



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.

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE



BULLETIN No. 755

Contribution from the Bureau of Crop Estimates
LEON M. ESTABROOK, Chief



Washington, D. C.



March 19, 1919

GEOGRAPHICAL PHASES OF FARM PRICES: OATS.

By L. B. ZAPOLEON, *formerly of the Division of Crop Records.*

CONTENTS.

	Page.		Page.
Price maps.....	2	Receipts, shipments, and consumption of	
Survey of regional differences in farm prices		chief markets.....	10
of oats.....	2	Price zones flexible.....	11
Price levels and trade routes.....	2	Sectional price ratios changing with economic	
Disposition of United States oat crop.....	4	transformations.....	11
Local variation in uses of oats.....	5	Retrospective view, 1871 to 1915.....	11
Production, consumption, and marketings,		Trend of yields to the acre.....	13
by States and sections.....	6	Trend of values to the acre.....	12
Local price factors.....	6	Sectional changes in production of oats.....	13
Isolated areas.....	8	Price vs. cost of production.....	13
Local variations in demand.....	8	Appendix: Average farm prices of oats, by	
Costs of hauling to shipping points.....	9	counties, 1910-1914.....	21
Urban markets.....	10		

INTRODUCTION.

The price a farmer gets for his products varies greatly according to the section of the country in which he is situated. For some crops—the staples even—twice as high a price level frequently prevails in one part of the United States as in another.

The charting of geographic variations in farm or producers' prices has possibilities of practical usefulness. General price levels of most agricultural products fluctuate constantly, of course; but as between two sections the difference in the farmers' price of a product remains approximately the same. This price advantage or disadvantage differs with each product, so that a region of high prices for one may have low prices for another.

In this bulletin a survey is made of the sectional differences throughout the United States in the producers' prices of oats. Some consideration is also given to the influence of producing areas, trade routes and consuming centers upon such variations, and to local factors which qualify price advantage—factors such as relative yields in bushels to the acre and costs of production.

PRICE MAPS.

Sectional differences in the farmers' price of oats have been charted on Maps 1 and 2. In Map 1 a price unit of 10 cents has been used to show tendencies due to broad general influences, as distinct from the minor variations due to local factors. Minor variations are shown in Map 2, which is more detailed.

The farm prices of oats, by counties, which form the base of these maps—averages by counties for the five years, 1910–1914—are given in the Appendix; also a further explanation of data and methods.

SURVEY OF REGIONAL DIFFERENCES IN FARM PRICES OF OATS.

Lowest prices paid for oats to farmers are along the northern boundary of the United States, from Ohio westward. The minimum price (Map 2) is seen in adjoining parts of North Dakota and Minnesota, in the north-central part of the country. From this zone the price levels of oats graduate upward in the various directions. Eastward through the grain belt, as far as Ohio, prices rise slowly, but through the Atlantic States a more rapid rise takes place; the increases are gradual westward also, toward the Pacific coast. It is in the South that the higher prices are most noteworthy. Highest prices are paid to growers of oats in the southeast—in Florida, Georgia, and South Carolina—where the prices are more than twice as high as in the zone of minimum price.

PRICE LEVELS AND TRADE ROUTES.

Map 3 shows the relative importance of different parts of the United States in the production of oats, according to the census for the year 1909.

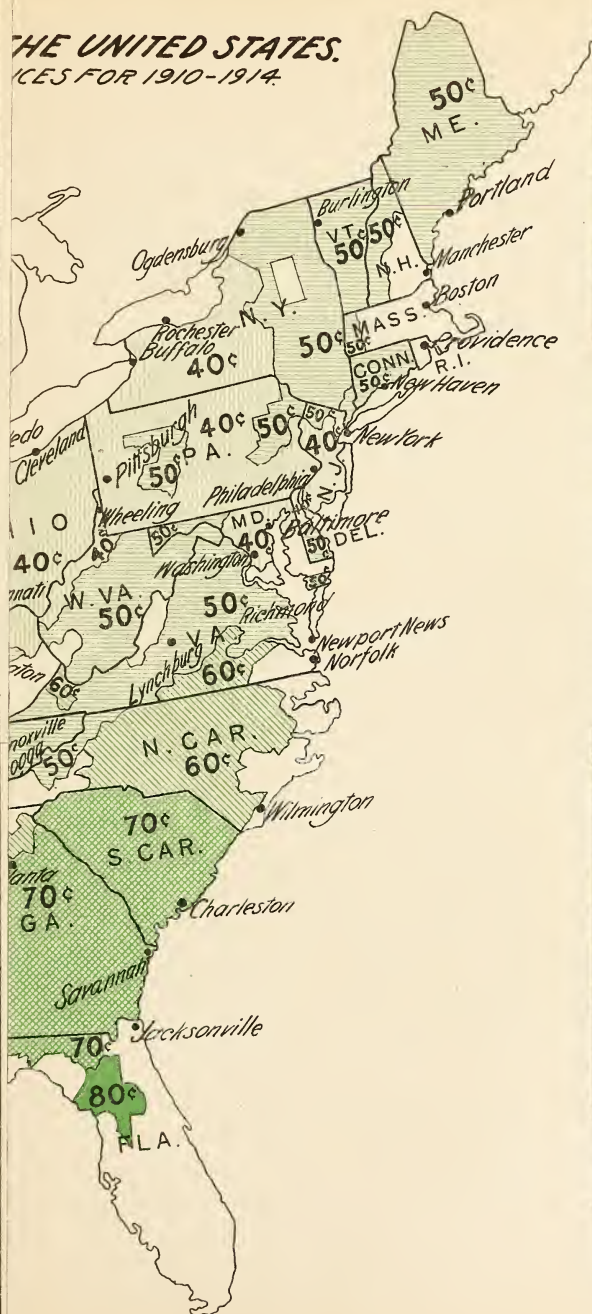
Although oats are a northern crop, their production within the United States is more general than that of any of the other cereals, because they can be grown on a variety of soils, because they fit readily into crop rotations, and because the practice of fall sowing in the South has made it possible to grow oats with good returns in that section. But the great bulk of the crop is produced in the sections of lowest price.

It will be observed that the zones of low price coincide with areas of dense and surplus production. A price divide appears between sections which ship to the East and South and those which ship to the West and South. The line of demarcation is indicated, roughly, by the territory of minimum price, which is remotely situated with regard to the markets in either direction.

Prices paid to producers of oats attain higher levels toward all points of the compass, rising steadily, as a rule, with distance from this region of lowest price. Emerging from the sections of large

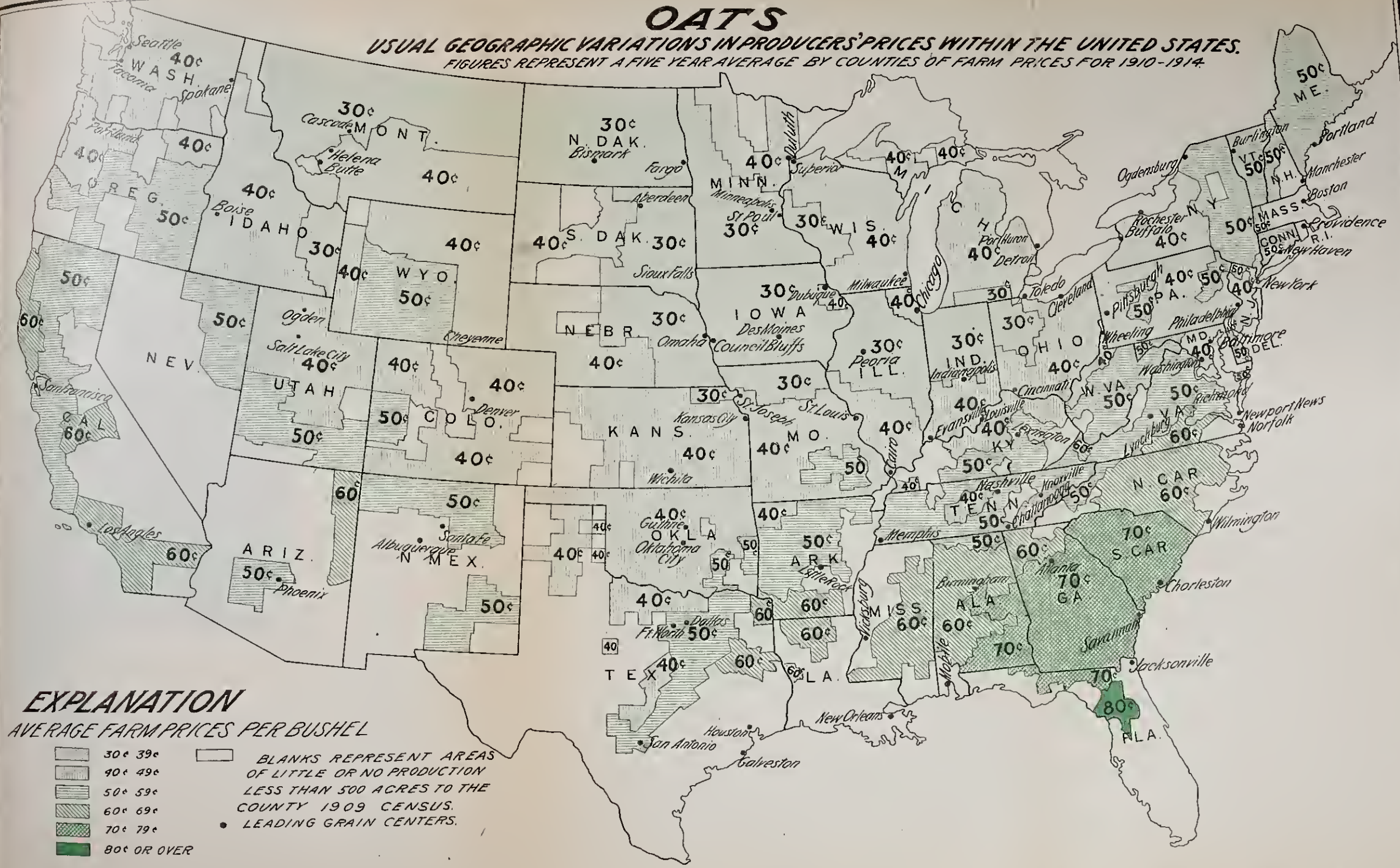
THE UNITED STATES.

ICES FOR 1910-1914.



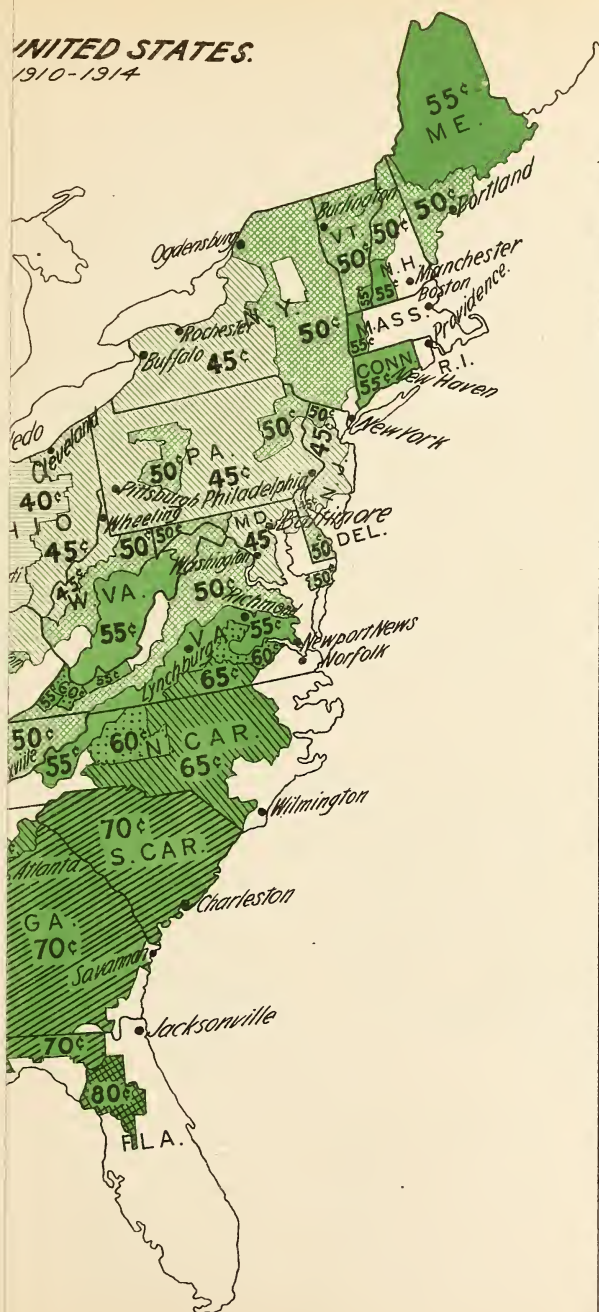
OATS

USUAL GEOGRAPHIC VARIATIONS IN PRODUCERS' PRICES WITHIN THE UNITED STATES.
FIGURES REPRESENT A FIVE YEAR AVERAGE BY COUNTIES OF FARM PRICES FOR 1910-1914.



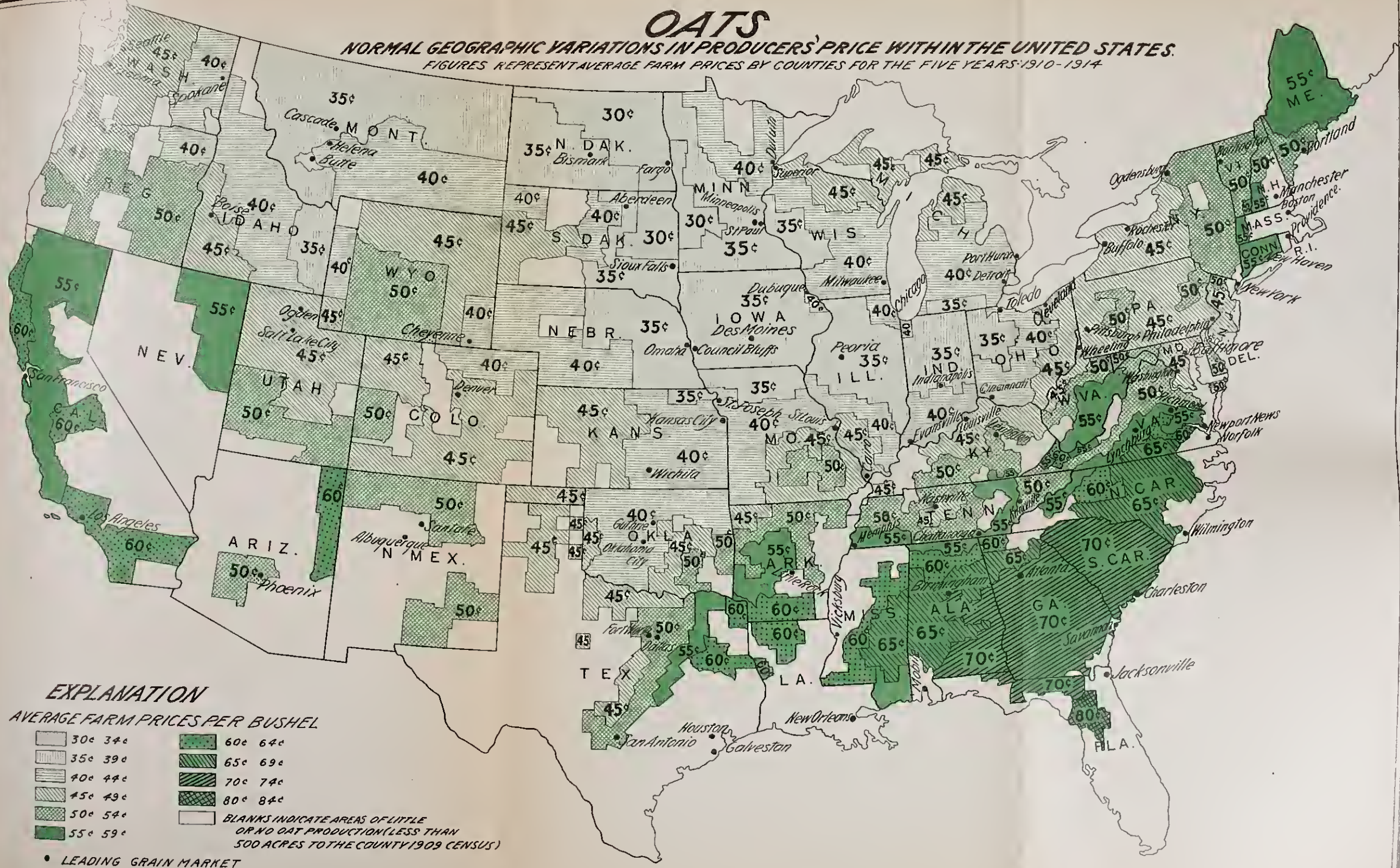
UNITED STATES.

1910-1914

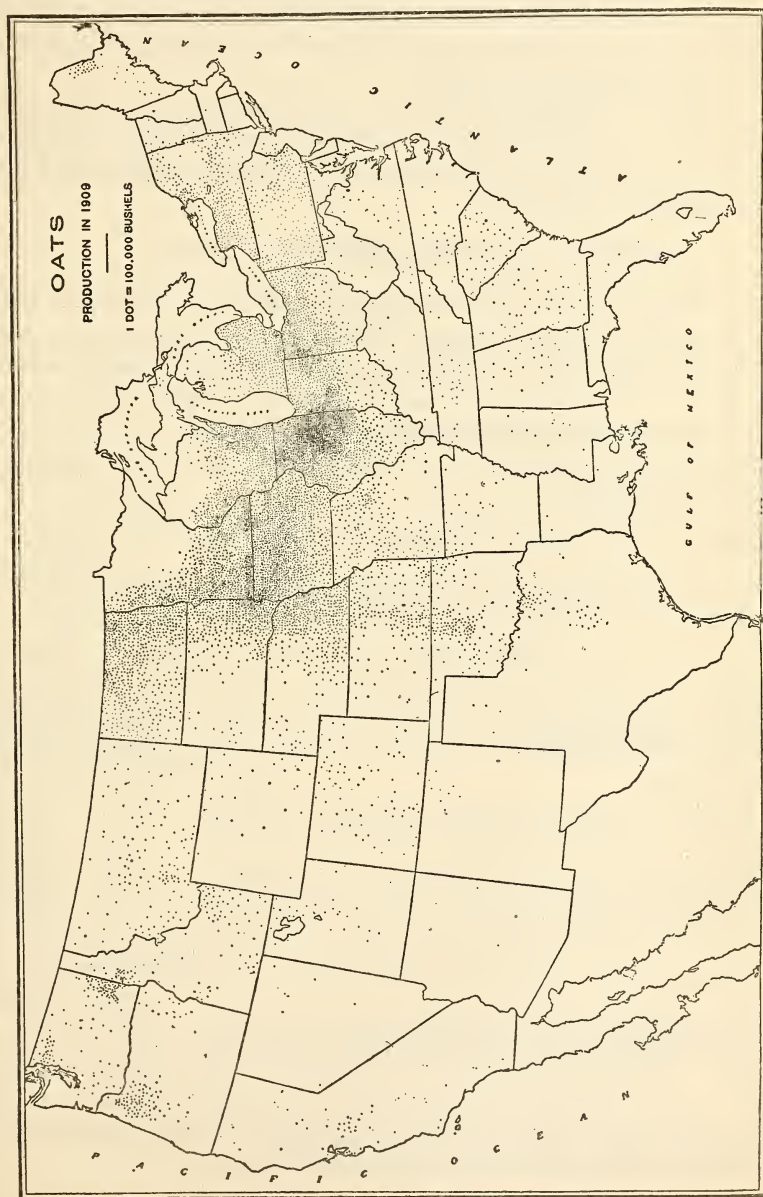


OATS

NORMAL GEOGRAPHIC VARIATIONS IN PRODUCERS' PRICE WITHIN THE UNITED STATES.
FIGURES REPRESENT AVERAGE FARM PRICES BY COUNTIES FOR THE FIVE YEARS 1910-1914



production, the upward movement in the price levels becomes more pronounced. In deficiency regions near the main channels of trade, price increases are small. Highest prices are paid to producers in the southeastern cotton States—areas of insufficient oat production which are farthest removed from the surplus-producing sections.



MAP 3.

Compared to such products as corn or vegetables, gradual elevation in the price levels of oats is a distinguishing characteristic, as well as comparative regularity in the upward slope of prices from the region of minimum price. In the commerce in oats, a weight per bushel nearly half that of wheat or corn lowers the freight charges. Moreover, the rate per 100 pounds is sometimes less than for wheat, consequently oats move at nearly half the expense of other cereals, and the greater the distance the more marked does this difference in costs of transportation become.

The trend of the price levels is evidently closely related to such influences as the location of areas of surplus and deficient production, the local uses of oats, and to the group of factors which enter into the distributive movement.

DISPOSITION OF UNITED STATES OAT CROP.

The price of oats is dominated by the demand for them as a feed-stuff; as such by far the larger part of the crop is consumed on farms, and second in importance is the consumption by live stock in cities. Imports and exports are normally unimportant, and only a small part of the crop is used for human food and for seed.

A few general phases of the uses and distributive movement of oats are shown in Table 1.

TABLE 1.—*Oats: Approximate distribution of the harvest of the United States.*

[Figures are five-year averages for the years 1911 to 1915. Number of bushels rounded to the nearest million.]

Item.	Per cent.	Bushels.
Production.....	100.0	1,229,000,000
Shipped out of counties where grown ¹	29.0	361,000,000
Remaining in counties where grown ¹	71.0	868,000,000
Farm consumption: ²		
Horses and mules.....	46.4	570,000,000
Milch cows.....	5.0	61,000,000
Other cattle.....	1.8	22,000,000
Swine.....	1.8	22,000,000
Sheep.....	1.8	22,000,000
Poultry.....	2.2	27,000,000
Human beings.....	.9	12,000,000
Seed.....	7.6	94,000,000
Other or doubtful.....	4.5	55,000,000
Total.....	72.0	885,000,000
Not used on farms:		
Exports.....	3.9	48,000,000
Consumed in merchant flour mills.....	4.1	50,000,000
Other urban uses, principally consumption by over 3,000,000 horses in cities, also human food (rolled oats and "breakfast foods").....	20.0	246,000,000
Total.....	28.0	344,000,000

¹ In the census year 1909, total sales of oats from farms constituted 32.7 per cent of the crop. As in the same year shipments out of counties where grown amounted to 25.9 per cent, the difference represents approximately the local sales, amounting to 6.8 per cent of the crop.

² U. S. Department of Agriculture. Farmers' Bulletin 629, p. 8. (1914.)

As less than 4 per cent of the national production was exported in 1911-1915, on an average, it is evident that domestic requirements absorbed nearly the entire crop.

Farm consumption absorbs 72 per cent of the crop. According to the 1909 census only a third of the harvest is sold, the remaining two-thirds never leaving the counties in which it is produced. A small part of the third sold is shipped back to farms for consumption.

Urban markets receive about a third of the national production. This third includes the export oats and the small percentage shipped to farms, but most of it is for urban consumption. In urban consumption the chief item is the requirement for horses. Other items are the quantity which enters merchant flour mills, about 50 million bushels, and the uses for human food in the form of rolled oats and breakfast foods. The latter uses take up the higher grades of oats. The census for 1909 reported 50 million bushels consumed in merchant flour mills, of which 36 million bushels were manufactured "chiefly for human food" and 14 million bushels "chiefly for stock feed." In 1909 the quantity entering custom flour mills was reported to be 13 million bushels.

Uses of oats may be grouped under the four headings: (1) Live stock consumption, (2) seed, (3) human consumption, and (4) export. Many million bushels are required for seed, human consumption, and export, but such uses do not absorb normally more than one-fourth of the crop.

Requirements for live stock, according to an estimate made in 1914, took up approximately three-fourths of the production of the United States, of which more than half a billion bushels, or over 60 per cent of the oats used on farms, were fed to horses and mules. Adding to this figure the quantities fed to animals not on farms, the aggregate consumption by horses and mules was possibly at least one-half of the national production.

LOCAL VARIATION IN USES OF OATS.

There is much variation throughout the country in farm practice as to feeding or selling, in the various uses of oats, and in methods of marketing. Used interchangeably with other crops, consumption in any section depends upon price, local production, and the abundance of other feeds.

Where corn is scarce and high in price, as in the Pacific States, a larger use is made of oats and barley for feeding purposes. In many sections of the West and South, oats are cut for hay. A special investigation for the State of Tennessee¹ showed that about 49 per cent of the crop of the State was fed in the straw and 51 per cent was thrashed.

¹ Monthly Crop Report, March, 1916, p. 21.

PRODUCTION, CONSUMPTION, AND MARKETINGS, BY STATES AND SECTIONS.

An idea of the relation of production to consumption, surplus and deficiency in each State and section, and the direction of the trade currents may be gained from Table 2.

It will be noted that three-fourths of the national oat crops of 1911-1915 were produced within the two divisions comprising the North Central States, which contain but 17 per cent of the total land area. This area embraces the regions of lowest farm price. It is the greatest grain and live-stock producing region, and most of the oats raised is consumed locally. However, the fraction of the crop which moves from this section constitutes the bulk of the commercial crop in the United States.

"Shipments out of counties where grown" in Table 2 may be said as a rule to represent the fraction which enters commercial channels, the rest of the crop remaining for local consumption.

In the census report for the year 1909, the sales of oats from farms were reported as 32.7 per cent of production. In the same year shipments out of counties where grown amounted to 25.9 per cent. The difference, 6.8 per cent of the crop, would appear to constitute the local sales.

Nearly 84 per cent of all the oats entering general trade channels originates within the North Central States. Yet this 84 per cent of the total commercial oats constitutes only a third of the production of this region, the remaining two-thirds being consumed on the farms where grown. The oat crop of the Pacific Northwest, with that of adjacent territory, enters normally into a distinct trade westward, the surplus over domestic needs being exported via the Pacific. If from the total commercial oats the figures for the far Western States be deducted, the concentration of production in the North Central States becomes still more pronounced compared with the rest of the country. The surplus from this north central section evidently supplements deficient production in other regions east of the Rocky Mountains and furnishes the bulk of the export oats. All other sections produce less than requirements, although some small areas therein produce surpluses. Details are given in Table 2.

LOCAL PRICE FACTORS.

THE GENERAL PRICE TREND AND LOCAL VARIATIONS.

Map 2, showing geographic differences in the farm price of oats, is designed to show local variations in the general price zones. It is based upon the same data as Map 1, except that a 5-cent unit has been used to throw into relief local deviations and minor counter-currents to the general drift of the price movement. The basic figures and an explanation as to methods are given in the appendix (pp. 21-28).

TABLE 2.—*Oats: Production and commercial movement.*

[Five-year average, 1911-1915.]

State and geographic division.	Production.			Shipped out of counties where grown.		
	Quantity.	Per cent of United States production.	Per capita.	Quantity.	Per cent of production of State or division.	Per cent of total shipments.
	<i>Thousand bushels.</i>		<i>Bushels.</i>	<i>Thousand bushels.</i>		
United States.....	1,228,765	100.0	12.6	360,560	29	100.0
New England.....	9,789	.8	1.4	149	2	(¹)
Middle Atlantic.....	80,401	6.5	3.9	4,930	6	1.4
South Atlantic.....	32,461	2.6	2.5	1,385	4	.4
East North Central.....	395,331	32.2	20.8	144,601	37	40.1
West North Central.....	527,674	42.9	43.8	157,009	30	43.5
East South Central.....	21,558	1.8	2.5	1,856	9	.5
West South Central.....	60,946	5.0	6.4	15,813	26	4.4
Mountain.....	65,282	5.3	22.2	20,442	31	5.7
Pacific.....	35,323	2.9	7.4	14,375	41	4.0
New England:						
Maine.....	5,452	.4	7.2	112	2	(¹)
New Hampshire.....	441	(¹)	1.0	4	1	(¹)
Vermont.....	3,178	.3	8.8	32	1	(¹)
Massachusetts.....	305	(¹)	.1	1	(¹)	(¹)
Rhode Island.....	58	(¹)	.1	0	0	0
Connecticut.....	355	(¹)	.3	0	0	0
Middle Atlantic:						
New York.....	42,500	3.4	4.4	2,331	5	.6
New Jersey.....	2,024	.2	.7	216	11	.1
Pennsylvania.....	35,877	2.9	4.4	2,383	7	.7
South Atlantic:						
Delaware.....	121	(¹)	.6	12	10	(¹)
Maryland.....	1,309	.1	1.0	167	13	.1
Virginia.....	4,108	.3	1.9	285	7	.1
West Virginia.....	2,774	.2	2.1	60	2	(¹)
North Carolina.....	4,864	.4	2.1	97	2	(¹)
South Carolina.....	7,988	.7	5.1	296	4	.1
Georgia.....	10,429	.8	3.8	439	4	.1
Florida.....	868	.1	1.1	19	2	(¹)
East North Central:						
Ohio.....	64,308	5.2	13.0	21,668	34	6.0
Indiana.....	54,731	4.5	19.8	23,801	43	6.6
Illinois.....	145,962	11.9	24.7	72,156	49	20.0
Michigan.....	50,948	4.1	17.3	12,411	24	3.4
Wisconsin.....	79,382	6.5	32.8	14,565	18	4.1
West North Central:						
Minnesota.....	104,457	8.5	47.9	30,449	29	8.4
Iowa.....	175,081	14.2	78.8	77,507	44	21.5
Missouri.....	27,807	2.3	8.3	3,772	14	1.0
North Dakota.....	73,436	6.0	111.1	13,200	18	3.7
South Dakota.....	44,507	3.6	69.2	13,992	31	3.9
Nebraska.....	57,977	4.7	47.0	12,439	21	3.4
Kansas.....	44,409	3.6	25.2	5,650	13	1.6
East South Central:						
Kentucky.....	3,893	.3	1.7	172	4	(¹)
Tennessee.....	6,967	.6	3.1	1,313	19	.4
Alabama.....	7,455	.6	3.3	212	3	.1
Mississippi.....	3,243	.3	1.7	159	5	(¹)
West South Central:						
Louisiana.....	1,429	.1	.8	166	12	(¹)
Texas.....	29,803	2.5	7.1	10,433	35	2.9
Oklahoma.....	23,653	1.9	12.2	4,953	21	1.4
Arkansas.....	6,061	.5	3.7	261	4	.1
Mountain:						
Montana.....	23,103	1.9	55.1	7,243	31	2.0
Wyoming.....	8,179	.7	50.2	1,846	23	.5
Colorado.....	11,587	.9	13.1	3,040	26	.8
New Mexico.....	1,867	.1	5.0	381	20	.1
Arizona.....	298	(¹)	1.3	37	12	(¹)
Utah.....	4,340	.4	10.7	1,103	25	.3
Nevada.....	499	(¹)	5.3	83	17	(¹)
Idaho.....	15,409	1.3	40.7	6,709	44	1.9
Pacific:						
Washington.....	14,035	1.1	10.4	6,409	46	1.8
Oregon.....	14,040	1.2	18.5	4,570	33	1.3
California.....	7,248	.6	2.7	3,396	47	.9
United States.....	1,228,765	100.0	12.6	360,560	29	100.0
Exports (including oatmeal).....	48,291	3.9				
Imports.....	5,353	.4				

¹ Less than one-tenth of 1 per cent.

Examination of Map 2 will disclose an irregular slope in the price levels in a number of instances. A varying rate of increase in the upward trend is also in evidence. The deviations from the general trend are not so frequent or pronounced as in the case of farm products which have comparatively local markets, or where cost of transportation, incident to greater bulk, represents a larger proportion of market values. This lower cost of shipping oats from one section to another tends to regulate and reduce the price differences between the two sections.

Price levels are more irregular and rise more rapidly southward than to the east or west. A number of factors contribute to this condition. On the north, the Canadian surplus is a factor to be reckoned with; other factors in this section are cheaper water transportation via the Great Lakes, availability of other feeds, and the organization of the grain trade.

ISOLATED AREAS.

The existence or absence of adequate transportation facilities has a strong influence on the price zones. An isolated region has practically a local market, influenced little by outside market conditions. The prices in the mountainous areas are out of line with prices in surrounding territory. Illustrations of this are seen in Appalachian Mountain regions and the Ozark section in Missouri.

LOCAL VARIATIONS IN DEMAND.

The elasticity of domestic demand and supply and the availability of substitutes are indicated by the fact that during the years 1911 to 1916 the annual variation in consumption of oats ranged from 20 million to 600 million bushels.

Much variation exists throughout the country in the relation of production to consumption, in farm practice as to feeding or selling, and in the various uses of oats and methods of marketing. Used interchangeably with other crops, consumption in any section depends upon price, local production, and the abundance of other feeds. Thus in the important oat-producing States west of the Mississippi—which are unfavorably situated as to the trade routes owing to distance and higher costs of transportation—a considerably larger proportion of the crop is retained for farm consumption than in the important surplus-producing States east of the Mississippi. The great variation, section by section, in the farm consumption of oats was indicated in Table 2 in the quantities remaining in the counties where grown.

COSTS OF HAULING TO SHIPPING POINTS.

Prices are influenced also by distance from shipping points, condition of wagon roads, and other things affecting wagon transportation.

Table 3 gives cost of hauling as estimated for 1906. Such costs are frequently higher than the costs of long shipments by rail or water.

TABLE 3.—Average cost of hauling oats from farms to shipping points.¹

[Cost refers to expense for round trips.]

State and geographic division.	Number of counties reported.	Average—					From most remote farms to shipping points—				
		Miles to shipping point.	Days for round trip.	Pounds in one load.	Cost per load.	Cost per 100 pounds.	Miles to shipping point.	Days for round trip.	Pounds in one load.	Cost per load.	Cost per 100 pounds.
North Atlantic:											
New York.....	8	7.8	0.6	2,619	\$2.21	\$0.08	25.0	1.5	3,000	\$6.75	\$0.22
Pennsylvania.....	24	7.1	.7	2,875	2.48	.09	20.0	1.0	2,000	2.50	.12
South Atlantic:											
Virginia.....	8	7.5	.7	2,644	2.28	.09	18.0	2.0	2,200	5.00	.23
West Virginia.....	5	10.0	.8	2,410	3.12	.13	20.0	2.0	1,750	6.00	.34
Georgia.....	8	12.7	1.1	1,575	2.62	.17	30.0	2.5	2,000	5.00	.25
North Central:											
Ohio.....	46	6.2	.6	3,120	1.96	.06	30.0	2.0	2,000	8.00	.40
Indiana.....	46	6.6	.6	3,021	1.75	.06	25.0	1.5	3,000	4.50	.15
Illinois.....	58	5.7	.5	2,847	1.47	.05	24.0	1.5	3,500	6.00	.17
Michigan.....	44	7.8	.6	2,710	1.81	.07	30.0	2.0	3,500	6.00	.17
Wisconsin.....	35	8.8	.7	2,588	2.09	.08	30.0	2.0	2,500	6.00	.24
Minnesota.....	44	8.3	.7	2,916	2.25	.08	30.0	2.0	3,000	7.00	.23
Iowa.....	73	6.1	.6	2,354	1.78	.08	16.0	2.0	3,500	7.00	.20
Missouri.....	42	8.6	.8	2,335	2.03	.09	25.0	2.0	2,000	5.00	.25
North Dakota.....	20	10.7	.7	3,738	3.23	.09	35.0	2.0	2,700	6.00	.22
South Dakota.....	32	12.7	.9	2,880	3.23	.11	50.0	2.5	2,500	15.00	.60
Nebraska.....	51	9.1	.7	2,826	2.14	.08	30.0	1.5	2,500	5.25	.21
Kansas.....	30	7.6	.6	2,835	1.69	.06	25.0	2.0	3,000	7.00	.23
South Central:											
Kentucky.....	18	10.5	1.1	2,256	2.99	.13	30.0	3.0	1,250	9.00	.72
Tennessee.....	24	9.8	.8	1,888	1.86	.10	30.0	3.0	1,600	6.00	.38
Alabama.....	2	15.5	1.4	1,500	3.50	.23	25.0	2.0	1,500	4.00	.27
Texas.....	43	13.8	1.1	2,358	3.02	.13	42.5	3.0	2,500	4.50	.18
Indian Territory.....	2	8.8	.6	1,900	1.65	.09	15.0	.5	2,000	1.38	.07
Oklahoma.....	12	12.9	.9	2,354	2.51	.11	45.0	3.0	2,000	7.50	.38
Western:											
Montana.....	17	13.9	1.3	3,076	5.69	.19	35.0	3.5	2,500	10.50	.42
Wyoming.....	7	22.1	1.9	2,829	7.03	.25	55.0	6.5	4,500	22.75	.51
Colorado.....	27	12.5	1.1	3,307	4.50	.14	70.0	7.0	2,500	35.00	1.40
New Mexico.....	4	18.0	1.7	2,212	5.42	.25	37.5	3.0	2,750	10.50	.38
Arizona.....	2	13.8	1.3	4,250	7.15	.17	27.5	2.5	4,500	18.75	.42
Utah.....	10	21.9	2.2	3,665	6.71	.18	100.0	14.0	7,000	35.00	.50
Nevada.....	1	12.0	1.4	6,000	10.50	.18	17.0	2.0	6,000	15.00	.25
Idaho.....	9	13.6	1.1	3,278	4.86	.15	27.5	1.5	2,500	6.75	.27
Washington.....	14	9.8	1.0	2,654	4.00	.15	60.0	7.0	2,000	28.00	1.40
Oregon.....	15	10.3	.9	3,783	3.24	.09	30.0	2.0	4,000	6.00	.15
California.....	17	9.9	.9	6,229	4.31	.07	32.0	3.0	4,000	12.75	.32
Geographic division:											
North Atlantic.....	32	7.5	.6	2,713	2.18	.08	.....	.....	.....	.....	.....
South Atlantic.....	21	9.4	.8	2,318	2.56	.11	.....	.....	.....	.....	.....
North Central.....	521	6.9	.6	2,766	1.82	.07	.....	.....	.....	.....	.....
South Central.....	101	13.0	1.0	2,289	2.74	.12	.....	.....	.....	.....	.....
Western.....	123	11.5	1.1	3,683	4.55	.12	.....	.....	.....	.....	.....
States represented.....	798	7.3	.6	2,772	1.82	.07	.....	.....	.....	.....	.....

¹ From "Costs of hauling crops from farms to shipping points," by Frank Andrews. Bul. 49, Bureau of Statistics, U. S. Dept. Agr.

URBAN MARKETS.

A large part of the commercial oat crop is first concentrated in a few large primary markets, most of which are located in the region of large production. Each market has a tributary territory, and farm prices in the sections shipping to each market tend to differ in proportion to costs of transportation. As this grain business is on a highly competitive basis, the price levels in surrounding sections (see price levels in North Central States) are comparatively even.

RECEIPTS, SHIPMENTS, AND CONSUMPTION OF CHIEF MARKETS.

In Table 4 are assembled data as to receipts, shipments, and apparent consumption in the most important grain centers. Allowing for duplication in reports of receipts, the degree of concentration in a few primary markets in the North Central States is manifest in comparing the total of receipts with the "shipments out of counties where grown" (Table 2).

While the great markets such as Chicago, St. Louis, and New York consume large quantities of oats, they are also points for concentration and reshipment.

TABLE 4.—*Oats: Receipts and shipments in leading markets.*

[Figures are five-year averages, 1911 to 1915, unless otherwise noted.]

Market.	Receipts.	Shipments.	Excess, receipts over shipments.
EAST OF THE ROCKY MOUNTAINS.			
Primary markets:	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Chicago.....	121,774,000	104,622,000	17,152,000
St. Louis.....	22,117,000	15,409,000	6,708,000
Minneapolis.....	21,513,000	20,218,000	1,295,000
Milwaukee.....	19,620,000	18,125,000	1,495,000
Omaha.....	13,266,000	13,599,000	.....
Peoria.....	10,391,000	11,717,000	.....
Kansas City.....	7,719,000	6,203,000	1,516,000
Cleveland.....	7,419,000	1,606,000	5,813,000
Cincinnati.....	7,188,000	5,076,000	2,112,000
Duluth.....	6,592,000	16,626,000	.....
Indianapolis.....	6,242,000	2,405,000	3,837,000
Louisville.....	6,037,000	4,240,000	1,797,000
Toledo.....	4,561,000	3,770,000	791,000
Detroit.....	3,823,000	743,000	3,080,000
Total ²	258,262,000	214,359,000	45,596,000
Other markets:			
Buffalo.....	12,685,000	(³)	(³)
New York.....	27,071,000	<i>Exports.</i>	19,070,000
Baltimore.....	15,726,000	12,310,000	3,416,000
Philadelphia.....	11,143,000	3,567,000	7,576,000
Boston.....	4,539,000	789,000	3,750,000
New Orleans.....	3,089,000	700,000	2,389,000
PACIFIC MARKETS.			
Seattle.....	2,344,000	764,000	1,580,000
San Francisco.....	2,049,000	259,000	1,790,000
Portland, Oreg. ⁴	2,286,000	1,327,000	959,000

¹ In these cases shipments apparently exceed receipts, according to the original reports.² Allowance should be made for some duplication in receipts due to such causes as intermediate markets crediting themselves with through shipments.³ No data.⁴ Data for 1915 only.

PRICE ZONES FLEXIBLE.

In concluding the brief summary of a few of the more general facts concerning regional price differences it appears necessary to direct attention to the changeable character of the price zones. The price differences as charted on Maps 1 and 2 represent the usual conditions as established by averages for the five years 1910 to 1914. These averages, which are based upon average prices for individual counties, indicate price zones which are fairly definite, but whose boundaries and price averages are subject to change. Unusual harvest or market conditions may change the price in one section as compared with another. Especially is this true for comparatively isolated sections, which are somewhat out of line with general trade currents. However, a comparison of the prices of many hundreds of counties during 1910-1914 shows that in individual years the price zones were substantially the same as those based upon the average prices of the five years.

SECTIONAL PRICE RATIOS CHANGING WITH ECONOMIC TRANSFORMATIONS.

The differences in price between one region and another, as indicated by the five-year averages in Table 5, reflect economic conditions that are changing; and the character of these changes in economic conditions since 1871-1875 are to a considerable extent indicated by the varying difference in price in one section as compared with another.

Transportation costs have declined greatly; other distributive expenses have dropped also; areas which formerly produced sufficient quantities for local needs must now bring in supplies. Sectional price differences have narrowed notably. The farmers' price of oats has become lower in areas of insufficient production, coincident with cheaper transportation from regions of surplus; on the other hand, prices have increased in areas of surplus production.

RETROSPECTIVE VIEW, 1871 TO 1915.

CHANGES IN REGIONAL PRICE DIFFERENCES.

In Table 5 the regional differences in the price of oats during the period 1871 to 1915 can be observed. The center of oat production has shifted to the west and north. The minimum farm price of oats has followed in the same direction. In the period 1871-1875 the lowest farm price appeared in Iowa, in 1882-1886 in Nebraska, and in 1911-1915 in North Dakota. The farm price in Massachusetts was 34 cents higher than in Iowa in 1871-1875, but only 18 cents higher in 1911-1915. In the surplus-producing North Central States, west of the Mississippi River, prices have increased, absolutely as well as relatively, but in the areas of insufficient production in the Southern and Mountain States prices have declined. Tendencies can best be followed through the percentage based upon the average for the United States at each period taken as 100 per cent. Details follow in Table 5.

TABLE 5.—*Farm prices of oats, 1871 to 1915.*

[A review, by States and sections, of the trend of geographic price differences.]

State and geographic division.	Farm prices per bushel, in 5-year averages.					Measurement of changes in percentages of the United States average as base (100 per cent)				
	1911-1915.	1901-1905.	1891-1895.	1882-1886. ¹	1871-1875. ²	1911-1915.	1901-1905.	1891-1895.	1882-1886. ¹	1871-1875.
	Cents. 39	Cents. 33	Cents. 29	Cents. 31	Cents. 36	P. ct. 100	P. ct. 100	P. ct. 100	P. ct. 100	P. ct. 100
United States.....										
New England.....	53	46	43	46	54	136	139	148	148	150
Middle Atlantic.....	47	40	36	38	44	121	121	124	123	122
South Atlantic.....	59	48	44	48	58	151	145	152	155	161
East North Central.....	39	33	28	30	32	100	100	97	97	89
West North Central.....	36	29	25	25	27	92	88	86	81	75
East South Central.....	57	47	42	47	61	146	142	145	152	169
West South Central.....	50	44	41	50	78	128	133	141	161	217
Mountain.....	47	52	40	53	53	121	158	138	171	.....
Pacific.....	46	45	37	45	64	118	136	128	145	177
New England:										
Maine.....	52	46	43	45	53	133	139	148	145	147
New Hampshire.....	55	47	43	46	54	141	142	148	148	150
Vermont.....	53	44	42	42	46	136	133	145	135	128
Massachusetts.....	53	47	43	48	57	136	142	148	155	158
Rhode Island.....	52	46	45	45	54	133	139	155	155	150
Connecticut.....	54	45	41	48	57	138	136	141	145	158
Middle Atlantic:										
New York.....	47	40	35	38	43	121	121	121	123	119
New Jersey.....	49	41	37	39	46	126	124	128	126	128
Pennsylvania.....	46	38	35	38	42	118	115	121	123	117
South Atlantic:										
Delaware.....	49	42	36	39	40	126	127	124	126	111
Maryland.....	49	38	35	37	41	126	115	121	119	114
Virginia.....	54	42	36	42	44	138	127	124	135	122
West Virginia.....	52	43	38	38	39	133	130	131	123	108
North Carolina.....	63	51	44	48	58	162	155	152	155	161
South Carolina.....	69	59	54	56	77	177	179	186	181	214
Georgia.....	68	58	52	56	74	174	176	179	181	206
Florida.....	71	54	60	69	90	182	164	207	223	250
East North Central:										
Ohio.....	40	34	30	33	33	103	103	103	106	92
Indiana.....	38	31	29	29	30	97	94	100	94	83
Illinois.....	38	32	26	26	27	97	97	90	84	75
Michigan.....	40	35	31	33	36	103	106	107	106	100
Wisconsin.....	39	32	26	28	32	100	97	90	90	89
West North Central:										
Minnesota.....	34	28	25	26	30	87	85	86	84	83
Iowa.....	35	28	23	24	23	90	85	79	77	64
Missouri.....	41	33	26	27	28	105	100	90	87	78
North Dakota.....	31	28	25	28	.....	79	85	86	90	.....
South Dakota.....	34	28	25	28	.....	87	85	86	.....	.....
Nebraska.....	36	28	24	20	25	92	85	83	65	69
Kansas.....	41	33	26	24	27	105	100	90	77	75
East South Central:										
Kentucky.....	49	39	34	35	41	126	118	117	113	114
Tennessee.....	51	41	34	37	41	131	124	117	119	114
Alabama.....	66	56	51	58	76	169	170	176	187	211
Mississippi.....	63	53	48	58	86	162	161	166	187	239
West South Central:										
Louisiana.....	58	49	46	56	98	149	148	159	181	272
Texas.....	48	47	38	47	76	123	142	131	152	211
Oklahoma.....	41	37	.....	.....	.....	105	112	.....	.....	.....
Arkansas.....	52	45	39	47	61	133	136	134	152	169
Mountain:										
Montana.....	36	39	40	53	.....	92	118	138	171	.....
Wyoming.....	44	46	.....	50	.....	113	139	.....	161	.....
Colorado.....	43	46	37	51	.....	110	139	128	165	.....
New Mexico.....	51	61	51	56	.....	131	185	176	181	.....
Arizona.....	63	67	.....	.....	.....	162	203	.....	.....	.....
Utah.....	45	48	36	46	.....	115	145	124	148	.....
Nevada.....	58	65	.....	58	95	149	197	.....	187	264
Idaho.....	36	46	38	54	.....	92	139	131	174	.....
Pacific:										
Washington.....	41	41	34	43	.....	105	124	117	139	.....
Oregon.....	41	42	34	43	53	105	127	117	139	147
California.....	55	51	44	49	74	141	155	152	158	206

¹ 1882-1886 taken instead of 1881-1885 because of availability of statistics for a larger number of states beginning 1882.² Values reduced to gold basis.

TREND OF YIELDS TO THE ACRE.

Yields in bushels to the acre must be taken into consideration as a qualifier of price advantage or disadvantage. The trend of yields, by States and geographic divisions, is shown in Table 6.

Increases in yield are general. It is only in the West North Central States, the western part of the great surplus-producing section, that diminishing yields appear. In this section large areas have been added to the cultivated land between 1875 and 1915, and the average yields of 1915 include areas not included in 1875. The most pronounced increases in yields per acre are seen in the Mountain and Southern States, offsetting declining price advantages in those sections.

TREND OF VALUES TO THE ACRE.

Prices and average yields have been correlated in Table 7 to show average values to the acre. For the period under review, values have increased in nearly all States and sections, but in varying ratios. The most pronounced improvement in this respect is seen in the Southern States. The average for the United States shows an increase, but declines are shown in the States of the industrial East and the far West.

SECTIONAL CHANGES IN PRODUCTION OF OATS.

The changes in the location of the chief oat-producing sections from 1871 to 1915 and the relation of production to population and other factors are indicated in Table 8.

During the period under review, production has increased fivefold. It has been concentrated to an increasing degree in the North Central States, which in 1871-1875 grew 60 per cent of the national crop of oats, and in 1911-1915, 75 per cent. The most marked relative increases during the last decade are shown in the Mountain and Southern States, but in relation to the United States total these sections are still comparatively unimportant. The three States constituting the Middle Atlantic section produced nearly one-fourth the total in 1871-1875, and in 1911-1915 their proportion dropped to about one-fifteenth.

PRICE VS. COST OF PRODUCTION.

Difference in costs of production is an independent factor which modifies sectional differences in producers' prices of oats. Costs are qualified by varying productivity as expressed by yields in bushels to the acre. High yields to the acre may reduce high acre-costs to low bushel-costs, and conversely. In the Southern States, for instance, the favorable combination of highest price and lowest costs to the acre is offset by relatively low yields to the acre; hence these States show the highest costs per bushel of oats and the minimum net returns.

TABLE 6.—*Oats: Trend of yields per acre, 1871–1915.*

[Limitations of soil and climate, reflected in yields per acre, as qualifying price factors.]

State and geographic division.	Yields per acre, in five-year averages.					Comparisons in percentages of the United States average as base.				
	1911–1915	1901–1905	1891–1895	1882–1886 ¹	1871–1875	1911–1915	1901–1905	1891–1895	1882–1886	1871–1875
	<i>Bush-els.</i> 32	<i>Bush-els.</i> 31	<i>Bush-els.</i> 26	<i>Bush-els.</i> 27	<i>Bush-els.</i> 28	<i>Per cent.</i> 100	<i>Per cent.</i> 100	<i>Per cent.</i> 100	<i>Per cent.</i> 100	<i>Per cent.</i> 100
United States	35	34	33	31	32	109	110	127	115	114
New England.....	31	30	28	28	29	97	97	108	104	104
Middle Atlantic.....	34	34	29	32	30	106	110	112	119	107
East North Central.....	29	31	26	32	32	91	100	100	119	114
South Atlantic.....	23	18	16	13	15	72	58	62	48	54
East South Central.....	21	18	16	14	17	66	58	62	52	61
West South Central.....	24	23	20	18	22	75	74	78	67	79
Mountain.....	42	35	31	31	.....	131	113	119	115	.....
Pacific.....	41	36	31	30	33	128	116	119	111	118
New England:										
Maine.....	39	38	35	29	26	122	123	135	107	93
New Hampshire.....	37	32	34	34	36	116	103	131	126	129
Vermont.....	40	38	37	35	36	125	123	142	130	129
Massachusetts.....	35	32	34	31	33	109	103	131	115	118
Rhode Island.....	29	30	30	28	32	91	97	115	104	114
Connecticut.....	31	32	28	29	32	97	103	108	107	114
Middle Atlantic:										
New York.....	33	33	27	30	34	103	106	104	111	121
New Jersey.....	29	28	29	27	25	91	90	112	100	89
Pennsylvania.....	32	30	27	28	29	100	97	104	104	104
East North Central:										
Ohio.....	36	36	30	32	28	112	116	115	119	100
Indiana.....	32	31	27	29	25	100	100	104	107	89
Illinois.....	34	32	30	35	30	106	103	115	130	107
Michigan.....	34	34	27	33	31	106	110	104	122	111
Wisconsin.....	35	35	32	31	35	109	113	123	115	125
West North Central:										
Minnesota.....	35	36	32	35	34	109	116	123	130	121
Iowa.....	35	30	32	34	36	109	97	123	126	129
Missouri.....	23	23	24	26	29	72	74	92	96	104
North Dakota.....	32	35	28	34	.....	100	113	108	126	.....
South Dakota.....	27	36	23	.....	.....	84	116	88	.....	.....
Nebraska.....	26	29	22	32	31	81	94	85	119	111
Kansas.....	25	25	23	32	31	78	81	88	119	111
South Atlantic:										
Delaware.....	30	25	21	23	19	94	81	81	85	68
Maryland.....	29	25	21	20	17	91	81	81	74	61
Virginia.....	21	17	14	11	14	66	55	54	41	50
West Virginia.....	25	24	22	18	23	78	77	85	67	82
North Carolina.....	19	14	12	9	13	59	45	46	33	46
South Carolina.....	21	15	12	10	11	66	48	46	37	39
Georgia.....	21	14	13	9	12	66	45	50	33	43
Florida.....	17	13	11	10	12	53	42	42	37	43
East South Central:										
Kentucky.....	22	22	21	19	22	69	71	81	70	79
Tennessee.....	22	19	17	13	17	69	61	65	48	61
Alabama.....	20	15	13	11	13	62	48	50	41	46
Mississippi.....	20	17	13	10	15	62	53	50	37	54
West South Central:										
Arkansas.....	23	19	19	17	23	72	61	73	63	82
Louisiana.....	22	16	15	13	16	69	52	58	48	57
Oklahoma.....	21	30	.....	.....	.....	66	97	.....	.....	.....
Texas.....	31	28	26	24	28	97	90	100	89	100
Mountain:										
Montana.....	46	42	34	36	.....	144	135	131	133	.....
Idaho.....	46	40	33	33	.....	144	129	127	122	.....
Wyoming.....	38	35	31	30	.....	119	113	119	111	.....
Colorado.....	38	33	27	33	.....	119	106	104	122	.....
New Mexico.....	36	24	29	22	.....	112	77	112	81	.....
Arizona.....	42	33	.....	.....	.....	131	106	.....	.....	.....
Utah.....	45	36	30	30	.....	141	116	115	111	.....
Nevada.....	45	36	.....	32	34	141	116	.....	119	121
Pacific:										
Washington.....	49	47	37	38	.....	153	152	142	141	.....
Oregon.....	39	28	28	27	33	122	90	108	100	118
California.....	35	32	29	26	33	109	103	112	96	118

¹See note 1, Table 5.

TABLE 7.—*Oats: Gross returns per acre.*

[A review of the trend of returns per acre of oats, 1871-1915, and measurement of tendencies in absolute and relative figures.]

State and geographic division.	Gross returns per acre in five-year averages.					Comparisons in percentages of the United States average as base (100).				
	1911-1915	1901-1905	1891-1895	1882-1886 ¹	1871-1875	1911-1915	1901-1905	1891-1895	1882-1886	1871-1875
United States	Dolls. 12.48	Dolls. 10.23	Dolls. 7.54	Dolls. 8.37	Dolls. 10.08	P. ct. 100	P. ct. 100	P. ct. 100	P. ct. 100	P. ct. 100
New England.....	18.55	15.64	14.19	14.26	17.28	149	153	188	170	171
Middle Atlantic.....	14.57	12.00	10.08	10.64	12.76	117	117	134	127	127
East North Central.....	13.36	11.22	8.12	9.60	9.60	107	110	108	115	95
West North Central.....	10.44	8.99	6.50	8.00	8.64	84	88	86	96	86
South Atlantic.....	13.57	8.64	7.04	6.24	8.70	109	84	93	75	86
East South Central.....	11.97	8.46	6.72	6.58	10.37	96	83	89	79	103
West South Central.....	12.00	10.12	8.20	9.00	17.16	96	99	109	108	170
Mountain.....	19.74	18.20	12.40	16.43	.....	158	178	164	196	.....
Pacific.....	18.86	16.20	11.47	13.50	21.12	151	158	152	161	210
New England:										
Maine.....	20.28	17.48	15.05	13.05	13.78	162	171	200	156	137
New Hampshire.....	20.35	15.04	14.62	15.64	19.44	163	147	194	187	193
Vermont.....	21.20	16.72	15.54	14.70	16.56	170	163	206	176	164
Massachusetts.....	18.55	15.04	14.62	14.88	18.81	149	147	194	178	187
Rhode Island.....	15.08	13.80	13.50	13.44	17.28	121	135	179	161	171
Connecticut.....	16.74	14.40	11.48	13.05	18.24	134	141	152	156	181
Middle Atlantic:										
New York.....	15.51	13.20	9.45	11.40	14.62	124	129	125	136	145
New Jersey.....	14.21	11.48	10.73	10.53	11.50	114	112	142	126	114
Pennsylvania.....	14.72	11.40	9.45	10.64	12.18	118	111	125	127	121
East North Central:										
Ohio.....	14.40	12.24	9.00	10.56	9.24	115	120	119	126	92
Indiana.....	12.16	9.61	7.83	8.41	7.50	97	94	104	100	74
Illinois.....	12.92	10.24	7.80	9.10	8.10	104	100	103	109	80
Michigan.....	13.60	11.90	8.37	10.89	11.16	109	116	111	130	111
Wisconsin.....	13.65	11.20	8.32	8.68	11.20	109	109	110	104	111
West North Central:										
Minnesota.....	11.90	10.08	8.00	9.10	10.20	95	99	106	109	101
Iowa.....	12.25	8.40	7.36	8.16	8.28	98	82	98	97	82
Missouri.....	9.43	7.59	6.24	7.02	8.12	76	74	83	84	81
North Dakota.....	9.92	9.80	7.00	9.52	.....	79	96	93	114	.....
South Dakota.....	9.18	10.08	5.75	.....	.....	74	99	76	.....	.....
Nebraska.....	9.36	8.12	5.28	6.40	7.75	75	79	70	76	77
Kansas.....	10.25	8.25	5.98	7.68	8.37	82	81	79	92	83
South Atlantic:										
Delaware.....	14.70	10.50	7.56	8.97	7.60	118	103	100	107	75
Maryland.....	14.21	9.50	7.35	7.40	6.97	114	93	97	88	69
Virginia.....	11.34	7.14	5.04	4.62	6.16	91	70	67	55	61
West Virginia.....	13.00	10.32	8.36	6.84	8.97	104	101	111	82	89
North Carolina.....	11.97	7.14	5.28	4.32	7.54	96	70	70	52	75
South Carolina.....	14.49	8.85	6.48	5.60	8.47	116	87	86	67	84
Georgia.....	14.28	8.12	6.76	5.04	8.88	114	79	90	60	88
Florida.....	12.07	7.02	6.60	6.90	10.80	97	69	88	82	107
East South Central:										
Kentucky.....	10.78	8.58	7.14	6.65	9.02	86	84	95	79	89
Tennessee.....	11.22	7.79	5.78	4.81	6.97	90	76	77	57	69
Alabama.....	13.20	8.40	6.63	6.38	9.88	106	82	88	76	98
Mississippi.....	12.60	9.01	6.24	5.80	12.90	101	88	83	69	128
West South Central:										
Arkansas.....	11.96	8.55	7.41	7.99	14.03	96	84	97	95	139
Louisiana.....	12.76	7.84	6.90	7.28	15.68	102	77	92	87	156
Oklahoma.....	8.61	11.10	.....	.....	.....	69	109	.....	.....	.....
Texas.....	14.88	13.16	9.88	11.28	21.28	119	129	131	135	211
Mountain:										
Montana.....	16.56	16.38	13.60	19.08	.....	133	160	180	228	.....
Idaho.....	16.56	18.40	12.54	17.82	.....	133	180	166	213	.....
Wyoming.....	16.72	16.10	.....	15.00	.....	134	157	.....	179	.....
Colorado.....	16.34	15.18	9.99	16.83	.....	131	148	132	201	.....
New Mexico.....	18.36	14.64	14.79	12.32	.....	147	143	196	147	.....
Arizona.....	26.46	22.11	.....	.....	.....	212	216	.....	.....	.....
Utah.....	20.25	17.28	10.80	13.80	.....	162	169	143	165	.....
Nevada.....	26.10	23.40	.....	18.56	32.30	209	229	.....	222	320
Pacific:										
Washington.....	20.09	19.27	12.58	16.34	.....	161	188	167	195	.....
Oregon.....	15.99	11.76	9.52	11.61	17.49	128	115	126	139	174
California.....	19.25	16.32	12.76	12.74	24.42	154	160	169	152	242

¹ See note 1, table 5.

TABLE 8.—Oats: A statistical review, from 1871 to 1915, by States and geographic divisions: Changes in domestic sources of supply, in absolute and relative figures; trend of per capita production; per cent of improved land in oats.

State and geographic division.	Geographic distribution of oat production in five-year averages.				Averages, 1911-1915 as compared with 1901-1905 (100 per cent).		Average per capita production. ¹					Distribution of oat production, in percentages of United States totals.					Per cent of all improved land occupied by oats. ²		
	1911-1915	1891-1895	1882-1886	1871-1875	1901-1905	Per cent.	1901-1915	1891-1905	1882-1886	1871-1875	Per cent.	1911-1915	1901-1905	1891-1895	1882-1886	1871-1875	1900	1889	1879
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	Per cent.	12.6	10.8	10.5	6.6	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
United States.....																			
New England.....	9,789	8,309	9,130	8,497	118	100	3.4	4.8	5.3	7.0	2.3	0.8	1.0	1.6	1.6	3.1	3.1	2.6	2.1
Middle Atlantic.....	80,401	80,512	80,062	65,497	100	100	1.9	4.8	5.3	7.0	2.3	0.8	1.0	1.6	1.6	3.1	3.1	2.6	2.1
South Atlantic.....	32,461	16,813	30,377	17,226	193	100	2.5	1.5	3.3	3.4	2.7	2.6	1.9	4.3	4.8	2.8	2.8	9.7	7.9
East North Central.....	395,331	323,137	227,176	109,226	122	100	20.8	19.4	16.0	17.8	11.2	32.2	37.1	32.2	37.3	39.2	22.6	11.3	6.2
West North Central.....	527,674	346,003	294,645	191,246	153	100	43.8	32.2	31.5	26.3	12.8	42.9	39.7	41.8	33.0	21.0	9.6	10.4	6.3
East South Central.....	21,558	13,375	24,535	12,086	161	100	2.5	1.7	3.9	4.1	2.5	1.8	1.5	3.7	4.2	2.0	2.1	4.8	4.5
West South Central.....	60,946	43,968	22,742	15,547	139	100	6.4	6.1	4.3	4.0	2.7	5.0	5.1	3.2	2.7	7.7	3.7	4.8	2.3
Mountain.....	65,282	18,458	8,090	5,210	354	100	22.2	9.4	6.0	5.9	2.9	5.3	2.1	1.2	0.9	1.5	7.3	3.9	4.4
Pacific.....	35,323	20,736	12,808	9,681	170	100	7.4	7.0	6.3	6.8	5.3	2.9	2.4	1.8	1.7	1.5	3.6	2.9	1.8
The Territories.....																			
New England:																			
Maine.....	5,452	4,366	2,439	1,723	125	100	7.2	6.2	6.5	3.7	2.7	.4	.5	.6	.4	.6	5.1	4.6	2.3
New Hampshire.....	4,441	3,392	1,046	1,098	112	100	1.0	.9	2.6	2.9	3.4	(3)	(3)	.2	.2	.4	1.2	1.2	1.3
Vermont.....	3,178	2,958	3,654	3,781	107	100	8.8	8.5	12.3	11.0	11.4	.3	.3	.6	.7	1.4	4.4	3.5	3.0
Massachusetts.....	308	213	560	727	143	100	1.1	.1	.2	.4	.5	(3)	(3)	.1	.1	.3	.7	.5	.9
Rhode Island.....	98	49	169	150	118	100	1.1	.1	.4	.6	.6	(3)	(3)	.1	.1	.3	1.0	.8	1.0
Connecticut.....	355	331	742	1,016	107	100	.3	.3	.9	1.6	1.8	(3)	(3)	.1	.2	.4	1.0	.9	1.8
Middle Atlantic:																			
New York.....	42,500	42,226	40,437	31,653	101	100	4.4	5.4	5.9	7.4	6.9	3.4	4.8	5.3	7.0	11.4	8.8	8.5	8.6
New Jersey.....	2,024	1,803	3,620	3,359	112	100	7.9	7.9	2.1	2.9	3.4	.2	.2	.5	.6	1.2	4.0	3.8	6.1
Pennsylvania.....	35,877	36,483	36,005	30,485	98	100	4.4	5.4	5.6	7.7	8.1	2.9	4.2	4.4	6.2	10.9	9.0	8.9	9.9
South Atlantic:																			
Delaware.....	115	470	481	388	105	100	6	.6	2.7	3.1	2.9	(3)	(3)	.1	.1	.9	.6	.7	2.5
Maryland.....	1,309	945	2,122	2,569	139	100	1.0	.8	1.9	2.2	2.2	.1	.1	.4	.4	.9	1.2	1.3	3.0
Virginia.....	4,108	3,495	7,078	4,991	118	100	1.9	1.8	4.0	4.5	3.8	.3	.4	.9	1.4	1.8	2.1	2.7	5.4
West Virginia.....	2,774	2,032	2,351	2,255	137	100	2.1	2.0	3.8	4.5	4.6	.2	.2	.4	.4	.3	1.0	1.8	4.0
North Carolina.....	4,864	3,103	5,247	2,908	157	100	1.1	1.6	3.7	3.5	2.8	.4	.4	.9	.3	1.1	1.6	3.3	6.9
South Carolina.....	7,988	3,147	3,694	2,644	254	100	5.1	2.3	3.3	3.5	2.8	.7	.4	.6	.6	.2	3.3	3.9	6.3
Georgia.....	10,429	3,563	6,444	3,357	293	100	3.8	1.5	3.6	3.9	2.6	.8	.4	.6	1.1	1.2	3.3	3.0	5.4
Florida.....	868	413	503	114	210	100	1.1	.7	1.3	1.6	.5	.1	(3)	.1	.1	.1	2.4	2.1	3.7

East North Central:									
Ohio.....	64,308	40,021	28,534	28,140	23,327	161	13.0	9.2	7.5
Indiana.....	54,731	41,490	24,175	24,175	13,178	132	19.8	16.1	12.6
Illinois.....	145,962	122,926	90,551	102,338	44,762	119	24.7	24.3	22.0
Michigan.....	50,948	33,362	19,720	25,792	9,539	153	17.3	13.1	11.8
Wisconsin.....	79,382	85,338	53,498	41,640	18,420	93	32.8	39.7	29.6
West North Central:									
Minnesota.....	104,457	76,530	53,201	35,155	10,915	136	47.9	41.4	36.9
Iowa.....	175,081	116,923	114,678	70,569	21,730	150	78.8	52.4	57.1
Missouri.....	27,807	18,273	27,337	30,022	16,030	152	8.3	5.8	9.7
North Dakota.....	73,436	30,493	14,618	11,559	.....	241	111.1	77.0	63.8
South Dakota.....	44,507	25,370	16,494	.....	.....	175	69.2	55.6	45.3
Nebraska.....	57,977	55,399	33,076	19,757	2,322	105	69.0	50.2	33.0
Kansas.....	44,409	33,015	33,241	24,084	7,375	193	25.2	15.0	23.1
East South Central:									
Kentucky.....	3,893	5,350	11,127	8,479	6,101	73	1.7	2.4	5.7
Tennessee.....	6,967	3,238	7,988	8,042	4,694	215	3.1	1.6	4.3
Alabama.....	7,455	3,002	4,873	4,694	.....	248	3.3	1.6	3.0
Mississippi.....	3,243	1,785	2,293	3,320	571	182	1.7	1.1	1.7
West South Central:									
Louisiana.....	1,429	498	593	438	35	287	8	3	5
Texas.....	29,803	24,869	16,101	11,117	1,041	120	7.1	7.5	6.5
Oklahoma.....	23,633	6,437	.....	.....	.....	164	12.2	13.7	.....
Arkansas.....	6,061	4,222	6,048	3,992	732	144	3.7	3.0	5.1
Mountain:									
Montana.....	23,103	6,817	2,594	1,562	.....	339	55.1	24.1	15.0
Wyoming.....	8,179	1,374	1,482	71	.....	595	50.2	12.6	6.8
Colorado.....	11,587	4,497	2,772	1,359	(⁶)	258	13.1	7.2	6.1
New Mexico.....	1,987	344	330	.....	.....	543	3.0	1.5	1.9
Arizona.....	4,340	1,639	923	684	76	621	1.3	5.4	.....
Utah.....	15,409	3,521	989	241	.....	265	10.7	3.4	4.0
Nevada.....	14,035	7,476	4,048	2,689	(⁶)	229	5.3	4.0	.....
Idaho.....	14,040	6,829	5,003	2,164	.....	438	40.7	16.7	9.0
Washington.....	7,248	5,243	1,931	1,989	.....	.....	.....	.....	.....
Oregon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
California.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
The Territories.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Domestic exports, including oatmeal:									
Quantity.....	48,291	16,090	7,289	3,725	752	.....	.....	.....	.....
Per cent of production.....	3.93	1.85	1.03	.64	.27	.....	.....	.....	.....

1 Four-year average.

2 From the decennial census returns.

3 Less than one-tenth of 1 per cent.

4 Less than one-tenth bushel.

5 Includes Indian Territory.

6 Included in "The Territories."

Georgia.....	68	41	55	21	14.28	1.67	8.62	11.48	2.30	166	174	186	162	66	114	121	105
Florida.....	71	50	60	17	12.07	1.92	8.56	10.23	1.55	141	182	227	176	53	97	120	94
East North Central:																	
Ohio.....	40	22	34	36	14.40	1.69	8.06	12.10	.85	179	103	100	100	112	115	113	111
Indiana.....	38	20	35	32	12.16	1.24	6.53	11.19	.48	186	97	91	103	100	104	92	103
Illinois.....	38	17	33	34	12.92	1.23	5.80	11.34	.42	223	97	77	97	100	104	81	104
Michigan.....	40	25	30	34	13.60	2.19	8.42	11.33	.56	162	103	114	103	106	109	118	108
Wisconsin.....	39	21	32	35	13.65	2.16	7.51	11.27	.08	182	100	95	94	109	109	105	103
West North Central:																	
Minnesota.....	34	20	27	35	11.90	.83	6.93	9.59	.16	172	87	91	79	100	95	97	88
Iowa.....	35	17	30	35	12.25	1.30	6.01	10.51	.05	204	90	77	88	100	98	84	96
Missouri.....	41	25	38	23	9.45	.75	5.64	8.77	.17	167	105	114	112	72	70	79	80
North Dakota.....	31	20	27	32	9.62	.52	6.57	8.71	.03	152	79	91	77	100	70	92	80
South Dakota.....	34	22	33	27	9.18	.62	5.97	8.57	.05	154	87	100	97	84	74	84	81
Nebraska.....	36	21	36	26	9.38	.65	5.56	9.24	.08	168	92	95	106	81	75	78	85
Kansas.....	41	25	39	25	10.25	.61	6.27	9.68	.01	163	105	114	115	78	82	88	89
East South Central:																	
Kentucky.....	49	30	44	22	10.78	.70	6.49	9.63	.56	166	126	136	129	69	86	91	88
Tennessee.....	51	31	44	22	11.22	.83	6.76	9.39	.74	166	131	141	129	69	90	95	88
Alabama.....	66	42	54	20	13.20	.56	8.37	10.78	1.41	158	169	191	159	62	106	117	99
Mississippi.....	63	39	53	20	12.60	.53	7.89	10.69	.98	160	162	177	156	62	101	111	98
West South Central:																	
Louisiana.....	58	35	46	22	12.76	.50	7.75	10.07	1.00	165	149	159	135	69	102	109	92
Texas.....	48	22	33	31	14.88	.92	6.83	10.11	.07	218	123	100	97	97	119	96	93
Oklahoma.....	41	30	41	21	8.61	.58	6.28	8.97	.62	137	105	136	121	66	69	88	82
Arkansas.....	52	29	42	23	11.96	.89	6.72	9.61	.21	178	133	132	124	72	96	94	88
Mountain:																	
Montana.....	36	18	26	46	16.56	.75	8.43	11.73	.....	196	92	82	76	144	133	118	108
Wyoming.....	44	22	30	38	16.72	.75	8.30	11.50	.05	201	113	100	88	119	134	116	105
Colorado.....	43	21	32	38	16.34	1.21	7.87	12.08	.05	208	110	95	94	119	131	110	111
New Mexico.....	51	24	33	36	18.36	1.62	8.56	12.05	.....	214	131	109	97	112	147	120	111
Arizona.....	63	33	41	42	26.46	.....	13.70	17.20	.....	193	162	150	121	131	212	192	158
Utah.....	45	27	42	45	20.25	1.17	12.23	18.90	.42	166	115	123	124	141	162	172	173
Nevada.....	58	.....	.....	45	26.10	.....	.....	.....	.....	149	141	209	.....	141	209	.....	130
Idaho.....	36	22	31	46	16.56	1.13	10.18	14.22	.06	163	92	100	91	144	133	143	130
Pacific:																	
Washington.....	41	20	30	49	20.09	1.24	9.76	14.79	.18	206	105	91	88	153	161	137	136
Oregon.....	41	20	39	39	15.99	1.10	7.66	11.16	.06	209	105	91	85	122	128	107	102
California.....	55	24	33	35	19.25	.81	8.83	11.49	.....	230	141	109	97	109	154	118	105

¹ Costs of production from a special inquiry of the Bureau of Crop Estimates ("Crop Reporter," June, 1911, p. 47). Although the data apply to the year 1900, they were collated on a uniform and comparable basis, and for the present purpose of comparing average cost conditions in one State or section with another they possess particular value.

² Cost per bushel obtained by dividing costs per acre, as given in the inquiry cited, by average yield 1911-1915. It is believed that costs per acre are comparatively stable.

³ Excluding by-products in returns and rental in costs. Values of by-products were considered as being offset, roughly, by values of farm manure applied.

Such factors are assembled in Table 9, which gives an idea as to sectional differences in costs per bushel and per acre, also yields and returns. The table is divided into two parts; the first shows costs in absolute figures, the second affords a comparison through percentages based upon the average for the United States taken as 100 per cent. The varying advantage or disadvantage in prices, costs, and yields can be followed more easily in these percentages. Taking Iowa as an illustration, it will be observed that price per bushel is 90 per cent of the United States average, yields 109, and the two combined in returns per acre 98. But the cost per acre, excluding land rental or interest, is only 84, and the ratio of returns to cost is high—204 per cent.

APPENDIX.

The data which follow, form the bases of Maps 1, 2, and 3, and are explained on pages 2 and 6.

Counties have been used as the smallest effective unit of measurement, for the reason that the usual State prices are frequently averages for large expanses of territory with dissimilar physical and price conditions. The basic figures were compiled from returns of some 30,000 township reporters for each of the five years 1910-1914, as of December 1. Observations for this period and for a like date of each year were employed to distinguish normal geographic variations from temporary deviations; and to further conduce thereto the price averages have been rounded to a five-cent unit to overcome occasional minor differences due to such causes as local variations in grade.

As the figures are designed to show geographic variation in prices paid to oat producers, counties with little or no oat production have been omitted (those with less than 500 acres in oats, according to the 1909 census).

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914.

[Cents per bushel.]

ALABAMA:	ALABAMA—Continued.	ARKANSAS—Continued.	CALIFORNIA—Contd.
55-59 cents—	70-74 cents—Contd.	50-54 cents—Contd.	55-59 cents—Contd.
Jackson.	Butler.	Montgomery.	Lassen.
Lauderdale.	Chambers.	Newton.	Merced.
Limestone.	Chilton.	Prairie.	Modoc.
Madison.	Coffee.	Randolph.	Monterey.
60-64 cents—	Conecuh.	Scott.	Napa.
Colbert.	Coosa.	Searcy.	Plumas.
Cullman.	Covington.	Sebastian.	Sacramento.
Dekalb.	Crenshaw.	Sharp.	San Benito.
Franklin.	Dale.	Stone.	San Francisco.
Lawrence.	Elmore.	White.	San Joaquin.
Marshall.	Escambia.	55-59 cents—	San Luis Obispo.
Morgan.	Geneva.	Clark.	San Mateo.
Walker.	Henry.	Conway.	Santa Barbara.
Winston.	Houston.	Faulkner.	Santa Clara.
65-69 cents—	Lee.	Garland.	Santa Cruz.
Autauga.	Pike.	Hempstead.	Shasta.
Blount.	Randolph.	Hot Spring.	Siskiyou.
Calhoun.	Russell.	Howard.	Solano.
Cherokee.	Shelby.	Logan.	Stanislaus.
Choctaw.	Tallapoosa.	Perry.	Sutter.
Clarke.	ARIZONA:	Pike.	Tehama.
Clay.	50-54 cents—	Polk.	Trinity.
Cleburne.	Maricopa.	Pope.	Yolo.
Dallas.	60-64 cents—	Pulaski.	60-64 cents—
Etowah.	Apache.	Saline.	Fresno.
Fayette.	ARKANSAS:	Sevier.	Humboldt.
Greene.	45-49 cents:	Van Buren.	Lake.
Hale.	Benton.	Yell.	Los Angeles.
Jefferson.	Boone.	60-64 cents—	Madera.
Lamar.	Carroll.	Ashley.	Marin.
Lowndes.	Madison.	Bradley.	Mendocino.
Macon.	Washington.	Calhoun.	Orange.
Marengo.	50-54 cents—	Columbia.	Riverside.
Marion.	Arkansas.	Drew.	San Diego.
Monroe.	Baxter.	Lafayette.	Sonoma.
Montgomery.	Clay.	Little River.	Ventura.
Perry.	Cleburne.	Miller.	COLORADO:
Pickens.	Craighead.	Nevada.	40-44 cents—
Saint Clair.	Crawford.	Ouachita.	Larimer.
Sumter.	Franklin.	Union.	Logan.
Talladega.	Fulton.	CALIFORNIA:	Morgan.
Tuscaloosa.	Greene.	55-59 cents—	Phillips.
Wilcox.	Independence.	Alameda.	Sedgwick.
70-74 cents—	Izard.	Amador.	Washington.
Barbour.	Johnson.	Colusa.	Weld.
Bibb.	Lonoke.	Contra Costa.	45-49 cents.
Bullock.	Marion.	Glenn.	Adams.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

COLORADO—Continued. 45-49 cents—Contd.	GEORGIA—Continued. 65-69 cents—Contd.	GEORGIA—Continued. 70-74 cents—Contd.	ILLINOIS—Continued. 35-39 cents—Contd.
Arapahoe.	Floyd.	Morgan.	Champaign.
Archuleta.	Forsyth.	Muscogee.	Christian.
Bent.	Gordon.	Newton.	Clark.
Boulder.	Habersham.	Oconee.	Coles.
Chaffee.	Hall.	Oglethorpe.	Crawford.
Conejos.	Haralson.	Paulding.	Cumberland.
Costilla.	Milton.	Pierce.	Dekalb.
Crowley.	Pickens.	Pike.	Dewitt.
Custer.	Polk.	Pulaski.	Douglas.
Denver.	White.	Putnam.	Edgar.
Douglas.	70-74 cents.	Quitman.	Edwards.
Eagle.	Appling.	Randolph.	Ford.
Elbert.	Baker.	Richmond.	Fulton.
El Paso.	Baldwin.	Rockdale.	Grundy.
Garfield.	Ben Hill.	Schley.	Hancock.
Huerfano.	Berrien.	Screven.	Henderson.
Jefferson.	Bibb.	Spalding.	Henry.
Kit Carson.	Bleckley.	Stephens.	Iroquois.
La Plata.	Brooks.	Stewart.	Jasper.
Las Animas.	Bryan.	Sumter.	Jo Daviess.
Lincoln.	Bulloch.	Talbot.	Kankakee.
Moffat.	Burke.	Taliaferro.	Kendall.
Montezuma.	Butts.	Tattall.	Knox.
Otero.	Calhoun.	Taylor.	La Salle.
Pitkin.	Campbell.	Telfair.	Lawrence.
Prowers.	Carroll.	Terrell.	Lee.
Pueblo.	Chatham.	Thomas.	Livingston.
Rio Blanco.	Chattahoochee.	Tift.	Logan.
Rio Grande.	Clarke.	Toombs.	McDonough.
Routt.	Clay.	Troup.	McLean.
Saguache.	Clayton.	Turner.	Macon.
Yuma.	Clinch.	Twiggs.	Marshall.
50-54 cents.	Cobb.	Upson.	Mason.
Delta.	Coffee.	Walton.	Menard.
Mesa.	Colquitt.	Ware.	Mercer.
Montrose.	Columbia.	Warren.	Morgan.
Ourray.	Coweta.	Washington.	Moultrie.
San Miguel.	Crawford.	Wayne.	Ogle.
CONNECTICUT:	Crisp.	Webster.	Peoria.
55-59 cents.	Decatur.	Wheeler.	Piatt.
Fairfield.	Dekalb.	Wilcox.	Putnam.
Hartford.	Dodge.	Wilkes.	Richland.
Litchfield.	Dooly.	Wilkinson.	Rock Island.
Middlesex.	Dougherty.	Worth.	Sangamon.
New London.	Douglas.	IDAHO:	Schuyler.
Tolland.	Early.	35-39 cents—	Scott.
Windham.	Effingham.	Bannock.	Shelby.
DELAWARE:	Elbert.	Bear Lake.	Stark.
45-49 cents.	Emanuel.	Bingham.	Stephenson.
New Castle.	Fayette.	Bonneville.	Tazewell.
50-54 cents.	Franklin.	Fremont.	Vermilion.
Kent.	Fulton.	40-44 cents—	Wabash.
Sussex.	Glasscock.	Blaine.	Warren.
FLORIDA:	Grady.	Boise.	Whiteside.
70-74 cents.	Greene.	Cassia.	Will.
Columbia.	Gwinnett.	Clearwater.	Winnebago.
Gadsden.	Hancock.	Custer.	Woodford.
Hamilton.	Harris.	Franklin.	40-44 cents—
Holmes.	Hart.	Gooding.	Adams.
Jackson.	Heard.	Idaho.	Bond.
Jefferson.	Henry.	Kootenai.	Calhoun.
Leon.	Houston.	Latah.	Clay.
Liberty.	Irwin.	Lemhi.	Cook.
Madison.	Jackson.	Lewis.	Dupage.
Suwanee.	Jasper.	Lincoln.	Effingham.
80-84 cents.	Jeff Davis.	Minidoka.	Fayette.
Alachua.	Jefferson.	Nez Perce.	Gallatin.
Bradford.	Jenkins.	Oneida.	Greene.
Levy.	Johnson.	Power.	Hamilton.
Marion.	Jones.	45-49 cents—	Hardin.
Sumter.	Laurens.	Ada.	Jefferson.
GEORGIA:	Lee.	Adams.	Jersey.
60-64 cents.	Liberty.	Canyon.	Johnson.
Catoosa.	Lincoln.	Elmore.	Kane.
Dade.	Lowndes.	Owyhee.	Lake.
Murray.	McDuffie.	Twin Falls.	McHenry.
Walker.	Macon.	Washington.	Macoupin.
Whitfield.	Madison.	ILLINOIS:	Marion.
65-69 cents.	Marion.	35-39 cents—	Montgomery.
Banks.	Meriwether.	Boone.	Pike.
Bartow.	Miller.	Brown.	Pope.
Chattooga.	Mitchell.	Bureau.	Saline.
Cherokee.	Monroe.	Carroll.	Wayne.
Dawson.	Montgomery.	Cass.	White.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

ILLINOIS—Continued.

45-49 cents—
Alexander.
Clinton.
Franklin.
Jackson.
Madison.
Massac.
Monroe.
Perry.
Pulaski.
Randolph.
Saint Clair.
Union.
Washington.
Williamson.

INDIANA:

35-39 cents—
Adams.
Allen.
Benton.
Blackford.
Boone.
Carroll.
Cass.
Clinton.
DeKalb.
Delaware.
Elkhart.
Fountain.
Fulton.
Grant.
Hamilton.
Hancock.
Hendricks.
Henry.
Howard.
Huntington.
Jasper.
Jay.
Kosciusko.
Lagrange.
Laporte.
Madison.
Marshall.
Miami.
Montgomery.
Newton.
Noble.
Parke.
Porter.
Pulaski.
Putnam.
Randolph.
Rush.
Saint Joseph.
Starke.
Steuben.
Tippecanoe.
Tipton.
Vermilion.
Wabash.
Warren.
Wayne.
Wells.
White.
Whitley.
40-44 cents—
Bartholomew.
Brown.
Clark.
Clay.
Crawford.
Daviess.
Dearborn.
Decatur.
Dubois.
Fayette.
Floyd.
Franklin.
Gibson.
Greene.
Harrison.
Jackson.
Jefferson.
Jennings.
Johnson.

INDIANA—Continued.

40-44 cents—Contd.
Knox.
Lake.
Lawrence.
Marion.
Martin.
Monroe.
Morgan.
Ohio.
Orange.
Owen.
Perry.
Posey.
Ripley.
Scott.
Shelby.
Spencer.
Sullivan.
Switzerland.
Union.
Vanderburg.
Vigo.
Warrick.
Washington.

IOWA:

35-39 cents—
Adair.
Adams.
Allamakee.
Appanoose.
Audubon.
Benton.
Blackhawk.
Boone.
Bremer.
Buchanan.
Buena Vista.
Butler.
Calhoun.
Carroll.
Cass.
Cedar.
Cerro Gordo.
Cherokee.
Chickasaw.
Clarke.
Clay.
Clayton.
Clinton.
Crawford.
Dallas.
Davis.
Decatur.
Delaware.
Des Moines.
Dickinson.
Emmet.
Fayette.
Floyd.
Franklin.
Fremont.
Greene.
Grundy.
Guthrie.
Hamilton.
Hancock.
Hardin.
Harrison.
Henry.
Howard.
Humboldt.
Ida.
Iowa.
Jasper.
Jefferson.
Johnson.
Jones.
Keokuk.
Kossuth.
Lee.
Linn.
Louisa.
Lucas.
Lyon.
Madison.

IOWA—Continued.

35-39 cents—Contd.
Mahaska.
Marion.
Marshall.
Mills.
Mitchell.
Monona.
Monroe.
Montgomery.
Muscatine.
O'Brien.
Osceola.
Pike.
Palo Alto.
Plymouth.
Pocahontas.
Polk.
Pottawattamie.
Poweshiek.
Ringgold.
Sac.
Scott.
Shelby.
Sioux.
Story.
Tama.
Taylor.
Union.
Van Buren.
Wapello.
Warren.
Washington.
Wayne.
Webster.
Winnebago.
Winneshek.
Woodbury.
Worth.
Wright.
40-44 cents—
Dubuque.
Jackson.
KANSAS:
35-39 cents—
Brown.
Doniphan.
Marshall.
Nemaha.
40-44 cents—
Allen.
Anderson.
Atchison.
Bourbon.
Butler.
Chase.
Chautauqua.
Cherokee.
Clay.
Cloud.
Coffey.
Cowley.
Crawford.
Dickinson.
Douglas.
Elk.
Franklin.
Geary.
Greenwood.
Harper.
Harvey.
Jackson.
Jefferson.
Jewell.
Johnson.
Kingman.
Labette.
Leavenworth.
Linn.
Lyon.
McPherson.
Marion.
Miami.
Montgomery.
Morris.
Neosho.
Osage.

KANSAS—Continued.

40-44 cents—Contd.
Pottawattamie.
Reno.
Republic.
Rice.
Riley.
Sedgwick.
Shawnee.
Sumner.
Wabunsee.
Washington.
Wilson.
Woodson.
Wyandotte.
45-49 cents—
Barber.
Barton.
Cheyenne.
Clark.
Decatur.
Edwards.
Ellis.
Ellsworth.
Ford.
Gove.
Graham.
Hodgeman.
Lane.
Lincoln.
Logan.
Meade.
Mitchell.
Ness.
Norton.
Osborne.
Ottawa.
Pawnee.
Phillips.
Pratt.
Rawlins.
Rooks.
Rush.
Russell.
Saline.
Scott.
Sheridan.
Sherman.
Smith.
Stafford.
Trego.
KENTUCKY:
45-49 cents—
Anderson.
Boone.
Boyd.
Boyle.
Bracken.
Breckinridge.
Bullitt.
Campbell.
Carroll.
Carter.
Davies.
Ellicott.
Fleming.
Franklin.
Fulton.
Gallatin.
Grant.
Graves.
Greenup.
Hancock.
Hardin.
Henry.
Hickman.
Jefferson.
Johnson.
Kenton.
Larue.
Lawrence.
Lewis.
Marion.
Mason.
Meade.
Mercer.
Nelson.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

KENTUCKY—Continued. 45-49 cents—Contd. Ohio. Oldham. Owen. Pendleton. Robertson. Rowan. Shelby. Spencer. Trimble. Washington. 50-54 cents— Adair. Allen. Barren. Bath. Bourbon. Butler. Casey. Christian. Clay. Edmonson. Fayette. Garrard. Grayson. Greene. Harrison. Hart. Jackson. Jessamine. Knox. Laurel. Lincoln. Logan. Madison. Menefee. Metcalfe. Monroe. Montgomery. Morgan. Nicholas. Owsley. Pulaski. Rockcastle. Scott. Simpson. Taylor. Todd. Warren. Wolfe. Woodford. 55-59 cents— McCreary. Wayne. Whitley.	MARYLAND: 45-49 cents— Anne Arundel. Baltimore. Caroline. Cecil. Frederick. Harford. Howard. Kent. Montgomery. Prince Georges. 50-54 cents— Allegany. Garrett. Somerset. Washington. Worcester. MASSACHUSETTS: 55-59 cents— Berkshire. MICHIGAN: 35-39 cents— Branch. Cass. Hillsdale. Lenawee. St. Joseph. 40-44 cents. Alcona. Allegan. Arenac. Barry. Bay. Berrien. Calhoun. Clare. Clinton. Eaton. Genesee. Gladwin. Gratiot. Huron. Ingham. Ionia. Iosco. Isabella. Jackson. Kalamazoo. Kent. Lapeer. Livingston. Macomb. Mecosta. Midland. Missaukee. Monroe. Montcalm. Muskegon. Newaygo. Oakland. Oceana. Ogemaw. Osceola. Oscoda. Ottawa. Saginaw. St. Clair. Sanilac. Shiawassee. Tuscola. Van Buren. Washtenaw. Wayne. Wexford. 45-49 cents. Alpena. Antrim. Baraga. Benzie. Charlevoix. Cheboygan. Chippewa. Crawford. Delta. Dickinson. Emmet.	MICHIGAN—Continued. 45-49 cents—Contd. Grand Traverse. Houghton. Kalkaska. Keweenaw. Lake. Leelanau. Luce. Mackinac. Manistee. Marquette. Mason. Menominee. Montmorency. Ontonagon. Otsego. Presque Isle. Roscommon. MINNESOTA: 30-34 cents— Bigstone. Chippewa. Clay. Grant. Kandiyohi. Lac Qui Parle. Lincoln. Lyon. Norman. Renville. Stevens. Swift. Traverse. Wilkin. Yellow Medicine. 35-39 cents. Anoka. Becker. Benton. Blue Earth. Brown. Carver. Chisago. Cottonwood. Dakota. Dodge. Douglas. Faribault. Fillmore. Freeborn. Goodhue. Hennepin. Houston. Isanti. Jackson. Kittson. Lesueur. McLeod. Mahnomon. Marshall. Martin. Meeker. Millelacs. Morrison. Mower. Murray. Nicollet. Nobles. Olmsted. Ottertail. Pennington. Pipestone. Polk. Pope. Ramsey. Red Lake. Redwood. Rice. Rock. Scott. Sherburne. Sibley. Stearns. Steele. Todd. Wabasha. Wadena.	MINNESOTA—Contd. 35-39 cents—Contd. Waseca. Washington. Watsonwan. Winona. Wright. 40-44 cents— Aitkin. Beltrami. Carlton. Cass. Clearwater. Crow Wing. Hubbard. Kanabec. Pine. Roseau. St. Louis. MISSISSIPPI: 60-64 cents— Amite. Attala. Calhoun. Chickasaw. Choctaw. Clay. Copiah. Hinds. Itawamba. Lawrence. Lincoln. Madison. Marion. Monroe. Pike. Pontotoc. Rankin. Union. Webster. Wilkinson. Yalobusha. 65-69 cents— Clarke. Covington. Forrest. Jasper. Jefferson Davis. Jones. Kemper. Lauderdale. Leake. Lowndes. Neshoba. Newton. Noxubee. Oktibbeha. Perry. Scott. Simpson. Smith. Wayne. Winston. MISSOURI: 35-39 cents— Adair. Atchison. Caldwell. Clark. Davies. Gentry. Grundy. Harrison. Holt. Knox. Lewis. Linn. Livingston. Macon. Mercer. Nodaway. Putnam. Schuyler. Scotland. Shelby. Sullivan. Worth.
---	--	--	---

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

MISSOURI—Continued.	MISSOURI—Continued.	NEBRASKA—Continued.	NEW YORK—Contd.
40-44 cents—	50-54 cents—Contd.	35-39 cents—Contd.	45-49 cents—Contd.
Andrew.	Texas.	Seward.	Cortland.
Audrain.	Washington.	Stanton.	Erie.
Barry.	Wayne.	Thayer.	Genesee.
Barton.	Wright.	Thurston.	Jefferson.
Bates.	MONTANA:	Valley.	Lewis.
Benton.	35-39 cents—	Washington.	Livingston.
Boone.	Beaverhead.	Wayne.	Madison.
Buchanan.	Blaine.	Wheeler.	Monroe.
Callaway.	Cascade.	York.	Niagara.
Carroll.	Chouteau.	40-44 cents—	Onondaga.
Cass.	Dawson.	Adams.	Ontario.
Cedar.	Flathead.	Banner.	Orleans.
Charlton.	Granite.	Box Butte.	Oswego.
Clay.	Hill.	Buffalo.	Schuyler.
Clinton.	Lewis & Clark.	Chase.	Seneca.
Cooper.	Lincoln.	Cherry.	Steuben.
Dade.	Madison.	Cheyenne.	Tioga.
Dekalb.	Missoula.	Dawes.	Tompkins.
Greene.	Powell.	Dawson.	Wayne.
Henry.	Ravalli.	Deuel.	Wyoming.
Hickory.	Sanders.	Dundy.	Yates.
Howard.	Sheridan.	Franklin.	50-54 cents—
Jackson.	Teton.	Frontier.	Albany.
Jasper.	Valley.	Furnas.	Clinton.
Johnson.	40-44 cents—	Garden.	Columbia.
Lafayette.	Big Horn.	Gosper.	Delaware.
Lawrence.	Broadwater.	Hall.	Dutchess.
Lincoln.	Carbon.	Harlan.	Essex.
McDonald.	Custer.	Hayes.	Franklin.
Marion.	Fergus.	Hitchcock.	Fulton.
Moniteau.	Gallatin.	Howard.	Greene.
Monroe.	Jefferson.	Kearney.	Herkimer.
Montgomery.	Meagher.	Keith.	Montgomery.
Morgan.	Musselshell.	Kimball.	Oneida.
Pettis.	Park.	Lincoln.	Orange.
Pike.	Rosebud.	Logan.	Otsego.
Platte.	Stillwater.	Morrill.	Rensselaer.
Polk.	Sweet Grass.	Perkins.	St. Lawrence.
Ralls.	Yellowstone.	Phelps.	Saratoga.
Randolph.	NEBRASKA:	Redwillow.	Schenectady.
Ray.	35-39 cents—	Scotts Bluff.	Schoharie.
St. Charles.	Antelope.	Sheridan.	Sullivan.
St. Clair.	Blaine.	Sherman.	Ulster.
Saline.	Boone.	Sionx.	Warren.
Stone.	Boyd.	Webster.	Washington.
Vernon.	Brown.	NEW JERSEY:	NEVADA:
Warren.	Burt.	45-49 cents—	55-59 cents—
45-49 cents—	Butler.	Burlington.	Elko.
Bollinger.	Cass.	Camden.	White Pine.
Butler.	Cedar.	Gloucester.	NORTH CAROLINA:
Camden.	Clay.	Hunterdon.	55-59 cents—
Cape Girardeau.	Collax.	Mercer.	Alleghany.
Christian.	Cuming.	Middlesex.	Ashe.
Cole.	Custer.	Morris.	Avery.
Crawford.	Dakota.	Salem.	Buncombe.
Dallas.	Dixon.	Somerset.	Haywood.
Douglas.	Dodge.	Warren.	Mitchell.
Franklin.	Douglas.	50-54 cents—	Watauga.
Gasconade.	Fillmore.	Sussex.	Yancey.
Howell.	Gage.	NEW HAMPSHIRE:	Madison.
Jefferson.	Garfield.	50-54 cents—	60-64 cents—
Laclede.	Greeley.	Coos.	Alexander.
Maries.	Hamilton.	Grafton.	Burke.
Miller.	Holt.	55-59 cents—	Caldwell.
Oregon.	Jefferson.	Cheshire.	Catawba.
Osage.	Johnson.	Sullivan.	Davidson.
Ozark.	Keyapaha.	NEW MEXICO:	Davie.
Perry.	Knox.	50-54 cents—	Iredell.
Ripley.	Lancaster.	Chaves.	Rowan.
St. Genevieve.	Loup.	Colfax.	Surry.
St. Louis.	Madison.	Mora.	Wilkes.
Scott.	Merrick.	Otero.	Yadkin.
Shannon.	Nance.	Rio Arriba.	65-69 cents—
Stoddard.	Nemaha.	San Juan.	Alamance.
Taney.	Nuckolls.	San Miguel.	Anson.
Webster.	Otoe.	Taos.	Cabarrus.
50-54 cents—	Pawnee.	NEW YORK:	Caswell.
Carter.	Pierce.	45-49 cents—	Chatham.
Dent.	Platte.	Allegany.	Cleveland.
Iron.	Polk.	Broome.	Columbus.
Madison.	Richardson.	Cattaraugus.	Cumberland.
Phelps.	Rock.	Cayuga.	Durham.
Pulaski.	Saline.	Chautauqua.	Edgecombe.
Reynolds.	Sarpy.	Chemung.	Forsyth.
St. Francois.	Saunders.	Chenango.	Franklin.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

NORTH CAROLINA—Con.	OHIO:	OHIO—Continued.	OREGON—Continued.
65-69 cents—Contd.	35-39 cents—	45-49 cents—Contd.	45-49 cents—Contd.
Gaston.	Allen.	Trumbull.	Clackamas.
Granville.	Auglaize.	Vinton.	Columbia.
Greene.	Champaign.	Washington.	Lane.
Guilford.	Crawford.	OKLAHOMA:	Linn.
Halifax.	Defiance.	40-44 cents—	Marion.
Harnett.	Fulton.	Adair.	Multnomah.
Hoke.	Hancock.	Alfalfa.	Polk.
Johnston.	Hardin.	Blaine.	Sherman.
Lee.	Henry.	Caddo.	Wasco.
Lenoir.	Logan.	Canadian.	Washington.
Lincoln.	Madison.	Cherokee.	Yamhill.
Mecklenburg.	Marion.	Cleveland.	50-54 cents—
Montgomery.	Mercer.	Comanche.	Baker.
Moore.	Paulding.	Cotton.	Crook.
Nash.	Putnam.	Craig.	Douglas.
Orange.	Seneca.	Custer.	Grant.
Person.	Shelby.	Delaware.	Harney.
Pitt.	Union.	Dewey.	Klamath.
Randolph.	Van Wert.	Ellis.	Malheur.
Richmond.	Williams.	Garfield.	PENNSYLVANIA:
Robeson.	Wood.	Garvin.	45-49 cents—
Rockingham.	Wyandot.	Grady.	Adams.
Rutherford.	40-44 cents—	Grant.	Allegheny.
Scotland.	Adams.	Harper.	Armstrong.
Stanly.	Ashland.	Jackson.	Beaver.
Stokes.	Brown.	Jefferson.	Bedford.
Union.	Butler.	Kay.	Berks.
Vance.	Clark.	Kingfisher.	Blair.
Wake.	Clermont.	Kiowa.	Bradford.
Warren.	Clinton.	Logan.	Bucks.
Wayne.	Coshocton.	McClain.	Butler.
Wilson.	Darke.	Major.	Center.
	Delaware.	Mayes.	Chester.
	Erie.	Murray.	Clarion.
	Fairfield.	Noble.	Clinton.
	Fayette.	Nowata.	Columbia.
	Franklin.	Oklahoma.	Crawford.
	Greene.	Osage.	Cumberland.
	Hamilton.	Ottawa.	Dauphin.
	Highland.	Pawnee.	Delaware.
	Hocking.	Payne.	Erie.
	Holmes.	Pottawatomie.	Fayette.
	Huron.	Rogers.	Franklin.
	Knox.	Stephens.	Fulton.
	Licking.	Tillman.	Greene.
	Lorain.	Tulsa.	Huntingdon.
	Lucas.	Wagoner.	Jefferson.
	Medina.	Washington.	Juniata.
	Miami.	Washita.	Lancaster.
	Montgomery.	Woods.	Lawrence.
	Morrow.	Woodward.	Lebanon.
	Ottawa.	45-49 cents—	Lehigh.
	Pickaway.	Beaver.	Lycoming.
	Pike.	Beckham.	McKean.
	Preble.	Bryan.	Mercer.
	Richland.	Carter.	Mifflin.
	Ross.	Cimarron.	Monroe.
	Sandusky.	Coal.	Montgomery.
	Scioto.	Greer.	Montour.
	Stark.	Harmon.	Northampton.
	Tuscarawas.	Haskell.	Northumberland.
	Warren.	Hughes.	Perry.
	Wayne.	Johnston.	Philadelphia.
	45-49 cents—	Lincoln.	Potter.
	Ashtabula.	McIntosh.	Snyder.
	Athens.	Marshall.	Somerset.
	Belmont.	Muskogee.	Sullivan.
	Columbiana.	Okfuskee.	Susquehanna.
	Cuyahoga.	Okmulgee.	Tioga.
	Gallia.	Pontotoc.	Union.
	Gauga.	Roger Mills.	Venango.
	Guernsey.	Seminole.	Warren.
	Harrison.	Texas.	Washington.
	Jackson.	50-54 cents—	Westmoreland.
	Jefferson.	Atoka.	Wyoming.
	Lake.	Choctaw.	York.
	Lawrence.	Le Flore.	50-54 cents—
	McKenzie.	Pittsburg.	Cambria.
	McLean.	Sequoyah.	Cameron.
	Mercer.	OREGON:	Carbon.
	Mountrail.	40-44 cents—	Clearfield.
	Morton.	Umatilla.	Elk.
	Oliver.	Union.	Forest.
	Stark.	Wallowa.	Indiana.
	Williams.	45-49 cents—	Lackawanna.
		Benton.	Luzerne.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

PENNSYLVANIA—Contd. 50-54 cents—Contd. Pike. Schuylkill. Wayne.	SOUTH DAKOTA—Con. 35-39 cents—Contd. Minnehaha. Spink. Tripp. Turner. Union. Yankton.	TENNESSEE—Contd. 50-54 cents—Contd. Sumner. Trousdale. Unicoi. Union. Van Buren. Warren. Washington. Wayne. Weakley. White.	TEXAS—Continued. 50-54 cents—Contd.
SOUTH CAROLINA: 70-74 cents— Abbeville. Aiken. Anderson. Bamberg. Barnwell. Beaufort. Berkeley. Calhoun. Charleston. Cherokee. Chester. Chesterfield. Clarendon. Colleton. Darlington. Dillon. Dorchester. Edgefield. Fairfield. Florence. Georgetown. Greenville. Greenwood. Hampton. Horry. Jasper. Kershaw. Lan-aster. Laurens. Lee. Lexington. Marion. Marlboro. Newberry. Oconee. Orangeburg. Pickens. Richland. Saluda. Spartanburg. Sumter. Union. Williamsburg. York.	40-44 cents— Campbell. Edmunds. Faulk. Harding. Hughes. Hyde. Lyman. Perkins. Potter. Sully. Walworth.	55-59 cents— Anderson. Bradley. Campbell. Chester. Fayette. Fentress. Hamilton. Hardeman. Hardin. James. Loudon. McMinn. McNairy. Marion. Meigs. Overton. Pickett. Polk. Rhea. Roane. Scott. Shelby. Tipton.	Hays. Hill. Hunt. Johnson. Kaufman. Kerr. McLennan. Medina. Parker. Rockwall. Tarrant. Travis. Williamson. Wise. 55-59 cents— Delta. Falls. Henderson. Hopkins. Lamar. Limestone. Milam. Navarro. Rains. Red River. Van Zandt. Wood. 60-64 cents— Anderson. Bowie. Cass. Cherokee. Nacogdoches. Rusk. Shelby. Smith.
SOUTH DAKOTA: 30-34 cents— Beadle. Brookings. Clark. Codington. Day. Deuel. Grant. Hamlin. Jerauld. Kingsbury. Lake. Marshall. Miner. Moody. Roberts. Sanborn. 35-39 cents— Aurora. Bonhomme. Brown. Brule. Buffalo. Charles Mix. Clay. Davison. Douglas. Gregory. Hand. Hanson. Hutchinson. Lincoln. McCook. McPherson.	45-49 cents— Butte. Custer. Fall River. Lawrence. Meade. Pennington. Stanley. TENNESSEE: 45-49 cents— Davidson. Hickman. Lewis. Maury. Rutherford. Smith. Williamson. Wilson. 50-54 cents— Bedford. Blount. Cannon. Carroll. Carter. Cheatham. Claiborne. Clay. Cocke. Coffee. Crockett. Decatur. Dekalb. Dickson. Dyer. Franklin. Gibson. Giles. Grainger. Greene. Grundy. Hamblen. Hancock. Hawkins. Haywood. Henderson. Henry. Humphreys. Jackson. Jefferson. Johnson. Knox. Lauderdale. Lawrence. Lincoln. Macon. Madison. Marshall. Monroe. Montgomery. Moore. Obion. Perry. Putnam. Robertson. Sevier. Sullivan.	TEXAS: 45-49 cents— Archer. Armstrong. Baylor. Blanco. Bosque. Briscoe. Burnet. Carson. Clay. Collingsworth. Cooke. Coryell. Deaf Smith. Floyd. Foard. Gillespie. Gray. Grayson. Hale. Hamilton. Hansford. Hardeman. Haskell. Hemphill. Hutchinson. Kendall. Knox. Lampasas. Montague. Ochiltree. Potter. Randall. Sherman. Swisher. Taylor. Wichita. Wilbarger. Young. 50-54 cents— Bandera. Bell. Bexar. Collin. Comal. Dallas. Denton. Ellis. Fannin.	UTAH: 45-49 cents— Boxelder. Cache. Carbon. Davis. Emery. Juab. Morgan. Rich. Salt Lake. Sanpete. Sevier. Summit. Tooele. Uinta. Utah. Wasatch. Wayne. Weber. 50-54 cents— Beaver. Garfield. Iron. Millard. Piute. San Juan. VERMONT: 50-54 cents— Addison. Bennington. Caledonia. Chittenden. Essex. Franklin. Grand Isle. Lamoille. Orange. Orleans. Rutland. Washington. Windsor. 55-59 cents— Windham. VIRGINIA: 50-54 cents— Albermarle. Alexandria. Augusta.

AVERAGE FARM PRICES OF OATS, BY COUNTIES, 1910-1914—Continued.

VIRGINIA—Continued.	VIRGINIA—Continued.	WEST VIRGINIA—Con.	WISCONSIN—Contd.
50-54 cents—Contd.	60-64 cents—Contd.	50-54 cents—Contd.	40-44 cents—Contd.
Botetourt.	Cumberland.	Lincoln.	Kenosha.
Caroline.	Dickenson.	Marion.	Kewaunee.
Clarke.	Dinwiddie.	Mineral.	Lafayette.
Culpeper.	Goochland.	Monongalia.	Manitowoc.
Essex.	Nottaway.	Morgan.	Marathon.
Fairfax.	Powhatan.	Preston.	Marquette.
Fauquier.	Prince Edward.	Putnam.	Milwaukee.
Floyd.	Prince George.	Ritchie.	Oconto.
Frederick.	Russell.	Roane.	Outagamie.
Greene.	65-69 cents—	Taylor.	Ozaukee.
King George.	Brunswick.	Wayne.	Portage.
Lancaster.	Charlotte.	Wirt.	Racine.
Lee.	Halifax.	55-59 cents—	Richland.
Loudoun.	Henry.	Braxton.	Rock.
Madison.	Lunenburg.	Calhoun.	Rusk.
Montgomery.	Mecklenburg.	Clay.	Sauk.
Northumberland.	Pittsylvania.	Fayette.	Sawyer.
Orange.	WASHINGTON:	Gilmer.	Shawano.
Page.	40-44 cents—	Grant.	Sheboygan.
Prince William.	Adams.	Greenbrier.	Taylor.
Pulaski.	Columbia.	Lewis.	Walworth.
Rappahannock.	Ferry.	McDowell.	Washington.
Richmond.	Franklin.	Mercer.	Waukesha.
Roanoke.	Lincoln.	Monroe.	Waupaca.
Rockbridge.	Spokane.	Nicholas.	Waushara.
Rockingham.	Stevens.	Pendleton.	Winnebago.
Scott.	Walla Walla.	Pocahontas.	Wood.
Shenandoah.	Whitman.	Raleigh.	45-49 cents—
Smyth.	45-49 cents—	Randolph.	Ashland.
Spotsylvania.	Chelan.	Summers.	Bayfield.
Stafford.	Clarke.	Tucker.	Douglas.
Warren.	Cowlitz.	Upshur.	Florence.
Washington.	Douglas.	Webster.	Forest.
Westmoreland.	Grant.	Wyoming.	Iron.
Wythe.	King.	WASHINGTON:	Langlade.
55-59 cents—	Kittitas.	35-39 cents—	Lincoln.
Amelia.	Klickitat.	Buffalo.	Marinette.
Amherst.	Lewis.	Chippewa.	Oneida.
Appomattox.	Okanogan.	Dunn.	Price.
Bedford.	Pend Oreille.	Eau Claire.	Vilas.
Bland.	Pierce.	Jackson.	WYOMING:
Buckingham.	Skagit.	Juneau.	40-44 cents—
Campbell.	Snohomish.	La Crosse.	Goshen.
Carroll.	Thurston.	Monroe.	Laramie.
Charles City.	Whatcom.	Pepin.	Lincoln.
Chesterfield.	Yakima.	Pierce.	Platte.
Fluvanna.	WEST VIRGINIA:	Polk.	45-49 cents—
Franklin.	45-49 cents—	St. Croix.	Albany.
Giles.	Brooke.	Trempealeau.	Bighorn.
Gloucester.	Cabell.	Vernon.	Campbell.
Grayson.	Hancock.	40-44 cents—	Converse.
Hanover.	Jackson.	Adams.	Crook.
Henrico.	Marshall.	Barron.	Hot Springs.
James City.	Mason.	Brown.	Johnson.
King and Queen.	Ohio.	Burnett.	Niobrara.
King William.	Pleasants.	Calumet.	Park.
Louisa.	Tyler.	Clark.	Sheridan.
Mathews.	Wetzel.	Columbia.	Uinta.
Middlesex.	Wood.	Crawford.	Washakie.
Nelson.	50-54 cents—	Dane.	Weston.
New Kent.	Barbour.	Dodge.	50-54 cents—
Patrick.	Berkeley.	Door.	Carbon.
Tazewell.	Doddridge.	Fond du Lac.	Fremont.
Warwick.	Hampshire.	Grant.	Natrona.
Wise.	Hardy.	Green.	Sweetwater.
York.	Harrison.	Green Lake.	
60-64 cents—	Jefferson.	Iowa.	
Buchanan.	Kanawha.	Jefferson.	

