



The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

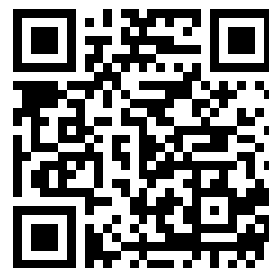
*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

GoogleTM books

<https://books.google.com>



50.7
Ln 3 ag
pp. 1

Agri.

THE LIBRARY OF THE
FEB 2 - 1943
UNIVERSITY OF ILLINOIS

AGRICULTURAL HISTORY SERIES NO. 5

NOVEMBER 1942

A

**History of
Livestock Raising
in the
United States,
1607-1860**

by

JAMES WESTFALL THOMPSON

UNITED STATES DEPARTMENT OF AGRICULTURE

UNIVERSITY OF ILLINOIS-URBANA



3 0112 104059016

Digitized by Google

This series is intended as a vehicle for presenting the results of research in agricultural history conducted throughout the Department of Agriculture. Edited in the Bureau of Agricultural Economics, with the aid of a Department advisory committee, the series will include monographs issued at irregular intervals as valuable materials and results of research become available.

FOREWORD

Professor James Westfall Thompson prepared a manuscript entitled "A History of Stock-Raising in America from Earliest Colonial Times to the Present, 1607-1916" during the years 1917 and 1918, when he laid aside, temporarily, his research on medieval Germany. He submitted the manuscript to the Department of Agriculture, and, for a short time in 1921, was employed as assistant in agricultural history.

The interest of Professor Thompson in livestock raising apparently derived from many sources. As a student of feudal economy, he had collected considerable material on the history of livestock in the Middle Ages, which was the basis of a series of articles published in the *Breeder's Gazette* in 1916 and 1918. For diversion, he had delved into accounts of early travelers in America; in these, he had found a wealth of data on stock raising, which had not been synthesized elsewhere. He had also first-hand knowledge of the role of livestock in the economy of the United States from his Iowa background, long residence in Chicago, and associations with men prominent in the livestock and meat-packing industries. His interest was further sharpened by the exigencies of the war, which focused attention on the food supply. In addition, he strongly supported Frederick Jackson Turner's views with respect to frontiers and their stages of development, and stock raising was a characteristic frontier enterprise.

The history of animal husbandry, as described in this report, is closely integrated with the general pattern of American development to 1860. In the acquisition and settlement of each frontier, livestock played a unique and vital role, providing the pioneers with transportation, food, draft power, and economic enterprises. Stock raising underwent many changes in the course of its westward march. In large measure, however, according to the author, the story is one of similarities rather than differences. The livestock industry of the Carolina Piedmont in the 1760's, for example, was remarkably similar to that of the Great Plains in the 1880's.

Professor Thompson's manuscript was offered to the editorial committee of the Agricultural History Series for consideration just before the death of the author, which occurred on September 30, 1941, and he had no opportunity to review the edited copy. As submitted to the Department of Agriculture in 1921, the manuscript included eight chapters dealing with the subject for the years 1860-1916. This period has, however, been treated in more detail in writings which have appeared during the last two decades. It was decided, therefore, that these chapters should not be included in the present publication. In all quotations, special care has been taken to follow the capitalization, spelling, and punctuation of the original text.

Everett E. Edwards, H. Goldenstein, and Mrs. Anne C. Chew, shared the responsibility for editing this manuscript.

O. C. Stine

Department Committee on Agricultural History

CONTENTS

	<i>Page</i>
Chapter 1	
<i>The European Background of American Livestock</i>	1
American Dependence on Europe for Domestic Animals	1
Diversity of European Types	1
Medieval Farming	2
Improvements in English Agriculture	2
Pioneer Breeders	3
American Interest in Breeding	4
Sheep in Spain	5
Native Breeds of Hogs	10
Horses in Medieval Europe	10
American Horses	12
Chapter 2	
<i>Stock Raising in Colonial New England</i>	14
Early Scarcity in Plymouth Colony	14
Livestock in Early Massachusetts Bay Colony	15
The Dutch Trade	17
Pasture and Expansion of Settlements	17
Prosperity in Massachusetts	20
Civil War in England	22
Shipping to the West Indies	23
Promotion of Sheep Husbandry	24
King Philip's War	25
Local Grazing Regulations	27
Colonial Wool	30
Trade in Horses	31
Cattle and Hogs	34
Decline of Agriculture	35
Chapter 3	
<i>Stock Raising in the Middle Colonies</i>	37
Livestock in New Netherland	37
English Rule in New York	39
New York Trade in Meat and Dairy Products	40
Backwardness of the Sheep Industry in New York	41
Swedish Agriculture along the Delaware	42
Maryland's Border Economy	44

	Page
<i>Stock Raising in the Middle Colonies (Continued)</i>	
Pennsylvania—"Queen of the Colonies"	45
William Penn's Leadership	46
German Farmers	49
The Conestoga Horse	51
East and West Jersey	52

Chapter 4

<i>Stock Raising in the Southern Colonies</i>	54
Livestock in Tidewater Virginia	54
Virginia Expands Inland	57
Livestock in Eighteenth-Century Virginia	59
Settlement of the Carolinas	60
Livestock in the Carolinas	61
Horse Breeding	63
Early Georgia	64
Summary of the Colonial Period	65

Chapter 5

<i>Stock Raising in the United States, 1775-1830</i>	67
Effect of American Revolution on Agriculture	67
Changes in New England	68
New Breeds	69
New York Cattle Trade	71
Opening of the Genesee Country	72
Backwardness of New Jersey	72
Pennsylvania Continues to Advance	73
Washington Promotes Animal Husbandry	74
Farming in Virginia	75
Natural Advantages of the Carolinas	77
New Currents after 1800	78
Arrival of Merino Sheep	79
The Merino Craze	80
Scientific Husbandry	81
Dairying	83
Improvements in Southern Cattle	85

Chapter 6

<i>The Opening of the New West</i>	86
The Extent of the New West	86
The British Prohibit Settlement of the New West	86
Virginians Move Westward	87
Early Days in Kentucky	89

	<i>Page</i>
<i>The Opening of the New West (Continued)</i>	
French Settlers in the Illinois Country	90
Livestock in Ohio	92
Cattle Droving to the East	93
The Merino Bubble	95
Stock Raising Fails to Prosper in Early Indiana	97
The Illinois Prairies	97
The Frontier Sequence	98
Obstacles to Stock Raising in Southern Illinois	99
The Michigan "Swamps"	101
The Frontier beyond the Mississippi	102
Colonization of the Southwest	104
The Planters Force out the Pioneers	106
Cotton Dominant in the New South	107

Chapter 7

<i>The Spanish Southwest and California</i>	108
Spanish Occupation of Southwest	108
Dependence of Missions on Livestock	109
Sheep Raising in New Mexico	111
California, A Stockman's Paradise	112
Manifest Destiny	114
The Santa Fe Trail	116
"Texas Fever"	117
The California Hide and Tallow Trade	118
Secularization of the Missions	119

Chapter 8

<i>The Beginnings of Stock Raising in Oregon Territory and Utah</i>	121
Early American Activities in the Pacific Northwest	121
The Willamette Valley	122
The Oregon Trail	123
The Mormons Settle Utah	126

Chapter 9

<i>Stock Raising in the United States during the Middle Era, 1830-1860</i>	128
The Factors Affecting Agriculture	128
New Breeds from England	129
The Battle of the Breeds	133
Experimentation in Sheep Raising	133
Systematic Horse Breeding	135
American Hogs	136
The Beef Belt	137
Sectionalism	139
Decline of Southern Stock Raising	140

	<i>Page</i>
<i>Stock Raising in the United States during the Middle Era, 1830-1860</i>	
(Continued)	
The Ohio Basin	141
The Railroads Effect a Revolution	141
The Rise of Cincinnati	142
Early Wisconsin Agriculture	143
Iowa	144
The Middle Border	145
Conclusion	146
<i>Literature Cited by James Westfall Thompson</i>	<i>147</i>
<i>Selected References on the History of Livestock Raising in the United States to 1860, Published Since the Thompson Manuscript Was Completed</i>	<i>178</i>

Chapter 1

THE EUROPEAN BACKGROUND OF AMERICAN LIVESTOCK

AMERICAN DEPENDENCE ON EUROPE FOR DOMESTIC ANIMALS

The roots of the present lie deep in the past. For the ancestry of American farm animals it is necessary to cross the Atlantic ocean and look to medieval England and the Continent, but most of all to England. Not a single species of domestic animal is indigenous to America. The first horses, cattle, sheep, and swine in America were brought by European colonists.

DIVERSITY OF EUROPEAN TYPES

The cattle of Europe show marked differences, not only as between those of one country and another, but even among local provinces and cantons.¹ In Holland and the marshy region of the Weser as far east as the Elbe and in Holstein are to be found a fine class of black and white cattle. Denmark has its large, yellow breed of cattle. In Switzerland, in the cantons of Berne and Fribourg, pasture a stately race of stock, differing in form and color from that in Lucerne or the Grisons.

Lombardy and Tuscany have a huge breed of cattle, running from white to gray in color, but chiefly distinguished by their long and graceful horns. These cattle are said to be the descendants of stock driven from the plains of Hungary by the Huns, Avars, and Hungarians, all of them Mongoloid peoples from the steppes of Asia who settled on the Danubian plains between the fifth and tenth centuries. Thousands of cattle similar to them may be seen grazing on the plains of Hungary today - large, handsome animals with enormously long horns and strong but slender limbs. The same variation in types of cattle may be observed in Germany, where the breeds often differ from province to province.

The differences in cattle are less marked in England, yet the variation in contour and color from county to county is noticeable. In Devon the cattle are red; in

¹In 1883, at the request of leading American cattle growers, a circular letter was sent to all American consuls with a view to receiving information that might be useful to stock breeders in the United States. Many of these reports were prepared by experts in the various countries at the request of the local consuls. The whole body of information was published by the Government in a huge volume of 855 pages with many interesting pictures, plans, tables, etc., under the title *Cattle and Dairy Farming*, U. S. Congress, House Executive Document 51, 49 Congress, 1 session, ser. 2397 (Washington, 1887). The book is a mine of information regarding English and continental breeds of cattle. The many valuable articles in the *Journal of the Royal Agricultural Society of England* may be located by using the *General Index to the First Series*, v. 1-25 (London, 1865) and the *General Index to the Second Series*, v. 26-50 (London, 1890).

Herefordshire there is the fine breed with white faces and red bodies. Broadly speaking, English cattle may be divided into two groups: Certain races which have possessed well-defined characteristics have existed from very early times; other breeds have been built up by careful selection and have transmitted their qualities to their offspring. The Devons and Herefords are examples of the first; the Shorthorns, the Ayrshires, and the Jerseys fall in the second category.

The cattle of colonial America were descended from the Spanish blacks, the Devonshire reds, the Dutch black and whites, and the Danish yellows, with some additions from Ireland, Wales, and Sweden. Out of a stock so variously formed, no distinctly marked race or fixed breed developed in America.

MEDIEVAL FARMING

The best of medieval farms would excite the scorn or contempt of a modern farmer. All labor was done by hand except plowing and carting. The fields were small, and the oxen hitched to the plow were pitifully diminutive animals, no bigger than young heifers today.² Often, from one to two dozen oxen had to be yoked to the plow, and as few farmers owned many head, it frequently was necessary for an entire village to pool its oxen and plow the fields in common.

With the little hay produced,⁶ the difficulty of wintering stock was great. They were fed almost wholly on straw and tree loppings and were often so thin in the spring that they could not walk and had to be carried out into the meadow. It was the common practice at the beginning of winter to kill and salt all save those needed for draft and breeding purposes. As to milk, there was precious little of it. Nearly all of it was produced between April and September. Even in the thirteenth century, when farming methods had improved, Walter of Henley, an English farm steward, who wrote a famous agricultural treatise, only expected $3\frac{1}{2}$ pounds of butter per week from 3 cows. Most of the milk was used to make cheese; more goat's milk than cow's milk was consumed in liquid form.

IMPROVEMENTS IN ENGLISH AGRICULTURE

English agrarian conditions began to improve during the reign of Elizabeth (1558-1603).³ By the time of Charles I (1625-1649), Ireland showed great development as a cattle-raising country, although the beginnings of the industry date back to James I (1603-1625). In 1620, it was estimated that 100,000 head of cattle were annually imported from Ireland into England. Under Charles II (1660-1685), Irish competition so jeopardized the profits of the English landowners that there was a serious fall in English farm rents. The House of Commons, which was controlled by the English country gentry and nobility, passed acts in 1665 and 1680 forbidding further importation of cattle from Ireland, with the result that the Irish cattle ranches no longer paid, and

²W. Denton, *England in the Fifteenth Century*, 170-171 (London, 1888). For a brief discussion of weights of livestock in the fifteenth century, see *ibid.*, 309-310. See also James Westfall Thompson, "Charlemagne as a Farmer," *Breeder's Gazette*, 70:32-33, 35, 37 (July 6, 1916).

³William Cunningham, *The Growth of English Industry and Commerce in Modern Times*, 2 (1):100 (Cambridge, Eng., 1903).

Irish graziers were ruined. The same policy was also followed against Dutch cattle.⁴ Such discrimination could not be made against Scotland, however, and in the eighteenth century quantities of Scotch cattle were driven to the Norfolk and Suffolk marshes, there to be fattened for the London market.

PIONEER BREEDERS

No well-directed efforts toward the improvement of cattle were made, even in England, until late in the eighteenth century. Robert Bakewell's endeavors at improvement were the first, but there was no general interest in the subject. Bakewell (1725-1795) was a man of remarkable sagacity and hard, common sense. It was his aim to establish a new system of animal development. Size was not the object with him. He sought to build up a breed of cattle which would yield the greatest quantity of good beef.

In so doing Bakewell contravened the ancient English notion that where there were big bones there was plenty of room to lay on flesh. Bakewell denied this proposition. He argued that "the smaller the bone, the truer will be the make of the animal, the quicker she will fatten, and her weight will have a large proportion of valuable meat." In this conclusion, although Bakewell came to it as the result of close observation and not by science, modern physiology has shown that he was right. The physiologists have demonstrated by careful experimentation the truth of the principle that the formation of a large, bony system is the result of defective nutrition and that to breed for bone is to rob the butcher's block or the milk pail.

Bakewell's efforts were directed toward the perfection of the English Longhorns, a class of cattle then found in the Midlands. Success crowned his patient skill and unwearied efforts. He raised the first high-class breed of cattle in England. Other enterprising stockmen, following in the path he had pointed out, devoted their attention to the Shorthorns, then known as Durhams, which were found around the Tees River area. Probably no other breed of cattle has had more time, thought, and money expended upon its development than the Shorthorn, and the breed has certainly justified the endeavor. In the same way, the Devon and the Hereford were developed and improved.

By the beginning of the Napoleonic Wars, Bakewell's methods were widely practiced in England, and sheep and cattle were raised more for the flesh than formerly. The introduction and cultivation of the turnip played an important part in this change. Indeed, the progress of stock raising in the eighteenth century cannot be understood apart from the progress made at the same time in general agriculture. This fact was apparent to Sir John Sinclair in 1795:

The difference between the size of cattle and sheep now, and in the reign of Queen Anne . . . is hardly to be credited. In 1710, the cattle and sheep sold at Smithfield Market weighed, at an average, as follows: Beeves, 370 lb.; Calves, 50 lb.; Sheep, 28 lb.; and Lambs, 18 lb. Now it may be stated: Beeves, 800 lb.; Calves, 143 lb.; Sheep, 80 lb.; and Lambs, 50 lb. The increase is principally, if not solely, to be attributed to the improvements which have been effected within these last sixty years. . . .⁵

⁴*Ibid.*, 372-373, 546; William Edward Hartpole Lecky, *A History of England in the Eighteenth Century*, 2: 226-227 (New York, 1882).

⁵Quoted in Cunningham, *Growth of English Industry*, 2(2):706.

Both in England and on the Continent, the formation and maintenance of large, picked herds of blooded cattle became an interest of many persons of wealth and high social position in the nineteenth century, even of royalty itself. Albert, the Prince Consort of Queen Victoria, had a magnificent herd of 200 Shorthorns at the Home Farm near Windsor Castle, another herd of 90 purebred Herefords at the Flemish Farm 2 miles away, and 100 Devons on the Norfolk Farm. King William of Württemberg, as early as 1824, began to import and breed Shorthorns, and was imitated by Nicholas II of Russia, Francis Joseph of Austria, and Louis Philippe of France. Napoleon III was a heavy buyer of English blooded stock, and the bulls he could not buy he hired, notably sires from the Booth Herd at Warlaby. Even the King of Sardinia and the King of Spain became interested in stock breeding, and longhorned white Tuscan cattle and black Spanish cows were crossed with Shorthorns from England.

AMERICAN INTEREST IN BREEDING

The success of English stockmen in creating types or breeds of cattle in course of time attracted the attention of intelligent farmers in America. The movement for better breeds on this side of the Atlantic was a slow one. All through the colonial epoch, the American farmer let his stock shift for itself, rarely even feeding it in winter and never providing shelter. As the result of generations of neglect his stock was scrawny and stunted and went under the name of "little runts." The American farmer did not know the capacity of his stock, under intelligent management, for the production of either beef or milk. He did not appreciate the fact that a cow was an animated machine and that her yield, like that of any piece of machinery, depended upon the quality of her system and the raw material furnished her for purposes of production.

Fortunately for the United States, when interest in improved breeds of cattle began to be manifest, the country did not have to go through the long process of building up breeds. The American stockman could draw on the types already developed in Britain and the Continent. British breeds, including English, Scotch, Irish, Jersey, and Guernsey cattle, are responsible for almost all the good cattle blood in the United States. The only Continental breeds that have ever competed with them are the Holstein-Friesian and the yellow Danish cattle.

The question is often asked: "What is the best breed of beef or milch cattle?" The answer to such a general question cannot be given by naming any one particular breed. There is no such thing as a "best" breed of cattle. One breed may be specially adapted for a certain purpose or a certain region, while another may be better suited for a different purpose or a different region.

Excluding purely dairy types, the breeds of cattle with which the stockman is concerned may be divided into two general classes, the beef type, and the dual-purpose type. The Shorthorn, Hereford, Aberdeen Angus, and Galloway are the prominent breeds of the beef type, while the Shorthorn, the Devon, and the Red Polled are the most important breeds of the dual-purpose type.⁶

⁶The various cattle breeds found in the United States are discussed in W. F. Ward and Dan T. Gray, "Beef Production in the South," U. S. Department of Agriculture, *Farmers' Bulletin* 580 (Washington, 1914); W. F. Ward, "Breeds of Beef Cattle," U. S. Department of Agriculture, *Farmers' Bulletin* 612 (Washington, 1915); Francis M. Rotch, "Select Breeds of Cattle and Their Adaptation to the United States," U. S. Patent Office, Report on Agriculture, 1861, p. 427-469.

SHEEP IN SPAIN⁷

Sheep, as the Bible abundantly shows, were originally oriental animals. They were imported into Spain by the Phoenicians, who established colonies there long before the Christian Era. Sheep thrive remarkably in the new land, for the topography and the climate were singularly adapted to sheep raising. Although joined to the European Continent, Spain is geologically and climatically like northern Africa. Southern Spain—Andalucía, Murcia, and Valencia—has only two seasons, a wet and a dry. The annual rainfall is less than that of Italy or Greece, which are in the same latitude. The sky and the sun are Syrian and unlike the rest of Europe. This identity of Spain with the Orient characterizes even the face of the land. The central part of the peninsula is a vast, semiarid plateau fit for little save sheep raising; few trees grow on the almost waterless plains.

Sheep raising thus naturally became the chief economic enterprise of central Spain from early times, and special privileges soon were accorded the wool grower. Owing to the sparseness of population, pasturing of sheep was permitted, not only on the public lands, but also on the lands of private persons, provided they did not injure the crops.

Whether Merino sheep are an indigenous breed in the peninsula or an imported variety cannot be said. The Phoenicians undoubtedly imported blooded animals from Syria, for tradition makes mention of a wonderful Syrian breed called "Imri," from which word the term "merino" is believed by some to have been derived. Carthage was a daughter of Phoenicia, and Phoenician Spain was her richest colony, so that it is likely that Barbary sheep were imported by them into Spain.

After their conquest of Spain, the Romans imported Italian breeds from northern Italy as well as from Apulia and Calabria. Tarentine wool from the far south of Italy was highly prized. Most positive information comes in the first century A. D., from Lucius Junius Moderatus Columella, whose *De Re Rustica* is the most valuable agricultural treatise which has come down from antiquity. He was a native of Cádiz, where his uncle possessed large estates, which were exploited scientifically, and undoubtedly this accounts for Columella's interest in agriculture. The uncle imported blooded rams both from Tarentum and from Africa. The native Spanish sheep must have been so improved by these crossings as to lose its original nature, so that by the end of Roman times, the Spanish breed had become a fixed type. Whether that type was already the Merino cannot be asserted.

When the Moorish and Berber tribes of northern Africa, which had been converted to Mohammedanism, crossed the Strait of Gibraltar in 711 A. D., and conquered the south and center of Christian Spain, they found millions of sheep in the country. These tribesmen also imported animals from Africa. By nature and historical tradition the Arabs were a pastoral people. Spain, however, was only partially conquered by them. North of the Ebro River the Christian population, a mixture of the Romanized Spaniard and the Germanic West Goth maintained itself, and gradually a cluster of tiny Spanish kingdoms was formed along the edge of the Pyrenees—Navarre, Leon (later Castile), and Aragon.

⁷For more detailed treatments of this subject, see James Westfall Thompson, "Sheep in Spain in the Middle Ages," *Breeder's Gazette*, 70: 90-91 (July 20, 1916), and "A Short History of the Merino Sheep," *ibid.*, 73: 484-485 (Mar. 7, 1918).

The debated land between the two peoples was the vast plateau where millions of sheep were grazed. The war of Moslem and Christian was not merely one of religion; it was an economic rivalry too, and wool, mutton, and sheepskins were the prizes. It was an irrepressible conflict of race, religion, and rival wealth, and was waged for centuries with truly oriental fanaticism.

This terrible warfare during the Middle Ages reduced the enormous flocks of Spanish sheep which were pastured on the upland plateaus. In a sense the wars were like huge sheep and cattle raids, for the population was thin and the towns few in number in central Spain. By the thirteenth century, however, the Mohammedans had been driven into the far south by the kings of Castile, one of whose cares was to replete the diminished flocks and reestablish the breed. Pedro IV (died 1387) had fine animals brought from the Barbary Coast for this purpose, and Cardinal Ximénez, the great statesman of Spain in the late fifteenth century, followed his example. As a result of these measures Spanish wool and leather became famous in the marts of medieval Europe and were responsible for much of the wealth of Spain, long before the time of Columbus.

The victorious kings rewarded their fighting nobles with huge grants of land. The Castilian hidalgos became sheep barons of enormous wealth, much like the Mexican cattle kings. Their fortified houses, or haciendas, surrounded with barns, granaries, warehouses, sheep pens, and the cottages of their dependents covered acres. Like the manorial lord of France and the rest of Europe in the feudal age, the hidalgo was a mighty landed proprietor with sway over hundreds of dependents. The herders, wool carders, washers, dyers, and tanners were not free employees but serfs whose families lived in huddled villages on the lord's domains. The sheep-shearing festivals of the villagers on these windy plateaus remind one of the description of the feast of Nabal of the house of Caleb described in the Bible, whose "possessions were in Carmel; and the man was very great, and he had three thousand sheep, and a thousand goats: and he was shearing his sheep in Carmel. . . . and behold, he held a feast in his house, like the feast of a king." The annual round-up was a time of universal merriment accompanied by much eating, drinking, singing, and dancing. Spanish Latin authors described the same thing; all the practices go back to the ancient Orient.

In May, the sheep were driven into a huge, square two-storied shed presided over by a factor. They were not washed before shearing but were sweated instead. Their feet were then tied by *ligadores*, and the sheep were then handed over to the shearers. After being sheared the sheep were branded and tarred. The old ones were selected for butchery, the rest taken off to the plains under a shepherd, each with a wolfish-looking dog. The wool was divided into three lots, according to quality, packed in bales on backs of mules, and taken to town for sale.

This great annual migration of the sheep gave rise to the famous institution of the *mesta*. Each *cabaña*, or flock, usually was composed of 10,000 sheep under a chief shepherd (*mavoral* or *capitax*) assisted by 50 under shepherds (*pastores*) and an indefinite number of wolf hounds (*perros de presa*). The distance of migration was often 150 leagues. The sheep traveled from 6 to 12 miles a day, so that they were from 40 to 60 days in the migration. In September, when the sheep were driven down into the plains for the winter at Al-Mazarron, they were smeared with a local red clay which softened their fleeces. This practice still prevails.

The shepherds were a somewhat lawless, saturnine class of men leading lonely, nomadic lives. Farmers and villagers along the road of the migrating flocks were

continually at feud with them, for their fields and crops often suffered severely. The Cortes of Burgos in 1315, in an endeavor to protect the agricultural classes, ordained that the sheep must be kept to the road and a prescribed border for pasturage. Apparently little was done, for in 1351 the Cortes of Valladolid denounced the violence and trespass of the shepherds and petitioned the king for rigid laws to suppress the evil. For years the annual migration of the sheep occasioned a condition of warfare between the farmers and cattle raisers and the sheepmen. In 1347, Alphonso XI took the shepherds under royal protection, for wool was the richest resource of the kingdom. The sheepmen were formed into a powerful association under the name of the mesta, of which the king was honorary president. Special courts were established for adjusting the peculiar kind of cases which arose. In course of time, a body of rights, privileges, and exemptions was created, together with a unique code of laws.

An analysis of this legislation which was codified in 1511 by a famous Castilian lawyer named Palacios Rubios may be of interest. The flocks had the right of free pasturage and free water everywhere along the road, except that fields of grain, cattle pastures, hayfields, vineyards, and gardens might not be trespassed on. If damage were done the shepherds were held liable, but the prohibition was practically a dead letter as no penalty was attached. The mesta vigorously opposed all fencing or enclosure of fields, and even any extension of agriculture.

The feud between the cattle owners and the sheepmen was like the range wars in the American West. Theoretically, a strip 90 yards wide on each side of the road, known as the *canada de paso*, was the legal grazing ground of the sheep while enroute from the plains of Segovia to the hilly country of Leon. As the wealth of the sheep barons influenced the courts of the *mesta*, and the king was inclined to favor the wool interests of the country more than any other industry, stockmen and farmers had little protection. The mesta was a huge monopoly under royal patronage and endeavored with all its power to ruin the small, independent sheep raiser. Some idea of its immense influence may be obtained from the evidence of a process held in Castile in 1482, when according to the testimony the *mesta* owned and controlled 2,684,032 sheep. The court of the *mesta* was abolished in 1834, but many of the medieval privileges accorded the sheepmen still remain, notably the right to graze the flocks upon the *canada* during migration. Today the shepherds carry guns instead of crooks and slings. They are still a wild, lawless class, clad as their forefathers were in leathern jerkins and sheepskin mantles and accompanied by the same wolfish kind of dogs.

Spanish wool in the Middle Ages was not considered as fine as English wool, which topped the market. The finest fleeces were kept at home, but thousands of bales of Spanish wool were annually exported to southern France, where it was manufactured into an infinite variety of cloths. The towns of southern France were largely industrial and filled with weavers and other textile workers. Almost every town made a particular kind of cloth. Much Spanish wool also was sent to Flanders (modern Belgium) where Ghent was the greatest wool manufacturing city in the Middle Ages. Here, although inferior to English wool, it was a strong competitor for the manufacture of the cheaper and coarser kinds of woollen cloth. The finest Spanish fleeces were shipped to Florence in Italy, which ranked as the second great woollen manufacturing center in Europe.

The English Parliament jealously endeavored to preserve the breed of English sheep in the reign of Henry VI (1422-1461) by prohibiting the exportation of live animals. However, Edward IV, in order to cement an alliance with Henry of Castile and

John of Aragon, in 1466 imprudently "granted license for certain Cotteshold sheepe to be transported into the countrie of Spaine which have then so multiplid and increased that it hath turned the commoditie of England much to the Spanish profits." Even these prize sheep, though, would excite the scorn of a modern sheepman, so much has breeding done. In the fifteenth century, fleeces produced about a pound of wool and "often much less."

A firm tradition has it that the Merino sheep is descended from a crossing of these Cotswold sheep with Spanish sheep. To substantiate the tale, the word "merino" is said to be derived from *ultra-marinus*, meaning "from beyond the sea," the prefix having become lost. This is an ingenious and interesting derivation but a very unlikely one. It may be asserted with little hesitation that the word "merino" is of genuine Spanish origin. Spain is a Latin country. The Latin word *major*, meaning "greater," was a regular title used for various kinds of officials. Our words *major*, for an army officer, and *mayor* are derived from it. From this word *major*, the Late or Low Spanish Latin of the Middle Ages developed the diminutive form of *majorinus* or overseer. It is used in a Castilian law of the year 1020 for a petty judge. In course of time, however, it became the usual word for an overseer or caretaker of sheep, particularly in the case of shepherds of fine flocks, the Spaniardized form of *majorinus* becoming first *mayorino*, and then *merino*. Once the word had reached this stage it was a natural step to call these quality sheep Merino sheep. It may be said with every probability that this is the true origin of the word. The word "merino" and the breed of sheep that are so called developed at the same time, but the lineage of the Merino must be traced through Syrian, Roman-Italian, and African crossings upon native Iberian stock.

Merino sheep failed to attract the attention they deserved in early modern times. England was the leader in the wool trade of Europe and believed that her native stocks were superior to any others. The Merino made its way into parts of the extreme south of France adjoining Spain by 1800.⁸

The earliest considerable exportation of Merino sheep out of Spain was made in the 1760's, when Frederick Augustus I, Elector of Saxony, obtained permission from the Spanish Government to acquire 200 picked animals from the choicest flocks in the Peninsula. They were principally from the Escorial flock, which belonged to the King of Spain. When the sheep reached Germany they were placed upon one of the estates of the Elector under the care of Spanish shepherds, who were brought with them. The Saxon Government went systematically to work to promote the raising of Merino sheep.

At first there was much prejudice against the Merinos. Saxony was a Protestant country, and the prejudice against Catholicism was extended even to the sheep. The substantial merits of the Merino, however, soon triumphed over foolish prejudice. The call for rams became so great that about 110 more Merinos were imported into Saxony in 1777.

The Germans made the Saxon Merino the equal, if not the superior, of the original Spanish Merino. Schools for the teaching of agriculture and animal husbandry were established at Lohmen, Rennersdorf, and other places, free publications were distributed, and stock exhibitions instituted. Contrary to prophecy, the Spanish Merino soon became

⁸E. L. Shaw and L. L. Heller, "Domestic Breeds of Sheep in America," U. S. Department of Agriculture, *Department Bulletin 94* (Washington, 1914).

acclimated to Germany and even flourished in Sweden. The prosperity and quality of the Saxon Merino industry, in course of time, alarmed England, always sensitive to the wool competition of other countries. English writers diligently spread the belief that the Merino was unprofitable because of its "voraciousness of appetite." A series of experiments in which it was shown that the Merino averaged 2 pounds of hay in winter to the Leicester sheep's $\frac{3}{4}$, that its longevity was greater, and that it retained its teeth and continued to breed for 2 or 3 years longer than improved English breeds failed to overcome British prejudice against the Merino. Even the English occupation of the Iberian Peninsula during the Napoleonic Wars failed to open British eyes to the value of the Merino.

The desperate plight of Spain in 1809, when she was endeavoring to free herself from Napoleon's heel, accounted for the introduction of the Merino into the United States. Until this time, Napoleon had left the conduct of the war in Spain to his marshals. In 1809, however, the French situation in the Peninsula became so serious that Napoleon came down into Spain, drove the English under Sir John Moore to their ships in Corunna Bay, and recaptured Madrid, compelling the Spanish Junta—the Revolutionary government—to flee to Badajoz in the heart of Estremadura, which was the oldest and best sheep country in Spain.

The Junta dared not impose further taxes upon the Spanish people for fear of throwing them into the arms of the French. There being no other alternative, it confiscated the four famous Merino flocks in Estremadura. These were the Paular, the Negretti, the Aguirres, and the Montarcos. The first two flocks each had about 10,000 sheep and the last two about 20,000, before the Napoleonic Wars began. All parties in the conflict, Spanish, French, and English, had slaughtered these famous flocks to feed their armies, so that there were left only about 7,500 Paulars, 6,000 Negrettis, 3,000 Aguirres, and 4,000 Montarcos in 1809. The British Minister, Sir Charles Stewart, bought 4,000 Paulars for the King of England and most of the Negretti flock for others at home.

The introduction of the Spanish Merinos into England, being simultaneous with the great industrial revolution that developed from the application of steam power to manufacturing and the invention of the power loom, before many years gave England preeminence as a woolen manufacturing country. Until the eighteenth century, England had been more a wool-raising than a mutton-growing land. The changes which had been introduced by Bakewell in sheep breeding had developed flesh at the expense of fleece, so that in the last half of the eighteenth century there had been a marked decline in the quality of the English clip.⁹ In 1800, for example, the importation of wool from Germany was 412,394 pounds; in 1814 it was 3,432,465 pounds; and in 1825 it reached the huge figure of 28,799,661 pounds.¹⁰

The Cotswold seems to have been the only distinguished English breed of sheep until Bakewell's reforms in stock breeding were introduced. From his time dates the beginning of the numerous differentiations in breeds of British sheep. Next to the Cotswold in antiquity comes the Southdown.¹¹

⁹R. E. Prothero, "Landmarks in British Farming," Royal Agricultural Society of England, *Journal* (ser. 3), 3:24-25 (London, 1892).

¹⁰Cunningham, *The Growth of English Industry and Commerce*, 2(2):644 note.

¹¹For the various breeds of sheep in the United States, see Shaw and Heller, "Domestic Breeds of Sheep in America," U. S. Department of Agriculture, *Department Bulletin* 94.

NATIVE BREEDS OF HOGS

Unlike the breeds of cattle, sheep, and horses, for which America owes so much to England, in the case of hogs most of the popular breeds were of native production. The Poland China, the Duroc-Jersey, and the Chester White are all of American origin. The distinctly English breeds of hogs in the United States are the Hampshire, the Berkshire, the Tanworth, the Yorkshire, the Cheshire, the Essex, and the Large Black, but none of these imported breeds, except the Berkshire, are as popular as the American breeds.¹²

HORSES IN MEDIEVAL EUROPE

All the famous breeds of draft horses are descended remotely from the heavy war chargers bred and ridden by the armed knights of the Middle Ages.¹³ The Great Horse of medieval times was the knight's steed. He had to be big boned and strong of limb and muscle to be able to bear the heavy load of a sheath of mail and a steel-clad rider.

The Crusades acquainted the knights of western Europe with the lighter and swifter Arab horse, and many high-bred Arab horses were brought back from the East. In 1121, Henry I of England, the youngest son of William the Conqueror, imported two Arabian horses, one of which he gave to the King of Scotland.

The transportation of the horses of the Crusaders from Marseille, Venice, Genoa, Pisa, and other maritime cities of southern Europe to the Holy Land became a well-established business in the twelfth and thirteenth centuries. They were carried in broad-bottomed ships called *huissiers*, having a door (*huis*) in the stern through which the horses were taken in. When closed, the door was calked up, for at sea it was below the water level. Each vessel carried about 40 horses. The Arab horse was too light to bear the weight of an armored knight, especially if the horse, too, was armored. Hence the necessity of every Crusader's taking his own charger. The best of these steeds were Spanish barbs and huge French or Flemish horses, having weight rather than speed. Undoubtedly the two latter are the remote ancestors of the modern Percheron and Belgian breeds.

The loss in horse flesh during the Crusades was enormous, for the Christians controlled only a narrow margin of coast line in Syria and Palestine. Supplies had to be brought from the west, and, in winter when navigation was more difficult and dangerous, famine often prevailed in the camps of the Crusaders. The slaughter of his destrier or charger in order to avoid starvation was the last resort of a knight. It frequently had to be done, as in the siege of Antioch in 1098, and again in the camp of Richard I in 1190, when the hunger was so great that "they slew valuable horses and without taking off the skins ate horse-flesh with joy, even the intestines."

By the importation of Arabian and Spanish stallions the speed and bottom of the horses of western Europe were much increased in the thirteenth century; at the same time, weight and bigness of bone necessary for the carriage of armored knights were secured.

¹²F. G. Ashbrook, "Breeds of Swine," U. S. Department of Agriculture, *Farmers' Bulletin* 765 (Washington, 1917).

¹³For additional details on this subject, see James Westfall Thompson, "War Horses in Mediaeval England," *Breeder's Gazette*, 70:167-168 (Aug. 3, 1916).

The price of a knight's charger naturally varied greatly. Perhaps the average price was \$175. In 1239, Aimaury of Narbonne paid 45 livres (about \$207) for one; that of Eustache de Neuville in 1231 cost 47 livres (about \$220); those which Baldwin II, King of Jerusalem, and Alphonso of Portugal received when they were knighted cost respectively 60 and 67 livres (\$276 and \$308). These figures, however, convey little until one knows that the purchasing power of money in that time was at least ten times as much as it is today. In other words, these sums must be multiplied by ten to ascertain the actual amount in modern money.

The question of furnishing mounts in an age of war, such as the Middle Ages, was of great concern to the governments. In 1279, Philip III of France issued an ordinance requiring every person of a specified fortune to possess a breeding mare. The counts, dukes, barons, abbots, and every other person "having sufficient pasture" were required by this law to have a stable of from 4 to 6 mares. Breeding mares could not be seized for debt. The export of war horses was forbidden and no dealer could sell more than 30 at any one time. This legislation does not seem to have remedied the rarity of war horses in France. Shortly afterwards the King's agents in Belgium were buying stallions for the royal stud farms. More than \$150,000 was expended in this way.

The English Government was more alert than the French in promoting horse breeding. Before the Norman Conquest in 1066, King Athelstan had forbidden the exportation of English horses, which shows that even at that early date the English horse must have been prized. King John imported stallions from Spain and Delgium to improve the breed. His son, Henry III, continued the policy, and the records contain several notices that his marshal bought horses at the fairs. Edward I was also keenly interested in improving English horses. Evidently by this time (1274-1307), the effect of having imported the heavy Belgian horse had become manifest, for the King's "great horses" are frequently mentioned. Edward, who had been in Tunis and the East, prized the Arab stock highly, and had a famous horse named Bayard, the first of a long series of favorite chargers with this name.

Edward II was unlike his father. He was careless and dissolute, shamelessly played his political favorites, and lost Scotland, which Edward I had conquered, at the battle of Bannockburn. He knew a good horse, however. The patent rolls of his reign abound with references to William of Toulouse, the King's horse buyer, who year after year made trips to Spain for the purchase of horses for the royal stud farms in Middlesex, Bedford, Bucks, Oxfordshire, Berkshire, and Sussex. The largest of these was at Hadleigh. Edward II also bought horses in Belgium, Lombardy, Sicily, and southern France, especially Gascony. The Earl of Lancaster and Sir Robert Clifford also had famous stud farms in England. In 1313, the latter presented the King with "a black stallion from his farm at Woodstock, a bay rouncy with a star in its forehead and a brown bay rouncy." Some of these stallions must have been difficult and even dangerous to handle. In 1309, it is recorded that "Philip de Wavendon, whilst on the King's service guarding one of his horses, lost an ear by its bite." In 1321, there was a "notification to avert sinister suspicion from Richard de Moleseye that the defect in his right ear is due to the bite of a horse." Criminals, it must be remembered, were often mutilated in medieval times, and without this royal credential the unfortunate Richard ran the risk of being mistaken for an offender against the law.

The great Hundred Years War (1339-1453) between England and France, which began under Edward III, enormously increased the demand for horses. Edward III rose to the situation and founded a group of vast equestrian establishments under the supervision

of Sir John De Brocas, an English knight of Gascon lineage, whose family had long been settled in Kent. The title of Master of the King's Horse descended for years through his family.

In the records of the reign of Edward III are hundreds of entries dealing with the King's horses—coursers, palfreys, trotters, hobbies, genets, hengests, and somers, but the references to *dextrarii* (destriers) or war chargers are easily first. In addition to the horses themselves, and the wages of their keepers, the saddles and housings of the horses cost annually a huge sum of money.

For purposes of administration England was divided into north and south England, the Trent River being the dividing line. On account of the hostility of the Scots, no horse or man living north of the Trent was required to do military service across the channel. The King had many stud farms in both regions, as at Windsor, Guilford, Odiham, Woodstock, Yardell, Waltham, Cornbury, Risborough, Swallowfield, Fasteerne, and Ashehurst.

When the peace of Brétigny was made in 1360, these great stud farms were broken up. The expenses of the war had been enormous, and Parliament murmured at the cost of their maintenance. It was a dear sacrifice. In 1369, the war was renewed by France, and this time the balance was in favor of the enemy. England met reverse after reverse, and, although there were other causes, the weakness of the English cavalry was undoubtedly a contributing factor. Sir John de Brocas died with the pain of disillusionment in his heart. This whole branch of administration had been in his hands from the beginning to the end.

During the rest of the fourteenth and well down into the fifteenth century, the English horse steadily declined, while on the other hand the intelligent government of Charles V of France materially improved the French stock. When Henry VII came to the throne in 1485, the deterioration of the English horse had become so great that he took radical measures to reinvigorate the stock. He forbade by law the breeding of horses less than 12½ hands high and interdicted the exportation of stallions. Henry VIII, his son, went much farther and forbade the breeding of stallions less than 15 hands high to mares of less than 13 hands in height. He even ordered the killing of many low-grade horses on the royal farms and in the royal forests. In imitation of the old law of Philip III of France, Henry VIII required the great landowners of the realm, both nobles and high clergy, to keep a certain number of brood mares and stallions on their estates.

For centuries the energy of the English Government was largely expended on the improvement of the breed of horses for purposes of war. There is no mention of formal racing in this time, although beyond doubt the sport was practiced in an informal way at the numerous horse fairs. Probably the earliest official race course in England was established at Chester in 1512. Formal horse races, with jockeys, colors, prizes, and a measured course are of medieval Italian origin. The custom did not spread to the rest of Europe until early modern times; in England horse raising became popular with the Stuarts in the seventeenth century.

AMERICAN HORSES

In the matter of light horses, America is fortunate in possessing types that have been developed from stock brought over in colonial times. "This stock and the

descendants from it," according to a publication of the Department of Agriculture, "have left a progeny which contains probably a smaller amount of cold blood than that of any European country."¹⁴ In the eighteenth century, the Narragansett pacer was famous in southern New England. Messenger was imported in 1788, and Justin Morgan was foaled in 1789. Denmark, sire of the breed of American Saddle Horses, was foaled in 1839, and Hambletonian 10, the founder of all Standardbreds, in 1849.

With these types of road or light-draft horses America was content until after the Civil War, when French and German coach horses and English Hackneys began to be imported. A few Cleveland Bays and Yorkshire coaches were also brought over. This tide from abroad was at the flood between 1870 and 1890.

For heavy draft purposes the reliance has been upon imported breeds. The only important native American type of draft horse, the Conestoga, was permitted to die out in the middle of the nineteenth century after the coming of the railroads.¹⁵

¹⁴George M. Rommel, "The Preservation of Our Native Types of Horses," U. S. Department of Agriculture, Bureau of Animal Industry, *Circular 137* (Washington, 1908).

¹⁵See G. Arthur Bell, "Breeds of Draft Horses," U. S. Department of Agriculture, *Farmers' Bulletin 619* (Washington, 1914).

Chapter 2

STOCK RAISING IN COLONIAL NEW ENGLAND

EARLY SCARCITY IN PLYMOUTH COLONY

The particular history of New England began with the landing of the Pilgrims at Plymouth in December 1620. Over 50 of the 102 persons who arrived died during the winter. In the spring, having been instructed by the Indians, they planted some 20 acres of corn and 6 of barley and peas, after manuring the fields with shad. The "corn did prove well . . . our barley indifferent good, but our pease not worth the gathering," wrote one of the settlers. "I never in my life remember a more seasonable year than we have here enjoyed," he added, "and if we have once but kine, horses, and sheep, I make no question but men might live as contented here as in any part of the world."¹

Three years were yet to elapse before the Pilgrims possessed any domestic cattle. Edward Winslow returned to England and on his second voyage out, in March 1624, "brought 3. heifers and a bull, the first beginning of any catle of that kind in the land," as Governor William Bradford recorded with quaint spelling in his *History of Plymouth Plantation*. These cattle undoubtedly were of the Devonshire breed. At a public court on May 22, 1627, this precious store of stock was carefully apportioned among the Plymouth settlers: "And first accordingly the few catle which they had were devided, which arose to this proportion: a cove to 6. persons or shars, and 2 goats to the same, which were first equalised for age and goodnes, and then lotted for; single persons consorting with others, as they thought good, and smaler familys likewise; and swine though more in number, yet by the same rule."² There were as yet no sheep or horses.

The colonists who settled Massachusetts Bay, unlike those at Plymouth, from the beginning took care to be supplied with cattle. In 1625, 3 ships "which carried kine" were sent over.³ There were enough cattle to spare 12 cows for the outlying settlement which was established at Cape Ann. In the next year, some "then of the Adventurers, that still continued their desire to set forward the plantation of a Colony there . . . adventured to send over twelve kine and bulls more. . . ."⁴ Francis Higginson recorded in his journal in 1629 the arrival of 5 ships with stock on board. The *Talbot* brought 6 goats; the *George's* "chief carriage were cattle, twelve mares, thirty kine, and some goats"; the *Four Sisters* "carried many cattle"; and the *Lion's Whelp* brought 4 goats.⁵ John White also noted some details with reference to these early shipments.

¹Edward Winslow, "Relation or Journall of the Beginning and Proceedings of the English Plantation Settled at Plimoth in New-England (London, 1622)," in Alexander Young, ed., *Chronicles of the Pilgrim Fathers of the Colony of Plymouth from 1602 to 1625*, p. 231, 233 (ed. 2, Boston, 1844).

²William T. Davis, ed., *Bradford's History of Plymouth Plantation, 1606-1646*, p. 217 (New York, 1908). Hereafter cited as *Bradford's History*.

³John White, "The Planters Plea (London, 1630)," in Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, from 1623 to 1636*, p. 9 (Boston, 1846). Hereafter cited as *Young, Chronicles of Massachusetts Bay*.

⁴*Ibid.*, 12.

⁵Francis Higginson, "A True Relation of the Last Voyage to New-England (1629)," *ibid.*, 215-216.

In addition to new settlers the ships carried "a convenient proportion of rotherbeasts [cattle], to the number of sixty or seventy, or thereabouts, and some mares and horses; of which the kine came safe for the most part, but the greater part of the horses died, so that there remained not above twelve or fourteen alive."⁶

LIVESTOCK IN EARLY MASSACHUSETTS BAY COLONY

From the inception of the Colony of Massachusetts Bay, its governing body, the Court of Assistants in England, recognized the essentially agricultural nature of the settlement. On May 21, 1629, it enacted the following regulation:

This Court, taking into due & mature consideracõn how necessary it willbe that a devydent bee forthwth made of some competent quantitie of land in the London plantacõn in New England, both for the p'sent accomodacõn of the people lately gone thither, aswell to build them houses as to inclose & manure, & to feede their cattle on, have thought fitt and ordered . . . That 200 acres of land bee by them allotted to each adventurer. . . .⁷

The efforts exerted by the home agents to supply the infant settlements with livestock is manifest in these excerpts from John Winthrop's *Journal*:

Thursday, July 1 [1630]. The *Mayflower* and the *Whale* arrived in Charlton [Charlestown] harbor. Their passengers were all in health, but most of their cattle dead, (whereof a mare and horse of mine). Some stone horses came over in good plight.

Tuesday, [July] 6 [1630]. The *Success* arrived. She had . . . goats. . . .

[October] 29 [1630] The *Handmaid* arrived at Plymouth . . . and of twenty-eight cows she lost ten.

[July] 14 [1631] The ship called the *Friendship* . . . arrived at Boston. . . . She landed here eight heifers, and one calf, and five sheep.

[July] 22 [1631] The *White Angel* came into the bay. She landed here twenty-one heifers.⁸

When it is remembered that in the England of this time there were no contractors for supplies and no warehouses for storing food, not even for the Navy, the effort that must have been required to mobilize supplies for the colonists and see that they were shipped is appreciated.⁹

The sufferings of passengers and stock alike during the crossing, especially in bad weather, were very great in the small Elizabethan vessels, the largest being not over 150 tons. Many cattle, horses, and sheep died on the voyage, as the above quotations from Winthrop's *Journal* indicate. Higginson wrote in warning to the home agents of the company not to send mares in foal or sheep in lamb. In the same communication he advised that Ireland was the best place to get sheep. Milk, the colonists soon had in sufficiency from goats and cows. It sold for a penny a quart.¹⁰

⁶White, "The Planters Plea," *ibid.*, 14.

⁷Nathaniel B. Shurtleff, ed., *Records of the Governor and Company of the Massachusetts Bay in New England*, 1:363 (Boston, 1853).

⁸James Kendall Hosmer, ed., *Winthrop's Journal 'History of New England,' 1630-1649*, 1:50-51, 53, 66 (New York, 1908). Hereafter cited as *Winthrop's Journal*.

⁹Edward Channing, *A History of the United States*, 1:168-169 (New York, 1905).

¹⁰Francis Higginson, "New-England's Plantation (ed. 3, London, 1630)," in Young, *Chronicles of Massachusetts Bay*, 245, 261.

Perils of the sea for the cattle was passed only to be succeeded by new perils of the land. It was hard enough for the settlers to build houses for themselves, and consequently, the cattle went unsheltered for several years in the Colony. As late as December 26, 1630, Winthrop recorded: "Many of our cows and goats were forced to be still abroad for want of houses."¹¹

Worse than exposure to the weather were the depredations of wolves among the stock. Winthrop is illuminating on this point:

[Sept.] 30 [1630] - The wolves killed six calves at Salem, and they killed one wolf.

The wolves killed some swine at Saugus.

[Oct.] 11, [1633] - The wolves contined to do much hurt among our cattle.¹²

A curious example of the economic value of color in cattle is the fact that a red calf was cheaper than a black one, for there was greater probability of the former being mistaken for a deer and so being pulled down by the wolves.¹³ So precious to the colonists were the few cattle which they possessed, that if one of them strayed, the whole community turned out to find it.

Where topographical conditions were suitable, it was the practice to fence off a neck of land in the bend of a river, or a peninsula, and impound the cattle there at night. Thus Charlestown fenced "the neck of land from Misticke river to the water";¹⁴ at Nahant, the neck was "used for to put young cattle in, and wether-goats, and swine, to secure them from the wolves."¹⁵ A few posts and rails from the low-water marks to the shore kept the wolves out and the cattle in. Boston, being a peninsula hemmed in by the bay on the south, the Charles River on the north, and the marshes in the rear, easily protected its cattle by a little fencing.¹⁶

Where nature did not facilitate protection stockades were built. That at Cambridge was particularly famous. The inhabitants "being well stored with cattle of all sorts . . . paled in with one general fence which is about a mile and a half long, which secures all their weaker cattle from the wild beasts."¹⁷ Private persons of means stockaded for themselves.¹⁸

By 1632, the cattle stringency of the colonists had become somewhat relieved. Bradford noted with satisfaction that "stocks increased, and the increase vendible."¹⁹ In 1633 and 1634, large shipments of cattle were received. On October 10, 1633, the *James* arrived at Salem with 60 cattle; in May 1634, 6 ships came in "with store of

¹¹Winthrop's *Journal*, 1:55.

¹²*Ibid.*, 53, 111.

¹³George K. Holmes, "Progress of Agriculture in the United States," U. S. Department of Agriculture, *Yearbook*, 1899, p. 311.

¹⁴"The Early Records of Charlestown," in Young, *Chronicles of Massachusetts Bay*, 384, 387.

¹⁵William Wood, "New-England's Prospect (London, 1634)," *ibid.*, 406.

¹⁶*Ibid.*, 397.

¹⁷*Ibid.*, 402.

¹⁸*Ibid.*, 404.

¹⁹Bradford's *History*, 293.

passengers and cattle."²⁰ Sixteen heifers in a single lot were sent to the Massachusetts Bay Company. Each of the ministers received one, and the rest were distributed among the poor.²¹ Finally, in the middle of November, before the winter closed down, the ship *Regard* came into the harbor with "about fifty cattle."²²

THE DUTCH TRADE

Fourteen years after the establishment of Plymouth, that colony and Massachusetts Bay began to have trade connections with the Dutch settlement at Manhattan and with the plantations in Virginia and Maryland. On August 12, 1634, Winthrop entered in his *Journal*: "Our neighbors of Plymouth and we had oft trade with the Dutch at Hudson's River, called by them New Netherlands. We had from them about 40 sheep. . . ." ²³ A fortnight later, he wrote: "The Dove . . . came from Maryland. . . . The governor [of Maryland] . . . wrote to the governor here, to make offer of trade of corn, etc. . . . and one Capt. Young wrote to make offer to deliver cattle here." ²⁴ From Dutch sources it is learned that even earlier than this, in 1633, a Virginian named Captain Stone, sailing from the Chesapeake to Massachusetts Bay with a cargo of cattle and salt, touched at New Amsterdam on the voyage. ²⁵

The trade intercourse with the Dutch was particularly valuable for the Massachusetts colonists, for the Dutch cattle were much better than the English stock. In addition, the colonists were able to purchase 27 big draft Flemish horses and many sheep from the Dutch. These important acquisitions were simultaneous with a large consignment in no less than 11 ships which arrived early in June 1635. ²⁶

In the same year, two members of the Massachusetts Bay Colony were adventuring in ships to Sable Island, where huge herds of wild cattle were to be found, the descendants of those that had escaped from shipwrecks. The French of Canada and the islands in the Gulf of St. Lawrence and the English colonists in Massachusetts both sought to enlarge their stock of cattle from the wild supply to be found in this no man's land. ²⁷

PASTURE AND EXPANSION OF SETTLEMENTS

The rapid way in which Plymouth and Massachusetts Bay threw out spurs of settlement is a familiar fact to every one acquainted with the history of early New England. Thomas Weston organized a post at Wessagusset, now Weymouth, in 1622; Thomas Morton established a settlement at Merry Mount in 1625; John Oldham located at Natascot or Hull; Salem was settled in 1628; in 1630 William Blackstone built a house on the peninsula which the Indians called Shawmut and which was later to grow into Boston;

²⁰Winthrop's *Journal*, 1: 111, 125.

²¹*Ibid.*, 128.

²²*Ibid.*, 140.

²³*Ibid.*, 130-131.

²⁴*Ibid.*, 131-132.

²⁵E. B. O'Callaghan, *History of New Netherlands; or New York under the Dutch*, 1: 146-147 (ed. 2, New York, 1855).

²⁶Winthrop's *Journal*, 1: 152.

²⁷*Ibid.*, 1: 153.

Thomas Walford settled at Mishawum, now Charlestown; and Samuel Maverick at Winnisimmet, now Chelsea. Dorchester and Cambridge were begun in like manner. More separate and remote settlements were established in Connecticut, New Hampshire, and Rhode Island.

Historians usually state that political friction and religious dissidence were the causes of these separations, and undoubtedly they were important factors. The influence of the primitive agricultural economy which necessarily obtained in a wilderness country also played a large part. It was to find pasturage for their cattle that the settlers scattered so widely. This helps to explain why the early New England towns were so rambling and sprawling, and why so many new towns were founded.²⁸

The colonists could barely raise enough corn in their fields to sustain human life. The cattle had to shift for themselves and find pasturage where they could. There were as yet no meadows and therefore no hay except marsh hay. Summer and winter the cattle had to browse in the forests, feeding upon leaves and tender shoots of trees.²⁹ The natural grass was thin and sparse and withered early in the summer. Corn was too valuable to be fed to cattle, even the stalks; what little there was had to be reserved for the sheep, which could not roam the woods on account of the wolves.

A casual entry made by Winthrop on September 17, 1633 is interesting for the light it throws on this economic condition. He wrote that John Cotton, the new minister, "was desired to divers places, and those who came with him desired he might sit down where they might keep store of cattle. . . ." ³⁰ Even more illuminating is the statement in Bradford's *History* for the year 1632:

And no man now thought he could live, except he had catle and a great deale of ground to keep them; all striving to increase their stocks. By which means they were scatered all over the bay, quickly, and the town, in which they lived compactly till now, was left very thine, and in a short time almost desolate.³¹

With the increase of population due to immigration much more than to natural increase—17 vessels bearing 2,000 persons arrived in 1630, and 10 to 12 ships came each month during the summer of 1633—the radiation of the settlers extended farther and farther.³²

In 1629, John Mason founded the Colony of New Hampshire in the territory between the Merrimac and the Piscataqua rivers. Here lumbering and especially the felling of the great white pines for ships' masts was an important industry. The English oxen of the Massachusetts colonists were too small and too light for this heavy work, and in 1633 Mason took a notable step for improving the breed of cattle by importing some large yellow cattle from Denmark, which brought up the size of the Devonshire herds.³³ These

²⁸Wood, "New-England's Prospect," 394-398.

²⁹Sylvester Judd, *History of Hadley*, 102-103 (Springfield, Mass., 1905).

³⁰Winthrop's *Journal*, 1:108.

³¹Bradford's *History*, 293.

³²Lois Kimball Mathews, *The Expansion of New England*, 15 (Boston and New York, 1909); Channing, *History of the United States*, 1:324.

³³Nathaniel Adams, *Annals of Portsmouth*, 23 (Portsmouth, N. H., 1825); C. E. Potter, "Native Cattle of New Hampshire," *New Hampshire State Agricultural Society, Transactions*, 1854, p. 226-237.

Danish cattle were chosen on account of their capacity for labor on the stubborn soil of New Hampshire and in the pineries, and for their ability to endure the rigors of a hard climate. By 1634, there were some 300 cattle upon Mason's patents, mostly of this breed.

Four years later, in 1638, one of Mason's agents drove more than a hundred of these oxen to Boston where he sold them for £25 a head.³⁴ New Hampshire grew slowly. Little Harbor, now Rye, was founded in 1623, and Exeter and Hampton in 1638. Newbury was a cattle-raising center of considerable importance, but on the whole settlement north of the Massachusetts line was not rapid.³⁵ Whenever the tendency to form new settlements manifested itself, the extension was along the coast and many times was due to want of sufficient pasturage in the old site. For example, Scituate was founded by emigrants from England in 1630. Six years later, they were complaining that their lands were "'stony and hard to be subdued'" and that the salt marshes failed to provide enough provender for their cattle. Some of the freemen, therefore, migrated to Marshfield.³⁶ Concord was the first example of expansion from the seaboard into the interior, and the "break in the frontier line having once been made, pioneering in the wilderness became general."³⁷

A paragraph in that quaint historical work of early New England, Edward Johnson's *Wonder-Working Providence*, shows how the need to find pastures for cattle induced the exodus from Cambridge into Connecticut in 1635.

This yeare the servants of Christ, who peopled the Towne of Cambridge, were put upon thoughts of removing, hearing of a very fertill place upon the River of Canectico, low Land, and well stored with Meddow, which is greatly in esteeme with the people of New England, by reason the Winters are very long. This people seeing that Tillage went but little on, Resolved to remove, and breed up store of Cattell, which were then at eight and twenty pound a Cow, or neare upon. . . .³⁸

The founding of Saybrook, Windsor, Wethersfield, and Hartford by emigrants from Massachusetts, chiefly from Cambridge and Dorchester, was the result of this resolution. The first group that went out, those "of Dorchester, who had removed their cattle to Connecticut before winter, lost the greatest part of them this winter; yet some, which came late, and could not be put over the river, lived very well all the winter without any hay."³⁹

The loss of stock was very great, owing to the fact that these Connecticut pioneers unwisely started out at the beginning of winter. Winthrop estimated it at £2,000 worth of cattle. The Cambridge group had been less precipitate and followed in the spring of 1636, under the leadership of Thomas Hooker, their pastor. They drove 160 head of cattle before them, "and fed of their milk by the way."⁴⁰

³⁴William B. Weedon, *Economic and Social History of New England, 1620-1789*, 1: 101-102 (Boston, 1890). Hereafter cited as Weedon, *New England*.

³⁵Mathews, *Expansion of New England*, 32.

³⁶*Ibid.*, 13.

³⁷*Ibid.*, 18. See Charles H. Walcott, *Concord in the Colonial Period*, 1-48 (Boston, 1884).

³⁸J. Franklin Jameson, ed., *Johnson's Wonder-Working Providence, 1628-1651*, p. 105-106 (New York, 1910). Hereafter cited as *Johnson's Wonder-Working Providence*. For other prices on cattle at this time, see *Bradford's History*, 347; and *Winthrop's Journal*, 1: 112.

³⁹*Ibid.*, 178.

⁴⁰*Ibid.*, 181; William De Loss Love, *The Colonial History of Hartford*, 116 (Hartford, Conn., 1914).

Connecticut tradition has unduly magnified the difficulties that confronted these first pioneers. Hardships they undoubtedly suffered, yet the way was not an unbroken wilderness. As one writer has pointed out: "The herd followed one another, as they would soon learn to do, in a beaten [Indian] path. It had been trodden that season by several other companies with cattle. . . . Indian villages were located here and there, providing food and shelter in need, as many an early pilgrim to Connecticut had reason to know."⁴¹

Two years later, in 1638, the Colony at New Haven was founded, "but in a little time they overstockt it with chattell," which is to say that the settlers there found the pasturage very poor, so they were compelled to "follow merchandizing, and Maritime affairs" instead of agriculture and stock raising.⁴² The beginnings of New England's coastal trade largely derive from the enterprise of these New Haven colonists who opened an important traffic with the Dutch on Manhattan and Long Island.

PROSPERITY IN MASSACHUSETTS

While the Connecticut colonists were experiencing the hardships of pioneer settlement, affairs in Massachusetts were booming. The fur trade and farming were both brisk. The years between 1636 and 1640 were halcyon years. Newcomers were arriving by every ship. Jeremiah Dummer estimated the value of the cattle alone which had come into Massachusetts in the 12 years after the settlement at Plymouth at £12,000.⁴³

Bradford wrote of the year 1638:

It pleased God, in these times, so to blesse the cuntry with such access & confluence of people into it, as it was thereby much enriched, and cattel of all kinds stood at a high rate for diverse years together. Kine were sould at 20 *li.* and some at 25 *li.* a peece, yea, some times at 28 *li.* A cow-calfe usually at 10 *li.* A milch goate at 3 *li.* and some at 4 *li.*⁴⁴

Winthrop's testimony shows the same prosperity. A cow sold for £25 or £30; a pair of oxen for £40; and corn was worth 5 shillings a bushel.⁴⁵ The demand for livestock in Massachusetts stimulated Samuel Maverick to go to Virginia and bring back 14 heifers and 80 goats.⁴⁶

After 15 years of labor and toil, the colonists in New England, especially in Massachusetts, were fairly well provided with cattle, horses, and probably with hogs. The testimony of contemporary observers is unanimous as to this. William Wood, writing of the year 1633, asked: "Can they be very poor, where for four thousand souls there are fifteen hundred head of cattle, besides four thousand goats, and swine innumerable?"⁴⁷

⁴¹*Ibid.*, 36.

⁴²Johnson's *Wonder-Working Providence*, 176.

⁴³Jeremiah Dummer, *A Defence of the New-England Charters*, 9 (London, 1721). Cf. Thomas Hutchinson, *The History of the Colony of Massachusetts-Bay*, 1:91 (Boston, 1764); Channing, *History of the United States*, 1:335.

⁴⁴Bradford's *History*, 347. "*li.*" stands for the old English *libra*, or pound sterling.

⁴⁵Winthrop's *Journal*, 1:200.

⁴⁶*Ibid.*, 185.

⁴⁷Wood, "New-England's Prospect," 415.

"There are not many Towns in the Country," recorded Johnson, "but the poorest person in them hath a house and land of his own, and bread of his own growing, if not some cattell: beside, flesh is now no rare food, beef, pork, and mutton being frequent in many houses. . . . there being, as is supposed in this Colony, about fifteen thousand acres in tillage, and of cattell about twelve thousand neat, and about three thousand sheep."⁴⁸

Cambridge enjoyed the double distinction of being the seat of Harvard College, the first institution of higher learning in what came to be the United States, and the most prosperous cattle center in New England.⁴⁹ The herd at Cambridge was so large that it was divided into a "milch" herd and a "dry" herd. The latter was cared for by a converted Indian named Waban, whose contract with the town is preserved in the local records. It is dated April 12, 1647 and reads:

Bargained with Waban, the Indian, for to keepe about six score heade of dry cattle on the south side of Charles River, and he is to have the full some of eight pound, to be paid as followeth, viz 30 s. to James Cutler, and the rest in Indian corne at 3 sh. bushel, after micheltide next. - He is to bargain to take care of them the 21 day of this present month, and to keepe them untill 3 weeks after michelmas; and if any be lost or ill, he is to send word unto the towne, and if any shall be lost through his carelessness he is to pay according to the value of the beast for his defect.

His ~ mark. Waban.⁵⁰

The condition of sheep husbandry was quite different from that of cattle. Chester Whitney Wright, in his standard work on *Wool-Growing and the Tariff*, summarized the situation as follows:

The lot of the innocent sheep in these struggling colonies was indeed a hard one. They proved to be the only domestic animals which did not multiply freely, and it was by constant work and effort alone that the race was kept from extinction. The wolf was its deadly enemy, but the severe winters, combined with lack of care on the part of the owners, also depleted the flocks. The colonists seldom made any effort to protect their sheep against winter storms, and, accustomed as these animals were to a milder clime, they suffered greatly.⁵¹

Five sheep had been brought over in the *Friendship* in the summer of 1631, and 40 sheep which must have been of the Texel breed had been bought from the Dutch in New Amsterdam in 1634.⁵² In 1635, more were brought over from Holland. These must have increased somewhat, although the raising of sheep for years was attended with great difficulty.⁵³ In 1642, it is doubtful if there were a thousand sheep in all

⁴⁸Johnson's *Wonder-Working Providence*, 210, 211.

⁴⁹According to a census taken by order of the General Court in 1647, Cambridge had 568 head of cattle, consisting of 208 cows valued at £9 per head; 131 oxen valued at £6 per head; and 229 young cattle. There were also 20 horses worth £7 each; 37 sheep valued at £1 10s. per head; 62 swine valued at £1 per head; and 58 goats worth 8s. each. Abiel Holmes, "The History of Cambridge," *Massachusetts Historical Society, Collections*, 1800 (ser. 1) 7:25 note (Boston, 1801).

⁵⁰Quoted in *ibid.*, 26.

⁵¹Chester Whitney Wright, *Wool-Growing and the Tariff*, 2 (Boston and New York, 1910).

⁵²Winthrop's *Journal*, 1:130-131.

⁵³Edward Eggleston, "Husbandry in Colony Times," *Century Magazine*, 27 (n.s. 5):445 (1884).

Massachusetts; wool was continually being imported from England. Wood wrote in 1633: "In an ill sheep year I have known mutton as dear in Old England, and dearer than goat's flesh is in New-England. . . ." ⁵⁴ It cannot be assumed from this statement that sheep raising in New England was well established as early as 1633. Johnson's statement that there were about 3,000 sheep in Massachusetts in 1642 seems an impossible figure, even admitting that "the Lord had been pleased to encrease sheep extraordinarily of late." ⁵⁵ The "goode flocke" belonging to the people of Cambridge in 1649 must have increased surprisingly in 2 years, for the census of 1647 had shown only 37 sheep.

CIVIL WAR IN ENGLAND

Upon the simple prosperity of New England in the middle of the seventeenth century adversity suddenly fell. The settlers of Massachusetts, Rhode Island, and Connecticut were of Puritan extraction. In England, by 1640, the Puritan Revolution was in full swing. Puritan control of the Long Parliament, the impeachment of Laud and Strafford, the abolition of the Star Chamber, and the Grand Remonstrance culminated in the Civil War of Cavalier and Roundhead and the rise of Cromwell.

Events like these kept at home the strong men who had hitherto fed the Colonies by immigration. The English market for the goods of the colonists also fell away during the turmoil. In Massachusetts, the tide was at lowest ebb in 1641. ⁵⁶ The drop in cattle values was like a modern financial crash. The changed state of the mother country caused a fall in the price of cattle, "in which most parte of their estats lay," wrote Bradford at this time.

Thus, a cove that but a month before was worth 20 *li.* . . . fell now to 5 *li.* . . . and a goate that wente at 3 *li.* or 50 *s.* would now yeeld but 8 or 10 *s.* at most. All men feared a fall of catle, but it was thought it would be by degrees; and not to be from the highest pitch at once to the lowest, as it did, which was greatly to the damage of many, and the undoing of some. ⁵⁷

The critical times were a matter of acute mental suffering to brave souls like Bradford and Winthrop, who had staked everything in the colonial venture and labored hard for its success. No one can read Winthrop's *Journal* for the years 1640 to 1642 without feeling the burden he carried. "Many men began to inquire after the southern parts; and the great advantages supposed to be had in Virginia and the West Indies, etc., made this country to be disesteemed of many," Winthrop wrote in 1640. ⁵⁸ Two years later, at the height of this first critical period of New England history, he explained:

The sudden fall of land and cattle, and the scarcity of foreign commodities, and money, etc., with the thin access of people from England, put many into an unsettled frame of spirit, so . . . as they concluded there would be no subsisting here, and accordingly they began to hasten away, some to the West Indies, others to the Dutch, at Long Island, etc., (for the governor there invited them by fair offers) and others back for England. . . . ⁵⁹

⁵⁴ Wood, "New-England's Prospect," 415.

⁵⁵ Johnson's *Wonder-Working Providence*, 211.

⁵⁶ Weeden, *New England*, 1: 170-171.

⁵⁷ Bradford's *History*, 356.

⁵⁸ Winthrop's *Journal*, 1: 333. Cf. Frank Strong, "A Forgotten Danger to the New England Colonies," *American Historical Association, Annual Report*, 1898, p. 77-94.

⁵⁹ Winthrop's *Journal*, 2: 82.

The adversity fell heaviest upon the wealthier landed proprietors, almost the whole of whose fortune was invested in farming and cattle raising. Winthrop related the story of one of this class, who, being compelled to sell a pair of oxen in order to pay a hired man, told him he could not afford to employ him any longer. The man answered that he would work for more of his cattle. "But how shall I do when all my cattle are gone?" asked the employer. "You shall then serve for me, and so you may have your cattle again," was the keen reply.⁶⁰

SHIPPING TO THE WEST INDIES

Hard times stimulate enterprise. England and Ireland had hitherto supplied the British West Indies with cattle and sheep, and with horses which were used chiefly to tread out the sugarcane on the plantations. The turmoil in England and Ireland in the forties and fifties of the seventeenth century interrupted this lucrative traffic, and the New England Colonies were not slow in discovering that it was an ill wind that blew nobody any good.

The raising of tropical products in the West Indies was so profitable a business that the economy of the islands was one-sided. Most of the livestock, wool, beef, pork, bacon, and ham that the planters required for themselves and their slaves was imported. With the failure of England and Ireland as a source of these supplies, the farmers of New England set out to capture this trade.

Massachusetts and Rhode Island soon began to grow rich on the Caribbean trade. In 1648, a cargo of 80 horses was shipped from Boston to the Barbados.⁶¹ A Rhode Islander by the name of William Coddington was making regular shipments of horses there in 1656.⁶² So great was the export of horses from Massachusetts that the government finally forbade the export of mares.⁶³ "This country also is now well stoced with horses, cowes, sheep & goates," explained Winthrop, in a new and happy frame of mind in 1660. "Now the country doth send out great store of biscott, flower, peas, beife, porke, butter, & other provisions to the supply of Barbados, Newfoundland, & other places. . . ."⁶⁴ Virginia and Maryland also supplied a market for these products.⁶⁵

Neither Plymouth nor Massachusetts could compete with Rhode Island in stock raising in the seventeenth century.⁶⁶ The Royal Commissioners, reporting on the state of the New England Colonies in 1666, described Rhode Island thus: "The best English grass and most sheep are in this Province, the ground being very fruitful, ewes bring

⁶⁰*Ibid.*, 228.

⁶¹*Ibid.*, 346.

⁶²Weeden, *New England*, 1:158; John R. Bartlett, comp., *Records of the Colony of Rhode Island and Providence Plantations*, 1:338 (Providence, 1856).

⁶³Weeden, *New England*, 1:154; Shurtleff, *Records of the . . . Massachusetts Bay*, 3:169.

⁶⁴Quoted in Weeden, *New England*, 1:204.

⁶⁵Great Britain, Privy Council, Public Record Office, *Calendar of State Papers, Colonial Series, America and West Indies*, 5:346 (London, 1880).

⁶⁶Edward Field, *State of Rhode Island and Providence Plantations at the End of the Century: A History*, 1:272-273 (Boston and Syracuse, 1902).

ordinarily two lambs, corn yields 80 for one, and in some places has grown 26 years together without manuring."⁶⁷ William Brenton alone owned 1,500 head of sheep.⁶⁸ A traveler in 1675 declared that there were more sheep in Newport "than anywhere else in New England."⁶⁹

PROMOTION OF SHEEP HUSBANDRY

The rapid growth of sheep husbandry during these years is surprising. It was zealously promoted not so much in order to increase the food supply as to furnish wool. As early as 1662, there was a woolen mill at Watertown, Massachusetts.⁷⁰ In 1650, the Reverend John Higginson of Connecticut wrote to the Reverend Thomas Thatcher of Weymouth: "God seems to provide in a gradual way for supply in clothing by the multiplying of sheep, there being many thousands in Rhode Island and from thence every plantation in these parts begin to get into stock more or less."⁷¹ Nevertheless, the frequent measures passed by the Massachusetts General Court to increase the flocks indicate that wool was not too plentiful at this time.⁷²

Great efforts were made by the New England Colonies to promote sheep raising. The exportation of ewes or lambs, except to other Colonies, was forbidden.⁷³ The Massachusetts General Court, in 1656, ordered all commons to be cleared for sheep.⁷⁴ Connecticut, in 1670, in order to encourage sheep growing, required every person to labor for one day in each year clearing the underwood to make pasturage.⁷⁵ Milford, Connecticut, kept over a thousand sheep as public property.⁷⁶

Drastic legislation was passed by all the New England Colonies to protect the sheep from the ravages of dogs. A dog that bit or killed a sheep was to be hanged as though a human malefactor. The execution usually was done in some nearby swamp, whence the name Hang-Dog Swamp for several localities in colonial Massachusetts and Connecticut.⁷⁷

In eastern Massachusetts the native American grass was thin, and the cattle were compelled to browse largely on the shoots of young trees. This resulted in the farm-houses of the early settlers being set far apart. The tale that the streets of old Boston were laid out along the former cowpaths is not legend, but fact. Desire for

⁶⁷*Calendar of State Papers, Colonial Series, America and West Indies*, 5:343.

⁶⁸Field, *State of Rhode Island*, 1:142.

⁶⁹*Calendar of State Papers, Colonial Series, America and West Indies*, 9:221 (London, 1893).

⁷⁰Channing, *History of the United States*, 2:494.

⁷¹Quoted in Bernard Christian Steiner, *A History of the Plantation of Menunkatuck and of the Original Town of Guilford, Connecticut*, 74 (Baltimore, 1897).

⁷²Wright, *Wool-Growing and the Tariff*, 3.

⁷³Weeden, *New England*, 1:195.

⁷⁴*Ibid.*, 198.

⁷⁵*Ibid.*, 276.

⁷⁶Eggleston, "Husbandry in Colony Times," 446.

⁷⁷Judd, *History of Hadley*, 103 and note.

better farming land, especially pasturage, was a cogent factor in promoting emigration to Connecticut. The broad meadows of the Connecticut River furnished a thick, close-set grass, often growing as high as the shoulder, upon which cattle thrived.⁷⁸

The natural richness of the Connecticut River bottom, as it drew Massachusetts settlers to Connecticut, also drew them into western Massachusetts, where Springfield, Hadley, and Hatfield were founded soon after Saybrook, Windsor, and Hartford. As Rhode Island excelled in sheepraising, so, in the second half of the seventeenth century, this region became famous for stock raising. John Pynchon of Springfield was one of the earliest American packers. Before 1655, he was driving cattle from Springfield to Boston in the autumn and was sending winter-fattened cattle there before 1670 and for many years thereafter.⁷⁹ Stall-feeding probably originated with the farmers around Springfield and Hadley. Pynchon not only fattened live cattle for the Boston market but dealt in mutton, tallow, and wool. However, packing of pork seems to have been his chief business. Between 1662 and 1683, he bought and packed great numbers of hogs, chiefly for the West Indian trade.

Pynchon's records indicate something about the hogs in the early New England Colonies. There were no choice breeds. Most of them were black or sandy in color; they were of razor-back build, speedy runners, as might be inferred from the fact that they ranged the woods in a half-wild state, and the boars were quite capable, with their huge tusks, of taking care of any wolves that might attack them. They seem hardly to have been fattened at all before killing, owing to the prevailing scarcity of corn. Pynchon's books give the weight of one lot of 162 hogs as 27,409 pounds, an average of 170 pounds per animal. Sixteen of these weighed less than 120 pounds; 25 weighed over 200 pounds; and the two heaviest tipped the scales at 270 and 282 pounds respectively.⁸⁰

The horse seems to have been much neglected in early New England, as compared with cattle and sheep. This is not surprising, inasmuch as oxen were universally used for draft purposes, roads were few in number, and the horse had no flesh value like cattle. "The horses, which obtained most of their living upon the commons," explained Sylvester Judd, "were cheaply raised, and were often much neglected. . . ."⁸¹ Nevertheless, an official report of 1671 stated that Massachusetts had a "store of good horses."⁸²

KING PHILIP'S WAR

The rapid extension of settlement by the English colonists, and especially the great development of stock raising between 1640 and 1675, were destined to have an important historical effect, for they were accountable for the first serious Indian war in New England. The Indians, in the main, had been friendly to the settlers.

⁷⁸Weeden, *New England*, 1:101.

⁷⁹Judd, *History of Hadley*, 372.

⁸⁰*Ibid.*, 368-372; Weeden, *New England*, 1:332.

⁸¹Judd, *History of Hadley*, 367.

⁸²*Calendar of State Papers, Colonial Series, America and West Indies*, 7:232 (London, 1889).

They had furnished them with corn out of their own supplies and had shown them how to plant it. Only in Connecticut, in 1637, had the Pequots given trouble. As long as the English continued to be fur traders and trappers the Indians did not molest them. As they increasingly became farmers and cattle raisers, friction with the Indians grew. The Wampanoags of Massachusetts, the Narragansetts of Rhode Island, and the Pequots of Connecticut were not nomadic Indians. Although they lived much by hunting, they dwelt in settled communities and practiced some agriculture.

Increasingly deprived of his lands, the Indian finally had to "fight or starve."⁸³ Having no cattle of his own, the Indian never fenced his cornfields, and the settlers' cattle and hogs, as they grazed at large, continually invaded these patches.⁸⁴ Not unnaturally the Indian retaliated by killing the stock. The traditional reply of King Philip, the son of Massasoit and chief of the Wampanoags, describes the nature of the Indian grievances.

By various means they [the English] got possession of a great part of my territory. . . . Sometimes the cattle [of] the English would come into the cornfields of my people, as they did not make fences like the English.

I must then be seized and confined, till I sold another tract of my country for satisfaction of all damages and costs. Thus, tract after tract is gone.⁸⁵

On the other hand, the settlers complained that the Indians continually killed the cattle as they wandered in the forests seeking pasturage. To the Indian this seemed a perfectly natural thing to do. Having no domestic animals of his own and used to hunting deer, his inclination was to strike down a cow as readily as he would a deer. He had no perception of the Englishman's idea of property, and all cattle seemed fair game to him. Like the Negro of the South, the Indian soon developed a taste for pork. Sometimes he had the naïveté to come into the settlements to sell it. This led to methods of suppression on the part of the towns. Concord enacted that all hogs owned by Englishmen should be marked on the ears, but that the Indians should not mark their hogs. When the Indians came to town to peddle pork they were required to bring the ears of the slaughtered hog as proof, or the meat was forfeited.⁸⁶

The colonists grievously complained of the way in which the Indians' dogs harried the cattle and sheep. This quaint minute appeared in the records of Providence in 1667:

Valentine Whittman and Thomas Clemence shal goe into the Jndian dwelling at pomecansett, And unto other Jndians living neare this Towne; And warne them to Take som Course with their Dogges to keep them from ffalling upon the Jnglish Cattell or Else they must Expect to have their Dogges Killed.⁸⁷

⁸³Channing, *History of the United States*, 1:455.

⁸⁴Herbert L. Osgood, *The American Colonies in the Seventeenth Century*, 2:411 (New York, 1904); *Calendar of State Papers, Colonial Series, America and West Indies*, 5:321.

⁸⁵William E. Foster, ed., *Early Attempts at Rhode Island History . . . Materials for a History of Rhode Island*, collected by Theodore Foster, 91-92 (Providence, 1885); *Calendar of State Papers, Colonial Series, America and West Indies*, 9:441-442, 466.

⁸⁶Walcott, *Concord in the Colonial Period*, 104; Shurtleff, *Records . . . of the Massachusetts Bay*, 4 (2):512-513 (Boston, 1854).

⁸⁷Quoted in Field, *State of Rhode Island*, 3:565 (Boston and Syracuse, 1902).

King Philip's War (1675-1676) grew out of this state of friction and mutual recrimination between the English colonists and the Indians. Philip was a leader with great force of character and formed a league which included all the Indian tribes from Maine to Connecticut. Naturally, the frontier settlements suffered most. An attack on Hadley was repulsed, but Deerfield was burned. The United Colonies raised 2,000 troops. The fort of the Narragansetts near Fall River was captured in December 1675, but during the winter and spring nearly all the towns suffered more or less severely. The end of the war came with a serious repulse of the Indians at Deerfield in May 1676, and finally the capture of King Philip himself, who was shot on August 12, 1676.⁸⁸

The New England Colonies were victorious in the war, but the colonists had grievously suffered in the loss of their homes, crops, and cattle. It required years to recover the prosperity which they had built up after 1640. Sporadic Indian forays still took place; in 1688 there was a particularly violent one.⁸⁹

The abatement of danger from the Indians gave a new impulse to expansion into localities which hitherto had not been entered. Notable among these places was the Merrimac Valley which soon rivaled the Connecticut Valley in western Massachusetts as a cattle-raising country. A visitor in 1688 wrote: "It is very fruitful in corn and grass. Nature has done so much that it seems like a plantation [*i.e. a farm*] of long standing rather than a wilderness."⁹⁰ From New Hampshire, fat oxen, descendants of the big, yellow Danish cattle imported by Mason, were regularly driven to Boston at the end of the seventeenth century. Around Hadley, as new grazing towns were settled, a brisk business was done in barreling beef and pork. John Pyncheon's career as a packer had ended in 1683, but several succeeded him in the business.⁹¹

LOCAL GRAZING REGULATIONS

The New England towns of the seventeenth century were simple agricultural communities, and under the wilderness conditions imposed by a raw and undeveloped country, they reverted to forms and customs of primitive village communities in some particulars.

The universality of the town common and the communal management of their flocks and herds by these first settlers of New England is an evidence of this statement. In the older settlements, as conditions became more stable and tillage increased, it was impracticable to permit the cattle and horses to range at will as they had done at first. Moreover, increased acreage of corn and imported English grass seed furnished stalks and hay for winter fodder. In consequence, the towns developed the practice of combining into one communal herd all the livestock of the community.

Town keeping of "cows and goates" is mentioned in Dorchester as early as 1633. Salem herded in common by 1634. Hadley had a town cowkeeper in 1662; Boston had one in 1663. The advantages of this arrangement are obvious. "By embodying in one communal

⁸⁸For an infrequently used source, see *Calendar of State Papers, Colonial Series, America and West Indies*, 9:405-406.

⁸⁹*Ibid.*, 12:591 (London, 1899).

⁹⁰*Ibid.*, 642.

⁹¹Judd, *History of Hadley*, 368-369.

herd the cattle of many owners, the best care was obtained with the least effort. Labor was scarce. . . . In some cases, as at Cambridge, the cows were brought into the village twice in twenty-four hours to be milked, and were pastured out day and night. Generally the cattle were in the home lots at night or in a common cow-house, safe from beasts of prey."⁹²

The owners paid a fixed sum for the cowkeeper's services; in Boston, in 1686, the charge was 2d. In the village economy the town bull was an animal of importance. Dorchester, in 1634, legislated for four bulls "to go with the drift of milch cows," which would indicate that the town must have had a considerable store of cattle.⁹³ Boston had a town bull as late as 1722, Guilford, Connecticut, till 1748, and Salem in 1790.⁹⁴ Various citizens had the custody of the bull, and owners of cows paid 12d. per head for service. From regulations like these it was a natural step for the town authorities sometimes to determine which calves should be raised for the service of the town.⁹⁵

The town common was open to all kinds of livestock. Horses, because of the greater difficulty of herding them, were usually hobbled. Thus, New Hampshire required the fettering of horses between March and October, for otherwise it "giveth a liberty of five months for those horses to trape over fences and tread and spoil our meadows."⁹⁶

The indiscriminate running of stallions among the mares upon the common was recognized as prejudicial to horse raising. Massachusetts, before 1700, excluded from town commons "all stone horses under fourteen hands high and not of 'comely proportion.'"⁹⁷ Colchester, Connecticut compelled the owner of a 3-year old black stallion to sell him because his height fell below the legal requirement. Narragansett forbade the running of stallions or rams at large.⁹⁸

As sheep were the most defenseless of domestic animals and the hardest to raise, the town regulations concerning their care were numerous. The town shepherd was a more important local personage than the town cowherd. Almost every town had one, and sometimes several, as at Windsor, Connecticut, where three flocks were assigned to different pastures. Herdwalks and sheepwalks are constantly mentioned in the New England town records.⁹⁹ Newbury "instituted an elaborate system for folding sheep in 1682. The whole 'lower commons' was divided into five 'ranges', or sheepwalks, each occupied by a distinct flock. One of these numbered 704 head, belonging to sixteen owners. Each owner brought a 'gate' . . . for every twenty sheep."¹⁰⁰ These gates were movable hurdles or movable pens after the custom in England. Night folding was absolutely necessary on account of wolves, especially in interior towns away from the seacoast where the sheep were often herded on offshore islands or necks of land.

⁹²Weeden, *New England*, 1:64.

⁹³*Ibid.*

⁹⁴Steiner, *History . . . of Guilford*, 243; Weeden, *New England*, 2:522; William Bentley, *The Diary of William Bentley*, 1:154 (Salem, Mass., 1905).

⁹⁵Henry R. Stiles, *The History of Ancient Windsor, Connecticut*, 145 (New York, 1859).

⁹⁶Nathaniel Bouton, ed., *Documents and Records Relating to the Province of New Hampshire from 1692 to 1722*, 3:805 (Manchester, N. H., 1869); Steiner, *History . . . of Guilford*, 242.

⁹⁷Weeden, *New England*, 1:277.

⁹⁸*Ibid.*, 404, 523.

⁹⁹*Ibid.*, 277.

¹⁰⁰*Ibid.*, Joshua Coffin, *A Sketch of the History of Newbury*, 138 (Boston, 1845).

In the early days of New England colonization, before there were enough cattle to require the appointment of a village cowherd, it was the practice of the neighbors to take turns watching the village herd. Not all felt equal responsibility, and some were careless. Lynn had a famous lawsuit in 1638 by reason of this. The circumstances, which are not without an amusing side, are related by Winthrop:

It fell out to the turn of one Gillow to keep them, and, as he was driving them forth, another of these neighbors went along with him, and kept him so earnestly in talk, that his cattle strayed and gate in the corn. Then this other neighbor left him, and would not help him recover his cattle, but went and told another how he had kept Gillow in talk, that he might lose his cattle, etc. The cattle, getting into the Indian corn, eat so much ere they could be gotten out, that two of them fell sick of it, and one of them died presently; and these two cows were that neighbor's who had kept Gillow in talk, etc. The man brings his action against Gillow for his cow (not knowing he had witness of his speech); but Gillow, producing witness, etc., barred him of his action, and had good costs, etc.¹⁰¹

Unlike the cattle, sheep, and horses, which were confined to the commons for pasturage, the hogs of early New England roamed at large. It was not until the eighteenth century that they were required to be ringed. Hadley in 1706 "voted to choose hog-ringers annually, and they were to ring all swine 14 inches high, found unringed on commons or fields, from March 1 to Dec. 1. . . . Hogs seem to have run at large if ringed, or sometimes if yoked and ringed."¹⁰²

Owners identified their stock by marks or brands—a medieval European device revived in the New World—which were registered with the town clerk; the description was sometimes embellished with a rude picture.¹⁰³ Some of these descriptions are amusing reading. Thus James Frie's mark was described as "a half cross cut out of the under side of the left ear, split or cut out about the middle of the Top of the ear, called by som a figger of seven."¹⁰⁴ Joseph Mawrey, a citizen of Rhode Island, had "1 M on the neere Buttock" for horses; his earmark for cattle was "a Cropp off of, the topp of ye Right Eare, & a halfe penney under it behind the Eare." John Browne's designation was "in Each Eare a hole." Occasionally a record of an owner who had a more fanciful design is found. Zuriell Hall, also of Rhode Island, marked his cattle with "a Cropp of the Topp of the Right Eare & a flower deluice on the left."¹⁰⁵ Even veterinary science was not unknown in colonial New England. In the seventeenth century, Roxbury had a "cowleech" named John Graves.¹⁰⁶

Between the cessation of the Indian wars after 1688 and the outbreak of the American Revolution in 1775, the New England Colonies enjoyed a large degree of prosperity. More and more trade tended to supplant agriculture. The fisheries were generally profitable, and manufacturing began to get a start.

¹⁰¹Winthrop's *Journal*, 1:278-279. This case is far less famous than the Sow Case, which actually had a constitutional significance. See *ibid.*, 2:64-66, 116-121, and for an explanation of the issue involved, George H. Haynes, *Representation and Suffrage in Massachusetts, 1620-1691*, p. 41-44 (Baltimore, 1894).

¹⁰²Judd, *History of Hadley*, 71.

¹⁰³James H. Trumbull and Charles J. Hoadly, comp., *The Public Records of the Colony of Connecticut*, 7:111 (Hartford, 1873).

¹⁰⁴Quoted in Weeden, *New England*, 1:523. Cf. Walcott, *Concord in the Colonial Period*, 103; Joseph Merrill, *History of Amesbury . . . and Merrimac*, 194 (Haverhill, Mass., 1880).

¹⁰⁵Field, *State of Rhode Island*, 3:566.

¹⁰⁶Weeden, *New England*, 1:109.

COLONIAL WOOL

The development of New England woolen manufacture stimulated greatly the raising of sheep, which became the staple animal industry of Massachusetts and Rhode Island.¹⁰⁷ Sheep raising and woolen manufacturing soon became an issue between Great Britain and the New England Colonies. England for centuries had enjoyed a monopoly of wool growing in Europe and looked with resentment upon the competition even of her own offspring. As early as 1660, England had forbidden the export of sheep and wool from any of the American Colonies, a prohibition which marks the beginning of the oppressive trade measures that finally helped drive the Colonies into rebellion. This was followed by a more drastic act in 1699 forbidding the shipping of wool to England. Even trading in wool or woolens among the Colonies themselves was forbidden.¹⁰⁸ The British Parliament also forbade the export of thoroughbred English rams into the Colonies, in order to prevent improvement of the breed of sheep there. Jared Eliot, in commenting on the poor sheep in Connecticut and the desirability of improving the breed, said: "The *English Breed of Cots-wold Sheep* cannot be obtained, or at least without great difficulty: For Wool and live Sheep are Contra-band Goods, which all strangers are prohibited from carrying out, on Pain of having their right Hand cut off."¹⁰⁹ As a consequence of this prohibition, the smuggling of rams out of England became a lucrative business for daring American sea captains.

Nevertheless, in spite of these restraints on the part of the home government, the sheep industry rapidly increased in New England in the eighteenth century. William Harris, who visited the Colonies in 1676, testified before the British Board of Trade that there were more sheep in Rhode Island than anywhere else in New England, and that "Newport could furnish wool to Europe."¹¹⁰ Two years earlier, Governor William Drenton had bequeathed 1,500 sheep to his heirs.

In the eighteenth century, the larger islands off the coast of Massachusetts and Rhode Island, such as Martha's Vineyard, Nantucket, and Block Island, became vast sheep preserves. The salubrity of the ocean atmosphere was reputed to give a softness to the fleece not unlike that of English wool. The principal reason why these places became so important for sheep raising was the fact that complete extermination of wolves had made it safe and profitable. When St. Jean de Crèvecoeur visited these islands in 1773, there were 20,000 sheep on Martha's Vineyard and 15,000 on Nantucket.¹¹¹

On the latter island, in particular, sheep raising was carefully regulated, as Crèvecoeur's account indicates:

The island was patented in the year 1671, by twenty-seven proprietors. . . . seeing that the scanty grass of the island might feed sheep; they agreed that each proprietor should be entitled to feed on it . . . 560 sheep. By this agreement, the national flock

¹⁰⁷*Ibid.*, 387-392; 2:681, 731-733, 789-791, 851-855; Wright, *Wool-Growing and the Tariff*, 5-9; J. Leander Bishop, *A History of American Manufactures from 1608 to 1860*, 1:331-335 (ed. 3, Philadelphia, 1868).

¹⁰⁸Wright, *Wool-Growing and the Tariff*, 5.

¹⁰⁹Jared Eliot, *Essays upon Field-Husbandry in New England*, 14 (Boston, 1760).

¹¹⁰William B. Weedon, *Early Rhode Island; A Social History of the People*, 114, 176 (New York, 1910).

¹¹¹Michel Guillaume St. Jean de Crèvecoeur, *Letters from an American Farmer*, 124, 166 (New York, 1904).

was to consist of 15,120 . . . Further, they agreed . . . four sheep should represent a cow, and two cows a horse. . . . ¹¹²

There were two big shearpens on the island, one at the west end, the other at the east end. According to the records the first sheepshearing took place in 1696. The last was in 1847, at a time when the center of gravity of American wool growing was in Ohio.

The severe British prohibition upon the importation of blooded English rams was as much a matter of irritation to the New England sheep raiser as the commercial restraints of the British Government were to the New England woolen manufacturer. The local wool was coarse and short. Andrew Burnaby, an English traveler in America in 1760, declared that he "was not able to discover that any one had ever seen a staple of American wool longer than seven inches; whereas in the counties of Lincoln and Leicester, they are frequently twenty-two inches long." He rightly attributed part of this poor-ness of quality to want of "attention and care in housing the sheep." ¹¹³ An added detriment to sheep raising was the fact that the Colonies were behind England in methods of feeding. Turnips were cultivated only as a kitchen vegetable, instead of in broad fields as in England. Moreover, the American winter was so severe that sheep had to be fed hay or corn fodder, which cut the profit of the American grower, whereas in England sheep often could be kept abroad during winter.

Governor Thomas Hutchinson, the last royal Governor of Massachusetts, described it in 1776 as "the most sheepish of all the Colonies." When driven out by the Revolution, he went to England and at one place saw "more sheep feeding than there are in all the American Colonies." ¹¹⁴ His observations may have been tinged with the natural animus of a Tory, yet it cannot be doubted that he honestly expressed some of the deficiencies of sheep raising and wool growing in America—deficiencies that were not removed until improved methods of feeding were adopted and Merino sheep imported from Spain early in the nineteenth century.

TRADE IN HORSES

Next to sheep raising in New England in the eighteenth century, the raising of horses was the most important branch of animal husbandry, with raising of cattle a close third. Horses were exported in large numbers to the West Indies for use in the sugar mills, where the combination of climate and hard labor soon made short work of them, so that there was a continual demand upon New England for horses.

If the colonists had confined their market in horses to the British West Indies, the home government would not have taken offense. However, the New Englanders sold their horses to the French and Dutch sugar planters in Martinique and Dutch Guiana which angered the British Government for the assistance it gave to French and Dutch

¹¹²*Ibid.*, 130, 131; Robert A. Douglas-Lithgow, *Nantucket, A History*, 80-83 (New York and London, 1914).

¹¹³Andrew Burnaby, "Travels Through the Middle Settlements in North America in the Years 1759 and 1760 (ed. 3, London, 1798)," in Rufus Rockwell Wilson, ed., *Source Books of American History*, 136 (New York, 1904).

¹¹⁴Thomas Hutchinson, *Diary and Letters*, 2:68, 107 (London, 1886).

sugar production. As early as 1721, strong representation was made by British sugar interests to the Lords Commissioners for Trade and Plantation against the export of horses from Massachusetts to any save British islands in the West Indies, of which Barbados was the most important.¹¹⁵

Boston and Salem in Massachusetts, Providence and Newport in Rhode Island, and Norwich, New London, and New Haven in Connecticut all had a thriving trade in horses with the West Indies. Rhode Island and Connecticut surpassed Massachusetts. John Hull early began to breed horses at Point Judith, Rhode Island, for the sugar plantations.¹¹⁶ At Providence, in the middle of the eighteenth century, James Brown had eight vessels, "all West india vessels, some to Surinam with Horses,"¹¹⁷ and in 1716 Captain Hutton of Newport took out 45 horses in a single shipment to Barbados;¹¹⁸ 6 cargoes of horses left New London together in June 1724;¹¹⁹ and a planter in Surinam ordered from his agent in Salem "16 large horses, young and with long tails."¹²⁰ One brig from Norwich carried 49 horses, and many sloops took 35 horses at once.¹²¹

These horse raisers lived in the southern corner of Rhode Island and formed a local aristocracy unique in New England, known as the "Narragansett Planters." Edward Channing's authoritative work on this group supplies data on its origin and characteristics. As pointed out by him, "Narragansetter's wealth was derived not so much from the cultivation of any great staple like tobacco or cotton as from the product of their dairies, their flocks of sheep, and their droves of horses, the once famous Narragansett pacers. In fine, they were large—very large—stock farmers and dairymen. . . ."¹²² Fine soil for pasture and numerous lagoons provided excellent facilities for the development of animal husbandry.

In New Haven, Benedict Arnold was actively engaged in the West Indian horse trade just before the outbreak of the Revolution. Arnold, who came of good old Rhode Island stock, was a man of great energy and originality. Instead of traveling around New England and buying up horses where and how he could, as so many of those engaged in the business did, Arnold, with three companions, used to go to lower Canada in the dead of winter, buy up the stocky and hardy Canadian ponies and drive them, a hundred at a time, across the ice of Lake Champlain and Lake George, then down the Hudson Valley and across to New Haven, the horses having nothing to feed upon through this wilderness except twigs and pine boughs.¹²³ During the spring, the horses were fattened, and when summer came they were put on board the sloops for Barbados. Arnold was his own skipper,

¹¹⁵E. B. O'Callaghan, ed., *Documents Relative to the Colonial History of the State of New-York*, 5:597 (Albany, 1855).

¹¹⁶Weeden, *New England*, 1:334.

¹¹⁷Quoted in *ibid.*, 2:658.

¹¹⁸*Ibid.*, 554.

¹¹⁹Frances Manwaring Caulkins, *History of New London, Connecticut*, 241 (New London, 1852).

¹²⁰Joseph B. Felt, *Annals of Salem*, 2:250 (ed. 2, Salem, Mass., 1845).

¹²¹Frances Manwaring Caulkins, *History of Norwich, Connecticut*, 478-479 (Hartford, 1866).

¹²²Edward Channing, *The Narragansett Planters, A Study of Causes*, 9, 15-16 (Baltimore, 1886).

¹²³John Codman, *Arnold's Expedition to Quebec*, 15 (New York, 1901); Marquis de Chastellux, *Travels in North-America, in the Years 1780, 1781, and 1782*, 1:360 and note, 361 (London, 1787).

for he was an accomplished seaman, and being his own master and working without middlemen, he made money.

The vessels engaged in the West Indian horse trade were popularly known as "horse jockeys." As they sailed only in summer, and the voyage was not long, they went out heavily loaded, horses and cattle being tethered on deck.¹²⁴ The profits of the business were large, so that horse stealing was a common offense in New England in the eighteenth century. In 1700, every Massachusetts port was required by law to keep a tollbook in which the dealer's name and the number of horses shipped with description of them was entered for "better preventing the stealing of horses and horse-kind, and clandestinely conveying them away." In Rhode Island the statute provided confiscation of property, three public whippings, and banishment from the Colony for a horse thief. In case he returned he was to be hanged.¹²⁵ In Connecticut, as early as 1700, horse stealing had become so common that a special court for trying horse thieves was established at New London.¹²⁶ The horse buyers, who traveled around buying up horses, had a bad reputation in the community.

Except for purposes of export, horses were not particularly prized in colonial New England. Oxen were far more used as draft animals. As late as 1825, half the teams in Hadley were ox teams. Horses were chiefly used for saddle purposes. Until about 1750, when New England roads had been improved enough to permit of wheeled vehicles and stages were introduced, practically the only wheeled vehicles in use were carts.¹²⁷ In Boston, Sir William Phipps had a hackney coach and "trimmed" horses, but both carriage and horses were a novelty and more pretentious than useful.¹²⁸

In general the quality of New England horse flesh was not high in colonial times. An observer "noted the poor kind and condition of the common draught-horses of Boston."¹²⁹ The best saddle horse in Massachusetts in 1754 belonged to Parson Charles Williams of Hadley; it was valued at \$66.¹³⁰ Sir William Pepperill imported two blooded stallions in 1750 "to mend the breed," with what effect it cannot be said.

In the older and more settled New England towns, by the eighteenth century, horses had ceased to run at large on the commons, but they probably continued to graze on the commons in remoter places. "About fourteen hands high" is the usual form of advertisement of horses for sale in newspapers of the time. A Massachusetts law of 1686 declared 14 hands to be "a good height" for horses. It is difficult to ascertain the prices of horses, because the currency of the separate Colonies differed, and, in the eighteenth century, most of it was paper money and fluctuated greatly.¹³¹ Prices ranged from £7 to £30, while a few brought £40. A horse's keep for a day was 4d. in summer and 6d. in winter.

¹²⁴Weeden, *New England*, 2:757, 828.

¹²⁵Samuel Greene Arnold, *History of the State of Rhode Island and Providence Plantations*, 2:11, 322 (New York, 1860).

¹²⁶Caulkins, *History of New London*, 254-255.

¹²⁷Lyon Gardiner Tyler, *England in America, 1580-1652*, p. 322 (New York and London, 1904); George Lyman Kittredge, *The Old Farmer and His Almanack*, 286-290 (Boston, 1904); Weeden, *New England*, 1:110-114, 116, 205; 2:276, 310-312, 408-411; Judd, *History of Hadley*, 367.

¹²⁸Weeden, *New England*, 1:297.

¹²⁹*Ibid.*, 2:690.

¹³⁰Judd, *History of Hadley*, 367.

¹³¹Richard Hildreth, *The History of the United States of America*, 4:256-259 (New York, 1863).

CATTLE AND HOGS

The New England Colonies could not compete with Virginia and the Carolinas in supplying the West Indies with live beef cattle and pork products. Accordingly, while cattle were everywhere generally raised in New England, the demand was chiefly for local needs. This demand was not only for beef and dairy purposes, but for draft purposes also. This last requirement led to the breeding of large cattle, which likewise helped the beef end of the business. In this particular, New Hampshire excelled. There, the effect of Mason's importation of big, yellow Danish cattle years before still showed. Herds of New Hampshire cattle, which had been fattened in the stall, were annually driven to the Boston market.

The region around Springfield and Hadley, in Massachusetts, where John Pynchon had established a packing business late in the seventeenth century, still maintained its reputation as a cattle country. From 1753 to 1757, William Clark of Northampton regularly drove cattle to Boston and Cambridge. His account book gives the weight of 12 oxen as varying from 607 to 970 pounds, the average being 767 pounds. The figures are eloquent testimony of the prevailing small size of cattle in the eighteenth century. Prices ranged from 16 to 20 shillings per hundredweight.¹³²

Prices of cattle rose between 1700 and 1750 in New England, owing partly to the increase of population, but much more to the fact that no improvement in stock breeding was made.¹³³ The author of the most valuable contemporary survey of the economy of the American Colonies, *American Husbandry*, published anonymously in 1775, sharply criticized the indifference, not to say brutality, of the average American farmer toward his livestock.

most of the farmers in this country are, in whatever concerns cattle, the most negligent ignorant set of men in the world. Nor do I know any country in which animals are worse treated. Horses are in general, even valuable ones, worked hard, and starved: they plough, cart, and ride them to death, at the same time that they give very little heed to their food; after the hardest day's works, all the nourishment they are like to have is to be turned into a wood, where the shoots and weeds form the chief of the pasture; unless it be after the hay is in, when they get a share of the after-grass.¹³⁴

Some of his other observations in regard to livestock are not so critical.

Hogs are throughout the province in great plenty and very large, a considerable export from the province constantly goes on in barrelled pork. . . .

The cattle commonly kept here are the same as in Great Britain: cows, oxen, horses, sheep, and hogs; they have large dairies, which succeed quite as well as in Old England; oxen they fat to nearly as great a size; their mutton is good; and the wool which their sheep yield is long but coarse. . . . The horses are excellent, being the most hardy in the world. . . .¹³⁵

¹³²Judd, *History of Hadley*, 368.

¹³³In 1650 the population of New England was about 25,000; by 1689 it was about 75,000; and between 1690 and 1740 it increased nearly fivefold. Charles McLean Andrews, *Colonial Self-Government, 1652-1689*, p. 3, 288 (New York and London, 1904); Everts Boutell Greene, *Provincial America, 1690-1740*, p. 228 (New York and London, 1905).

¹³⁴*American Husbandry*, 1: 80 (London, 1775).

¹³⁵*Ibid.*, 56, 57-58.

DECLINE OF AGRICULTURE

Andrew Burnaby, an English traveler in America in 1759-1760, characterized Massachusetts as "a rich, populous and well-cultivated province."¹³⁶ Yet he was aware that agriculture in Massachusetts was visibly declining in the first half of the eighteenth century, and the same was true of Rhode Island and Connecticut. The third and fourth generations of New Englanders were paying for the improvidence of their forebears, who had steadily cropped a none-too-fertile soil without manuring. Only along the coast, where the shad and mackerel ran in shoals, was the old Indian method of fertilizing with dead fish practiced. The commercial raising of wheat had largely ceased in New England after 1750, except on new clearings along the upper Connecticut and Merrimac rivers. Wheat was imported from New York and the South;¹³⁷ corn, however, continued to be raised for feeding stock. Trade, manufacturing, and the fisheries grew much more than agriculture.¹³⁸

More and more, in the eighteenth century, New England, and especially the older parts of it, gravitated toward the growing of wool and the raising of horses and cattle. Pasture land supplanted wheat fields. To this end the chief effort was expended in improving hay. English grass seed was imported in large quantities, and Jared Eliot introduced clover into New England in 1757. Timothy, or "heardsgrass" as it was called, was first sown near Dorchester in 1771.¹³⁹ Even with this progress the growth of agriculture in New England did not keep pace with that of manufacturing. Hay often had to be imported from Pennsylvania. The river towns did not learn the use of clover and timothy until after the Revolution.

Cattle raising, in particular, declined in the decades just previous to the Revolution. The increasing output of textiles helped sheep raising, and the exorbitant prices the West Indian planters were willing to pay for horses stimulated the breeding of horses in spite of the steady rise in the prices of hay and fodder. In live cattle and beef and pork products, New England could not compete with the Southern Colonies in supplying the West Indies. The demand for live cattle was mainly for local needs. The fishing fleets of New England consumed much of the barreled meats. Between 1700 and 1775, the price of cattle on the hoof advanced 25 percent, and the same was true of dairy products. Welsh and Irish butter could be imported by the port towns of Massachusetts at little more than the cost of home produce, and the quality was better.

By the time of the Revolution, New England, except in the back counties, had ceased to be predominantly an agricultural region. Fisheries had always been her staple resource, with trade and manufacturing next. Just as in the 1880's the Great Plains became the chief cattle-raising region of the United States, partly because the land was cheap and population sparse, so in the late eighteenth century in New England increasing population and the growth of urban life, industry, and commerce tended to drive cattle raising to the frontier of that time. One historian has described the process thus:

¹³⁶Burnaby, "Travels," in Wilson, *Source Books of American History*, 143.

¹³⁷Weeden, *New England*, 2:507, 687.

¹³⁸The relative merits of agriculture versus manufacturing became a subject of academic debate. In 1742, 1751, 1753, 1773, 1785, and 1787 applicants for the M.A. degree at Harvard presented theses on this subject. — Weeden, *New England*, 2:688.

¹³⁹*Ibid.*, 687-689, 735.

Early in the century as good land became scarce in the older towns of New England, and proprietors began to deny the commons to the landless, venturesome and discontented men, accepting the challenge of a savage-infested wilderness, moved northward along the rivers into Maine and New Hampshire, or beyond the original Connecticut settlements into the valley of the Housatonic. . . . Long before the Revolution opened, there thus existed in New England a fringe of pioneer settlements such as Vassalboro and Durham on the Androscoggin and the Kennebec, Concord and Hinsdale on the Merrimac and the Connecticut, Pittsfield and Great Barrington on the Housatonic, which formed a newer New England. . . . 140

As early as 1695, the frontier towns had become so numerous that the government found it hard work to provide protection for them.¹⁴¹ In 1704 when the inhabitants of Deerfield were massacred by the Indians and French, the town was on the extreme north-western frontier of Massachusetts.¹⁴² In spite of the hardships and the dangers attending life on the frontier, the indomitable population, driven from coastal New England by the rise in land values and the increasing predominance of commerce and industry, faced the Indian and the wolf, the forest and the frost. Here on the edge of civilization, in the border settlements, cattle could be cheaply raised, for they roamed the woods until autumn when they were driven to the larger towns to be fattened and butchered. Whether on the frontier of New England, or in the Far West, ranching has ever been a frontier enterprise.

¹⁴⁰Carl Lotus Becker, *Beginnings of the American People*, 173-174 (Boston, 1915).

¹⁴¹Frederick Jackson Turner, "The Old West," Wisconsin State Historical Society, *Proceedings*, 1908, p. 187, and "The First Official Frontier of the Massachusetts Bay," Colonial Society of Massachusetts, *Publications*, 17:250-253 (Boston, 1914).

¹⁴²Francis Parkman, *A Half-Century of Conflict*, 1:55-93 (Boston, 1897).

Chapter 3

STOCK RAISING IN THE MIDDLE COLONIES

The Middle Atlantic Colonies, lying between the Hudson and the Potomac rivers, were settled by peoples of mixed European origin. Henry Hudson, an English captain in Dutch service, explored the river that bears his name in 1609. A Dutch trading post was established on Manhattan Island in 1613; but the settlement of New Netherland, later New York, did not really begin until the creation of the Dutch West India Company in 1621, and the founding of New Amsterdam in 1625.

The Swedes founded a colony at the Capes of the Delaware in 1638 and called the region New Sweden. The Dutch, who claimed the seaboard from the Mohawk River to the mouth of the Delaware, regarded this occupation as an invasion of their rights, and in 1655 the colony was seized by the Dutch Governor, Peter Stuyvesant, and annexed to New Netherland.

LIVESTOCK IN NEW NETHERLAND

Cattle first appeared in New Netherland in the spring of 1625, when Peter Evertsen Hulft, one of the directors of the Dutch West India Company, sent over from Holland 103 head of stock, among which were stallions, mares, bulls, cows, hogs, and sheep. Presumably the horses were of the heavy Flemish breed, such as were sold to the Massachusetts colonists by the Dutch in 1635. The cattle must have been the black and white breed of the Dutch, and the sheep were probably from the Island of Texel, a famous sheep-raising center. With typical Dutch care, the animals had been well provided for on shipboard, each having had a separate stall with a flooring of sand; only two died on the passage.

Comparatively nothing was done for the first 7 years of Manhattan's existence toward promoting settlement and agriculture. The monopolistic nature of the Dutch West India Company deterred immigration. At this time a stout palisade or wall, from which Wall Street derives its name, protected the settlement on the north side. Beyond this lay the "bouwerijs" or farms.¹ In spite of this agricultural tinge, the Colony was primarily intended as a trading post, and the progress of animal husbandry was slow.

All the land was owned by the company and leased to tenants. It was hard work for the tenant to clear a tract and establish a bouwery. He could not have taken care of much stock in the beginning even if it had been available, as there was no corn until the land was cleared and no hay, except dried marsh grass. Hogs that wandered in the woods, feeding on acorns and nuts made up the early staple; during the winter they furnished hard, clean pork. At first a team of horses or a yoke of oxen and a few pigs were about all the company a man had. "The farmer can get all sorts of cattle in the

¹The present Bowery in New York marks the road that led from the lower point of the island to these outlying farms.

course of the second summer," ran the printed instructions of the company, "when he will have more leisure to cut and bring home hay, also to build houses and barns for men and cattle."² A more liberal policy was adopted later, by which the company furnished each tenant with tools, 4 horses, 4 cows, and some sheep and pigs. The annual rent was 100 guilders and 80 pounds of butter. At the expiration of 6 years, the tenant returned the original number of stock, plus half the increase.

More prejudicial to prosperity than the niggardliness of the Dutch West India Company was the dishonesty of the Governor, Wouter Van Twiller. At his coming in 1633, the farms on Manhattan Island were reasonably well stocked with brood mares, oxen, milch cows, heifers, yearlings, goats, calves, and the necessary farming implements. At the end of his administration, not more than five or six farms on Manhattan had livestock. Some of the animals which the New England colonists bought from the Dutch of New Amsterdam about this time probably were part of the booty of the avaricious Van Twiller. Another part may have gone to enlarge the herds on his own farm at Red Hook. The rapidity with which Dutch settlements grew on Long Island, Staten Island, and in New Jersey, to the disadvantage of Manhattan, was partly due to Van Twiller's methods.

The dismissal of Van Twiller was the beginning of a better order of things in New Netherland. In 1640, a more liberal charter permitted any one who emigrated to New Netherland together with 5 other persons over 15 years of age to take up 100 morgen (217 acres) of land.³ These liberal terms stimulated colonization, and not only Manhattan but Long Island, Staten Island, the Jersey shore, and the country up the Hudson River began to be studded with little villages.

Not all of the newcomers were Dutch. Holland practiced religious toleration as did no other Government. In consequence, Walloons from the Spanish Netherlands (Belgium), Huguenots from France, Waldensians from Piedmont, and Puritans from both Old and New England flocked in. These settlers brought with them many of the Old World customs of village agricultural economy.

The villages, especially those upriver, were usually fenced with high palisades or long boards, and closed with gates in compliance with administrative regulation. Around the settlement lay the plowlands, the common meadow, and the common pasture of the community. The extent to which the principle of holding property in common prevailed in some of the villages is shown by a case that arose in the town of Esopus. One of the villagers there complained that the village herdsman did not "bring his cows home in time; that he had not brought them in two days." The rejoinder of the cowherd was: "If they don't bring their cattle by the drove I can't care for them," and the court sustained his defense.⁴

Under the administration of Governor William Kieft, New Amsterdam enjoyed great prosperity. On September 15, 1641, the council authorized two annual fairs at New Amsterdam, one on October 15 for cattle, the other on November 1, for hogs.⁵

²E. B. O'Callaghan, ed., *Documents Relative to the Colonial History of the State of New York*, 1:367 (Albany, 1856).

³*Ibid.*, 119-123.

⁴Quoted in Irving Elting, *Dutch Village Communities on the Hudson River*, 32 (Baltimore, 1886).

Adriaen Van der Donck, author of a valuable history of New Netherland under the Dutch, visited the Colony before the English seizure in 1664 and left an account of the economy of New Amsterdam.⁶ He was impressed by the fine cattle, which compared favorably with the Dutch stock, and by the number of hogs and goats.

The slaughterhouses and cattle pens in New Amsterdam were almost as conspicuous on the landscape as windmills in Holland. They straddled the ditch on the north side of the palisade, later Wall Street, the effluvia flowing down this streamlet through the Water Poort or Water Gate into the East River. New Amsterdam lacked the orderliness that characterized the trim, red-tiled villages of the home country. Hogpens, out-houses, and other nuisances encroached upon the crooked streets.⁷

Altogether different from the corporate enterprise of the Dutch West India Company and the Dutch village communities were the patroonships. The patroons were rich proprietors, who patented enormous tracts of land in perpetuity and leased portions to tenants.⁸ The arrangement was a modified form of the feudal tenure obtaining in Europe. Most of the holdings were up the Hudson, but some were along Long Island Sound. Van Cortlandt Manor and Pelham Manor preserve the names of two such proprietorships; Philipse Manor in Westchester was another. The most famous were Rensselaerswyck, a tract of 700,000 acres on both sides of the Hudson, including the present site of Albany; Livingston Manor, near Rondout; and the Manor of Pavonia on the Jersey side.

ENGLISH RULE IN NEW YORK

The seizure of New Amsterdam by the English in 1664, and the change of the name of the Colony to New York, did not alter the agricultural economy fundamentally. The patroonships lasted a long time, and the Dutch farmers continued to manage their farms as before. However, the local regulations governing cattle became more stringent. The Dutch had never bothered much about marks of ownership, perhaps because the herds and flocks were often owned by the community. The Duke of York's laws changed this easy-going way of things. Fences were required to be kept in repair against stray cattle getting into cornfields. It was provided further, that "all cattle and hoggs shall be markt with the publique marke of the Town to which they belong and the private mark of the owner, and whatsoever Swine or greater Cattle, horses excepted shall be found in the woods or Commons unmarked are Lyable to poundage."⁹ It is evident from this that the cattle were driven in a herd to the common pasture, but all cattle had now to be marked.

In order to improve the roads, the English imposed new tolls on cattle, which the thrifty Dutch frequently evaded by taking their cattle to market by water. They avoided paying bridge tolls and ferriage by swimming their cattle across the narrower streams. Soon after New York was taken from the Dutch, the ferrymaster at Harlem found he was

⁶Thomas F. De Voe, *The Market Book*, 1:17 (New York, 1862).

⁶Adriaen Van der Donck, "Description of the New Netherlands," *New-York Historical Society, Collections* (ser. 2), 1:125-242 (New York, 1841).

⁷J. H. Innes, *New Amsterdam and its People*, 274-275 (New York, 1902).

⁸O'Callaghan, *Documents Relative to the Colonial History of the State of New York*, 1:118.

⁹Quoted by Elting, *Dutch Village Communities on the Hudson River*, 35.

losing revenue, because the country drovers let their cattle ford Spuyten Duyvil Creek when the tide was out, and thus evaded the toll over King's Bridge.¹⁰

The establishment of English rule undoubtedly redounded to the material prosperity of the Colony; this is indicated by a minute of the board of aldermen, dated July 16, 1698. "A considerable increase of stock of cattle, and sould att double ye price of what they were formerly; and for instance, about fourteen years ago (1684) there were not above *four hundred neat cattle* killed for the service of the inhabitants of this citty, and now near *three thousand head*, besides sheep and other small cattle, which fully demonstrates the increase of the trade."¹¹ Governor Andros, in 1678, mentioned beef, pork, and horses as articles of export from New York.¹²

As population increased and the price of land rose in the older settled regions of New York, new home seekers naturally gravitated to the wilderness. The territory lying back of the Catskills and the Valley of the Mohawk were thus opened up early in the eighteenth century. The rich meadows of the latter particularly attracted settlement. Conspicuous among the settlers were German refugees, driven out of the Palatinate by the wars of Louis XIV, who brought with them the patient and thorough methods of agriculture and stock breeding with which they were familiar in Germany. One broad stretch of the Mohawk Valley was so settled by these immigrants that it was known as German Flats.¹³

Unlike the Indians of New England who learned nothing of agriculture or stock raising from the English, the Indians of central New York became farmers to some degree. Richard Smith, in 1769, came upon a Mohican village near the present site of Unadilla, and reported that their "cows were large and fat."¹⁴

NEW YORK TRADE IN MEAT AND DAIRY PRODUCTS

Before the American Revolution, the economic history of New York was similar to that of the other Colonies. Like New England, New York drove a thriving business in salt beef, hams, bacon, horses, and livestock with the West Indies.¹⁵ New York City, though not yet rivaling Philadelphia and Boston, was the center of a flourishing agricultural region. "Never have I known a place" wrote Crèvecoeur of New York just before the Revolution, "where provisions of all kinds were cheaper or more abundant; meat, bacon, ham, mutton, butter, cheese, grain, fish, oysters all combine to make living wholesome and cheap."¹⁶ The chief deficiency was in dairy products, and this condition was universal in the Colonies except in Pennsylvania.

¹⁰Innes, *New Amsterdam and its People*, introd.

¹¹Quoted in De Voe, *Market Book*, 87.

¹²*Ibid.*, 57.

¹³Albert Bernhardt Faust, *The German Element in the United States*, 1:73-110 (Boston and New York, 1909); Adam Gordon, "Journal of an Officer Who Travelled in America and the West Indies in 1764 and 1765," in Newton D. Mereness, ed., *Travels in the American Colonies*, 418 (New York, 1916).

¹⁴Francis Whiting Halsey, *The Old New York Frontier*, 143 (New York, 1901).

¹⁵Between 1763 and 1766, New York's average exports of beef, hams, bacon, pork, and venison were valued at £18,000; horses and livestock at £17,000. - *American Husbandry*, 1:124 (London, 1775).

¹⁶Michel Guillaume St. Jean de Crèvecoeur, *Lettres d'un Cultivateur Américain*, 2:63 (Maestricht, Holland, 1785); Gordon, "Journal of an Officer," 415.

Continual cropping of the soil without neutralizing the exhaustion by artificial fertilization showed its effect on agriculture in New York, as in New England. Hay was sparse because too much of it was natural, and grass seed was rarely sown. Winter foddering of cattle was indifferent, and their protecting them from inclement weather was almost unknown; consequently the cows gave little milk. The butter made in New York was notoriously bad, and much butter was imported from Ireland. The New York papers, in 1763, reported the arrival on Christmas Day of the *Pitt*, with 2,000 firkins of butter from Belfast.¹⁷ Local New York butter was sold to the West Indies. The produce merchants had an evil reputation for fraudulent practice in its disposal; it was often mixed with lard or tallow, and loaded with salt in order to give it weight.¹⁸

The butchers of New York City formed an influential guild that jealously guarded its almost monopolistic privileges. Originally formed by the Dutch after the manner of the trade guilds in European cities, the organized butchers were a close corporation which not infrequently forced up prices to the prejudice of the community. They strenuously opposed every act of the municipality which attempted to regulate market conditions, even when public sanitation was the purpose. In 1763, when the New York common council attempted to regulate the city markets, the butchers retaliated by pushing up prices to an intolerable point. One newspaper complained: "Was it not astonishing, and beyond all human tolerance, that beef should be sold from 7d. to 8d. per lb., when it might be offered for 3d. and 4d., and yield a sufficient profit! Cattle were perhaps never plentier or cheaper in the country than the greater part of the time during which this exorbitant price had been exacted."¹⁹

The farmers of Westchester County and Long Island had combined with the city butchers in this practice, and, in retaliation for the ordinance, refused to send their stock to market. The combination overreached itself, for Connecticut farmers found it profitable to drive cattle all the way to New York.

BACKWARDNESS OF THE SHEEP INDUSTRY IN NEW YORK

As everywhere in the Colonies in the eighteenth century, except in New England, sheep husbandry was backward. Before the Stamp Act in 1765, sheep were chiefly raised in New York for live export to the West Indies, and English wool was imported for clothing. This backwardness was partly due to the curious prejudice that obtained against mutton as a food. Lamb was frequently eaten but not mutton. As a consequence sheep were not allowed to increase above the demand for exportation.

Just before the Revolution, public opinion awoke to the necessity of stimulating sheep raising and wool growing. Associations were formed whose members pledged themselves not to eat lamb. In 1766, a popular petition was circulated, the signers agreeing not to eat lamb before the first day of August, in order "to increase the breed of sheep, and provide wool for the employment and cloathing for the industrious poor."²⁰ It was found impracticable, however, to enforce abstinence until so late a date, and the next year May 1 was adopted.

¹⁷De Voe, *Market Book*, 148.

¹⁸*Ibid.*

¹⁹*Ibid.*, 145.

²⁰*Ibid.*, 150.

In 1775, in order further to conserve the supply of sheep, the New York Provincial Congress, at the instance of Gouverneur Morris, passed a resolution to the effect that "the inhabitants ought not to kill any lamb until the first of November next." In the preceding year, the congress had forbidden the export of sheep from the Colony. As might have been expected these acts created great dissatisfaction in spite of their intelligent purpose, and many sheep were smuggled out. The prejudice of the consumer against the eating of mutton could not be overcome, and it was scornfully said that "Nobody but sentimental old ladies were in favor of sparing the poor lambs." As a result, Morris' restraining act was amended, and August 1 was substituted for November 1.²¹

SWEDISH AGRICULTURE ALONG THE DELAWARE

Passing down the Atlantic coast, the next Middle Colony to engage attention is that founded at the Capes of the Delaware by the Swedes in 1638.²² This was 43 years before the founding of Philadelphia. The independent history of this colony was short. The Dutch of New Netherland took umbrage at its establishment and, in 1655, it was conquered by Peter Minuit, the Dutch Governor. Nine years later, with the English conquest of New Amsterdam, New Sweden, too, passed under English sway.

In the middle of the eighteenth century, Pehr Kalm, a learned Swedish scientist, visited the Colonies in America. His *Travels into North America* is a valuable source for the economy of the American Colonies in the generation previous to the Revolution. No other book of this period except *American Husbandry* is so useful.

Kalm was especially interested in the history of the Swedes on the lower Delaware, and as a naturalist he was particularly interested in their agricultural economy. He wanted to find out where the first settlers got their cattle, and questioned a Swede named Nils Gustafson, then a man over 90 years of age, whose father had come over with the Swedish Governor, Johan Printz. The old man could not remember the state of the country before the Dutch had seized it. But from what his father had told him of early conditions and Gustafson's own first recollections, Kalm gleaned some interesting information.

The old man still remembered seeing great forests on the site of Philadelphia. His father and others had told him that the first settlers brought their horses, cows, oxen, sheep, hogs, geese, and ducks over with them. There were very few animals at first, but they multiplied greatly. He did not know whether the Swedes ever obtained cattle from the other colonies, except from the Dutch in New Amsterdam.²³ Like most reminiscences of the elderly, his statements were not altogether accurate. The original expedition, instead of bringing with it a large number of farm animals, actually had very few. The commander was instructed to stop at Sable Island, which was covered with wild cattle, to stock up there and then to proceed to South River, as the Delaware River was then known.²⁴

²¹ *Ibid.*, 287-288.

²² For a comprehensive history of this colonization, see Amandus Johnson, *The Swedish Settlements on the Delaware* (University of Pennsylvania, 1911).

²³ Peter Kalm, "Travels into North America (London, 1772)," in John Pinderton, ed., *A General Collection of the Best and Most Interesting Voyages*, 13:536-541 (London, 1812).

²⁴ Johnson, *Swedish Settlements on the Delaware*, 1:113.

But the two ships took the southern route across the Atlantic, intending to buy livestock at the Caribbean Islands.²⁵ Stress of weather interfered with this plan too, and the ships arrived off the Delaware Capes with little livestock aboard. This forced the settlers to turn to the Dutch for their first cattle. In 1639, the projectors of the colony prepared to send over another ship from Sweden with "cattle and people."²⁶

When the Swedish Governor Peter Hollandaer arrived in 1640, he urgently requested that all kinds of cattle be sent with every ship. In the meantime, a few cattle were obtained from Virginia and probably Maryland.²⁷ In 1641, "five horses, eight cows, five sheep and two goats were landed alive, but two horses and one cow died soon after the arrival of the ships. The pigs which had been taken over on previous voyages or bought from New Amsterdam increased rapidly, and many of them ran wild. They were shot in the autumn and the pork was smoked and salted and preserved for winter food."²⁸

The Swedes, like the Plymouth colonists, suffered for a long time because of lack of cattle. They were not so forehanded as the founders of Massachusetts Bay and New Amsterdam. In 1643, seven oxen and one cow were bought from the Dutch, the price being 124 beaver skins (868 florins) for the oxen and 22 beaver skins (154 florins) for the cow. Some were driven overland from the Hudson River to the Delaware; the rest were taken coastwise by ship.²⁹ The sheep seem to have increased slowly to a fair-sized flock, which grazed on the rye acres after harvest and on corn stalks and straw during the winter.

Under Johan Printz's administration (1643-1653), the state of New Sweden improved greatly. Agriculture was fostered and placed on a more prosperous footing, and cattle raising was encouraged.³⁰ In 1663, the Colony possessed about 200 head of cattle, 20 horses, 80 sheep, and several thousand hogs.³¹ In the next year, New Sweden, which the Dutch had already taken, was seized in turn by the English, and the territory became British.

The political change brought little economic betterment to the Dutch and Swedish settlers on the Delaware. Compared with the Germans they were poor agriculturalists;³² many had neither barns nor stables and left their grain lying unthreshed in the fields. The Swedish pastor, Israel Acrelius, who wrote *A History of New Sweden* about 1760, recorded:

The horses are real ponies, and are seldom found over sixteen hands high. . . .

The cattle are also of a middling sort. . . . Where the pasture is fair, a cow does not give less than two quarts of milk at a time - that is, twice a day. . . . And as animals are not kept in the house during the winter, so it sometimes happens that calves are caught in the snow, and are none the worse for it.³³

²⁵*Ibid.*, 114.

²⁶*Ibid.*, 123.

²⁷*Ibid.*, 198.

²⁸*Ibid.*, 202.

²⁹*Ibid.*, 313.

³⁰*Ibid.*, 319-320; 2:523.

³¹*Ibid.*, 2:667.

³²Francis Daniel Pastorius, "Circumstantial Geographical Description of Pennsylvania," in Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 397 (New York, 1912).

³³Israel Acrelius, "A History of New Sweden," Pennsylvania Historical Society, *Memoirs*, 11:152-153 (Philadelphia, 1874).

MARYLAND'S BORDER ECONOMY

Maryland, located north of the Potomac River and extending down both sides of Chesapeake Bay, is sometimes called a Middle Atlantic Colony, sometimes a Southern Colony. Both in its economy and its social texture, Maryland was a mixture of the two types. The economy of the New England and the Middle Colonies was diversified, partaking of agriculture, industry, and commerce. In the Southern Colonies production of a single staple, such as tobacco in Virginia and rice or cotton in South Carolina, absorbed most of the productive energy of the population. Maryland did not have the variety of economic life that prevailed in Pennsylvania, New York, and New England; on the other hand, her economy was not so one-sided as that of Virginia or South Carolina.

Maryland was first settled in 1634 by about 200 English colonists, who were chiefly of the Catholic faith. The occupation partook of Old World methods, the land being divided among a group of manorial proprietors whose estates were similar to those of the Dutch patroons along the Hudson River. Before 1676, there were about 60 such manors, the average area of each being around 3,000 acres.³⁴

George Alsop, an Englishman who lived in Maryland in 1666, recorded in his book entitled *A Character of the Province of Maryland* that domestic animals "were carried over at the first seating of the Country, to stock and increase the situation, as Cows, Horses, Sheep and Hogs. . . ."³⁵ The statement, however, is incorrect. The first domestic animals in Maryland were bought by the settlers. Soon after their arrival, they "procured from Virginia, Hogges, Poultry, and some Cowes, and some male cattell, which hath given them a foundation for breed and increase."³⁶ This original acquisition was increased from time to time by importations from Barbados, whose governor promised to furnish them "with all manner of provisions, cattle, hogs, corn, poultry and fruit trees. . . ."³⁷

This stock increased rapidly, cattle, horses, and hogs foraging at large in the forest. It was not so with the sheep. In Maryland as in New England, they suffered from wolves. They had to be continually watched by day and securely penned at night. The New England practice of herding sheep on islands or necks of land was in use in Maryland, but sheep husbandry in Maryland lagged far behind that of New England. In 1697, when New England's production of wool was exciting the bitter opposition of English wool growers, and her woollen manufacturing was fairly self-sufficient, the Maryland Council told the Board of Trade that "the colony had no general supply of woollen manufactures except from England, although necessity had taught some of the inhabitants to use native wool of the province for coarse stockings and clothing for servants and slaves."³⁸

³⁴Herbert L. Osgood, *The American Colonies in the Seventeenth Century*, 2:25 (New York, 1904).

³⁵George Alsop, *A Character of the Province of Maryland*, 40 (New York, 1869).

³⁶"A Relation of Maryland (London, 1635)," in Clayton Colman Hall, ed., *Narratives of Early Maryland, 1633-1684*, p. 76 (New York, 1910).

³⁷Quoted in Bernard C. Steiner, *Beginnings of Maryland, 1631-1639*, p. 28 (Baltimore, 1903).

³⁸Margaret Shove Morriss, *Colonial Trade of Maryland, 1689-1715*, p. 71 (Baltimore, 1914).

Disaster befell the Colony toward the end of the century. A succession of intensely cold winters depleted the stock enormously, and dearly taught the people the necessity of providing winter forage and housing for cattle.³⁹ Only after some years had elapsed was Governor Seymour able to report that most of the people "have good Tracts of Land and Stocks of Cattle and Hogs."

Maryland horses, although often of good English stock, were frequently scrubby and unkempt, as they were rarely either curried or stabled. The common country horse was undersized, but he was tough and fast. His hoofs were seldom shod; his hide was thick enough to repel flies and mosquitoes; his mane and tail were decorated with burs; and he had no gait except the walk and the gallop. Few were over 14½ hands high.⁴⁰ On the islands, and particularly Chincoteague, a species of beach pony ran wild. Even on the mainland there were many wild horses, and, as fences were neither numerous nor high, their depredations became a nuisance. Acts were passed in 1694, 1695, 1699, and 1712 "to prevent the great multitude of horses in this province." In 1715, the legislation upon this subject was consolidated in an act which provided that from May 1 to November 1 "owners of horses, mares, colts and geldings shall keep them within enclosure." A horse breaking bounds, after two notices had been served on the owner, might be shot for trespass or seized by the injured party as his own. Any stallion over 18 months old had to be kept continually fenced or tethered, and breeding mares were not permitted to graze in the woods.

The truth is that the Marylanders were indifferent both to agriculture and stock raising, and made little attempt to foster either beyond the bare necessity of livelihood. The proprietors were most interested in cultivating tobacco, although it never became so universal there as in Virginia. Inasmuch as town life was almost unknown in Maryland, there was no multitude of local regulations with respect to pasturage, marking, etc., such as prevailed in New England and the more northern colonies. The range was wide, and the population scant. Long after New England towns had begun to fence cattle in, the woods were still the only pasturage in Maryland. The few regulations of which there is a record were of a most elementary kind, and were intended chiefly to suppress those acts that characterize the history of every frontier or primitive community. Cattle stealing was the commonest of these, and a system of wood rangers was established whose duty was to prevent the theft of branded stock and to pick up unbranded cattle. The arrangement was not very successful. The rangers themselves were sometimes accused of being as unreliable as the Indians, who generally got the blame for every disappearance.

PENNSYLVANIA -- "QUEEN OF THE COLONIES"

Pennsylvania was the latest of the colonies established north of the Potomac River, yet, in spite of this, its prosperity was so great just before the outbreak of the Revolution that an observer of American colonial conditions described Pennsylvania as "the queen of the colonies."⁴¹

³⁹One estimate puts the loss in 1694-1695 at 25,429 cattle and 62,373 hogs. -- *Ibid.*, 462 note.

⁴⁰J. Thomas Scharf, *History of Maryland*, 2:7 (Baltimore, 1879).

⁴¹Julia Post Mitchell, *St. Jean de Crèvecoeur*, 26 (New York, 1916).

The territory was granted to William Penn in 1681, and Philadelphia was founded the next year. The prosperity of Pennsylvania was partly due to the solid and select character of its original settlers and partly to the unusually good quality of the soil. The English Quakers were eminent for sobriety, enterprise, and thriftiness. They were of the yeoman class. Neither of the dependent peasantry nor of the landed aristocracy, they came from English middle-class farming stock, with the best traditions of agriculture and animal husbandry. Pennsylvania, moreover, was not inhibited in its development by the corporate greed of a trading company like the Dutch West India Company in New Netherland, nor by the pretensions of a landed aristocracy as in Virginia and Maryland. In community freedom it was more nearly like the New England Colonies. The Pennsylvania settlement, however, had more capital to start with than did Massachusetts Bay and infinitely more than Plymouth.

The quality of the soil of Pennsylvania was another factor in its prosperity. Until the rich meadows of the Mohawk Valley in upper New York were opened, after the middle of the eighteenth century, no land in any of the Colonies was comparable to the district within the four Pennsylvania counties of Philadelphia, Lancaster, Bucks, and York. Even to this day the region is among the best farming country in the United States. Perhaps nowhere else in colonial America was there to be found a finer combination of favorable physical conditions and sound, intelligent inhabitants than in Pennsylvania. It possessed, furthermore, the three important advantages of limited estates, free labor, and products capable of intensive agricultural methods.⁴² Benjamin Franklin perceived this when he wrote that America, and Pennsylvania in particular, was a land of opportunity and "heartly young laboring men, who understand the husbandry of corn and cattle, which is nearly the same in that country as in Europe, may easily establish themselves there."⁴³

WILLIAM PENN'S LEADERSHIP

From the very beginning, the lot of the Quaker Colony was a prosperous one. Within 2 years after its foundation, Penn wrote to the Committee of the Free Society of Traders in London, who were the home sponsors of the settlement: "We have no want of Horses, and some very good and shapely enough; two Ships have been freighted to Barbadoes with Horses and Pipe-Staves, since my coming in. Here is also plenty of Cow-Cattle, and some Sheep; the People Plow mostly with Oxen."⁴⁴ Two years later, in 1685, he wrote: "The Weeds of our Woods feed our Cattle to the Market as well as Dary. I have seen fat Bullocks brought thence to Market before Mid Summer. Our Swamps or Marshes yeeld us course hay for the Winter."⁴⁵

Unlike the colonists elsewhere, Penn was unwilling to have cattle forage at large in the woods, and he took measures immediately after the establishment of the settlement to provide a good supply of hay. When the first settlers of Pennsylvania arrived, they

⁴²James Curtis Ballagh, "Introduction to Southern Economic History - the Land System," American Historical Association, *Annual Report*, 1897, p. 107.

⁴³Jared Sparks, ed., *The Works of Benjamin Franklin*, 2:471 (Boston, 1836).

⁴⁴William Penn, "A Letter from William Penn . . . to the Committee of the Free Society of Traders (London, 1683)," in Myers, *Narratives of Early Pennsylvania*, 229.

⁴⁵William Penn, "A Further Account of the Province of Pennsylvania (London, 1685)," *ibid.*, 264.

found a coarse, short grass plentiful in the woods in summer, but the hay, which was chiefly gotten in the marshes, failed to keep the cattle in flesh during the winter.⁴⁶ Penn found that the marshes could be improved by sowing the low, moist lands with English grass seed. Meadows may be classified as stubble and clover, upland pastures, and lowland marshes. Red clover was not in general use until after the Revolution, but in some localities it is mentioned earlier.⁴⁷ The combination of red and white clover with the grass growing up in the wheat stubble made good pasture.⁴⁸ Franklin regarded a mixture of clover and spear grass the best kind of pasture.

At the same time, William Penn opened up a cattle trade with the West Indies and provided for home distribution and consumption of stock by starting markets in Philadelphia, Chester, and New Castle, as well as two annual fairs.⁴⁹ With great foresight, Penn set out to make Pennsylvania self-supporting from the beginning. Cattle and sheep raisers of New York and Rhode Island who tried to sell their stock to the Quakers at high prices, found a slim market.⁵⁰ He urged his people to buy stock, not to sell it. "I would have them to buy still, and not weaken their Herds, by Killing their Young Stock too soon," were his instructions. The wisdom of the advice soon was manifest. Pennsylvania was early famous for her exports of beef, pork products, live cattle, and hogs to Barbados, and for her butter and cheese. In fact, dairying probably was farther advanced in Pennsylvania in 1700 than anywhere else in America. The dairying of Rhode Island and Connecticut dates from the middle of the eighteenth century.

One proof of the prosperity of Pennsylvania is to be found in the rapid increase of population. In this particular it grew faster than any Colony in the seventeenth century. Another evidence is the rapid rise in the value of land. "The country daily improves with inhabitants," wrote an official visitor, "and is cultivated with an Industry much exceeding the neighboring provinces."⁵¹ Gabriel Thomas recorded that Pennsylvanians had "constantly . . . quick vent into Barbados and other Islands . . . and . . . a quick Trade for both Corn and Cattle . . . a Brother of mine . . . sold within the compass of one Week, about One Hundred and Twenty fat Beasts, most of them good handsom large Oxen."⁵²

From its founding, Pennsylvania had a good breed of horses, fit for both draft and saddle. Having been established later than the other Colonies, she was able to draw upon Virginia for horses, which, despite their undersize, due to roughing it, were of good English stock and hardy. Moreover, Penn had brought over with him three

⁴⁶Thomas Budd, *Good Order Established in Pennsylvania and New-Jersey in America*, 32-33 (New York, 1865).

⁴⁷John F. Watson, *Annals of Philadelphia and Pennsylvania*, 2:486 (Philadelphia, 1845).

⁴⁸Acrelius, "A History of New Sweden," 154.

⁴⁹Penn, "Further Account of the Province of Pennsylvania," 262. Faust, *German Element in the United States*, 2:379, erroneously ascribed this honor to the Germans in Pennsylvania, claiming that the institution was an adaptation of the German "Jahrmarkt or Messe."

⁵⁰There is a glint of hard humor in Penn's statement that "New York, New England . . . and Road Island did with their provisions fetch our Goods and Money, but at such Rates, that some sold for almost what they gave, and others carried their provisions back, expecting a better Market neerer, which showed no scarcity, and that we were not totally destitute on our own River." - Penn, "Further Account of the Province of Pennsylvania," 266.

⁵¹Great Britain Public Record Office, *Calendar of State Papers, Colonial Series, America and West Indies*, 14:24 (London, 1903).

⁵²Gabriel Thomas, "An Historical and Geographical Account of Pensilvania and of West-New-Jersey (London, 1698)," in Myers, *Narratives of Early Pennsylvania*, 329.

blooded mares and the stallion colt, Tamerlane, described as "of the best strain in England" and almost certainly the best example of horse flesh imported in the seventeenth century.⁵³ It has not been ascertained what the breed of this famous horse was, or from what part of England it was brought, but a man of Penn's substantial, practical character is most likely to have bought good draft horses rather than saddle horses. It is certain, with the well-known Quaker antipathy to sports, that Tamerlane was not of racing stock. Undoubtedly, many heavy Flemish horses must have been acquired from the former Dutch Colonies, so that the base of the horse stock used for draft purposes in Pennsylvania was English crossed upon Flemish or Belgian mares. From this union later developed the famous Conestoga horse.

All stock in Pennsylvania had to be marked before it was 6 months old, and the mark registered with the county clerk, or else it was taken up as estray. A ranger was licensed to look after stock by the clerk, and any other person picking up estrays was punished as a horse thief. By 1724, the number of undersized, half-wild stallions running at large had become such a nuisance that an act was passed providing that all male horses over 18 months old were to be taken up and castrated unless they were of good appearance and at least 13 hands high.

From the beginning, Pennsylvania tried to improve the hay by sowing English grass seed and practiced a more intensive agriculture than prevailed in the other Colonies. This led to strict regulations governing stock, and thus greater care was provided than elsewhere in America. All stock had to be marked or branded, and the rangers, who seem to have been more honest and efficient than those in Maryland, were vigilant in picking up stray cattle and hogs. Fences were well built—both stone and post and rail types being used. The wasteful Virginia "snake-fence" or "worm-fence," which excited the ire of so many travelers used to European methods of farming, was rare in Pennsylvania.⁵⁴ The fences were not as high as those of today, not because material was scarce, but because labor was always high in colonial times. To obviate this drawback, hogs were regularly ringed and often yoked as well. Horses and cattle, too, if prone to get out of bounds, were either yoked or hobbled.⁵⁵ These restraints were rarely to be seen outside thrifty Pennsylvania. The contrivance of the yoke appeared so peculiar to Kalm, the Swedish traveler, that he was at pains to give a careful description of it.

Although naturally Penn's wish that all cattle might be housed in winter was an ideal that was far from being realized, nevertheless, it is most probable that cattle got better care in winter in Pennsylvania than in any other Colony.⁵⁶ Kalm noted with satisfaction that hay stacks and straw stacks with roofs over them, under which the cattle could feed and get protection from the weather, were not uncommon around Philadelphia; really good barns, however, were first introduced into America by the Germans. By the middle of the eighteenth century, Kalm wrote, the wolf had been so thoroughly hunted in Pennsylvania and New Jersey that the "sheep lay all night in the fields without fear of wolves."

⁵³J. Thomas Scharf and Thompson Westcott, *History of Philadelphia, 1609-1884*, 1:137 (Philadelphia, 1884); Edward Eggleston, "Husbandry in Colony Times," *Century Magazine*, 27 (n.s. 5):445 (January 1884).

⁵⁴See Johann David Schöpf, *Travels in the Confederation, 1783-1784*, 1:131-132 (Philadelphia, 1911).

⁵⁵Philadelphia had a town cowherd until 1795. Watson, *Annals of Philadelphia and Pennsylvania*, 2:421.

⁵⁶Penn directed that his own stables be built of brick. — *Ibid.*, 103.

GERMAN FARMERS

It has been pointed out that Pennsylvania was fortunate in the quality of its settlers – the solid, thrifty, intelligent Quakers. In the first quarter of the eighteenth century, there came a new influx of settlers, whose influence was destined to affect profoundly the material prosperity and the social texture of Pennsylvania. These newcomers were German emigrants driven out of the Palatinate about 1717. They represented a fine type of the sober, industrious farm peasantry. Coming as refugees most of them were poor upon arrival, having little capital except the will and strength to work. Many came as redemptioners or indentured servants whose transportation had been paid, and who were bound to service for a term of years until the debt was discharged.

Some of the Palatinates came to New York and settled in the Mohawk or German Flats. Palatine and Herkimer in central New York still serve to recall this German colonization. The bulk of the German refugees went to Pennsylvania. It has been estimated that, by the time of the Revolution, one-third of the population of Pennsylvania was of German blood. Altogether there were probably 200,000 Germans in the Thirteen Colonies by 1775. Half of them lived in Pennsylvania, chiefly in the region which is still predominantly occupied by the so-called "Pennsylvania Dutch." Whole towns were to be found where German was practically the only language spoken.⁵⁷

As soon as the period of indenture was over, the German established himself on his own farm. His Old World knowledge of forest conditions had taught him that the richest soil underlay hardwood forests, and he did not shrink from the hard labor of clearing such land, as did the Dutch and Swedes on the Delaware, and the Scotch-Irish, who were pouring into the Colonies by the thousands. The soil of the hardwood forests was prevailingly of limestone formation, whereas the open country was chiefly on a slate foundation. The result was that the racial distribution in Pennsylvania, in course of time, roughly corresponded to the geological variations.⁵⁸

The German's barn was the best building on his farm. He was sure to build a fine, large barn before he built any dwelling house for himself except a rude log cabin. Stables were provided for the animals. The hay was of the best, as particular attention was paid to the meadows. The practice of housing stock in winter unquestionably was good economy, for much less food was required, and the animals came out in the spring in good condition.⁵⁹ Little use was made of corn except for feeding stock, and stall-feeding and fattening for market was profitable with very little capital. The Germans also made much use of spelt and turnips in feeding stock, being the first people in America to cultivate turnips and other roots for anything but kitchen use.⁶⁰ While the ordinary farmer fed his cattle on felled treetops or let them browse in the woods,

⁵⁷Frederick Jackson Turner, "The Old West," Wisconsin State Historical Society, *Proceedings*, 1908, p. 212-218; Edward Channing, *A History of the United States*, 2:421 bibliography (New York, 1912).

⁵⁸*Ibid.*, 410. Cf. Sherman Day, *Historical Collections of the State of Pennsylvania*, 416 (Philadelphia, 1843).

⁵⁹Cf. Samuel Kercheval, *A History of the Valley of Virginia*, 136-137 (ed. 2, Woodstock, Virginia, 1850).

⁶⁰Schöpf, *Travels in the Confederation*, 1:305. See Benjamin Rush, "An Account of the Manners of the German Inhabitants of Pennsylvania," Pennsylvania-German Society, *Proceedings and Addresses*, 1908, 19(21):1-128.

the Quaker and the German both housed and fed their stock. The German farmer believed in having fewer stock which were well kept rather than a larger number of poor, thin beasts.⁶¹

The "noble models of the German establishments in the centre of Pennsylvania" made the Keystone Colony famous as a farming and stock-raising country before the Revolution.⁶² A German physician named Johann David Schöpf, who was with a contingent of Bavarian troops during the Revolution, and who stayed afterwards in order to travel through the new Nation, observed that where "a German settles, there commonly are seen industry and economy, more than with others, all things equal—his house is better-built and warmer, . . . and his stabling is especially superior. . . ." ⁶³ He invariably had a few books on agriculture and a farmer's almanac.⁶⁴ The German barn excited the admiration of Kalm, and he described it carefully.⁶⁵

This German or Swiss "bank" barn was—and still is—the highest type of barn known. New England and Virginia created the plain "shed" barn, a simple structure that was sometimes connected with the house by a woodshed or other outhouse.⁶⁶ The Dutch barn in New York and northern New Jersey was an immense improvement upon this. It was a spacious structure with ample mows and stalls.

The German bank barn was like neither of these. Its basement was walled against a hill, and was used as a stable for horses, cattle, sheep, and even hogs. The threshing floor was above the basement with mows on either hand; occasionally there were double-decker floors. A driveway led up to the threshing floor on the second story, and thence around the barn. Through trapdoors in the floor the corn or other feed could be dropped from the wagons directly into the stalls below. Finally, the Pennsylvania German farmer took the precaution of attaching ventilators made of chimney pots to his barn. This device survives today and has been universally imitated.

In the raising of horses the Pennsylvania Germans were unexcelled. Lord Adam Gordon estimated that they owned 80,000 of the best horses in the Province in 1765.⁶⁷ The lack of inland navigation in the tract between the Delaware and the Susquehanna rivers probably made the horse more necessary there than in many other places. But the Germans loved horses for their own sake and preferred them to oxen for farm use. This was not the case with the English Quakers.⁶⁸ Dr. Schöpf noted with satisfaction that the wagons and horses which he met on the road between Philadelphia and York were "all in excellent order." The horses were of a strong, large breed, unusual in the other

⁶¹Frank Reid Diffenderffer, *The German Immigration into Pennsylvania*, pt. 2, p. 123 (Lancaster, 1900).

⁶²Timothy Flint, *Recollections of the Last Ten Years*, 206 (Boston, 1826).

⁶³Schöpf, *Travels in the Confederation*, 1:103.

⁶⁴*Ibid.*, 109 note.

⁶⁵Kalm, "Travels into North America," 448.

⁶⁶Later, a second structure, extending like an L across the end of the shed barn was added. This type of barn can be traced through "New England towns" in central New York and the Western Reserve of Ohio, as well as along the Eastern Shore of Maryland and throughout Tidewater Virginia.

⁶⁷Gordon, "Journal of An Officer," 411.

⁶⁸Franklin favored oxen to horses because oxen did as much work, ate less, and could be eaten for beef. Letter to Lord Kames, Feb. 21, 1769, in Sparks, *The Works of Benjamin Franklin*, 7:434-436 (Boston, 1838).

Colonies, and were "kept in good condition, and always looking sound and fit, whereas the skeletons along the coast are thin to the point of collapsing."⁶⁹ Schöpf criticized the prevalent American practice of underfeeding and overworking horses, whereby they often foundered or went blind; the practice was conspicuously absent from the German farms in Pennsylvania.

THE CONESTOGA HORSE

By the time of the American Revolution, the "strong and large breed of horses" in Pennsylvania had developed into a type known as the Conestoga horse – the only widely known native draft horse ever produced in America. Before the railroads came, the Conestoga horse was the great reliance of teamsters, stage drivers, and Government mail carriers from the Atlantic seaboard to the Ohio River. It is a matter of great regret that the breed was suffered to die out about 1850, for in some ways it was superior to any of the imported draft horses. The Conestoga horses were capable of hauling heavy loads, doing hard work, and enduring American weather conditions more adverse than those to be found in western Europe. Moreover, they were fast steppers and could travel farther in a day than the modern heavy horse, an ability of signal importance in a country of long distances.

Whether the Conestoga horse was basically of English Shire origin or of Belgian draft-horse origin is a matter of doubt. According to John Bach McMaster: "These creatures were of English origin. Some emigrants who settled in Chester county brought a few horses with them. From the English in turn the Swiss Mennonites obtained that stock which, in the valley of the Pequea and along the banks of Conestoga Creek, they brought to a high state of perfection."⁷⁰ However, L. M. Bonham, former secretary of the Ohio Livestock Association, declared that the Conestoga horse "seems to have descended from the stock brought by emigrants from Flanders, Denmark, and Germany. It was a mixture of several breeds, resulting in a large, patient burden bearer held in high esteem by the Germans of that State."⁷¹ Whatever the lineage of the Conestoga horse, there is no doubt that the Pennsylvania Germans were the originators of the breed. The very name of the horse indicates this. The Conestoga Valley was an important place of German settlement.

The wagon drawn by these splendid creatures was known as the Conestoga wagon. It was the ancestor of the later "prairie schooner," and, before the railroad, it was the freight vehicle of the time. It was usually drawn by a team of six well-kept horses wearing good harnesses that were sometimes adorned with bows of bells fitted to form an arch over the collar. The wagon body was necessarily built stanch and strong but it was by no means clumsy. Upon it the wheelwright expended his utmost skill and

⁶⁹Schöpf, *Travels in the Confederation*, 2:21. "There may be from 7000 to 8000 Dutch Waggon with four Horses each, that from Time to Time bring their Produce and Traffick to Philadelphia, from 10 to 100 Miles Distance." – William Douglass, *A Summary, Historical and Political, of the First Planting, Progressive Improvements, and Present State of the British Settlements in North-America*, 2:333 (New Orleans, 1853).

⁷⁰John Bach McMaster, *A History of the People of the United States, from the Revolution to the Civil War*, 2:559 (New York, 1897).

⁷¹Lazarus N. Bonham, "American Live Stock," in Chauncey M. Depew, ed., *One Hundred Years of American Commerce, 1795-1895*, 1:223 (New York, 1895).

good taste, and often produced a masterpiece of form and durability. The running gear was invariably painted red and the body blue. The cover was of stout, white linen or hempen material, drawn tightly over a frame and fitted to the body. It was lower in the middle and projected like a bonnet in front and back, the whole making a graceful appearance.⁷²

In the middle of the eighteenth century, the Philadelphia market and the Pennsylvania fairs, which Penn had founded, were the finest in America. Kalm described them with enthusiasm, declaring that visitors "are sure to meet with every produce of the season, which the country affords, on the market-days. . . ." ⁷³

The richness of Lancaster farms and the efficiency of the Pennsylvania German's methods of fattening stock made the country around Philadelphia, in the eighteenth century, a famous place for fattening cattle for market. Not only were herds of cattle driven down to these farms from the upper valleys of Pennsylvania, but great herds were brought all the way from Virginia and the Carolinas.⁷⁴

EAST AND WEST JERSEY

New Jersey fell to England with the conquest of the Dutch in 1664. In the same year, the region between the Hudson and the Delaware rivers was granted to Lord Berkeley and Sir George Carteret, and in 1676 it was divided into East and West Jersey, whence came the term the "Jerseys." The line of division ran diagonally from southeast to northwest, so that in effect East Jersey was northern Jersey and West Jersey southern Jersey.

East Jersey had been settled by the Dutch and its agriculture was, therefore, similar to that of New York. Late in the seventeenth century, a large influx of settlers from New England greatly influenced the agriculture.⁷⁵ The general sentiment seemed to be that the development of East Jersey lay in corn and cattle.⁷⁶

West Jersey, on the other hand, was adjacent to Philadelphia, and its economy was powerfully influenced by Quaker settlement. Writing before 1700, Gabriel Thomas recorded that Jersey "is exceedingly fruitful in Cattel, of which I have seen great numbers brought from thence, viz. Oxen, Cows, Sheep, Hogs, and Horses, to Philadelphia."⁷⁷

⁷²Oscar Kuhns, *The German Swiss Settlements of Colonial Pennsylvania*, 98-99 (New York, 1901). "In this wagon," wrote Dr. Rush, "drawn by four or five horses . . . they convey to market, over the roughest roads, 2000 and 3000 pounds' weight of the produce of their farms." - Franklin Ellis and Samuel Evans, *History of Lancaster County, Pennsylvania*, 350 (Philadelphia, 1883).

⁷³Kalm, "Travels into North America," 395.

⁷⁴Alexander Gregg, *History of the Old Cheraws*, 109 (New York, 1867); Turner, "The Old West," 203.

⁷⁵Charles McLean Andrews, *Colonial Self-Government, 1652-1689*, p. 109 (New York and London, 1904); Lois Kimball Mathews, *The Expansion of New England*, 48, 52-56 (Boston and New York, 1909).

⁷⁶Andrews, *Colonial Self-Government*, 127; Samuel Smith, *The History of the Colony of Nova-Caesaria, or New-Jersey*, 181-182 (Burlington, N. J., 1765).

⁷⁷Thomas, "Historical and Geographical Account of Pensilvania and of West-New-Jersey," 351.

A report to the same effect, written in 1721 by an official of the English Board of Trade sent over to examine the economic condition of the Colonies, states: "This province produces all sorts of grain or corn, the inhabitants likewise breed all sorts of Cattle, in great quantities, with which they supply the Merchants of New York & Philadelphia. . . ." ⁷⁸

However, the economic difference between East and West Jersey was deeper than a difference of historical attachment and development. It was rooted in the soil. The land in the former was more undulating and hilly than in the latter, and consequently the farms in East Jersey tended to be small holdings. The flat lands of West Jersey took on a plantation character; it is significant that there was more slavery in West Jersey than anywhere else in the North.

In late colonial and Revolutionary times, there was a great deal of horse breeding in the central counties of Monmouth, Somerset, Burlington, Gloucester, and Salem. This fact accounts for the horse's head on the State seal and on the seal of Trenton, the capital. ⁷⁹

The pine barrens and the long, low beaches and islands off the southeast coast had nothing in common with either East or West Jersey. These beaches furnished a coarse grass in summer and hay and bedding in winter. Although nominally under private ownership, actually the areas were in common usage. Here cattle multiplied rapidly and flourished in the mild climate; periodically they were rounded up and branded. Some farmers, to keep their stock from wandering and going wild, ferried them across the inlets in scows during the spring, where they were left until winter. ⁸⁰

⁷⁸Ernest Ludlow Bogart and Charles Manfred Thompson, eds., *Readings in the Economic History of the United States*, 45 (New York and London, 1916).

⁷⁹Francis Baxley Lee, *New Jersey as a Colony and as a State*, 2:453-454 (New York, 1902).

⁸⁰*Ibid.*, 1:279-280.

Chapter 4

STOCK RAISING IN THE SOUTHERN COLONIES

LIVESTOCK IN TIDEWATER VIRGINIA

Virginia was the oldest English colony in America, having been founded in 1607 with the settlement of Jamestown. Hogs, cattle, sheep, and horses were brought with the colonists in the first vessel, the *Susan Constant*. None of the livestock survived long as all the animals had to be consumed during the ensuing famine. Another supply of stock was sent out in 1611, with Thomas Dale, the new Governor. This was the real beginning of livestock south of the Potomac River.¹

Because of the hostility of the Indians who beset the Colony from the very first, the hogs were put on Hog Island, and a stockade was erected for the horses, cattle, and sheep.² Dale took strict measures to protect the future supply and ordained that no "man shall dare to kill or destroy any bull, cow, calfe, mare, horse, colt, goate, swine, cocke, henne, chicken, dogge, turkie or any tame Cattel or Poultry of what Condition soever; whether his owne or appertaining to another man, without leave. . . ."³ As a result of this conservation, the colonists soon had 200 cattle, 200 goats, many hogs, and a small number of horses.⁴

The impossibility of providing provender for the cattle and hogs, if they remained in stockade, necessitated letting them run at large in the woods. Despite Indian hunters and wolves, the stock increased so prodigiously that the colonists regarded the phenomenon with wonder.

This natural increase was added to by shipments from England. In 1619, it was proposed that 20 heifers be sent out with every 100 settlers. In February of that year, the ship *Tryal* sailed with 60 head and was followed the same month by the *Faulcon* with 52 cattle and 4 mares. Ten of the cows died on the voyage, but the balance was maintained by the birth of 10 calves.⁵

In a resolution adopted by the directors of the Virginia Company on July 7, 1620, it was proposed to ship 200 head of cattle, 400 goats, 80 asses, and 20 mares. The stipulation was made that the cattle were to be fine and from English breeds.⁶ Daniel Gookin, later destined to become one of Cromwell's right-hand men in Ireland, as well

¹Philip Alexander Bruce, *Economic History of Virginia in the Seventeenth Century*, 1:204, 211 (New York and London, 1895).

²*Ibid.*, 206.

³Quoted in *ibid.*, 216.

⁴Ralph Hamor, *A True Discourse of the Present Estate of Virginia*, 23 (Albany, 1860).

⁵Bruce, *Economic History of Virginia*, 1:247. The price of a cow in Virginia at this time was £15, or about \$300. — *Ibid.*, 250.

⁶*Ibid.*, 248.

as famous both in Virginia and Massachusetts, was the contractor. The cattle he brought out were obtained in Ireland.⁷ In the same year, the Earl of Warwick employed a Thomas Jones "to go to Virginia with cattle."⁸ In 1621, Walloon families, numbering 300 persons, came to Virginia "with a quantity of cattle, as well for husbandry as for their support. . . ."⁹ These were the first Flemish cattle imported into Virginia.

There were probably 500 cattle in Virginia by 1620.¹⁰ The loss in shipments across the ocean must have been heavy, for notices of "very rough weather at sea and loss of cattle" were frequent.¹¹ When Lady Wyat came to Virginia in 1623, "once landed . . . she asked for the speedy sending of supplies, especially of bacon and cheese, for the cattle as well as the men had perished on the way over."¹² Compensation, however, was made for these losses in the amazing natural increase of stock. By 1627, there were supposed to be from 2,000 to 5,000 cattle in Virginia, and innumerable hogs which fattened on mast and acorns in the woods.¹³ It was estimated that by 1647 there were 20,000 horned cattle, 3,000 sheep, 200 horses, 50 asses, and 5,000 goats.¹⁴ By 1633, Virginia was able to provision ships from England for the return passage, and to seek a market for live cattle in New England.¹⁵ There is singular evidence of the increase of cattle by 1660 in the recommendation that a cow be given to every Indian chief, the members of whose tribe had brought to the proper authorities the heads of eight wolves.¹⁶ This sagacious legislative action was taken both in order to reduce the number of wolves and also, as the statute explicitly stated, in the hope of civilizing and Christianizing the Indians. "The cow has performed both a conspicuous and a useful part in the history of the human race," Philip Alexander Bruce whimsically commented, "but probably never before or since has so high a compliment been paid to her capacity for accomplishing good, as in this expression of confidence in her power to change even the wild nature of the Indian by the softening influence of her presence."¹⁷ The laudable intention proved better than the realization. Although the Indians grew very fond of milk; they were too lazy to feed or care for stock, and let the fresh cows go unmilked.

By 1630, the Indians had been driven out of the country around the lower James River. Here the colonists formed a great range for their cattle by fencing off a peninsula with an area almost as great as the English County of Kent. To these emigrants from a narrow island this range must have seemed a princely domain. "Within the

⁷This transaction seems to have been the beginning of an important trade in cattle between Ireland and Virginia. —*Ibid.*, 249.

⁸Great Britain, Public Record Office, *Calendar of State Papers, Colonial Series, America and West Indies*, 9:58 (London, 1893).

⁹*Ibid.*, 60.

¹⁰Bruce, *Economic History of Virginia*, 1:247.

¹¹*Calendar of State Papers, Colonial Series, America and West Indies*, 9:144.

¹²Edward Channing, *A History of the United States*, 1:207 (New York, 1905).

¹³Bruce, *Economic History of Virginia*, 1:202, 296.

¹⁴Edward Eggleston, "Husbandry in Colony Times," *Century Magazine*, 27 (n.s. 5): 442 (January 1884).

¹⁵Bruce, *Economic History of Virginia*, 1:311, 330.

¹⁶William Waller Hening, ed., *The Statutes at Large; Being a Collection of All the Laws of Virginia*, 1:395 (New York, 1823).

¹⁷Bruce, *Economic History of Virginia*, 1:370.

boundary of this range," as Bruce explained, "the cattle wandered at liberty, finding their food in wood, marsh, and field during every season. If fed at all in winter, they received only the husks of maize with a few grains."¹⁸

Many cattle, however, escaped from the compounds and in course of time gave rise to herds of wild cattle that roamed the forests and river bottoms.¹⁹ These wild cattle, horses, and hogs committed serious damage on the plantations. Fencing was almost impossible at this early period, although various fence laws were passed.²⁰ When fences were at last introduced, the Virginian, in a land where timber was so cheap that whole areas of forest were burned over in order to make clearings, invented the time-honored, and picturesque, but barely hog-and-cattle-proof, "snake fence" with its zig-zag rails.²¹

As in the New England and Middle Colonies, the hardest stock to raise in Virginia were sheep. Long after Virginia was able to ship out both cattle and horses, the exportation of sheep was forbidden.²² Here, however, the settlers had themselves partly to blame. Although sheep runs were built on peninsulas or islands as protection against wolves, no systematic effort was made to supply the sheep with fodder or litter, or to protect them from the winter weather.

The Bacon insurrection in 1676 destroyed a considerable number of the stock, but the natural increase was so rapid that the loss was soon repaired. Toward the end of the seventeenth century, Virginia was rich in all kinds of livestock, even sheep.²³ The same drop in cattle values occurred in Virginia as in New England, but with less calamity to the community.²⁴ New England, aside from stock raising, had no other resource at that time except the fisheries, whereas in Virginia tobacco was a lucrative staple.

Before 1649, horses were few and valuable. In 1639, the Quarter Court appointed two men to go to England and import horses for the Colony.²⁵ By 1669, there was a reasonable supply of domestic horses, besides hundreds of wild horses, whose depredations were a serious nuisance, and the law against the exportation of horses was revoked.²⁶ Owners of good horses, however, were "thought to be more or less easy in fortune. . . ."²⁷

By law, cattle and horses in Virginia had to be marked or branded, as was the case in the other Colonies. Because settlement had been made by scattered plantations, often miles apart—for years Jamestown and later Williamsburg were the only towns—the multitude of town regulations concerning cattle which prevailed in New England is not

¹⁸ *Ibid.*, 312.

¹⁹ *Ibid.*, 477-479.

²⁰ *Ibid.*, 315, 378.

²¹ *Ibid.*, 316-318.

²² *Ibid.*, 378.

²³ *Ibid.*, 481.

²⁴ The price of cows dropped, about 1640, from £15 per head to £2. — *Ibid.*

²⁵ *Ibid.*, 335.

²⁶ *Ibid.*, 376, 474. For the value of horses, see *ibid.*, 475.

²⁷ *Ibid.*, 376.

found. Town cowherds, town hogringers, and town common pastures were unknown in Virginia. The Indians grew to be such hog stealers that the law required them to mark their hogs—the exact reverse of the legislation of Massachusetts.²⁸ The law, though, was a dead letter. Wild hogs were so numerous that nobody minded the theft of a hog. By 1670, they were so abundant as to baffle enumeration. The only care ever given them was in the case of farrowing sows, who were sometimes permitted to use the tobacco storehouses as shelter.²⁹

VIRGINIA EXPANDS INLAND

Unlike New England, where rapid expansion of the settlements began very early, the settlements—or rather plantations—in Virginia clung tenaciously to the Tidewater region for almost a century. The reason is partly to be found in the hostility of the Indians which, before 1676, was greater than in New England. More important was the fact that tobacco growing was the chief economic enterprise, and for this purpose the rich bottom lands along the rivers, below the fall line, excelled. The natural topography divided Virginia into three distinct parts, each with a remarkable physical identity of its own—a condition that profoundly influenced the development of Virginian history. These three regions were the Tidewater or coastal region; the Piedmont, from the fall line to the foot of the mountains that walled the Colony on the west; and the Blue Ridge and the vast region beyond.

By the time Virginia had passed the century mark, her settlements had not yet extended farther inland than the fall line. Virginians had not yet penetrated the strip of forest, not 50 miles wide, which separated the Tidewater region from the broad grassy prairies of the Piedmont, and they knew nothing of the Shenandoah Valley beyond the Blue Ridge.

It was inevitable, in course of time, that the restless and adventurous of the population would penetrate the forest barrier. With the gradual exhaustion of the tobacco lands, the engrossing of great plantations by the Virginia aristocracy, and the increase of population men broke away from the old settlements and went forth into the wilderness to find clearings for farms.

The colonial government frowned upon such expansion. As late as 1710, the law forbade settlement so far from the frontier that the rangers could not give protection. Once the rich Shenandoah Valley was discovered, there was no inhibiting the expansion of Virginia. Here the prairie grass grew 5 feet high, the pea vine, at once forage and grain, flourished, and the slopes of the hills afforded pasturage.³⁰ It was an Elysian land for cattle raising. Practically unsettled in 1720, the rich valley filled rapidly in the years following. Virginia was compelled to abandon the policy of limiting the expansion of her people, and in 1720 the movement to the valley was sanctioned by the organization of Spottsylvania and Brunswick counties.³¹

²⁸*Ibid.*, 379-380.

²⁹*Ibid.*, 378-379.

³⁰Samuel Kercheval, *A History of the Valley of Virginia*, 49 (ed. 2, Woodstock, Va., 1850).

³¹Charles E. Kemper, ed., "The Early Westward Movement of Virginia, 1722-1734," *Virginia Magazine of History and Biography*, 12:341 note (April 1905).

These Virginia pioneers, dreaming of establishing ranches in the lush valley, found that the ubiquitous and enterprising Pennsylvania Germans already had discovered the Shenandoah Valley for themselves.³² It was not wholly the sloth of Virginia's expansion that was responsible. The Shenandoah was far more accessible from Pennsylvania than from Virginia. Although the Blue Ridge walled Virginia's westward advance, the Shenandoah was readily open to settlers from Pennsylvania, as it was a continuation of the trough that ran along the eastern edge of the Alleghenies in southeastern Pennsylvania.³³

The German pioneer built his log house and cattle pens in the wilderness and started to raise stock on the rich meadows of the Shenandoah, in spite of savage beast and still more savage Indian.³⁴ The Indian danger, however, did not become acute until the outbreak of the French and Indian War in 1754.³⁵ In the interval the Shenandoah became a cattle-raising country of great fame.

The easygoing land laws made it readily possible for the first comers to acquire huge areas of wild land in western Virginia.³⁶ The story is told that Jacob Stover, a German who came into the Valley in 1733, patented 5,000 acres by giving human names to every horse, cow, hog, and dog he owned, and which he represented as heads of families ready to migrate and settle the land.³⁷

By 1750, there were two distinct societies in Virginia: Tobacco planters in the Tidewater region, and farmers and cattle raisers on the Piedmont and west of the Blue Ridge in the Valley. With Braddock's defeat in 1755, the Indians attacked the frontier settlements in western Virginia, and their outrages drove many of the settlers back east of the Blue Ridge. The Indians rarely attacked the stockaded settlements unless aided by the French. They preferred to ravage lonely farms instead.³⁸

Each settlement had its own log fort, with the farms scattered a mile or more around it. When the alarm sounded, all thronged into the stockade, leaving the livestock to shift for itself in the woods.³⁹ Under these conditions of danger, the frontiersmen farmed in common, all the men uniting to plow first one field and then another; to get the harvest in on one farm and then another. They carried their guns to the fields, leaving them stacked close at hand with an old man or a boy to watch.⁴⁰ The spring and summer were the times of greatest peril. Relative tranquility prevailed during the winter, when, owing to the severity of the weather, the Indians were unable to make their raids.

³²There may have been a few Germans in the Shenandoah Valley as early as 1704. — John Walter Wayland, *The German Element of the Shenandoah Valley of Virginia*, 9-10 (Charlottesville, 1907). Kercheval, *History of the Valley of Virginia*, 41, is in error in claiming that Joist Hite was the first settler.

³³Frederick Jackson Turner, "The Old West," Wisconsin State Historical Society, *Proceedings*, 1908, p. 211-212.

³⁴For a description of one of these German stockades about 1715, see Ulrich B. Phillips, ed., *Plantation and Frontier, 1649-1863*, 2:232 (Cleveland, 1910).

³⁵Kercheval, *History of the Valley of Virginia*, 45.

³⁶Turner, "The Old West," 205.

³⁷Kercheval, *History of the Valley of Virginia*, 42-43.

³⁸*Ibid.*, 61-62, 74.

³⁹*Ibid.*, 223.

⁴⁰*Ibid.*, 77.

Sometimes after winter had seemed to set in, the weather grew mild again and continued so for several weeks. This was Indian summer. To us, today, the season is one of pleasure, an apparent prolongation of summer into the cold season, but Indian summer was dreaded by our ancestors. It afforded the Indians another opportunity to fall upon the settlements when they were most exposed, as all the inhabitants were scattered abroad on their little farms.

After the conclusion of the French and Indian War, treaties were made with the Indians and the whole frontier from New England to the Carolinas once more enjoyed immunity, until the outbreak of the Revolution brought British-Indian adherents down upon the settlements again. The memory of these raids are preserved in the tales of the massacres at Wyoming Valley and Cherry Valley.

In the interim, westward expansion was renewed all along the frontier. As in New York where the settlements spread up the Mohawk Valley, so in Virginia there was a new overflow into the Shenandoah. By 1772, settlements had grown up in what is now West Virginia, along the Monongahela, and between that River and Laurel Ridge. By the next year, settlers had reached the Ohio River on the Virginia side. Braddock's old military road was the chief route of these pioneers. A lesser number went by way of Forts Bedford and Ligonier, the military road from eastern Pennsylvania to Fort Pitt, or Pittsburgh, as it came to be known. Some of these settlers took the precaution of going over the mountains in the spring to put in their corn, leaving their families behind, until the autumn.

LIVESTOCK IN EIGHTEENTH-CENTURY VIRGINIA

Virginia in the eighteenth century was not a thriving Colony, particularly in the coastal region. Less than a tenth of the land was cultivated, and that was tilled in a slipshod fashion. The formerly productive tobacco fields had become infertile, and instead of practicing rotation of crops, manuring, and subsoil plowing, the planter generally abandoned old fields and cleared new ground. Virginia pork was reputed to be the best in America, yet the planter of the Tidewater made no attempt to raise more hogs or cattle than his family and slaves needed for sustenance. His cattle and sheep were small and lean; they wandered unfed, untended, and unhoused over the range and diminished in numbers as they shrank bodily in size.⁴¹ The only animal upon which the Virginia planter bestowed attention was the horse, which he used for riding.⁴²

In upland Virginia, and especially in the Shenandoah Valley and on the rivers flowing into the Ohio, conditions were different.⁴³ Here the free farmer combined rude farming with cattle raising. The frontier forts guarding the Shenandoah Valley and the Indian routes over the Alleghenies from the west always furnished a good market for his stock. Besides there were the settlements such as Winchester, Martinsburg, Strasburg, and Staunton that were growing into towns. The residue of his stock was driven down to the older and more populous centers along the coast.

⁴¹Johann David Schöpfung, *Travels in the Confederation, 1783-1784*, 2:32, 48 (Philadelphia, 1911).

⁴²Andrew Burnaby, "Travels Through the Middle Settlements in North America in the Years 1759 and 1760 (ed. 3, London, 1798)" in Rufus Rockwell Wilson, ed., *Source Books of American History*, 44 (New York, 1904). Cf. Eggleston, "Husbandry in Colony Times," 445; Adam Gordon, "Journal of an Officer who Travelled in America and the West Indies in 1764 and 1765," in Newton D. Mereness, ed., *Travels in the American Colonies*, 405 (New York, 1916).

The border counties made up the true cattle country of the Old Dominion. The settlers' farms were ranches; many kept large herds of cattle and from 40 to 50 horses. Herds of four and five hundred were not uncommon. They also had sheep in considerable numbers, although the cost of attention and the ravages of wolves made sheep raising less lucrative than cattle raising.⁴⁴

SETTLEMENT OF THE CAROLINAS

"The province of North Carolina," wrote Governor Johnston to the British Board of Trade in 1749, "was first settled by People from Virginia in low circumstances who moved hither for the benefit of a larger and better range for their Stocks."⁴⁵ South Carolina had been founded as a separate Colony in 1663, and the settlement later to become Charleston was established in 1670. The Colony had originally included the present territory of North Carolina, but the planters for years stuck close to their rice and indigo plantations along the coast and made no attempt to occupy the back country. Meanwhile, an overflow of population from Virginia with different political associations and a different economy began to settle there. In 1729, the boundary between Virginia and North Carolina was determined as running through the Dismal Swamp, and North Carolina was separated from South Carolina the same year.

The pine barrens of North Carolina, which soon were to become an important source for the production of naval stores such as tar and pitch, also were a factor in limiting upcountry settlement from South Carolina. On the other hand, the Great Valley of Virginia penetrated down into western Carolina and afforded a natural and ready way of access into the hinterland of both North and South Carolina. Soon after the close of the French and Indian War, the frontier inhabitants of Pennsylvania and Virginia began to drift southward down the Valley.⁴⁶

The settlement of the Carolina Piedmont began to increase after the defeat of the Tuscaroras and the Yemassee in 1713.⁴⁷ Some of the settlers who came down from the north drove their horses, cattle, and hogs before them.⁴⁸ Large numbers of wild horses, descendants of those originally brought over to Florida, and wild black Spanish cattle were found in the country.⁴⁹ Many of these were rounded up by the first settlers, and stock raising in upper North and South Carolina became a lucrative business.⁵⁰

⁴³Burnaby, "Travels Through the Middle Settlements," 73-74.

⁴⁴*American Husbandry*, 1:166-167 (London, 1775).

⁴⁵William L. Saunders, ed., *The Colonial Records of North Carolina*, 4:920 (Raleigh, 1886).

⁴⁶Alexander Gregg, *History of the Old Cheraws*, 92 (New York, 1867). "The borderers in the Valley of Virginia and on the western highlands of the Carolinas were largely engaged in raising horses, cattle, sheep, and hogs, which grazed at will upon the broad slopes of the Alleghanies, most of them . . . in . . . a wild state. . . ." - Reuben Gold Thwaites, *Daniel Boone*, 35 (New York, 1902).

⁴⁷John Fiske, *Old Virginia and Her Neighbours*, 2:304 (Boston and New York, 1897); Turner, "The Old West," 203.

⁴⁸William A. Schaper, "Sectionalism and Representation in South Carolina," *American Historical Association, Annual Report*, 1900, 1:277.

⁴⁹Columbus brought over some horses on his second voyage in 1493, but Cabeza de Vaca was the first person who imported horses into any part of the country now comprising the United States.

⁵⁰*Ibid.*, 283.

Under the niggardly policy of its governors, most of the cattle of the first colonists in South Carolina had been brought from Virginia at high prices.⁵¹ The dear-ness of the stock and the poverty of the breed made it more profitable to go as far afield as New York. One Dutch cow was said to be "worth two from Virginia."⁵²

LIVESTOCK IN THE CAROLINAS

In the balmy climate and the thick marsh grass of the river-bottom meadows of South Carolina the stock thrived amazingly. The only bane was wolves. Here were "cattle fit for the knife all the year round, and hogs, sheep, goats, and other service-able animals," wrote an enthusiast in 1671.⁵³ Another declared at the same time: "Cattle will be bred, fed and kept at very easy rates."⁵⁴ The prophecy was not exaggerated. South Carolina was destined to become the great cow country of the American Colonies. As early as 1782, Thomas Ashe, one of the first historians of Carolina, recorded: "The great encrease of their Cattel is rather to be admired than believed: not more than six or seven years past the Country was almost destitute of Cows, Hogs, and Sheep, now they have many thousand Head."⁵⁵

The rapid increase of livestock in South Carolina soon alarmed the founders of the Colony. Their purpose was to develop enormous rice and indigo plantations. They wished to allow the inhabitants only enough stock for family needs and looked with dismay upon the swift gravitation toward stock raising. They even attempted by law to prevent migration from the tidewater lands to the upcountry in an effort to concentrate the activities of the inhabitants wholly upon rice and indigo culture in the seaboard region. As long as cattle raising was dependent upon importation, the proprietors controlled the situation. When the colonists asked for more cattle, they were told that the government wanted planters not graziers.⁵⁶

Such an arbitrary economy was impossible of continued enforcement. Information accumulated in the coastal settlements of the Long Canes and the Big Glades, which Bishop Spangenberg in his *Diary* enthusiastically called Goshen Land, and of the rich clearings and pea-vine pasturage in the back country. The restless population, which had steadily increased by immigration and which was unable to acquire cheap land near the coast because it was engrossed by the planters, broke away and moved inland, following up the course of the rivers.⁵⁷

⁵¹A hog which might be bought for 10 shillings in England in 1670 cost 30 shillings in Virginia. - *Calendar of State Papers, Colonial Series, America and West Indies*, 7:86, 91 (London, 1889).

⁵²*Ibid.*, 167, 180.

⁵³*Ibid.*, 186-187.

⁵⁴*Ibid.*, 169.

⁵⁵Thomas Ashe, "Carolina; or a Description of the Present State of that Country (London, 1682)," in Alexander S. Salley, Jr., ed., *Narratives of Early Carolina, 1650-1708* (Original Narratives of Early American History, edited by J. Franklin Jameson), 149 (New York, 1911).

⁵⁶George Chalmers, "Political Annals of the Province of Carolina," in B. R. Carroll, compiler, *Historical Collections of South Carolina*, 2:299 (New York, 1836); Schaper, "Sectionalism and Representation in South Carolina," 277.

⁵⁷William James Rivers, *A Sketch of the History of South Carolina*, 54 (Charleston, 1856); John H. Logan, *A History of the Upper Country of South Carolina*, 1:8, 150 (Charleston and Columbia, 1859); Turner, "The Old West," 203.

Information on these rich lands in the upper country first was carried to the coastal settlements by the Indian traders and trappers. In the course of their wanderings through the wilderness, they discovered the resources of the country and brought back glowing accounts of the Elysian spots they had seen; thus opening the way to the most eligible sections for succeeding groups of advancing settlers. The hunters and the traders were not real pioneers, for they appropriated no lands and leveled no forests, but they played an important part in the development of the American frontier.⁵⁸

Thus it came about that the cowpens of the cowdrivers—the ranches of the stockmen—began to supplant the log cabins of the hunters in the Piedmont region of South Carolina. John H. Logan has graphically described these cowpens:

Having selected a tract, where cane and pea-vine grass grew most luxuriantly, they erected in the midst of it temporary cabins, and spacious pens. These were used as enclosures, in which to collect the cattle at proper seasons, for the purpose of counting and branding them. . . .

At an earlier day, a cow-pen was quite an important institution. It was usually officered with a superintendent, and a corps of sub-agents, all active men, experienced woodsmen, and unfailing shots at long or short sight with the rifle. For these a hamlet of cabins were erected, besides the large enclosures for the stock; all of which, with a considerable plat of cleared land in the vicinity for the cultivation of corn, made quite an opening in the woods. . . .⁵⁹

A cowpen was a rough, noisy, frontier community not unlike Miles City and Ogallala in the palmy days of the western cow country. Horse thieves and cattle lifters mingled with honest men. It was a wild and boisterous life. The cowpen keepers, if the pasturage were found sufficient, might remain for years in the same place; or, again, as pastures thinned or civilization and increase of population grew around them, they would push farther back into the wilderness. A contemporary described them as moving "(like unto the ancient patriarchs or the modern Bedouins in Arabia) from forest to forest as the grass wears out or the planters approach them."⁶⁰

In order to stock a cowpen in the early days, it was only necessary to round up the wild cattle of the region. This was done by the simple practice of building a corral, between the forks of two streams if possible, and driving the cattle into it. The wild horses were caught in the same way, and some of the streams in upper South Carolina still retain names, as Horse Pen Fork, in reminiscence of this custom.⁶¹ Once branded with the owner's mark, the cattle were let out again to forage in the woods. From time to time salt was placed in the neighborhood of the cowpen in order to familiarize the stock with the place and accustom them to having men around. Milk was obtained by the simple device of placing the calves in a pen partitioned off from the main

⁵⁸ Logan, *History of the Upper Country of South Carolina*, 1:149.

⁵⁹ *Ibid.*, 151-152. Cf. Gregg, *History of the Old Cheraws*, 68, 108-110; A. S. Salley, Jr., *The History of Orangeburg County, South Carolina*, 219-221 (Orangeburg, S. C., 1898); Turner, "The Old West," 202; Edward McCrady, *The History of South Carolina under the Royal Government, 1719-1776*, p. 295-296 (New York, 1899).

The cowpen struck the imagination of cultured Easterners in the middle of the eighteenth century much as the ranch life of the Far West has allured urbanites more recently.

⁶⁰ *Ibid.*, 396; Logan, *History of the Upper Country of South Carolina*, 1:28-29.

⁶¹ Gregg, *History of the Old Cheraws*, 109.

stockade. When the mother cows came up in the evening, they were partly milked in the main pen, and then the gate into the calves' pen was opened and the calves stripped them. The same process was repeated in the morning.⁶²

Contemporary descriptions of cattle raising in South Carolina in its most prosperous days, before the herds were decimated by a cattle plague just prior to the Revolution, show that the Piedmont region of the Carolinas was the cattle country of the American Colonies. According to the author of *American Husbandry*, it was "not an uncommon thing to see one man the master of from 300 to 1,200, and even 2,000 cows, bulls, oxen, and young cattle; hogs also in prodigious numbers."⁶³

At regular seasons great herds of these cattle were driven to the coastal towns of Charleston, Norfolk, Baltimore, and Philadelphia.⁶⁴ Sometimes the herds were sold to professional drovers who took them into town, in which case the herds were delivered gratis on the other side of a designated stream. These long drives to the coastal towns were often very hard on the cattle. In 1752 and again in 1769, terrible droughts prevailed, so that the watercourses dried up and water holes had to be dug along the roads, some as deep as 15 feet.⁶⁵ Worse still, in the middle of the eighteenth century, a distemper broke out and destroyed seven-eighths of the cattle of the Carolina Piedmont. In order to protect her own stock, the legislature of Virginia enacted a series of regulations to control the driving of cattle through her frontier counties, thus anticipating the Federal legislation of later times to prevent the spread of Texas fever.⁶⁶

Of hog raising in the Carolinas there is little to be said. Every planter had numbers of them running wild in the forests. When wanted, they were shot, for there was no other way of capturing them. Thousands were killed, salted, and shipped to the West Indies.⁶⁷ Pork was a valuable export from Charleston, and Cheraw bacon in the South rivaled that of Connecticut in the North.

HORSE BREEDING

Horses ran wild all along the frontiers of Virginia and the Carolinas. Most of them were sprung from stallions and mares which had escaped from the settlements. Immense droves of wild horses are mentioned as early as 1670.⁶⁸ Under the hardships of wild life the horses deteriorated in size, and as many of them were captured by hunters on the border, fear began to be felt for the welfare of the stock belonging to the colonists. In 1700, South Carolina took legislative measures to restrain this trade in wild horses.⁶⁹ Seven years later, the statute was repealed, when it was discovered that the Scotch-Irish, and especially the Germans from Pennsylvania, who were pushing

⁶²William Bartram, *Travels Through North and South Carolina, Georgia, East and West Florida*, 306 (London, 1792).

⁶³*American Husbandry*, 350; Jean Pierre Purry, "A Description of the Province of South Carolina," in Peter Force, ed., *Tracts and Other Papers*, 2(11):8-9 (Washington, 1838).

⁶⁴Gregg, *History of the Old Cheraws*, 68 note; Turner, "The Old West," 203.

⁶⁵Gregg, *History of the Old Cheraws*, 117.

⁶⁶Turner, "The Old West," 203.

⁶⁷Purry, "A Description . . . of South Carolina," 9.

⁶⁸Logan, *History of the Upper Country of South Carolina*, 1:155.

⁶⁹*Ibid.*, 154; McCrady, *History of South Carolina*, 518.

into the Piedmont, were bringing good Pennsylvania and Virginia horses with them. In 1731, Jean Pierre Furry wrote: "Horses, the best kind in the World, are so plentiful that you seldom see any body travel on foot except Negroes, and they oftener on horse-back." It was the boast of South Carolina in the eighteenth century that a steer cost no more than a hen. It might almost equally have been said of horses.

About 1754, the breed of horses was much improved by importations from England, and great attention was given to the breeding of saddle horses and hunters. One writer described them as being trained "to two gaits—the canter and the walk, and in these they were unsurpassed. The trot and pace were seldom used. The saddle horses were excellent hunters, and though but of medium size would seldom hesitate to take a six-rail fence at a leap. The boys and girls learned to ride upon tackies, which were often not more than ponies in size, but active, enduring and easy gaited."⁷⁰ These ponies were to be found running wild on the islands off the coast of North and South Carolina.⁷¹

South Carolina and Georgia had one notable breed of horses more highly prized than any other. These were the Chickasaw horses, named after the first mounted Indians with whom the whites of the English colonies came in contact.⁷² The Chickasaws were fully aware of the value of the breed and carefully guarded it from intermixture. They even tried to prevent the sale of their horses to the whites, and most of the horses in South Carolina and Georgia were stolen and smuggled out of the Indian country. The horses were small, seldom being over 13½ hands high, but active, and beautiful.⁷³

The Chickasaw horses were direct descendants of the first horses landed within territory now belonging to the United States. Of Spanish barb origin, they had been brought over to Tampa, Florida, in 1528 by Cabeza de Vaca.⁷⁴ The expedition suffered frightfully from the Indians, and from hardships and desertion. Many of the horses were killed for food, and boats and water bottles were made from their hides, but some of the horses managed to escape to the wilderness. From these the Chickasaw or Seminole horses were descended.

The Seminoles, Chickasaws, and Cherokees of Spanish Florida and the back country of Georgia manifested far more aptitude for civilization than the Indians of the North. They raised hogs, cattle, and horses in almost equal proportion to the whites along the border and even cultivated fields of corn and wheat.⁷⁵

EARLY GEORGIA

Georgia was the last colony to be settled, being founded in 1733. Like South Carolina, it became a great cow country late in the eighteenth century, especially in

⁷⁰*Ibid.*, 519. For an account of horse racing in South Carolina, see *ibid.*, 520-523.

⁷¹James Battle Avirett, *The Old Plantation*, 109 (New York, 1901).

⁷²Eggleston, "Husbandry in Colony Times," 445.

⁷³Gordon, "Journal of an Officer," 384.

⁷⁴Núñez Cabeza de Vaca, "The Narrative of Alvar Núñez Cabeza de Vaca," edited by Frederick W. Hodges, in *Spanish Explorers in the Southern United States, 1528-1543*, p. 14, 18, 20, 35-37 (New York, 1907).

⁷⁵Bartram, *Travels*, 188. For further information on the southern Indians, especially the Cherokees, see Charles C. Royce, "The Cherokee Nation of Indians," U. S. Bureau of Ethnology, *Annual Report*, 1883-1884, 5:121-138; Annie Heloise Abel, "The History of Events Resulting in Indian Consolidation West of the Mississippi," American Historical Association, *Annual Report*, 1906, 1:233-438; Thomas Valentine Parker, *The Cherokee Indians* (New York, 1907).

the region between the Savannah and the Ogeechee rivers, where cowpens became familiar institutions. Farther south, in Florida and the Seminole country, cattle raising was not profitable. The country was low and swampy and infested with flies. Worse still, the streams abounded with leeches; these fastened upon the cattle, which, being very fond of a species of water grass, waded deep into the water. The leeches gave rise to horrible ulcerations on the bodies of the cattle, which undoubtedly were aggravated by flies and other insects, so that the animals were often raw and bleeding and frequently died of their sufferings. The disease was known locally as "water-rot" or "scald." It never occurred in the Georgia uplands or the savannahs in the forests.⁷⁶

SUMMARY OF THE COLONIAL PERIOD

Having completed this survey of the history of stock raising in the Colonies before the national period, it seems well to draw together into a single whole a few of the main facts. For the sake of convenience of treatment, three historical and geographical areas—New England, the Middle Colonies, and the South—have been distinguished. These three divisions had each a prevailing economy of its own, but the distinctions had chiefly to do with the coastal region. New England depended chiefly on fisheries and trade; the Middle Colonies on trade, without fisheries; and the South on plantation staples—tobacco in Virginia and rice and indigo in Carolina.

In every one of the Colonies, stock raising on a large scale was primarily a frontier activity. The business had a unity which prevailed over all the lines of political division. The history of stock raising during the colonial period must be understood in terms of the frontier of that time, and, as Frederick Jackson Turner has so cogently shown, the colonial frontier, "as a whole can only be understood by obliterating the state boundaries which conceal its unity. . . ."⁷⁷

The frontier of the American Colonies was composed of a combination of border sectors. As a territory it always possessed a unity of its own, independent of the particular province to which each separate sector was politically attached. The frontier, in the period of the first settlements, was identical with the Atlantic coast. As the settlements multiplied and the population slowly moved inland, the frontier retreated. In the middle of the seventeenth century, it was marked by the fall line, or the head of navigation of the rivers. By 1700, the frontier in New England was at the foothills of the White Mountains and the Berkshires; in New York above Albany and beyond the German Flats in the Mohawk Valley; in Pennsylvania around Philadelphia; in Virginia at the edge of the Tidewater where it remained until the discovery of the Shenandoah Valley; in the Carolinas it was barely 80 miles from the coast.

The great westward push came in the eighteenth century. In 1763, at the close of the French and Indian War, the frontier "included the back country of New England, the Mohawk Valley, the Great Valley of Pennsylvania, the Shenandoah Valley, and the Piedmont—that is, the interior or upland portion of the South, lying between the Alleghanies and the head of navigation of the Atlantic rivers marked by the fall line."⁷⁸

⁷⁶Bartram, *Travels*, 205-206.

⁷⁷Turner, "The Old West," 185-186.

⁷⁸*Ibid.*, 185.

Along all this frontier line, from New England to Georgia, cattle raising and small farming were the principal enterprises. A regular sequence of industry, beginning with hunting, followed by cattle raising, and finally culminating in settled farming is observable in the historical evolution of this frontier. Each epoch of the frontier's expansion was characterized by this "common sequence of frontier types, fur-trader, cattle-raising pioneer, small primitive farmer."⁷⁹ By 1800, the cow country was west of the Alleghenies, in Ohio and Kentucky; in 1860, it was in Illinois and Missouri; and by the 1880's, it was on the Great Plains. The ranches and cowboys of the nineteenth century were the counterpart of the cowpens and cowdrivers of the eighteenth century.

⁷⁹Frederick Jackson Turner, "The First Official Frontier of the Massachusetts Bay," *Colonial Society of Massachusetts, Publications*, 17:254 (Cambridge, 1914). Cf. Schaper, "Sectionalism and Representation in South Carolina," 247-249; Gregg, *History of the Old Cheraws*, 109.

Chapter 5

STOCK RAISING IN THE UNITED STATES, 1775-1830

EFFECT OF AMERICAN REVOLUTION ON AGRICULTURE

The Revolution brought less adversity to the civilian population than is commonly assumed. Agricultural operations went on very nearly as they did in peaceful days, except in the immediate neighborhood of the contending armies.¹ After the battle of Bunker Hill, New England, save for Rhode Island where the British were in occupation of Newport, enjoyed almost complete immunity. Virginia, North Carolina, and South Carolina were not visited by the war until 1780-1781. Moreover, the farmers around points of prolonged British occupation, such as New York and Philadelphia, prospered. The British armies furnished a ready market for all their produce and paid high prices in gold, whereas elsewhere American paper money only was in circulation, and it was almost worthless; neither men nor beef could be obtained with it.²

Dr. Johann Schöpf, a keen observer who traveled through America just after the Revolution, said the belief that America at large suffered as a result of the war was not founded on facts. "We found on the road that everybody was well and neatly clad," he recorded, "and observed other signs of good living and plenty."³

The war hardly interfered with the prosperity prevailing in Pennsylvania. The value of Pennsylvania farms actually increased from £5 to £8 an acre.⁴ A French officer, the Marquis de Chastellux, who also traveled through America about this time, gathered the same impression. "Such is the immense, and certain benefit of agriculture," he wrote, "that notwithstanding the war, it not only maintains itself wherever it has been established, but it extends to places which seem the least favourable to its introduction."⁵

Foreign commerce on the other hand suffered, owing to British mastery of the sea. New England ports, in particular, fell upon hard times; Boston suffered acutely.⁶ The West Indian cattle trade was wholly interrupted. In contrast, New York and Philadelphia grew rich supplying the British armies. The result of this condition was that farming replaced commerce to a large extent. Capital flowed back from the coast, and inland farms rose in value.⁷

¹Edward Channing, *A History of the United States*, 3:396 (New York, 1908).

²Andrew Cunningham McLaughlin, *The Confederation and the Constitution, 1783-1789*, p. 77 (New York and London, 1910).

³Johann David Schöpf, *Travels in the Confederation, 1783-1784*, 1:55 (Philadelphia, 1911).

⁴*Ibid.*, 113, 128.

⁵François Jean, Marquis de Chastellux, *Travels in North-America, in the Years 1780, 1781, and 1782*, 1:47 (London, 1787). Hereafter cited as Chastellux, *Travels*.

⁶Large flocks of sheep were sent from Rhode Island to distressed Boston. Samuel Greene Arnold, *History of the State of Rhode Island and Providence Plantations*, 2:341 (New York, 1860).

⁷Chastellux, *Travels*, 2:237, 250 note; McLaughlin, *The Confederation and the Constitution*, 73-75.

The testimony of these foreign observers is corroborated by American statesmen of the time. John Adams declared: "The truth is, that agriculture . . . [has] been so much increased by this war, that it is much to be doubted whether they [the Americans] ever fed or clothed themselves more easily or more comfortably."⁸ The economic shock of the Revolution was only temporary, and it chiefly affected trade. The capital that had been invested in commerce was diverted to agriculture.

Washington's correspondence is immensely significant as showing that the recovery of the country from the post-war economic depression was apparent to this careful observer long before the new Government was established, and even while the adoption of the Constitution by the States was still in doubt. Washington wrote to La Fayette on January 29, 1789: "certain it is, that no diminution in agriculture has taken place. . . ."⁹ It was estimated that by 1797 the price of cattle had advanced one-seventh, which would indicate an increase in the wealth of the country.

CHANGES IN NEW ENGLAND

By 1789, the rural aspect of Massachusetts, the oldest of the New England States, had begun to be much like that of Old England. Except in remote districts cattle were no longer pastured on the common, which had become the village green. Livestock were no longer suffered to run at large, but were enclosed within the fields of each farmer. Naturally, with this change, the old practice of marking and branding cattle also fell into disuse. The town bull, too, disappeared.

Near Boston, cattle were extensively raised to provide incoming ships with beef. Prominent among such cattle raisers was a former Revolutionary officer, General William Heath.¹⁰ General Henry Knox of Thomaston, Maine, also had a herd on Brigadier Island. Fine cattle were to be found around Bradford and Haverhill.¹¹

Massachusetts, after the Revolution, gravitated more toward dairying and drifted away from beef raising. Beef cattle in Massachusetts were principally raised in the Berkshires, where Stockbridge was a center. The surrounding farms were described as "almost all laid down in meadow."¹² The staple stock in Massachusetts at this time was sheep. While many sheep were raised on the mainland, the islands of Nantucket and Martha's Vineyard, especially the first, were the great centers of sheep raising. In 1785, a bank was established in Nantucket with a capital of \$40,000—a large sum in those days—to facilitate the sheep and wool industry.¹³ But the real day of sheep in America did not come until after 1800, with the importation of Merinos.

⁸ John Adams, *The Works of John Adams*, 7:183 (Boston, 1852). Compare Franklin to the same effect. — Jared Sparks, ed., *The Works of Benjamin Franklin*, 2:462-463 (Boston, 1836).

⁹ Jared Sparks, ed., *The Writings of George Washington*, 9:464 (Boston, 1835). Compare an earlier letter to La Fayette, June 18, 1788, *ibid.*, 379-383; and one to Jefferson, Aug. 31, 1788, *ibid.*, 423-428.

¹⁰ Chastellux, *Travels*, 1:79.

¹¹ François Alexandre Frédéric de La Rochefoucauld-Liancourt, *Travels through the United States of North America*, 2:200 (London, 1799). Hereafter cited as Rochefoucauld, *Travels*.

¹² *Ibid.*, 212.

¹³ *Ibid.*, 161.

Rhode Island, as formerly, rivaled Massachusetts in sheep and far surpassed her in beef cattle and horses. When the war ended, Rhode Island was quick to renew its former lucrative trade with the West Indies in cattle, horses, and pork products. Dairying also grew rapidly at this time. The old practice of letting milch cows and horses go unhoused in winter had generally disappeared; sheep, too, were protected against the weather.

After the Revolution, however, it was Connecticut that became the stock-raising State of New England. The ports of New London, Stonington, New Haven, and Norwich had a flourishing business with the West Indies in live cattle, horses, and pork products. Much progress was also made in dairying.¹⁴ Connecticut hogs were described as "remarkably fine and uncommonly fat," and her hams were the most famous in the North. Every part of the State contributed to stock raising, and the cattle everywhere seem to have been in abundance and of good breed, but those of Hartford excelled. In 1788, the "vast meadows [around Hartford] covered with herds of cattle of an enormous size" excited the admiration of the French traveler, Brissot de Warville.¹⁵ The stock raiser usually sold one-fourth of his stock each year, but horses under 3 years of age were not sold.

With this increase in stock raising came better care of animals in Connecticut. Improvement in breeding of cattle and hogs, winter housing, and winter forage became general with the more opulent farmers. There was also a more intelligent farming, manifested in the manuring of the soil, the attentive clearing and watering of meadows, and the introduction of new grass seeds. At this time mules began to be extensively bred in Connecticut, and were frequently used in place of oxen for draft purposes. They were worth from \$40 to \$50 per head.

NEW BREEDS

New Hampshire's famous yellow oxen, the finest in America before the Revolution, suffered great depletion during the war.¹⁶ They were very largely employed for draft purposes by the American Army and when worn out in service were slaughtered for food for the troops. Although the famous yellow Danes had lost their identity by this time, the strain, by mixture with cattle of Devon origin brought into New Hampshire and Maine from Massachusetts, gave rise to the breed of cattle known as the Old Rock Stock.

In the years after the Revolution, the best beef cattle in New England were to be found in Maine and New Hampshire. Unusual pains were taken to improve these cattle by judicious importation, long before the practice obtained elsewhere. Charles Vaughan and his brother, Dr. Benjamin Vaughan, both of whom were greatly interested in agriculture, imported a number of cattle from England. Their first importation was made in 1791 and consisted of two cows and two bulls, the animals arriving in the Kennebec Valley

¹⁴Stonington annually exported 400,000 pounds of cheese, chiefly to Boston, New York, Philadelphia, and Baltimore. Block Island cheese was famous. - *Ibid.*, 136.

¹⁵J. P. Brissot de Warville, *New Travels in the United States of America Performed in 1788*, p. 132 (Dublin, 1792).

¹⁶The best oxen in the country, after the Revolution, were found in Connecticut where they were worth from \$70 to \$80 a yoke. The Genesee Valley and even Canada imported Connecticut oxen. - Rochefoucauld, *Travels*, 1:282.

in the autumn of that year. The bulls had been purchased in the Smithfield market, and the cows from dairymen near London. These cattle were probably of the Bakewell breed, which was an improvement on the old Longhorns. During the war with England, in 1814, an English vessel with cattle on board was captured and taken into Portland. A bull from this lot stood in parts of the Kennebec Valley, a few years later, and was known as the Frize Bull; he left some good stock.

When the Revolution ended in 1783, the frontier had advanced beyond that of 1760. Vermont and Maine still reflected the frontier conditions that had characterized Massachusetts and Connecticut about 1700. Vermont was an agglomeration of scattered farms and hamlets in the Green Mountains; Maine was a similar group of communities strung along the deeply indented and rocky coast, where the inhabitants lived partly by stock raising and primitive farming and partly by fishing.

As the territory of Vermont was long in dispute between New York and New Hampshire—it did not become a State until 1790—the land titles were all clouded, with the result that the pioneers speedily developed a law of their own, enforced by their own local associations. This was the origin of the Green Mountain Boys. Moreover, the dubious jurisdiction made Vermont an asylum for fugitives from justice and other hard characters, so that lynch law or use of the "birch seal" became familiar practices.¹⁷ Here, as elsewhere along the frontier, many cattle were raised, but the claim of Vermont to animal fame was in horses.

Vermont at this time had produced a distinct breed of draft horses, which were described as "models of what draught horses should be, combining immense power with great quickness, a very respectable turn of speed, fine show and good action." The origin of this local breed is unknown. If descended from horses brought over by the Scotch-Irish, the breed may have been the result of crossing Lanark mares with Irish ponies, although the absence of feather on the legs is difficult to account for unless the Irish blood in them threw off this appurtenance. The Vermont cart horse never seems to have gotten far out of the confines of the State. Vermont was off the beaten track of travel and trade, and the Vermont horse as a type apparently disappeared with the coming of the railroad. Its extinction is greatly to be regretted, for, with the exception of the Conestoga horse, it was the only genuine draft horse America has produced.¹⁸

A strain of far greater eminence, and one that has been restrictedly perpetuated, is the famous Morgan horse of Vermont. However obscure the origin of Justin Morgan, it is certain that this famous stallion was from a thoroughbred sire. He had three famous sons, Bulrush, Sherman, and Woodbury. From Blackhawk Morgan, sired by Sherman, the breed really sprang.¹⁹

Maine was a backward region in the post-Revolutionary years. Its settlements, all of them along or near the coast, were divided between fishing, lumbering, and primitive farming. Natural conditions largely prevailed. The cattle were the ordinary,

¹⁷Frederick Jackson Turner, "The Old West," Wisconsin State Historical Society, *Proceedings*, 1908, p. 194, 216.

¹⁸Lazarus N. Bonham, "American Live Stock," in Chauncey W. Depew, ed., *One Hundred Years of American Commerce, 1795-1895*, 1:223 (New York, 1895).

¹⁹*Ibid.*, 221.

black, New England sort; the few sheep were long-legged and scrawny. Sheep were raised merely to add to the diet of the farmer and to supply enough wool for the making of homespun clothing. The coldness of the climate did not induce cultivation of much corn. On the other hand, Maine grew good grass, so that a plentiful supply of hay was available for winter forage, which was absolutely necessary in that latitude. If it had not been for the length and coldness of the winters, stock raising would have been profitable in Maine, where the vast area of forest supplied a pasturage similar to that of South Carolina. The necessity of providing forage in winter increased the labor and curtailed the profits of stock raising. In addition, the forests of Maine were thick and the wolves numerous.²⁰

NEW YORK CATTLE TRADE

In the Middle States, after the Revolution, the same drift toward a more settled agriculture is noted. Around New York City a scarcity of cattle was felt just after the war, but by 1788 the loss had been repaired. While farmers near the city had always received good prices, the drovers found their business a risky one during the Revolution. Their disposition was to sell to the British, who occupied New York, and receive hard cash in payment instead of paper money. The American forces in Westchester County and in New Jersey continually endeavored to intercept these supplies and confiscate the herds. One of these drovers loyally adhered to the patriot cause, and his services to the American Army were so eminent, if humble, that he attracted the attention of Washington himself. This drover, John Pessenger, was entrusted for a time with the task of buying livestock for the Army.²¹

The New York markets were described as very much inferior to those of Philadelphia.²² One reason for this, probably, was their inaccessibility. All cattle from Long Island, Staten Island, and New Jersey had to be brought in boats, and steam power was not available.²³ Transportation, therefore, was expensive.

As an exporter of live cattle, New York rivaled and even surpassed Rhode Island and Connecticut in the West Indian trade, after the Revolution. The *New York Journal* of January 24, 1791, boasted that "there were exported (in 1790) 7,072 horses, cattle, and mules, it being 394 more than was shipped the preceding year from the district of New London."²⁴ Westchester County and Long Island were the great cattle-raising areas in the vicinity of New York. Long Island, too, pastured thousands of sheep on the famous Brushy Plain, a great tract of thin pasturage incapable of cultivation as farming land.²⁵

Up the Hudson, where some of the great patroonships still remained, the Dutch farmers plodded along in the same old way. They were a homely, thrifty folk but were not economically progressive. They raised enough cattle, sheep, and dairy products for

²⁰Rochefoucauld, *Travels*, 1:427-431, 435-436, 441-442, 465.

²¹Thomas F. De Voe, *The Market Book*, 1:160-161 (New York, 1862).

²²Rochefoucauld, *Travels*, 2:459.

²³Much objection was made by the public against carrying cattle on the regular ferry boats. - De Voe, *Market Book*, 1:187.

²⁴Quoted in *ibid.*

²⁵Isaac Weld, Jr., *Travels Through the States of North America*, 550-551 (ed. 4, London, 1800); Edward Eggleston, "Husbandry in Colony Times," *Century Magazine*, 27 (n.s. 5): 446 (January 1884).

their own needs but were not eager to find a market for them.²⁶ One notable feature of their stock raising was the minor use they made of hay in winter, feeding their stock on roots instead. On the other hand, the Huguenot farmers around New Paltz had abundance of cattle which were cared for intelligently.²⁷

In the Mohawk Valley the stock of the German settlers had suffered heavily during the war, both from the legitimate operations of war and from the raids of the Tories. Their cattle were neither numerous nor of fine breed, and their horses, although considerable in numbers, were not remarkable. The increasing emigration of settlers from New England at this time resulted in the growing use of oxen instead of horses for plowing—a New England preference which Elkanah Watson noticed with gratification in 1791. The real German farmer had always preferred horses to oxen.

OPENING OF THE GENESEE COUNTRY

One of the most important changes in the history of post-Revolutionary agriculture was the opening of the rich Genesee country just before 1800. It represented a very significant advance of the frontier, and it was accompanied by the settlement of what is now central New York and the lake region. The frontier conditions of a virgin soil and extensive pasturage prevailed, but without the terror of the Indian. The soil hardly needed to be plowed; stirring it with a harrow was sufficient. Even then it was so rich that the grain often ran to stalk. Manuring was unnecessary and undreamed of. Even in winter, cattle were left in the open, but were fed hay and straw if they were to be fattened; otherwise they shifted for themselves in the forest. The snow never lay "so deep as to cover all the herbs which serve for their pasture," it was said.²⁸

Wolves were too prevalent to make sheep raising profitable, but horses and cattle thrived. Many of these Genesee Valley pioneers were originally from New England, and as they generally brought their cattle and horses with them, the stock of the country was unusually good.²⁹ Captain Williamson, who lived at Bath, New York, in 1797, imported a pair of beautiful stallions, the services of which were only for the mares of fellow landed proprietors.

In general, before 1800, none of the settlers in central New York and the Genesee Valley felt themselves ready to dispose of their stock. They neither sold nor slaughtered many cattle, but lived on pork, saving the cattle to augment the stock. They were building for the future with wise vision. When the Erie Canal was built between 1817 and 1825, they were in a position to supply the thousands of workmen required, and to pour great quantities of grain and cattle into the eastern markets when the canal was completed.

BACKWARDNESS OF NEW JERSEY

Agriculturally, New Jersey had been the most backward of the Middle Colonies; after the Revolution it was the most backward of the Middle States. Wedged in between

²⁶Chastellux, *Travels*, 1:356-357; Rochefoucauld, *Travels*, 2:216-217.

²⁷*Ibid.*, 233.

²⁸*Ibid.*, 1:139.

²⁹*Ibid.*, 147.

New York and Pennsylvania, it partook of the economy of each but was not so progressive as either. In northern New Jersey Dutch influences predominated; but in the south, German and Quaker farming was important. Of the two divisions, the latter was the more prosperous.

The Dutch Jerseymen were thrifty but not enterprising. They hoarded their gains and were reluctant to invest capital in farming. "Always faithful to their national economy," wrote Chastellux, "they cultivate, reap, and sell without augmenting either their houses or their enjoyments; content with living in a corner of their farm, and with being only the spectators of their own wealth."³⁰ One other inhibition which rested on New Jersey agriculture more than on any of the other northern States was slavery, which obtained in New Jersey to a greater degree than elsewhere north of the Potomac.³¹ The Quaker and German antagonism towards slavery was economically profitable. They relied wholly on free labor and worked hard themselves, bringing to bear upon their farms all the excellent agricultural traditions of which they were the heirs. Schöpf thought the region opposite Philadelphia equal, if not superior, to York County, Pennsylvania, or Long Island.³²

PENNSYLVANIA CONTINUES TO ADVANCE

After the Revolution, as before, Pennsylvania retained its reputation as the banner State for intelligent agriculture and animal husbandry. The Quaker-German combination was hard to beat. These Germans "machen es just so aus" was the queer mixed German and English comment made to Schöpf.³³ As for the Quakers, Rochefoucauld said of them: "Their farm is the constant object of their thought. . . . They lay out the greatest part of their grounds in meadow, and they carry their butter, cheese, calves, poultry . . . to Philadelphia near forty miles distant." The witty Frenchman added, with a touch of satire: "The religion of that sect is the article which least occupies the Quakers. . . ." ³⁴

Improved methods of farming that became current in Pennsylvania long before they were widely practiced elsewhere helped stock raising greatly; examples were the use of clover and gypsum on exhausted meadows, which was introduced about 1780; and the extensive growing of turnips for cattle feed.³⁵ Another innovation was a seeding plow known as the Bucks County plow.³⁶

The counties around Philadelphia were the paradise of the American farmer. Buying lean cattle and fattening them was a profitable business. Stock farms abounded.³⁷ Colonel Starrett of Newton had a fine herd of cows and a bull of English breed.

³⁰Chastellux, *Travels*, 1:341-342.

³¹Rochefoucauld, *Travels*, 1:543-544.

³²Schöpf, *Travels in the Confederation*, 1:21.

³³*Ibid.*, 165.

³⁴Rochefoucauld, *Travels*, 2:395.

³⁵John F. Watson, *Annals of Philadelphia and Pennsylvania*, 2:66 (Philadelphia, 1845).

³⁶Schöpf, *Travels in the Confederation*, 1:130.

³⁷Philadelphia, consequently, was a great export center for beef, pork, and dairy products. In 1796 it exported 6,860 barrels of beef, 157,470 pounds of butter, 243,332 pounds of cheese, 1,082,690 pounds of ham, 12,029 barrels of pork, and 383,850 pounds of tallow. —Rochefoucauld, *Travels*. 2:367.

He would sell none of his calves; he yarded his horses and cattle in winter; and his barn was filled with turnips and cabbage as well as hay and grain, the roots being stored in underground pits. A neighbor of the colonel, Squire MacCornick, had 23 cows, a blooded bull, and two yoke of oxen for which he had refused \$100 a yoke. A man named Bates, originally from Morpeth in Northumberland, owned a big stock farm on the Delaware and had three imported English stallions.³⁸

After the Revolution the upper Susquehanna Valley and its affluents, whence the early settlers had been driven by the war, again began to fill, so that an outer zone of farming and cattle raising was formed around the older counties adjoining Philadelphia. The peer of these remoter regions was the Wyoming Valley, which became famous as a cattle country.³⁹

The one kind of stock that did not thrive in Pennsylvania was sheep. The State was behind Massachusetts in this particular. Sheep husbandry was yet to come into its own, with the importation of the Merino, but Pennsylvania was undeniably backward in this industry. Nowhere in America, except on Nantucket Island in Massachusetts, were large flocks kept. The American farmer was content to raise a few for mutton and homespun, and that was all.

Apart from the poorness of the breed of sheep in America at this time—almost every American sheep was long-legged and had a thin fleece which seldom weighed over 3 pounds—there was always the danger of wolves. Except in the most settled areas of Massachusetts, Rhode Island, and Connecticut, wolves still ran at large, especially in upper New York and Pennsylvania, where they came down from the mountains even as far as the farms around Newtown and Reading. This danger might have been averted by hiring shepherds and establishing sheep walks and penfolds. However, the cost of labor was too high to make this practicable unless the farmer could make the sheep itself a more profitable animal either for wool or mutton. The Americans, although great meat eaters, were not fond of mutton. Consequently, sheep were left to wander at large for pasturage, leaving bits of their fleece on the bushes. Schöpf thought that there was enough of this scattered wool in Pennsylvania to make picking the bushes worth as much as shearing the sheep.⁴⁰

WASHINGTON PROMOTES ANIMAL HUSBANDRY

America owes to George Washington, who was one of the largest landowners and best farmers of his time, a debt of gratitude for his encouragement of animal husbandry. He was among the first in America to consider the question of sheep improvement in a practical way. After the Revolution, Washington retired to Mount Vernon with the intention of devoting himself wholly to farming and stock raising. What his hopes were with reference to sheep is shown in the following letter written to a Virginia friend, H. D. Gough, on February 4, 1792.

During the time of my residing at home, between the close of the war and the entrance on my present office, I had paid much attention to my sheep, and was proud in being able to produce perhaps the largest mutton and the greatest quantity of wool from my

³⁸Chastellux, *Travels*, 2:86 note.

³⁹Schöpf, *Travels in the Confederation*, 1:174.

⁴⁰*Ibid.*, 124.

sheep that could be then produced. But I was not satisfied with this; and contemplated further improvements both in the flesh and wool by the introduction of other breeds, which I should by this time have carried into effect, had I been permitted to pursue my favorite occupation.⁴¹

Washington believed in industrial as well as political patriotism. He thought the development of sheep raising not only would be most profitable to the farmer, but that it was highly important to the public, as it would encourage woollen manufacturing. The United States was then dependent upon England for manufactured goods.

The call to public life prevented Washington from carrying out his intention of improving the breed of sheep. He encouraged his friend Gough to undertake what he, himself, was unable to do. The result was the importation of some rams of the broad-tailed Persian breed. These rams did not come directly from Persia, but from Barbary. What the success of this experiment was it is not possible to say. Before it had gone very far the Merino began to invade the country and swept every other breed into the background.

Use of mules on Virginia plantations began soon after the Revolution. All were imported from Cuba, as none were bred in this country. Schöpf noted in his journal that they were "beginning to be liked because they are so perfectly adapted for the American economy thriving with scant attention and bad feed."⁴²

Washington was one of the founders of the American mule industry. In 1795, the King of Spain presented him with a pair of Spanish jacks, which were landed at Portsmouth, New Hampshire. La Fayette is said also to have given him a jack of the Maltese breed, named Knight of Malta, in 1787.⁴³ The progeny of Royal Gift, as the King's gift was called, was soon spread over Virginia. Other jacks, imported by less distinguished persons, soon followed, as well as great cargoes of mules from Spain.⁴⁴ Virginia became the mule-raising center. Although mules were little used north of the Potomac, Connecticut farmers raised a considerable number which were driven overland to Virginia or shipped by vessel to Norfolk. The story is told that John Randolph, the witty United States Senator from Virginia, on observing a drove of mules passing through the streets of Washington, pointed them out to Uriah Tracy, the Senator from Connecticut, saying:

"Tracy, there go a lot of your constituents."

"Ye-es," said Tracy, scrutinizing the drove, "going down to Virginia to teach school."

FARMING IN VIRGINIA

Farming in Virginia made little or no improvement after the Revolution, except in the newer region beyond the Blue Ridge where land values rose.⁴⁵ The planters of

⁴¹ Worthington Chauncey Ford, ed., *The Writings of George Washington*, 12:102 (New York and London, 1891).

⁴² Schöpf, *Travels in the Confederation*, 2:48.

⁴³ J. T. Warder, "Mule Raising," U. S. Department of Agriculture, *Annual Report*, 1863, p. 184.

⁴⁴ John Bach McMaster, *A History of the People of the United States, from the Revolution to the Civil War*, 2:560 (New York, 1897).

⁴⁵ Schöpf, *Travels in the Confederation*, 2:88 note.

the Tidewater made little effort to rehabilitate their exhausted plantations, and miles of once cultivated land reverted to wilderness. They lived from hand to mouth. Although tobacco farming was increasingly unprofitable, they failed to adapt their agriculture to new conditions.⁴⁶

In the lower parts of Virginia little or no hay was made. It did not grow readily in the dry, sandy soil, and the planter did not understand how to make use of the marshes, as was done in New England. The horses, and such cows as were kept about the house for milk, were fed on corn fodder as long as the store lasted; afterward the beasts had to shift for themselves.⁴⁷ Cattle were rarely housed, although winters in Virginia sometimes were hard. It was the common opinion that the housing and milking of cows in winter would kill them. In consequence, milk in Virginia was scarce and poor. One traveler related that he used to walk a mile out from the town of Halifax to the house of a certain farmer "to drink cow's milk, which was there excellent."⁴⁸ As a whole, cattle in Virginia were a poor breed. Oxen were so inferior as to be worth less than half the price of a Connecticut or Pennsylvania pair; they were never valued at more than \$40. Wild cattle still abounded, even in the older parts of Virginia, owing to the great number of abandoned plantations. Most of these cattle were to be found in the Dismal Swamp, where sedge and reed grass were thick and the winters rarely too severe for them.⁴⁹

Hogs were so numerous in Virginia that they became a nuisance to gardens and plantations. If the planters had raised more corn the hogs might have been fattened, and Norfolk would have rivaled Baltimore and Philadelphia as an export center for ham, bacon, lard, and pork products. However, hogs were neglected; the planters sometimes indulged in pig shooting for mere sport.

Sheep were very scarce in Virginia, and of an inferior and ugly breed. Few farmers kept any and then only enough for home consumption. This was true even of Jefferson until he became interested in Merinos.⁵⁰

The only domestic animals in which Virginians were interested were horses, and they were raised not for draft purposes but for riding and racing. Race tracks were adjacent to every town of importance. Indubitably, Virginia produced the best gentleman's horse in the United States, as the efficiency of the Virginia cavalry during the Revolution had shown. The strain was kept up by importation from England of blooded stallions and mares, and the pedigrees of horses were followed out with care.⁵¹

As a whole, horses in Virginia were as poor and as badly cared for as the cattle. Few good work horses were to be found in the State. The best draft animals were the mules just introduced from Cuba. "One sees everywhere," recorded Schöpf, "little, thin

⁴⁶Brissot de Warville, *New Travels in the United States*, 432-433.

⁴⁷Schöpf, *Travels in the Confederation*, 2:89; Weld, *Travels through the United States*, 138; Rochefoucauld, *Travels*, 2:23.

⁴⁸J. F. D. Smyth, *A Tour in the United States of America*, 1:90 (London, 1784).

⁴⁹Schöpf, *Travels in the Confederation*, 2:100; Weld, *Travels through the United States*, 138.

⁵⁰Rochefoucauld, *Travels*, 2:74.

⁵¹Schöpf, *Travels in the Confederation*, 2:65; "Travel Diary of Bishop and Mrs. Reichel," in Newton D. Mereness, ed., *Travels in the American Colonies*, 592 (New York, 1916).

animals, hitched to wagons made of wood throughout, not the smallest bit of iron to be found in the construction. A collar of pleated straw and a pair of rough leather traces, or perhaps of twisted bark, make the entire harness."⁵² With the exception of racing horses, all the others were left to run about in the fields for pasture, without protection from winter weather. Fortunately for the poor brutes, the ordinary Virginia horse lacked that delicacy of taste which caused European horses to refuse bad or unclean feed. "Here they devour every thing without distinction," Schöpf added, "the meanest hay and even their own excreta." During the war, when Pennsylvania teamsters came into Virginia with the American Army, the Virginia farmer made the important discovery that horses would eat small-cut straw, but to him it was a curiosity, nothing more. Schöpf was asked whether a German horse would condescend to eat that sort of feed.⁵³

NATURAL ADVANTAGES OF THE CAROLINAS

Stock raising in the Carolinas did not change during or after the Revolution. Indeed, until well into the nineteenth century, the Piedmont region remained a land of thousands of wild cattle and cowpens.⁵⁴ The only change was that ranching tended to retreat farther inland as settlement increased.⁵⁵

The number of semiwild cattle, horses, and hogs that roamed the woods and glades in the western Carolinas was prodigious. Unless branded, or otherwise marked, they became the property of the owner of the land on which they grazed. The "wood-right," by which every landowner had a fixed share of all wild herds thereabouts, obtained in certain parts of the country. This right, like any other property right, could be transferred or sold with the land.⁵⁶

As before the Revolution, huge droves of cattle and hogs were driven to Charleston, Baltimore, and Philadelphia.⁵⁷ It was found that, because the hogs were fed on mast and acorns, Carolina bacon was soft and did not keep well, and the lard was thin. Consequently, Carolina hogs were corn-fattened in the North for marketing. Butcher's meat in Charleston was neither fat nor of good taste, because, as the South raised little corn, the cattle were not fattened before killing.⁵⁸ The profits arising from this prodigal and careless method of stock raising were large; except for the cost of driving to market and a few weeks' of fattening, the expense was negligible.

Most of the farmers in the Carolinas who practiced intelligent and intensive farming and stock raising were German settlers who had migrated from Pennsylvania. J. F. D. Smyth found that they had great quantities of butter, good and abundant milk,

⁵²Schöpf, *Travels in the Confederation*, 2:65.

⁵³*Ibid.*, 89.

⁵⁴The Revolutionary General, Andrew Pickens, after the war engaged in stock raising in Pendleton and drove cattle to New York. — John H. Logan, *A History of the Upper Country of South Carolina*, 152 (Charleston and Columbia, 1859).

⁵⁵According to Schöpf the back-country folk of the Carolinas were called "Crackers" from the noise they made with their whips when they came to town with cattle or caravans of pack horses. — *Travels in the Confederation*, 2:222-223.

⁵⁶*Ibid.*, 110-111.

⁵⁷*Ibid.*, 108-110.

⁵⁸*Ibid.*, 189.

and foddered cattle.⁵⁹ Many of these Germans belonged to the Moravian Brotherhood and carried their peculiar religious and social ideas and their agricultural economy to the South.

Stock raising in Georgia continued as before the Revolution. Schöpf, like Bartram before him, noticed that cattle raising was not profitable in the warm, swampy region of lower Georgia and in Florida.⁶⁰ Around St. Augustine, however, the Spanish cattle were good. Hogs flourished everywhere, feeding on acorns, chestnuts, and roots. At the Spanish governor's house in St. Augustine, Schöpf found a Chinese hog, brought by a sea captain, "which by its short feet, hanging, dragging belly, and softer bristles was distinct from the European breed. . . ."

One gets concrete evidence of the importance of stock raising in the years succeeding the Revolution in the country's export figures of livestock and beef and pork products.⁶¹

	1791	1792	1793	1794	1795	1796
Beef, pork bacon, bbls. of (180 lbs.)	94,621	120,017	120,056	156,072	201,133	167,526
Butter, firkins (50-100 lbs.) . .	16,666	11,761	9,190	36,932	28,389	34,065
Cheese, quintals	1,299	1,259	1,462	5,769	23,431	17,352
Cattle	4,627	4,551	3,728	3,495	2,510	4,625
Horses and mules	7,419	6,557	5,718	3,445	4,025	7,001
Pigs and sheep	27,180	33,444	21,998	14,990	11,416	12,993
Tallow, pounds	317,195	152,622	309,366	130,012	49,515	187,403

In 1790, the population of the United States was 3,929,214. In 1800, it was over 5,308,000. In 1790, the center of population was 23 miles east of Baltimore. A decade later, it was 18 miles west of Baltimore, and for years to come it moved westward roughly along the thirty-ninth parallel.

NEW CURRENTS AFTER 1800

American historical writers often refer to the election of Thomas Jefferson as the "revolution of 1800." Just as there was a change in the political and social ideas of the United States after 1800, so a marked change was observable in farming and its kindred pursuits. It was a period of general awakening to new ideas in agriculture.⁶² The introduction of artificial fertilizers such as gypsum, increased attention to

⁵⁹Smyth, *A Tour in the United States of America*, 1:161.

⁶⁰Schöpf, *Travels in the Confederation*, 2:245-246.

⁶¹Rochefoucauld, *Travels*, 2:589.

⁶²A leader in blooded stock breeding at this time was Elkanah Watson. In 1808 he imported from Dutchess County, New York a "pair of small-boned, short-legged pigs known as the grass-fed breed," from which western Massachusetts profited. The same year he also imported "a young bull of a celebrated English stock." — *Men and Times of the Revolution, or Memoirs of Elkanah Watson*, 366 (New York, 1856).

manuring, rotation of crops where none had been practiced before, importation of blooded cattle from England and the Merino sheep from Spain, the popularity of agricultural columns in the newspapers, the founding of local agricultural societies—all these are signs of an increasing and more intelligent interest in farming.⁶³

As far back as 1749, Benjamin Franklin, the wisest head of the Revolutionary generation except Washington, had advocated the teaching of agriculture in colleges.⁶⁴ Crèvecoeur, the author of the *Letters from an American Farmer*, in a communication to the *Pennsylvania Gazette*, April 23, 1788, had advocated the founding of farmers' associations throughout Pennsylvania. Rochefoucauld noticed in 1797 that there "are in almost all the towns of America, at least in the principal cities of the states, societies for agriculture. . . ." ⁶⁵ In New England, the Reverend Samuel Deane (1733-1814) had preached the cause of more scientific farming and in 1790 had issued an octavo volume entitled *The New-England Farmer; or Georgical Dictionary*, which the author declared was "adapted to the state and circumstances of this country."

ARRIVAL OF MERINO SHEEP

The importation of Spanish Merino sheep, soon after 1800, revolutionized stock raising in the United States. America's dependence upon English wool was a source of great chagrin to American leaders for years. Britain still maintained an embargo on the exportation of blooded rams. A few Barbary sheep had been brought into the country, but the experiment seems not to have prospered. Spain's jealous guardianship of her Merino flocks prevented importation from that country until Napoleon's invasion. Jefferson soon learned of the great liquidation of the Spanish flocks as a result of these wars. In a letter of November 23, 1809, he wrote to George Washington Irving:

An American vessel . . . proposes to touch at some port of Spain with the view of obtaining Merino sheep to be brought to our country. The necessity we are under, and the determination we have formed of emancipating ourselves from a dependence on foreign countries for manufactures which may be advantageously established among ourselves, has produced a very general desire to improve the quality of our wool by the introduction of the Merino race of sheep.⁶⁶

Whether it was due to Jefferson's suggestion, or of his own initiative, William Jarvis, the United States consul at Lisbon, made a large purchase of Merino sheep from the Spanish flocks at this time. He bought the balance of the Paular flock, besides 1,300 Aguirres, 200 Montarcos, 200 from the Escurial flock, and some Negrettis. In all about 3,850 Merino sheep were shipped by him to the United States, out of which Jarvis made a present to Jefferson of an Aguirres ewe and a Paular ram in 1810. Jarvis himself established a Merino flock at his home in Wethersfield, Vermont, which was made up of one-half Paulars, one-quarter Aguirres, and one-quarter Escurials, Negrettis, and Montarcos.

⁶³In 1811 Watson founded the Berkshire Agricultural Society. John Adams, then an old man, wrote to Watson in great appreciation of his work.—*Ibid.*, 433-434.

⁶⁴Letter from Cadwallader Colden in Sparks, *Works of Benjamin Franklin*, 7:45.

⁶⁵Rochefoucauld, *Travels*, 2:669.

⁶⁶Andrew A. Lipscomb and Alfred Ellery Bergh, eds., *The Writings of Thomas Jefferson*, 12:327 (Washington, 1903).

James Madison, Jefferson's lifelong friend and successor in the Presidency, was also a sheep fancier, who often found relaxation from the burden of public affairs on his Virginia farm. Jarvis gave two Merino ewes to Madison, who bought four more from Jarvis' shipment, "as a fund of pure Marino blood, worth attending to."⁶⁷ The ewes cost him \$175 each. Before these acquisitions Madison already had a famous, though small, flock of large-tailed Algerine sheep, two rams of which he gave to Jefferson. They were large animals, but the wool was coarse, and to improve the wool, Madison made his Merino acquisitions.

As for the rest, in Jarvis' own words, he was "disposed to distribute those valuable animals to every State which would be likely to profit by the acquisition."⁶⁸ This was the first large importation of Merino sheep into America, though actually the pioneer importer of Merinos was David Humphreys. A native of Derby, Connecticut, he was secretary of the American legation in Paris and later Minister to Spain (1797-1802). He brought home 100 Merinos in 1802. Humphreys, however, must divide honors with Chancellor Robert R. Livingston of New York, the American Minister to France, who, also in 1802, brought back to America a Merino ram and two ewes from the Merino flock of the French Government at Rambouillet. Livingston was much interested in sheep raising and wrote the *Essay on Sheep* (1809), which is the earliest American work on sheep husbandry.⁶⁹

Jefferson's satisfaction over the introduction of Merino sheep into the United States was very great, for he had long taken a keen interest in sheep husbandry. As far back as 1792, he had margined his copy of Arthur Young's *Travels in France* with this commentary: "In the middle & upper parts of Virginia they [sheep] are subject to the wolf, & in all parts of it to dogs. These are great obstacles to their multiplication. . . . Probably, however, sheep, carefully tended, would be more profitable than cattle. . . ." ⁷⁰ Jefferson and Madison worked out a comprehensive scheme to cover the whole State of Virginia with Merino sheep.⁷¹

THE MERINO CRAZE

The scattering of the native flocks of Spain, and the political turmoil of that country after the fall of Napoleon, prevented any further importations of Merinos from Spain. The flocks already obtained increased rapidly. The American farmer discovered the advantage of wool growing, and the demand for wool was all the heavier because of the stoppage of English wool by the War of 1812. In 1811, Merino wool sold at 75 cents, while by 1813, it ranged from \$2 to \$3 a pound.

⁶⁷Gaillard Hunt, ed., *The Writings of James Madison*, 8:111-112 (New York and London, 1908).

⁶⁸New York State Agricultural Society, *Transactions*, 1841, 1:324 (Albany, 1842).

⁶⁹Watson, *Men and Times of the Revolution*, 342-345; Chester Whitney Wright, *Wool-Growing and the Tariff*, 12-34 (Boston and New York, 1910); McMaster, *History of the People of the United States*, 3:503-504; Stephen Powers, *The American Merino: for Wool and for Mutton*, 11-21 (New York, 1887).

⁷⁰Paul Leicester Ford, ed., *The Works of Thomas Jefferson*, 7:118-119 (New York and London, 1904).

⁷¹Letter to Madison, May 13, 1810, in Lipscomb and Bergh, *Writings of Thomas Jefferson*, 12:390-391.

The owners of the rocky hillsides of New England saw new profits in their barren farms. Vermont became the banner sheep State of the Union. Woolen manufacturing developed enormously, especially in Rhode Island and Massachusetts. The Schofield factory at Newburyport wove the suit of domestic broadcloth in which Madison was inaugurated.

The demand for Merino sheep became a craze throughout the country from New England to Ohio.⁷² As Spain could no longer supply Merinos, American breeders turned to the flocks of Saxony. James Shepard of Northampton, Massachusetts, is credited with being the first American wool grower to import Saxon Merinos; in 1823 he imported three rams. Within two years the Messrs. Searles of Boston were making regular shipments of Saxon Merinos.

Unfortunately, avarice more than intelligence attended these importations. Many sheep, advertised as "pure blooded electoral Saxons," were half grades. The thrifty German sheep raiser seems to have preyed upon the credulity of the American farmer; German newspapers in the 1820's teemed with advertisements of sheep for sale.

A wave of speculation swept the country. The wildest and highest prices prevailed. Jefferson vented his disgust of the condition in a letter to Madison.⁷³ The Essex Bank in Salem, Massachusetts, failed because of the cashier's speculations in Merino sheep.⁷⁴ The enthusiasts had failed to foresee that the prices of wool were inflated because of the temporary stoppage of British competition. When the war with England ended in 1815, British woolen goods began to come in again and gradually forced down the former high prices of American wool. Eventually, the Merino bubble burst, and ruined many persons. Sheep raising did not again get on its feet until the tariff of 1828 which helped protect the American sheep grower and the American woolen manufacturer against outside competition.⁷⁵

SCIENTIFIC HUSBANDRY

The interest of Benjamin Franklin, the Reverend Samuel Deane, Hector St. John de Crèvecoeur, and others in promoting more scientific agriculture and stock raising in the United States in Revolutionary times was of considerable significance. The seed they sowed began to bear fruit. François André Michaux observed in 1802 that there

⁷²Wright, *Wool-Growing and the Tariff*, 24-34; George Campbell, "Sheep and Wool, History and Management of Merino Sheep," U. S. Patent Office, *Annual Report*, 1854, 2:28-31.

⁷³Letter of May 13, 1810, in Lipscomb and Bergh, *Writings of Thomas Jefferson*, 12:389.

⁷⁴William Bentley, *Diary of William Bentley*, 4:483, 542 (Salem, 1914).

⁷⁵For the history of the identification of sheep raising with the tariff, see Wright, *Wool-Growing and the Tariff*, 35-81. The development of Merino breeding is treated in E. L. Shaw and L. L. Heller, "Domestic Breeds of Sheep in America," U. S. Department of Agriculture, *Bulletin* 94 (Washington, 1914).

"reigns in the United States a public spirit that makes them greedily seize hold of every plan that tends to enrich the country by agriculture and commerce."⁷⁶

Franklin's suggestion of 1749 that agriculture be taught in the colleges culminated in 1785 in the founding of the Philadelphia Society for Promoting Agriculture, of which Washington was an early member.⁷⁷ The Massachusetts State Agricultural Society was founded in 1792.⁷⁸ Waltham had a local agricultural society in 1793 and held a stock show in that year.⁷⁹ The Pittsfield Fair in the Berkshires, founded in 1811 chiefly through the activity of Elkanah Watson, was soon famous.⁸⁰ The Brighton Fair in 1819 was attended by Josiah Quincy, Judge Story of the United States Supreme Court, and B. W. Crownenshield, onetime Secretary of the Navy.⁸¹ By 1820, the fair of the New York County Agricultural Society at Mount Vernon was an annual event;⁸² the Merino Society of the Middle Atlantic States was founded in 1811. No one in America labored more earnestly to foster these societies than Elkanah Watson, whom John Adams with justice called the father of American agricultural societies.⁸³

No one can read the correspondence of many of the leading men of America in the two decades immediately preceding 1830 or the sources for the agricultural history of this epoch without being impressed with the widespread interest in the improvement of agriculture and animal husbandry. The old practices which had sufficed in colonial times failed to meet the changed conditions. Colonial methods of stock raising were no longer practicable, at least in the Atlantic States.

Originally the forest furnished herbage for the stock, which wandered at large and fed and fattened without expense to the owner; this was no longer true. Still, the habits founded on these primitive conditions persisted. The same number of cattle was kept, regardless of the diminution of forest pasturage and the inadequate development of meadowlands. In many parts of the United States, the size and appearance of the cattle showed that feed was not being produced in proportion to the number of stock. Few farmers had the vision to realize that the number of cattle on their farms should not be greater than the resources of the farm could support; poor cattle are as unprofitable as poor farms. When the feed is scarcely enough to keep cows alive, nothing can be spared for the milk pail. Even the manure from several poor cattle is worth less than the manure from a single fat animal. Estwick Evans, a New Hampshire farmer who traveled throughout the United States early in the nineteenth century, cogently summarized the defects of stock raising at this time:

⁷⁶ François André Michaux, "Travels to the West of the Alleghany Mountains (London, 1805)," in Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 3:207 (Cleveland, 1904).

⁷⁷ Sparks, *Writings of George Washington*, 9:139-141.

⁷⁸ Bentley, *Diary of William Bentley*, 1:414 (Salem, 1905).

⁷⁹ *Ibid.*, 2:60-61 (Salem, 1907).

⁸⁰ Watson, *Men and Times of the Revolution*, 365; Bentley, *Diary of William Bentley*, 4:53.

⁸¹ *Ibid.*, 622.

⁸² De Voe, *Market Book*, 419.

⁸³ Estwick Evans, as early as 1818, commented on the beneficial effect of these organizations. — "A Pedestrian Tour of Four Thousand Miles Through the Western States and Territories During the Winter and Spring of 1818 (Concord, N. H., 1819)," in Thwaites, *Early Western Travels*, 8:145 (Cleveland, 1904).

With respect to the raising of cattle too we act . . . unwisely. . . . According to the limited production of our farms, our cattle are too numerous. We lose one half of the food appropriated for them, by applying it to too great a number. In many cases our cattle are not worth so much in the spring of the year as they were in the preceding fall. Our swine, in particular, are kept poor until the crops come in, and then it costs to fatten them three times as much as they are worth. . . . ⁸⁴

Time, necessity, and intelligent study of the conditions which obtained were needed to remedy this backwardness. Agriculture has ever been the most conservative of employments. Progressive men such as Elkanah Watson encountered absurd opposition or apathy at every turn. In 1818, the shopkeepers of Salem refused to put the advertisements of the Massachusetts Agricultural Society's stock fair in their windows or to subscribe to the support of it, because "the opinion was abroad that it was a speculation & that they [the promoters] had a private interest."⁸⁵

In New England the belated persistence of colonial practices with reference to animal husbandry is evidenced by the following bits of information. Salem kept a town bull until 1790; both Salem and Boston continued to pasture sheep on the islands off the coast till 1808, as the Pilgrims had done when the wolves were thick;⁸⁶ and cattle still grazed around the Bunker Hill monument in 1832.⁸⁷

DAIRYING

In spite of these belated survivals of an antiquated economy, New England showed material progress in the early nineteenth century. Her land, never very rich, had long since become too exhausted, in spite of the use of gypsum and manure, to compete with the richer western fields. Much land that formerly had been tilled was now given over to meadow. The farmers had gone in for dairying or sheep raising, which were supported by the increasing number of woolen mills. Middlesex County, Massachusetts, was peculiarly rich in pasturage and dairies.⁸⁸ Rhode Island was chiefly given to sheep raising and woolen manufacturing, although its cheese commanded good prices on the Boston and New York markets.⁸⁹ Connecticut was also extensively engaged in dairying and sheep raising.

The breeds of stock had much improved by 1830. Merino sheep were common throughout New England, particularly in Vermont. At Danvers, Massachusetts, there was a flock of Cape of Good Hope sheep.⁹⁰ Great attention began to be given to dairy breeds of cattle. In 1817, the Oakes Cow at New Mills was so famous as a milk producer that the Massachusetts Agricultural Society had her picture painted. Prince Maximilian of Wied, in 1832, described the cattle of New England as "in general, large and handsome; there are oxen with immense horns, almost as in the *Campagna di Roma*, in Italy; and they are

⁸⁴*Ibid.*, 144-145.

⁸⁵Bentley, *Diary of William Bentley*, 4:500.

⁸⁶*Ibid.*, 1:154; 3:29.

⁸⁷Maximilian, Prince of Wied, "Travels in the Interior of North America, Part 1 (London, 1843)," in Thwaites, *Early Western Travels*, 22:47 (Cleveland, 1906).

⁸⁸John B. Wyeth, "Oregon; or a Short History of a Long Journey from the Atlantic Ocean to the Region of the Pacific (Cambridge, Mass., 1833)," *ibid.*, 21:26 (Cleveland, 1905).

⁸⁹Henry Bradshaw Fearon, *Sketches of America: A Narrative of a Journey of Five Thousand Miles Through the Eastern and Western States of America*, 98-102 (London, 1818).

⁹⁰Bentley, *Diary of William Bentley*, 1:373-374.

also large and fat. Their colour is generally brown, as in Germany, but for the most part, a very shining yellowish, or reddish brown, often spotted with white."⁹¹ Boston remained the largest live cattle market in New England, although most of the cattle sold there were raised in New Hampshire and Vermont.⁹²

After the turn of the century, the Middle Atlantic States, like New England, turned increasingly to dairying, cheese making, and the fattening of western cattle. The upper Hudson and Mohawk valleys raised both stock and cereals. Schoharie County and the lake region in the center of the State around Ontario and Genesee counties were notable livestock areas.⁹³ Merino sheep became common by 1820, and the Southdown was imported into the northern New York counties from Canada, in spite of the fact that wolves were still a nuisance in these newer regions.⁹⁴

Importation of Shorthorn cattle was also begun at this time. In 1823, General Stephen Van Rensselaer of Albany imported the bull, Washington, and two heifers. In 1824, Colonel John Hare Powell of Philadelphia began to make annual importations, selling them to Ohio stock breeders.⁹⁵ In Middlesex County, New Jersey, descendants of the original Dutch settlers owned specimens of cattle without horns.

Pennsylvania remained the banner State for farming. Lancaster was the largest inland town in the United States, with Frederick, Maryland, next. The development of cereal agriculture in the Delaware Basin after the Revolution, had made Philadelphia the leading grain, flour, and breadstuffs center in the country. Consequently even the rich Lancaster region was beginning to show signs of exhaustion by 1820, but was restored by rest, clover, plaster, and manure. For this reason the farmers of Lancaster took with alacrity to the business of fattening western cattle. The manure thus secured renewed the soil, and grazing became as profitable as farming in eastern Pennsylvania.⁹⁶

The Pennsylvania-German and Quaker farmers, ever alert to realize a profit, enlarged their acreage of pasture, rutabagas, and turnips to meet new conditions.⁹⁷ Dairying in Pennsylvania, as elsewhere, increased notably. The Germans still clung to hog raising, but few other farmers raised hogs on a large scale. The bulk of them came from the West. In both New York City and Philadelphia, hogs ran at large in the streets as scavengers until after 1825.⁹⁸

⁹¹Maxmilian, "Travels in the Interior of North America," in Thwaites, *Early Western Travels*, 22:47 note. Both size and color apparently were derived from the large, yellow cattle Mason had imported into New Hampshire in 1628.

⁹²Fearon, *Narrative of a Journey*, 105; Evans, "A Pedestrious Tour," 106; Wyeth, "Oregon," 26.

⁹³Evans, "A Pedestrious Tour," 122; Fearon, *Narrative of a Journey*, 82; John Melish, *Travels Through the United States of America, in the Years 1806 & 1807, and 1809, 1810, & 1811*, p. 520, 525 (London, 1818).

⁹⁴In 1810 Albany County had 34,342 sheep; Dutchess, 83,855; Cayuga, 49,872; Onondaga, 44,893; Jefferson, 20,000. — *Ibid.*, 561; Evans, "A Pedestrious Tour," 126.

⁹⁵Bonham, "American Live Stock," 225.

⁹⁶William Faux, "Memorable Days in America (London, 1823)," in Thwaites, *Early Western Travels*, 12:94 (Cleveland, 1905).

⁹⁷William Cobbett, *A Year's Residence in the United States of America*, pt. 2, p. 331 (ed. 2, London, 1819).

⁹⁸De Voe, *Market Book*, 482.

Pennsylvania horses, especially the Conestoga, were notably superior to those in the other States. Adlard Welby described them as "coming nearest in form to the old English charger as seen in paintings. . . ." ⁹⁹

IMPROVEMENTS IN SOUTHERN CATTLE

South of the Potomac the changes in agriculture and animal husbandry were less than in the North, except in the Cotton Belt. ¹⁰⁰ In Virginia, culture of tobacco had so exhausted the soil that there were vast areas of abandoned plantations. Many farmers had emigrated to Ohio, Alabama, or Mississippi. ¹⁰¹ If the system had continued much longer, those remaining would have sunk into utter poverty. A few planters had seen the advantage of stock raising, and some had imported cattle from England. ¹⁰²

In the latter part of the eighteenth century, a "Mr. Hylton" imported into Virginia a variety of cattle known as the Boyington stock. It was well liked, especially for the oxen, and spread throughout the Tidewater region. About 1783, Matthew Patton procured, through his son in Baltimore, an English bull, which was the first imported English stock along the southern branch of the Potomac River. To cross with this Patton stock, a man named Miller of Augusta County imported a Shorthorn cow and bull, then known as the "milk breed." Colonel Archibald Cary also imported a bull described as "'the old Shorthorn Durham'" whose get were spread through Virginia to the Shenandoah Valley and beyond. ¹⁰³

As a whole, in the generation following the Revolution, the condition of stock and stock raising in Virginia was backward. The only good animals, with rare exceptions, were saddle horses. N. F. Cabell's monograph on the agriculture of Virginia, although wise in suggestion, was little heeded. In vain he argued that a "few cattle of good breed, well-kept, will supply us with more efficient oxen; as much or more and better beef and milk, than many ill-fed. Similar results will reward increased attention to the breeds of sheep and swine." ¹⁰⁴

Washington had proposed the introduction of cattle shows into Virginia after the Pennsylvania practice, and G. P. W. Custis was the first person in Virginia to set an example on his own estate by annually calling together the neighboring planters for a sheep shearing at Arlington. ¹⁰⁵ This was the nucleus of the Society of Virginia for Promoting Agriculture formed in 1811. Unfortunately, however, agricultural societies in the South too often were merely social gatherings.

⁹⁹Adlard Welby, "A Visit to North America and the English Settlements in Illinois (London, 1821)," in Thwaites, *Early Western Travels*, 12:181.

¹⁰⁰In Washington, horses, cows, and pigs grazed in the streets, even around the Capitol. —Faux, "Memorable Days in America," *ibid.*, 11:112 (Cleveland, 1905); Welby, "A Visit to North America," 327-328.

¹⁰¹N. F. Cabell, "Some Fragments of an Intended Report on the Post Revolutionary History of Agriculture in Virginia," *William and Mary College Quarterly Historical Magazine*, 26:149-150 (January 1918).

¹⁰²Samuel Kercheval, *A History of the Valley of Virginia*, 313-315 (ed. 2, Woodstock, Va., 1850).

¹⁰³Cabell, "Some Fragments of . . . the Post Revolutionary History of Agriculture in Virginia," 167.

¹⁰⁴*Ibid.*, 159.

¹⁰⁵For a brief survey of agricultural societies in Virginia before the Civil War, see *ibid.*, 169-173.

Chapter 6

THE OPENING OF THE NEW WEST

THE EXTENT OF THE NEW WEST

When the War of 1812 came to an end, the "American Nation, with its back to Europe and its face to the West, addressed itself to the solution of the problems of the Nineteenth Century."¹ Chief among these problems was the settlement of the New West—the country beyond the Alleghenies. The Old West, the region between the fall line and the mountains had ceased to be a frontier—like the cattle country, it retreated before the advance of civilization.

The New West comprehended all the territory lying between the Alleghenies and the Mississippi River and extended from the Great Lakes to the Gulf of Mexico. Frontier conditions differed in degree along this huge expanse, and the physical topography of the parts was markedly different. It should be remembered, however, that the region was all one great wilderness.

The territory was composed of three sectors, each with definite physical boundaries: the Northwest, between the Great Lakes and the Ohio River; the Central West, the territory south of the Ohio River and in the valley of the Tennessee River; and the Southwest, from the south side of the Tennessee watershed to the Gulf. The Northwest was the West for western New York and Pennsylvania, and part of Virginia; the Central West, for Virginia, and, to some degree for upland Carolina; the Southwest, for the Carolinas and Georgia. The States of Ohio, Indiana, Michigan, Illinois, and Wisconsin have been carved out of the Northwest section; Kentucky and Tennessee out of the Central West; and Alabama and Mississippi out of the Southwest.

THE BRITISH PROHIBIT SETTLEMENT OF THE NEW WEST

The hunter, the trapper, and the Indian trader had already explored the land beyond the Alleghenies, and even before the Revolution, there was a disposition on the part of a few adventurous spirits to colonize it. This was particularly true of Virginia. However, the British Government discouraged the tendency of the population to move away from the seaboard, at least beyond the heads of the rivers or over the Divide. In 1763, after France had surrendered all of its possessions on the North American Continent to Great Britain a Royal Proclamation was issued which forbade any governor "to grant warrants of survey, or pass any patents for lands beyond the heads or sources of any of the rivers which fall into the Atlantic Ocean from the west or northwest; or upon any lands whatever which, not having been ceded to or purchased by us . . . are reserved to the said Indians or any of them."²

¹Edward Channing, *A History of the United States*, 4:564 (New York, 1917).

²William Houston, ed., *Documents Illustrative of the Canadian Constitution*, 70 (Toronto, 1891).

This prohibition was the basis of much feeling in the American Colonies, especially in the communities along the border, and was a factor in provoking a rebellious spirit there. From the first, the Royal Proclamation was defied by the American people. In 1772, an official report to the British Government declared: "If we reflect how the people themselves have gradually retired from the coast, we shall be convinced they want no encouragement to desert the seacoasts and go into the back-countries, where the lands are better and got upon easier terms."³

Indian possession of much of this coveted land was a more serious obstacle to western expansion than the prohibition of the British. Back of the settled parts of New York and Pennsylvania was the country of the Iroquois, the Delawares, the Shawnees, and other Indian tribes. The whole country north of the Ohio River was blocked to settlers by their occupation. In similar wise, the Southern Colonies, the Carolinas and Georgia, were blocked from western extension by the Chickasaws, the Cherokees, and the Creeks.

VIRGINIANS MOVE WESTWARD

In 1768, the treaties of Fort Stanwix and Hard Labour with the Indian tribes provided for a free zone between possible white settlement and Indian country.⁴ From southwestern Virginia, the Kentucky, Cumberland, and Tennessee rivers were natural ways of ingress into this rich country. Kentucky, the Land among the Meadows, named from the Iroquois word *Ken-ta-kee*, had long been known by reputation. The explorations of Daniel Boone and James Robertson opened the way to settlement and started the tide of immigration, especially after Lord Dunmore's War, in 1774, freed Kentucky and Tennessee of any immediate danger from the Indians of the Northwest.⁵

During the Revolution, a constant stream of settlers from Virginia was flowing into Kentucky, where the meadows abounded with thick grass and the salt springs or "licks" were frequent. It has been estimated that in these years 20,000 people moved from the East into the West. This general migration is to be explained in several ways: Partly by a desire to escape heavy taxation after the war and partly by a propensity for a free and unrestricted mode of life, but chiefly for the purpose of providing for growing families. With big families and rising land values in the older parts of America, desire for more and cheaper land became a powerful impulse toward migration. The owner of a little farm in the East could sell it and with the sum received acquire ten times as much land in the West, which would enable him to leave a good-sized farm to each of his sons and daughters.

These pioneers trekked from the old settlements, packing a few household goods on horseback and driving their cattle before them. The only roads were Indian trails, so that the use of wagons was impossible. Colonel William Fleming, who traveled in Kentucky in 1779-1780, recorded in his *Journal* how he encountered such bands of

³Ernest Ludlow Bogart and Charles Manfred Thompson, eds., *Readings in the Economic History of the United States*, 145 (New York and London, 1916).

⁴Archer Butler Hulbert, *Boone's Wilderness Road*, 23, 26 (Cleveland, 1903).

⁵*Ibid.*, 30. See also, E. O. Randall, "The Dunmore War," *Ohio Archaeological and Historical Society, Publications*, 11:169-197 (Columbus, 1903); George Elliott Howard, *Preliminaries of the Revolution, 1763-1775*, p. 241 (New York and London, 1905).

immigrants, sometimes on the road, sometimes camped in a glade.⁶ It was a rough and perilous march. The cattle were likely to wander off into the forest and wolves and panthers frequently killed the stragglers; worst of all was the danger of fording streams, especially at high water. Fleming related that one company of immigrants lost 500 cattle by high water near Boonesborough.⁷

Sometimes the earlier pioneers, who occupied the lands just west of the Alleghenies, resented the Kentucky immigrants, who were continually passing through, pasturing their herds in the glades.⁸ These glades offered tempting pasturage, and it is no wonder that they were often the subject of contention. One of the most famous, The Glades or Glade Settlement, was graphically described in a letter of 1784 as:

one of the most remarkable features of these mountains and this land. These are broad stretches of land of many thousand acres, covered with dense forests; beyond this there is not a tree to be found, but the ground is covered knee-keep with grass and herbs, where both the botanist and the cattle find delicious food. Many hundred head of cattle are driven yearly, from the South Branch and other surrounding places. . . .⁹

This last observation is revealing, for it shows that the frontier had become a great cow country, whence stock was driven to the eastern towns in the older portion of the State.

The improvements of the backwoods farmer were usually confined to the building of a log cabin and the clearing and fencing of a small piece of ground for raising corn.¹⁰ A horse, a cow, a few hogs, and some poultry comprised the livestock and for the rest of his livelihood the backwoodsman depended on his rifle. Growth of settlement was the signal for removal farther west. The next group of settlers, who had considerably less dependence on wild game, readily adapted themselves to a growing population and devoted more time to agriculture. Their livestock were more numerous than those of the backwoods predecessor, but as the cattle had to shift for themselves, they were small and lean. Having little capital, the settlers did not sow grass seed and the land which should have afforded good pasturage was overgrown with weeds. As a result, no fodder was laid up for winter except some corn, and the livestock were compelled to range the forest for food. Trees were sometimes cut down so that the cattle might eat the buds. Lack of shelter completed the misery of the stock. Horses were not exempted from suffering, for they had to labor hard while being underfed and unprotected in cold weather.

This second group of settlers brought only a small portion of the land under cultivation, success depending on increasing land values, not on production. When the neighborhood became more populous these farmers sold out, often at great profit, to a third group which might be called the capitalist farmers.

⁶William Fleming, "Journal of Travels in Kentucky, 1779-1780," in Newton D. Mereness, ed., *Travels in the American Colonies*, 649 (New York, 1916).

⁷*Ibid.*, 627.

⁸Johann David Schöpf, *Travels in the Confederation, 1783-1784*, 1:234 (Philadelphia, 1911); Hulbert, *Boone's Wilderness Road*, 135.

⁹Archer Butler Hulbert, *Pioneer Roads and Experiences of Travelers*, 2:79-80 (Cleveland, 1904).

¹⁰James Flint, "Letters from America (Edinburgh, 1822)," in Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 9:232-235 (Cleveland, 1904-1907).

The new occupants either destroyed the existing dwellings or converted them into barns and replaced them with houses of brick. They built better fences, cultivated more land, sowed grass seed, improved the stock, and generally introduced some Merino sheep. These farmers also fattened cattle for market, and often erected flour mills, sawmills, or distilleries.

EARLY DAYS IN KENTUCKY

We are fortunate to have from a western surveyor, Gilbert Imlay, a graphic account of the circumstances and conditions under which Kentucky was settled.

The fertility of the soil amply repays the labourer for his toil. . . . The ground will yield from 50 to 60 bushels of corn to the acre. . . . and in three or four years his stock of cattle and sheep will prove sufficient to supply him with both beef and mutton. . . . By the fourth year, provided he is industrious, he may have his plantation in sufficient good order to build a better house.¹¹

When Kentucky was first settled, the borders of the rivers were covered with cane. It was one of the strongest inducements for the early settlers, as it provided excellent forage.¹²

Kentucky farmers gave attention to blooded cattle from the beginning. In 1785, three sons of Matthew Patton of Virginia, who had imported a Longhorn English bull, emigrated to Kentucky and took some of the half-breed heifers with them. Ten years later, they sent to Virginia for more of these milch cattle. In 1803, the Pattons brought out the "Milk Bull," Pluto 825, who proved a noted breeder. This stock founded the best herds in Kentucky. Descendants of this bull, another bull named Mars, and a cow named Venus were taken into Ohio where they also founded a better breed of cattle. In 1817, Lewis Sanders of Lexington, imported three bulls and three heifers from England; they were probably Durhams.

Very early in her history, Kentucky took to the business of raising horses. The first legislative assembly of Transylvania, which met at Boonesborough in 1775, passed "an act for preserving the breed of horses." The founders of the Kentucky stock were brought by the first settlers who came from Virginia, which excelled in the quality of its horseflesh at that time. When François André Michaux was in Kentucky in 1802, he observed that almost "all the inhabitants employ themselves in training and meliorating the breed of these animals; and so great a degree of importance is attached to the melioration, that the owners of fine stallions charge from fifteen to twenty dollars for the covering of a mare."¹³ A first-class Kentucky saddle horse at that time cost from \$130 to \$140.¹⁴

¹¹George Imlay, *A Topographical Description of the Western Territory of North America*, 150-151 (ed. 2, London, 1793).

¹²John Bradbury, "Travels in the Interior of America, in the Years 1809, 1810, and 1811 (ed. 2, London, 1819)," in Thwaites, *Early Western Travels*, 5:42.

¹³François André Michaux, "Travels to the West of the Alleghany Mountains (London, 1805)," *ibid.*, 3:243, Maximilian of Wied also commented on the fact that the Kentucky horses were "considered to be the best in the country."—"Travels in the Interior of North America (London, 1843)," *ibid.*, 22:158.

¹⁴Michaux, "Travels to the West," 245.

The horses of Tennessee were not so famous as those of Kentucky, but the breed was protected by the importation of Kentucky stallions and mares.¹⁵ To consume the surplus corn in Tennessee, great numbers of cattle were raised. They were driven directly to the Gulf coast, despite the many forests and rivers that had to be traversed.

Every Kentucky farmer raised hogs, sometimes hundreds of them. Every owner recognized his hogs by the way in which their ears were cropped. The animals never left the woods, summer or winter. Corn was sometimes given them, more to keep them from growing completely wild than from need. Salt was absolutely necessary; indeed, the hogs would come to the farmhouse door to beg for it and would spend hours licking the trough in which the salt had been. Michaux described the hogs in Kentucky as "of a bulky shape, middling size, and straight eared."¹⁶

Sheep raising in early Kentucky was not profitable. A species of nettle or cockle burrs was very troublesome, and, consequently the fleeces often were scarcely worth shearing.¹⁷

Lexington had acquired the outward appearance of an eastern town by 1807. Carriages and coaches were common. The inhabitants boasted of 1,500 "good and valuable horses," and 700 cows. The tract of 1,600 square miles surrounding Lexington was one of the richest in America. Fortescue Cuming compared it to the Po Valley.¹⁸ Henry Clay's farm at Ashland, near Lexington, was already famous in 1818. Clay systematically developed his pasture, being unwilling to let his stock range for food. He cleared away all the underbrush, leaving sufficient timber to afford shade for the cattle. The tracts were then sowed with grass seed, which, with the native clover, made very fine pasturage.¹⁹

Michaux, as early as 1793, remarked upon the "Farming Establishments" along the road from Lime Stone (later Maysville) to Lexington.²⁰ William Faux described the country around Lexington in 1818 as "the finest arable and pasture land in the known world, on which grass, the most luxuriant, is seen rotting for want of cattle."²¹ Two years later, Major Stephen Long, passing through Louisville, was amazed at the extensive pasturage.²²

FRENCH SETTLERS IN THE ILLINOIS COUNTRY

While Kentucky was thus early becoming a commonwealth, the settlement of the country north of the Ohio River was delayed, although, as a historic territory, the Ohio-Illinois country was of old French occupation. Sault Sainte Marie is the oldest

¹⁵*Ibid.*, 280-281.

¹⁶*Ibid.*, 246.

¹⁷Thomas Nuttall, "A Journal of Travels into the Arkansa Territory During the Year 1819 (Philadelphia, 1821)," in Thwaites, *Early Western Travels*, 13:58.

¹⁸F. Cuming, "Sketches of a Tour to the Western Country, Through the States of Ohio and Kentucky (Pittsburgh, 1810)," *ibid.*, 4:187-188.

¹⁹Thomas Hulme, "A Journal Made During a Tour in the Western Counties of America, September 30, 1818-August 7, 1819 (London, 1828)," *ibid.*, 10:65-66.

²⁰André Michaux, "Journal of Travels into Kentucky; July 15, 1793-April 11, 1796," *ibid.*, 3:38.

²¹William Faux, "Memorable Days in America (London, 1823)," *ibid.*, 11:90.

²²S. H. Long, "Account of an Expedition from Pittsburgh to the Rocky Mountains, Performed in the Years 1819, 1820 (London, 1823)," *ibid.*, 14:74-75.

town in the Northwest, having been founded by the French 14 years before William Penn founded Philadelphia. It is 120 years older than Marietta, the oldest town of English ancestry in Ohio.

When the Northwest Territory passed to England in 1763, the country from the Ohio to the Straits of Mackinac was a wilderness thinly peopled by Indians. Here and there were some old French forts, the only centers of civilization in the region, and even these were more savage than civilized. When the forts passed to the English, many of the French inhabitants emigrated across the Mississippi, most of them removing to St. Louis.²³

The Illinois and Wabash posts were favorably situated for agriculture. Thomas Hutchins, describing the settlement at Vincennes, said: "They raise Indian corn . . . Wheat; and Tobacco of an extraordinary good quality. . . . They have a fine breed of horses (brought originally by the Indians from the Spanish settlements on the western side of the River Mississippi) and large flocks of Swine, and Black Cattle."²⁴ From the Wabash settlements, 600 barrels of flour were shipped to New Orleans in 1746. Salt, beef, tallow, tar, bear's grease, flour, and pork were regularly sent to New Orleans from the Wabash and Illinois settlements, but, as in all French posts, trade in agricultural products was very little encouraged.²⁵

The census of 1767 showed at Vincennes 232 whites, 168 foreigners (French and Spanish), 10 Negroes, 17 Indians, 352 oxen, 588 cows, 260 horses, and 295 hogs; in all Illinois there were only 600 whites, 303 Negroes, 295 oxen, 342 cows, 216 horses, and 912 hogs.²⁶ The exodus of the French inhabitants was a matter of concern to the incoming British authorities, as the garrisons of the forts were supplied with beef, pork, and wheat from the French farmers living in the neighborhood.²⁷ Colonel George Croghan, the Irish officer whose labors for the development of the Illinois country have only lately been put in their true light, sent to General Gage, the British commandant, a report upon *The Best Method of Supplying Fort Chartres with Provisions*, dated January 12, 1767, in which he urged that every effort be made to induce the French to raise cattle and other agricultural products.²⁸ He pointed out to his superior that the forts should be made a market for the sale of cattle and provisions, because not only might it induce those who had removed to the Spanish side of the Mississippi to return, but it would also prevent the few French who yet remained on the English side from driving their cattle to the Spanish side and settling there permanently.

Apparently the warning was not heeded, or else the French could not be induced to stay. The forts were compelled to get their livestock from western Pennsylvania and western Virginia, whence herds were driven for the feeding of the garrisons. This

²³Clarence Walworth Alvord and Clarence Edwin Carter, eds., *The Critical Period, 1763-1765*, p. 190, 271 (Springfield, Ill., 1915).

²⁴Thomas Hutchins, *A Topographical Description of Virginia, Pennsylvania, Maryland, and North Carolina*, 28-29 (London, 1778).

²⁵Elbert Jay Benton, *The Wabash Trade Route in the Development of the Old Northwest*, 24 (Baltimore, 1903).

²⁶Clarence Walworth Alvord and Clarence Edwin Carter, eds., *The New Régime, 1765-1767*, p. 469-470 (Springfield, Ill., 1916).

²⁷*Ibid.*, 479.

²⁸*Ibid.*, 479-481.

business, besides the furnishing of many other supplies for the forts, fell into the hands of a Philadelphia firm, Messrs. Baynton, Wharton & Morgan, which did an enormous business in frontier commerce, such as peltry and furs.²⁹

Compared with Kentucky, the Ohio country had an unfavorable reputation as a stock-raising country before the Revolution. It was said that the winters were long and hard, "where a man must lay up as many tons of hay as he has heads of cattle to support them through the winter." Nevertheless, when the Revolution ended, and there was no longer a Royal Proclamation or Quebec Act to hinder immigration, the population of the West increased rapidly. The Government's award of bounty lands to its soldiers, the organization of numerous land companies, and the enactment of the Northwest Ordinance in 1787 enormously stimulated settlement.

Most of the first settlers came from Pennsylvania and Virginia; the road via western New York was still blocked by Indian occupation.³⁰ In Buffalo Rochefoucauld, in 1797, saw Indians cutting grass with their knives instead of sickles which could have been obtained in the settlements; yet, they were sufficiently civilized to keep some horses and cows and to have some really fine oxen.³¹ The pioneers from Pennsylvania came up the Juniata River and over the Alleghenies, through Carlisle and Fort Bedford to Fort Pitt, and thence down the Ohio. Those from Virginia had an easier road which penetrated the mountains and ran down the Monongahela River to the Ohio. The union of this river with the Allegheny to form the Ohio made the Monongahela the natural Virginia gateway to the West.³²

LIVESTOCK IN OHIO

Two events of 1795 greatly stimulated the settlement of the Ohio country and furthered cattle raising there. One was the destruction of the Indian danger in the Northwest after the Battle of Fallen Timbers on the Maumee River (August 20, 1794) and the Treaty of Greenville which followed it, by which the Indians were removed farther west. The other was the Whisky Rebellion in western Pennsylvania. The farmers there had discovered that the readiest means of converting their corn into a marketable commodity was the manufacture of home-distilled whisky, which could be packed in small kegs, transported on horseback to the coast, and sold at a large profit.³³ It was believed that cattle and hogs could not be profitably driven from so far inland to the seaboard, so stockmen west of the Alleghenies floated their pork and hams in flatboats down the Ohio and the Mississippi to New Orleans. It was a long but cheap method of disposal, for the cost of transportation was negligible.³⁴

²⁹See index *ibid.*, under the name of the company.

³⁰Frederick Jackson Turner, "The Place of the Ohio Valley in American History," *Ohio Archaeological and Historical Quarterly*, 20:38 (January 1911).

³¹François Alexandre Frédéric La Rochefoucauld-Liancourt, *Travels Through the United States of North America*, 1:175 (London, 1799).

³²John Fiske, *Old Virginia and Her Neighbours*, 2:399 (Boston and New York, 1897).

³³Emory R. Johnson, and others, *History of Domestic and Foreign Commerce of the United States*, 1:211 (Washington, 1915); Frederick Jackson Turner, *Rise of the New West, 1819-1829*, p. 101 (New York and London, 1906).

³⁴Michaux, "Travels to the West," 158.

The establishment of a national internal revenue system and the imposition of an excise tax on whisky broke up the whisky trade. The western counties of Pennsylvania seethed with rebellion, which Washington, then President, suppressed by sending troops. Deprived of the right of converting a large quantity of corn into whisky, the farmers in western Pennsylvania and Ohio gave renewed attention to the raising of cattle and hogs. These animals increased so rapidly that the New Orleans market became glutted, and another way had to be found to dispose of them. Stock raising on a large scale superseded the primitive industries of the frontier.³⁵ Between 1815 and 1830, Ohio was the cattle and hog-raising center of the United States. The vast prairies were covered with a luxuriant growth of grass, affording an abundant supply of food for the stock of the new settler; when constantly fed on by cattle, the prairies became covered with white clover and the much-esteemed blue grass.³⁶

The English traveler, Henry Bradshaw Fearon, who visited Ohio in 1818, described the prairies as "filled with herds of cattle for the Philadelphia and Baltimore markets." The grass grew 4 feet high. The only attention the cattle received was a little salt twice a week. In the next year William Faux described the Ohio country as of "fine natural grass and white clover . . . crowded with cattle. . . ." ³⁷ The arable land had been cropped for 15 years, yet the wheat stubble and cornstalks were still strong and thick. Around Zanesville and Coshocton thousands of stock were grazed for the eastern market, the cattle chiefly going to Philadelphia, and the hogs to Baltimore.³⁸

The Pickaway Plains, a rich prairie 14 miles long on the west side of the Scioto River was the finest cattle region in Ohio; in general, the best cattle were raised in the northern part of the State. The cattle grew large and handsome on the rich grass in spite of lack of care. In summer they were fat; but many died of semistarvation and disease in the winter.³⁹

CATTLE DROVING TO THE EAST

The history of the rise and decline of Ohio droving is a short but interesting chapter in the history of the New West. It probably was suggested by the success which Kentucky horse raisers found in driving horses to market. The Southern States, and particularly South Carolina, were the principal places to which Kentucky horses were driven for sale. They were brought there in droves of 15, 20, or 30, in the early part of winter, the journey from Lexington to Charleston requiring from 18 to 20 days; this distance made a difference of from 25 to 30 percent in the price.⁴⁰

In order to appreciate this economic interchange between West and East, the economic and political background must be understood. Ohio, owing to the fertility of its soil, produced a large surplus of corn. Transportation was bad and markets distant;

³⁵John Bach McMaster, *A History of the People of the United States, from the Revolution to the Civil War*, 3:89-145 (New York, 1896).

³⁶Bradbury, "Travels in the Interior of America," 294.

³⁷Faux, "Memorable Days in America," in Thwaites, *Early Western Travels*, 11:168.

³⁸John Melish, *Travels Through the United States of America, in the Years 1806 & 1807, and 1809, 1810, & 1811*, p. 441 (London, 1818).

³⁹Cuming, "Sketches of a Tour," 220; James Flint, "Letters from America," 119; Maximilian, "Travels in the Interior of North America," in Thwaites, *Early Western Travels*, 22:185.

⁴⁰Michaux, "Travels to the West," 244.

consequently, a bushel of corn in Philadelphia was worth 4 bushels in Ohio.⁴¹ The corn could not be carried there profitably, but if fed to cattle, which could be driven to market, the Ohio farmer made money on both corn and cattle. The Napoleonic Wars in Europe kept up the price of corn, so that it was natural that the most profitable days of Ohio droving fell between 1802 and 1815.⁴²

At least as early as 1802, Kentucky and Ohio cattle raisers began to drive cattle to Philadelphia and Baltimore.⁴³ Again, in 1805, a herd of cattle was driven from the Scioto River across the mountains. Of this herd, 22 were sold en route at Moorfield, Virginia; the rest were driven on to Baltimore, where they were sold at a net profit of \$31.77 per head.⁴⁴ Thereafter, travelers frequently met droves of Ohio cattle and hogs going east. Fortescue Cuming told of meeting an old Revolutionary soldier who was then (1807) a farmer near Pittsburgh. He was returning homeward after helping drive a herd of 150 hogs to Philadelphia.⁴⁵

In 1817, an Ohio drover named Drenning drove 200 head of cattle from Chillicothe to New York; these were the first western cattle brought to that market. The herd arrived in June, and the *New York Press* of that month reported that: "They appear as fresh as if just taken off one of our Long Island farms. When it is recollected that they have been driven nearly one thousand miles, this fact will be considered a very remarkable one."⁴⁶

After this experience, droving to New York was as common as to Philadelphia. The problem of getting cattle from the grazing grounds in the West to the eastern markets was solved. Daniel Drew, who later became one of the first millionaires of New York, kept the Bull's Head Tavern in New York, which became the favorite rendezvous of Ohio drovers. Two grades of cattle were driven to the East. Three-year-old steers, called "stock cattle," were taken to eastern Pennsylvania, where the farmers bought and fattened them for market. Fat 4-year-old bullocks were driven more slowly and sold directly to the butchers.

There were three principal routes from Ohio to the East. Until the construction of the Erie Canal in 1825, the northern road was by way of Erie, Pennsylvania, and Dunkirk, New York, and thence down the Mohawk Valley. After that date, until the coming of the railroads, live cattle were usually driven to market, and meat, lard, and pork products were shipped by boat. The second road crossed the Ohio River by ferry at Wellsville, and led via Pittsburgh to Philadelphia. After the building of the Pennsylvania Railroad, Pittsburgh became a stockyard center from which cattle were shipped eastward by rail. The southern route followed the old Zane's Trace from Zanesville to

⁴¹Frank P. Goodwin, "The Rise of Manufactures in the Miami Country," *American Historical Review*, 12:768 (July 1907).

⁴²Michaux, "Travels to the West," 205.

⁴³*Ibid.*, 191, 245.

⁴⁴The standard price at this time was \$25 per head for cattle measuring a fixed number of feet around the belly, and \$1 was added or subtracted for every inch over or under this measurement. —Melish, *Travels Through the United States*, 481.

⁴⁵Cuming, "Sketches of a Tour," 54. For accounts of other travelers, see John Woods, "Two Years' Residence in the Settlement on the English Prairie in the Illinois Country, United States (London, 1822)," in Thwaites, *Early Western Travels*, 10:204; Faux, "Memorable Days in America," *ibid.*, 11:146; Flint, "Letters from America," 80.

⁴⁶Quoted in Thomas F. DeVoe, *The Market Book*, 411 (New York, 1862).

Wheeling, and passed thence, either through Bedford, Pennsylvania, to Philadelphia, or through Cumberland, Maryland, to Baltimore. These three routes are substantially those of the New York Central, the Pennsylvania, and the Baltimore and Ohio railroads.

Along these roads were "drove stands" - inns or rather big farmhouses where the drovers lodged, surrounded by cattle pens and corncribs.⁴⁷ The crew of drovers comprised a boss, often the owner of the herd, a man to ride along each side, and another to lead. The last led an ox as a sort of bellwether for the herd. The Centreville whip was a famous weapon of these drovers. It was originally manufactured by a harness-maker at Centreville and attained great fame. These whips had linen or silk "crackers," and the report of them was like a rifle shot. The hired drovers, who received \$15 a month, had to walk home. Usually 33 miles was considered a day's walk; fast walkers made 40.

In the summertime a cloud of dust signaled the coming of a drove long before it was visible over the hills. In early spring or late fall, the road was often nearly impassable from mud, a condition which was aggravated by the trampling cattle. When the clay dried or froze, the road became worse. Bridge and ferry tolls were one of the main expenses of cattle droving; on the Cumberland Road cattle were taxed twice as heavily as hogs, and hogs twice as much as sheep.⁴⁸

Often before the destination was reached, the drover was met by speculators who, knowing the condition of the market better than the drover, frequently made shrewd bargains. The trials and tribulations of a drover on the road may be easily imagined; one incident was so curious that it deserves to be described. When steamboating began on the Ohio River the whistle of the boat often so scared the cattle that they stampeded, and engineers and firemen frequently amused themselves in this way. A western drover sent the following quaint complaint to a Wheeling, Virginia, newspaper in 1826:

On the 12th of April, 1826, as I was driving 45 head of fat cattle up the Ohio river, a little above Mrs. Parriott's in Ohio County, Va. the steam boat Clinton crossed the river a little behind the cattle and kept close along the shore until she got about midway of the cattle, when she let off 3 or 4 blasts of steam, and the cattle started up the river as if the deuce was in them. I kept before them for more than a mile and a half, when having the advantage of a bridge I succeeded in turning them, and when they came opposite the boat she gave them 3 or 4 blasts more, and the men on the boat gave a shout, and being not yet satisfied they gave my horse a few blasts. The name of the captain of the boat I knew not, but I wish to caution the public against a man of such mean and disgraceful conduct. I can easily prove the above facts.⁴⁹

THE MERINO BUBBLE

As the Ohio country became more settled, sheep raising followed cattle and hog raising. The first sheep came with the Virginians before 1800.⁵⁰ The Merino made its

⁴⁷Farms on the road in Pennsylvania were worth from 50 to 100 percent more than land, equal in quality, but lying farther back. Along the road a combination farm and tavern was highly profitable. Faux, "Memorable Days in America," Thwaites, *Early Western Travels*, 12:18.

⁴⁸Archer Butler Hulbert, *The Cumberland Road*, 102 (Cleveland, 1904).

⁴⁹Ulrich B. Phillips, ed., *Plantation and Frontier, 1649-1863*, 2:277 (Cleveland, 1910).

⁵⁰Joseph Martin, *A New and Comprehensive Gazetteer of Virginia and the District of Columbia*, 320 (Charlottesville, 1835).

appearance soon after its arrival in America. John Melish reported in 1819 that both common and Merino sheep were "getting very plenty" in Zanesville.⁵¹ Seth Adams of Muskingum imported descendants of David Humphreys' Merinos, and in 1810 he drove 176 of these sheep into Kentucky and Tennessee. Wells and Dickinson had a large Merino flock in connection with their woolen mill at Steubenville.⁵² In 1828, Thomas Wardall of Theddlethorpe, Lincolnshire, sold his farm in England and emigrated to Ohio, where he settled near Cincinnati. Two years later, he returned to Lincolnshire and brought back with him the first sheep directly imported to Ohio.

The German communistic communities, of which there were several, were noted for sheep raising. Maximilian of Wied, the German Prince who traveled through America in the years 1832-34, was especially interested in seeking out these German settlements, and visited the community at Zoar in Ohio. As the Prince approached, "the shepherd drove a numerous flock of sheep over the bridge, and answered my questions in genuine Swabian German. His entire dress and equipments were quite in the German fashion: a shepherd's crook, a broad leather bandolier, ornamented with brass figures, a flat broad-brimmed hat, and a large grey coat; a costume very uncommon in America."⁵³ These communities were evidently an Old-World picture in a New World.

Sheep farming prospered all through Ohio, and woolen factories multiplied. So great was the textile demand that manufacturers were compelled to import wool to keep their looms employed. Visions of great wealth to be derived from the growing of wool floated before the eyes of Ohio farmers, and the so-called Merino bubble or craze was created.⁵⁴ The bursting of the Merino bubble in Ohio was one of the forces that led to the outcry for the protection of American sheep raisers and woolen manufacturers from the English. This was seconded by the grain growers, who were finding their agricultural surplus too large to be disposed of by fattening cattle and hogs. The result was the tariff of 1828.

By 1830, Ohio was no longer characterized by frontier conditions and had taken on much of the more settled aspect of the Eastern States.⁵⁵ Between 1810 and 1830, its population increased 61 percent, and as the population increased the trails changed to roads, the log cabins to comfortable houses, the clearings to farms, and the ragged villages to towns. Commercial and industrial differentiation had taken place. Northern Ohio was bound to the East by Lake Erie and the Erie Canal, southern Ohio by the Cumberland Road. Wasteful farming methods were being supplanted by a more intensive tillage; the quality of livestock was improved; manure, instead of being thrown into the river, was spread over the fields; and barns were well built and commodious.⁵⁶

⁵¹Melish, *Travels Through the United States*, 421.

⁵²Chester Whitney Wright, *Wool-Growing and the Tariff*, 26, 30 (Boston and New York, 1910).

⁵³Maximilian, "Travels in the Interior of North America," in Thwaites, *Early Western Travels*, 24:156.

⁵⁴Johnson, *History of Domestic and Foreign Commerce*, 1:218.

⁵⁵John Ervin Kirkpatrick, *Timothy Flint, Pioneer, Missionary, Author, Editor, 1780-1840*, p. 71 (Cleveland, 1911); Frank P. Goodwin, "Building a Commercial System," *Ohio Archaeological and Historical Quarterly*, 16:316 (July 1907), and "The Rise of Manufactures in the Miami Country," *American Historical Review*, 12:761-775.

⁵⁶Henry Bradshaw Fearon, *Sketches of America: A Narrative of a Journey of Five Thousand Miles Through the Eastern and Western States of America*, 226 (London, 1818).

STOCK RAISING FAILS TO PROSPER IN EARLY INDIANA

The tide of immigration passed on into Indiana and Illinois, which, in 1830, were in the stage that Ohio had reached in 1810.⁵⁷ Land was available in Indiana after the cessions of 1803, by which the Indians gave up all of central Indiana between the Wabash and the White rivers. James Flint in 1818 recorded that "Already upwards of a hundred families have entered it, for the purpose of rearing cattle and hogs."⁵⁸ With reference to the road between Maysville, Kentucky, and Chillicothe, Ohio, Thomas Hulme wrote: "Some pretty good farms in view . . . but many abandoned for the richer lands of Indiana and Illinois."⁵⁹

Indiana, even in its pioneer days, never approached Ohio or Illinois as a stock-raising country. It was much more heavily wooded than either of the others; the southern part was hilly and broken, and the lake region in the north was very marshy. The lawlessness of its population was also a deterrent factor; early Indiana society was notorious. Horse thieves were common.⁶⁰ Even a judge was widely suspected of stealing the hogs which he shipped in flatboats down the river to New Orleans. Moreover, Indiana was too far away from the eastern markets to make droving practicable; hence, the market for her cattle and hogs was limited to the river trade and the Kentucky shore. Horses, however, could travel greater distances than cattle and were profitably driven into the Cotton Belt, and to Virginia ports, whence they were shipped to Cuba for the sugar mills and plantations.

Among the most progressive elements of the population in Indiana in early times was the German communist settlement at New Harmony. This group had originally been established at Harmony, in western Pennsylvania, where it manufactured broadcloth from the wool of its own Merino flock in 1810;⁶¹ George Rapp, the founder of the colony, paid \$1,000 for a full-blooded Merino ram. In 1814 these settlers removed to New Harmony, Indiana, near the mouth of the Wabash. Although sheep raising and wool manufacturing was the chief industry, the Harmonists also raised cattle and hogs by the thousand.⁶²

THE ILLINOIS PRAIRIES

The pioneer history of Illinois is very much a repetition of that of Ohio. Physiographically the country was similar to that of Ohio—a mingling of prairie and timber lands. Many of the first settlers were from the East and were accustomed to associating rich soil with timber, as in Pennsylvania. They were suspicious of the prairies and used them for grazing rather than for farming.⁶³

Illinois was the first prairie country that immigrants to the West found. The prairies varied in size from a few acres to many square miles. Grand Prairie was 200 miles long and from 20 to 30 miles wide; English Prairie, which took its name from the

⁵⁷Woods, "Two Years' Residence . . . in the Illinois Country," 310.

⁵⁸Flint, "Letters from America," 185.

⁵⁹Hulme, "A Journal Made During a Tour," 69.

⁶⁰Michaux, "Travels to the West," 154.

⁶¹J. Leander Bishop, *A History of American Manufactures from 1608 to 1860*, 2:194 (ed. 3, Philadelphia, 1868); Melish, *Travels Through the United States*, 332.

⁶²Bradbury, "Travels in the Interior of America," 315.

⁶³Lois Kimball Mathews, *The Expansion of New England*, 184 (Boston and New York, 1909); Solon Justus Buck, *Illinois in 1818*, p. 106 (Springfield, Ill., 1917).

English settlements of Birkbeck and Flower, near the mouth of the Wabash River, was over 10,000 acres in extent. Lesser prairie tracts included Bonpas, Burnt, Bushy, Village, and French Creek. Looking Glass Prairie, in St. Clair County, was famous for its loveliness.⁶⁴ It required years of plowing, ditching, and draining to make these lands comfortable habitats for either men or beasts. Edmund Flagg, who waxed so enthusiastic over the sight of Looking Glass Prairie in 1837, would have tempered his enthusiasm if he had had to live there in 1818.⁶⁵

In the early days, Illinois society was a medley of squatters, farmers who had taken up Government land, land jobbers, lawyers, farmers who were more stock raisers than cultivators, old French habitants, and some Indian hunters.

As Illinois was settled by immigrants who came by way of the Ohio River, or across southern Indiana, the extreme southern part was occupied first. Moreover, the north and center of the territory was still held by Indians.⁶⁶ The only domesticated livestock in the country, when the first American pioneers appeared, belonged to the French and half-breed residents, who raised cattle, horses, hogs, and poultry in a desultory fashion.⁶⁷

Among these French settlers, the establishment of colonies in compact form as a protection from the savages and to promote social intercourse was a matter of special requisition and enactment. Each settlement was granted two tracts of land for common fields and commons. The former consisted of several hundred acres, conveniently divided among the individual families and enclosed by the joint labor of the villagers. The seasons for plowing, sowing, and reaping were regulated by public ordinance, with the restriction that each individual, so long as he complied with the necessary regulations, possessed his lot in *franc alleu* or fee simple. The common was a far more extensive tract, sometimes embracing several thousand acres without enclosure and reserved for wood and pasture. Here there was no grant in severalty but donations from the tract were often made to newcomers.

There was a certain degree of comfort in these French villages. They had an abundance of hogs, cows, and horses, all of which ran at large on the prairies. They mowed a little grass for winter hay, and the hogs lived on nuts, acorns, and roots. In agriculture the superior industry of the Americans pushed the French farmer to the lowest economic stratum. New laws abridged the former immunities of the French.⁶⁸

THE FRONTIER SEQUENCE

The familiar sequence of hunter and Indian trader, pioneer farmer and cattle raiser, and lastly skilled agriculturalist, which characterized the expansion of the frontier, is clearly distinguishable in early Illinois history.⁷⁰ The backwoodsman,

⁶⁴Woods, "Two Years' Residence . . . in the Illinois Country," 270-271.

⁶⁵Edmund Flagg, "The Far West: or a Tour Beyond the Mountains (New York, 1838)," in Thwaites, *Early Western Travels*, 26:252.

⁶⁶Thomas Ford, *A History of Illinois*, 38 (Chicago and New York, 1854); Buck, *Illinois in 1818*, 38-39, 58 map, 59-64.

⁶⁷Flagg, "The Far West," in Thwaites, *Early Western Travels*, 27:119.

⁶⁸*Ibid.*, 45-46.

⁶⁹Bradbury, "Travels in the Interior of America," 260-261.

⁷⁰Buck, *Illinois in 1818*, p. 98-99.

at most, had only a cow, a few hogs, and a horse; he depended on his rifle for a living. The class of settlers who came after him reversed the method, and gained a livelihood by raising cattle, using the rifle only for recreation. Usually the backwoodsman sold out before he had brought much of his land under cultivation. His successor fenced the fields, systematically cultivated them, and introduced improved stock of horses, cattle, and sheep.⁷¹

In the year of its erection into statehood, 1818, Illinois was in the second stage of this transition. Hamlets were few and far between, and the settler's cattle wandered at will, the brand being the only sign of ownership. Records of the county commissioners of Illinois throw an interesting light on the early conditions of stock raising.⁷²

In early Illinois, stock raising repeated the stages that had developed along the colonial frontier and, later, in Ohio.⁷³ The cattle and hogs ran at large, the former subsisting on prairie grass and the tender shoots of the trees, and the latter on acorns and nuts. The calves were penned up to make sure that the cows would return home at nightfall. Wolves, however, were a menace, and the flies in summer were worse than an nuisance.⁷⁴ Nothing approaching blooded cattle yet existed. The cattle comprised every sort of grade, although popular prejudice seems to have favored spotted or part-colored animals. Both in Indiana and Illinois in these early days, half-wild horses ran loose on the prairies and would often approach passing travelers in the hope of getting salt.⁷⁵

John Woods has given a graphic picture of early stock raising in southern Illinois.

Farm-buildings are not numerous. Corn-cribs are built the same as cabins, except that they are placed on logs. . . .

Cow and pig pens, with cart and waggon lodges, are yet scarce. When pigs are shut up for fattening, it is common to make a fence for them of rails, in the same manner as for fields; sometimes one corner is covered over for a lodging place for them, but it is more common for them to be left to the mercy of the winds and weather. . . . There are but few cattle-yards and sheds; and the cattle are mostly left abroad in winter, with no shelter but what the leafless trees afford.⁷⁶

OBSTACLES TO STOCK RAISING IN SOUTHERN ILLINOIS

The chief obstacle to stock raising in southern Illinois at this time was the deficiency of water; many of the springs went dry in the heat of summer. This condition could be relieved by wells of 25 or 30 feet in depth, but the expense of digging them was very great.⁷⁷ The drought of 1819 was long remembered in southern Illinois.

⁷¹Flint, "Letters from America," 232-236.

⁷²Theodore Calvin Pease, *The County Archives of the State of Illinois*, lxxxviii (Springfield, Ill., 1915).

⁷³Buck, *Illinois in 1818*, p. 141.

⁷⁴Faux, "Memorable Days in America," in Thwaites, *Early Western Travels*, 11:258; Solon J. Buck, ed., "Pioneer Letters of Gershom Flagg," *Illinois State Historical Society, Transactions*, 1910, p. 159.

⁷⁵Bradbury, "Travels in the Interior of America," 268 note.

⁷⁶Woods, "Two Years' Residence . . . in the Illinois Country," 279-280.

⁷⁷*Ibid.*, 336-337.

Poor drainage and recurring droughts led to frequent and sometimes virulent sicknesses both of human beings and of stock. In 1820, there were violent epidemics among the horses and cattle. The illness that attacked cattle was known as "milk sickness." By some it was ascribed to a certain unknown and poisonous plant; by others to springs of water or the exhalations of marshes. Its terrible fatality, not only among cattle but among human beings, at one time created a veritable panic. The symptoms in humans were intolerable thirst, complete constipation, low temperature, and great nervousness, but no chills or headaches. The disease was also known as the "trembles." Recovery was rare; a stricken animal generally dying within 8 or 10 days. A farm where this disease had broken out was known as a "milk-sick farm" and was unsalable.⁷⁸

The first settlers exaggerated the possibilities of southern Illinois as a cattle-raising country. It is true that the profits of the first comers were often large, but, as in Indiana, the possibilities were limited.⁷⁹ Droving to the eastern markets was impossible. Occasionally Ohio drovers came to Illinois to buy cattle, but New Orleans was the chief outlet. Illinois had to compete with Ohio in the down-river trade in cattle, beef, hogs, salt pork, ham, and bacon, and consequently the New Orleans market was often glutted. Cattle raising on a big-business basis did not obtain until the opening of the railroads brought swifter and greater accessibility.

The English settlements founded by Morris Birkbeck on the Wabash River and by George Flower in Edwards County were agriculturally the most progressive communities to be found in southern Illinois.⁸⁰ The latter especially was prosperous, raising cattle, hogs, and sheep—the first flock of Merinos in Illinois was here—and shipping salted beef and pork, hams, bacon, butter, and cheese to New Orleans. Flower's former shepherd in England came out, bringing some English sheep and an English-bred cow.⁸¹

In 1816, the Indians had ceded the portion of their territory in northern Illinois which included the Galena lead mines. The workers in these mines and their families furnished a market for cattle, so that this region became the first cattle-raising country in northern Illinois.⁸² As for Chicago, or Fort Dearborn, it was barely on the map in 1830. The garrison at the post and the local Indian traders furnished the only market.⁸³ Governor Cass of Michigan, when he visited there in 1820, perceived that the surrounding country had many advantages for raising stock, but rapid development did not begin until after the Black Hawk War of 1832. From that time Chicago was the entrepôt of the Northwest.

⁷⁸ Flagg, "The Far West," in Thwaites, *Early Western Travels*, 27:95-96; Thomas L. McKenney, *Memoirs, Official and Personal*, 141 (New York, 1846).

⁷⁹ Richard Flower wrote of buying bullocks at \$16 and \$17 and selling them the next year at \$28 to \$31. —Buck, *Illinois in 1818*, p. 141. John Reynolds declared that money flowed into Illinois in 1818 to repay the farmer manyfold. —*My Own Times*, 112 (Chicago, 1879).

⁸⁰ For an account of the settlement, see George Flower, *History of the English Settlement in Edwards County, Illinois* (Chicago, 1882).

⁸¹ Buck, *Illinois in 1818*, p. 102-112, 161.

⁸² Reuben Gold Thwaites, "Notes on Early Lead Mining in the Fever (or Galena) River Region," Wisconsin State Historical Society, *Collections*, 13:290-292 (Madison, 1895); Frederick Jackson Turner, "The Colonization of the West, 1820-1830," *American Historical Review*, 11:308 (January 1906).

⁸³ Before the War of 1812, a man by the name of Clark was a Chicago cattle dealer—perhaps the first. —Milo Milton Quaife, *Chicago and the Old Northwest, 1673-1835*, p. 167 (Chicago, 1913).

In 1830, all of northern Illinois was an unbroken wilderness, except for a few trading posts and the colony of lead workers at Galena. Some thirty farmers were settled on Bureau Creek, and smaller groups at Peru, La Salle, Ottawa, Newark, and Holderness Grove. There were many Indian trails but only one road north of the Illinois River.⁸⁴ After the campaign of 1832 the possibilities of northern Illinois and southern Wisconsin became known. The population increased by leaps and bounds. People poured in by way of the Erie Canal and the Great Lakes from New England, New York, and the Western Reserve in Ohio. Before 1840, the pioneer period of Illinois history was over. Henceforth, the frontier of the Northwest was in Wisconsin and Iowa, and—to a lesser extent—in Michigan.

THE MICHIGAN "SWAMPS"

The pioneer history of Wisconsin and Iowa falls within the period subsequent to 1830, and is considered later in this study. That of Michigan may be considered here, although its pioneer history was barely over by 1840.

The settlement of Michigan was much delayed because of erroneous reports concerning its geography. It was commonly believed that beyond the southern tier of counties was a vast tamarack swamp suitable only for trappers and hunters.⁸⁵ The school books taught this, and the belief was supported by an official report of Government surveyors who pretended to have made a survey of the region.

Many of the Indians remaining in the territory had been employed by the British in two wars against the United States and were regular pensioners of the British Government. They were looked upon with suspicion and added to the prejudice against Michigan. Consequently, settlement did not begin until after the War of 1812. Between 1800 and 1810, the increase of population was only 1,005 persons. In 1810, when Ohio had a population of 231,000, Indiana 25,000 and Illinois 12,000, Michigan had less than 5,000.⁸⁶

By 1818, the Government survey of Michigan had progressed so far that the sale of lands was begun. Yet, the Census of 1820 showed that Ohio had added over 250,000 to her population, Indiana 123,000 and Illinois 43,000, whereas Michigan had only increased from 4,800 to less than 9,000.⁸⁷ Even when the Erie Canal was opened in 1825, it was not of immediate benefit to Michigan, the immigrants pouring into Ohio, Indiana, and Illinois instead.

Between 1820 and 1830, Michigan began to come into its own, its population increasing to 32,000 in the latter year. By 1840, the inhabitants numbered 212,000. Even as late as 1856, however, only the southern tiers of counties were well settled.⁸⁸

⁸⁴ John Moses, *Illinois, Historical and Statistical*, 1:364 (Chicago, 1889).

⁸⁵ Estwick Evans, "A Pedestrian Tour of Four Thousand Miles Through the Western States and Territories during the Winter and Spring of 1818 (Concord, N. H., 1819)," in Thwaites, *Early Western Travels*, 8:220; Thomas McIntyre Cooley, *Michigan, a History of Governments*, 192-193 (Boston, 1885).

⁸⁶ Romanzo Adams, "Agriculture in Michigan: A Sketch," Michigan Political Science Association, *Publications*, 3(7):8 (March 1899).

⁸⁷ *Ibid.*, 9.

⁸⁸ Jacob Ferris, *The States and Territories of the Great West*, 180 (New York and Auburn, 1856).

North of this line the dense forests, swamps, and pine barrens retarded settlement for a long time.

The livestock that the first pioneers of Michigan found belonged to the native French population and were of a very indifferent character.⁸⁹ Some of the horses were Canadian ponies, others were reputed to be a cross between the wild Southwestern horses of Spanish origin and mares captured at the time of Braddock's defeat.⁹⁰ The first good livestock in Michigan came from Ohio. In 1818, 1,042 beef cattle and 1,435 hogs were sent to Detroit from Ohio.⁹¹ Between 1825 and 1840, great droves of cattle, horses, and hogs were driven across the line from Ohio into Michigan. The prevalence of wolves made sheep raising precarious. The formation of an agricultural society in Oakland County in 1830 indicates that the State was progressing. However, Michigan has never been notable for stock raising or for the cultivation of corn.⁹²

THE FRONTIER BEYOND THE MISSISSIPPI

The terminal date in the history of pioneer colonization of the New West may be taken as 1832, the year of the Black Hawk War. By that time the pioneer history of Ohio, Indiana, Illinois, and to a lesser degree of southern Michigan, was completed. The settlement of northern Michigan and Wisconsin had hardly begun, and their history falls farther on in the century. In general, the Mississippi River was the extreme westward boundary of the New West. Much of the region beyond had been set aside for the "eternal use" of the Indians by James Monroe and his successors, who, between 1825 and 1841 built up a solid barrier of Indian reservations extending in an unbroken front from Green Bay to the southern boundary of the United States at the Red River.⁹³ At one point the restless American pioneer pierced this barrier. Missouri was colonized as part of the same movement which settled Ohio, Indiana, and Illinois. It was the one place where the frontier bulged beyond the natural barrier of the Mississippi.

As the Ohio River carried the emigrant to the Mississippi, so the Missouri carried him beyond it. The French habitants who crossed over to St. Louis after the Ohio Country passed to England in 1763 had pointed the way. St. Louis, in fact, was founded in 1764 as a home for these French exiles from Vincennes and Kaskaskia.⁹⁴

A typical French frontier way of life developed there. The farming was similar to that which obtained around Vincennes and Detroit. Hogs and cattle ran wild in the woods, and the prairie furnished pasture and hay, but St. Louis, under the French, was only incidentally an agricultural and cattle-raising country.⁹⁵ Its chief business was the fur and Indian trade.⁹⁶ In 1803, St. Louis, together with the vast territory of Louisiana, passed into the possession of the United States.

⁸⁹Cooley, *Michigan*, 223-226; George Newman Fuller, *Economic and Social Beginnings of Michigan*, 107-109 (Lansing, 1916).

⁹⁰Thomas Morris, "Journal of Captain Thomas Morris, (London, 1791)," in Thwaites, *Early Western Travels*, 1:311.

⁹¹Fuller, *Economic and Social Beginnings of Michigan*, 132 note.

⁹²Adams, "Agriculture in Michigan," 29-30.

⁹³Frederic L. Paxson, "The Cow Country," *American Historical Review*, 22:65 (October 1916).

⁹⁴Frederic L. Billon, *Annals of St. Louis*, 20-21 (St. Louis, 1886).

⁹⁵Long, "Account of an Expedition," in Thwaites, *Early Western Travels*, 14:108.

⁹⁶Hiram Martin Chittenden, *The American Fur Trade of the Far West*, 1:104 (New York, 1902).

The surplus population which continually crowded from the East into the West soon overflowed into Missouri. Some came down the Ohio and up the Mississippi to the mouth of the Missouri; others, to avoid the hard pull up the Mississippi, left the boats at Shawneetown, Illinois, and went overland to St. Louis. A few came straight overland from the East.

The little village of Olean, situated at the head of navigation on the Allegheny River, in Cattaraugus County, New York, was a favorite point of embarkation. In the early years of the nineteenth century, great numbers of families migrating from the northern and eastern States "took water" there.⁹⁷ The hard times following the War of 1812 greatly increased emigration from New England, especially from Maine.⁹⁸ In the years 1815-16, 15,000 persons removed to Ohio from Maine. One settler told Faux in 1818 that hundreds of wagons with droves of beasts, four or five hundred in a drove, and at least 5,000 souls bound for Missouri from Kentucky had passed his house since the last harvest.⁹⁹

By far the largest number of Missouri settlers came down the Ohio in keelboats and flatboats bringing their furniture, household utensils, and livestock with them. Steering their ark with a big oar at the stern, they were guided by the *Ohio Pilot*, a book which professed to instruct them in the mysteries of navigating the river.¹⁰⁰ Before the advent of the steamboat, horse boats, made by fastening two keelboats to a platform on which was a treadwheel propelled by horses, were common.¹⁰¹ These were much in use on the upcurrent of the Mississippi from the mouth of the Ohio to St. Louis, and also on the Missouri; the first United States troops moving up the Missouri River were so transported. Sometimes the craft was not even as pretentious as a flatboat but was merely a raft.¹⁰²

Timothy Flint, looking out on the flatboats covering the waters below the junction of the Ohio and the Mississippi rivers at New Madrid, wrote of the Missouri pioneers:

They have come from regions, thousands of miles apart. They have floated to a common point of union. The surface of the boats cover some acres. Dunghillfowls are fluttering over the roofs, as an invariable appendage. The chanticleer raises his piercing note. The swine utter their cries. The cattle low. The horses trample, as in their stables.¹⁰³

Nor was the overland tide of immigration into Missouri less steady. Again to quote from Flint:

The immigration from the western [Ohio, Indiana, Illinois] and southern states to this country poured in a flood, the power and strength of which could only be adequately conceived by persons on the spot. We have numbered a hundred persons passing through the village of St. Charles in one day.¹⁰⁴

⁹⁷Long, "Account of an Expedition," in Thwaites, *Early Western Travels*, 14:59.

⁹⁸Joshua L. Chamberlain, *Maine: Her Place in History*, 91 (Augusta, 1877).

⁹⁹Faux, "Memorable Days in America," in Thwaites, *Early Western Travels*, 11:206.

¹⁰⁰Timothy Flint, *The History and Geography of the Mississippi*, 1:151-153 (ed. 2, Cincinnati, 1832).

¹⁰¹Woods, "Two Years' Residence . . . in the Illinois Country," 232.

¹⁰²James Hall, *Letters from the West*, 87-88 (London, 1828).

¹⁰³Flint, *Recollections of the Last Ten Years*, 103-104.

¹⁰⁴*Ibid.*, 201.

The rapidity with which Missouri was peopled, especially the northern counties, is one of the marvels of western history. In 1821, that section of land embraced within the limits of Morgan County numbered but 20 families; in 1830, its population was nearly 14,000. The lure of Missouri, as of Kentucky, was the abundant cane along the rivers and the rich prairies. The Mamelles Prairie in Missouri was as famous as the Looking Glass Prairie in Illinois.¹⁰⁵

The view from the summit of the prairie mounds was celebrated as one of the most beautiful prairie scenes in the West. To the right extended the Missouri Bottom, studded with the farms of the French villagers; the course of the river was delineated by the blue line of bluffs. In front was spread the lovely Mamelles Prairie with its waving ocean of flowers of every form and scent and hue, and hundreds of cattle cropping the herbage. The view was that of a sea of endless verdure. All along the northern horizon, curving away in a magnificent sweep of 40 miles to the west, like towers and castles rose the hoary cliffs of the Mississippi. Tracing along the bold facade on the opposite shore, the eye detected the deep-cut openings which outlined the embouchure of the Illinois River and several smaller streams. To the left extended 70 miles of sweeping prairie. Upward of 50,000 acres, with a soil of inexhaustible fertility, were visible to the eye at a single glance.¹⁰⁶

Stock raising was largely followed in early Missouri, as might be expected in a new country. The most careful class of settlers in this particular were the Pennsylvania-German farmers who practiced in Missouri the methods of animal husbandry which they had so well developed in the East. Their barns, with ample mows, stalls, and pens were the best in the new country as they had been in the old.¹⁰⁷ Whereas the average settler in Missouri lavishly wasted the cane for winter fodder and then let his stock shift for themselves, the careful German farmer duly gathered his hay in the summer.

Missouri as a stock-raising country was quite the equal of Illinois and Ohio in natural features and in one particular had a great advantage, namely, in accessibility of market.¹⁰⁸ Missouri flatboats bearing livestock, beef, pork products, butter, and cheese could start for New Orleans earlier than those of the Ohio, and the voyage could be made more quickly. Moreover, besides New Orleans and the Southern plantations, Missouri stock raisers found a nearby market in the lead- and zinc-mining colonies and the Army garrisons.¹⁰⁹

COLONIZATION OF THE SOUTHWEST

The Southwest of the period immediately after 1812 included the territory west of the Carolinas and Georgia, from which the present States of Alabama and Mississippi have been carved. What the Old Northwest was to Pennsylvania and New York, and Kentucky and Tennessee to Virginia, this region was to the seaboard Southern States.

¹⁰⁵ Flagg, "The Far West," in Thwaites, *Early Western Travels*, 26:303; Bradbury, "Travels in the Interior of America," 42-43.

¹⁰⁶ Flagg, "The Far West," in Thwaites, *Early Western Travels*, 26:273-276.

¹⁰⁷ Flint, *Recollections of the Last Ten Years*, 236-237.

¹⁰⁸ *Ibid.*, 249.

¹⁰⁹ Katharine Coman, *Economic Beginnings of the Far West*, 2:49, 51, 73 (New York, 1912).

In 1775, it is doubtful if there were more than 3,000 whites in the region between Kentucky and the Gulf of Mexico, and most of these were at New Orleans.¹¹⁰ Unlike the culture of the Northwest, which was French and Indian before the American occupation, that of the Southwest was a triple combination of Indian, Spanish, and French. Before 1795, when it was ceded by Spain to the United States, what is now the southern half of Alabama and Mississippi was known as West Florida. In 1798, this region was organized as the Mississippi Territory. Both France and Spain had competed for West Florida in the seventeenth and eighteenth centuries, and Mobile and Biloxi were originally French, not Spanish settlements.

In the Southwest roamed huge herds of half-wild black Spanish cattle. There were many hogs, locally known as De Soto hogs because supposedly they sprang from animals which had escaped during De Soto's expedition in 1539-1542. Wild horses also abounded—descendants of the first Spanish horses, which the Indians captured and tamed, and which were known as Chickasaw horses.

The years of alternate French and Spanish occupation of the Gulf territory had made little impression. Plant and animal life grew luxuriantly and increased enormously, but the intelligence of man made no attempt to improve upon the wantonness of nature. Cattle, horses, and hogs just grew. Animal husbandry was confined to the futile attempt of Pierre Le Moyne Iberville at Biloxi, in accordance with royal orders from Paris, "to catch bison calves, make a fenced park to hold them, and tame them for the sake of their wool, which was reputed to be of value for various fabrics."¹¹¹

In the lower Mississippi country, no one ever thought of fattening cattle; they were killed just as they were found in the canebrakes. Throughout lower Louisiana, whether under French or Spanish rule, apparently no attempt was ever made to establish any breed of domestic animals by selection, and no foreign ones were introduced. Cattle increased and fattened with no attention other than the occasional ascertaining of their existence in the wilderness and giving them a little salt from time to time. Unrestrained liberty and a perpetual food supply had completely naturalized the cattle and horses, although the original stock had deteriorated somewhat under wilderness conditions. The native horse was smaller than his Spanish ancestor, but was very hardy and capable of subsisting entirely upon grass and cane.¹¹²

Considering the resources and possibilities of the country, lower Louisiana was but little exploited. New Orleans, under both the French and the Spanish regime, was an outlet for horses, live cattle, hides, and tallow for the West Indies. Most of the livestock was driven from ranches in Texas, then a Spanish dominion, to Natchitoches. The local population of Louisiana was supremely indifferent to either farming or trade; the better class was composed of Alsatian Germans whom John Law had sent out to work his estate in Louisiana. These colonists first settled at Arkansas Post, but later removed to the Bayou St. John, whence the term "Cote des Allemands," which was applied to this region.¹¹³

¹¹⁰Hulbert, *Boone's Wilderness Road*, 145.

¹¹¹Francis Parkman, *A Half-Century of Conflict*, 1:294 (Boston, 1893).

¹¹²Nuttall, "Journal of Travels," 113-114.

¹¹³Coman, *Economic Beginnings of the Far West*, 1:82, 87-88.

When Louisiana was purchased in 1803, Jefferson at once tried to familiarize the American people with the possibilities of the new acquisition. At his suggestion a pamphlet describing the resources of the country was printed and circulated. In this publication the rare possibilities of the Red River Valley for stock raising were set forth. The travels of Henry Marie Brackenridge through the lower Mississippi and Red River country in 1811 called further attention to the old French Southwest as a favorable region for colonization. As a stock country, he declared, "it was highly favorable to the multiplication of flocks and herds."¹¹⁴ When the Florida purchase from Spain gave the United States possession of the Gulf coast from Pensacola to New Orleans the tide of emigrants from the South Atlantic States began to flow in.

As early as 1810, Virginia and North Carolina settlers had reached northern Mississippi via the Cumberland and Tennessee rivers, and the next decade saw population moving down the Mobile River toward the Gulf.¹¹⁵ American colonization of the Gulf region was precisely the same as the occupation of the Old Northwest, except that the pioneers came from the Carolinas and Georgia instead of western Virginia, Pennsylvania, and New York. In the valleys of the rivers flowing into the Gulf were thick canebrakes and the pods of the sugar tree, sweet and nutritious as those of the pea, and even the "very atmosphere seems fattening to the cattle."¹¹⁶

THE PLANTERS FORCE OUT THE PIONEERS

The first settlers in the southern wilderness were generally persons to whom hardihood and adventure had become confirmed habit, and who chose to depend on hunting more than tillage for a livelihood. Therefore, they kept somewhat in advance of the settlers who intended to establish a permanent residence. These pioneers removed from place to place with their cattle, horses, and hogs, confining themselves to one spot only so long as the range afforded good pasturage. When the canes were fed down or destroyed, and the acorns became scarce, the small cornfield and the rude cabin were abandoned, and the squatter retreated farther toward the west.

The rich lands of Alabama and Mississippi seemed a veritable stock raiser's paradise to those who first beheld the country.¹¹⁷ Anxious to exploit the region, the Southern planters, came with their slaves and livestock, moving in like caravans.¹¹⁸ The more enterprising frontiersmen pushed on, especially toward the Red and the Arkansas rivers; others retreated to the pine hills and barrens, where a "poor white" class developed.

In Missouri the currents of migration from North and South met, giving the State a peculiar double character, half northern, half southern. Agriculture was partly free farming and partly an endeavor on the part of rich Southern planters to adapt the plantation system to an almost northern latitude.

¹¹⁴H. M. Brackenridge, "Journey of a Voyage up the River Missouri Performed by Eighteen Hundred and Eleven (ed. 2, Baltimore, 1816)," in Thwaites, *Early Western Travels*, 6:161.

¹¹⁵McMaster, *History of the People of the United States*, 4:523.

¹¹⁶Evans, "A Pedestrious Tour," 300.

¹¹⁷Long, "Account of an Expedition from Pittsburgh to the Rocky Mountains," in Thwaites, *Early Western Travels*, 17:32; Nuttall, "Journal of Travels," 216.

¹¹⁸Flint, *History and Geography of the Mississippi Valley*, 184, 186-188; Susan Dabney Smedes, *Memorials of a Southern Planter*, 47-64 (Baltimore, 1887).

COTTON DOMINANT IN THE NEW SOUTH

The establishment of the plantation system in the Gulf region and the enormous development of cotton growing there, destroyed the homogeneity which had formerly characterized the New West as a whole. By 1830, as Turner indicated, the "industrial differentiation between the northern and southern portions of the Mississippi valley had become clearly marked. The Northwest was changing to a land of farmers and town-builders, anxious for a market for their grain and cattle; while the Southwest was becoming increasingly a cotton-raising section. . . ." ¹¹⁹

So lucrative was cotton that it shaped the whole Southern economy. The large planters preferred to buy stock and feed in Ohio, Illinois, and Indiana, rather than compete in stock growing. The opening, about 1830, of a Southern market for the agricultural surplus and livestock of the Old Northwest was a godsend. ¹²⁰

Even South Carolina, whose Piedmont was once the land of cowpens, failed to produce enough livestock for her own needs. Robert Mills wrote in 1826:

There is not a finer grazing country in the world than South Carolina and were attention paid to the raising of cattle, sheep, goats, hogs, horses, mules, &c., this state might supply itself as well as all the West India Islands, &c. with these useful animals; but every other object gives place to cotton. Immense numbers of cattle, hogs, horses, and mules are driven from the western country annually into this state, and sold to advantage. ¹²¹

Here and there a planter might be found who had a flock of sheep, or who took pride in possessing a good-looking herd of cattle, but this was rare, except between Natchez and New Orleans on the west side of the river. ¹²² The Opelousas country, an extensive and fertile prairie about 100 miles from New Orleans, was probably the best cattle country in all the Gulf region. Here great herds of cattle were grazed for the New Orleans market, 12,000 head sometimes being sold in a single year. ¹²³

The Gulf region as a whole was not a first-rate cattle country. It was too marshy and too much infested with insects. Evans, who was a keen observer, recorded his impressions thus: "The cattle in this part of the country are not worth, in the market, more than one fourth of the price of New-England cattle. The cows seldom calve more than once in two years, and they give very little milk. The milk of a Yankee cow will make more butter than ten of them." ¹²⁴ He continued: "The beef in the [New Orleans] market is very inferior. Owing to the climate or bad management, the cattle, although large and elegant, are poor. . . . Turkeys are from four to six dollars apiece, fowls one dollar each, beef about twenty cents, and butter seventy-five cents per pound." ¹²⁵

¹¹⁹Turner, "The Colonization of the West," *American Historical Review*, 11:305.

¹²⁰*Ibid.*, 322-323; Johnson, *History of Domestic and Foreign Commerce*, 1:215.

¹²¹Robert Mills, *Statistics of South Carolina*, 155 (Charleston, 1826).

¹²²Cuming, "Sketches of a Tour," 324-338.

¹²³Nuttall, "Journal of Travels," 311.

¹²⁴Evans, "A Pedestrious Tour," 330.

¹²⁵*Ibid.*, 341.

Chapter 7

THE SPANISH SOUTHWEST AND CALIFORNIA

SPANISH OCCUPATION OF SOUTHWEST

The history of the formation of the United States is the history of the westward expansion of the Thirteen Colonies from the Atlantic seaboard, first to the head of tidewater, then to the roots of the mountains, then over the Alleghenies to the Mississippi River, and finally across the Great Plains to the Pacific Ocean.

The middle region of the Great Plains, between the Missouri and the Rocky Mountains, was the last conquest of American civilization. Before that was accomplished, a flank movement of American colonization towards the Spanish Southwest extended American occupation over Texas, Arizona, New Mexico, and California. Although this vast area was new to the United States, together with Spanish Florida it was the region of oldest European occupation in North America.

The conquest of Mexico by Hernando Cortez in 1519-1521 laid the foundations of Spanish domination in the Southwest. Columbus, on his second voyage, had brought sheep, cattle, and horses to stock Hispaniola in the West Indies, and from this island the Spanish settlements in Mexico drew their first supply of livestock. Cortez brought much stock directly from Spain, notably horses and sheep, the latter being certainly Merinos. This laid the foundation of stock raising and sheep husbandry in New Spain. Woolen cloth was manufactured in Mexico as early as 1560. These imported Spanish horses, cattle, and sheep were the progenitors of the immense herds and flocks which later dotted the plains of Texas, Arizona, New Mexico, and California.

Before the end of the seventeenth century, adventurous Spanish explorers had carried the flag of Castile across Old Mexico to the Pacific, and northward across the Rio Grande into the present territory of Texas, Arizona, New Mexico, and Utah. In the years 1540-1542, Francisco Vasquez de Coronado, who was sent out by the Spanish Viceroy, Antonio de Mendoza, in search of the fabled Seven Cities of Cibola, reached Zuñi, discovered the Moqui Cañon of the Colorado River, and after wintering at Zuñi, again struck out in the spring of 1541, first toward the southeast and then north along the one hundredth parallel to a point as far as the present Dodge City in Kansas, returning home to Mexico across Oklahoma, New Mexico, and Arizona.

In this stupendous expedition Coronado carried with him 1,000 horses, 500 cows, and 5,000 sheep.¹ Some of these were captured by Indians, some escaped, and in this wise the wild horses and wild cattle, in course of time, commingled with the huge herds of buffalo and antelope upon the plains. It is hard to say which astonished the

¹Pedro de Castañeda, "Account of the Expedition to Cibola," edited by Frederick W. Hodge in *Spanish Explorers in the Southern United States, 1528-1543*, p. 382 (New York, 1907).

Spaniards more, these teeming herds or the vast extent of level plain.² In 1598, Juan de Oñate ascended the Rio Grande, which he crossed at El Paso, and 7 years afterwards made his way across New Mexico and Arizona to the head of the Gulf of California, whence he returned to Old Mexico. The vast herds of bison which Oñate saw on these expeditions proved the possibilities of the region as a cattle country.³

Stock raising was already well established in Old Mexico, where the ranches of Rodrigo del Rio, Salvago, and Jeronimo Lopez were famous. At first the idea was entertained of domesticating the buffalo, and various attempts were made to manufacture cloth out of buffalo hair. The difficulty of corralling, to say nothing of taming, the buffalo, was too great for the experiment to succeed.⁴

The hostility of the Indians long impeded the extension of Spanish domination north of the Rio Grande. Juan de Oñate's expedition is the true beginning of the history of New Mexico, the first province established north of the Rio Grande. His contract with the Viceroy bound him to take into New Mexico "two hundred soldiers, and a sufficiency of provisions for the first year's support of the colony; with abundance of horses, black cattle, sheep, etc., as also merchandise, agricultural utensils, tools and materials for mechanics' purposes. . . ." ⁵ Seven thousand cattle, besides horses and sheep, were taken with the expedition.

Adversity overtook this colony after Oñate left it, and it required long and arduous labor to put the settlement upon its feet. The great pueblo revolt of 1680 seemed the ruination, at first, of all Spanish power beyond the river.⁶ However, in 1693, Santa Fe was refounded, and was followed by the establishment of Santa Cruz de la Canada in 1695 and Albuquerque in 1706.

DEPENDENCE OF MISSIONS ON LIVESTOCK

In the eighteenth century, the mission stations, ranches, and presidios multiplied rapidly in New Mexico and spread into Arizona, where a mission had been begun at Tucson in 1700.⁷ Below the Pecos River, that is to say in Texas, progress was slower, the principal difficulty being Indian hostility.⁸ The Indian wars that followed this expansion beyond the lower Rio Grande need not be considered here. It is important to observe, however, that the movement was a combined military conquest, missionary occupation, and agricultural, or rather cattle-raising, colonization. The Indian inhabitants of the region, the Tejas (whence the word Texas), unlike the Apaches and Comanches, were a semiagricultural people, and easily conquered. Soon seven mission stations were established in Texas between the Trinidad and the Red rivers, and one, San Antonio, on the river of that name.

² *Ibid.*, 336, 382.

³ Don Juan de Oñate, "Letter Written by Don Juan de Oñate from New Mexico to the Viceroy, the Count of Monterey (1599)," in Herbert Eugene Bolton, ed., *Spanish Exploration in the Southwest, 1542-1706*, p. 219 (New York, 1916).

⁴ Don Juan de Oñate, "Account of the Discovery of the Buffalo (1599)," *ibid.*, 227-228.

⁵ Josiah Gregg, *Commerce of the Prairies*, 1:260 (Philadelphia, 1850).

⁶ Anne E. Hughes, *The Beginnings of Spanish Settlement in the El Paso District*, 295-301 (Berkeley, 1914).

⁷ Eusebio Francisco Kino, "Report and Relation of the New Conversions (1710)," in Bolton, *Spanish Exploration in the Southwest*, 444, 458.

⁸ Cf. Herbert E. Bolton, "The Spanish Occupation of Texas, 1519-1690," *Southwestern Historical Quarterly*, 16:1-17 (July 1912).

The war in Europe between Spain and France in the first quarter of the eighteenth century also was extended to America, and the missions were devastated in 1719-21 by the French and Indians from Louisiana. When peace was made, colonization of Texas was renewed, and before many years the number of cattle, horses, sheep, and hogs around the missions exceeded computation, in spite of the Indian raids. Time and again both mission stations and ranches were attacked and their cattle driven off. The missions, in consequence, had to be well fortified, and served half as houses of God, half as fortresses against the Indians. As for the rancheros, they lived in feudal isolation on the prairies in palisaded and stockaded rancherías—an agglomeration of dwelling house, stables, outbuildings, penthouses, and cattle pens—while their stock ranged the country for leagues around, each owner having marked his livestock with a distinguishing brand.⁹

The Spanish frontier was expanded and the Spanish occupation secured by the soldier, the rancher, the miner, and the missionary. In the mountainous regions, mining outdistanced stock raising. On the plains stock raising was the main, almost the only, industry. Of these four forms of activity the most important and the most typical was the mission. The Spanish mission, whether Franciscan or Jesuit, was the primary agent in the conquest of the Southwest. As a stock-raising center a mission was far more important than any or all the ranches roundabout it.

What the French forts in the Ohio country and Louisiana, with their small colonies of habitants and endless stream of trappers and fur traders, were to France in North America; what the advancing line of backwoods farmers, with their axes and their rifles, was to the English colonies in subduing the wilderness and conquering a continent, that the Spanish mission was to Spain in the Southwest and California. The mission was the pioneering agency of Spain in America.¹⁰ At the height of Spain's domination, about 1800, there were 21 missions in California, as many in Texas, and more in New Mexico.

Lacking Spaniards to settle her possessions, Spain was able to colonize the aborigines. The Indians of the Southwest—barring the Apaches and Comanches—were already a semiagricultural people, as the Pueblos, for example, and the missionaries could build upon and develop the native economy, which it was impossible to do with the fierce Algonquin tribes of the English and French parts of America.

Professor Herbert E. Bolton has well described the worth and work of the Spanish mission:

Each fully developed mission was a great industrial school, of which the largest, as in California, sometimes managed more than 2,000 Indians. There were weaving rooms, blacksmith shop, tannery, wine-press and warehouses; there were irrigating ditches, vegetable gardens, and grain fields; and on the ranges roamed thousands of horses, cattle, sheep, and goats. Training in the care of fields and stock not only made the neophytes self-supporting, but afforded the discipline necessary for the rudiments of civilized life. The women were taught to cook, sew, spin, and weave; the men to fell the forest, build, run the forge, tan leather, make ditches, tend cattle and shear sheep.¹¹

⁹Herbert E. Bolton, "The Mission as a Frontier Institution in the Spanish-American Colonies," *American Historical Review*, 23:51-52 (October 1917).

¹⁰*Ibid.*, 42-61.

¹¹*Ibid.*, 57.

An official report of 1762 shows that the four Querétaran missions in Texas possessed 4,897 head of cattle, 12,000 sheep and goats, and about 1,600 horses, besides a considerable number of working oxen. At the same time the four missions in California had 2,262 head of cattle and 4,000 sheep and goats.¹²

SHEEP RAISING IN NEW MEXICO

The population of New Mexico was almost wholly confined to a few towns like Santa Fe and Taos, the suburbs of which were generally farms. However, in the course of the long Spanish occupation many of the individual ranchos and haciendas had grown into villages, a result of the indispensable necessity of protection against the Indians.

The principal settlements were located in the valley of the Rio Grande, extending from nearly 100 miles north to about 140 miles south of Santa Fe. Those down the river were much the most prosperous. The necessity of irrigation confined agriculture to the valleys, and the owners of cattle near the settlements were obliged to employ herdsmen to protect the crops. The high tablelands afforded the finest grazing in the world, which, for want of water, were useless for any other purpose. However, the scanty moisture was sufficient for a highly nutritious grass called grama, which was very short and curly. From August to October, this pasturage was in its prime, and, being rarely nipped by the frost until the rains were over, cured upon the ground and made excellent hay. On this natural hay, in spite of the rigorous winters, all stock in New Mexico generally managed to maintain themselves in good condition until spring.

No form of animal husbandry was more systematically attended to in New Mexico than sheep raising. When the territory was at the zenith of its prosperity, ranchos were to be found on the borders of every stream and near every mountain where water and pasture might be procurable. Even upon the arid plains immense flocks were to be seen, which were only taken to water once in every two or three days. These sheep were herded at nightfall wherever they happened to be, circled quietly around the shepherds' fire, and watched by big dogs. There were extensive proprietors who had ranchos scattered over half the province and possessed half a million sheep. The custom sometimes was to farm out the ewes to the rancheros who made a return of 20 percent upon the stock in *carneros*, a term applied to sheep fit for marketing, especially wethers.

Sheep were the staple production of New Mexico under the Spanish regime. About 200,000 head were annually driven to the southern markets, and it is said that in one year as many as 500,000 were exported. This trade was a profitable business for the wealthier New Mexicans, who would buy sheep from the poor rancheros at from 50 to 75 cents a head, and sell them at from 100 to 200 percent profit.

A large quantity of inferior wool was produced in New Mexico and exported to Chihuahua, which was the only commercial outlet. Every autumn a caravan set out from Santa Fe and crossed the Rio Grande at El Paso with a great flock of sheep. The sheep of New Mexico were exceedingly small, with very coarse wool. As mutton, however, they were excellent, owing probably to the excellence of their pasturage. New Mexico depended

¹² *Ibid.*, 59; Katharine Coman, *Economic Beginnings of the Far West*, 1:104-105 (New York, 1912).

as much on sheep for food as the West and South did on hogs. Pork was seldom met with in the Spanish Southwest. Milch cows were rare, but goat's milk was to be had in abundance. Goat flesh was cheaper than mutton and much eaten by the poorest classes.¹³

The Indians also were an important factor in New Mexican stock raising. They had little use either for wool or mutton, as the buffalo of the plains furnished them with both meat and skins, but they would drive off horses on every occasion. The Apaches and Comanches chiefly relied for food on the ranchos and haciendas of Old and New Mexico, especially the former, as New Mexico was more remote from their haunts. They were particularly fond of mule meat; cattle and sheep might remain untaken, for there was a plethora of these animals, but never too many mules.¹⁴

There are few reliable statistics of livestock for the missions in New Mexico, and none for the ranchos belonging to the Spanish proprietors, which, scattered from Taos to El Paso, were less able to protect themselves than the fortified mission stations, and were left to their own enterprise by the garrison at Santa Fe.¹⁵

Texas, New Mexico, and the lower part of Arizona, which the Spaniards called Upper Pimeria, formed the dominion of Spain in what is now our Southwest. Spain had one more possession which is now included within the limits of the United States—California, or Alta (Upper) California, to distinguish it from peninsular California.

CALIFORNIA, A STOCKMAN'S PARADISE

California was first settled by sea from the west coast of Old Mexico, where the exploring companies were outfitted at Culiacán and Mazatlan.¹⁶ The overland route through Arizona, via the Gila River, was very late in being opened, although the Jesuits had discovered the practicability of such a road as early as 1687, and it was California's greatest need. California found it difficult to depend upon the Pacific ports in Old Mexico, or the peninsula, for stock. Shipping was insufficient; the animals could not well stand the long and rough sea voyage; and the sterility of Lower California made it impossible to drive stock up from Cape San Lucas.

The first Spanish settlements in California were the presidios at San Diego, (1769) and Monterey (1770), and the mission stations at Monterey (1770) and San Diego and San Gabriel (1771). The first animals were brought from Lower California. In 1769, Fernando de Rivera drove 200 head of cattle and nearly the same number of horses and mules northward through Sonora along the coast of the Gulf of California, enough of these animals surviving the difficult northward march to give hope for the future from their natural increase.¹⁷

These first California missions had been founded by the Jesuits. When that order fell, in the interim before the Franciscans succeeded them, the California

¹³Gregg, *Commerce of the Prairies*, 1:161, 187-191.

¹⁴*Ibid.*, 290, 298.

¹⁵Hubert Howe Bancroft, *History of Arizona and New Mexico, 1530-1888*, p. 276 (San Francisco, 1889).

¹⁶Antonio de La Ascensión, "A Brief Report of the Discovery in the South Sea (1602-1603)," in Bolton, *Spanish Exploration in the Southwest*, 127.

¹⁷Charles Edward Chapman, *The Founding of Spanish California*, 102 (New York, 1916).

missions had a serious set-back. The memorial of Father Serra, dated March 13, 1773, shows this condition of depression:

All the missions were in very great need of mules, especially the inland missions. . . . Above all, asses and mares should be sent, for procreation of more mules, or the province would never be free from trouble because of its lack of pack-animals. Cows destined for the proposed San Francisco and Santa Clara missions should in the meantime be kept at the existing missions rather than at the presidios, so that there might be milk for the Christian converts, the only aliment that the missionaries had been able . . . to give them.¹⁸

Every stockman knows how rapidly stock will increase under favorable conditions, and Spanish California was a peculiarly favored country, both in climate and in the pacific nature of the Indians. It was not long before the stock at the Franciscan missions showed rapid progress. In 1774, the total number of cattle had increased from 205 to 304; horses and mares from 67 to 100; mules from 77 to 85; sheep from 94 to 170; goats from 67 to 95; hogs from 102 to 130. In the next year, 1775, the census showed 447 cows, 191 sheep, 145 goats, 68 horses, 60 mares, and 98 mules, but only 131 hogs, indicating that many hogs must have been eaten.

Thereafter the livestock at the California missions increased in a manner almost to stagger computation. Travelers noted the herds of horses and cattle on the hills about the Bay of San Francisco and marveled at their fecundity and the slight cost of raising them. The Indians made excellent herders, and the 15 head of cattle brought from Santa Clara in 1778 had multiplied a hundredfold in the 15-year interval. In 1806, the herds of San Francisco had become so numerous that the governor ordered 20,000 killed to save the pastures.¹⁹

The years between 1790 and 1820, before the effects of the secession of Mexico from Spain in 1821 began to injure their prosperity, were the palmy days of the California missions. In 1784, the 9 missions had 5,000 horses, mules, and cattle, and 4,294 goats and sheep. In 1790, the number of missions had increased to 11, owning 72,000 head of horses, mules, and horned cattle, and 26,000 head of sheep, goats, and hogs. In 1800, there were 18 missions possessing, in round numbers— for accurate computation was impossible—67,000 head of large livestock and 86,000 head of sheep.²⁰ The royal ranchos at this time had only 18,000 head.

The wealth of the missions, according to Katharine Coman, reached its climax in 1833. The livestock was estimated as including 424,000 cattle, 62,500 horses and mules, and 321,500 sheep, together with a few hogs and goats. Assuming that one-fourth the herd was killed each year, and that the value of hide and tallow averaged \$5 to \$6 per animal, the sales from the missions' herds alone must have brought in between \$500,000 and \$600,000 in the year 1833.²¹ These figures are all the more amazing when it is remembered that in the terrible drought of 1828-30, which lasted 22 months, thousands of cattle and horses died or were killed.

¹⁸*Ibid.*, 120-121.

¹⁹Hubert Howe Bancroft, *California Pastoral, 1769-1848*, p. 346-347 (San Francisco, 1888); Coman, *Economic Beginnings of the Far West*, 1:152, 386.

²⁰Chapman, *The Founding of Spanish California*, 427. Cf. Hubert Howe Bancroft, *History of the North Mexican States and Texas*, 1:749 (San Francisco, 1884).

²¹Coman, *Economic Beginnings of the Far West*, 1:175; Bancroft, *California Pastoral*, 339. For a detailed statistical study of the livestock of the California missions before and after secularization, see Hubert Howe Bancroft, *History of California*, v. 1-3 *passim* (San Francisco, 1884-1885).

Though far the richest, the mission ranches were not the only ones in California. There were also the *ranchos del rey*, those belonging to the king, and the ranches that were owned by private persons.²² These proprietors lived like feudal barons of the Middle Ages, with hundreds of servants and retainers, and numbered their stock by thousands and their lands by square leagues. A ranch of only 4 or 5 leagues square was considered small. General Vallejo nominally owned 146,000 acres, a tract over 30 leagues square; he had from 12,000 to 15,000 horned cattle, 7,000 to 8,000 horses, and from 2,000 to 3,000 sheep.²³ Some men had several ranches in different parts of the country.

This, however, was just before the collapse of the missions. In the palmy days of the last decade of the eighteenth century and the first decades of the nineteenth, there were few private ranches of great extent. The missionaries looked with hostility upon private ranches and even those of the crown.²⁴ Settlers who lived in towns or pueblos were not allowed to possess more than 50 head of horned cattle or horses, and the private ranch owners had no large herds before 1800. One had to own at least 150 head of stock to be entitled to the use of a brand.²⁵

When a California rancher wanted to slaughter cattle, he sent six men out on horseback, armed with long knives. The animal was stabbed in the cervical vertebra, as in a bullfight. A man following cut its throat and bled it, after whom came the skinners (*peladores*), succeeded in turn by a squad of butchers who cut off the prime parts of the flesh. Lastly came a swarm of Indian women who gathered the tallow up in leathern bags.²⁶ The residue of the carcass was left for the coyotes. Tallow was sewed up in hides in parcels of 500 pounds weight, called *botas*. Each mission had a weekly rodeo or round-up, when enough cattle and other stock were killed to suffice for a week. From 20 to 30 head would thus be slaughtered weekly. Each mission had a separate corral for horses, cattle, and sheep.²⁷

The rapid progress of events early in the nineteenth century was destined profoundly to change the political and economic conditions in the Spanish Southwest. The Mexican Revolution in 1821, when Mexico threw off the yoke of Spain, was not the most important of these events. Far weightier was the influence of developments in the United States, beginning with the purchase of Louisiana in 1803 and culminating in the Mexican War of 1846.

MANIFEST DESTINY

The Louisiana Purchase enormously stimulated the feeling of manifest destiny in the hearts of the American people. More than ever they believed that the United States was fated by history to control the North American Continent, a feeling that was

²²*Ibid.*, 1:682-683; 2:546.

²³Bancroft, *California Pastoral*, 348, 351.

²⁴Bancroft, *History of California*, 1:717; 2:171-173, 353-354, 414, 565-566, 592-594, 614-615, 621, 661-665; 3:633-634, 676-677, 711-713.

²⁵*Ibid.*, 1:622.

²⁶Bancroft, *California Pastoral*, 340, 344.

²⁷*Ibid.*, 341.

powerfully stimulated by the steady westward drift of the American people down the Ohio and the Cumberland, across the Mississippi, and up the Missouri, Arkansas, and Red rivers, in the early decades of the nineteenth century. Certain other factors also encouraged this feeling, such as Aaron Burr's dream of creating a great state in the Southwest, and the acquisition of Florida from Spain in 1819.

If the United States could acquire Spanish Florida, why should she not hope to acquire Spanish Texas as well, it was asked? The chaotic condition of Texas under Mexican sway invited occupation. The settlers in the Valley of the Red River soon looked with longing eyes upon the broad and rich pastures of Texas. Spain had never been able to colonize the country, save with a few scattered mission-farms and ranches, and the new Mexican Government was no more successful. Nevertheless, the Mexican Government jealously resented any occupation by aliens. The fate of Philip Nolan was meant to deter other adventurous persons who might seek to emulate him.²⁸

It was impossible that the eager, westward-pressing American people, who had mastered the territory between the Alleghenies and the Mississippi, and were already far up the western tributaries of that river, could with equanimity see so rich a land as Texas given over to wild Apaches and Comanches. By 1830, the white population in Texas had shrunk to 3,500 persons huddled around the only two remaining presidios at San Antonio and Bahia de Espiritu Santo; all the ranches and missions in the valleys of the Sabine, the Trinity, the Brazos, and the Colorado rivers had lapsed into a state of barbarism.²⁹

The first American to break into this abandoned paradise was Captain Zebulon Montgomery Pike, a United States Army officer sent out by the Federal Government in 1806-1807 on an exploring expedition to determine the disputed southwestern boundary of the recent Louisiana Purchase. The discoverer of Pike's Peak either unwittingly or deliberately trespassed upon Spanish territory in Colorado and was arrested and taken to Santa Fe. After tedious delay Pike was released and returned home, bringing with him a great deal of specific knowledge pertaining to the country. Pike's journal, which was soon published, marks an epoch in the history of American westward expansion.

The official delimitation of the frontier between American and Spanish territory, made in 1819, was the earliest positive forward step. The line was run from Pike's Peak eastward along the upper Arkansas River to longitude 100°, thence south to the Red River, and down that river and the Sabine to the Gulf.

Two years later, the revolt of Mexico from Spain, whose power in the New World collapsed, further opened the territory of Texas to American occupation. The broadening process was particularly manifested in two events: The establishment of a colony of American farmers and ranchers by Moses Austin in 1821, and the opening of trade intercourse between Missouri and Santa Fe over the famous Santa Fe Trail in 1824.

²⁸Edward Everett Hale, "The Real Philip Nolan," *Mississippi Historical Society, Publications*, 4:281-329 (Oxford, Miss., 1901).

²⁹Coman, *Economic Beginnings of the Far West*, 1:117.

THE SANTA FE TRAIL

The Santa Fe Trail was the American trading route, over which were carried the manufactured products of the United States, such as hardware, cutlery, and cotton goods, to the Spanish and Spanish-Indian population in the Southwest who were still living in almost primeval simplicity.³⁰ The road ran from Independence, Missouri, through Fort Dodge to Santa Fe; later another branch was opened from Van Buren, on the Arkansas River, to Santa Fe. These caravans brought back from New Mexico raw products, such as hides, leather, and wool, besides droves of mules, cattle, and sheep. Before the importation of jacks into Missouri and Arkansas these areas relied almost wholly upon New Mexico for mules.³¹

When the Santa Fe Trail was first opened about 1824, horses were chiefly used, as mules were scarce.³² In 1829, Major Riley of the United States Army employed oxen with such success that from that time onward oxen were used quite as much as mules. Oxen could pull heavier loads than mules, especially through muddy or sandy tracts; but they generally fell off more than mules as the prairie grass became drier. Another disadvantage of the ox was the tenderness of his feet. Good oxshoers were few on the plains. Sometimes oxen were shod with moccasins made of raw buffalo hide, which worked well as long as the weather was dry, but soon wore out if they became wet with rain, or, what was more usual, in fording streams. Most mules, on the other hand, traveled the whole distance from Missouri to New Mexico without being shod at all.

All stock was tethered at night when camp was pitched; a place with good pasturage was always selected. If the animals were allowed to range, not only was there danger of their roaming too far and possibly being taken up by marauding bands of Indians, but the animals in wandering from point to point, picked the tenderest herbage, whereas if tethered, they clipped the whole pasturage within their compass clean and got more to eat.³³

It was soon found that stock brought overland from New Mexico to the States fared better by traveling the southern road to Van Buren instead of to Independence, so that the former was left to the trade caravans and the latter became the regular route for driving stock. The reason for the adoption of the Van Buren-Santa Fe road instead of the old trail was twofold: It was considerably shorter and less intersected with streams, there were fewer sandy stretches, and the grass sprang up nearly a month earlier than on the northern trail; the more southern climate of Arkansas was favorable to the stock which was brought from the Southwest, whereas the more rigorous winters of Missouri often proved fatal to unacclimated Mexican animals.³⁴

The comings and goings of these great caravans naturally enlarged the information of the people in the American West regarding the resources and nature of Texas. They learned that cattle, hogs, horses, and mules could be raised with an absence of trouble

³⁰Gregg, *Commerce of the Prairies*, *passim*; Charles M. Harvey, "The Story of the Santa Fe Trail," *Atlantic Monthly*, 104:774-785 (December 1909); Frederic Logan Paxson, *The Last American Frontier*, 53-69 (New York, 1910); Coman, *Economic Beginnings of the Far West*, 2:75-93.

³¹Gregg, *Commerce of the Prairies*, 1:307; 2:138.

³²*Ibid.*, 1:35.

³³*Ibid.*, 64.

³⁴*Ibid.*, 2:155-156.

and expense that was almost incredible. For horses and cattle the prairie grasses and the canebrakes offered a never-failing supply of fodder, and the mast of the woods, with the native pea, afforded free subsistence for hogs. Livestock could be introduced from the United States, bought in the country, or procured cheaply from the Mexicans on the Rio Grande. The increase of stock was more rapid, or at least so reputed, than in a colder country, and, allowing for all casualties, generally doubled in 2 years. Cows sometimes calved when a year and a half old, and a pair of hogs increased to 40 in a year. Cattle, horses, and mules could be driven to Natchez and New Orleans at a trifling cost, and, in addition, there was a ready market in Cuba and the West Indies. As a sheep-raising country, western Texas and New Mexico were nearly ideal.³⁵

The possibilities of Texas as a farming and ranching country were first fully perceived by the American, Moses Austin, a native of Connecticut who had long lived in the West. After much negotiation with the Mexican Government, he at last obtained permission to establish a colony in Texas. By 1828, his colony had increased to 20,000 persons, who were chiefly occupied in stock raising, which was profitable in spite of the blackmailing practices of the Mexican soldiery and the raids of the Indians. Austin was content with the black Spanish cattle which he found in Texas, but the inferiority of Mexican sheep was such that early in the history of the settlement, he introduced American sheep, a great flock of which was driven overland with success along the Santa Fe Trail.³⁶

"TEXAS FEVER"

It was not many years before American immigration into Texas became a rush. The "Texas fever" seized the people of Missouri, Kentucky, Illinois, and especially of the Gulf States, exactly as the "Ohio fever" had prevailed earlier.³⁷ The great inrush of American settlers began to alarm the Mexican Government.

It is not necessary to go into the history of the revolt of Texas in 1835 and the establishment of the Republic of Texas, whose territory was finally annexed by the United States as the result of the Mexican War. It may be noticed in passing that some of the grievances of the people of Texas concerned them as stock raisers. One of these was the way in which the soldiery of the presidios took cattle, sheep, and mules when they wanted them without payment; another was the lack of protection given the settlers and their stock from Indian raids.

Again, the laws and customs of the Spanish Southwest with reference to ownership of cattle, were very annoying to the first Americans who colonized Texas. No matter how many owners a horse or mule might have had, every new possessor marked it with his own particular brand, which was called a *fierro*, and again, upon selling it, a sale brand or *venta* had to be affixed, so that an animal was often disfigured with a multiplicity of such scars. To make matters more complicated, one unskilled in this

³⁵William Kennedy, *Texas: Its Geography, Natural History, and Topography*, 79 (New York, 1844).

³⁶*Ibid.*, 81.

³⁷Cf. Ulrich B. Phillips, ed., *Plantation and Frontier, 1649-1863*, 2:253-254 (Cleveland, 1910).

species of animal heraldry was often liable to be imposed on. If the horse he purchased failed to have sales marks corresponding to ownership marks, less one, it might be seized as "unvented." Again, unscrupulous persons frequently surreptitiously put a new *venta* upon an animal, and then attached their own brand, which was proof of their ownership in a Spanish court.³⁸

With the Treaty of Guadalupe Hidalgo, in 1848, the Spanish Southwest became permanently American and the El Dorado of the stock raiser. There rushed in a roaring flood of people, most of them bent upon farming and stock raising. The temporary damming of the stream by the war was succeeded by a tide of emigration from the States, the like of which had not been known before.³⁹ The annexation included California, a political acquisition which the gold rush of '49 confirmed into actual occupation by the American people.

THE CALIFORNIA HIDE AND TALLOW TRADE

Until the discovery of gold, California had been wholly a stock-raising country, and a very great one. At about the time of the Mexican Revolution, the friars and the rancheros of California found a market for the hides and tallow of their large herds of cattle and some outlet for their wool. The Massachusetts whaling ships, which had led the way into the Pacific, were soon followed by New England trading ships, whose owners discovered that Boston leather merchants and shoe manufacturers were eager to obtain cheap hides from California. These ships, in addition, carried California horses to the sugar plantations in Hawaii exactly as, in colonial times, New England ships had plied a profitable trade in horses with the sugar planters in the West Indies.⁴⁰

The hide and tallow trade remained the staple trade of California. Boston merchants controlled the greater part of this trade, but found competitors in South American and West Indian dealers, whose vessels, called drogers or coasters, also were often seen in California ports.⁴¹ In *Two Years Before the Mast*, Richard Henry Dana, a Boston lawyer and man of letters, who, in his youth, shipped as a seaman on one of the Boston-Pacific trade ships, vividly described the hide and tallow trade of California in 1835-1836. The hides were bought at the uniform rate of \$2 apiece. They were carried to the coast in great lumbering, axle-creaking oxcarts, so primitive that the wheels were merely cross sections of a big tree trunk.⁴²

The California hide trade soon declined, owing to the carelessness of the ranch owners who never took the trouble to do more than sun dry the hides which the vessel master had to transport to San Diego to be cured. In their eagerness to get easy money, the cattle raisers frequently killed their cattle when too young, so that the hides were

³⁸Gregg, *Commerce of the Prairies*, 1:106.

³⁹See the item from the *Houston Democratic Telegraph and Texas Register*, Jan. 27, 1848, printed in Phillips, *Plantation and Frontier*, 2:257; Charles Lyell, *A Second Visit to the United States of North America*, 2:60-62 (London, 1849).

⁴⁰F. W. Beechey, *Narrative of a Voyage to the Pacific*, 332 (Philadelphia, 1832); Conan, *Economic Beginnings of the Far West*, 1:163-164.

⁴¹Bancroft, *History of California*, 2:419-420, 668-669; 3:118-119, 127-128, 132-139, 366-367.

⁴²Richard Henry Dana, Jr., *Two Years Before the Mast*, 98-99 (Boston, 1895).

too small and too thin. The result was that a vessel might have to stay for 18 months to 2 years in California, going from place to place, while the master haggled to get a cargo. The double handling and the delays naturally reduced the profits of the business. Moreover, California had now to compete with the Argentine, whose hides could be laid down on Boston wharfs at less cost than those from California, and which were preferred because they were better cured and would tan better.

SECULARIZATION OF THE MISSIONS

With the independence of Mexico, the California missions began to deteriorate. The friars had governed the Indians with a benevolent despotism, for they were practically in a state of peonage upon the lands of the missions. The friars had not abused the Indians, and their labor, if hard, nevertheless had some compensation in the peace and protection which was given them. The ecclesiastical hand was not so heavy in California as in Mexico. The friars were imbued with a real spirit of missionary effort, albeit it took a somewhat medieval form; they were permanently attached to one mission, and felt the necessity of keeping up the credit of the mission and promoting its material welfare. They paid their debts regularly, and marketed their goods intelligently. The Indians, in their simple way, were attached to the missions.⁴³

The Mexican Revolution was followed by an orgy of spoliation. In 1834, a law of secularization was passed. The original intention of this measure was to distribute one-half of the lands of each mission among the dependent Indians attached to it, the residue being appropriated by the Government. What actually happened, however, was that a horde of Mexican officials—grafters, soldiers of fortune, broken-down politicians—descended upon the rich California missions and stripped them clean for their own enrichment.⁴⁴

One hundred thousand head of cattle were killed in the year in which this law was passed.⁴⁵ The friars, seeing the coming storm, hastily began to kill their cattle in order to realize what they could. When the commissioners arrived they continued the slaughter, selling the hides and tallow for absurdly low prices to get cash. Every one of the 21 missions was thus systematically despoiled.⁴⁶ In 1842, the number of cattle was reduced from hundreds of thousands to 29,020, the horses to 3,820, and the sheep to 31,600.⁴⁷

The principle of secularization is not protested. The economy of the California missions represented a medieval and Old World system which was incompatible with the whole historical spirit and development of the Western Hemisphere. The regime, however, need not have been destroyed in a day, nor the liquidation permitted to enrich a few who had done nothing to create the wealth upon which they seized. Five parties should have

⁴³*Ibid.*, 195.

⁴⁴*Ibid.*, 193-200.

⁴⁵U. S. Bureau of the Census, Tenth Census, 1880, *Agriculture*, 3:75.

⁴⁶Coman, *Economic Beginnings of the Far West*, 1:176 ff.; Theodore F. Hittell, *History of California*, 2:206-211 (San Francisco, 1885); Irving Berdine Richman, *California under Spain and Mexico, 1535-1847*, p. 248-291 (Boston and New York, 1911); Bancroft, *History of California*, 3:348-349.

⁴⁷Bancroft, *California Pastoral*, 339.

been considered in the secularization: The Mexican Government, the Indians, the missionaries, the Mexican-Spanish settlers, and the *paisanos*, or Europeanized incomers, consisting of British, French, and Americans. The Mexican politicians and the *paisanos* managed to obtain most of the benefits.⁴⁸

The rise of the cattle kings of California, whom the United States found the real rulers of the territory when California passed to the United States after the war with Mexico, dates from this famous secularization. The Indians of the missions, whose labors had created the wealth of the missions, got nothing, and the friars were generally dispossessed.⁴⁹

⁴⁸The relative merits of secularization have provoked considerable dispute. Bancroft was an advocate of "California for the Californians," while Father Zephyrin Engelhardt in his monumental 4-volume work, *The Missions and Missionaries of California* (San Francisco, 1908-1916), presented a passionate brief for the missionaries.

⁴⁹Coman, *Economic Beginnings of the Far West, 183-186*; Harris Newmark, *Sixty Years in Southern California, 1852-1913*, p. 166-188 (New York, 1916).

Chapter 8

THE BEGINNINGS OF STOCK RAISING IN OREGON TERRITORY AND UTAH

EARLY AMERICAN ACTIVITIES IN THE PACIFIC NORTHWEST

No event in American history is more fraught with the element of audacity than the annexation of the Pacific slope by the United States in the 1840's. The acquisitions of California and Oregon were practically simultaneous in point of time, but the way in which the separate territories were obtained was very different.

The fall of Spain's power in the Western World, coupled with the weakness of the new Mexican Government in the Spanish Southwest and the indomitable American spirit of expansion and settlement, ultimately brought about the collapse of Mexican rule in Texas, New Mexico, and Arizona, and that collapse naturally carried with it California as well. The territory of the Pacific Northwest, which the United States claimed as part of the Louisiana Purchase, was disputed by Great Britain by right of discovery by Captain Cook in 1778, and subsequent occupation by the Hudson's Bay Company, a British corporation.

Lewis and Clark's expedition into the Far Northwest in 1802-1806 and the activity of the American Fur Company founded by John Jacob Astor in 1808 fortified the United States' claim to Oregon. However, American acquisition of the Oregon Country might have been impossible, had it not been for that singular mixture of New England missionary enthusiasm and the stream of westward migration.

The history of each of these developments is replete with romance, audacity, and enthusiasm. While Marcus Whitman's ride "to save Oregon" has been endowed with a mythical aura and has been magnified out of historical proportion by the transfiguring mists of time, the feat, nevertheless, was a notable one. Quite as remarkable were the hardy pioneers who traversed the Great Plains—in order to settle in Oregon. Nothing in American history is more astounding as a sheer accomplishment than their gigantic trek of 2,000 miles over an intervening area of wilderness as great as the territory of half a dozen of the States of today.

It had never been the policy of the Hudson's Bay Company either to encourage settlement or to promote farming and stock raising in Oregon, but the beginnings of stock raising, are, nevertheless, attached to the history of the company. In course of time, the company was compelled to take care of its old servants by retiring them on nearby farms, where raising cattle was easier and more lucrative than agriculture. In this wise the French Prairie in the Willamette Valley became the earliest seat of stock raising in Oregon.¹ Later, a subsidiary, the Puget Sound Agricultural Company was organized to develop farming on the northern bank of the lower Columbia.

¹Joel Palmer, "Journal of Travels over the Rocky Mountains, to the Mouth of the Columbia River; Made during the Years 1845 and 1846 (Cincinnati, 1847)," in Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 30:180 (32 v., Cleveland, 1904-1907).

In addition, some flocks and herds were necessary for the support of the population attached to the posts, notably Fort Vancouver. This original stock was secured in Spanish California.² Dr. John McLoughlin, the factor of the Hudson's Bay Company, whose name is as inseparably connected with early Oregon history as that of Whitman, wisely labored to make the colony around the fur post self-supporting by encouraging farming and cattle raising. Recognizing the availability of the country for sheep raising, he contracted with a Boston sea captain who had touched the North Pacific coast for trading purposes in 1829, to go to California and bring back a shipload of sheep. Unfortunately, the captain was a better sailor than he was stock breeder. When the consignment arrived, every sheep was found to be a wether.³

The real founders of Oregon stock raising were the missionaries, whose stations were the first actual farms in Oregon, and who had taught the converted Indians to raise and care for considerable numbers of cattle. Live cattle, at this time, were hard to get in Oregon. In 1834, a band of missionaries brought 250 horses and nearly a thousand head of cattle overland from St. Louis—the first large consignment of livestock received in Oregon. But there was need for many more.

This need was filled by the Willamette Cattle Company, formed in 1837, for the purpose of importing live cattle from California for the benefit of the missionary-post communities. Ewing Young, a trapper, and Philip L. Edwards, afterwards a Sacramento lawyer, were the leaders in this company. Taking 16 men with them to help with the cattle, the party reached the mouth of the Columbia in canoes, and then traveled by ship to southern California.

It was not possible to bring a sufficient number of cattle by sea, and the plan was to drive them the whole length of California. The distance was not the greatest difficulty. The Klamath Indians of southern Oregon were notoriously hostile and had already attacked drovers, who had attempted previously to bring cattle through from California.⁴

After tedious negotiations with the Spanish authorities, arrangements were made for the purchase of 700 cattle, at \$3 each, to be delivered at the San José and San Francisco missions. The cattle were wild and the difficulty of driving them up the San Joaquin Valley and across the Sacramento River was very great. In the mountains, the difficulties were even greater. "Mountain succeeded mountain apparently without end, each higher and steeper than the one before, until horses and cattle were well nigh exhausted and the men utterly discouraged."⁵ The Indians continually harassed the party, although fortunately no lives were lost. Finally in October, after nearly 4 months of hardship, some 600 cattle reached the Willamette Valley.

THE WILLAMETTE VALLEY

The Willamette Valley was the heart of the Oregon country and was ideal for stock raising. "Few portions of the globe," wrote Thomas Jefferson Farnham, "in my

²Thomas Jefferson Farnham, "Travels in the Great Western Prairies, the Anahuac and Rocky Mountains, and in the Oregon Country (London, 1843)," *ibid.*, 29:62.

³Hubert Howe Bancroft, *History of the Northwest Coast*, 2:443 (San Francisco, 1884).

⁴Palmer, "Journal of Travels over the Rocky Mountains," 192.

⁵Hubert Howe Bancroft, *History of California*, 4:87 (San Francisco, 1886).

opinion, are to be found so rich in soil, so diversified in surface, or so capable of being rendered the happy abode of an industrious and civilized community. For beauty of scenery and salubrity of climate, it is not surpassed. It is peculiarly adapted for an agricultural and pastoral people. . . ."⁶ Joel Palmer, one of the earliest Oregon pioneers, regarded the country around Whitman's station at Walla Walla as possessing the best grazing land in Oregon. Sheep were rare in Oregon in the early days, but Palmer rightly perceived that "no part of the world is better adapted to the growth of wool than this middle region. . . ."⁷

Word of the possibilities of Oregon reached the East through the reports of missionaries, fur traders, and occasional travelers. The news came just as the Ohio-Missouri westward movement was beginning to ebb. The contiguous territory immediately beyond the Middle Border was unready for settlement owing to Indian occupation. Consequently, there was nothing for the restless pioneers to do but cross the Great Plains. Thus, the famous Oregon Trail came into existence.

THE OREGON TRAIL

In 1838, the Oregon Provisional Emigration Society was formed by a group of easterners to encourage emigration to the Pacific Northwest, and "to make use of all the advantages for stock raising" which the country was reputed to afford.⁸ Four years later, the rush over the Oregon Trail began. In 1842, a handful of 125 immigrants arrived from across the plains; in 1843, there were 875; in 1844, 1,800; and in 1845, 3,000. By the end of 1845, 5,000 Americans had settled in Oregon. "Fifty-four, forty, or fight," the slogan of the Presidential campaign of 1844, was notification to Great Britain that, although the boundary might be disputable, the United States considered the Oregon Country as her own. It was also an appeal to the pioneer spirit of America to secure the empire of the Far Northwest by occupation.

What followed is a remarkable chapter in the history of the natural expansion of a great people. Gathered from all parts of the Middle West and the East, the participants in this historic trek, who had not yet forgotten the frontier traditions of their forefathers, moved over the country with their herds of cattle and sheep to form the basis of agricultural life in the new land.

The promoters of Oregon colonization had foreseen the difficulty of getting cattle from California, and therefore the necessity of the first settlers bringing cattle and sheep over the trail. Whitman had advocated the establishment of a series of post farms from Missouri to the Rockies.⁹ However, the cost of such an arrangement made it prohibitive, and the pioneers had to depend on finding sufficient herbage along the road to support their cattle. They also depended on their own rifles, rather than garrisons, to protect themselves and their stock from the Indians.¹⁰

⁶Farnham, "Travels in the Great Western Prairies," 102.

⁷Palmer, "Journal of Travels over the Rocky Mountains," 237.

⁸Joseph Schafer, *A History of the Pacific Northwest*, 134 (New York and London, 1905).

⁹Katharine Coman, *Economic Beginnings of the Far West*, 2:158 (New York, 1912).

The wagons of these pioneers were drawn by oxen, the men riding horses and driving the cattle. Palmer had 2,000 head of cattle in his company, and on the road fell in with another company which had nearly a thousand.¹¹ An account of the day-to-day experience of one such company of Oregon pioneers is given in the original narrative of Jesse Applegate, entitled "A Day with the Cow Column in 1843."¹² The migrating body, as described in this account, numbered over a thousand persons, with about 120 wagons drawn by six ox teams, averaging six yokes to the team, and "several thousand loose horses and cattle." Some of the emigrants had only their teams, while others had large herds in addition. Those not encumbered, or having but few loose cattle, were attached to the van, or light column; those having more than four or five cows joined the heavy, or cow column.

At night the wagons were formed in a ring, and the cattle permitted to graze in a wide circle around the encampment. Camp was broken every morning at four o'clock. The cattle, which might have strayed as much as 2 miles in the night, were rounded up by the men, while the women prepared breakfast. In about an hour, some 5,000 animals were close up to the camp, and the teamsters were busy selecting their teams and driving them inside the corral of wagons to be yoked.

At 7 o'clock, the start was made. The big, canvas-topped prairie schooners took the trail, one by one, forming a procession from three-quarters to a mile long. Behind them came a band of horses, which scarcely needed attention, as they soon learned docilely to follow the wagons and rarely wandered. Not so the herd of cattle that brought up the rear. It was a task to get them in motion and a greater one to prevent them from wandering off the trail. The stronger cattle took the lead and frequently balked, forbidding the weaker animals to pass them. Nothing save the snake-like whips of the drivers kept the herd together and in motion. Fifteen to 20 miles were made each day.

The long, hard trip was difficult for the oxen, which often went lame. Their feet became dry and feverish, and cracks appeared in the clefts of the hoofs. In these cracks, the rough blades of grass and particles of earth collected, so that their feet finally swelled and festered. The mode of treatment was to wash the feet with strong soap suds, scrape or cut away all the diseased flesh, and then pour boiling pitch or tar upon the sore. If applied early this remedy usually cured. If the heel became worn out, tar was applied and the hoofs singed with a red-hot iron. The forts and trading posts along the Oregon Trail became regular points where lame cattle were disposed of and kept until well, or else killed for beef.¹³

In Wyoming, cattle frequently suffered from thirst, as they would not drink from the hot springs, although some of the waters were palatable to men. Occasionally an unwary ox, unfamiliar with a hot spring, would amuse the company by starting to take a

¹⁰Oxen needed special protection on the prairies, as the Indians had a special prejudice against them, considering them "bad medicine" that injured the buffalo. Maximilian, Prince of Wied, "Travels in the Interior of North America, in the Years 1832, 1833, and 1834 (London, 1843)," in Thwaites, *Early Western Travels*, 23:235.

¹¹Palmer, "Journal of Travels over the Rocky Mountains," 35. Thwaites' preface to this narrative is an admirable introduction to early Oregon history. See also Peter H. Burnett, "Letters," *Oregon Historical Society Quarterly*, 3:398-426 (December 1902); F. G. Young, "The Oregon Trail," *ibid.*, 1:339-370 (December 1900).

¹²Jesse Applegate, "A Day with the Cow Column in 1843," *ibid.*, 371-383.

¹³Palmer, "Journal of Travels over the Rocky Mountains," 49, 86, 222.

drink and immediately begin kicking and bellowing most excitedly. Cattle that had been raised in Illinois or Missouri stood the trip better than those from Indiana and Ohio, as they were accustomed to eating the prairie grass upon which they had to rely during the journey.¹⁴ There was no opportunity for speculation by buying cattle and driving them through to Oregon, as Oregon obtained its supply from California. But nothing was lost in bringing a good number of cattle, as prices were always high. So systematic were the arrangements for crossing the Oregon Trail, that fresh cows were always among the herds so that milk might be available.

Even sheep were driven all the way from Missouri.¹⁵ This venturesome experiment was first undertaken on a large scale by Joseph Watt, one of the sturdiest of the early Oregon pioneers, who went out in 1844. He saw at once the immense possibilities for sheep raising. There were few sheep in the Oregon country at this time; some were owned by the Hudson's Bay Company, and a few had been brought overland in 1844. Having made money during the 3 years of his sojourn in Oregon, Watt started back to Missouri in 1847. His friends and former neighbors ridiculed the idea of driving a great flock of sheep across the plains. Nothing daunted, Watt, who was a natural lover of sheep, got together a flock of several thousand. The long, monotonous trip was made almost without incident until near its termination; at the Snake River Watt nearly lost the whole flock. The sheep had to swim across the river. There was a strong current, and when it seemed as though the entire flock would be swept away, one lusty ram struck out for shore, and happily the others followed his example.¹⁶ The arrival of this flock founded sheep husbandry on an extensive scale in Oregon. In 1856, Watt and others formed the Willamette Woolen Manufacturing Company, the pioneer enterprise of this nature in Oregon.¹⁷

By 1845, it is estimated that there were about 6,000 Americans in Oregon, almost all of them in the Willamette Valley. The settlers soon found a ready market for their surplus in California, where the rush to the gold fields, beginning in 1849, enormously increased the population and taxed the resources of the country. Hard times, however, came within 5 years, when the California rush had begun to diminish, and agriculture and cattle raising were again pursued.

In spite of its unexcelled climate and its immense and rich pasturage, stock raising did not flourish in Oregon for many years. While the discovery of gold and coal in Oregon helped to increase the population, nevertheless the rate of increase was slow. Even in 1870, all of Oregon, Washington, and Idaho had only 130,000 inhabitants. Isolation was the chief cause of this condition; Oregon was too far from the markets.¹⁸ Its real development as a cattle country dates from the 1880's, when the railroads began to reach there.

¹⁴*Ibid.*, 258.

¹⁵The business of driving cattle to Oregon became so important that regular organizations were formed to forward cattle for the settlers. — *Ibid.*, 128, 144.

¹⁶James B. Robertson, "A Pioneer Captain of Industry in Oregon," *Oregon Historical Society Quarterly*, 4:150-167 (June 1903).

¹⁷L. E. Pratt, "The Origin and History of the Willamette Woolen Factory," *ibid.*, 3:248-259 (September 1902).

¹⁸James H. Gilbert, *Trade and Currency in Early Oregon*, 72, 95 (New York, 1907).

THE MORMONS SETTLE UTAH

In the 1840's, most of the territory east of the Mississippi River had long since passed the pioneer stage. This was also true, although in a somewhat lesser degree, of Missouri, Arkansas, and Texas, to the west of the Mississippi. The Middle Border was represented by Iowa, admitted to the Union in 1846, and Wisconsin, admitted in 1848. From there to the Pacific slope, the entire area, extending from the Red River on the south to the Red River of the North, was Indian and buffalo country. It was traversed by the Oregon Trail; by the Santa Fe Trail; after 1849 by the route of the Forty-Niners, which branched from the Oregon Trail just beyond the South Pass in Wyoming; and by the route of the Pony Express, which ran up the Platte River to Cheyenne, and across the Utah and Nevada desert to California. In all this vast combined prairie and desert empire only one substantial white settlement was effected before the Civil War. This was the Mormon colony at Salt Lake.

It must have been the success of the emigration to Oregon which suggested to Brigham Young the practicability of crossing the plains to find asylum for his people. The boldness of the enterprise was magnificent. In addition to the hardships and perils of the plains, Utah was an unknown country. On the other hand, the climate, resources, and natural conditions of Oregon were well known before immigration began.¹⁹

There is no need to trace the origins of the sect of Latter Day Saints, or to do more than refer to their wanderings from central New York to Missouri, thence to Nauvoo in Illinois, and their final resolve, in the spring of 1846, to make the great trek westward. Through the winter of 1845-46 the Mormons disposed of all their houses, farms, and immovable property in Illinois, converting the proceeds into wagons, oxen, horses, and cattle. By June, 16,000 persons, 2,000 wagons, and 30,000 head of stock had been ferried across the Mississippi. The route led across Iowa, then inhabited by the Sac and Fox Indians, to Council Bluffs on the Missouri River. More or less permanent camps were established along the trail for the accomodation of later comers. Two of these settlements or farms included 2 square miles each of fenced land for raising grain and pasturing stock.²⁰

The Missouri crossing at Council Bluffs was the division point on the road. Here, in the bottom lands of the great river, thousands of Mormons were temporarily encamped, and miles of farm land were cultivated. Cattle by the thousands were driven across the Missouri into what are now Monona and Harrison Counties, Iowa, to winter on the rush bottoms, a now extinct species of reed which remained green all winter and was something like the southern cane as forage.

In the spring of 1847, the march across the Great Plains was resumed. The organization was modeled after that of the caravans on the Oregon Trail. The companies

¹⁹The territory comprehended within the present limits of Utah was ceded to the United States in 1848. It had no distinctive name at that time.

²⁰Father De Smet, who saw the Mormons at Council Bluffs, wrote that for "several hundred miles, all the forests along the south side of the river were filled with cattle belonging to the Mormons."—"Oregon Missions and Travels over the Rocky Mountains, in 1845-46 (New York, 1847)," in Thwaites, *Early Western Travels*, 29:371. The history of the temporary Mormon settlements on the Missouri has been written by Clyde B. Aitchison, "The Mormon Settlements in the Missouri Valley," *Oregon Historical Society Quarterly*, 8:276-289 (September 1907).

were divided into separate units, each under a captain, with vedettes thrown out on each side and in advance to keep watch. At night the wagons were drawn into a circle, while the stock pastured around. Stock did not accompany the van, but remained with the other detachments. The first company, consisting of 1,553 persons, 566 wagons, 2,213 head of stock, including 124 horses, 887 cows, 358 sheep, and a few hogs and chickens, reached Salt Lake in the autumn of 1847. The stipulated outfit of each family of five was 1 wagon, 3 yoke of oxen, 2 cows, 2 steers, and 3 sheep, besides such essentials as flour, sugar, bedding, garden seeds, and tools.²¹

Fortunately for the Mormons, the winter of 1847-48 was very mild, and plowing, harrowing, and sowing began early. Enough provisions were left to carry the colony until the first harvest. The beef, which was obtained from the oxen, was very tough, as the animals had hauled wagons all the way from the Missouri River to Salt Lake.

As in the case of early Oregon, the discovery of gold in California was a godsend to the settlers of Utah. The shortest route from the East passed through Salt Lake, and the Mormons sold their produce and stock at enormous profit to the thousands of emigrants madly racing to California. Horses were much more in demand than oxen, as the latter were too slow for the feverish gold hunters. The Mormons bought jaded oxen and horses at one-fifth their cost, often blooded stock which only needed rest.²² A visitor to Salt Lake City in 1850 said that the Mormons had "numerous herds of the finest cattle, droves of excellent sheep, with horses and mules enough to spare. . . ." ²³

²¹Coman, *Economic Beginnings of the Far West*, 2:174.

²²Hubert Howe Bancroft, *History of Utah, 1540-1886*, p. 297 (San Francisco, 1889); Coman, *Economic Beginnings of the Far West*, 2:179-180.

²³William Kelly, *An Excursion to California*, 1:229 (London, 1851).

Chapter 9

STOCK RAISING IN THE UNITED STATES DURING THE MIDDLE ERA,
1830-1860

THE FACTORS AFFECTING AGRICULTURE

By the middle decades of the nineteenth century, the United States had realized its manifest destiny, having bridged the North American Continent from the Atlantic ocean to the Pacific. American history between 1830 and 1860 was fraught with immense and far-reaching changes of both an external and an internal nature. In the former sense, the most important fact—or rather sequence of facts—was territorial expansion and settlement. The westward advance of the frontier was the dominant fact.

In 1819, Florida was acquired from Spain. Between 1820 and 1830, Missouri was carved out of the southeastern part of the old Missouri Territory. In this decade, the westward extension of the frontier proceeded at a relatively moderate rate; the energies of the people were mainly given to filling up the included areas. In the South the removal of the Creeks, the Cherokees, the Choctaws, and the Chickasaws opened western Georgia, the Gulf States, and Arkansas to settlement.

Between 1830 and 1840, the State of Michigan came into being, the remainder of the territory being designated as Wisconsin Territory; Iowa Territory was cut out of Missouri Territory and included part of the present State of Minnesota. Arkansas, with a population that had increased 221 percent, was admitted as a State. In the Northwest the removal of the Sac and Fox Indians from northern Illinois and Wisconsin opened these regions to pioneers. Between 1840 and 1850 Iowa was admitted as a State and the Territory of Minnesota was established; between 1850 and 1860 Kansas and Nebraska were organized as Territories.

Internally these three decades were also characterized by far-reaching, even revolutionary, changes in agriculture. The 10 years between 1830 and 1840 mark the transition from the old order of farming and care of cattle to a new one. The colonial and early national period may be described as one of woodland agriculture, distinguished by extensive farming methods, with old-fashioned techniques and old, familiar kinds of crops.

Westward expansion introduced the highly important factor of free, or at least relatively cheap, land, and plains or prairie agriculture. Simultaneously, there appeared new methods of tillage, a more intensive working of the soil, the use of artificial fertilizers, foreign breeds of cattle, new species of crops, and the invention of new agricultural implements, such as the grain cradle, the mowing machine, and the reaper.¹

¹William Trimble, *Introductory Manual for the Study and Reading of Agrarian History*, 32-37 (Fargo, N. D., 1917); Raymond G. Taylor, *Outlines of American Industrial History*, 49-50 (Manhattan, Kans., 1915); George K. Holmes, "Progress of Agriculture in the United States," U. S. Department of Agriculture, *Yearbook*, 1899, p. 307-334.

Other contributory factors which influenced the agricultural revolution were the rise of agricultural periodicals and farm literature, and the building of railroads, with an enormous development of transportation and markets. The Federal Government also aided by establishing an agricultural division in the Patent Office of the Department of the Interior in 1839, and by enacting the Preemption law of 1841 which guaranteed land titles to settlers. These governmental activities culminated in 1862 in four important events: The establishment of the Department of Agriculture, the founding of the land-grant colleges, the Federal charter of the Union Pacific Railroad, and the Homestead Act.

All these movements or events were modifying or auxiliary factors that conditioned the history of animal husbandry in America. They were lateral forces that had an immense influence. From all these facts and forces one influence in particular, which was of immediate application to the livestock industry, must be differentiated. This was the importation of breeding animals, chiefly cattle, from England.

NEW BREEDS FROM ENGLAND

As has been noted, soon after the Revolution a few Americans had become sensible of the deficiencies of their cattle and had set to work to improve the breeds. It may be well to summarize these earlier efforts, preliminary to a survey of the progress of cattle breeding in the middle of the nineteenth century, when there was a general interest in the movement.

In 1783, three gentlemen of Baltimore, Messrs. Patton, Goff, and Ringold, sent to England for the best cattle obtainable. They could not have had any particular breed in mind, for at that time no distinct breed can be said to have arisen unless it was Bakewell's Longhorns. The Shorthorns were hardly in existence then; for Hubback, the celebrated bull, which was the forebear of the Shorthorns, was only 6 years old in 1783, and the fame of the Devons and Herefords was purely local.

A few animals arrived in Maryland from England in that year, and in 1785 a bull of this importation was taken into Kentucky, followed soon after by another of the same stock. This was the foundation of the famous Patton stock of Maryland, Virginia, and Kentucky. These importations consisted of two kinds of cattle. One stock became known as the "beef breed" and the other as the "milk breed." The former, probably, were early examples of Shorthorns, the latter some of Bakewell's Longhorns. A few Shorthorns were imported into Westchester County, New York, in 1792 and 1796, where they were kept pure for some years but later scattered without leaving any distinct traces.

When the second war with England terminated in 1815, increased attention to stock breeding was to be observed all over the United States. In 1817, the Massachusetts Society for Promoting Agriculture offered a premium of \$100 for the importation of a thoroughbred Shorthorn bull. This resulted in the procuring of a fine animal by Stephen Williams of Northboro, Massachusetts—the first Shorthorn bull imported into the United States—at a cost of about \$1,000.

In 1817, Colonel Lewis Sanders of Kentucky imported 12 English-bred cattle, 6 of which were certainly Shorthorns. The effect of this importation upon stock raising in Kentucky and Ohio was very great. In the same year, Henry Clay, who had recently been

in England, imported 4 Herefords, 2 bulls, and 2 cows, at a cost of \$500. These may have been the first Herefords brought to the United States. For years, Clay's herd of Herefords at Ashland was one of the sights of visitors to Kentucky. However, the popular preference in the Blue Grass Country was Shorthorns, and this does not seem so remarkable if the richness of the pastures and the heritage of Shorthorns from the meadows of the Teeswater are considered.

Other importations of Shorthorns were made to New York in 1816 and 1822, and in 1818 the celebrated Shorthorn bull, Coelebs, and the cow, Flora, were brought to Massachusetts where they founded the famous "Creampots" on the farms of Colonel Samuel Jaques at Somerville, near Boston. Flora was the dam of 14 sons and daughters between 1819 and 1833, whose progeny enriched the stock of that Commonwealth. In 1818 also, Gorham Parsons of Brighton, Massachusetts, imported *Fortunatus*, sometimes called *Holderness*, and another well-known dynasty of cattle was founded in Massachusetts. In the same year, Theodore Lyman of Boston imported a remarkably fine bull which was sent to Maine, and Stephen Williams of Northboro secured the famous Young Denton, the sire of a long line of remarkable milkers. Thereafter importations of high-bred cattle from England became common. William Pierce of Portsmouth, New Hampshire, brought over Nelson and the cow *Symmetry*, the progenitors of the huge ox, *Americus*, whose size was so herculean that he was exhibited around the country and later sent to England as an example of American breeding.

In 1824, J. H. Powel of Pennsylvania began the regular importation of Shorthorns and bred them for years. He may be said to have been the first systematic breeder of them in the United States. Much of his stock was bought by Ohio and Kentucky farmers. Another notable Shorthorn herd was owned by Samuel Thorne of Thorndale, New York.²

At this time, Ohio was the great cattle-raising center in the country, whence thousands of head were annually driven east to the Philadelphia, Baltimore, and New York markets. The Ohio cattle raisers were not slow to see the advantage of improving their beef cattle by crossings with Shorthorns, and in 1834 the Ohio Company for Importing English Cattle was formed and chartered.³ The sum of \$9,200 was subscribed in \$100 shares and agents sent abroad who brought over 19 Shorthorns during the next year. This herd was steadily increased by fresh purchases until 1836, when it was sold at public auction—probably the first thoroughbred cattle sale ever held in America—and a dividend of \$280 per share, amounting to \$25,760, was declared. During the decade previous to the outbreak of the Civil War, the livestock of Ohio increased in value more than 200 percent. So remarkable an increase cannot have been wholly due to demand; it can be clearly shown that intrinsically better animals had superseded the inferior native cattle, owing partly to the accessibility of markets with the coming of the railroads and the wider dissemination of knowledge.

Clay's example of importing Herefords was imitated in 1824 by Admiral Coffin, of the British Royal Navy, who was settled near Boston. He sent a bull and a heifer of Hereford stock to the Massachusetts Society for Promoting Agriculture. These animals

² "Short Horn Cattle," U. S. Department of Agriculture, *Report*, 1863, p. 192-193.

³ John L. Taylor, "History of the Ohio Company for Importing English Cattle," U. S. Patent Office, *Report on Agriculture*, 1851, p. 98-103.

were kept on a farm near Northampton, Massachusetts, and became the scions of numerous progeny in central Massachusetts. The largest importation of Herefords was made in 1840 by Messrs. Corning and Latham of Albany, New York, who did for the Herefords what Powel had already done for the Shorthorns. Their first lot consisted of 5 bulls and 17 heifers. L. A. Dowley also imported several fine specimens of Herefords which were kept on his farm at Brattleboro, Vermont. A part of this herd went to the State Farm at Westboro, Massachusetts, and from there to the vicinity of Baltimore. Herefords did not catch the popular fancy as the Shorthorns had done. They did not become adapted to the thin pastures of New England and the needs of a region of comparatively small dairy farms.

The history of the Devon in America has greater continuity than that of any other breed of cattle. Devon cattle were the first importations of the colonists of Plymouth and Massachusetts Bay. They laid the foundation of the common stock of New England, as the prevalent red color of New England cattle still attests.

In the middle of the nineteenth century, imported Devons began to come into the country, about the same time as the Herefords and later than the Shorthorns. Robert Patterson of the well-known Baltimore family of that name became an extensive breeder of Devons. The Massachusetts Society for Promoting Agriculture also imported a herd. Although not often preserved intact like the Shorthorns and Herefords, these imported Devons did much to raise the general quality of New England cattle. Crossbreds between Devon stock and grade cattle supplied the best beef of the Boston market, which, since early times, was known as a consumer of the best beef produced in America.

The Ayrshires began to be imported in the 1850's, especially in New England, where the exhausted farms were increasingly given over to pasture purposes. The industrialization of dairying about this time also stimulated the importations. Crossed with common stock the Ayrshires produced good milkers, just as the Devons, when crossed with the same stock, produced good beef cattle. One of the Ayrshire cows brought over by John P. Cushing of Watertown, Massachusetts, gave 3,864 quarts of milk in one year, an average much higher than the normal production of a milch cow at that time. The first Ayrshire cow imported by the Massachusetts Society for Promoting Agriculture yielded 16 pounds of butter a week during one season, on grass alone. An Ayrshire cow imported by H. H. Peters of Southboro, Massachusetts, in 1858, averaged 49 pounds of milk for 114 days, beginning June 1, 1862. In 3 days during July, her milk yielded 6 pounds of butter. The Ayrshire became the typical New England dairy cow, as the Shorthorn became the Ohio and Kentucky beef animal.⁴ From New England the Ayrshire spread into central New York, where dairy farms multiplied about the time of the Civil War, and into New Jersey, Pennsylvania, and Maryland, especially around Baltimore and Washington.

The Ayrshire held her own as a milch cow until the arrival of the Jerseys. Between 1850 and 1865, large numbers of Jerseys were imported. In 1853, there were 75 Jerseys in Massachusetts; 10 years later, they were numbered by the thousand. The success of the Jersey was due to its high production of butter; as a producer of milk and cheese the Ayrshire was regarded as superior.

⁴Sanford Howard, "Characteristics of Ayrshire Cattle," U. S. Department of Agriculture, Report, 1863, p. 197-198.

Just before the Civil War opened, in 1859, Arthur W. Austin of West Roxbury, Massachusetts, imported a 3-year-old Kerry bull and 5 2-year-old heifers from Ireland. They arrived in November after a long and tempestuous passage. The bull was so completely exhausted that he died soon after landing. Another bull and two heifers were immediately ordered, and these animals arrived in July 1860. The increase of this herd in 1861 was 4 males and 3 females, and in 1862, 4 males and 2 females, making an aggregate of 21 head of full-blooded Kerries. It was observed that the size of these animals increased materially from the very first generation born in this country. The Kerries attracted a good deal of attention the first few years. John Wentworth, a well-known Chicago citizen, made a special trip to see them, and was much impressed. His comment was: "If I lived out on the open prairie, had no barn, and could keep but one cow, I would prefer a little black Kerry to all others."⁵

The Dutch of colonial New York had introduced the black and white Holstein breed of cattle, but its distinct qualities had not been perpetuated. In 1810, William Jarvis, of Wethersfield, Vermont, the same individual who made the first large importations of Spanish Merinos, brought over a bull and two cows. No more Holsteins seem to have been imported until 1852 when Winthrop W. Chenery of Belmont, Massachusetts, as an experiment, imported a single cow. Her extraordinarily good qualities led to further importation in 1857 of a bull and two cows and in 1859 of four more cows. Unfortunately, a cattle disease broke out in Massachusetts in 1859-1860 and, except for one bull, destroyed this entire herd. In the autumn of 1861, undaunted by this blow, Chenery imported another Holstein bull and four cows, which with the progeny of the only survivor of his first group, formed the earliest Holstein herd in America.⁶ Local prejudice attributed the cattle plague to the Holsteins, and this was a powerful deterrent to further Holstein importations. It took years for the bad reputation given the Holsteins at this time to be overcome.

A survey of the improved stock of the country about the time the Civil War ended would have shown that the Shorthorns, or beef breeds, were centered in the Ohio Basin and westward across the Mississippi, and that the dairy herds were more generally confined to the Atlantic States.⁷ As the locale of the two different kinds of cattle differed, so also did their care. The breeding of beef cattle was chiefly confined to gentleman farmers of wealth, or a few professional stock raisers able to command considerable capital. These herds were often large. The dairy herds, on the other hand, were smaller, and were scattered among the farmers, mainly of New England, who had given up regular farming for the milk, butter, and cheese business.

⁵For an account of these early importations of Irish Kerries, see Sanford Howard, "The Kerry Breed of Cattle," *ibid.*, 1862, p. 313-317.

⁶Winthrop W. Chenery, "Holstein Cattle," *ibid.*, 1864, p. 161-167.

⁷The annual reports of the Patent Office, 1847-1861, and the report of the Commissioner of Agriculture for 1862 contain much circumstantial information regarding the importation of English blooded cattle during these years. This appears in the form of communications from correspondents in various parts of the United States. Especially valuable is Samuel L. Boardman, "Some Outlines of the Agriculture of Maine," *ibid.*, 1862, p. 41-50. The books by English travelers in America are valuable for local information. See especially James Stuart, *Three Years in North America* (Edinburgh, 1833); Charles Augustus Murray, *Travels in North America During the Years 1834, 1835, & 1836* (London, 1839); James Caird, *Prairie Farming in America* (New York, 1859); J. F. W. Johnston, *Notes on North America, Agricultural, Economical, and Social* (Edinburgh and London, 1851). A valuable series of three articles is found under the title "American Cattle" in the *Nation*, 1:620-621 (Nov. 16, 1865); 2:45-46, 239-240 (Jan. 11, Feb. 22, 1866). See also the article by John Clay, Jr., "Work of the Breeder in Improving Live Stock," U. S. Department of Agriculture, *Yearbook*, 1899, p. 632-642.

THE BATTLE OF THE BREEDS

By 1850, the Battle of the Breeds, which for many years had divided English stockmen into rival camps, was transferred across the Atlantic and since that date has been going on in the United States. There is no gainsaying the generally good effect of that rivalry upon the improvement of cattle breeds in America, although there have been some attendant features which are to be deprecated. One of these was the tendency to push a good movement to an extreme by paying fancy prices for imported stock, and to make a fad of certain breeds, even going so far as to set up color instead of milk- or beef-producing qualities as the criterion. The Shorthorns, in particular, were for a time made the victims of this chameleon-like whimsy. Again, in overzeal to protect and perpetuate the purity of the strain, there was too much inbreeding, and good stock lost its vitality and degenerated. The decadence of the Creampots of Massachusetts was directly due to this.⁸

It is undoubtedly true that the extensive importation of Shorthorns, Herefords, Ayrshires, and Jerseys in the decades before the Civil War materially improved the quality of American cattle, both for beef and milk production. There is no gain without some loss. The English breeders, such as Bakewell and Charles and Robert Colling, built up the splendid herds of England from native stock. In the general rage for English blooded cattle it is a matter of some regret that no American breeder was found who was wise and patient enough to attempt to do the same thing in the United States. The United States has no distinctly American breed of cattle, as have England, France, Holland, Denmark, Germany, Italy, Hungary, and other European countries. Not one is native American.

Yet, just as the American people had developed into a distinct type by a fusion of the Old World elements that came to these shores in the seventeenth and eighteenth centuries, so out of the various stocks of European cattle brought over by the first settlers, something worth dignifying as an American breed of cattle had been developed, especially in New England. Although this breed received only a moderate degree of attention, it became distinguished for its good beef- and milk-producing qualities. Unfortunately, no American breeder endeavored to build up this breed. Stockmen were impatient of time, and took a short cut by importing blooded animals from abroad instead of following the long road which might have ended brilliantly in the creation of a genuine American breed of cattle.⁹

The opportunity was let slip, and it is not likely to return; perhaps it is not desirable now. In the same way the best domestic animal ever developed in America of truly American character, the Conestoga draft horse of Pennsylvania, was suffered to become extinct. This was an even greater loss to America than the neglect of native cattle breeding.

EXPERIMENTATION IN SHEEP RAISING

Side by side with the interest in English cattle in the middle of the nineteenth century went as great an interest in the introduction of breeds of sheep in addition to the Merino.

⁸William H. Slingerland, "The 'Cream Pot' Stock," U. S. Department of Agriculture, Report, 1866, p. 291-292; J. R. Dodge, "The Jaques 'Cream Pot' Stock," *ibid.*, 292-294.

⁹Clay, "Work of the Breeder in Improving Live Stock," 634-638.

The decade between 1845 and 1855 marks the transition from fine-wool sheep to coarse-wool and mutton sheep. In the 1860's, English mutton breeds began to be introduced. These sheep were brought partly from Canada, and partly from England, and were distributed east of the Mississippi River. Since that time, in the States of that region, mutton breeds have gradually gained the supremacy. The Merino breed, with its many varied types, and the English types of sheep are nearly equal in number, the former predominating in the range States, and the latter in the farming States.

In 1840, D. O. Collins of Hartford, Connecticut, imported some Rambouillet Merinos, but because of the contemporary prejudice against Merinos, it was not until the early 1880's that the Rambouillet began to come into its own.

In the meantime, American sheep raisers had turned to the English breeds. The first reliable record of Southdowns in the United States is that of a flock belonging to Dr. Rose of Seneca, New York, in 1803. From central New York these sheep spread into Pennsylvania, and particularly into Ohio, where they were brought by the pioneers who came by way of the Mohawk River and Lake Erie, or down the Allegheny River. From Ohio, in succeeding years, the Southdown spread throughout the Northwest and the West. An importation of Shropshires was made into Virginia in 1855, but there is no record of the importer. In 1860, Samuel Sutton of Relay House, brought over another lot, and since then many have been imported. A few Hampshire sheep were brought into Virginia just before the Civil War, but the breed was not established in the United States until after 1865. Clayton Raybold of Delaware imported some Oxford Down sheep in 1846, and in 1853 William C. Rives of Virginia, and R. S. Fay of Lynn, Massachusetts, each made an importation. At that time the Oxford Down was known as the Cotswold Crossbred sheep. Cheviots were brought into Canada about 1825. Robert Young of Delphi, New York, made the first American importation, but active interest in this breed was not aroused until about 1880. Old-type Lincolnshires are said to have been brought to the United States before 1796. In 1825, A. A. Lawrence of Massachusetts imported 10 head, and other importations followed. The first Lincolns in Ohio were brought over by Thomas Wardle of Theddlethorpe, Lincolnshire, an Englishman who settled near Cincinnati about 1835.

The South Atlantic and Gulf States were never much inclined towards sheep raising. Even before cotton began to predominate in the South great prejudice existed against sheep husbandry. John Randolph, the eccentric statesman of Virginia, once declared on the floor of Congress that he would go out of his way any time "to kick a sheep." There was a popular belief in the South that the wool of sheep would turn to hair. Accordingly, sheep raising, even after the advent of the Merino and the boom given to wool growing, was never extensive in the region.¹⁰

However, the acquisition of Texas in 1845, owing to its proximity to the territory of the Old South, slightly stimulated sheep raising. In 1840, less than one-fifth of the sheep of the country were south of the Ohio, and two-fifths of all southern sheep were in the border States of Virginia and Kentucky. In spite of efforts to promote sheep raising in the South before the war, little headway was made. Only in Texas, where Vermont Merinos were introduced in 1853, did the industry show perceptible growth.

¹⁰J. D. B. DeBow, *The Industrial Resources, etc., of the Southern and Western States*, 3:188-195 (New Orleans, 1853); George C. Patterson, "Adaptation of the Mountain Regions of the South to Sheep Husbandry," U. S. Patent Office, *Report on Agriculture*, 1857, p. 53-56.

Angora goat farming, was introduced from abroad early in the 1850's, and it was even proposed to import yaks from Tartary for domestication on the Great Plains, after it had become manifest that the bison never could be domesticated.¹¹

SYSTEMATIC HORSE BREEDING

Before the Civil War—and indeed for two decades after that conflict—systematic horse breeding in the United States, except of racing stock, was nearly unknown. The day of the Shire Horse, the Belgian, the Clydesdale, and the Percheron had not yet arrived. The Morgan, Messenger, and Black Hawk breeds of New England were the best known and most widely disseminated.¹² Much of the stock, such as the Hambletonians, had an admixture of thoroughbred blood, the presence of which made the American roadster a typical horse. The weakest point in American horseflesh was the inferiority of draft horses.¹³ The popularity of oxen for plowing and heavy farm work undoubtedly militated against the development of a heavy type of horse, for there was little demand for such an animal.

The farmer, naturally, most conditioned the type of horse which was bred, and what the farmer wanted was a horse heavy enough to do some field work, yet light enough for driving to town, either to market or to church. The English traveler, James F. W. Johnston, observed of American horses:

They are, in reality, too light for heavy farm-work; and when the period arrived for deep-ploughing, and the more extensive cultivation of heavy land, a heavier and stronger stock of horses, still preserving a quick step, will gradually take the place both of the oxen, which, in many States, are now extensively employed, and of the limber-horses, with which they are sometimes yoked in the same team.¹⁴

One of the first importers of high-class draft horses from England was Edward Harris of Moorestown, New Jersey, who, in 1839, imported two Norman or Percheron mares and a stallion named Diligence—a compactly built horse slightly over 15 hands high. The next importation was not until 1851, when Charles Fullington of Union County, Ohio, brought over from France the famous stallion Louis Napoleon, described as “a short-legged, closely ribbed, blocky and compact grey, three years old.” This animal was later sold to A. P. Cushman of De Witt County, Illinois, but he had remained long enough in Union County to impress the breeders there with his worth and to put his stamp on many colts. The Percheron-Norman horse was the first draft breed to become popular in the United States. A company was soon formed, after the manner of the Ohio company which imported English cattle, to import Percheron horses into the United States. With good reason this part of Ohio is known among horse breeders as “The Perche of America.” Probably the earliest importation of Percherons, and indeed of any blooded draft horses,

¹¹D. J. Browne, “Goats; Introduction of the Cashmere-Shawl Goat,” *ibid.*, 1855, p. 54-57; John Bachman, “Report on Asiatic Goats,” *ibid.*, 1857, p. 56-66. For the yak, see D. J. Browne, “Proposed Introduction of the Yak-Ox from Tartary to the Great Plains of the West,” *ibid.*, 1858, p. 239-241.

¹²C. L. Flint, “The Horses of New England,” *ibid.*, 1861, p. 382-402; Boardman, “Some Outlines of the Agriculture of Maine,” 44-46.

¹³The Conestoga draft horse was extinct about the middle of the century, having been neglected with the appearance of the railroads. — John Strohm, “The Conestoga Horse,” U. S. Department of Agriculture, *Report*, 1863, p. 175-180.

¹⁴Johnston, *Notes on North America*, 1:165.

west of the Wabash River was made by W. J. Edwards of Chicago in 1868, when he imported the stallion, Success, afterwards sold to the Fletcher Horse Company of Wayne, Illinois. This horse founded the famous Dunham-Percherons of Illinois. Neither the Belgian, the Clydesdale, the Suffolk, or the Shire Horse had any vogue in the United States until after 1870.

AMERICAN HOGS

The most thoroughly American domestic animal is the hog. Breeders in the United States have always been more partial to the lard type than to the bacon type, and most American hogs are of the former category. The improvement of swine in the United States was relatively greater than that of cattle, horses, or sheep, and was done with far less expenditure for imported animals. Unlike the beef and dairy stockmen, who sent their native cattle to the shambles and imported whole herds of blooded cattle from England, the American hog raiser was content to use the mongrel sow descended from colonial ancestry as a base, upon which he crossed imported Chinese, Neapolitan, Berkshire, Tamworth, Russian, Suffolk Black, Byfield, and Irish Grazier boars. These importations began as early as the second quarter of the nineteenth century.

The evolution of the established breeds of hogs illustrates the same principles and practices that the breeding of any other high-class domestic animal exemplifies. As Professor Brewer of Yale University said, "A breed of animals is never made by crossing two and only two distinct breeds, and preserving the better qualities of both. I am not aware that there is any such case on record among all the countless breeds of our domestic animals. But new breeds are often made of several original breeds by a selection from the mongrel progeny."

Structurally, the creation of the modern hog has been that of making an animal which would put flesh on the sides and quarters, instead of running to bone and a big head. Physiologically, the effort of the breeder has been to elongate the intestine of the hog so as to enable him to transmute into meat and fat the corn he consumes. According to naturalists the average length of the intestine of the wild boar compared with his body, is as 9 to 1. In the ordinary domestic hog this proportion is 13.5 to 1; in the Siamese and Chinese hog it is 16 to 1; and in the Berkshires, Poland Chinas, Chester Whites, and Duroc-Jerseys it probably is 18 to 1 because of the many generations of careful feeding and selection.

The English Berkshire was developed from the Old English, the Chinese, the Siamese, and the Neapolitan breeds. Although one of the oldest, like all breeds of hogs, the English Berkshire is still comparatively new. As late as 1840, there were complaints in England of the persistent reversion of Berkshires to the hated characteristics of the Old English hog, such as slowness of feeding; coarseness of ear, hair, and shape; and mixed, uncertain colors.

The Bedford hog owed its introduction into the United States to Parkinson, an Englishman living near Baltimore about the beginning of the nineteenth century. The breed was known as the Woburn in Massachusetts and New York. The Byfield was originated by a farmer in Byfield, Massachusetts, who accidentally found in the market a hog of remarkable appearance. It was white, with heavy lopped ears, flat-sides, and of great length and size. Crossed with the Russian or Chinese hog, the improved Byfield founded a popular breed in New England and wherever New Englanders emigrated, as in New York and Ohio.

The ancestors of the Irish Graziers were native Irish hogs brought over in great numbers by the Irish immigrants. These hogs, when crossed on Byfields, Woburns, or American Berkshires produced a good all-around hog, notable for its ability to thrive on grass, refuse garden truck, and potato peelings. They were white, with a few black spots, upright ears, and light jowl. This stock later gave the Poland Chinas their fine coating and symmetry of form.

The result of this experiment was the building up of several genuinely American breeds of swine.¹⁵ These included the Chester White, first developed in Chester County, Pennsylvania; the Poland China, much prized in the Ohio Valley States; and the Jersey Red, or Duroc, breed, which furnished heavy pork for the West Indian trade. In northern Indiana a popular variety of white hogs, known as Victorias, was reputed to be of a finer type than the Chester Whites and larger than the English breeds.

The Chester White breed was not an original, but a cross-breed, between the best native stock of Chester County, and a Bedfordshire boar, imported by Captain James Jeffries about 1820; his get. became well distributed over the country.¹⁶

Of all these various breeds of swine, probably the most generally popular was the Poland China, which held the same position in hogdom that the Shorthorns did in the cattle kingdom.¹⁷ Hog raisers, however, were less concerned with special breeds than cattlemen, and aimed to get the longest hog that would fatten early, without regard to name. Except in the South, the long-legged, long-visaged, flap-eared, slab-sided, razor-backed hog had nearly disappeared by 1860. In Ohio, Indiana, and Illinois, the greatest hog-raising States before the Civil War, the ancient Hoosier and Prairie Rooter had disappeared.

THE BEEF BELT

An attentive study of the history and development of stock raising in the United States reveals the fact that the belt or zone of territory which corresponds broadly to the 40th parallel of latitude affords the best facilities for cattle feeding. Starting at Portland, Maine, and spreading south by way of Boston, Hartford, and Harrisburg, there is a gradual improvement, which culminates in the vicinity of Philadelphia. From Philadelphia westward, whether by way of Wheeling, Columbus, Indianapolis, Springfield, across the Mississippi River, or by way of the Mohawk Valley and Lake Erie, there is the same high standard of quality.

The different grades of cattle that graze on the rolling pastures of this belt fatten in less time and mix their lean and their fat, or marble their flesh, much more fully and evenly than cattle raised elsewhere. North of this zone, the intense cold demands too great a consumption of feed in order to preserve the required quantity of

¹⁵"Swine, Condensed Correspondence," U. S. Patent Office, *Report on Agriculture*, 1854, p. 56-58; 1855, p. 61-63; James P. Gunnell, "Farming in the New England States," *ibid.*, 1861, p. 260-261.

¹⁶Paschall Morris, "White Chester Breed of Swine," U. S. Department of Agriculture, *Report*, 1865, p. 475-476.

¹⁷L. N. Bonham, "The Origin and Development of the Poland-China Hog," *Standard Poland-China Record*, 1:22-33 (1887).

animal heat. Consequently, the beef is of poor quality, dark in color, and with little or no admixture of fat and lean; Montreal beef is an example. South of this zone the beef becomes stringy, and the fat becomes tallow and is not interlarded with the flesh but forms in a solid layer. Most southern beef exhibits this quality.

The peculiar adaptation of this zone along the 40th parallel for growing high-quality beef entitles it to be known as the American Beef Belt. At its broadest this belt reaches from the 36th to the 43rd parallel and extends westward to the 100th meridian on the edge of the Great Plains in central Kansas and Nebraska.

The natural adaptation of this belt for stock raising, and the great development of the industry within it, in course of time led to a differentiation of activities within the business. Stock feeders became distinguished from stock raisers. This distinction was established near Philadelphia, in Lancaster County, shortly after the Revolution, and the practice of Ohio droving confirmed and enlarged it. Areas remote from markets, where land is cheap and pasturage extensive, answer better for stock raising than for stock feeding, as the lean bullock may be driven or transported a great distance without injury, while the fattened animal rapidly diminishes both in weight and quality by any mode of transportation.

As the center of stock raising moved westward into Illinois and thence across the Mississippi, and the dressed-beef industry developed, former stock-raising places became stock-feeding places. This was the case in Ohio before the Civil War, and in Illinois after 1870.

This differentiation into stock raisers and stock feeders led in time to the development of better business organization to govern the industry. An early and important example is the institution of the Madison County Cattle Sales in Ohio.

Monthly and quarterly sales, or market fairs, as they were termed, had long been well established there. These were sale days on which the grazer, feeder, and seller brought their fattened animals, and the butcher came to make his purchases both at auction and on private terms. The system gained favor until many of the best dealers considered the plan invaluable. Essentially the same idea was inaugurated at Paris, Kentucky, in the Blue Grass region. A monthly court brought the planters and stockmen together, whence originated the idea of having at the same time a general sale of cattle, horses, mules, and other livestock. Northern men here met southern purchasers of mules and horses, and thus the cotton and sugar States were enabled to buy needed animals and the North to dispose of surplus stock at fair prices. Responsible men filled the administrative positions, and the system became firmly established. Each year these monthly court days became more important, and hundreds of animals changed owners. Other communities soon emulated the Paris plan and started similar enterprises, but from various causes, chiefly from lack of system and energy on the part of the originators, these fairs were allowed to decline.

The only other successful enterprise was originated in 1856 by a few cattlemen of central Ohio. In February of that year, the cattle sellers and buyers of Madison County were invited to meet in the public square at London, Ohio. The sales for the first few months were not large, and only 1,500 head of cattle were sold during 1856.

The venture prospered, and the practice was imitated throughout the Beef Belt. The Civil War stimulated the system, as Government contractors regularly resorted to the cattle sales to buy beef for the armies.¹⁸

SECTIONALISM

From these general observations concerning the history of stock raising between 1830 and 1860, which applied in greater or less degree to every part of the United States east of the Great Plains, we pass to a more particular survey of certain regions.

Even colonial America had been sectionally divided; the New England Colonies, the Middle Atlantic Colonies, and the South Atlantic Colonies differed in racial origins, institutions, social texture, and economic interests. The Revolution welded the Thirteen Colonies into a Nation, but it did not extinguish these differences.

On the contrary, they became more marked in the older States with the lapse of time, and as the country extended westward new areas were added, each dominated by particular sectional influences. Broadly speaking, however, before 1830, the most pronounced sectional division of the United States was vertical, between the seaboard States and the New West lying beyond the Alleghenies and extending to the Mississippi.

Between 1830 and 1860, the homogeneity of the New West was broken up, and a horizontal sectionalism between the northern group of States and the southern developed. The chief factor in this revolution, for it was a revolution in American history, was the rapid growth of cotton growing, which was dependent upon slave labor for its development. After the invention of the cotton gin a major part of the energy of the South was expended on cotton, with tobacco in Virginia, rice in South Carolina, and sugar in Louisiana as less important staples.

The South, with the exception of Texas, ceased to be a stock-raising country to any considerable degree. "Cotton was king." The drift of population, during the years 1830-50, from the worn-out lands of Maryland, Virginia, and the Carolinas into the rich buckshot lands of Alabama and Mississippi and the deep-soiled bottom lands of the Red River in Arkansas was like the exodus from the northern and eastern States into the Ohio Valley before 1830.

For years before the Civil War, the large planters of the Cotton Belt put their land into cotton and their money into slaves. Livestock, which they needed for work animals and food, were bought in the North, especially in Kentucky and Ohio. It was estimated in 1845 that Southern planters in the preceding 20 years had expended \$900,000,000 in the North for horses, mules, cattle, sheep, hogs, hay, and farm implements.¹⁹ Each year, 10,000 horses and mules were driven from the Middle Atlantic and western States into the South to stock the plantations.²⁰

¹⁸J. R. Dodge, "Madison County Cattle Sales," U. S. Department of Agriculture, *Report*, 1869, p. 371-377.

¹⁹Edward Ingle, *Southern Sidelights*, 55 (New York and Boston, 1896).

²⁰J. S. Buckingham, *The Slave States of America*, 2:203 (London and Paris, 1842); Emory R. Johnson, and others, *History of Domestic and Foreign Commerce of the United States*, 1:247 (Washington, 1915).

One must guard against being deceived by the census statistics pertaining to the Southern States before the war. The South was a large consumer of livestock, but, Texas excluded, it was not a large producer, except in the case of hogs. In 1840, the North had 10,084,970 hogs against the South's 16,216,323; 2,097,307 horses and mules against the South's 2,238,362; and 7,569,022 head of cattle of all kinds against the South's 7,402,564. In 1850, the North had 10,343,265 hogs against the South's 20,008,948; 2,284,344 horses and 40,341 mules against the South's 2,052,375 horses and 518,990 mules; and 8,584,611 head of all kinds of cattle against the South's 9,124,857.

On the face of these figures the superiority would seem to be with the South. However, almost all the horses and mules and many of the cattle and sheep were of northern origin. Moreover, the South, because it raised only 10 percent as much hay as the North, had to buy feed outside its borders.

The agricultural backwardness of large areas of the South, combined with the wastefulness of the slave regime, quickly wore out the horses and mules which were imported from the North, so that the South was continually drawing on the North for more animals. Cattle also suffered from ill treatment and neglect much more than in the North. Frederick Law Olmsted, who traveled through the South in 1855, wrote:

when I ask why mules are so universally substituted for horses on the farm, the first reason given, and confessedly the most conclusive one, is that horses cannot bear the treatment that they always *must* get from negroes; horses are always soon foundered or crippled by them, while mules will bear cudgeling, and lose a meal or two now and then, and not be materially injured, and they do not take cold or get sick if neglected or overworked.²¹

DECLINE OF SOUTHERN STOCK RAISING

Stock raising within the Cotton Belt declined sharply between 1830 and 1860. Only in those parts of the South where cotton could not be grown profitably, as in Virginia, the Carolina Piedmont, and Tennessee, did stock raising continue, and then in no large degree. Even from the Piedmont, where the cowpens had abounded in the eighteenth century, the glory had departed. South of the Virginia line, in the Carolinas, which in colonial times had been the most famous cattle-raising region within the Thirteen Colonies, the decline of stock raising by 1830 was astounding. By that time, the specialization that was ultimately to prove the bane of the South, already largely obtained.²²

The old cowpens, however, which had begun to fall into decay and disuse after the Revolution, acquired a new lease on life. No longer used as ranches, they now became stock stands for the overnight care of the thousands of hogs and cattle driven through each season from the North. Each drove was lotted by itself, and corn was shoveled from a wagon to the hungry stock. The places in the Carolina Piedmont which are now winter resorts, were sites of stock stands early in the nineteenth century. Asheville was the most important of these, while others included Warm Springs, Hot Springs, Sandy Bottoms, and Putnam.

²¹Frederick Law Olmsted, *A Journey in the Seaboard Slave States*, 47 (New York, 1856).

²²William Gregg, *Essays on Domestic Industry* (Charleston, 1845).

After 1850, there were indications that the center of animal husbandry and meat packing was slowly moving westward toward St. Louis and Chicago.²⁹ The report of the Ohio State Board of Agriculture for 1857 showed that the decrease in the farming population in 5 counties was 6 percent, as a result of the westward emigration of many small farmers. It was estimated that not less than 140,000 persons in Ohio had left for other parts since 1850.³⁰ Horses, mules, and cattle had considerably increased between 1850 and 1860, but the augmentation was offset by a proportional decrease of sheep and hogs. In the 17 years after 1840, the number of hogs had not materially increased, having been 2,099,000 in 1840, and only 2,331,000 by 1857.

It was evident after 1850 that Ohio was to repeat the history of the New England and North Atlantic States and go over to manufacturing, intensive agriculture, and dairy farming, and that the stock-raising center was passing into Illinois.³¹ The growth of the livestock industry in Illinois in the decade between 1840 and 1850 foreshadowed the change which, by 1863, was consummated. The richness of her cornfields made Illinois the banner stock-raising State in the Union, whereas the advantageous situation of Chicago both for Great Lakes commerce and as a railroad center made that city the natural focal point and clearinghouse for the meat industry. Unmentioned in the Census of 1830, with a population of less than 5,000 in 1840, two decades later Chicago had a population of over 100,000 and a trade in grain, wool, livestock, packed meats, and agricultural implements amounting to more than \$50,000,000 a year.

During the middle decades of the nineteenth century, while the South was gravitating away from the Union on an orbit of its own, the Northeastern and North Atlantic States had become predominantly industrial and commercial. Even in the States of the New West in the Ohio Basin farming became more intensive, dairying began to rival stock raising, and manufacturing to rival both of these. The American frontier with its old, familiar pioneer conditions had marched onward into Wisconsin, and across the upper Mississippi into Iowa and Minnesota. Here lay the historic Middle Border of the 1860's, which was less a Corn Belt and Hog-and-Cattle Country than a Wheat Belt. In these areas the population was scattered, as it had been earlier in Ohio. Even as far back as 1820, some adventurous settlers—half hunters, half farmers—had penetrated into Wisconsin Territory and into Iowa. Years before Minnesota was organized as a Territory, pioneers had crept into that country from Illinois. This was the case as early as 1819-1820.³²

EARLY WISCONSIN AGRICULTURE

The history of the settlement of Wisconsin is a repetition at a later age and in another region, of the settlement of the Ohio Basin and Michigan. In the one as in the other, the French domination preceded American occupation. Reuben Gold Thwaites has thus summarized the French influence on Wisconsin:

²⁹St. Louis was the equal of Chicago as a packing center until 1861, when the southern market, to which St. Louis chiefly catered, failed on account of the war. St. Louis was the concentration point for southern Illinois, Iowa, and Missouri.

³⁰Ohio State Board of Agriculture, *Annual Report*, 1857, p. 45.

³¹Caird, *Prairie Farming in America*, 117-119; Lois Kimball Mathews, *The Expansion of New England*, 185 (Boston and New York, 1909); Johnson, *History of Domestic and Foreign Commerce*, 1:239.

³²Philander Prescott, "Farming among the Sioux Indians," U. S. Patent Office, *Report on Agriculture*, 1849, p. 451-455.

³³Reuben Gold Thwaites, *The Story of Wisconsin*, 161 (Boston, 1890).

The traders were wont to select commanding sites, often Indian villages, for their stations; and upon sites thus chosen, either by the aborigine or trader, are today situated most of the cities and leading towns of the State—such, for example, as Milwaukee . . . Green Bay, Prairie du Chien . . . Portage. . . . The network of Indian trails, which were also used by the traders, developed into public roads when American settlers, first with saddle horses and then with wagon teams, came to occupy the country. Thus was Wisconsin thoroughly explored, its cities and highways located, and its waterways mapped out, by the early French, long before the inrush of agricultural colonists.³³

The heavy work of the fields was done by oxen, six or eight being attached to a wooden plow hung on two wheels, one large and one small. The French in Wisconsin, as elsewhere, did not use the yoke; the draft was from a wooden bar lashed across the foreheads of the oxen. Bark ropes were more common than leather traces. Ebenezer Childs made the first ox yoke at Green Bay in 1822.³⁴ Some of the French had Canadian ponies, which were used only for travel. Cattle, hogs, sheep, and poultry were brought to Green Bay at an early date, but sheep were few and of late importation.

After the American occupation, provisions destined for the garrison at Green Bay were sent from Pittsburgh via the Great Lakes, except live cattle, which were driven overland from Illinois. In 1825, Colonel William S. Hamilton drove 700 head of cattle from southern Illinois through Chicago and across the Milwaukee, Sheboygan, and Manitowoc rivers to Green Bay.³⁵ Some years later, Ebenezer Childs bought 262 head of stock in Illinois and Missouri, for which he paid \$2.00 per hundredweight for beef cattle and \$5 to \$7 for cows. He drove the herd from Carrollton, Illinois, through Jacksonville, Springfield, and Ottawa, up the Fox River Valley to Mequeno, past Big Foot Lake, now Lake Geneva, and through Waukesha to Lake Michigan, where he hit the trail straight northward to the fort. He arrived with 210 head; 39 had been killed by the Indians, 4 had been slaughtered for food, and 9 had been sold in Indian villages en route.³⁷

As the settlement of Wisconsin slowly increased, the local farmers found a market for their surplus stock at Green Bay, and Illinois and Ohio traders began to come into the country for furs, tallow, and similar articles.³⁸ Milwaukee, in 1836, was the most populous center in Wisconsin, with 500 people; in the same year Racine had 300 inhabitants. A few families had penetrated into the interior as far as Prairie Village, some 15 miles from Lake Michigan. Yet so rapidly did population flow in that by 1840 31,000 persons were in the Wisconsin Territory. Stock raising was not a staple industry with these first settlers as it had been in Ohio and Illinois. The country was too heavily wooded and too remote from markets. Lead and copper mining and lumbering were much more important.

IOWA

In 1832, soon after the termination of the Black Hawk War, settlers began to cross the Mississippi River from Illinois and locate in the Black Hawk Purchase, or

³⁴Ebenezer Childs, "Recollections of Wisconsin Since 1820," Wisconsin State Historical Society, *Report and Collections*, 4:161 (Madison, 1859).

³⁵Augustin Grignon, "Seventy-Two Years' Recollections of Wisconsin," *ibid.*, 3:197 (Madison, 1857).

³⁶Moses M. Strong, *History of the Territory of Wisconsin, from 1836 to 1848*, p. 186 (Madison, 1885).

³⁷Childs, "Recollections of Wisconsin," 169-172.

³⁸Grignon, "Seventy-Two Years' Recollections of Wisconsin," 262-265.

Iowa. Many of these had served in the war either as soldiers or as rangers and so had considerable knowledge of the country—hence their eagerness to occupy the land.³⁹ The fame of the Iowa country penetrated to the East, and it was not long before the overflow from Indiana and Illinois began to pour into Iowa.

When the time for the removal of the Indians from Iowa approached, the crowd of immigrants facing a cordon of United States troops at Rock Island numbered thousands. The bars were let down on June 1, 1833, and the settlement of Iowa began.⁴⁰ The eastern and central portions of the Territory were soon occupied, but the Sac and Fox Indians still possessed the western part along the Missouri River. Seven counties were organized in 1836, and by 1840 there were 18 counties. Between 1838 and 1840, the population doubled, the census of the latter year showing 43,112 inhabitants.

THE MIDDLE BORDER

By 1840, settlements in Wisconsin extended as far north as the 43rd parallel. Along the upper Mississippi River a broad belt of population extended from St. Paul to the northern boundary of Missouri. Through this latter State the Middle Border connected with the South and the settlements in Arkansas. Owing to the expansion of the settlements in the interior, the frontier of the Middle Border was shorter in 1840 than in 1830. In the decade between 1840 and 1850, both Iowa and Wisconsin were admitted to the Union and Minnesota Territory was organized, but the frontier line was little changed. The extension of settlement was stopped by the boundary of the Indian Territory, and the western border of Missouri marked almost a complete halt of the westward movement. In Iowa settlement made some advance, moving up the Missouri, Des Moines, and other rivers. The settlements in Minnesota, in and around St. Paul, were greatly extended up and down the Mississippi, while other scattering bodies of population appeared in northern Wisconsin. In the southern part of Wisconsin and along Lake Michigan the settlements were nearly continuous as far as Green Bay.

The first extension of settlements appeared in 1850 beyond the Missouri River; in Kansas and Nebraska the population went beyond the 97th meridian. Between this vertical line and the Rocky Mountains spread the still unconquered and unsettled region of the Great Plains, not to be overcome until after the Civil War. In the same decade the incipient settlements about St. Paul had spread in all directions, forming a broad band of union with the main body down the Mississippi River. In Iowa, settlements had crept steadily northwestward until the State was nearly covered. Spreading up the Missouri, the population had reached the present southeastern corner of South Dakota, where further progress was stopped for 20 years by the Sioux.⁴¹

Nothing in American history exceeds the speed of this occupation of the Middle Border. The age of steam had come, and the locomotive had supplanted the oxcart; the prairie schooner was becoming obsolete by this time. Alexis de Tocqueville, the French

³⁹ Benjamin F. Gue, *History of Iowa*, 1:162-164 (New York, 1903).

⁴⁰ John B. Newhall, *Sketches of Iowa, or the Emigrant's Guide*, 13 (New York, 1841); Jacob Van der Zee, "The Roads and Highways of Territorial Iowa," *Iowa Journal of History and Politics*, 3:181 (April 1905).

⁴¹ U. S. Bureau of the Census, Tenth Census, 1880, *Population*, xvi-xviii.

publicist and historian, who visited America in 1831, calculated the rate of western progress at 19 miles a year. In the 1850's, the unit of measurement would have been leagues and not miles.

In the *Annual Report of the Commissioner of Agriculture for 1863* appeared an article on the "Distribution and Movement of Neat Cattle in the United States," by Silas L. Loomis. Analyzing the census data, the author found that the ratio of cattle to the population was 80 percent, or 80 head to every 100 persons. Eight percent of the demand was for working oxen, 24 percent for milch cows, and 44 percent for all other cattle.⁴²

Loomis also worked out the separate ratios for each State and Territory for 1840, 1850, and 1860. He showed that the New England and Middle Atlantic States, with the exception of Vermont and New Hampshire, were unable to supply their own needs. "This territory," he explained, "contains the most populous cities in the Union, as well as the principal manufacturing and mining districts, and consequently people must increase at a more rapid rate than cattle can be produced."⁴³

It was the great valley of the Mississippi, "the garden of the New World," that was to provide for the growing wants of the Nation. The great law of cattle movement, according to Loomis, was that cattle "*must be moved eastward and capital westward to supply the pressing demands of our people.*"⁴⁴

CONCLUSION

In 1860, stock raising was on the threshold of becoming one of the Nation's leading industries. The aggregate value of livestock in 1860 was more than a billion dollars, an increase of over 100 percent since 1850.⁴⁵ Texas was the leading cattle-producing State, and Chicago a foremost packing center.

Within two decades, the livestock industry underwent revolutionary transformations. Great cities sprang up in the United States and western Europe, demanding huge supplies of meat and dairy products. Men of enterprise commanding capital and immigrant labor established plants in which every detail of cattle slaughtering was organized. Mechanical refrigeration in the 1870's was another landmark. The ranch replaced the open range on the Great Plains, and fattening of stock became a separate enterprise of the Corn Belt. Transcontinental railroads and trans-Atlantic steamships began to carry slaughtered meat products to all the leading markets in the United States and Europe. When disease threatened the American industry in the 1880's, the Federal Department of Agriculture was ready to undertake the necessary research and supervisory control. The livestock industry, originating in the few cattle, sheep, hogs, and horses brought over by the first colonists, had thus risen to the status of Big Business.

⁴²Silas L. Loomis, "Distribution and Movement of Neat Cattle in the United States," U. S. Department of Agriculture, *Report*, 1863, p. 255, 259, 261.

⁴³*Ibid.*, 255.

⁴⁴*Ibid.*, 259.

⁴⁵U. S. Bureau of the Census, Eighth Census, 1860, *Agriculture*, 2:cxxvi.

LITERATURE CITED BY JAMES WESTFALL THOMPSON

Professor Thompson's study of stock raising in the United States as submitted to the Department of Agriculture includes extensive notes on the left margin which indicate the sources used. In addition, a bibliography devoted largely to the English and European background was appended to the first chapter. This bibliography and the marginal citations for the nine chapters here published constitute this appendix entitled "Literature Cited by James Westfall Thompson." It has proved impossible to identify a few of the marginal citations, and these have, therefore, been omitted.

PRIMARY SOURCES

Public Records and Statutes

BRITISH COLONIAL PAPERS

Great Britain, Privy Council, Public Record Office, *Calendar of State Papers, Colonial Series, America and West Indies* . . . (v. 5, 7, 9, 12, 14-16, London, 1880-1903).

The volumes cited relate to the years 1661-1676, 1685-1688, and 1697-1698.

Houston, William, ed., *Documents Illustrative of the Canadian Constitution* (338 p., Toronto, Carswell & Co., 1891).

COLONIAL, STATE, AND LOCAL RECORDS AND STATUTES

Alvord, Clarence Walworth, and Clarence Edwin Carter, eds., *The Critical Period, 1763-1765* (Illinois State Historical Library, Collections, v. 10, British series, v. 1, lvii, 597 p., illus., Springfield, Ill., Illinois State Historical Library, 1915).

——— and ——— eds., *The New Régime, 1765-1767* (Illinois State Historical Library Collections, v. 11, British series, v. 2, xxviii, 700 p., illus., map, Springfield, Ill., Illinois State Historical Library, 1916).

Bartlett, John Russell, comp., *Records of the Colony of Rhode Island and Providence Plantations, in New England* [1636-1792] (v. 1, illus., Providence, A. C. Greene and Bros., State Printers, 1856).

Bouton, Nathaniel, ed., *Provincial Papers: Documents and Records Relating to the Province of New-Hampshire* [1692-1722] (v. 3, Manchester, Published by authority of Legislature of New Hampshire, 1869).

Hening, William Waller, ed., *The Statutes at Large; Being a Collection of All the Laws of Virginia* (v. 1, New York, R. & W. & G. Bartow, 1823).

O'Callaghan, E. B., ed., *Documents Relative to the Colonial History of the State of New-York* (v. 1, 5, Albany, Weed, Parsons & Co., 1855-1856).

Pease, Theodore Calvin, *The County Archives of the State of Illinois* (Illinois State Historical Library, Collections, v. 12, Bibliographical series, v. 3, cxli, 730 p., Springfield, Ill., Illinois State Historical Library, 1915).

Saunders, William L., ed., *The Colonial Records of North Carolina* (v. 4-5 [1734-1759], Raleigh, P. M. Hale; Josephus Daniels, 1886-1887).

Shurtleff, N. B., ed., *Records of the Governor and Company of the Massachusetts Bay in New England* [1628-1686] (v. 1, 4, Boston, W. White, 1853-1854).

Trumbull, James Hammond, and Charles J. Hoadly, comps., *The Public Records of the Colony of Connecticut* (v. 7 [1726-1735], Hartford, Case, Lockwood & Brainard, 1873).

Young, Alexander, ed., "The Early Records of Charlestown," Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, From 1623 to 1636*, p. 369-387 (Boston, Charles C. Little & James Brown, 1846).

FEDERAL RECORDS

Ashbrook, F. G., "Breeds of Swine," U. S. Department of Agriculture, *Farmers' Bulletin* 765 (16 p., illus., Washington, 1917).

[Bachman, John], "Report on Asiatic Goats," U. S. Patent Office, Report on Agriculture, 1857, p. 56-66.

Bell, G. Arthur, "Breeds of Draft Horses," U. S. Department of Agriculture, *Farmers' Bulletin* 619 (16 p., illus., Washington, 1914).

Boardman, Samuel L., "Some Outlines of the Agriculture of Maine," U. S. Department of Agriculture, Report, 1862, p. 39-59.

Browne, D. J., "Goats; Introduction of the Cashmere-Shawl Goat," U. S. Patent Office, Report on Agriculture, 1855, p. 54-57.

——— "Progress of Agriculture: Progress and Public Encouragement of Agriculture in Russia, Prussia, and the United States," U. S. Patent Office, Report on Agriculture, 1857, p. 1-50. See especially p. 13-29.

——— "Proposed Introduction of the Yak-Ox from Tartary to the Great Plains of the West," U. S. Patent Office, Report on Agriculture, 1858, p. 239-241.

Cadwell, L., "Hogs Packed in the West, 1849-50," U. S. Patent Office, Report on Agriculture, 1849, p. 493-496.

- Campbell, George, "Sheep and Wool; History and Management of Merino Sheep," U. S. Patent Office, Report on Agriculture, 1854, p. 28-38.
- Chenery, Winthrop W., "Holstein Cattle," U. S. Department of Agriculture, Report, 1864, p. 161-167, illus.
- Cincinnati Price Current, "Pork Trade of the West," U. S. Patent Office, Report on Agriculture, 1850, p. 544-545.
- Cist, Charles, "Hog Crop," U. S. Patent Office, Report, 1848, p. 636-640.
- "The Hog and Its Products," U. S. Department of Agriculture, Report, 1866, p. 382-393.
- "Mr. Cist on the Hog Crop," U. S. Patent Office, Report, 1847, p. 524-533.
- Clay, John, Jr., "Work of the Breeder in Improving Live Stock," U. S. Department of Agriculture, Yearbook, 1899, p. 627-642.
- Craig, J. B., "Pleuro-Pneumonia," U. S. Patent Office, Report on Agriculture, 1860, p. 252-267.
- Dodge, J. R., "The Jaques 'Cream Pot' Stock," U. S. Department of Agriculture, Report, 1866, p. 292-294.
- "Madison County Cattle Sales," U. S. Department of Agriculture, Report, 1859, p. 371-377.
- "Short Horn Cattle," U. S. Department of Agriculture, Report, 1863, p. 190-193, illus.
- Emerson, G., and A. L. Elwyn, "Cattle Disease, or Pleuro-Pneumonia," U. S. Patent Office, Report on Agriculture, 1860, p. 239-251.
- Flint, C. L., "The Horses of New England," U. S. Patent Office, Report on Agriculture, 1861, p. 382-402.
- Greathouse, Charles Howard, "Historical Sketch of the United States Department of Agriculture; Its Objects and Present Organization," U. S. Department of Agriculture, Division of Publications, Bulletin 3 (97 p., 2d rev., Washington, 1907).
- Gunnell, James P., "Farming in the New England States," U. S. Patent Office, Report on Agriculture, 1861, p. 251-262.
- Holmes, George Kirby, "Progress of Agriculture in the United States," U. S. Department of Agriculture, Yearbook, 1899, p. 307-334.
- Howard, Sanford, "Characteristics of Ayrshire Cattle," U. S. Department of Agriculture, Report, 1863, p. 193-198, illus.
- "The Kerry Breed of Cattle," U. S. Department of Agriculture, Report, 1862, p. 313-317, illus.

- Loomis, Silas L., "Distribution and Movement of Neat Cattle in the United States," U. S. Department of Agriculture, *Report*, 1863, p. 248-264.
- Louisville (Ky.) Courier, "Hog Statistics," U. S. Patent Office, Report on Agriculture, 1850, p. 561-563.
- Marshall, F. R., "Breeds of Sheep for the Farm," U. S. Department of Agriculture, *Farmers' Bulletin* 576 (16 p., illus., Washington, 1914).
- Morris, Paschall, "White Chester Breed of Swine," U. S. Department of Agriculture, *Report*, 1865, p. 475-476.
- Morse, Jedediah, *A Report to the Secretary of War of the United States on Indian Affairs . . .* (400 p., illus., map, New Haven, S. Converse, 1822).
- Patterson, George C., "Adaptation of the Mountain Regions of the South to Sheep Husbandry," U. S. Patent Office, Report on Agriculture, 1857, p. 53-56.
- Prescott, Philander, "Farming Among the Sioux Indians," U. S. Patent Office, Report on Agriculture, 1849, p. 451-455.
- Rommel, George M., "The Preservation of Our Native Types of Horses," U. S. Department of Agriculture, Bureau of Animal Industry, *Circular* 137 (143 p., illus., Washington, 1908).
- Rotch, Francis M., "Select Breeds of Cattle and Their Adaptation to the United States," U. S. Patent Office, Report on Agriculture, 1861, p. 427-469.
- Shaw, E. L., and L. L. Heller, "Domestic Breeds of Sheep in America," U. S. Department of Agriculture, *Department Bulletin* 94 (59 p., illus., Washington, 1914).
- Simpson, James Hervey, *Report of Explorations Across the Great Basin of the Territory of Utah . . . in 1859* (518 p., illus., maps, Washington, Government Printing Office, 1876).
- Slingerland, William H., "The 'Cream Pot' Stock," U. S. Department of Agriculture, *Report*, 1866, p. 291-292.
- Strohm, John, "The Conestoga Horse," U. S. Department of Agriculture, *Report*, 1863, p. 175-180, illus.
- Taylor, John L., "History of the Ohio Company for Importing English Cattle," U. S. Patent Office, Report on Agriculture, 1851, p. 98-103.
- "The Scioto Importations of Improved Cattle," U. S. Patent Office, Report on Agriculture, 1849, p. 297-299, illus.
- True, Alfred Charles, "Agricultural Experiment Stations in the United States," U. S. Department of Agriculture, *Yearbook*, 1899, p. 513-548, illus.
- U. S. Census Office, 7th Census, 1850, *The Seventh Census of the United States: 1850 . . .* (cxxxvi, 1022 p., Washington, R. Armstrong, 1853).

U. S. Census Office, 8th Census, 1860, *Agriculture of the United States in 1860* . . . (clxxii, 292 p., Washington, Government Printing Office, 1864).

——— 10th Census, 1880, [Census reports] *Tenth Census*, June 1, 1880 (v. 1, 3, Washington, Government Printing Office, 1883-88).

U. S. Congress, "Cattle and Dairy Farming; Letter from the Secretary of State, Transmitting to the Speaker of the House of Representatives Reports from the Consuls of the United States, on Cattle and Dairy Farming and the Markets for Cattle, Beef, and Dairy Products in Their Several Districts," 49 Congress, 1 Session, *House Executive Document 51* (855 p., illus., Serial 2397, Washington, Government Printing Office, 1887).

U. S. Department of Agriculture, *Reports*.

The annual reports of the U. S. Department of Agriculture have appeared in the following forms: (1) Report of the Commissioner of Agriculture, 1862-1889; (2) Report of the Secretary of Agriculture, 1889-date; (3) Yearbook of the U. S. Department of Agriculture, 1894-date.

The marginal notes of Professor Thompson's manuscript as submitted to the Department of Agriculture refer to a number of the signed articles in these series, and these are here listed by authors. A bibliography appended to the first chapter refers to the entire series and suggests the use of the cumulative indexes in locating data on livestock. The following unsigned article was also cited: "Short Horn Cattle," U. S. Department of Agriculture, *Report*, 1863, p. 190-193, illus.

U. S. Engineer Department, *An Expedition to the Valley of the Great Salt Lake of Utah* . . . (478 p., illus., maps, Philadelphia, Lippincott, Grambo, & Co., 1852).

U. S. Patent Office, *Annual Report of the Commissioner of Patents*.

The annual reports of the Commissioner of Patents for 1837-1861 include considerable data on agriculture. There was no report on agriculture for 1846, and beginning with the report for 1849 the material on agriculture was issued as a separate volume.

The signed articles in this series of reports which Professor Thompson included in his marginal notes are cited in this bibliography by authors. Reference was also made to the following unsigned articles: "Historical Sketch of the United States Agricultural Society," U. S. Patent Office, *Report on Agriculture*, 1859, p. 22-30; "Swine: Condensed Correspondence," 1854, p. 56-58, 1855, p. 61-63; and "Societies for Promoting Agriculture, State Boards, etc.," 1858, p. 90-213.

Ward, W. F., "Breeds of Beef Cattle," U. S. Department of Agriculture, *Farmers' Bulletin* 612 (23 p., illus., Washington, 1915).

——— and Dan T. Gray, "Beef Production in the South," U. S. Department of Agriculture, *Farmers' Bulletin* 580 (20 p., illus., Washington, 1914).

Warder, J. T., "Mule Raising," U. S. Department of Agriculture, *Report*, 1863, p. 180-190, illus.

Whitney, Milton, "Soil Investigations in the United States," U. S. Department of Agriculture, *Yearbook*, 1899, p. 335-346.

Original Narratives

Applegate, Jesse, "A Day With the Cow Column in 1843," *Oregon Historical Society, Quarterly*, 1:371-383 (1900).

Ascensión, Antonio de la, "A Brief Report of the Discovery in the South Sea (1602-1603)," Herbert Eugene Bolton, ed., *Spanish Exploration in the Southwest, 1542-1706*, p. 104-134 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1916).

Ashe, Thomas, "Carolina, or a Description of the Present State of that Country (London, 1682)," Alexander S. Salley, Jr., ed., *Narratives of Early Carolina, 1650-1708*, p. 135-159 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1911).

Beverly, Robert, *The History of Virginia*, in four parts (ed. 2, 284 p., illus., London, Printed for B. and S. Tooke, etc., 1722).

Bradford, William, *Bradford's History of Plymouth Plantation, 1606-1646*, edited by William T. Davis (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, 437 p., illus., map, New York, Charles Scribner's Sons, 1908).

Budd, Thomas, *Good Order Established in Pennsylvania and New-Jersey in America* . . . (Gowans Bibliotheca Americana, no. 4, 111 p., New York, W. Gowans, 1865).

Castañeda de Nagero, Pedro de, "The Narrative of the Expedition of Coronado," edited by Frederick W. Hodge, *Spanish Explorers in the Southern United States, 1528-1543* (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1907).

Coxe, Tench, *A View of the United States of America, in a Series of Papers, Written at Various Times Between the Years 1787 and 1794* (512 p., Philadelphia, 1794).

Dana, Richard Henry, Jr., *Two Years Before the Mast* (Riverside Literature Series, no. 84, 470 p., Boston, Houghton, Mifflin & Co., 1895).

DeBow, James Dunwoody Brownson, *The Industrial Resources, etc., of the Southern and Western States* (v. 3, New Orleans, DeBow's Review, 1853).

Doddridge, Joseph, *Notes on the Settlement and Indian Wars of the Western Parts of Virginia and Pennsylvania from 1763 to 1783* . . . (320 p., illus., Pittsburgh, John S. Ritenour and Wm. T. Lindsey, 1912).

Douglass, William, *A Summary, Historical and Political, of the First Planting, Progressive Improvements, and Present State of the British Settlements in North-America* (v. 2, London, R. and J. Dodsley, 1760).

- Dummer, Jeremiah, *A Defence of the New-England Charters* (80 p., London, W. Wilkins, 1721).
- Easton, John, *A Narrative of the Causes Which Led to Philip's Indian War, of 1675 and 1676* (207 p., map, Albany, N. Y., J. Munsell, 1858).
- Flint, Timothy, *The History and Geography of the Mississippi Valley* (ed. 2, v. 1, Cincinnati, E. H. Flint and L. R. Lincoln, 1832).
- Gregg, Josiah, *Commerce of the Prairies* (2 v., illus., Philadelphia, J. W. Moore, 1850).
- Gregg, William, *Essays on Domestic Industry* (63 p., Charleston, Purges & James, 1845).
- Hall, Clayton Colman, ed., "A Relation of Maryland (London, 1635)," Clayton Colman Hall, ed., *Narratives of Early Maryland, 1633-1684*, p. 63-112 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1910).
- Hamor, Ralph, *A True Discourse of the Present Estate of Virginia, and the Successes of the Affaires There Till the 18 of June, 1614* (69 p., Albany, J. Munsell, 1860).
- Higginson, Francis, "New-England's Plantation (ed. 3, London, 1630)," Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, from 1623 to 1636*, p. 239-267 (Boston, Charles C. Little & James Brown, 1846).
- "A True Relation of the Last Voyage to New-England (1629)," Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, from 1623 to 1636*, p. 213-238 (Boston, Charles C. Little & James Brown, 1846).
- Hutchins, Thomas, *A Topographical Description of Virginia, Pennsylvania, Maryland, and North Carolina* (67 p., London, Printed by J. Almon, for the Author and sold 1778).
- Imlay, George [i.e., Gilbert], *A Topographical Description of the Western Territory of North America* (ed. 2, 433 p., maps, London, Printed for J. Debrett, 1793).
- Johnson, Edward, *Johnson's Wonder-Working Providence, 1628-1651*, edited by J. Franklin Jameson (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, 285 p., illus., map, New York, Charles Scribner's Sons, 1910).
- Johnston, James Finlay Weir, *Notes on North America, Agricultural, Economical, and Social* (2 v., map, Edinburgh and London, W. Blackwood & Sons, 1851).
- Kennedy, William, *Texas: Its Geography, Natural History, and Topography* (118 p., New York, W. Jackson, 1844).
- Kino, Eusebio Francisco, "Report and Relation of the New Conversions (1710)," Herbert Eugene Bolton, ed., *Spanish Exploration in the Southwest, 1542-1706*, p. 433-464 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1916).
- Martin, Joseph, *A New and Comprehensive Gazeteer of Virginia, and the District of Columbia* (636 p., map, Charlottesville, Va., J. Martin, 1835).

- Mills, Robert, *Statistics of South Carolina* (782 p., map, Charleston, Hurlbut & Lloyd, 1826).
- Neill, Edward Duffield, *Virginia Company of London* (17 p., Washington, Government Printing Office, 1868).
- Newhall, John B., *Sketches of Iowa, or, the Emigrant's Guide . . .* (252 p., illus., map, New York, J. H. Colton, 1841).
- Núñez Cabeza de Vaca, Alvar, "The Narrative of Alvar Núñez Cabeça de Vaca," edited by Frederick W. Hodge, *Spanish Explorers in the Southern United States, 1528-1543* (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1907).
- Oñate, Juan de, "Account of the Discovery of the Buffalo (1599)," Herbert Eugene Bolton, ed., *Spanish Exploration in the Southwest, 1542-1706*, p. 223-232 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1916).
- "Letter Written by Don Juan de Oñate from New Mexico to the Viceroy, the Count of Monterey (1599)," Herbert Eugene Bolton, ed., *Spanish Exploration in the Southwest, 1542-1706*, p. 212-222 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1916).
- Paschall, Thomas, "An Abstract of a Letter from Thomas Paskell of Pennsylvania to His Friend J. J. of Chippenham (London, 1683)," Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 247-254 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1912).
- Pastorius, Francis Daniel, "Circumstantial Geographical Description of Pennsylvania (Frankfort and Leipzig, 1700)," Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 355-448 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1912).
- Penn, William, "A Further Account of the Province of Pennsylvania (London, 1685)," Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 257-278 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1912).
- "A Letter from William Penn . . . to the Committee of the Free Society of Traders . . . (London, 1683)," Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 219-244 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1912).
- Prince, Thomas, "Annals of New England," Massachusetts Historical Society, *Collections* (ser. 2), 7:189-295 (Boston, 1818).

- Purry, Jean Pierre, "A Description of the Province of South Carolina (Charles Town, 1731)," Peter Force, ed., *Tracts and Other Papers*, v. 2, no. 11, 15 p., (Washington, Peter Force, 1838).
- Russell, Robert, *North America, Its Agriculture and Climate; Containing Observations on the Agriculture and Climate of Canada, the United States, and the Island of Cuba* (390 p., maps, Edinburgh, Adam and Charles Black, 1857).
- Thomas, Gabriel, "An Historical and Geographical Account of Pensilvania and of West-New-Jersey (London, 1698)," Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West New Jersey, and Delaware, 1630-1707*, p. 309-352 (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, New York, Charles Scribner's Sons, 1912).
- Vancouver, George, *A Voyage of Discovery to the North Pacific Ocean . . . in the Years 1790, 1791, 1792, 1793, 1794, and 1795* (3 v., illus., map, London, G. S. and J. Robinson, 1798).
- Van der Donck, Adriaen, "Description of the New Netherlands," New-York Historical Society, *Collections* (ser. 2), 1:125-242 (New York, H. Ludwig, 1841).
- Warden, D. B., *A Statistical, Political, and Historical Account of the United States of North America . . .* (3 v., map, Edinburgh, A. Constable & Co., 1819).
- White, John, "The Planters Plea (London, 1630)," Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, from 1623 to 1636*, p. 1-16 (Boston, Charles C. Little & James Brown, 1846).
- Winslow, Edward, "Relation or Journall of the Beginning and Proceedings of the English Plantation Settled at Plimoth in New-England (London, 1622)," Alexander Young, ed., *Chronicles of the Pilgrim Fathers of the Colony of Plymouth from 1602 to 1625*, p. 109-251 (ed. 2, Boston, Charles C. Little & James Brown, 1844).
- Winthrop, John, *Winthrop's Journal "History of New England," 1630-1649*, edited by James Kendall Hosmer (Original Narratives of Early American History . . . J. Franklin Jameson, general editor, 2 v., illus., map, New York, Charles Scribner's Sons, 1908).
- Wood, William, "New-England's Prospect (London, 1634)," Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay, from 1623 to 1636*, p. 389-415 (Boston, Charles C. Little & James Brown, 1846).

Travel Accounts

- Ashe, Thomas, *Travels in America Performed in 1806 . . .* (3 v., London, R. Phillips, 1808).
- Bailey, Francis, *Journal of a Tour in the Unsettled Parts of North America in 1796 & 1797* (439 p., London, Baily Bros., 1856).

Bartram, William, *Travels Through North and South Carolina, Georgia, East and West Florida, the Cherokee Country . . .* (xxiv, 520 p., illus., map, London, Reprinted for J. Johnson, 1792).

Beechey, F. W., *Narrative of a Voyage to the Pacific and Beering's Strait . . .* (493 p., illus., maps, Philadelphia, Carey & Lea, 1832).

Birkbeck, Morris, *Letters From Illinois* (ed. 3, 114 p., London, Taylor & Hessey, 1818).

Bradbury, John, "Travels in the Interior of America, in the Years 1809, 1810, and 1811 (ed. 2, London, 1819)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 5 (Cleveland, Arthur H. Clark Co., 1904).

Brackenridge, H. M., "Journal of a Voyage up the River Missouri Performed by Eighteen Hundred and Eleven (ed. 2, Baltimore, 1816)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 6:19-166 (Cleveland, Arthur H. Clark Co., 1904).

Brissot de Warville, Jacques Pierre, *New Travels in the United States of America Performed in 1788* (xliii, 483 p., Dublin, W. Corbet for P. Byrne, A. Queber, etc., 1792).

Duckingham, James Silk, *The Slave States of America* (v. 2, London and Paris, Fisher, Son & Co., 1842).

Burnaby, Andrew, *Travels Through the Middle Settlements in North America in the Years 1759 and 1760 . . .* (ed. 3, London, 1798, reprinted in Rufus Rockwell Wilson, ed., *Source Books of American History*, 265 p., New York, A. Wessels Co., 1904).

Buttrick, Tilly, Jr., "Voyages, Travels and Discoveries (Boston, 1831)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 8:15-89 (Cleveland, Arthur H. Clark Co., 1904).

Caird, James, *Prairie Farming in America* (130 p., New York, D. Appleton Co., 1859).

Chambers, William, *Things as They Are in America* (364 p., London and Edinburgh, W. and R. Chambers, 1854).

Chastellux, Marquis de [Francois Jean], *Travels in North-America, in the Years 1780, 1781, and 1782* (2 v., illus., maps, London, G. G. J. and J. Robinson, 1787).

Cobbett, William, *A Year's Residence in the United States of America [1817-1818]* (ed. 2, 3 pts. in 1 v., London, Sherwood, Neely & Jones, 1819).

Crèvecoeur, Michel Guillaume St. Jean de, *Lettres d'un cultivateur Américain, écrites à W. S. écuyer, depuis l'année 1770, jusqu'à 1781* (v. 2, Maestricht, Holland, J. E. Dufour & P. Roux, 1785).

——— *Letters from an American Farmer . . .* reprinted from the original edition, with a prefatory note by W. P. Trent, and an introduction by Ludwig Lewisohn (New York, Fox, Duffield & Co., 1904).

- Cuming, F., "Sketches of a Tour to the Western Country, Through the States of Ohio and Kentucky (Pittsburgh, 1810)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 4 (Cleveland, Arthur H. Clark Co., 1904).
- De Smet, Pierre Jean, "Oregon Missions and Travels Over the Rocky Mountains, in 1845-46 (New York, 1847)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 29:103-424 (Cleveland, Arthur H. Clark Co., 1906).
- Evans, Estwick, "A Pedestrious Tour of Four Thousand Miles Through the Western States and Territories During the Winter and Spring of 1818 (Concord, N. H., 1819)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 8:91-364 (Cleveland, Arthur H. Clark Co., 1904).
- Farnham, Thomas Jefferson, "Travels in the Great Western Prairies, the Anahuac and Rocky Mountains, and in the Oregon Country (London, 1843)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 28:21-380, 29:11-102 (Cleveland, Arthur H. Clark Co., 1906).
- Faux, William, "Memorable Days in America (London, 1823)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 11:17-305, 12:9-138 (Cleveland, Arthur H. Clark Co., 1905).
- Fearon, Henry Bradshaw, *Sketches of America: A Narrative of a Journey of Five Thousand Miles Through the Eastern and Western States of America [1817-1818]* (454 p., London, Hurst, Rees, Orme, and Brown, 1818).
- Flagg, Edmund, "The Far West: Or a Tour Beyond the Mountains (New York, 1838)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 26:21-370, 27:13-121 (Cleveland, Arthur H. Clark Co., 1906).
- Fleming, William, "Colonel William Fleming's Journal of Travels in Kentucky, 1779-1780," Newton D. Mereness, ed., *Travels in the American Colonies*, p. 617-655 (New York, Macmillan Co., 1916).
- Flint, James, "Letters from America (Edinburgh, 1822)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 9 (Cleveland, Arthur H. Clark Co., 1904).
- Flower, Richard, "Letters From Lexington and the Illinois . . . (London, 1819)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 10:85-109 (Cleveland, Arthur H. Clark Co., 1904).
- "Letters From the Illinois, 1820-1821 . . . (London, 1822)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 10:111-169 (Cleveland, Arthur H. Clark Co., 1904).
- Fordham, Elias Pym, *Personal Narrative of Travels in Virginia, Maryland, Pennsylvania, Ohio, Indiana, Kentucky; and of a Residence in the Illinois Territory, 1817-1818*, edited by F. A. Ogg (248 p., illus., Cleveland, Arthur H. Clark Co., 1906).
- Gordon, Adam, "Journal of an Officer Who Travelled in America and the West Indies in 1764 and 1765," Newton D. Mereness, ed., *Travels in the American Colonies*, p. 367-453 (New York, Macmillan Co., 1916).

- Hall, James, *Letters From the West; Containing Sketches of Scenery, Manners, and Customs* (385 p., London, H. Colburn, 1828).
- Hulme, Thomas, "A Journal Made During a Tour in the Western Countries of America, September 30, 1818-August 7, 1819; extracted and reprinted from William Cobbett, *A Year's Residence in the United States of America* (London, 1828)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 10:17-84 (Cleveland, Arthur H. Clark Co., 1904).
- Kalm, Peter, "Travels into North America (ed. 2, London, 1772)," John Pinkerton, ed., *A General Collection of the Best and Most Interesting Voyages and Travels*, 13:374-700 (London, Longman, Hurst, etc., 1812).
- Kelly, William, *An Excursion to California Over the Prairie, Rocky Mountains, and Great Sierra Nevada* (v. 1, London, Chapman & Hall, 1851).
- La Rochefoucauld Liancourt, Francois Alexandre Frédéric, *Travels Through the United States of North America . . . in the Years 1795, 1796, and 1797* (2 v., maps, London, R. Phillips, 1799).
- Lawson, John, *A New Voyage to South Carolina* (258 p., map, London, Printed in 1709).
- Long, S. H., "Account of an Expedition From Pittsburgh to the Rocky Mountains, Performed in the Years 1819, 1820 (London, 1823)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 14-17 (Cleveland, Arthur H. Clark Co., 1905).
- Lyell, Charles, *A Second Visit to the United States of North America* (v. 2, illus., London, J. Murray, 1849).
- Maximilian, Prince of Wied, "Travels in the Interior of North America, Part 1 (London, 1843)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 22-24 (Cleveland, Arthur H. Clark Co., 1906).
- McKenney, Thomas Loraine, *Memoirs, Official and Personal; with Sketches of Travels Among Northern and Southern Indians* (2 v. in 1, illus., New York, Paine & Burgess, 1846).
- Melish, John, *Travels Through the United States of America, in the Years 1806 & 1807, and 1809, 1810, & 1811 . . .* (648 p., illus., map, London, G. Cowie & Co., 1818).
- Michaux, André, "Journal of Travels into Kentucky; July 15, 1793-April 11, 1796," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 3:25-104 (Cleveland, Arthur H. Clark Co., 1904).
- Michaux, Francois André, "Travels to the West of the Alleghany Mountains (London, 1805)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 3:105-306 (Cleveland, Arthur H. Clark Co., 1904).
- Morris, Thomas, "Journal of Captain Thomas Morris, of his Majesty's XVII Regiment of Infantry; Detroit, September 25, 1764; reprint from the author's *Miscellanies in Prose and Verse*, p. 1-39 (London, 1791)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 1:293-328 (Cleveland, Arthur H. Clark Co., 1904).

Murray, Charles Augustus, *Travels in North America During the Years 1834, 1835, & 1836* (2 v., London, R. Bentley, 1839).

Nuttall, Thomas, "A Journal of Travels into the Arkansa Territory During the Year 1819 (Philadelphia, 1821)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 13 (Cleveland, Arthur H. Clark Co., 1905).

Olmsted, Frederick Law, *A Journey in the Seaboard Slave States, With Remarks on Their Economy* (723 p., illus., New York, Dix & Edwards, 1856).

Palmer, Joel, "Journal of Travels Over the Rocky Mountains, to the Mouth of the Columbia River; Made During the Years 1845 and 1846 (Cincinnati, 1847)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, v. 30 (Cleveland, Arthur H. Clark Co., 1905).

Reichel, John Frederick, "Travel Diary of Bishop and Mrs. Reichel and Their Company from Lititz, Pennsylvania, to Salem, in Wachovia, North Carolina, 1780," Newton D. Mereness, ed., *Travels in the American Colonies*, p. 585-599 (New York, Macmillan Co., 1916).

Schöpf, Johann David, *Travels in the Confederation, 1783-1784* (2 v., Philadelphia, W. J. Campbell, 1911).

Smyth, J. F. D., *A Tour in the United States of America* (2 v., Dublin, Price, Moncrieffe, etc., 1784).

Stuart, James, *Three Years in North America* (2 v., map, Edinburgh, Printed for R. Cadell, 1833).

Sutcliff, Robert, *Travels in Some Parts of North America, in the Years 1804, 1805, & 1806* (293 p., illus., York, England, C. Peacock, 1811).

Welby, Adlard, "A Visit to North America and the English Settlements in Illinois (London, 1821)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 12:139-341 (Cleveland, Arthur H. Clark Co., 1905).

Weld, Isaac, Jr., *Travels Through the States of North America . . . During the Years 1795, 1796, and 1797* (ed. 4, 552 p., illus., maps, London, J. Stockdale, 1800).

Woods, John, "Two Years' Residence in the Settlement on the English Prairie in the Illinois Country, United States (London, 1822)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 10:171-357 (Cleveland, Arthur H. Clark Co., 1904).

Wyeth, John B., "Oregon; or a Short History of a Long Journey from the Atlantic Ocean to the Region of the Pacific (Cambridge, Mass., 1833)," Reuben Gold Thwaites, ed., *Early Western Travels, 1748-1846*, 21:17-106 (Cleveland, Arthur H. Clark Co., 1905).

Recollections

- Biddle, James W., "Recollections of Green Bay in 1816-17," Wisconsin State Historical Society, *Collections* (1854), 1:49-63 (Madison, 1855).
- Childs, Ebenezer, "Recollections of Wisconsin Since 1820," Wisconsin State Historical Society, *Report and Collections* (1857-1858), 4:153-195 (Madison, 1859).
- Flint, Timothy, *Recollections of the Last Ten Years, Passed in Occasional Residences and Journeyings in the Valley of the Mississippi* (395 p., Boston, Cummings, Hilliard & Co., 1826).
- Grignon, Augustin, "Seventy-Two Years' Recollections of Wisconsin," Wisconsin State Historical Society, *Report and Collections* (1856), 3:197-295 (Madison, 1857).
- Matson, Nehemiah, *Memories of Shaubena* (269 p., illus., Chicago, D. B. Cooke & Co., 1878).
- Reynolds, John, *My Own Times, Embracing also the History of My Life* (600, xxiii p., illus., Chicago, Belleville, B. H. Perryman & H. L. Davison, 1855).
- Snedes, Susan Dabney, *Memorials of a Southern Planter* (341 p., Baltimore, Cushing & Bailey, 1887).
- Watson, Elkanah, *Men and Times of the Revolution; or, Memoirs of Elkanah Watson . . .* (460 p., New York, Dana & Co., 1856).

Personal Letters and Diaries

- Adams, John, *The Works of John Adams . . . with a Life of the Author, Notes and Illustrations* (v. 2, 7, Boston, Little Brown & Co., 1850-1852).
- Bentley, William, *The Diary of William Bentley . . .* (4 v., Salem, Mass., Essex Institute, 1905-1914).
- Bond, Phineas, "Letters of Phineas Bond, British Consul at Philadelphia, to the Foreign Office of Great Britain, 1787-1794," American Historical Association, *Annual Report*, 1896-1897, 1:513-659.
- Burnett, Peter H., "Letters." Oregon Historical Society, *Quarterly*, 3:398-426 (1902).
- Flagg, Gershom, "Pioneer Letters of Gershom Flagg," edited with introduction and notes by Solon J. Buck, Illinois State Historical Society, *Transactions*, 1910, p. 139-183.
- Franklin, Benjamin, *The Works of Benjamin Franklin . . .*, edited by Jared Sparks (v. 2, 7, Boston, Hilliard, Gray & Co., 1836-1838).
- Hutchinson, Thomas, *The Diary and Letters of His Excellency Thomas Hutchinson* (v. 2, London, S. Low, Marston, Searle & Livingston, 1886).

Jay, John, *Correspondence and Public Papers* . . . , edited by H. P. Johnston (4 v., New York, 1890-1893).

Jefferson, Thomas, *The Writings of Thomas Jefferson* . . . , edited by Andrew A. Lipscomb and Alfred Ellery Bergh (v. 12, Washington, Thomas Jefferson Memorial Association, 1903).

——— *The Works of Thomas Jefferson* . . . , edited by Paul Leicester Ford (v. 7, New York and London, G. P. Putnam's Sons, 1904).

Lechford, Thomas, *Note-Book Kept by Thomas Lechford, Esq., . . . Boston, Massachusetts Bay, from June 27, 1638, to July 29, 1641* (*Archaeologia Americana*, American Antiquarian Society, Transactions, v. 7, 460 p., Cambridge, J. Wilson & Son, 1885).

Madison, James, *The Writings of James Madison* . . . , edited by Gaillard Hunt (9 v., illus., New York and London, G. P. Putnam's Sons, 1900-1910). See especially volumes 3, 4, 8, and 20.

Spotswood, Alexander, *The Official Letters of Alexander Spotswood* (Virginia Historical Society, Collections, n.s., 2 v. in 1, illus., Richmond, The Society, 1882-1885).

Washington, George, *The Writings of George Washington* . . . , edited by Worthington C. Ford (v. 12, New York and London, G. P. Putnam's Sons, 1891).

——— *The Writings of George Washington* . . . , edited by Jared Sparks (v. 9, Boston, Harper & Bros., 1835).

Agricultural Writings

TREATISES

Anonymous, *American Husbandry; Containing an Account of the Soil, Climate, Production and Agriculture of the British Colonies in North America and the West Indies; with Observations on the Advantages and Disadvantages of Settling in Them, Compared with Great Britain and Ireland* (2 v., London, J. Bew, 1775).

Beatty, Adam, *Southern Agriculture, Being Essays on the Cultivation of Corn, Hemp, Tobacco, Wheat, etc. and the Best Method of Renovating the Soil* (293 p., New York, C. M. Saxton, 1843).

Edition 2 published with title, *Essays on Practical Agriculture* (Maysville, Ky., 1844).

Eliot, Jared, *Essays upon Field-Husbandry in New-England* (166 p., Boston, Printed and sold by Edes & Gill, 1760).

AGRICULTURAL SOCIETY TRANSACTIONS

Jarvis, William, "Merino and Saxony Sheep," *New York State Agricultural Society, Transactions*, 1841, 1:320-338.

- Klippart, John H., "Report of the Corresponding Secretary," Ohio State Board of Agriculture, *Annual Report*, 1857, p. 17-66.
- Potter, C. E., "Native Cattle of New Hampshire," New Hampshire State Agricultural Society, *Transactions*, 1854, p. 226-237.

FLOCK, HERD, RECORD, AND STUD BOOKS

The flock, herd, record, and stud books of the British and American breeders' associations contain pertinent historical data. Usually the first volume of the series for each breed contains a short history describing the origin and characteristics of that particular breed.

SECONDARY WORKS

Geography

- Brigham, Albert Perry, *Geographic Influences in American History* (366 p., maps, Boston, Ginn & Co., 1903).
- Davis, William Morris, "The Continent of North America," Hugh Robert Mill, ed., *The International Geography*, p. 664-678, maps (New York, D. Appleton & Co., 1908).
- "The United States of America," Hugh Robert Mill, ed., *The International Geography*, p. 710-773, maps (New York, D. Appleton & Co., 1908).
- Dopp, Mary, "Geographic Influences in the Development of Wisconsin," American Geographical Society, *Bulletin*, 45:401-412, 490-499, 585-609, 653-663, 736-749, 831-846, 902-920, maps (1913).
- Miller, George J., "Some Geographic Influences in the Settlement of Michigan and in the Distribution of Its Population," American Geographical Society, *Bulletin*, 45:321-348, maps (1913).
- Semple, Ellen Churchill, *American History and Its Geographic Conditions* (466 p., maps, Boston and New York, Houghton, Mifflin & Co., 1903).
- Shaler, Nationiel Southgate, "Physiography of North America," Justin Winsor, ed., *Narrative and Critical History of America*, 4:i-xxx (Boston and New York, Houghton, Mifflin & Co., 1885).

English and European Background

- Andrews, Charles McLean, *The Old English Manor* (Johns Hopkins University Studies in History and Political Science, extra v. 12, 291 p., Baltimore, Johns Hopkins Press, 1892).
- Cheyney, Edward P., *An Introduction to the Industrial and Social History of England* (317 p., illus., maps, New York, Macmillan Co., 1901).

See Ch. 2, Rural Life and Organization, p. 31-56.

- Cheyney, Edward P., "The Mediaeval Manor: Translation of a Typical Extent," *American Academy of Political and Social Science, Annals*, 4:275-291 (September 1893).
- Clarke, Ernest, "Colling, Charles," and "Colling, Robert," *Dictionary of National Biography, Supplement*, 2:45-46 (London, Smith, Elder & Co., 1901).
- Cunningham, William, *An Essay on Western Civilization in Its Economic Aspects* (Cambridge Historical series, ed. by G. W. Prothero, 2 v., maps, Cambridge, Cambridge University Press, 1898-1900).
- *The Growth of English Industry and Commerce* (2 v. in 3, Cambridge, University Press, 1896-1903).
- Curtler, William Henry Ricketts, *A Short History of English Agriculture* (371 p., Oxford, Clarendon Press, 1909).
- Defoe, Daniel, *A Tour Through the Whole Island of Great Britain* (v. 1, London, J. and F. Rivington, etc., 1769).
- Denton, W., *England in the Fifteenth Century* (337 p., London, George Bell & Sons, 1888).
- Fordham, Montague Edward, *A Short History of English Rural Life From the Anglo-Saxon Invasion to the Present Time* (183 p., London, George Allen & Unwin; New York, Charles Scribner's Sons, 1916).
- Forrest, Jacob Dorsey, *Development of Western Civilization* (406 p., Chicago, University of Chicago Press, 1907).
- Fowler, W. Warde, "Study of a Typical Mediaeval Village," *Quarterly Journal of Economics*, 9:151-174, map (January 1895).
- Garnier, Russell M., *History of the English Landed Interest: Its Customs, Laws and Agriculture* (2 v., London, Swan Sonnenschein & Co., 1892-1893).
- Hasbach, Wilhelm, *A History of the English Agricultural Labourer*, newly edited by the author and translated by Ruth Kenyon, with a preface by Sidney Webb (470 p., London, P. S. King & Son, 1908).
- Humphreys, Jennett, "Robert Bakewell," *Dictionary of National Biography*, 3:23-24 (London, Smith, Elder & Co., 1885).
- Lecky, William Edward Hartpole, *A History of England in the Eighteenth Century* (v. 2, New York, D. Appleton & Co., 1882).
- Luchaire, Achille, *Social France at the Time of Philip Augustus* (ed. 2, 441 p., New York, Henry Holt & Co., 1912).
- McDonald, Donald, *Agricultural Writers From Sir Walter of Henley to Arthur Young, 1200-1800* (228 p., illus., London, Horace Cox, 1908).
- Prothero, Rowland Edmund, *English Farming, Past and Present* (504 p., London, New York etc., Longmans, Green & Co., 1912).

Prothero, Rowland Edmund, "Landmarks in British Farming," Royal Agricultural Society of England, *Journal* (ser. 3), 3:4-30 (London, 1892).

Rogers, James Edwin Thorold, comp., *A History of Agriculture and Prices in England, From the Year After the Oxford Parliament (1259) to the Commencement of the Continental War (1793)* . . . (7 v. in 8, Oxford, Clarendon Press, 1866-1902).

Royal Agricultural Society of England, London, *Journal* . . . (v. 1, London, 1840-).

For the many valuable articles, see *General Index to the First Series* . . . , v. 1-25, 1840-1864 (London, 1865), and *General Index to the Second Series* . . . , v. 1-25, 1865-1889 (London, 1890).

Seignobos, Charles, *The Feudal Régime*, translated and edited by Earle W. Dow (70 p., New York, Henry Holt & Co., 1902).

Thompson, James Westfall, "Charlemagne as a Farmer," *Breeder's Gazette*, 70:32, 33, 35, 37 (July 6, 1916).

—— "Farms and Farmers in Ancient Rome," *Breeder's Gazette*, 69:698, 699, 701 (Mar. 23, 1916).

—— "Sheep in Spain in the Middle Ages," *Breeder's Gazette*, 70:90, 91 (July 20, 1916).

—— "Short History of the Merino Sheep," *Breeder's Gazette*, 73:484-485 (Mar. 7, 1918).

—— "War Horses in Mediaeval England," *Breeder's Gazette*, 70:167, 168 (Aug. 3, 1916).

Vinogradoff, Paul, *English Society in the Eleventh Century; Essays in English Mediaeval History* (599 p., Oxford, Clarendon Press, 1908).

—— *The Growth of the Manor* (384 p., London, Swan Sonnenschein & Co., New York, Macmillan Co., 1905).

—— *Villainage in England* (464 p., Oxford, Clarendon Press, 1892).

Wergeland, Agnes Mathilde, *Slavery in Germanic Society in the Middle Ages* (158 p., Chicago, University of Chicago Press, 1916).

General United States Histories

Abel, Annie Heloise, "The History of Events Resulting in Indian Consolidation West of the Mississippi River," American Historical Association, *Annual Report*, 1906, 1:235-450 (Washington, 1908).

Acrelius, Israel, *A History of New Sweden* (Pennsylvania Historical Society, Memoirs 11, 468 p., illus., map, Philadelphia, Historical Society of Pennsylvania, 1874).

A translation by William M. Reynolds of *Reskrifning om de Swenska Församlingars gedan Nya Nederland* (Stockholm, 1759).

- Alvord, Clarence Walworth, "The British Ministry and the Treaty of Fort Stanwix," Wisconsin State Historical Society, *Proceedings* (1908-09), 56:165-183.
- Andrews, Charles McLean, *Colonial Self-Government, 1652-1689* (The American Nation: A History, edited by Albert Bushnell Hart, v. 5, 369 p., maps, New York and London, Harper & Bros., 1904).
- Becker, Carl Lotus, *Beginnings of the American People* (The Riverside History of the United States, edited by William E. Dodd, v. 1, 279 p., illus., maps, Boston, New York [etc.], Houghton Mifflin Co., 1915).
- Bolton, Herbert E., "The Mission as a Frontier Institution in the Spanish-American Colonies," *American Historical Review*, 23:42-61 (1917).
- Bourne, Edward Gaylord, *Spain in America, 1450-1580* (The American Nation: A History, edited by Albert Bushnell Hart, v. 3, 350 p., illus., maps, New York and London, Harper & Bros., 1904).
- Carter, Clarence Edwin, *Great Britain and the Illinois Country, 1763-1774* (223 p., Washington, American Historical Association, 1910).
- Channing, Edward, *A History of the United States* (v. 1-4, New York, Macmillan Co., 1905-1917).
- Codman, John, *Arnold's Expedition to Quebec* (340 p., illus., map, New York, Macmillan Co., 1901).
- Farrand, Livingston, *Basis of American History, 1500-1900* (The American Nation: A History, edited by Albert Bushnell Hart, v. 2, 303 p., maps, New York and London, Harper & Bros., 1904).
- Faust, Albert Bernhardt, *The German Element in the United States . . .* (2 v., Boston and New York, Houghton Mifflin Co., 1909).
- Greene, Evarts Boutell, *Provincial America, 1690-1740* (The American Nation: A History, edited by Albert Bushnell Hart, v. 6, 356 p., maps, New York and London, Harper & Bros., 1905).
- Hildreth, Richard, *The History of the United States of America* (v. 3-4, New York, Harper & Bros., 1863).
- Hornaday, William Temple, "The Extirpation of the American Bison, with a Sketch of Its Discovery and Life History," U. S. National Museum, *Annual Report*, 1886-87, 2:367-548.
- Howard, George Elliott, *Preliminaries of the Revolution, 1763-1775* (The American Nation: A History, edited by Albert Bushnell Hart, v. 9, 359 p., maps, New York and London, Harper & Bros., 1905).
- Hulbert, Archer Butler, *Boone's Wilderness Road* (Historic Highways of America, v. 6, 207 p., illus., map, Cleveland, Arthur H. Clark Co., 1903).

- Hulbert, Archer Butler, *The Cumberland Road* (Historic Highways of America, v. 10, 207 p., illus., maps, Cleveland, Arthur H. Clark Co., 1904).
- *Pioneer Roads and Experiences of Travelers* (Historic Highways of America, v. 11-12, illus., maps, Cleveland, Arthur H. Clark Co., 1904).
- Learned, Henry Barrett, *The President's Cabinet; Studies in the Origin, Formation, and Structure of an American Institution* (471 p., New Haven, Yale University Press, 1912). See p. 292-345 on the Department of Agriculture.
- Lowery, Woodbury, *The Spanish Settlements Within the Present Limits of the United States, 1513-1561* (515 p., maps, New York and London, G. P. Putnam's Sons, 1901).
- Mathews, Lois Kimball, *The Expansion of New England* (303 p., maps, Boston and New York, Houghton Mifflin Co., 1909).
- McLaughlin, Andrew Cunningham, *The Confederation and the Constitution, 1783-1789* (The American Nation: A History, edited by Albert Bushnell Hart, v. 10, 348 p., maps, New York and London, Harper & Bros., 1905).
- McMaster, John Bach, *A History of the People of the United States, from the Revolution to the Civil War* (v. 2-4, New York, D. Appleton & Co., 1885-1895).
- Osgood, Herbert L., *The American Colonies in the Seventeenth Century* (v. 2, New York, Macmillan Co., 1904).
- Parkman, Francis, *A Half-Century of Conflict* (12 v., Boston, Little, Brown & Co., 1893).
- Paxson, Frederic Logan, *The Last American Frontier* (402 p., illus., maps, New York, Macmillan Co., 1910).
- Parker, Thomas Valentine, *The Cherokee Indians, with Special Reference to Their Relations with the United States Government* (116 p., illus., map, New York, Grafton Press, 1907).
- Ramsay, David, *History of the American Revolution* (2 v., Philadelphia, R. Aitken & Son, 1789).
- Royce, Charles C., "The Cherokee Nation of Indians," U. S. Bureau of American Ethnology, *Annual Report* (1883-84), 5:121-378 (Washington, Government Printing Office, 1887).
- Strong, Frank, "A Forgotten Danger to the New England Colonies," American Historical Association, *Annual Report*, 1898, p. 77-94 (Washington, 1899).
- Turner, Frederick Jackson, "The Colonization of the West, 1820-1830," *American Historical Review*, 11:303-327 (1906).
- "The Old West," Wisconsin State Historical Society, *Proceedings*, 1908, 56:184-233 (Madison, Wis., The Society, 1909).

Turner, Frederick Jackson, "The Place of the Ohio Valley in American History," *Ohio Archaeological and Historical Quarterly*, 20:32-47 (1911).

——— *Rise of the New West, 1819-1829* (The American Nation: A History, edited by Albert Bushnell Hart, v. 14, 366 p., illus., maps, New York and London, Harper & Bros., 1906).

——— "Western State-Making in the Revolutionary Era," *American Historical Review*, 1:70-87, 251-269, map (1895-1896).

Tyler, Lyon Gardiner, *England in America, 1580-1652* (The American Nation: A History, edited by Albert Bushnell Hart, v. 4, 355 p., illus., maps, New York and London, Harper & Bros., 1904).

Weeden, William B., *Economic and Social History of New England, 1620-1789* (2 v., Boston, Houghton, Mifflin & Co., 1890).

State and Local Histories

Adams, Nathaniel, *Annals of Portsmouth, Comprising a Period of Two Hundred Years . . .* (400 p., Portsmouth, N. H., The Author, 1825).

Aitchison, Clyde B., "The Mormon Settlements in the Missouri Valley," *Nebraska Historical Society, Proceedings* (ser. 2), 10:7-25; and *Oregon Historical Society, Quarterly*, 8:276-289 (1907).

Alsop, George, *A Character of the Province of Maryland* (Gowans Bibliotheca Americana, v. 5, 125 p., illus., map, New York, Gowans, 1869).

Arnold, Samuel Greene, *History of the State of Rhode Island and Providence Plantations* (v. 2, illus., maps, New York, London, D. Appleton & Co., 1860).

Arthur, John Preston, *Western North Carolina; A History (from 1730 to 1913)*. (710 p., illus., Raleigh, N. C., Edwards & Broughton Printing Co., 1914).

Bancroft, Hubert Howe, *California Pastoral, 1769-1848* (The Works of H. H. Bancroft, v. 34, 808 p., San Francisco, History Co., 1888).

——— *History of Arizona and New Mexico, 1530-1888* (The Works of H. H. Bancroft, v. 17, 829 p., San Francisco, History Co., 1889).

——— *History of California* (The Works of H. H. Bancroft, v. 18-24, San Francisco, History Co., 1884-1890).

——— *History of the North Mexican States and Texas* (The Works of H. H. Bancroft, v. 15-16, San Francisco, History Co., 1884-1889).

——— *History of the Northwest Coast* (The Works of H. H. Bancroft, v. 27-28, San Francisco, A. L. Bancroft & Co., 1884).

- Bancroft, Hubert Howe, *History of Utah, 1540-1886* (The Works of H. H. Bancroft, v. 26, 808 p., San Francisco, History Co., 1889).
- Belknap, Jeremy, *The History of New-Hampshire* (3 v., illus., map, Boston, The Author, 1791-1792).
- Billon, Frederic L., *Annals of St. Louis in Its Territorial Days, From 1804 to 1821* (465 p., illus., St. Louis, The Author, 1888).
- Blanchard, Charles, ed., *Counties of Morgan, Monroe and Brown, Indiana* (800 p., illus., Chicago, F. A. Battey & Co., 1884).
- Bolton, Herbert E., "The Spanish Occupation of Texas, 1519-1690," *Southwestern Historical Quarterly*, 16:1-26 (1912).
- Brown, John Mathias, *Brief Sketch of the First Settlement of the County of Schoharie, by the Germans . . .* (23 p., Schoharie, L. Cuthbert, 1823).
- Bruce, Philip Alexander, *Economic History of Virginia in the Seventeenth Century* (2 v., New York and London, Macmillan & Co., 1895).
- Buck, Solon Justus, *Illinois in 1818* (362 p., illus., map, Springfield, Illinois Centennial Commission, 1917).
- Caulkins, Frances Manwaring, *History of New London, Connecticut From the First Survey of the Coast in 1612, to 1852* (679 p., illus., New London [Case, Tiffany & Co.] 1852).
- *History of Norwich, Connecticut* (704 p., illus., Hartford, The Author, 1866).
- Chamberlain, Joshua L., *Maine: Her Place in History* (108 p., map, Augusta, Sprague, Owen & Nash, 1877).
- Channing, Edward, *The Narragansett Planters, a Study of Causes* (Johns Hopkins University Studies in Historical and Political Science, ser. 4, pt. 3, 23 p., Baltimore, Johns Hopkins Press, 1886).
- Chapman, Charles Edward, *The Founding of Spanish California, the Northwestward Expansion of New Spain, 1687-1783* (xxxii, 485 p., illus., maps, New York, Macmillan Co., 1916).
- Coffin, Joshua, *A Sketch of the History of Newbury, Newburyport, and West Newbury, From 1635 to 1845* (416 p., illus., Boston, S. G. Drake, 1845).
- Cooley, Thomas McIntyre, *Michigan, A History of Governments* (376 p., map, Boston, New York, Houghton, Mifflin & Co., 1885).
- Day, Sherman, *Historical Collections of the State of Pennsylvania . . .* (708 p., illus., Philadelphia, G. W. Gorton, 1843).

- Diffenderffer, Frank Reid, *The German Immigration into Pennsylvania Through the Port of Philadelphia, 1700 to 1775: Pt. 2, The Redemptioners* (330 p., illus., Lancaster, The Author, 1900).
- Douglas-Lithgow, Robert A., *Nantucket: A History* (389 p., illus., map, New York and London, G. P. Putnam's Sons, 1914).
- Ellis, Franklin, and Samuel Evans, *History of Lancaster County, Pennsylvania . . .* (1101 p., illus., maps, Philadelphia, Everts & Peck, 1883).
- Elting, Irving, *Dutch Village Communities on the Hudson River* (Johns Hopkins University Studies in Historical and Political Science, ser. 4, no. 1, 68 p., Baltimore, Johns Hopkins Press, 1886).
- Engelhardt, Fr. Zephyrin, *The Missions and Missionaries of California* (4 v., San Francisco, James H. Barry Co., 1908-1916).
- Felt, Joseph Barlow, *Annals of Salem* (ed. 2, v. 2, illus., Salem, W. & S. B. Ives; Boston, J. Munroe & Co., 1845-49).
- Field, Edward, *State of Rhode Island and Providence Plantations at the End of the Century: A History* (v. 1, 3, illus., maps, Boston and Syracuse, Mason Publishing Co., 1902).
- Fiske, John, *Old Virginia and Her Neighbours* (2 v., maps, Boston and New York, Houghton, Mifflin & Co., 1897).
- Flower, George, *History of the English Settlement in Edwards County, Illinois, Founded in 1817 and 1818* (Chicago Historical Society's Collection, v. 1, 402 p., illus., Chicago, Fergus Printing Co., 1882).
- Foote, William Henry, *Sketches of North Carolina, Historical and Biographical* (557 p., New York, R. Carter, 1846).
- Ford, Thomas, *A History of Illinois, From Its Commencement as a State in 1818, to 1847* (477 p., Chicago, S. C. Griggs & Co., New York, Ivison & Phinney, 1854).
- Foster, William Eaton, ed., *Early Attempts at Rhode Island History . . . Materials for a History of Rhode Island*, collected by Theodore Foster (Rhode Island Historical Society, Collections, 134 p., Providence, 1885).
- Fuller, George Newman, *Economic and Social Beginnings of Michigan* (630 p., illus., maps, Lansing, Mich., Wynkoop Hallenbeck Crawford Co., 1916).
- Gregg, Alexander, *History of the Old Cheraws . . . 1730 to 1810* (546 p., illus., maps, New York, Richardson and Co., 1867).
- Que, Benjamin F., *History of Iowa From the Earliest Times to the Beginning of the Twentieth Century* (v. 1, New York, Century History Co., 1903).
- Halsey, Francis Whiting, *The Old New York Frontier . . . 1614-1800* (432 p., illus., New York, Charles Scribner's Sons, 1901).

- Haynes, George H., *Representation and Suffrage in Massachusetts, 1620-1691* (Johns Hopkins University Studies in Historical and Political Science, ser. 12, no. 8-9, 90 p., Baltimore, Johns Hopkins Press, 1894).
- Hazen, Henry Allen, *History of Billerica, Massachusetts* (509 p., illus., Boston, A. Williams & Co., 1883).
- Hittell, Theodore Henry, *History of California* (v. 2, San Francisco, Occidental Pub. Co., 1885).
- Holmes, Abiel, "The History of Cambridge," Massachusetts Historical Society, *Collections*, 1800 (ser. 1) 7:1-67 (Boston, 1801).
- Hughes, Anne Eugenia, *The Beginning of Spanish Settlement in the El Paso District* (University of California Publications in History, v. 1, no. 3, p. 295-392, Berkeley, University of California Press, 1914).
- Hutchinson, Thomas, *The History of the Colony of Massachusetts-Bay* (v. 1, Boston, Thomas & John Fleet, 1764).
- Innes, John H., *New Amsterdam and Its People* (365 p., illus., maps, New York, Charles Scribner's Sons, 1902).
- Johnson, Amandus, *The Swedish Settlements on the Delaware* (2 v., Philadelphia, University of Pennsylvania, 1911).
- Judd, Sylvester, *History of Hadley, Including the Early History of Hatfield, South Hadley, Amherst and Granby, Massachusetts* (504, 205 p., illus., Springfield, Mass., H. R. Hunting & Co., 1905).
- Kemper, Charles E., ed., "The Early Westward Movement of Virginia, 1722-1734," *Virginia Magazine of History and Biography*, 12:337-352 (1905).
- Kercheval, Samuel, *A History of the Valley of Virginia* (ed. 2, 347 p., Woodstock, Va., J. Gatewood, Printer, 1850).
- Kuhns, Levi Oscar, *The German and Swiss Settlements of Colonial Pennsylvania: A Study of the So-Called Pennsylvania Dutch* (268 p., New York, Henry Holt & Co., 1901).
- Lee, Francis Bazley, *New Jersey as a Colony and as a State* (4 v., illus., maps, New York, Publishing Society of New Jersey, 1902).
- Logan, John H., *A History of the Upper Country of South Carolina, From the Earliest Periods to the Close of the War of Independence* (v. 1, 521 p., Charleston, S. G. Courtenay & Co., Columbia, P. B. Glass, 1859).
- Love, William De Loss, *The Colonial History of Hartford, Gathered From the Original Records* (369 p., illus., Hartford, Conn., The Author, 1914).
- McCrary, Edward, *The History of South Carolina Under the Royal Government, 1719-1776* (847 p., illus., map, New York, London, Macmillan Co., 1899).

- Merrill, Joseph, *History of Amesbury . . . the First Seventeen Years of Salisbury . . . and Merrimac, From Its Incorporation to 1876* (451 p., illus., map, Haverhill, Mass., F. P. Stiles, 1880).
- Morriss, Margaret Shove, *Colonial Trade of Maryland, 1689-1715* (Johns Hopkins University Studies in Historical and Political Science, ser. 32, no. 3, 157 p., Baltimore, Johns Hopkins Press, 1914).
- Moses, John, *Illinois, Historical and Statistical* (2 v., Chicago, Fergus Printing Co., 1889).
- Newmark Harris, *Sixty Years in Southern California, 1852-1913* (xxviii, 688 p., illus., New York, Knickerbocker Press, 1916).
- O'Callaghan, E. B., *History of New Netherland; or, New York Under the Dutch* (ed. 2, 2 v., illus., maps, New York, D. Appleton & Co., 1855).
- Parton, James, "Cincinnati," *Atlantic Monthly*, 20:229-246 (1867).
- Pooley, William Vipond, *The Settlement of Illinois From 1830 to 1850* (University of Wisconsin, Bulletin 220, History ser., v. 1, no. 4, 309 p., maps, Madison, Wis., 1908).
- Quaife, Milo Milton, *Chicago and the Old Northwest, 1673-1835* (480 p., illus., map, Chicago, University of Chicago Press, 1913).
- Ramsay, David, *The History of South Carolina, From Its First Settlement in 1670, to the Year 1808* (2 v., illus., map, Charleston, David Longworth, 1809).
- Randall, E. O., "The Dunmore War," *Ohio Archaeological and Historical Society, Publications*, 11:169-197, maps (Columbus, 1903).
- Reynolds, John, *The Pioneer History of Illinois* (348 p., Belleville, Ill., N. A. Randall, 1852).
- Richman, Irving Berdine, *California Under Spain and Mexico, 1535-1847* (541 p., illus., maps, Boston and New York, Houghton Mifflin Co., 1911).
- Royce, Josiah, *California, From the Conquest in 1846 to the Second Vigilance Committee in San Francisco* (513 p., illus., map, Boston and New York, Houghton, Mifflin Co., 1886).
- Rush, Benjamin, "An Account of the Manners of the German Inhabitants of Pennsylvania," *Pennsylvania-German Society, Proceedings and Addresses*, 1908, 19(21):1-18, illus. (Lancaster, New Era Printing Co., 1910).
- Salley, A. S., Jr., *The History of Orangeburg County, South Carolina* (572 p., illus., maps, Orangeburg, S. C., R. S. Berry, Printer, 1898).
- Schafer, Joseph, *A History of the Pacific Northwest* (321 p., illus., maps, New York and London, Macmillan Co., 1905).

- Schaper, William A., "Sectionalism and Representation in South Carolina," *American Historical Association, Annual Report*, 1900, 1:237-463, maps (Washington, Government Printing Office, 1901).
- Scharf, John Thomas, *History of St. Louis City and County, From the Earliest Periods to the Present Day* (v. 1, illus., maps, Philadelphia, L. H. Everts & Co., 1883).
- *History of Maryland From the Earliest Period to the Present Day* (v. 2, Baltimore, J. B. Piet, 1879).
- and Thompson Westcott, *History of Philadelphia, 1609-1884* (v. 1, illus., maps, Philadelphia, L. H. Everts & Co., 1884).
- Sioussat, St. George Leakin, *Economics and Politics in Maryland, 1720-1750* (Johns Hopkins University Publication 21, no. 6-7, 84 p., Baltimore, Johns Hopkins Press, 1903).
- Smith, Samuel, *The History of the Colony of Nova-Caesaria, or New-Jersey* (573 p., Burlington, N. J., James Parker, 1765).
- Staats, Stephen, "The Occasional Address," *Oregon Pioneer Association, Transactions*, 1877, p. 46-59 (Salem, Oregon, E. M. Waite, 1878).
- Steiner, Bernard Christian, *Beginnings of Maryland, 1631-1639* (Johns Hopkins University Studies in Historical and Political Science, ser. 21, no. 8-10, 112 p., Baltimore, Johns Hopkins Press, 1903).
- *A History of the Plantation of Menunkatuck and of the Original Town of Guilford, Connecticut . . .* (538 p., Baltimore, The Author, 1897).
- Stiles, Henry Reed, *The History of Ancient Windsor, Connecticut . . .* (922 p., illus., maps, New York, C. B. Norton, 1859).
- Strong, Moses M., comp., *History of the Territory of Wisconsin, From 1836 to 1848* (637 p., Madison, Democrat Printing Co., 1885).
- Thwaites, Reuben Gold, "Notes on Early Lead Mining in the Fever (or Galena) River Region," *Wisconsin State Historical Society, Collections*, 13:271-292 (Madison, 1895).
- *The Story of Wisconsin* (389 p., illus., map, Boston, D. Lothrop Co., 1890).
- Turner, Frederick Jackson, "The First Official Frontier of the Massachusetts Bay," *Colonial Society of Massachusetts, Publications*, 17 (*Transactions*, 1913-14):250-271 (Boston, The Society, 1914).
- Valentine, David Thomas, *History of the City of New York* (404 p., illus., maps, New York, G. P. Putnam & Co., 1853).
- Walcott, Charles Hosmer, *Concord in the Colonial Period . . .* (172 p., Boston, Estes & Lauriat, 1884).

- Watson, John F., *Annals of Philadelphia and Pennsylvania* . . . (v. 2, illus., Philadelphia, Carey & Hart, 1845).
- Wayland, John Walter, *The German Element of the Shenandoah Valley of Virginia* (272 p., Charlottesville, Va., The Author, Michie Co., Printers, 1907).
- Weeden, William B., *Early Rhode Island; A Social History of the People* (381 p., illus., New York, Grafton Press, 1910).

Biographies

- Ellis, George E., *Life of John Mason* (Sparks Library of American Biography v. 3, ser. 2, Boston, C. C. Little & J. Brown, 1841).
- Hale, Edward Everett, "The Real Philip Nolan," *Mississippi Historical Society, Publications*, 4:281-329 (Oxford, Miss., 1901).
- Keeler, Lucy Elliott, "The Croghan Celebration," *Ohio Archaeological and Historical Society, Publications*, 16:1-112 (Columbus, 1907).
- Kirkpatrick, John Ervin, *Timothy Flint, Pioneer, Missionary, Author, Editor, 1780-1840* (331 p., illus., Cleveland, Arthur H. Clark Co., 1911).
- Lodge, Henry Cabot, *Alexander Hamilton* (306 p., Boston, Houghton, Mifflin & Co., 1882).
- Mitchell, Julia Post, *St. Jean de Crèvecoeur* (363 p., New York, Columbia University Press, 1916).
- Robertson, James R., "A Pioneer Captain of Industry in Oregon [Joseph Watt]," *Oregon Historical Society, Quarterly*, 4:150-167 (1903).
- Stevens, John Austin, *Albert Gallatin* (419 p., Boston, Houghton, Mifflin & Co., 1884).
- Thwaites, Reuben Gold, *Daniel Boone* (257 p., illus., New York, D. Appleton & Co., 1902).
- Williams, Charles Richard, "George Croghan," *Ohio Archaeological and Historical Society, Publications*, 12:375-409 (Columbus, 1903).

Economic (including Agricultural) Histories

- Adams, Romanzo, "Agriculture in Michigan: A Sketch," *Michigan Political Science Association, Publications*, 3(7):1-40 (1899).
- Avirett, James Battle, *The Old Plantation* (202 p., illus., New York, Chicago, etc., F. Tennyson Neely Co., 1901).
- Ballagh, James Curtis, "Introduction to Southern Economic History: The Land System," *American Historical Association, Annual Report*, 1897, p. 99-129 (Washington, Government Printing Office, 1898).

- Beach, William Morrow, "Milk-Sickness," Albert H. Buck, ed., *A Reference Handbook of the Medical Sciences*, 5:9-11 (New York, William Wood & Co., 1887).
- Benton, Elbert Jay, *The Wabash Trade Route in the Development of the Old Northwest* (Johns Hopkins University Studies in Historical and Political Science, ser. 21, no. 1-2, 112 p., Baltimore, Johns Hopkins Press, 1903).
- Bidwell, Percy Wells, "Rural Economy in New England at the Beginning of the Nineteenth Century," Connecticut Academy of Arts and Sciences, *Transactions*, 20:241-399 (New Haven, 1916).
- Bishop, John Leander, *A History of American Manufactures from 1608 to 1860 . . .* (ed. 3, 3 v., Philadelphia, E. Young & Co.; London, S. Low, 1868).
- Bogart, Ernest Ludlow, and Charles Manfred Thompson, eds., *Readings in the Economic History of the United States* (xxviii, 862 p., New York, Chicago [etc.], Longmans, Green & Co., 1916).
- Bonham, Lazarus N., "American Live Stock," Chauncey M. Depew, ed., *One Hundred Years of American Commerce, 1795-1895*, 1:220-230 (New York, D. O. Haynes & Co., 1895).
- Cabell, N. F., "Some Fragments of an Intended Report on the Post Revolutionary History of Agriculture in Virginia," with notes by E. G. Swem, *William and Mary College Quarterly Historical Magazine*, 26:145-168 (1918).
- Callender, Guy Stevens, ed., *Selections from the Economic History of the United States, 1765-1860, with Introductory Essays* (819 p., map, Boston, New York [etc.], Ginn & Co., 1909).
- Chittenden, Hiram Martin, *The American Fur Trade of the Far West* (v. 1, illus., maps, New York, F. P. Harper, 1902).
- Conan, Katharine, *Economic Beginnings of the Far West* (2 v., illus., maps, New York, Macmillan Co., 1912).
- *The Industrial History of the United States* (461 p., illus., maps, New York, Macmillan Co., 1910).
- DeVoe, Thomas Farrington, *The Market Book, Containing a Historical Account of the Public Markets in the Cities of New York, Boston, Philadelphia and Brooklyn . . .* (v. 1, New York, The Author, 1862).
- Eggleston, Edward, "Husbandry in Colony Times," *Century Magazine*, 27 (n.s. 5):431-449, illus. (1884).
- Gilbert, James Henry, *Trade and Currency in Early Oregon; A Study in the Commercial and Monetary History of the Pacific Northwest* (Columbia University Studies in History, Economics, and Public Law, v. 26, no. 1, 126 p., New York, Columbia University Press, 1907).

- Goodwin, Frank P., "Building a Commercial System," *Ohio Archaeological and Historical Society, Quarterly*, 16:316-339 (1907).
- "The Rise of Manufactures in the Miami Country," *American Historical Review*, 12:761-775 (1907).
- Harvey, Charles M., "The Story of the Santa Fé Trail," *Atlantic Monthly*, 104:774-785 (1909).
- Hibbard, Benjamin H., "The Settlement of Public Lands in the United States," *International Review of Agricultural Economics*, 61:97-117 (1916).
- Hill, Robert Tudor, *The Public Domain and Democracy; A Study of Social, Economic, and Political Problems in the United States in Relation to Western Development* (Columbia University Studies in History, Economics, and Public Law, v. 38, no. 1, 253 p., New York, Columbia University, 1910).
- Ingle, Edward, *Southern Sidelights; A Picture of Social and Economic Life in the South a Generation Before the War* (373 p., New York and Boston, T. Y. Crowell & Co., [1896]).
- James, Edmund Janes, *The Origin of the Land-Grant Act of 1862 (the So-Called Morrill Act) and Some Accounts of Its Author, Jonathan B. Turner* (139 p., Urbana-Champaign, University Press, 1910).
- Johnson, Emory Richard, and others, *History of Domestic and Foreign Commerce of the United States* (Carnegie Institution of Washington, Publication 215A, v. 1, Washington, Carnegie Institution of Washington, 1915).
- King, Isaac Fenton, "The Coming and Going of Ohio Droving," *Ohio Archaeological and Historical Society, Quarterly*, 17:247-253 (1908).
- Kittredge, George Lyman, *The Old Farmer and His Almanack* (403 p., illus., maps, Boston, W. Ware & Co., 1904).
- Paxson, Frederic Logan, "The Cow Country," *American Historical Review*, 22:65-82 (1916).
- Phillips, Ulrich B., ed., *Plantation and Frontier, 1649-1863* (A Documentary History of American Industrial Society, edited by John R. Commons and others, v. 1-2, Cleveland, Arthur H. Clark Co., 1910).
- Pitman, Frank Wesley, *The Development of the British West Indies, 1700-1763* (495 p., map, New Haven, Yale University Press, 1917).
- Pratt, L. E., "The Origin and History of the Willamette Woolen Factory," *Oregon Historical Society, Quarterly*, 3:248-259 (1902).
- Swem, Earl Gregg, comp., *A List of Manuscripts Relating to the History of Agriculture in Virginia*, collected by N. F. Cabell, and now in the Virginia State Library (Virginia State Library Bulletin, v. 6, no. 1, 20 p., Richmond, Davis Bottom, superintendent of public printing, January 1913).

- Taylor, Raymond Garfield, *Outlines of American Industrial History* (91 p., Manhattan, Kans., Kansas State Agricultural College, 1915).
- Treat, Payson Jackson, *The National Land System, 1785-1820* (426 p., New York, E. B. Treat & Co., 1910).
- Trimble, William J., "The Beginnings of the Industrial Revolution in American Agriculture, 1839-41," North Dakota State Agricultural College, *College and State*, 1, no. 5 (1917).
- *Introductory Manual for the Study and Reading of Agrarian History* (47 p., Fargo, N. Dak., 1917).
- "The Influence of the Passing of the Public Lands," *Atlantic Monthly*, 113:755-761 (1914).
- Van der Zee, Jacob, "The Roads and Highways of Territorial Iowa," *Iowa Journal of History and Politics*, 3:175-225 (1905).
- Wright, Chester Whitney, *Wool-Growing and the Tariff; A Study in the Economic History of the United States* (Harvard Economic Studies, v. 5, 362 p., Boston and New York, Houghton Mifflin Co., 1910).
- Young, F. G., "The Oregon Trail," *Oregon Historical Society, Quarterly*, 1:339-370 (1900).

Articles and Books on Cattle, Hogs, Horses, and Sheep

- Bonham, L. N., "The Origin and Development of the Poland-China Hog," Standard Poland-China Record Association, *The Standard Poland-China Record*, 1:22-33 (1887).
- Cambridge Natural History*, edited by S. F. Harmer and A. E. Shipley (10 v., illus., London, Macmillan & Co., 1895-1909).
- In v. 10, *Mammalia* (1902), by Frank Evers Beddard, see the following: hogs, p. 32, 199, 239-241, 275-279; horses, p. 239-241, 247-249; oxen, p. 317-321; sheep, p. 321-324.
- Dawson, Henry Clay, *The Hog Book; Embodying the Experience of Fifty Years in the Practical Handling of Swine in the American Cornbelt* (414 p., illus., Chicago, Breeder's Gazette, 1911).
- Dietrich, William, *Swine; Breeding, Feeding and Management* (312 p., illus., Chicago, Sanders Publishing Co., 1910).
- Encyclopaedia Britannica*, Ed. 11 (Cambridge, University Press, 1910).
- See the following articles: Cattle, 5:539-542; Heredity, 13:350-354; Horse, 13:712-725; Sheep, 24:817-822; Swine, 26:236-237; Variation and selection, 27:906-912.
- Gilbey, Sir Walter, *The Great Horse; or, The War Horse: from the Time of the Roman Invasion till its Development into the Shire Horse* (69 p., illus., London, Vinton & Co., 1899).

- Gilbey, Sir Walter, *Horses, Past and Present* (89 p., illus., London, Vinton & Co., 1900).
- Johnstone, James Hope Stewart, *The Horse Book: A Practical Treatise on the American Horse Breeding Industry as Allied to the Farm* (299 p., illus., Chicago, Sanders Publishing Co., 1907).
- Lydekker, Richard, *The Horse and Its Relatives* (286 p., illus., London, G. Allen & Co., 1912).
- *The Sheep and Its Cousins* (315 p., illus., London, G. Allen & Co., 1912).
- Nation, "American Cattle," *Nation*, 1:620-621; 2:45-46, 239-240 (Nov. 16, 1865, Jan. 11, Feb. 22, 1866).
- Osborn, Henry Fairfield, "The Evolution of the Horse in America (Fossil Wonders of the West)," *Century Magazine*, 69:3-17, illus. (November 1904).
- Powers, Stephen, *The American Merino: for Wool and for Mutton* (368 p., illus., New York, O. Judd Co., 1887).
- Ridgeway, William, *The Origin and Influence of the Thoroughbred Horse* (538 p., illus., Cambridge, University Press, 1905).
- Sanders, Alvin Howard, *A History of the Percheron Horse . . .* (602 p., illus., maps, Chicago, Breeder's Gazette Print, 1917).
- *Shorthorn Cattle* (840 p., illus., map, Chicago, Sanders Publishing Co., 1916).
- *The Story of the Herefords* (1087 p., illus., Chicago, Sanders Publishing Co., 1914).
- Weld, Mason Cogswell, and Charles du Haÿs, *The Percheron Horse in America*, by M. C. Weld; *In France*, by Charles du Haÿs (142 p., illus., New York, O. Judd Co., 1886).
- Wrightson, John, *Sheep Breeds and Management* (ed. 2, 235 p., illus., London, 1895).

SELECTED REFERENCES ON THE HISTORY OF LIVESTOCK RAISING
IN THE UNITED STATES TO 1860, PUBLISHED SINCE THE
THOMPSON MANUSCRIPT WAS COMPLETED

- Ashton, John, *Historic Ravenswood, Its Founders and Its Cattle; Preceded by a Brief History of the Shorthorn Breed up to the Period of Its Introduction into the United States* (158 p., illus., [Columbia, Mo., E. W. Stephens Pub. Co.] 1926).
- *A History of Hogs and Hog Production in Missouri* (Missouri State Board of Agriculture, *Monthly Bulletin*, v. 21, no. 1, 75 p., illus., Jefferson City, Mo., 1923).
- *History of Jack Stock and Mules in Missouri* (Missouri State Board of Agriculture, *Monthly Bulletin*, v. 22, no. 8, 63 p., illus., Jefferson City, Mo., 1924).
- *History of Shorthorns in Missouri Prior to the Civil War* (Missouri State Board of Agriculture, *Monthly Bulletin*, v. 21, no. 11, 87 p., illus., Jefferson City, Mo., 1923).
- Bell, James G., "A Log of the Texas-California Cattle Trail, 1854," edited by J. Evetts Haley, *Southwestern Historical Quarterly*, 35:208-237, 290-316; 36:47-66 (1932). Also reprinted with same title as a book (78 p. [Austin, Texas] 1932).
- Bidwell, Percy Wells, and John I. Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Carnegie Institution of Washington Publication 358, 512 p., illus., Washington, Carnegie Institution of Washington, 1925).
- Bowling, G. A., "The Introduction of Cattle into Colonial North America," *Journal of Dairy Science*, 25:129-154 (1942).
- Brogan, Evelyn, *Famous Horses of American History* (121 p., San Antonio, Texas, Forum Publishing Co., 1923).
- Business Historical Society, "An Early Chapter in the American Sheep Industry," *Business Historical Society, Bulletin*, 6(5):1-6, illus. (1932).
- Caldwell, George L., "A History of Cavalry Horses," *Cavalry Journal*, 37:543-557 (1928).
- Carrier, Lyman, *The Beginnings of Agriculture in America* (323 p., illus., New York, McGraw-Hill Book Co., 1923).
- Carter, William Giles Harding, *The Horses of the World; the Development of Man's Companion in War Camp, on Farm, in the Marts of Trade, and in the Field of Sports* (118 p., illus., Washington, National Geographic Society, 1923).

- Chard, Thornton, "Did the First Spanish Horses Landed in Florida and Carolina Leave Progeny?" *American Anthropologist*, 42:90-106, illus. (1940).
- Cherington, Paul T., "Wool Growing in the United States," National Association of Wool Manufacturers, *Bulletin*, 52:327-344 (1922).
- Clark, T. D., "Live Stock Trade between Kentucky and the South, 1840-1860," Kentucky State Historical Society, *Register*, 27:569-581 (1929).
- Cleland, Robert Glass, *The Cattle on a Thousand Hills: Southern California, 1850-1870* (327 p., San Marino, Huntington Library, 1941).
- Clemen, Rudolf Alexander, *The American Livestock and Meat Industry* (872 p., illus., New York, Ronald Press Co., 1923).
- *By-Products in the Packing Industry* (410 p., illus., Chicago, University of Chicago Press, 1927).
- Cole, Arthur Harrison, *The American Wool Manufacture* (2 v., illus., Cambridge, Harvard University Press, 1926).
- Connor, Louis George, "A Brief History of the Sheep Industry in the United States," American Historical Association, *Annual Report*, 1918, p. 89-197, maps (Washington, Government Printing Office, 1921).
- Culmer, Frederick A., ed., "Selling Missouri Mules down South in 1835," *Missouri Historical Review*, 24:537-549 (1930).
- Culver, Francis Barnum, *Blooded Horses of Colonial Days; Classic Horse Matches in America before the Revolution* (156 p., illus., Baltimore, The Author, 1922).
- Denhardt, Robert H., "The Role of the Horse in the Social History of Early California," *Agricultural History*, 14:13-22 (1940).
- "The Southwestern Cow-Horse," *Cattleman*, 25(7):21-23; (8):37, 38, 39, 42; (9):39, 40, 45; (10):93, 94, 96; (11):35-36, illus. (1938-1939).
- "Spanish Horses and the New World," *Historian*, 1:5-23 (1928).
- Dobie, J. Frank, "The First Cattle in Texas and the Southwest Progenitors of the Long-horns," *Southwestern Historical Quarterly*, 42:171-197 (1939), and *Cattleman*, 25(10):33, 35, 36, 37, 38, 40, 41, 42, 44, 45, 46, 47, 49, 50, 51 (1939).
- Edwards, Philip Leget, *The Diary of Philip Leget Edwards; The Great Cattle Drive from California to Oregon in 1837* (Rare Americana series, no. 4, 47 p., San Francisco, Grabhorn Press, 1932).
- Frantz, J. Andrew, "History of Cattle and Stock Yards in Lancaster County prior to 1800," Lancaster County Historical Society, *Papers*, 18(3):41-46 (1924).

- Garrard, Charles T., "Introduction of Imported Cattle in Kentucky," *Kentucky State Historical Society, Register*, 29:400-415, 30:37-60 (1931-1932).
- Gow, Robert M., *The Jersey: An Outline of Her History during Two Centuries - 1734-1935* (539 p., illus., New York, American Jersey Cattle Club, 1936).
- Gray, Lewis Cecil, *History of Agriculture in the Southern United States to 1860 . . .* assisted by Esther Katherine Thompson (Carnegie Institution of Washington Publication 430, 1086 p., maps, Washington, Carnegie Institution of Washington, 1933).
- Guyol, Louise Hubert, "Our Ancestral Animals," *Americana*, 26:489-501 (1932).
- Haines, Francis, "The Northward Spread of Horses among the Plains Indians," *American Anthropologist*, 40:429-437, map (1938).
- "Where Did the Indians Get Their Horses?" *American Anthropologist*, 40:112-117 (1938).
- Harrison, Fairfax, *The Equine F. F. Vs. A Study of the Evidence for the English Horses Imported into Virginia before the Revolution* (184 p., illus., Richmond, privately printed, Old Dominion Press, 1928). Printed in part with the same title in the *Virginia Magazine of History and Biography*, 35:329-370, illus. (1927).
- Haskett, Bert, "Early History of the Cattle Industry in Arizona," *Arizona Historical Review*, 6(4):3-42 (1935).
- "History of the Sheep Industry in Arizona," *Arizona Historical Review*, 7(3):3-49 (1936).
- Hedrick, Ulysses Prentiss, *A History of Agriculture in the State of New York* (462 p., illus. [Albany, J. B. Lyon Co.] for the New York State Agricultural Society, 1933).
- Hopkins, John Abel, Jr., *Economic History of the Production of Beef Cattle in Iowa* (Iowa economic history series no. 8, 248 p., maps, Iowa City, State Historical Society of Iowa, 1928). Also published with the same title in *Iowa Journal of History and Politics*, 26:65-143, 204-294, 415-460 (1928).
- Kingston, C. S., "Introduction of Cattle into the Pacific Northwest," *Washington Historical Quarterly*, 14:163-185 (1923).
- Leavitt, Charles T., "Attempts to Improve Cattle Breeds in the United States, 1790-1860," *Agricultural History*, 7:51-67 (1933).
- "Transportation and the Livestock Industry of the Middle West to 1860," *Agricultural History*, 8:20-33 (1934).
- Loehr, Rodney C., "The Influence of English Agriculture on American Agriculture, 1775-1825," *Agricultural History*, 11:3-15 (1937).

- Lomax, Alfred L., "History of Pioneer Sheep Husbandry in Oregon [1810-1876]," *Oregon Historical Quarterly*, 29:99-143 (1928).
- Loomis, Frederic Brewster, *The Evolution of the Horse* (233 p., illus., Boston, Marshall Jones Co., 1926).
- McDonald, J. J., "The American Cattle Industry," *Americana*, 34:393-408 (1940).
- "The American Sheep Industry," *Americana*, 34:55-71 (1940).
- Morrison, Robert, *The Individuality of the Pig: Its Breeding, Feeding, and Management* (524 p., illus., New York, E. P. Dutton & Co., 1928).
- Oliphant, J. Orin, "Winter Losses of Cattle in the Oregon Country, 1847-1890," *Washington Historical Quarterly*, 23:3-17 (1932).
- Parr, Elizabeth L., "Kentucky's Overland Trade with the Ante-Bellum South," *Filson Club and University of Louisville, Historical Quarterly*, 2:71-81 (1928).
- Phillips, Deane, "Horse Raising in Colonial New England," Cornell University Agricultural Experiment Station, *Memoir*, 54:883-941 (Ithaca, 1922).
- Pirtle, Thomas Ross, *History of the Dairy Industry* (645 p., illus., maps, Chicago, Mojonnier Brothers, Company, 1926).
- Plumb, Charles Sumner, "Felix Renick, Pioneer," *Ohio Archaeological and Historical Quarterly*, 33:3-66 (1924).
- "Seth Adams, a Pioneer Ohio Shepherd," *Ohio Archaeological and Historical Quarterly*, 43:1-34, illus. (1934).
- Purcell, Richard Joseph, *Connecticut in Transition, 1775-1818* (471 p., maps, Washington, American Historical Association, 1918). See especially p. 153-172 on the introduction of Merino sheep.
- Sanders, Alvin Howard, *The Cattle of the World; Their Place in the Human Scheme, Wild Types and Modern Breeds in Many Lands . . .* paintings by Edward Herbert Miner (142 p., illus., Washington, National Geographic Society, 1926).
- *A History of Aberdeen-Angus Cattle . . .* (1042 p., illus., Chicago, New Breeder's Gazette, 1928).
- Sheffy, L. F., "The Spanish Horse on the Great Plains [1540-1880]," *Panhandle-Plains Historical Review*, 6:80-101 (1933).
- Smith, Harry Worcester, *A Sporting Family of the Old South* (477 p., Albany, N. Y., J. B. Lyon Co., 1936).
- Stong, Philip Duffield, *Horses and Americans* (333 p., illus., New York, Frederick A. Stokes Co., 1939).

Swanton, John R., "The Survival of Horses Brought to North America by De Soto," *American Anthropologist*, 41:170-171 (1939).

Tilley, Nannie M., "Timothy Pickering on Beef Cattle, Dairying, and Cider," *Agricultural History*, 15:98-111 (1941).

United States Department of Agriculture, *Yearbook*, 1918-1941 (Washington, Government Printing Office, 1919-1942).

Note the following articles: E. W. Sheets, and others, "Our Beef Supply," 1921, p. 227-322, illus., maps; C. W. Larson, and others, "The Dairy Industry," 1922, p. 281-394, illus., maps; E. Z. Russell, and others, "Hog Production and Marketing," 1922, p. 181-280, illus., maps; D. A. Spencer, and others, "The Sheep Industry," 1923, p. 229-310, illus., maps; W. H. Black, "Beef and Dual-Purpose Cattle Breeding," 1936, p. 863-886, illus.; H. C. McPhee and O. G. Hankins, "Swine—Some Current Breeding Problems," 1936, p. 887-905, illus.; H. C. McPhee and D. A. Spencer, "Breeding Problems with Sheep," 1936, p. 907-928, illus.; J. O. Williams and William Jackson, "Improving Horses and Mules," 1936, p. 929-946, illus.; R. R. Graves and M. H. Fohrman, "Superior Germ Plasm in Dairy Herds," 1936, p. 997-1141; Everett E. Edwards, "American Agriculture—The First 300 Years," 1940, p. 171-276.

Vernon, Arthur, *The History and Romance of the Horse* (525 p., Boston, Waverly House, 1939).

Wilson, Harold F., "The Rise and Decline of the Sheep Industry in Northern New England," *Agricultural History*, 9:12-40 (1935).

Woodward, Carl Raymond, *The Development of Agriculture in New Jersey, 1640-1880* (321 p., illus., New Brunswick, Agricultural Experiment Station, Rutgers University, 1927).

Woodward, William, "The Thoroughbred Horse and Maryland," *Maryland Historical Magazine*, 17:139-162 (1922).

Woolley, George Walter, "Genetic History of Cattle in Wisconsin," *Wisconsin Academy of Sciences, Arts and Letters, Transactions*, 30:131-178 (Madison, 1937).

AGRICULTURAL HISTORY SERIES

- No. 1. *Some General Histories of Latin America*, by Wayne D. Rasmussen. 7 p. Ed. 1, April 1941. Ed. 2, April 1942.
- No. 2. *Some Landmarks in the History of the United States Department of Agriculture*, by T. Swann Harding. 94 p. January 1942.
- No. 3. *Price Administration, Priorities, and Conservation Affecting Agriculture in the United States, in 1917-18*, by Arthur G. Peterson. 16 p. November 1941.
- No. 4. *The Hoch-Smith Resolution; A Study of a Congressional Mandate on Transportation*, by E. O. Malott. 117 p. July 1942.
- No. 5. *A History of Livestock Raising in the United States, 1607-1860*, by James Westfall Thompson. 182 p. November 1942.

