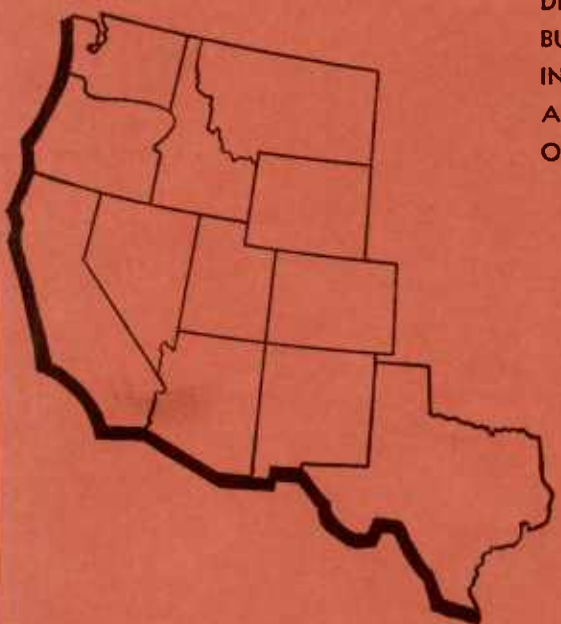
Shifts in the Trade in Western Slaughter Livestock

by Western Livestock Marketing Research Technical Committee



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Shifts in the Trade in Western Slaughter Livestock

By the WESTERN LIVESTOCK MARKETING RESEARCH TECHNICAL COMMITTEE[1]

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[1]This report was prepared by Harold Abel, Agricultural Economist, Bureau of Agricultural Economics, U. S. Department of Agriculture, in collaboration with the other Members of the Committee. The personnel of the Committee is listed on the inside of the front cover. Under the direction of the Committee, the Western States are now working simultaneously on two phases of research in livestock marketing and are developing background information regarding the industry. These phases are: (1) An analysis of western livestock auction markets and (2) an analysis of methods and practices followed in the marketing of western feeder cattle.

SUMMARY

Slaughter of commercial meat animals in the 12 Western States, here considered, practically doubled during the last quarter-century. The human population in the West increased by nearly two-thirds. Population has increased with striking rapidity during the last 10 years.

In round figures, slaughter expanded from roughly 3 billion pounds to 6 billion pounds (live weight) from 1925 to 1948. The population grew from 16.0 million to about 26.5 million persons during the same period. (The 12 Western States, as the term is used in this report, includes the usual 11 Western States plus Texas.)

Historically, a substantial portion of the meat-animal production in the West has moved to the Corn Belt as feeder stock, prior to fattening, with slaughter and ultimate consumption taking place in the eastern part of the United States. But since 1925, a larger and larger share of the western marketings has been going to supply western slaughterers. The more important findings of this study of shifts in the trade in western slaughter livestock had to do with the changes which are taking place in this market movement and the shifts that are occurring in the "line of east-west movement of slaughter livestock." As the demand for livestock to be slaughtered in the West has increased, and as livestock numbers in the West for shipment to other parts of the United States have decreased, the "line of east-west movement" has gradually moved eastward. The term "line of east-west movement" refers to the approximate geographic boundary to which western packer-buyers need to come from coastal points to buy their supplies of slaughter livestock.

This increase in demand for western meat animals within the borders of the 12 Western States means that some of the livestock that was formerly available for consumption in the East is now utilized in the local area, so western stockmen are finding it possible to sell a larger part of their yearly output of meat animals nearer their own farms and ranches.

It now appears that human population in the West will increase to approximately 30 million people by 1955. This should be considered when future needs of slaughter livestock in the West are studied. If this increase in population materializes, and if this growth is accompanied by reasonably high disposable incomes on the part of western consumers (in other words, if the western per capita consumption of meat in 1955 is equal to that of 1948), then about 1,200,000,000 more pounds live weight of meat animals will be required in the West. This additional demand could be supplied either from slaughter in the West or from inshipment, or from some combination of the two.

If all the meat to supply the demand for this additional western population were to come from livestock slaughtered in the West, a western slaughter of 7,200,000,000 pounds would be required by 1955. This apparently needed increment of 1,200,000,000 pounds, when expressed in terms of head count, is the equivalent of about 800,000 cattle, 375,000 calves, 1,100,000 hogs, and 1,000,000 sheep and lambs.

Even though more pounds of meat animals per breeding unit and per acre of range land are now produced in the West than was true

25 years ago, the ratio of western commercial livestock slaughter to the total number of livestock on farms and ranches in the West has been steadily increasing. Likewise, although human population in the West has been growing rapidly, the number of meat animals per capita of human population in the West has declined during the last quarter-century.

Considered as an entity, the 12 Western States still constitute a major surplus-marketing area for both cattle and sheep. Because of this, the eastern markets are still a major price-determining influence for livestock sold by western stockmen. Within this western region, the Intermountain and the Southwestern States are outstanding surplus-producing areas while the Pacific coast is predominately a deficit area in both production and marketing of livestock.

In recent years an average net surplus of 2.5 billion pounds of all classes of live animals was marketed from the western region compared with around 3.3 billion pounds in 1925–27. The degree of surplus or deficit existing for the several classes of livestock varied from a net deficit of 640 million pounds of hogs to a net surplus of 2.4 billion pounds of cattle and calves and 731 million pounds of sheep.

Irrespective of the extent of surplus or deficit existing for the several species of livestock, the demands for livestock for slaughter in the West are developing at a more rapid rate than the ability of western farmers and ranchers to increase the production of these animals.

The fact that the needs of western slaughterers are growing more rapidly than the ability of western stockmen to increase the production of these animals strongly indicates the need for research to determine the economic feasibility of feeding more livestock in the West rather than shipping dressed meats, or fat animals, into the region. Such a study should include an investigation of the extent to which western livestock feeding operations can and should be expanded, as well as the most economical method. Range operators who have customarily produced feeder cattle and sheep for sale in the East may find it more profitable in the future to investigate the possibilities of putting additional finish on their animals before selling them to western packer-buyers or feeders.

At certain times during the last 25 years considerable quantities of locally produced wheat of good quality, together with other feed grains, have been fed to livestock in the West, but only when relationships between livestock and wheat prices favored such feeding. The ability of the West to supply large quantities of feed in occasional years tends to upset the normal livestock-marketing pattern, since western meat packers generally are reluctant to make permanent expansions in facilities for slaughtering unless they can be assured of a steady flow of slaughter animals to their plants. As there is some concern, at present, over large wheat surpluses in the western region and as many farms in the West can, under present farming methods, produce more digestive nutrients per acre of wheat than is true for other grain crops, research is needed on possible ways by which western wheat surpluses can be used in an expanded livestock-feeding program. Such research will have to consider the influence that future agricultural policies will have on wheat-feeding possibilities and the degree of emphasis future

agricultural programs may place on the expansion of an "animal agriculture."

The Pacific Coast States led all other areas in the western region in total commercial production of meat; they accounted for about 50 percent of the western regional total in 1948. The Southwest, principally Texas, slaughtered about one-third of all the meat animals commercially killed in the region. The remaining 17 percent of the regional slaughter or meat production was done in the Intermountain area; Colorado produced all but 6 percent of this figure.

Western farm slaughter has been declining for all classes of meat animals studied. This decline is caused by a decrease in farm population in the West and by technological developments in slaughtering animals and curing meats. Developments in refrigeration, transportation, and distribution of meat have made it easier for farm people to buy meat from retail stores or from neighboring frozen-food locker plants.

Since 1940, more and more of the western meat-animal slaughter has taken place in federally inspected plants. Western federally inspected slaughtering establishments handled 65 percent of all the cattle, 42 percent of all the calves, 80 percent of all the sheep and lambs, and 57 percent of all the hogs, that were slaughtered in the 12 Western States, from 1944 to 1948. Indicative of the concentration of production by type of plant, 128 federally inspected packers in 1947, representing only about 3 percent of all western slaughtering establishments, produced about two-thirds of all the meat for the region that year. Within this group there are packing firms that conduct business on a national scale.

Another noticeable development in the West has been the decentralization of the commercial livestock slaughtering industry. Since 1925, an increasing proportion of certain classes of livestock have been slaughtered at points outside the western public markets. This has been most evident in the Southwest and in the Intermountain area, but gains are also noted on the Pacific coast even though a substantial part of the total commercial slaughter has been done there by interior packers for some time. (See footnote 11, page 21, for definition of the term "interior packers.")

Month-to-month fluctuations in the total pounds of commercial livestock slaughtered are less pronounced among western interior packers than among packers located at terminal public markets in the West. The production of meat by western commercial slaughtering plants varies but little throughout the year, in contrast to the rather pronounced seasonal variations in the total pounds of monthly livestock receipts at terminal markets in the West.

Average weights of commercial meat animals slaughtered in the West vary by States, by areas within the region, by type of slaughterer, by season, and by class of animal slaughtered. The annual average weights of livestock slaughtered in the West are generally comparable with the average weights of similar classes in the United States as a whole, except in the case of calves. Slaughter weights of calves slaughtered in the West are considerably heavier (about 113 pounds) than those of calves that are slaughtered in other parts of the United States.

SLAUGHTER LIVESTOCK IN THE WEST

Preliminary to exhaustive studies of the western livestock industry, a comprehensive collection of fundamental data was undertaken. One of the first phases on which data were collected had to do with the marketing and slaughter of livestock grown in the West. When these data were placed under examination certain relationships became clear. These relationships were between (1) human population in the West and demand for slaughter livestock in the West, (2) the direction of market movements for slaughter livestock in the West and the changes in the total pounds of meat animals slaughtered in the West, and (3) the interrelationship between (1) and (2).

Briefly, this study disclosed that there is a growing western demand for meat. This, in practical effect, means a growing western demand for western-grown slaughter livestock. Other subjects discussed in this report include: (1) Surplus and deficit marketing and slaughtering areas within the West; (2) trends in decentralization of livestock slaughter in the West; (3) relative importance of livestock slaughter by type of western processor; (4) trends in western livestock slaughter under Federal inspection; (5) numbers and location of important western commercial slaughtering establishments; (6) seasonality of livestock slaughter in the West; (7) current and future demand in the West for slaughter livestock; and (8) changes in the direction of market movement for slaughter livestock in the West. These subjects are discussed for the western region as a whole, and for the principal areas within the 12 Western States—the Pacific coast, the Southwest, and the Intermountain areas.[2]

Slaughter Classifications or Categories

Meat that is produced in the Western States is usually classified as federally inspected slaughter, wholesale and retail slaughter not federally inspected, and farm slaughter.[3] The total of the first two classes is considered to represent total commercial slaughter, whereas farm slaughter is regarded as noncommercial. Total slaughter for all purposes is made up of commercial slaughter plus farm slaughter.

Commercial meat is produced by two groups of processors—the larger commercial meat packers generally referred to as wholesale slaughterers,[4] and the operators of the smaller plants, called retail-

[2]Pacific coast includes California, Oregon, and Washington. Southwest includes Arizona, New Mexico, and Texas. Intermountain includes Colorado, Idaho, Montana, Nevada, Utah, and Wyoming.

[3]The term Western States as used in this report includes Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming.

[4]The term "large commercial wholesalers" or the term "large commercial slaughterers" as used in this report includes all federally inspected plants plus a grouping of other large nonfederally inspected establishments identified by the Bureau of Agricultural Economics as "other wholesale and large locals." These nonfederally inspected establishments do not include, however, all slaughtering plants that are normally considered as commercial establishments as some of the medium-to-small killers, who probably should be classified as commercial slaughterers, are now included and identified in the Bureau reports as "retailers or local butchers."

ers or local butchers. During the 3-year period 1946–48, an annual average of 4,317,000 head of cattle, 2,073,000 calves, 5,291,000 sheep and lambs, and 5,760,000 hogs, were killed commercially in the West. About 20 percent of all cattle and calves slaughtered in that region in these 3 years is estimated to have been dairy stock and, as such, constitutes a byproduct of the dairy industry.

Both slaughterers who generally engage in interstate marketing of meat and exporters (the larger wholesalers) are required to operate under Federal inspection. Inspectors employed by the United States Department of Agriculture examine the animals before they are slaughtered there, and certify the products that are sound, healthful, wholesome, and fit for human food. Most of the commercial slaughtering in the West is done in federally inspected plants. Establishments that handle only products that move within the State where slaughtered (mostly "other commercial slaughter") are not subject to Federal regulation *(2, pp. 57–88)*.

In addition to western commercial slaughter, about 151,000 cattle, 183,000 calves, 212,000 sheep, 209,000 lambs, and 1,368,000 hogs, are slaughtered annually on western farms and ranches.[5] The meat produced from this "farm," or "noncommercial" slaughter, is usually consumed on the farms, but in some localities carcasses or parts of carcasses are sold for use elsewhere.

Available Statistics

The principal sources of statistics for livestock slaughter generally are the Bureau of Animal Industry, the Livestock Branch of Production and Marketing Administration, the Bureau of Agricultural Economics, all of which are in the United States Department of Agriculture, and the Bureau of the Census in the United States Department of Commerce. Through its Meat Inspection Service, the Bureau of Animal Industry compiles records of the number of animals slaughtered in plants operated under Federal inspection. In reports of meat production and supplies, the United States Department of Agriculture has treated the production by these plants separately because the statistics on slaughter obtained from them are more complete and reliable than are the statistics for the plants that are not federally inspected. For the Western States the available data on federally inspected slaughter began with 1925.

For several years the Bureau of Agricultural Economics has estimated the State figures of slaughter for each class of livestock killed on farms, and since 1946 it has prepared estimates by States of total commercial and total noncommercial slaughter. For the years before 1946, statistics by States are not available on total commercial slaughter for the Western States.

The biennial reports of the Bureau of the Census, published in *The Census of Manufactures (12)*, form an additional source of statistical information on livestock slaughter in the West. Those reports supply data beginning with 1925, for most of the States, on total wholesale slaughter in all plants having products with an annual gross value of more than $5,000.

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[5] See Meat Animals—Farm Production and Income *(8)*. The numbers shown for each class of livestock are the numbers slaughtered on western farms and ranches during the period 1946–48.

These three sources of data, supplemented by unpublished information from the Bureau of Agricultural Economics, provide a means for making annual estimates of regional slaughter beginning with 1925 and extending through 1948.[6]

THE CHANGING WESTERN DEMAND FOR SLAUGHTER LIVESTOCK

During the time for which statistics are available commercial slaughter of livestock in the Western States (all slaughter done there except farm slaughter) has notably increased. In general, the increase has steadily reflected a continued growth in western human population. Commercial meat-animal slaughter grew rapidly during World War II when military and relief agencies began buying large quantities of meat for shipment overseas. The first figures are for 1925 when, in terms of live-weight equivalents, 3,063,000,000 pounds of meat animals were slaughtered. This represented approximately 11 percent of the United States total commercial slaughter in that year.

The low point of production in the West came in 1930, when the output was 2,798,000,000 pounds live weight. Peak production came in 1946 with 6,792,700,000 pounds. In 1948, the estimated quantity was 5,999,700,000 pounds, or about 17 percent of the total for the United States.

Within the western region the commercial meat-animal slaughter has increased most on the Pacific coast, somewhat less in the Southwest, and has shown the least increase in the Intermountain area.

California led the other Western States in total commercial meat production, accounting for about 37 percent of the western total from 1946 to 1948. The three Pacific Coast States produced about 50 percent of the regional total for that period. Texas produced 1,870,000,000 pounds, or approximately 30 percent. Colorado was the third largest producer with about 11 percent of the regional total (fig. 1).

Federally inspected slaughter is a larger proportion of total slaughter in the Pacific and Intermountain areas, while non-Federal and farm slaughter is greatest in the Southwest.

Farm slaughter in the West accounted for about 525,285,000 pounds, in 1948, representing about 13 percent of the farm slaughter in the United States and about 8 percent of the total western slaughter for all purposes. Commercial and noncommercial slaughter of meat animals in the West since 1925 are shown in table 4 (p. 52).

Factors Influencing the Supply and Demand for Meat

As meat occupies an important place in the American diet, it might be expected that any material change in population or in numbers of consumers in an area would result in a corresponding change in the consumption of meat. This is an apparent long-run tendency, or an underlying influence, affecting the demand for meat in the Western States. In addition, economic conditions—such as plentiful supplies of live animals relatively near, relation between the freight rates on live animals and those on dressed meat, and the

[6] See Appendix, page 46, for method used when obtaining estimates.

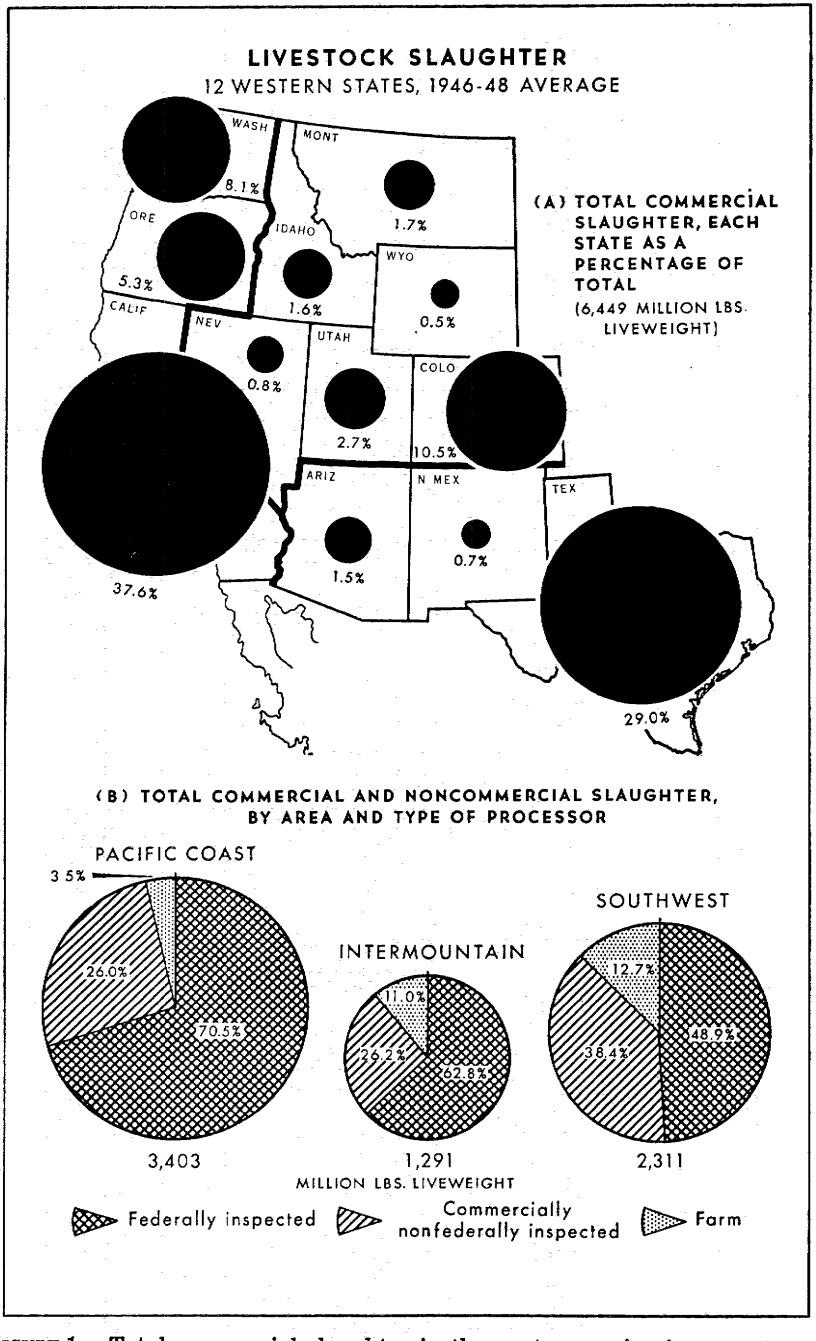

FIGURE 1.—Total commercial slaughter in the western region is concentrated along the Pacific coast, especially in California and also in the States of Texas and Colorado. The largest proportion of livestock slaughtered in the Pacific and Intermountain areas come from federally inspected plants. The largest proportion of the animals slaughtered in the Southwest, on the other hand, are from nonfederally inspected plants or are farm-slaughtered animals.

general trend toward decentralization of the meat-packing industry —have favored the development and growth of slaughtering in the West. As these conditions have been developing noticeably during the last 25 years, the volume of meat-animal slaughter has expanded more in the West than in any other region in the United States.

From the standpoint of demand, other influential considerations aid in determining the number of livestock that will be slaughtered locally and nationally in any given year. From the short-run as well as from the long-run viewpoint, both United States and western demand for meat products are subject to all of the variations resulting from differences in consumer status, including custom or habit, religious affiliations, geographic location of consumers, and, most important, variations in consumer incomes or purchasing power. A relatively high disposable income in western consuming areas during most of the period has strongly influenced the increase in the regional demand for meat.

Considered as a group, the 12 Western States constitute a major surplus-marketing area for both cattle and sheep; therefore, eastern markets and the conditions they reflect are still a major influence in the determination of prices for livestock sold by western stockmen.

From the standpoint of supply, on the other hand, many factors are influential in the price-making mechanism. These include: (1) Total United States supplies of feed available for livestock and the efficiencies of livestock production, (2) number of live animals on farms and the reproduction rates, (3) demand for livestock for feeding purposes, (4) variations in the production of range feed, (5) availability of skilled labor (lambing crews, sheepherders, etc.), (6) degree of control of public grazing lands, (7) Federal price-support programs relative to the different classes of meat animals and to the feeds consumed by the animals, and (8) Government policy with respect to the procurement of meat and foreign trade in these products.

All of these influences, together with those of the general price level for all United States commodities, are instrumental in determining the prices of meat at retail, at wholesale, and at the farm, the country over.

Characteristics of Production, Marketing, and Slaughter of Meat Animals in the West

Livestock production for each State and for the region is the livestock poundage of meat animals produced on farms and ranches in the State or region during any calendar year. Production is the number of pounds added by birth and growth, but does not include the weights of all livestock on farms and ranches. Livestock production is ascertained for each State by deducting the weight of livestock shipped into the State from the total pounds of marketings and farm slaughter in the State, and by adding or subtracting, as the case may be, the difference in the inventory poundage between the beginning and the close of the year. The sum of the production figures for the included States gives the total production for the western region.

Marketings represent shipments to markets and to packers within a State and shipments out of the State. They include retail slaugh-

ter of animals originating in the State, but do not include interfarm sales within a State, or farm slaughter. Total marketings for the 12 Western States constitute the total for the western region. The estimated marketings are based on reports from stockyard companies, packers, State sanitary boards, and railroads. In States where such records are incomplete, marketings are estimated from the available sample of market records and from other data on disposition. The average weight per head since 1946 is estimated on the basis of average weights at the principal markets and of averages for livestock slaughtered by Federal and nonfederally inspected plants. Net marketings are marketings as defined above minus the estimated weights of inshipments of each class of livestock shipped into each State.[7]

Many western cattle and lambs are known in the trade as "two-way" livestock as their destination may be either to feed lots or to packers, depending upon price outlook at time of sale, available feed supplies, season when marketed, and other considerations of an economic nature. Large numbers of stockers and feeders produced in Montana, Wyoming, Colorado, New Mexico, and Texas, move east to the Corn Belt States to be fattened.

The proportion of western commercially fed livestock that is now slaughtered in western plants is not known, but average numbers in feed lots on January 1 during the period 1947–49 indicate that not more than 13 percent of all cattle and calves, and not more than 32 percent of sheep and lambs, killed by western packers could have come from these sources.[8]

Marketing data now published cannot be refined to allow the segregation of the volume of marketings for immediate slaughter, or the separation of that part of the marketings which is sold as stockers and feeders. Comparisons of production, marketings, and commercial slaughter of western meat animals are shown in table 1.

As western packers' needs for slaughter animals have more than doubled during the last quarter century, whereas meat-animal production in the West has increased only about one-third over the same period, there has been a steady decline in the volume of western livestock available for consumption in the East. As a result, the ratio of livestock slaughter in the West to live-weight animal production has been increasing. This is true even though more pounds are now produced per western breeding unit and more per acre of range land than was the case 25 years ago.

In the periods of increasing numbers, the ratio of slaughter to production is low, whereas in periods of decreasing numbers the ratio is high, in the West. In 1925 and 1927, many cattle and calves

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[7]Estimates of inshipments for feeding and breeding purposes are based primarily on records showing shipments into the States, such as the Bureau of Animal Industry records of inspection at public stockyards of dairy cattle and of feeding and breeding cattle, hogs, and sheep; railroad records of receipts of livestock; and State sanitary board or brand inspections. Records are also obtained on the direct movement of livestock into a number of States. Livestock shipped into a State for immediate slaughter are not included in this item.

[8]See reports of the United States Bureau of Agricultural Economics *(6, 10, 11)*. The statistics on livestock on feed include cattle and rather substantial numbers of sheep and lambs that are shipped east for slaughter. Thus to the extent that these figures include livestock that are never slaughtered in the region, the percentages are too high. On the other hand, January 1 numbers do not reflect the total number of fed animals in States in which year-long feeding is practiced, and to this extent the percentages are low. California and Colorado are the two States in which the year-long feeding is practiced most extensively.

TABLE 1.—*Relationships between livestock production, marketings, and total commercial slaughter, by class of livestock, 12 Western States, 1925–48*

LIVE WEIGHT

Year	Production[1]				Net marketings[2]				Commercial slaughter[2]			
	Cattle and calves	Sheep and lambs	Hogs	All meat animals	Cattle and calves	Sheep and lambs	Hogs	All meat animals	Cattle and calves	Sheep and lambs	Hogs	All meat animals
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
1925	3,630.1	914.6	898.5	5,443.2	5,086.4	1,019.0	597.6	6,703.0	2,207.0	196.3	660.0	3,063.3
1926	3,420.1	999.4	895.6	5,315.1	4,568.3	1,057.4	510.8	6,136.5	2,143.9	204.3	622.8	2,971.0
1927	3,330.2	983.5	1,017.6	5,331.3	4,633.9	957.2	612.6	6,203.7	2,039.0	205.6	678.7	2,923.3
1928	3,259.1	1,090.7	1,057.3	5,407.1	4,448.5	1,077.0	745.0	6,270.5	1,964.0	210.2	819.6	2,993.8
1929	3,386.3	1,065.1	969.2	5,420.6	4,076.5	1,078.9	677.3	5,832.7	1,828.9	220.1	796.1	2,845.1
1930	3,422.4	1,181.3	876.7	5,480.4	3,743.5	1,197.7	557.7	5,498.9	1,816.3	261.0	720.7	2,798.0
1931	3,547.7	1,228.0	1,024.6	5,800.3	3,619.3	1,430.4	574.1	5,623.8	1,819.5	323.8	729.2	2,872.5
1932	3,815.8	959.8	1,096.1	5,871.7	2,487.2	1,123.0	655.3	4,265.5	1,774.3	339.3	822.4	2,936.0
1933	4,009.7	951.0	1,009.6	5,970.3	3,308.9	1,080.7	633.9	5,023.5	1,954.1	299.8	870.1	3,124.0
1934[3]	3,660.2	1,040.9	803.4	5,504.5	5,392.2	1,422.6	599.1	7,413.9	2,112.5	260.1	763.0	3,135.6
1935[3]	3,222.7	986.8	674.5	4,884.0	4,316.8	1,163.5	357.1	5,837.4	2,329.7	316.1	503.9	3,149.7
1936	3,779.9	1,063.7	898.2	5,741.8	4,408.4	1,153.4	744.0	6,305.8	2,631.3	326.3	712.3	3,669.9
1937	3,734.4	1,128.2	950.3	5,812.9	4,841.5	1,275.8	616.4	6,733.7	2,758.4	348.4	700.8	3,807.6
1938	3,832.0	1,202.1	1,016.0	6,050.1	4,710.7	1,326.3	879.6	6,916.6	2,691.3	371.4	725.0	3,787.7
1939	3,971.8	1,193.6	1,232.4	6,397.8	4,680.3	1,314.2	738.3	6,732.8	2,734.3	353.0	895.8	3,983.1
1940	4,024.7	1,223.0	1,150.3	6,398.0	4,441.9	1,321.9	855.2	6,619.0	2,568.5	348.6	1,078.5	3,995.6
1941	4,466.9	1,294.9	1,141.9	6,903.7	4,539.0	1,347.9	791.5	6,678.4	2,787.5	348.2	1,118.2	4,253.9
1942	4,994.6	1,296.2	1,499.0	7,789.8	5,340.9	1,530.2	1,272.5	8,143.6	3,116.5	414.5	1,230.4	4,761.4
1943	5,136.2	1,138.3	1,934.9	8,209.4	5,366.8	1,501.0	1,758.1	8,625.9	3,077.6	474.6	1,607.4	5,159.6
1944	5,458.5	1,089.1	1,475.3	8,022.9	6,378.4	1,437.2	1,475.3	9,290.9	4,234.9	468.7	1,742.7	6,446.3
1945	5,374.5	1,082.7	1,152.2	7,609.4	7,175.3	1,454.0	891.5	9,520.8	4,710.0	578.4	1,156.2	6,444.6
1946	5,113.3	989.5	1,080.6	7,183.4	7,064.8	1,410.3	770.5	9,245.6	4,666.0	593.9	1,532.8	6,792.7
1947	5,207.2	895.4	1,039.3	7,141.9	7,129.2	1,161.1	714.0	9,004.3	4,814.6	422.5	1,318.5	6,555.6
1948	5,223.5	781.5	1,117.6	7,122.6	6,711.6	1,096.2	767.5	8,575.3	4,222.6	458.3	1,318.8	5,999.7

See footnotes at end of table.

TABLE 1.—*Relationships between livestock production, marketings, and total commercial slaughter, by class of livestock, 12 Western States, 1925–48—Continued*

RATIO

Year	Commercial slaughter to production				Commercial slaughter to net marketings				Production to net marketings			
	Cattle and calves	Sheep and lambs	Hogs	All meat animals	Cattle and calves	Sheep and lambs	Hogs	All meat animals	Cattle and calves	Sheep and lambs	Hogs	All meat animals
1925	0.61	0.21	0.73	0.56	0.43	0.19	1.10	0.46	0.71	0.90	1.50	0.81
1926	.63	.20	.70	.56	.47	.19	1.22	.48	.75	.95	1.75	.87
1927	.61	.21	.67	.55	.44	.21	1.11	.47	.72	1.03	1.66	.86
1928	.60	.19	.78	.55	.44	.20	1.10	.48	.73	1.01	1.42	.86
1929	.54	.21	.82	.52	.45	.20	1.18	.49	.83	.99	1.43	.93
1930	.53	.22	.82	.51	.49	.22	1.29	.51	.91	.99	1.57	1.00
1931	.51	.26	.71	.50	.50	.23	1.27	.51	.98	.86	1.78	1.03
1932	.46	.35	.75	.50	.71	.30	1.25	.69	1.53	.85	1.67	1.38
1933	.49	.32	.86	.52	.59	.28	1.37	.62	1.21	.88	1.59	1.19
1934[3]	.58	.25	.95	.57	.39	.18	1.27	.42	.68	.73	1.34	.74
1935[3]	.72	.32	.75	.64	.54	.27	1.41	.54	.75	.85	1.89	.84
1936	.70	.31	.79	.64	.60	.28	.96	.58	.86	.92	1.21	.91
1937	.74	.31	.74	.66	.57	.27	1.14	.57	.77	.88	1.54	.86
1938	.70	.31	.71	.63	.57	.28	.82	.55	.81	.91	1.16	.87
1939	.69	.30	.73	.62	.58	.27	1.21	.59	.85	.91	1.67	.95
1940	.64	.29	.94	.62	.58	.26	1.26	.60	.91	.93	1.35	.97
1941	.62	.27	.98	.62	.61	.26	1.41	.64	.98	.96	1.44	1.03
1942	.62	.32	.82	.61	.58	.27	.97	.58	.94	.85	1.18	.96
1943	.60	.42	.83	.63	.57	.32	.91	.60	.96	.76	1.10	.95
1944	.78	.43	1.18	.80	.66	.33	1.18	.69	.86	.76	1.00	.86
1945	.88	.53	1.00	.85	.66	.40	1.30	.68	.75	.74	1.29	.80
1946	.91	.60	1.42	.95	.66	.42	1.99	.73	.72	.70	1.40	.78
1947	.92	.47	1.27	.92	.68	.36	1.85	.73	.73	.77	1.46	.79
1948	.81	.59	1.18	.84	.63	.42	1.72	.70	.78	.71	1.46	.83

All weight figures have been rounded from thousands to millions of pounds.

[1] Bureau of Agricultural Economics, Meat Animals—Farm Production and Income, Revised estimates by States, September and April 1947, April 1948, April 1949.

[2] Estimates of net marketings and total commercial livestock slaughter based on published and unpublished data of Bureau of Census, U. S. Department of Commerce; and Bureau of Animal Industry, Production and Marketing Administration, and Bureau of Agricultural Economics, U. S. Department of Agriculture.

[3] Data for 1934 and 1935 include Government purchases for production and marketings but not included in commercial slaughter.

were being liquidated, but in 1929 and 1931 the numbers were on the increase. In 1935 and 1937, they were moving down again and in 1939 they were moving up. From 1944 through 1948 they were declining. Which way cattle inventories were moving at a given time can be learned by inspecting the ratios for the series of years shown in table 1. A comparison of slaughter with production on a year-to-year basis should take into account the fact that slaughter is relatively high in relation to production in years of decreasing inventories, and relatively low in relation to production when inventories are moving upward.

Deficiencies in western livestock production in relation to western demand are most pronounced in the case of hogs, and least in the case of sheep and lambs. The available figures for the annual totals of livestock marketings in these 12 States indicate that total regional marketings are still larger than total regional slaughter requirements by about 2,491 million pounds live weight.[9] But the statistics for all species show that the needs of western slaughterers are developing at a more rapid rate than is the apparent ability of western growers to increase the production of slaughter livestock.

Prospects

Assuming a situation of general stability in the purchasing power of consumers in the West at about the 1948 level, future demand in the region through 1955 for slaughter livestock probably will continue relatively strong. This prospect is strengthened by the fact that a steady decline in the per capita production of meat animals has occurred in the West over the last 25 years. Furthermore, indications point to a continued expansion in western human population for the future *(13, 3)*.

The rather sharp recent increase in the demand for slaughter livestock within the western area and the expected further growth in western human population are of particular significance to western farmers and ranchers. They offer possibilities for new and expanded markets for livestock and increase the likelihood of the farmers to sell a larger proportion of their yearly meat-animal production nearer their own farms and ranches. In the future it may prove more profitable for western range operators, who have customarily produced feeder livestock to be sold in the East, to consider the possibility of putting additional "finish" on their animals before selling them to packer-buyers or feeders located in the West.

The fact that the needs of western slaughterers are growing more rapidly than is the local production of livestock ready for slaughter strongly indicates the need for research to determine the economic feasibility of feeding more livestock in the West rather than shipping dressed meats, or fat animals into the region. Such a study should include an investigation of the extent to which Western livestock feeding operations can and should be expanded as well as the most economic method.

Under present methods of producing meat animals in the West, future needs for slaughter livestock by western slaughterers can be

[9] 1946–48 average. The annual marketings of meat animals include stocker and feeder livestock that are not immediately available for slaughter. Therefore, if comparisons were to be made strictly on the basis of fat animals or livestock for immediate slaughter, these statistics are understatements of the actual situation. Statistics, particularly for hogs, include livestock shipped into the region from outside the 12 Western States.

met only if the major part of the total meat demanded by western consumers is meat from animals produced outside commercial feed lots. However, to the extent that the western demand for commercially fed cattle and sheep increases, it will be necessary either (1) for western farmers and ranchers to convert more of their crop acreage to the production of suitable feeds for fattening livestock or to import such feeds, or (2) for the slaughterers to ship in more fat livestock or dressed meats from outside the region. If such a demand should develop, the western farmers and ranchers would find that the relative returns which they could get from alternative farming enterprises would be an important consideration.

Among the factors that will determine the trend are the quality and kinds of meat demanded by western consumers, the prices they are willing and able to pay for the meat, the relation between freight rates for fresh meat and for live animals when moved east or west, and efficiencies that may or may not be developed in producing slaughter livestock in the West, including the use of feeds.

At certain times during the last 25 years considerable quantities of locally grown wheat of good quality, and other feed grains, have been fed to fatten livestock in the West, but only when relationships between prices for livestock and prices for feed have favored such feeding. With the advent of Government loan and price-support programs it has generally not been economical to feed good-quality wheat to livestock in the West. Only under the wartime feed-wheat programs, when wheat for feed was subsidized, were large quantities of commercial wheat fed to the livestock. Wheat feeding in the West under this program began in 1942, reached a peak in 1943, and then decreased somewhat in 1944, the last year of the program. This ability of the West to supply large quantities of feed in occasional years tends to upset the normal livestock-marketing pattern, as western meat packers generally are reluctant to make permanent expansions in facilities for slaughtering unless they can be assured of a steady flow of slaughter animals to their establishments.

Since there is some concern, at present, over wheat surpluses in the western region and since many farms in the West can under present farming methods produce more digestive nutrients per acre of wheat than per acre of other grain crops, research is needed on possible ways by which wheat surpluses in the West can be used in an expanded livestock-feeding program. Such research must consider the influence that agricultural policies in the future will have on the possibilities of feeding wheat and the degree of emphasis future agricultural programs are likely to place on the expansion of an "animal agriculture."

SURPLUSES OR DEFICITS BETWEEN MARKETING AND SLAUGHTER IN THE WEST[10]

The bulkiness and perishability of livestock, the necessity for speed in making deliveries, and the seasonal nature of the business, have their influence on the costs of marketing livestock. To the

[10]As no data on imports or exports of dressed meats are available for the western region, a study of the balances in the West between production and consumption was not possible. The State and area comparisons shown in this section are between net marketings and total commercial slaughter of western meat animals.

degree that it is necessary to ship animals long distances, the expenses of transportation, yardage, feed, insurance, buying, selling, and shrinkage, become important items of cost in marketing.

As is true in the country as a whole, western cattle, sheep, and hogs are produced generally far away from the centers of consumption. In the United States the center of livestock production is west of the Mississippi River and the center of meat consumption is east of it. Likewise, in the West the three Pacific Coast States—with about 55 percent of the population of the West—is the principal area in which meat is consumed, whereas a large part of the western live-animal production takes place at inland points which are long distances from these coastal consuming centers.

The Census of Agriculture for 1945 *(14)* reported that 78 percent of all western farms and ranches have cattle and calves, 40 percent hogs, and 9 percent sheep, but the production of these animals is highly localized. On January 1, 1949, approximately 78 percent of all western cattle, about 86 percent of all western sheep and lambs, and about 70 percent of all western hogs, were located on farms east of the Pacific Coast States, which illustrates more specifically the areas of surplus or deficit production in the West. The extent to which each of the 12 Western States markets more or less livestock than is required to meet its own slaughter requirements is illustrated in figures 2 and 3.

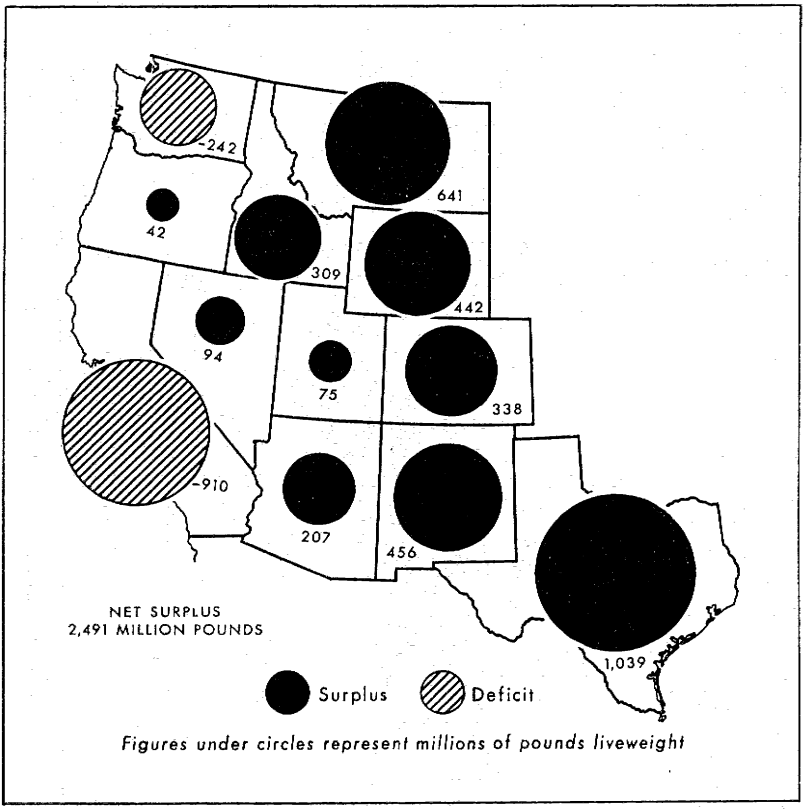

FIGURE 2.—Surplus of net marketing of meat animals over commercial slaughter, 12 Western States, 1946–48 average.

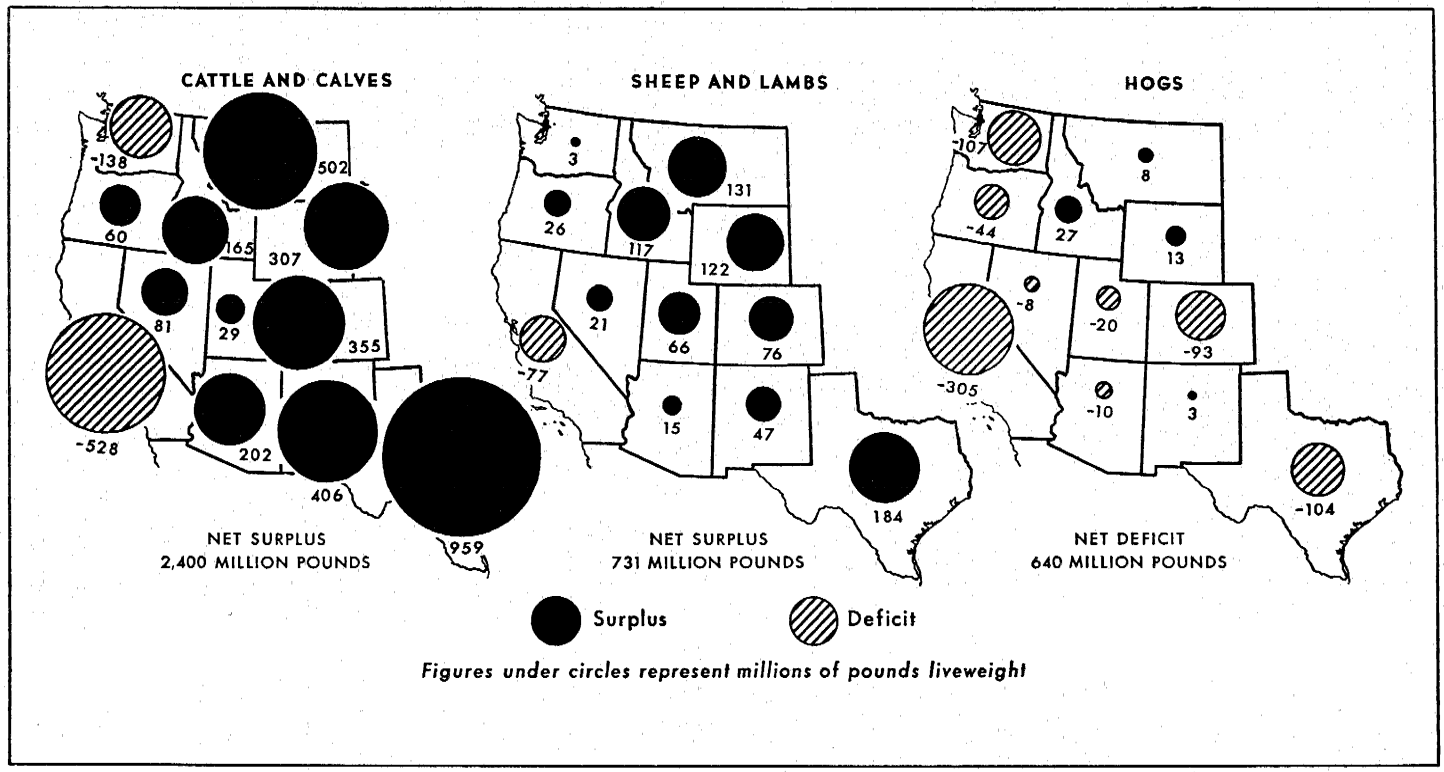

FIGURE 3.—Surplus of net marketing of meat animals over commercial slaughter, by class, 12 Western States, 1946–48 average.

TABLE 2.—*Railroad freight rates for livestock and fresh meat and ratio of fresh meat rates to livestock rates, from selected eastern shipping points to selected points of destination on the Pacific coast, 1940–49*[1]

Point of origin	Effective date of rate change	Points of destination								
		Portland, Oreg.			San Francisco, Calif.			Los Angeles, Calif.		
		Livestock rate	Fresh meat rate	Ratio	Livestock rate	Fresh meat rate	Ratio	Livestock rate	Fresh meat rate	Ratio
		Ct. per cwt.	*Ct. per cwt.*		*Ct. per cwt.*	*Ct. per cwt.*		*Ct. per cwt.*	*Ct. per cwt.*	
Des Moines, Iowa	*1940*									
	Jan. 1		257.0			271.0			271.0	
	Dec. 29	110.5		2.33	112.0		2.42	109.0		2.49
	Dec. 31								256.5	2.35
	1942									
	Mar. 8								264.0	2.42
	Mar. 18	114.0	265.0	2.32	115.0	279.0	2.43	112.0		2.36
	1943									
	May 15	110.5	257.0	2.33	112.0	271.0	2.42	109.0	256.5	2.35
	1945									
	Nov. 11		163.0	1.48		163.0	1.46		163.0	1.50
	1946									
	July 1	114.0	168.0	1.47	115.0	168.0	1.46	112.0	168.0	1.50
	1947									
	Jan. 1	131.0	202.0	1.54	132.0	202.0	1.53	129.0	202.0	1.57
	Oct. 13	144.1	222.2	1.54	145.2	222.2	1.53	141.9	222.2	1.57
	1948									
	Jan. 5	157.0	242.4	1.54	158.0	242.4	1.53	154.8	242.4	1.57
	Jan. 13	157.0	242.4	1.54	158.0	242.4	1.53	154.8	242.4	1.57
	May 6	157.0	247.0	1.57	158.0	247.0	1.56	155.0	247.0	1.59
	1949									
	Jan. 11	163.3	256.7	1.57	164.3	256.9	1.56	161.2	256.0	1.59
	Sept. 1	170.0	269.0	1.58	171.0	269.0	1.57	167.0	269.0	1.61
Omaha, Nebr.	*1940*									
	Jan. 1		256.0			260.0			260.0	
	Dec. 29	109.0		2.35	107.0		2.43	103.0		2.52
	Dec. 31					249.0	2.33		249.0	2.42
	1942									
	Mar. 3					256.0	2.39			
	Mar. 8								256.0	2.49
	Mar. 18	112.0	264.0	2.36	110.0		2.33	106.0		2.42
	1943									
	May 15	109.0	256.0	2.35	107.0	249.0	2.33	103.0	249.0	2.42
	1945									
	Nov. 11		156.0	1.43		156.0	1.46		156.0	1.51

See footnotes at end of table.

TABLE 2.—*Railroad freight rates for livestock and fresh meat and ratio of fresh meat rates to livestock rates, from selected eastern shipping points to selected points of destination on the Pacific coast, 1940–49*[1]*—Continued*

Point of origin	Effective date of rate change	Points of destination								
		Portland, Oreg.			San Francisco, Calif.			Los Angeles, Calif.		
		Livestock rate	Fresh meat rate	Ratio	Livestock rate	Fresh meat rate	Ratio	Livestock rate	Fresh meat rate	Ratio
		Ct. per cwt.	*Ct. per cwt.*		*Ct. per cwt.*	*Ct. per cwt.*		*Ct. per cwt.*	*Ct. per cwt.*	
Omah, Nebr.—Continued	*1946*									
	July 1	112.0	160.5	1.43	110.0	160.5	1.46	106.0	160.5	1.51
	1947									
	Jan. 1	129.0	193.0	1.50	127.0	193.0	1.52	122.0	193.0	1.58
	Oct. 13	141.9	212.3	1.50	139.7	212.3	1.52	134.2	212.3	1.58
	1948									
	Jan. 5	154.8	231.6	1.50	152.0	231.6	1.52	146.0	231.6	1.59
	Jan. 13	154.8	231.6	1.50	152.0	231.6	1.52	146.0	231.6	1.59
	May 6	155.0	232.0	1.50	152.0	232.0	1.53	146.0	232.0	1.59
	1949									
	Jan. 11	161.2	241.3	1.50	158.1	241.3	1.53	151.8	241.3	1.59
	Sept. 1	167.0	251.0	1.50	164.0	251.0	1.53	164.0	251.0	1.53
Kansas City, Mo.	*1940*									
	Jan. 1	----------	260.0	----------	----------	260.0	----------	----------	256.5	----------
	Dec. 29	109.0	----------	2.39	107.0	----------	2.43	103.0	----------	2.49
	1942									
	Mar. 8	----------	----------	----------	----------	268.0	2.50	----------	264.0	2.56
	Mar. 18	112.0	268.0	2.39	110.0	----------	2.44	106.0	----------	2.49
	1943									
	May 15	109.0	260.0	2.39	107.0	260.0	2.43	103.0	256.5	2.49
	1945									
	Nov. 11	----------	162.0	1.49	----------	162.0	1.51	----------	151.0	1.47
	1946									
	July 1	112.0	167.0	1.49	110.0	167.0	1.52	106.0	155.5	1.47
	1947									
	Jan. 1	129.0	200.0	1.55	127.0	200.0	1.57	122.0	187.0	1.53
	Oct. 13	141.9	220.0	1.55	139.7	220.0	1.57	134.2	205.7	1.53
	1948									
	Jan. 5	154.8	240.0	1.55	152.0	240.0	1.58	146.0	224.4	1.54
	Jan. 13	154.8	240.0	1.55	152.0	240.0	1.58	146.0	224.4	1.54
	May 6	155.0	240.0	1.55	152.0	240.0	1.58	146.0	225.0	1.54
	1949									
	Jan. 11	161.2	249.6	1.55	158.1	249.6	1.58	151.8	234.0	1.54
	Sept. 1	167.0	259.0	1.55	164.0	259.0	1.58	158.0	243.0	1.54

Denver, Colo.	*1940*									
	Jan. 1		160.0			190.0			190.0	
	Dec. 29	96.0		1.67	90.0		2.11	83.0		2.29
	Dec. 31								189.0	2.28
	1942									
	Mar. 8		165.0	1.72		196.0	2.18		195.0	2.35
	Mar. 18	99.0		1.67	93.0		2.11	85.0		2.29
	1943									
	May 15	96.0	160.0	1.67	90.0	190.0	2.11	83.0	189.0	2.28
	1945									
	Nov. 11		145.0	1.51		145.0	1.61		139.0	1.67
	1946									
	July 1	99.0	149.5	1.51	93.0	149.5	1.61	85.0	143.0	1.68
	1947									
	Jan. 1	114.0	179.0	1.57	107.0	179.0	1.67	98.0	172.0	1.76
	Oct. 13	125.4	196.9	1.57	117.7	196.9	1.67	107.8	189.2	1.76
	1948									
	Jan. 5	136.8	214.8	1.57	128.0	214.8	1.68	117.6	206.4	1.76
	Jan. 13	136.8	214.8	1.57	128.0	214.8	1.68	117.6	206.4	1.76
	May 6	137.0	215.0	1.57	128.0	215.0	1.68	118.0	207.0	1.75
	1949									
	Jan. 11	142.5	223.6	1.57	133.1	233.6	1.68	122.7	215.3	1.75
	Sept. 1	148.0	232.0	1.57	138.0	232.0	1.68	127.0	224.0	1.76
Ogden, Utah	*1940*									
	Jan. 1		108.0			108.0			108.0	
	1942									
	Mar. 8					111.0			111.0	
	Mar. 15								108.0	
	Mar. 18		111.0							
	1943									
	May 15		108.0			108.0				
	July 15	66.0		1.64	62.0		1.74	64.0		1.69
	1946									
	Jan. 17		110.0	1.67						
	July 1	68.0	113.0	1.66	64.0	111.0	1.73	66.0	111.0	1.68
	1947									
	Jan. 1	78.0	136.0	1.74	74.0	133.0	1.80	76.0	133.0	1.75
	Oct. 13	85.8	149.6	1.74	81.4	146.3	1.80	83.6	146.3	1.75
	1948									
	Jan. 5	93.6	163.2	1.74	88.8	159.6	1.80	91.0	159.6	1.75
	Jan. 13	93.6	163.2	1.74	88.8	159.6	1.80	91.0	159.6	1.75
	May 6	94.0	163.0	1.73	89.0	160.0	1.80	91.0	160.0	1.76
	1949									
	Jan. 11	97.8	169.5	1.73	92.6	166.4	1.80	94.6	166.4	1.76
	Sept. 1	106.0	176.0	1.66	96.0	173.0	1.80	102.0	173.0	1.70

[1] Rates quoted are for fat cattle, fat hogs, and fat sheep and lambs. Only one rate is listed for all types of calves and goats. All rates are for the predominant method of loading; single-deck for cattle and double-deck for all others. Rates and minimum weights for cattle refer to single-deck cars; all others double-deck.

Minimum weights, 36-foot cars: Cattle—22,000 pounds; calves—23,000 pounds; hogs—24,000 pounds; and sheep and goats—20,000 pounds.

U. S. Department of Agriculture—Division of Marketing and Transportation Research, Bureau of Agricultural Economics; and Transportation Rates and Services Division, Production and Marketing Administration.

As a result of these differences in interarea or interstate relationships, large numbers of live animals—principally cattle and sheep —are transported each year from the range country to the west coast. There they are either slaughtered as "grass fats" or are fed or grazed for 3 to 6 months before they are slaughtered by Pacific coast feeders and packers. Dry-lot feeders located in the irrigated valleys of the Intermountain and Southwestern States make substantial contributions to the production process by adding gains to live animals as they move to the west coast from the range country. In addition to the movement of live animals to the west coast there is considerable traffic in dressed and cured meats from packers in the Southwest, Intermountain States, and from as far east as the Corn Belt area who ship directly to west coast wholesalers.

Western packers have four general functions: (1) To slaughter animals and to dress, cure, process, and can the meat, (2) to manufacture byproducts such as hides, glue, fertilizer, and soap, (3) to store perishable and nonperishable meat products, and (4) to distribute meat and meat products which may include jobbing, and to operate branch houses and warehouses.

Western packers and independent wholesalers often find it necessary or to their advantage to supplement their own production of meat or its products with supplies of dressed meat from their own plants or from plants located in other regions. From this standpoint it is important that a packer maintain the volume of an established plant, even though this may be difficult. Differences in freight rates as between live animals and the dressed product determine to a large extent the volume of dressed meat that will be moved during any given period.

Specific data as to the movement of dressed and cured meats to Pacific coast points from midwestern packers are not available but it is evident that in some years the volume handled has been large. It is logical to assume that the volume of dressed-meat imports into these 12 Western States has increased since 1940, as more favorable freight rates for dressed meats have been introduced (table 2). Apparently these shipments are more substantial in the case of cured pork and other pork products than in the case of other meats, as all but 4 of the 12 Western States slaughtered more hogs than were marketed within their borders, on the average, for the 3 years 1946–48. These figures indicate that the entire region is a deficit producer of slaughter hogs (fig. 3). Each year large numbers of live hogs are transported from rail points in the western Corn Belt and from the Dakotas for sale and for slaughter in the West.

The question of shipments of dressed meat in the Western States in its several phases deserves early study by the Western Livestock Marketing Research Technical Committee.

LIVESTOCK SLAUGHTER BY INTERIOR PACKERS[11]

Since 1925 the tendency has been for more and more livestock of certain classes to be slaughtered at western interior towns and cities that are at a distance from the larger western cities where most of the public and terminal markets in the West are located. This trend has been most noticeable in the Southwest and in the Intermountain area. Gains are noted also on the Pacific coast, but here a substantial part of the total commercial slaughter in the West has been done by interior packers for some time. In the Southwest the pro-

duction by interior packers is growing rather rapidly in the case of cattle, hogs, and calves; but there has been a rather sharp decrease in regard to sheep and lambs. During the periods 1925–27 and 1946–48, the proportion of livestock slaughtered by interior packers in the Southwestern States increased from an average of 22 percent to 57 percent for cattle, from 40 percent to 60 percent for hogs, from 37 percent to 59 percent for calves; it decreased from 6 percent to less than 1 percent for sheep and lambs (fig. 4). Slaughtering of livestock by interior packing plants has been more common in the 12 Western States than in the United States as a whole for all classes of meat animals except sheep and lambs.

Several fairly recent improvements in the field of transportation have favored the increase of livestock slaughter nearer the sources of supply. They include the increases in the total mileage of oiled and paved highways and hard-surface farm roads and the development of the refrigerated truck and refrigerated rail car. These facilities make it possible for western farmers and ranchers to move livestock to packers and for packers to move dressed meats to consumers in a much shorter time than was possible before. Undoubtedly there are other reasons for growth in the decentralization of western livestock slaughter but these reasons lie in the province of research, and they warrant more attention than can be included in this report.

Considering the improvements in the transportation of live animals and dressed meats and the other advantages mentioned, apparently interior packers have certain circumstances in their favor over packers at the large public markets. Included among these are: (1) Lower cost for plant site, (2) ease in obtaining uniform supply of live animals throughout the year from farmers located in the immediate vicinity, (3) reduced overhead costs and savings in yardage, feed, and hauling expenses, (4) less shrinkage of animals in transit, and (5) to some extent, reduced expenses in buying.

The trend toward increased slaughter by plants located nearer the sources of supply of live animals is significant from the standpoint of the marketing of livestock and the distribution of meat in the West. To the extent that this method of meat production continues to develop, it will replace to some extent the long-time practice of shipping live animals long distances, or from the surplus- to the deficit-producing areas. But it should not be assumed that increases in decentralization of packing plants in the West means a corresponding increase in the number of smaller independent packers. On the contrary, a larger percentage of the total slaughter has continued and probably will continue to be done by the larger interior firms that are already in business.

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[11]The term "interior packers" as used in this report refers to meat-packing firms and other establishments for livestock slaughter that are located at points outside terminal or public markets. Estimates of the slaughter done by interior packing plants is a residual arrived at by subtracting the figure of local slaughter done at terminal markets from estimates of total western commercial slaughter. It is pointed out that for this report any direct receipts of livestock by packers at terminal markets that did not go through the terminal market could not be allowed for, because of lack of data. Although the volume of western livestock handled in this way is small compared with the total volume handled by terminal packers, there is a tendency on the part of some terminal packers to handle more direct shipments; however, the volume of direct shipments would not invalidate the comparisons made in this section. (See figures 10, 11, and 12, pages 32-34, for the location of packing plants at terminal or public markets in the 12 Western States.)

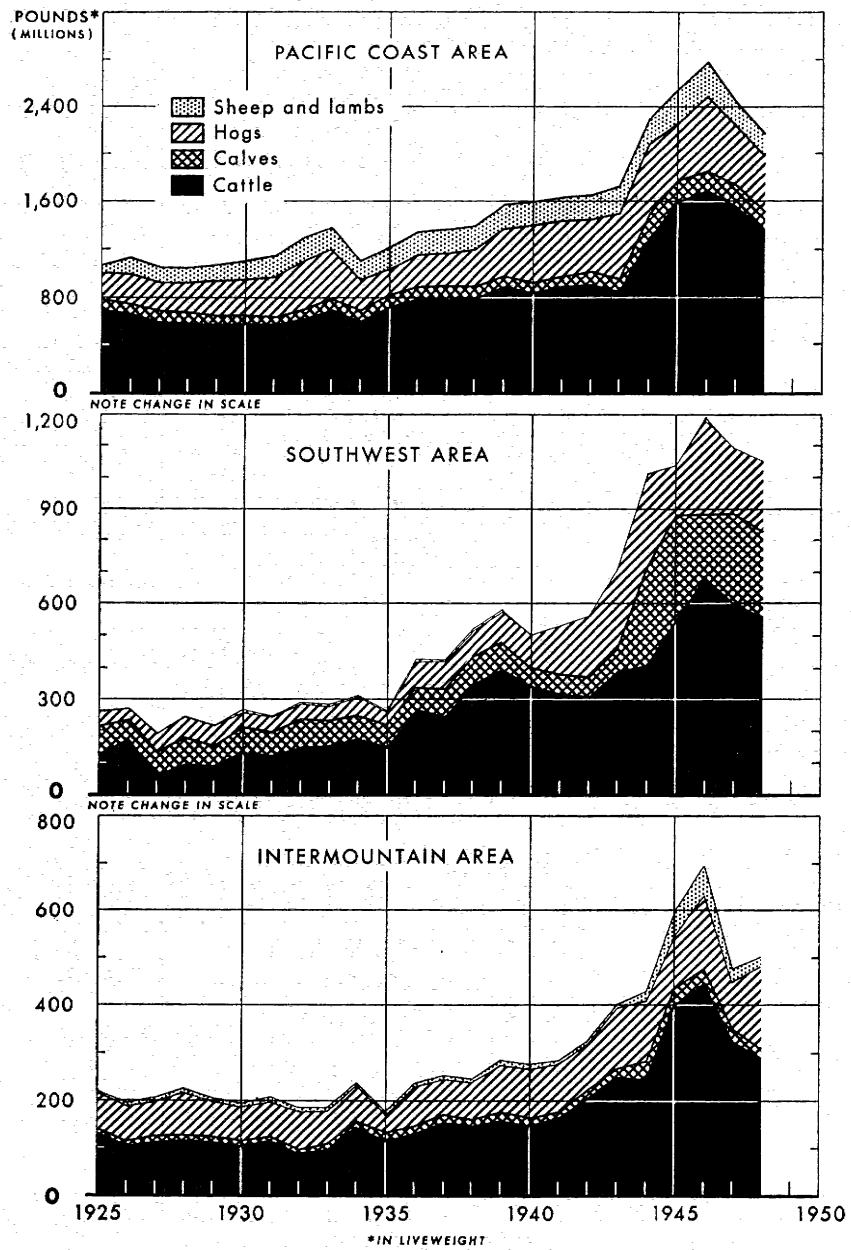

FIGURE 4.—Total commercial livestock slaughter at points other than terminal markets, by class, by area, 12 Western States, 1925–48.

Some interior packers have a disadvantage in that, as small independent plants, they have not been able to make the most economical use of byproducts of the meat-packing process. But apparently they have not found this a limitation to their growth, for most of these plants now freeze and concentrate large quantities of byproducts for processing at larger centers. Moreover, independent operators have advantages in more flexible use of labor and of operations that are not possible at large plants.

The trend toward decentralization of slaughter in the Western States varies by areas and by class of animals killed. A larger volume of total livestock slaughter is done by interior packers on the Pacific coast than in either of the other areas. The greatest increase in the Pacific coast slaughter that takes place outside the public markets is in cattle and hogs. Only moderate changes are apparent in calves and sheep.

Decentralization in all the areas is noticeable in the case of hogs and cattle and to a lesser degree in the case of sheep, calves, and lambs. Slaughter of sheep and lambs in the Southwest actually shows a decrease at points removed from terminal markets, thus demonstrating a tendency to centralize sheep slaughter at terminal markets in this area. The reason is not known at present. Further research is needed on this point.

RELATIVE IMPORTANCE OF LIVESTOCK SLAUGHTER BY TYPE OF PROCESSOR

Among the three methods of slaughter used before 1939, commercial nonfederally inspected slaughter of cattle, calves, sheep, and lambs, exceeded that of federally inspected slaughter and farm slaughter. In the case of hogs, the larger number were slaughtered under Federal inspection in this earlier period, farm slaughter being second in order of importance. Since that time, however, federally inspected slaughter of all classes of livestock has become the most important.

Since World War II, western meat packers have slaughtered livestock principally under Federal inspection (fig. 5). Of the total livestock slaughtered during the 1944–48 period, federally inspected plants handled 65 percent of the cattle, 42 percent of the calves, 80 percent of the sheep and lambs, and 57 percent of the hogs. The higher percentage of sheep and lambs probably had two causes: (1) Sheep flocks are fairly large in the West resulting in shipments direct to terminal markets where federally inspected plants predominate and (2) the smaller nonfederally inspected plants do not generally encourage business in sheep because that requires special equipment. Slaughter of sheep and lambs in these federally inspected establishments has increased more in relation to total (about 38 percent) than was true of any other class of meat animals, from 1925 to 1948 (fig. 6). Federally inspected slaughter of cattle increased about 18 percent and of hogs 13 percent in the period studied, while calves showed a gain of approximately 6 percent, compared with total slaughter.[12]

Nonfederally inspected slaughter was more important compared with total slaughter from 1925 to 1929; but after 1939 nonfederally inspected slaughter showed a marked tendency to decrease. Of the four classes of livestock slaughtered by nonfederally inspected plants the largest percentage of total slaughter was for calves. The smallest was for sheep and lambs.

Farm slaughter has tended to decrease in relation to total slaughter. Farm slaughter of hogs has probably been maintained at a higher level than farm slaughter of cattle or sheep because of the comparative ease in preparation and because of the keeping quality of pork when cured. Fewer cattle are slaughtered on farms and ranches than other classes of meat animals, and the volume of farm

[12]Averages for period 1925–29 and 1944–48 were used for these comparisons.

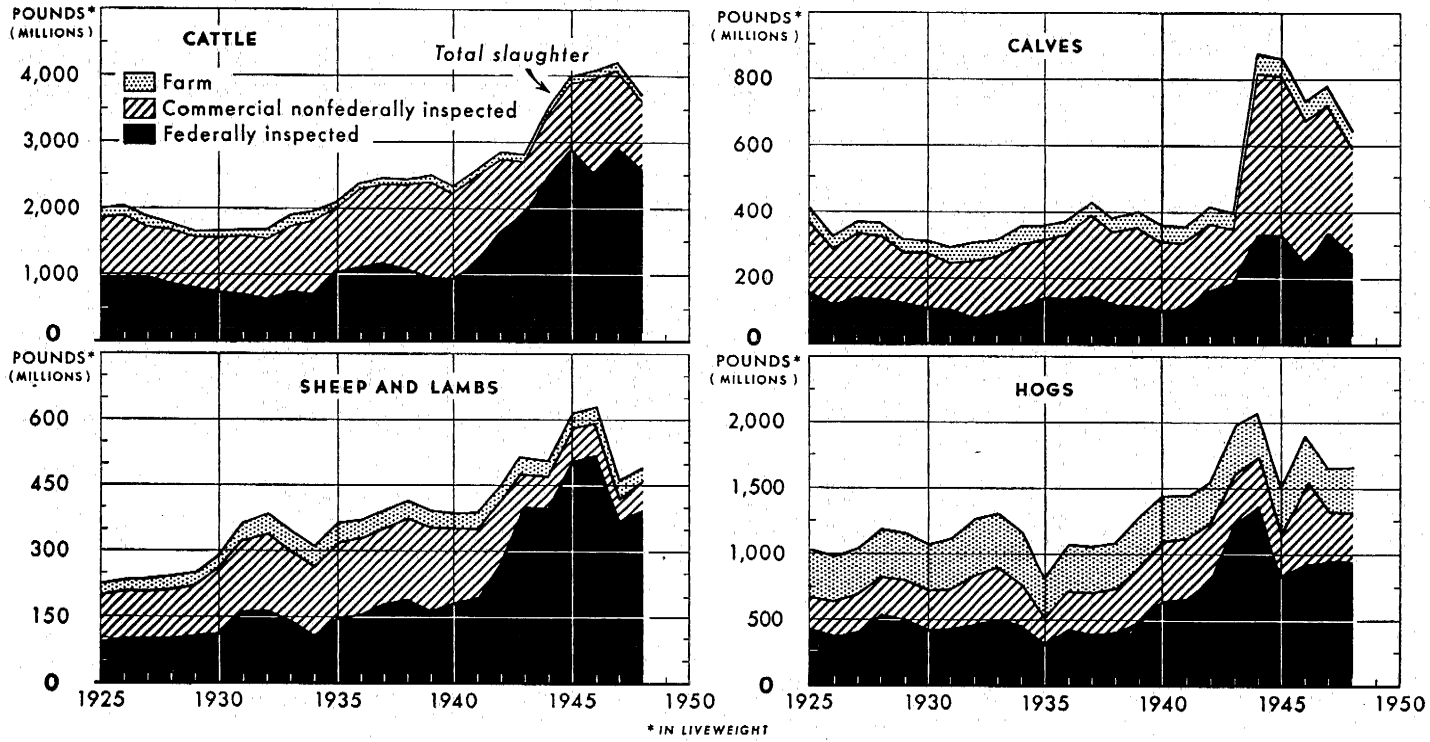

FIGURE 5.—Total slaughter, by class and by type of processor, 12 Western States, 1925–48.

slaughter for all classes of meat animals does not fluctuate so much as does commercial meat production in the West. The largest volume of farm slaughter of hogs (in live-weight poundage) was in 1933, of sheep and lambs in 1934, of calves in 1946, and of cattle in 1933.

The downward trend in farm slaughter came about because farm population has decreased and because the practice of slaughtering animals and curing of meats on farms and ranches has declined.

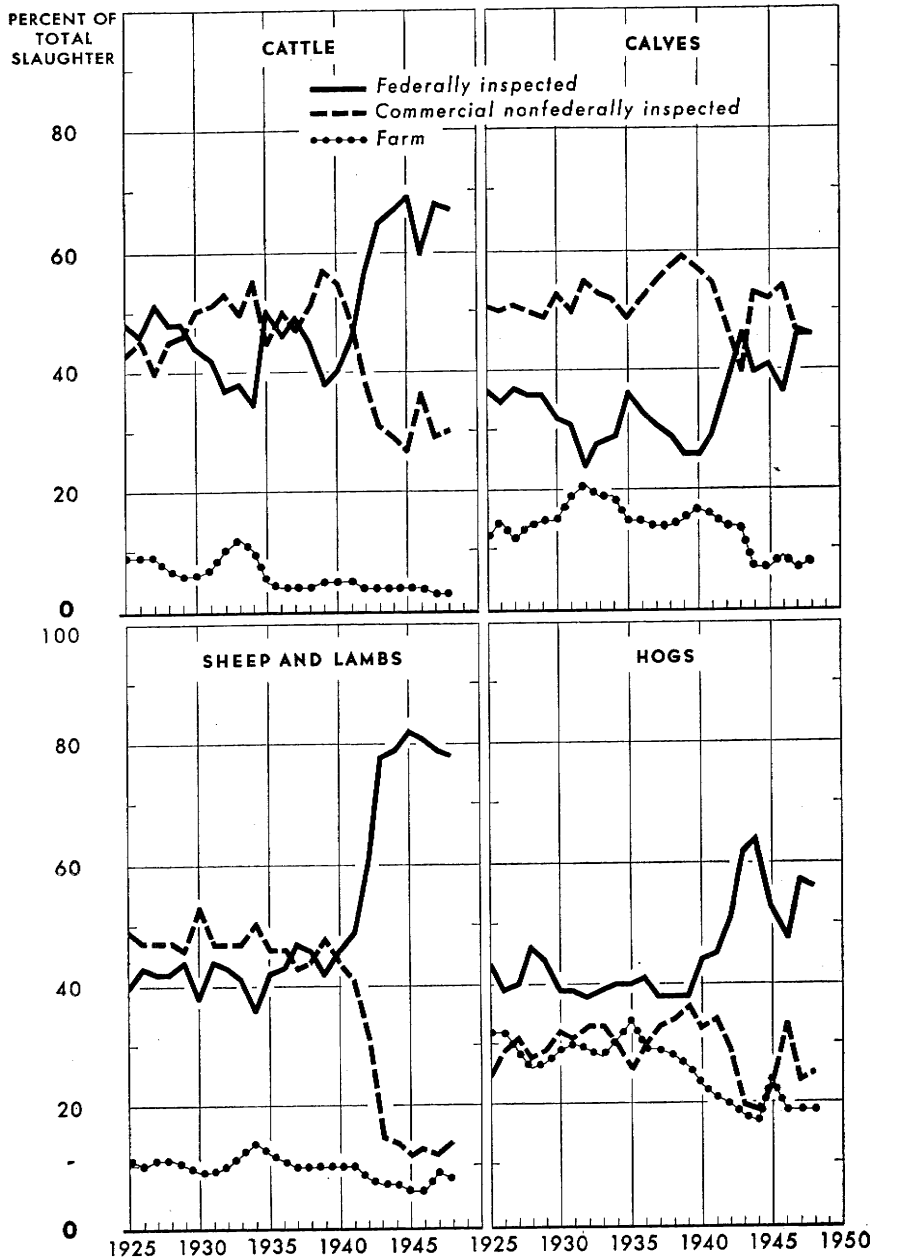

FIGURE 6.—Total livestock slaughter: Percentage of each class slaughtered, by type of processor, 12 Western States, 1925–48.

Furthermore, technological developments generally in refrigeration, transportation, and distribution of meat, have made it easier for farm people to buy meats than to slaughter and perhaps cure their own animals on the farm. Much of the meat used on farms is now bought from retail meat establishments or is processed off the farm and stored in frozen-food lockers nearby. Some of the meat consumed on farms is obtained from livestock that is slaughtered at frozen-food locker plants.

Comparison by Areas

Types of livestock slaughter used in the Pacific coast, the Southwest, and the Intermountain areas of the 12 Western States, vary considerably by class of meat animals. The greatest single change in class of livestock slaughter has been on the Pacific coast where, before 1939, the volume of nonfederal slaughter was considerably greater than slaughter under Federal inspection. Since 1939, however, packers in that area have shifted more to Federal inspection. In the Southwest area nonfederally inspected slaughter is still prevalent in relation to total area slaughter in the case of hogs and calves. In the Intermountain States methods of meat-animal slaughter for all classes of livestock have remained more uniform than in either the Pacific coast or the Southwest areas, except in case of sheep—the slaughter of sheep by federally inspected plants has increased sharply (fig. 7).

Pacific Coast Area.—From 1925 to the beginning of World War II, 69 to 73 percent of the calves and 59 to 67 percent of the sheep and lambs killed by packers on the west coast were slaughtered in nonfederally inspected plants. Since the war, the volume of calves and sheep and lambs slaughtered in such plants has decreased to about 39 percent and 17 percent respectively. Similar shifts are noted for hogs and cattle. But practically all of these reductions have been offset by the increase in volume of animals handled at federally inspected plants. Farm slaughter has decreased very little in proportion to slaughter by other types of processors since 1925.

California, which accounts for about three-fourths of the total commercial slaughter in the Pacific Coast States, had rigid State inspection for several years before World War II. Thus, when the Fulmer Act (see footnote 13, p. 28) was passed at the outset of the war, most packing plants in California could qualify for Federal inspection with only minor alterations of plant and equipment. During the war, with Federal inspection free and State inspection not free, it was natural that these plants should stay with Federal inspection.

Southwest Area.—The production by federally inspected plants exceeded that by nonfederally inspected establishments in the case of hogs and calves during the prewar period 1925–39. Since then, hogs and calves slaughtered by nonfederally inspected plants have increased. Nonfederally inspected establishments in the Southwest have gained in volume of cattle slaughter since 1935, but production by federally inspected plants still exceeds that of other types of processors in case of cattle.

More sheep and lambs are handled by federally inspected plants in the area than any other class of livestock. From 1946 to 1948 this volume has approximated 75 percent of the total sheep and lamb slaughter done by all processors in the area.

In the Southwest, farm slaughter of hogs and sheep and lambs is more important than in other areas of the region. But this method of slaughter has declined in relation to total slaughter on all classes of livestock.

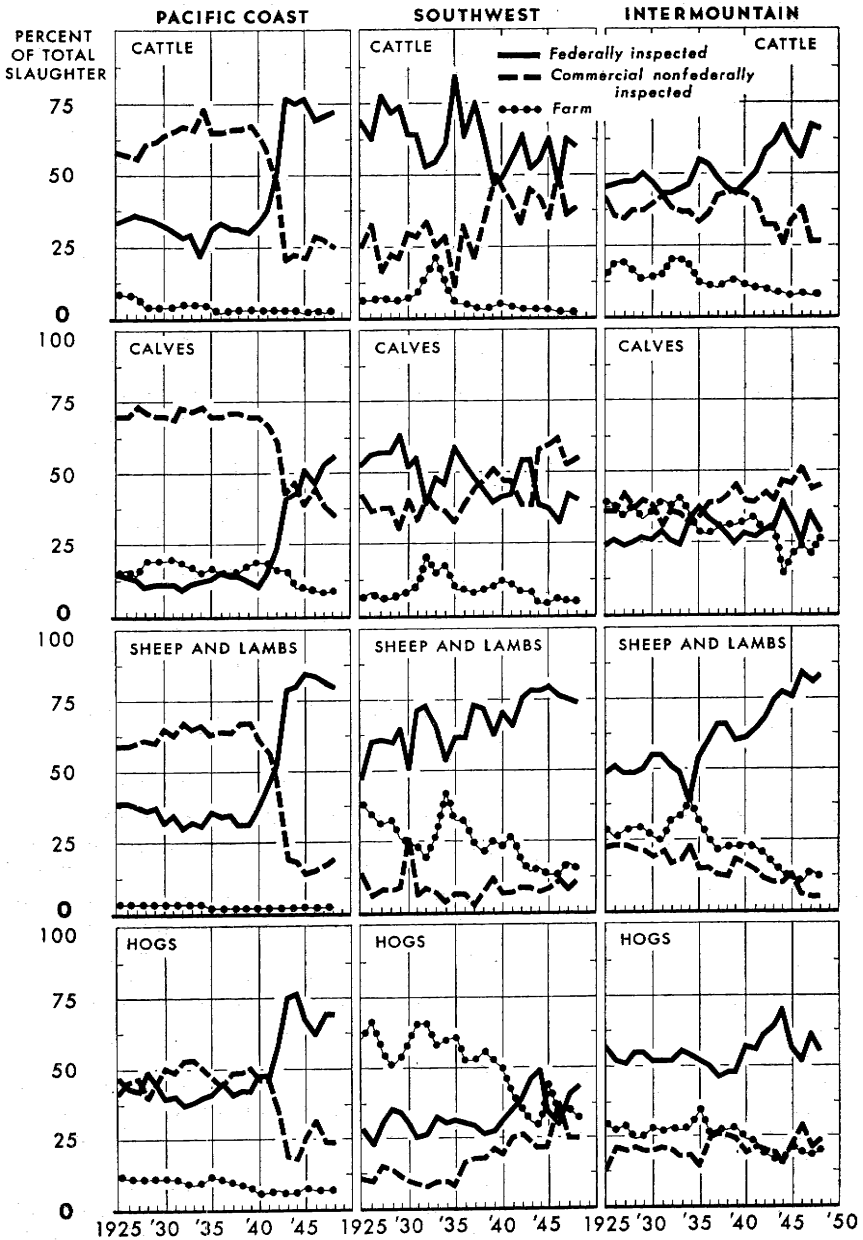

FIGURE 7.—Livestock slaughter, by area: Percentage of each class slaughtered by type of processor, 12 Western States, 1925–48.

INTERMOUNTAIN AREA.—There is less variation in the type of slaughter in the Intermountain area than in other parts of the western region. Federally inspected plants predominate in the production of meat in the Intermountain States and the growth of livestock slaughter by these plants has been substantial since 1939. In recent years, 81 percent to 84 percent of sheep and lambs, 55 percent to 67 percent of cattle, 52 percent to 61 percent of all the hogs, and 25 percent to 35 percent of all the calves, in this area, have been slaughtered under Federal inspection.

Farm slaughter of cattle and calves represents a higher percentage of total slaughter in the Intermountain States than is true in the other two areas of the region, but even here the tendency is for slaughtering on farms to decrease.

TRENDS IN LIVESTOCK SLAUGHTER IN THE WEST UNDER FEDERAL INSPECTION

Yearly livestock slaughter in federally inspected plants in general varies from year to year in much the same way as in nonfederally inspected commercial meat-packing establishments. Notwithstanding these fluctuations, the tendency has been for federally inspected meat production to increase.[13] Previous to 1935 the volume was more or less unchanged or possibly tended slightly downward. Real impetus to an increase came at the outset of World War II when military and relief agencies began buying large quantities of meat to fill domestic and overseas requirements. Thus, the rapid expansion in total volume of meat that was federally inspected, during the war, can be attributed almost entirely to the Government's procurement policy which, with only minor exceptions, excluded the purchase of meat from plants that had no Federal inspection (fig. 8).

In terms of total pounds live weight, cattle slaughter in western plants has always been most important, exceeding 2.9 billion pounds in 1947, the year of peak production.

Hog slaughter in federally inspected plants is second from the standpoint of total pounds processed, with sheep and lambs and calves following in that order. Hog slaughter for the region reached its peak in 1944, with 1,365,000,000 pounds of live animals handled. Since that year, hog slaughter by federally inspected plants has leveled off with an annual output of about 900,000,000 pounds.

In terms of head count, more sheep and lambs have been slaughtered in federally inspected plants than any other species of western livestock since 1944. Before 1945, the total number of hogs slaughtered exceeded that of sheep and lambs except for 3 years—1935, 1937, and 1938.

Federally inspected slaughter of calves (pounds live weight) increased more during 1938–48 than did any other class of western livestock, even though a smaller proportion of calf slaughter was

[13] Part of the relative increase in federally inspected slaughter during World War II was a result of Government regulations. The Fulmer Act (approved June 10, 1942) *(16)* authorized the Secretary of Agriculture to provide inspection during the war emergency to meat-packing establishments engaged in interstate commerce only in order to facilitate purchase of meat and meat products by Federal agencies. Part of the increase resulted from placing under Federal inspection all plants producing more than 51 cattle carcasses a week meeting Army purchase specifications (Amendment 7, F.D.O. 75.2, issued February 22, 1944, effective April 1, 1944).

performed under Federal inspection in the early part of the period studied than of other classes of meat animals. One reason for the increase in calf slaughter is the increase in the number of dairy cows in the West.

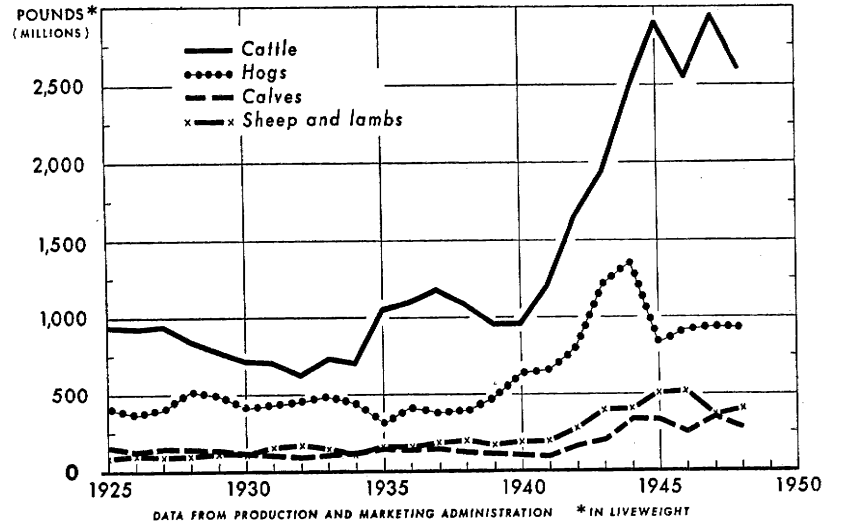

FIGURE 8.—Livestock slaughtered under Federal inspection, by class, 12 Western States, 1925–48.

Although the trend in federally inspected slaughter for the 12 Western States has been steadily upward there was considerable variation in the poundage of the several classes of meat animals handled. Average meat production in federally inspected plants during 1946–48 as compared with the prewar years of 1939–41 has shown the following increases: calves 163 percent, cattle 158 percent, sheep and lambs 139 percent, and hogs 58 percent.

The poundages of slaughter of federally inspected cattle and calves tended to decrease from 1925 to 1932, to increase from 1932 to 1937, and to decrease again from 1937 to 1940. Slaughter of sheep and lambs and hogs under Federal inspection has been steadily upward since 1925 except for the drought years of 1932–35 when the poundage dropped rather sharply.

COMPARISON BY AREAS

The ratio between federally inspected slaughter and total slaughter of cattle, hogs, calves, and sheep and lambs in the Southwest, in the Intermountain area, and in the Pacific Coast States, for the period covered by this report, has shown considerable change (fig. 9).

PACIFIC COAST STATES.—In terms of head count, California, Washington, and Oregon, in 1948, accounted for 52 percent of the regional total of federally inspected slaughter for cattle, 50 percent for calves, 52 percent for hogs, and 49 percent for sheep and lambs.

The proportion of hogs and sheep and lambs slaughtered by these plants in this area conforms to a more-or-less uniform pattern for the 24-year period, whereas in the case of cattle and calves there has been considerable diversity in their relative importance to total federally inspected slaughter in the region, since 1925. Less than 15

percent of all calves slaughtered on the Pacific coast in 1925 were processed by establishments that had Federal inspection; but in 1948 this proportion reached 50 percent. Much the same change was true of cattle, although the increase was less marked than with calves. Slaughter of cattle on the Pacific coast has shown a steady gain, from 34 percent of the regional total in 1925 to 52 percent in 1948.

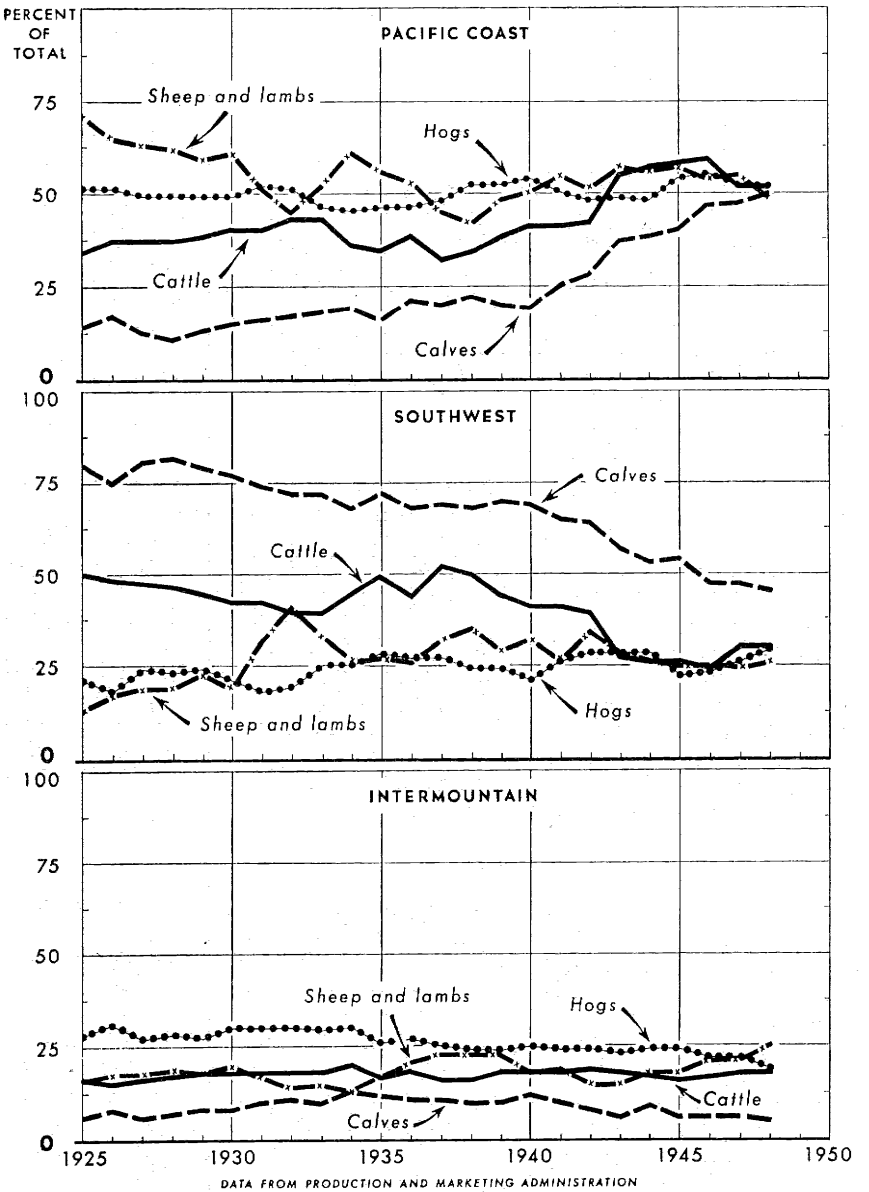

FIGURE 9.—Federally inspected slaughter: Slaughter in each area expressed as a percentage of the regional slaughter, by class, 12 Western States, 1925–48.

SOUTHWESTERN STATES.—The second most important area within the western region from the standpoint of volume of livestock slaughtered by federally inspected plants is the Southwest—Arizona, New Mexico, and Texas. Proportionately more calves than other species of meat animals were slaughtered by such plants in this area. Before 1946, calf slaughter in this type of plant was more important in the Southwest than in any other area in the West, but the long-time trend there has been for a decrease in slaughter of calves, relative to slaughter of other classes of livestock.

Since 1943, cattle, hogs, and sheep and lambs slaughtered in the Southwest under Federal inspection has remained fairly uniform at 25 percent to 30 percent of the regional total slaughter under Federal inspection. Nevertheless, since 1937 there has been a marked tendency for the proportion of cattle to total regional cattle slaughtered by this method to decrease rather rapidly. For the period studied, the ratio of hogs and sheep and lambs to the regional totals has remained relatively constant.

INTERMOUNTAIN STATES.—In the Intermountain States—Montana, Wyoming, Colorado, Utah, Idaho, and Nevada—fewer meat animals of all species are slaughtered under Federal inspection than in either of the other two western areas. During the period covered by this report the slaughter ratio between the four classes of meat animals to regional totals has held fairly constant.

In the Intermountain States, in 1948, the federally inspected slaughter of sheep and lambs represented a larger portion of the regional federally inspected slaughter (in number of head) than was true for the other classes of livestock handled by these plants in this area. In that year, this area accounted for 18 percent of the federally inspected cattle slaughter of the West, 5 percent of the calves, 19 percent of the hogs, and approximately 25 percent of the sheep and lambs.

NUMBER AND LOCATION OF LARGE COMMERCIAL SLAUGHTERING ESTABLISHMENTS IN THE WEST

Some large commercial slaughterers of meat animals[14] are located in each of the 12 Western States but there are wide variations in the numbers in individual States. On January 1, 1949, California had 107 large slaughter plants, or more than one-third of all such establishments in the region; Arizona, New Mexico, and Nevada, each had three, and Wyoming two. Concentrations of meat processors who make substantial contributions to the total production of western meat, other than those in California, are situated in Texas, Colorado, Washington, and Oregon (figs. 10, 11, and 12).

On January 1, 1949, 292 large wholesale plants were operating, of which 126 were federally inspected. The number of slaughtering establishments producing meat for commercial use varies from year to year and during a given year. However, there is a high correlation between physical location of western slaughtering plants and large aggregations of human population. The locations of the larger plants—those operating under Federal inspection and other large nonfederal wholesalers—are shown in figures 10, 11, and 12. In addition to these two classes of wholesalers substantial

[14]For definition of the term "large commercial slaughterers," or type commercial wholesalers, see footnote 4, p. 5, of this report.

FIGURE 10.—The majority of the federally inspected and other large wholesale slaughtering establishments in the western region are located in the Pacific area.

numbers of small butchers, local slaughtering establishments, and frozen-food locker plants, slaughter livestock and sell meat.

Indicative of the concentration of production by type of plant in 1947, 128 western federally inspected packers, representing 3 percent of all western slaughtering establishments, accounted for about

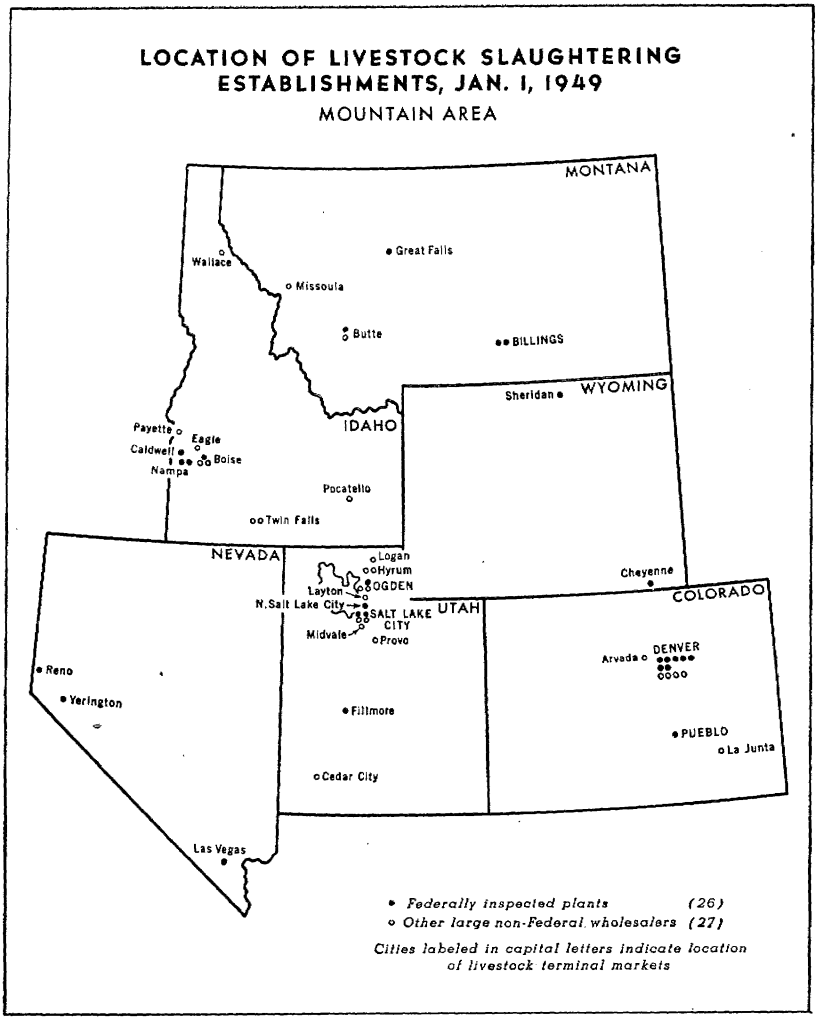

FIGURE 11.—Federally inspected and other large wholesale slaughtering establishments in the mountain area are concentrated mainly in the vicinity of Boise, Idaho, Salt Lake City, Utah, and Denver, Colo.

64 percent of all the meat produced in the West in that year. Within this group there are packing firms that operate on a national scale.

As a result of the Government's war and postwar policy with respect to the procurement of meat, federally inspected meat production gained new importance. With minor exceptions, military and relief agencies bought only federally inspected meats so there was a sharp rise in the number of firms to adopt Federal inspection. Comparable gains for the same period are noted in the total poundage of graded meat, or that certified by the United States Department of Agriculture as complying with Government specifications.

The number of western federally inspected slaughtering plants declined somewhat in the immediate postwar period but most of those that adopted Federal inspection during the war continued the service. There were several reasons: (1) As practically all slaugh-

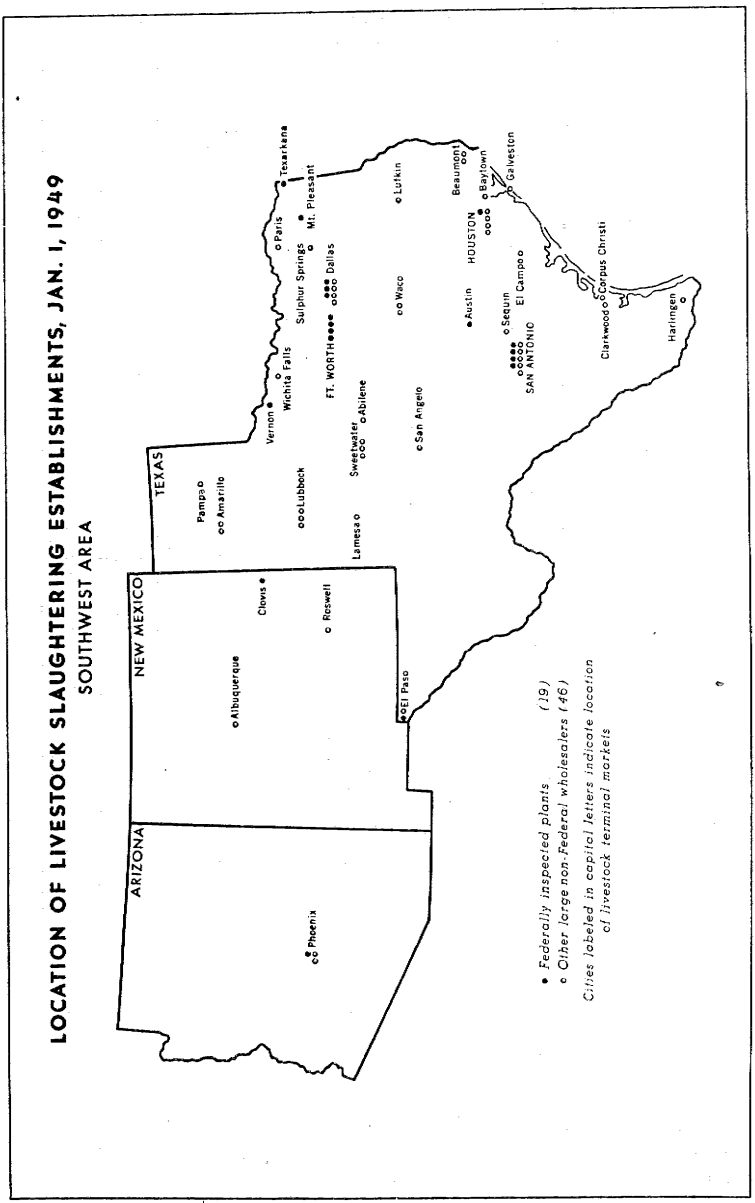

FIGURE 12.—Nearly all the federally inspected and other large wholesale slaughtering establishments in the Southwest area are located in Texas.

ter in California has been under rigid State inspection, many plants could qualify for Federal inspection during the war under the Fulmer Act without alterations in plant or equipment. With Federal inspection free, and with State inspection not free, it was natural that the plants would remain under Federal inspection; even after the war, for the short period when Federal inspection was on a fee basis, there was little incentive to switch. (2) Eligibility to enter into purchase contracts with Government agencies is considered

desirable, in spite of the sharp decline in the volume of this business after 1945. (3) There was a wish to retain the volume of interstate business built up during the war. (4) The meat-packing establishments that made considerable alterations in plant and equipment during the war to qualify for Federal inspection wanted to continue to utilize these changes by continuing the inspection, particularly when such services are paid for by the United States Treasury. (5) A change in consumer buying habits seemed evident to the extent that increased recognition apparently had been given to inspected meat.

Grading of all beef, veal, and lamb and mutton, according to Government standards, was compulsory during World War II under price control and rationing. Since the war, with the return of Government grading of meat to a permissive rather than a mandatory basis, the volume of meat that is graded and stamped with the name of the grade in accordance with Federal standards by Government graders has diminished somewhat in some parts of the West. But it has held up well in California where it seems that consumer preferences for federally graded meat have strongly influenced the wholesale and retail meat trade to demand that the meat they purchase be so graded. Even though most large packers had long distributed their own branded products and still use their own systems of grading meat, this demand for Government-graded meat has probably had its influence upon their marketing practices also. A meat-packing establishment does not have to be operated under Federal inspection in order to obtain the services of a Government grader, but meat that is not slaughtered and processed under some form of inspection deemed adequate by the Department of Agriculture cannot be federally graded. Uninspected meat is never graded or officially stamped for grade by Government meat graders. Increase in the number of federally inspected slaughtering plants in the West is illustrated by the fact that in 1925 there were 79 inspected plants in the 12 Western States, and in 1948 there were 197 (fig. 13).

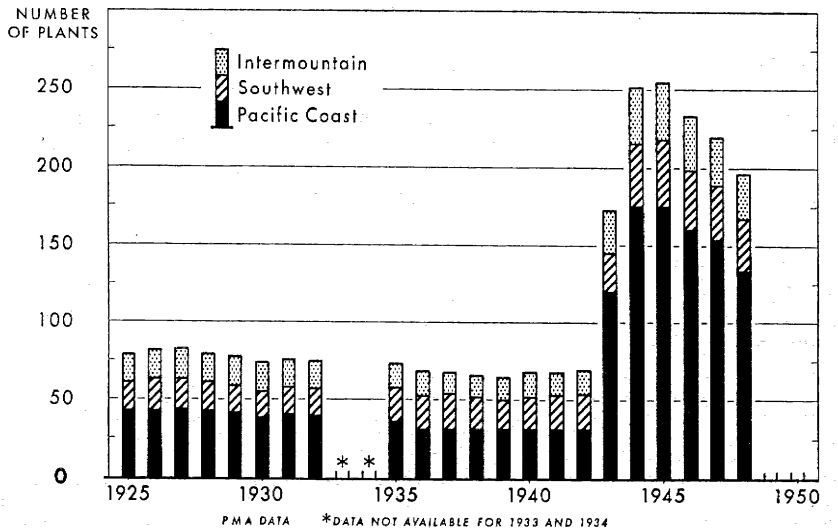

FIGURE 13.—Number of slaughtering establishments under Federal inspection, by area, 12 Western States, on June 30, 1925–48.

COMPARISON OF SEASONALITY OF COMMERCIAL LIVESTOCK SLAUGHTER IN THE WEST WITH RECEIPTS OF LIVESTOCK AT WESTERN TERMINAL MARKETS

Month-to-month fluctuations are less pronounced in the total pounds of commercial livestock slaughter in the West than in the total receipts of livestock at western terminal markets. In addition, the seasonality of commercial meat-animal slaughter is less with western interior packers than with packers who are located at terminal public markets (called local slaughter[15]) in the western region[16] (fig. 14).

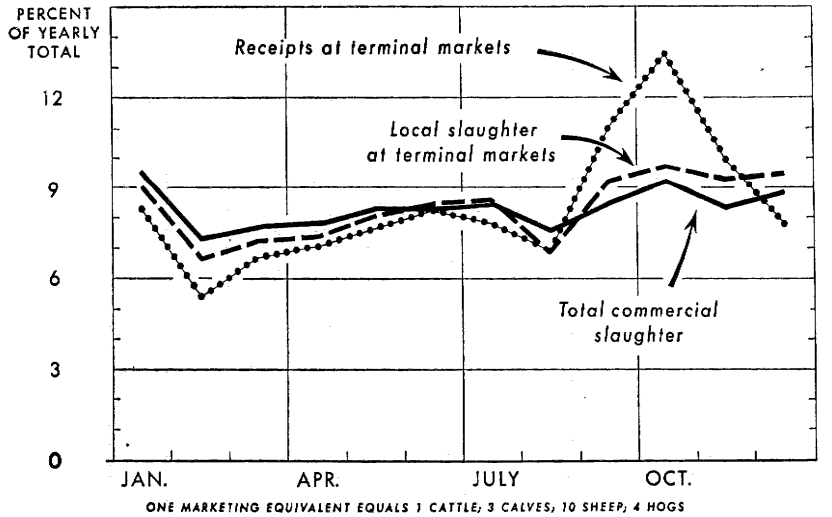

FIGURE 14.—Seasonal movement of livestock receipts and slaughter, in marketing equivalents, 12 Western States, 1947.

Both local slaughter and total receipts at terminal markets are characterized by more pronounced seasonal swings than are found in the case of commercial livestock slaughtering done at interior plants. This may be one reason that packers at terminal markets buy a certain part of their monthly live-animal requirements in the country, or at points other than terminal markets.

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[15]The term "local slaughter" refers to the slaughtering done by packers whose plants are located at terminal public markets in the West. Published data on local slaughter, or the number of livestock killed by terminal-market packers, does not include direct receipts of livestock at plants or those animals slaughtered that did not move through terminal yards. The annual volume of this movement is rather important to the West.

[16]For purposes of comparison, receipts at western terminal markets, local slaughter at public markets, and total western commercial slaughter were converted to marketing equivalents. *Market equivalents*, as used in this report, are 1 cattle, 3 calves, 10 sheep, 4 hogs. Monthly data on total commercial slaughter are available for only the 3 years 1946, 1947, and 1948. Data for 1948 were not used in the study of seasonality because of irregularities in data covering monthly slaughter resulting from strikes in the western meat-packing industry. The monthly data for 1946 were eliminated for purposes of comparison because of abnormal monthly marketings of live animals after the elimination of the price ceilings of the Office of Price Administration in that year.

Seasonal variation in the number of animals and in the pounds of western commercial livestock slaughtered is different for the four classes of meat animals studied. However, less seasonal variation is noted when the total poundage of all meat animals is grouped and considered as a single unit. Western commercial slaughter of hogs and calves shows the greatest degree of seasonal change; slaughter of cattle shows the least. The heaviest volume of hog slaughter tends to occur in months when slaughtering is low for other meat animals, and vice versa (fig. 15).

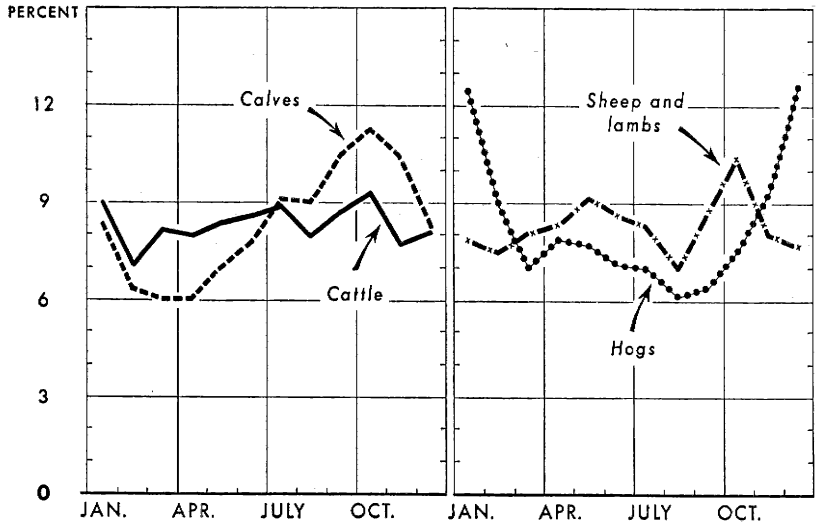

FIGURE 15.—Monthly commercial livestock slaughter as a percentage of yearly total, by class, 12 Western States, 1947.

Seasonally, total meat-animal slaughter in the West is low in August and from February to May, and peak production is usually reached between September and January. In December and January, western hog slaughterings are noticeably above those for other months. In October, the volume of cattle and sheep slaughterings increases as large numbers of these animals move to market.

Certain degrees of uniformity in the flow of the raw product are in the best interest of efficiency for the meat-packing industry, as this uniformity maintains the use of maximum plant capacity throughout the year and eliminates seasonal peaks in the labor force. As western consumer demand for meat seems to be rather uniform throughout the year and as the product is perishable, it is not economical to hold meat and meat products for long periods.

Long storage of meat is costly, for the market value of frozen meat usually is discounted in relation to the fresh product, and storage space must be paid for as well.

AVERAGE WEIGHTS OF MEAT ANIMALS SLAUGHTERED IN THE WEST

The average weights of animals slaughtered commercially and noncommercially in the 12 Western States vary by States and areas within the region, by type of processor, by season, and by class of animal slaughtered. The weights of meat animals slaugh-

tered are generally lighter in the West than in other regions of the United States in the case of hogs, but are about equal in regard to cattle and sheep. Western calves usually average about 113 pounds heavier than calves slaughtered in other parts of the United States.

During the 3 years 1946–48, the average weights of western slaughter cattle were 905 pounds; of calves 321 pounds of sheep and lambs 93 pounds; and of hogs 241 pounds. Weights of animals slaughtered in federally inspected plants generally averaged heavier than the same class of animals slaughtered by nonfederally inspected plants. Calves formed the single exception; non-Federal weights were heavier for calves during this time.

In western farm slaughter the weights for cattle and sheep averaged less than the weights of animals killed at federally inspected plants, but farm-slaughter weights of both calves and hogs were heavier.

In general, cattle killed commercially on the Pacific coast are usually heavier than those slaughtered in other parts of the West, whereas those killed in the Southwestern States—Texas, Arizona, and New Mexico—are usually the lightest in western slaughter. In contrast, the weights of calves are generally heavier in the Southwest, whether slaughtered commercially or on farms, than in any other area of the West (table 3).

TABLE 3.—*Average live weight of meat animals slaughtered, by type of processor, 12 Western States, by area, and for United States 3-year average, 1946–48*[1]

Class of livestock and type of slaughter	12 Western States				Total United States average
	Pacific coast area	Southwestern area	Intermountain area	Total 12 States	
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Cattle:					
Commercial:					
Federally inspected	990	800	974	934	939
Nonfederally inspected	958	712	900	845	833
Total	981	763	950	905	905
Farm	787	679	781	763	759
Total	976	761	937	899	899
Calves:					
Commercial:					
Federally inspected	239	355	320	297	206
Nonfederally inspected	235	399	314	341	210
Total	237	382	316	321	208
Farm	259	357	332	308	267
Total	239	380	320	320	211
Sheep and lambs:					
Commercial:					
Federally inspected	98	80	99	94	94
Nonfederally inspected	93	80	102	91	88
Total	97	80	99	93	93
Farm	89	85	89	87	87
Total	97	80	98	92	93
Hogs:					
Commercial:					
Federally inspected	246	233	255	244	25[illegible]
Nonfederally inspected	235	231	243	235	226
Total	242	232	252	241	248
Farm	234	262	269	255	247
Total	242	242	251	244	247

[1] Average weights for each class of meat animals slaughtered in the West in 1946 were estimated.
U. S. Department of Agriculture, Bureau of Agricultural Economics.

Weights of sheep and lambs average heavier at killing time in the Intermountain States than in the Pacific coast or the Southwest. In the Southwest the slaughter weights for sheep and lambs when killed commercially are usually about 12 to 15 percent lower than in the region as a whole.

There is less variation in average weights of hogs between areas than in the case of any other class of meat animals slaughtered, but in the Intermountain area the weights of slaughter hogs were greater than in the other two areas.

RELATION BETWEEN LIVESTOCK SLAUGHTER IN THE WEST AND HUMAN POPULATION IN THE WESTERN STATES, WITH PROJECTIONS

One of the most notable single influences contributing to the increase in the slaughtering done in the West since 1925 has been the growth in human population in the West (fig. 16).

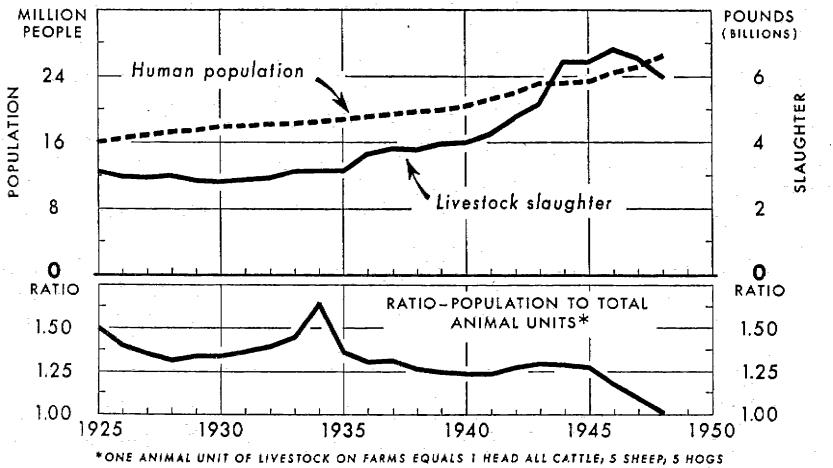

FIGURE 16.—Relationship between human population, commercial livestock slaughter, and ratio of human population to livestock on farms, 12 Western States, 1925–48.

As meat is used in substantial quantities in the diet of most of those who live in the West, it is logical to assume that any material increase in human population would be accompanied by more-or-less proportionate gains in meat consumption. From 1925 to 1948, meat-animal slaughter in the West increased 96 percent, while population gained 66 percent. In the 36 States lying outside the West, human population grew 20 percent compared with a 21-percent increase in livestock slaughter in those States, indicating that both population and livestock slaughter advanced more rapidly in the West than in other parts of the United States.

Average yearly rates of gain in the population in the West have been considerably greater since 1939 than before that year. Significant also from the standpoint of consumption of meat is the nature of the increase. A large part of the increase since 1940 has come in urban coastal centers where manufacturing prevails. These facts have a real bearing on the recent demand for meat and for

livestock for slaughter. But not all of the increase in the western livestock slaughter can be attributed to the growth in the human population. Part of the increase there, particularly that which occurred from 1944 to 1946, was a direct result of heavy military and overseas requirements in the Pacific.

In the 10 years beginning with 1925, population in these 12 Western States combined was growing at an average annual rate of about 280,000. In the last 10 years (1938–48) this rate of annual growth approximates 670,000 people. It is estimated that by July 1, 1955, the total population of the United States will number between 155 and 159 million people *(3, table 3)*. This implies that even though a further expansion is expected, the increase for the United States may be at a lessening rate compared with the 10-year growth that immediately preceded 1948.

To those making this study it seemed apparent that some analysis at this point would give a few practical deductions of use to the industry.

From 1939 to 1948, the annual rates of population growth in the United States averaged about 1.7 million people but it is estimated that in the 10 years immediately preceding 1955 the yearly average will range from about 1.2 to 1.9 million. On the assumption that population growth in the West during the next 7 years will continue to be more rapid than in the rest of the country, population in the 12 Western States may approximate 30 million persons by 1955, compared with 26,517,000 in July 1948.[17] Unusually favorable economic conditions in the area could result in a higher population of the West by 1955, whereas adverse conditions could retard population growth below the projected rate.

Year-to-year changes in total livestock slaughter in the West since 1925 and the interrelation of such changes to total growth in western population are illustrated in figure 17. Here the value of *r*

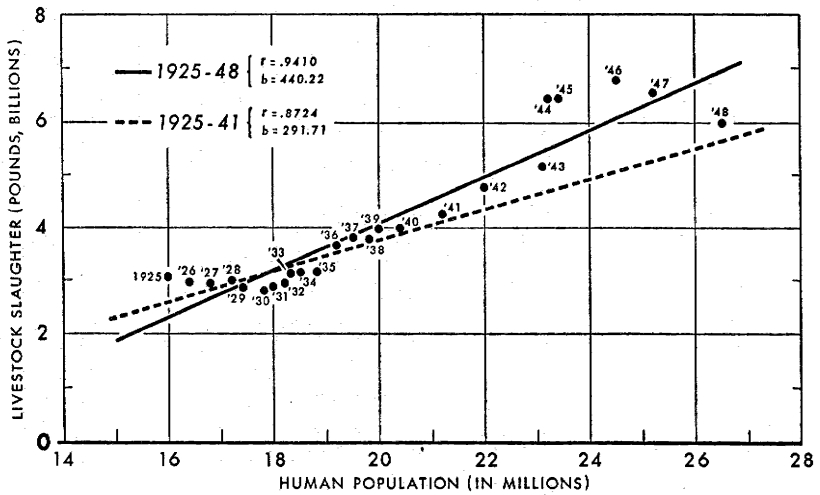

FIGURE 17.—Relationship of civilian population growth to total commercial slaughter of all meal animals, 12 Western States, 1925–48.

[17]The projected level of 30 million is intermediate between levels corresponding to the "high" and "low" assumptions underlying the regional projections presented in Hagood's report *(3)*.

(coefficient of correlation) is found to be 0.9410.[18] If this relationship between the two variables—population and livestock slaughter—were perfect, a single and unchanging value of the x (population) would always be found paired with the y (livestock slaughter), or if such were the case it could be said that the relation was one to one.

From this type of analysis it is possible to do some speculating on probable future demand for slaughter livestock in the West, (1) assuming that numbers of human population can be estimated fairly accurately and (2) providing it is possible to foresee to some extent, and to make adjustments for, possible changes in economic climate to come in the future. Among the more important assumptions included in a speculation of this type are (1) that the western per capita consumption of meat by 1955 will be at about the same level as it was in 1948 and (2) that no material increases in the shipments of dressed meats or live animals will occur from points outside the 12 Western States through changes in freight rates or for other reasons. Speculations of this kind are beyond the scope of this study but a few of the more important influences can be mentioned.

If we accept the assumption that the total numbers of potential meat consumers in the West may increase from 26,517,000 in 1948 to approximately 30,000,000 by 1955, and that similar economic influences (relative to the marketing of western livestock for slaughter in the West and to population growth) that have existed from 1925 to 1948, will prevail in the intervening years, up to and including 1955, then it is likely that about 1,200,000,000 additional pounds of western meat animals over and above that required by western plants in 1948 may be needed to meet the increases in western demand for meat by 1955.[19] Or, in terms of live-weight equivalents this means that an additional head count of 800,000 cattle, 375,000 calves, 1,100,000 hogs, and 1,000,000 sheep and lambs, will be needed for slaughter purposes by western plants to meet the demand of the growing population in the West.

The extent to which this additional demand can be met from supplies of locally produced livestock depends on several conditions, none of which can be stated with the degree of accuracy needed to make a reliable forecast. The total production of fat livestock—those produced by operators from dry-lot feeding—will be limited by the availability of grazing resources and other feed available for fattening purposes; and the ability to produce feed will depend mainly upon the ability of western cropland to grow these feeds efficiently. So it appears that the proportion of future live-animal slaughter which is to come from western feed-lots is governed directly by these factors. Nevertheless, future slaughter needs in the West for both cattle and sheep can, and probably will, be obtained from livestock produced under western range and tame-pasture conditions and from livestock marketed in the form of "grass-fats." This will be true particularly if consumer preferences among Westerners continue to be satisfied with meat that has less finish than that demanded by eastern consumers.

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[18] See Correlation Analysis, p. 49.

[19] Estimates for 1955 include appropriate adjustments for the abnormally heavy slaughter from 1942 to 1946 which resulted from the war in the Pacific and other military requirements.

Heretofore, commercial feeding in the West has been generally confined to irrigated-farming areas where adequate supplies of grain, hay, and sugar-beet byproducts are an important part of the feeding program and where the use of manure is an integrated part of farming. It is apparent, therefore, that future programs of irrigation development in the West will be extremely important to any program which anticipates increases in the total numbers of fat or slaughterable livestock.

The extent and the rapidity with which new irrigation projects are to be developed in the West is unknown at present, but any expansions of irrigated crop acreages will find various crops competing for the use of such land. Dairy products, fruits, vegetables, and other cash crops are some of the more important to be considered.[20] Nevertheless, the fact that growing feed for livestock is largely a residual use of irrigated land makes it possible to assume that some increase in feeding operations would accrue from development of new irrigation projects. Dairy cattle make some contribution to total western commercial slaughter at present, so further expansions of the dairy industry would not completely offset potential gains which could have been made if the expansion had been confined entirely to the livestock-feeding industry *(5)*. Another production potential for cattle and sheep lies in the probability that, through better range management, the carrying capacities of western range lands may be substantially increased. Material increases have already occurred in the carrying capacity of many western irrigated pastures through better farm management.

Any expansion of feed-crop acreages and pasture-improvement practices will alter somewhat the present program of western livestock production. Further increases in crop yields per acre will make it possible to increase the total weights of livestock marketed; but an offsetting influence will include the diversion of additional crop acreages to noncrop uses as population increases. There are real indications, at present, that some shifts will be made from wheat to pasture, but the restoration of western cropland to pasture cannot be made rapidly.

As human population increases throughout the remaining areas of the United States, demand grows for more meat animals. If larger quantities of western-produced meat are to be consumed within the confines of the 12 Western States, fewer and fewer numbers of meat animals will be moved east to Corn Belt feed lots and for slaughter. As the West historically has been the principal source of feeder cattle and sheep for eastern feeders this would mean that the East must look elsewhere, possibly to the Southern States or to Mexico or Canada, for such supplies. However, prices which consumers in the different areas are willing and able to pay in the future for meat may revamp, or cause adjustments in, land-use relationships in both eastern and western agriculture.

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[20] An illustration relative to competition for use of land is found in the case of cotton in California. During the war and the period immediately following, California became one of the largest cotton-producing States in the Nation. Much of the land on which this cotton was grown was formerly irrigated pasture lands in the San Joaquin Valley which, before the war, was used for sheep pasture. With the recent introduction of acreage-control programs for cotton, implemented by acreage allotments, much of this land in the San Joaquin Valley will now be diverted from cotton to other crop uses.

CHANGES IN THE "LINE OF EAST-WEST MOVEMENT" FOR WESTERN LIVESTOCK SLAUGHTER[21]

The economic adage that the West constitutes a major surplus area for production of cattle and sheep and that eastern markets are the major price-determining influence for livestock sold by western stockmen may still be true; but if so, the statement must be made with less assurance than was possible 25 years ago.

The transition of western marketings of meat animals from predominantly "surplus" to a position in which the current annual marketings of slaughter livestock (particularly hogs and cattle) is hardly sufficient to fill the needs of local consumers, is not because of any material reduction in total animal units of western livestock on farms and ranches. It is due rather to an almost phenomenal growth in human population in the West, which means that each year a larger percentage of the total net marketings of livestock from the West is consumed there. The result is that the ratio between livestock slaughter and total net marketings has been increasing and the per capita numbers of these animals on western farms and ranches has been decreasing.

As local needs for slaughter livestock have grown and as the numbers available for shipment to other parts of the United States have decreased, the "line of east-west movement" between the numbers sold by farmers and ranchers for off-farm use and the numbers bought by western packers has gradually moved eastward. Figure 18 shows the approximate lines of balance between slaughter and net marketings of western livestock (geographic boundaries of east-west movement of slaughter livestock) for the three periods 1925–27, 1939–41, and 1945–47. The line for 1955 has been estimated on the basis of probable additional needs (additional requirements over 1948) of slaughter livestock resulting from an estimated further growth in population, as discussed in the previous section.

As marketings of livestock for slaughter and for other purposes cross those lines from considerable distances in both directions, the lines are only the approximate midpoints of boundaries to which western packer-buyers need to come for their supplies. These points have been ascertained by comparing the estimated net poundage of annual marketings of meat animals in live weights with the total live-weight pounds of livestock slaughtered, by States. As a guide in refining the boundaries within a particular State, total breeding stock by counties (as shown by 1945 United States Census) were used. The cause of the curvature of the lines, particularly for cattle and sheep, is principally that California and Washington are deficit-marketing areas whereas Oregon has surplus marketings of both cattle and sheep. Heavy slaughtering is done by some plants in southern California, the managers of which find it necessary to reach long distances inland for their supplies.

[21]To draw a line of east-west balance for western livestock slaughter as attempted in figure 18 involves some real statistical difficulties mainly because county data on the volume of livestock marketed and the direction of this market movement are not available. To arrive at the approximate boundaries to which livestock would move west, considerable smoothing of the lines was necessary, as it is obvious that livestock for slaughter purposes will cross these smoothed lines for considerable distances in both directions. Other hindrances arose in having to resort to Census statistics on county livestock production as indicators of areas of probable heavy marketings.

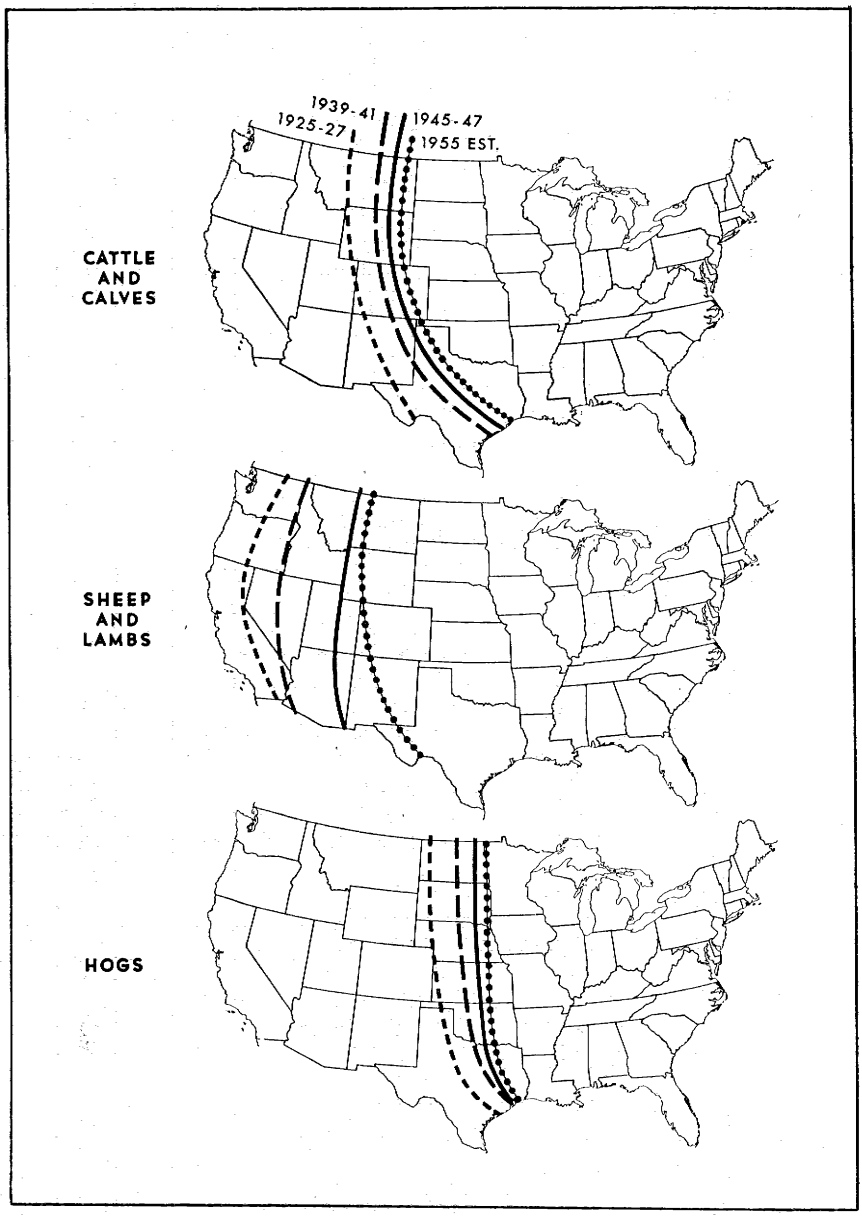

FIGURE 18.—Line of east-west movement—approximate geographic boundary to which Western packer-buyers must come inland to buy the livestock slaughtered in the 12 Western States. (For limitations in this illustration see footnote 21, p. 43.)

It is true that the number of livestock marketed yearly from counties or other western geographic boundaries correlates rather closely with numbers of meat animals in the breeding herd on farms and ranches from the same locality, but production statistics in themselves do not show the direction of livestock market movements. Taking the case of cattle, any future inroads that California

may make on the total United States supply of slaughter livestock will probably occur in Nebraska, Kansas, Oklahoma, and northern Texas. It is doubtful whether more cattle and calves will be taken away from southern Texas in competition with San Antonio, Houston, and New Orleans, where population has also increased sharply. Future inroads for hogs will probably occur in the western Corn Belt and not in Texas and northern Minnesota. Thus, if county statistics on marketings were available which showed the direction that slaughter livestock moved from local areas, then at some points the "lines of east-west movement" as now drawn probably would bend the other way or would at least be more nearly straight than now shown.

Estimated requirements for western slaughter for 1955 have been balanced against the average annual net marketings in the West for the years 1946, 1947, and 1948. Marketings of cattle and sheep in these years were heavy because of rather substantial reductions in inventories; thus average net marketings were above those of an earlier period. This situation is illustrated by the fact that western cattle numbers reached a peak in the current cycle about 1944 when "all cattle numbers" as of January 1, in the 12 Western States, equaled 23,401,000 head, compared with 21,960,000 head on hand the same date in 1949 and 21,951,000 on January 1, 1948. Numbers of western stock sheep have decreased rapidly since 1942, when 32,380,000 head were on western farms and ranches. The number of ewe lambs saved for breeding purposes in the 12 Western States, exclusive of Texas, indicates that the liquidation process for sheep may be over; these numbers increased from 1,774,000 on January 1, 1948 to 1,816,000 on January 1, 1949 *(9)*.

If the indications that the trough of the present western cattle cycle is past should prove accurate, then cattle numbers on western farms should begin to increase. If this should be the case, range operators will hold over more cows and heifers for breeding purposes, and so for the next few years they will be building inventories. To the extent that this happens a smaller proportion of future cattle numbers will be available for market and for slaughter.

What has been said regarding cattle is also apparent in regard to sheep. The peak of heavy marketings of sheep and lambs is probably past. Inventories are now so low that light marketings are in prospect for several years, even though some further liquidation occurs.

Marketings of hogs probably will not increase materially unless greater acreages of cropland are diverted to suitable feeds for hogs and the development is accompanied by such price relationships as will make hog raising in the West a more profitable enterprise than it is now.

It is not likely that irrigation projects now in process of development will be far enough advanced by 1955 to contribute substantially to a gain in the number of livestock fed. On the other hand, the continued pasture improvement through artificial reseeding, the possible reductions in the acreage of wheat and cotton, and the probable further technological advances in plant and animal breeding, are likely to be favorable to an increase in future marketings.

The line of east-west movement extends farther east for hogs than for any other kind of meat animals, indicating the present extreme deficit position, and indicating the reason that the West imports substantial quantities of live hogs and dressed and cured pork.

On January 1, 1949, about 64 percent of all sheep and lambs in the United States were on western farms and ranches. Thus the western surplus position of net marketings over total slaughter in regard to sheep is greater than in regard to any other class of meat animals in the region. Nevertheless, the future ability of the western sheep industry to maintain a strong position in marketings will depend mainly on how far the industry goes in reducing inventory numbers.

The sharp reduction in sheep numbers on western ranges that took place from 1942 to 1949 made it possible to maintain the sheep and lamb kill at a higher level than otherwise would have been possible. Actual and potential slaughterings of cattle were larger than they would otherwise have been, as a result of shifts from sheep to cattle.

For cattle and calves the balance of east-west movement is farther east than for sheep, but is somewhat west of the line for hogs. From present indications it appears that few, if any, western marketings of slaughter cattle and calves will be available for movement east after 1960. It is probable, notwithstanding, that a substantial part of stocker and feeder cattle, as well as stocker and feeder sheep, from the West, will continue to be shipped eastward and that shipments of dressed and cured meats into the 12 Western States will continue to increase.

APPENDIX

Methodology Used in Making Estimates

The estimates in table 4, page 52, for total commercial and noncommercial slaughter in the West of each class of livestock are expressed in terms of number of head and total pounds of live weight slaughtered. Estimates of total livestock slaughter for all purposes consists of two principal subdivisions: (1) Total western commercial slaughter and (2) total western farm slaughter or total noncommercial slaughter. Estimates of total commercial slaughter were further refined through the preparation of separate estimates for federally inspected plants and for livestock slaughtered in plants not federally inspected.

Sources of data used in making estimates of livestock slaughter are found in the published and unpublished statistics of the Washington and Denver offices of Agricultural Estimates, Bureau of Agricultural Economics, and published data from the Bureau of Animal Industry, both of the United States Department of Agriculture, and in reports of Bureau of the Census, United States Department of Commerce.

DATA USED IN MAKING STATE ESTIMATES

The biennial reports of commercial slaughter, by States, as shown in the Census of Manufactures *(12)* for the years 1925, 1927, 1929, 1931, 1935, 1937, and 1939, served as bench marks in the process of arriving at final State estimates. Adjustments in census totals were necessary in all cases to allow for incompleteness.[22] Other information used in the preparation of final estimates includes:

[22]Data for 1933 were not usable, as census reports show no slaughter data by States. Reports of the Census of Manufactures on livestock slaughter have not been published since 1939.

1. Total federally inspected slaughter, by States (total head count and average weights of each class of livestock slaughtered).[23] Data from the Bureau of Animal Industry and Bureau of Agricultural Economics, United States Department of Agriculture.

2. Total slaughter, including break-down of commercial and farm slaughter for California *(1)*.

3. Local slaughter, by States *(8)*.

4. Official annual estimates of total commercial livestock slaughter in the United States *(15)*.

5. Nonfederally inspected slaughter for 1944 *(17)*.

As the Bureau of Agricultural Economics has published complete slaughter statistics, by States, since 1947 *(7)*, these data were used without adjustment, for the years 1947 and 1948. Numbers of livestock slaughtered, by States, were published by the Bureau of Agricultural Economics in 1946 but estimates of average weights were not shown.

METHODS USED IN MAKING STATE AND SUBREGIONAL ESTIMATES OF LIVESTOCK SLAUGHTER

1. NUMBER OF HEAD.—The number of each species and class of livestock reported by the Census of Manufactures and shown as slaughtered in commercial plants served as a bench mark when the relationships between totals for States and areas were ascertained.

Generally, census statistics of slaughter were not shown separately for Wyoming, Arizona, New Mexico, and Nevada, for the period covered by this study. This practice of not publishing data for these four States was in accordance with the policy of the Bureau of the Census. As less than three slaughtering plants were usually operating in each of these States, to show data in these cases might serve to release the confidential production records of each plant.

The degree of completeness of data for these four States varied somewhat by years, but slaughter statistics were complete for all States in 1939. A complete series of census data was also available for the Pacific Coast States of California, Washington, and Oregon, from 1925 to 1948. The fact that this area in 1948 accounted for about 46 percent of all the cattle, 52 percent of all the sheep, and more than 49 percent of all the hogs, that were slaughtered in the 12 Western States, emphasizes the importance of having rather complete coverage in this area. Because the coverage on the Pacific coast was rather complete and because such a large part of the total livestock slaughter in the West is done in this area, these data had a stabilizing influence on all estimates for that region.

Slaughter statistics for California *(1)* represent complete totals for livestock slaughtered in that State. They were used in all cases as official totals, without adjustment.

[23]Published data on federally inspected slaughter give no clue to the volume of slaughter done by nonfederally inspected plants. For example, in 1946, when a larger-than-normal proportion of all plants were inspected, only about 64 percent of the total commercial slaughter poundage was covered. This inspection varied in total coverage from 41 percent in the case of calves to 87 percent in the case of sheep and lambs, in that year. In years before World War II these percentages were much lower.

In arriving at the numbers of livestock slaughtered in Wyoming, Arizona, New Mexico, and Nevada, the indicated yearly changes in local slaughter, and the livestock balance sheets *(8)* issued by the Bureau of Agricultural Economics were used. Indications of yearly changes as shown by these reports were then related to the most recent year or series of years for which complete statistics on livestock slaughter in these States were available.

After preliminary State estimates had been formulated, upward adjustments in all States except California were made for the purpose of correcting census reports for incompleteness. Incompleteness in census data is caused in two ways: through the definition of the plants included in the census survey (any plant, the annual production of which was valued at less than $5,000, was not made a part of the census report), and through the exclusion of custom slaughtering from the State totals. But in spite of these eliminations it was evident that the census reports furnished rather accurate indications of relationships between States and areas.

Fragmentary information regarding the volume of custom slaughtering done in the region was available in the files of the Western Livestock Office of the Bureau of Agricultural Economics, so indications of incompleteness were arrived at by comparing the census totals with the official estimates by the United States Department of Agriculture of total commercial slaughter. The second step, then, was to ascertain the proper adjustment for completeness in State and area totals (exclusive of California).

2. AVERAGE WEIGHTS.—State data, indicating average weights of each species and class of livestock, were generally available from three sources. (1) Average weights of animals slaughtered on farms came from unpublished data of the Bureau of Agricultural Economics. (2) Average weights of animals slaughtered under Federal inspection came from reports of the Bureau of Animal Industry. (3) Average weights of total commercial slaughter came from the Census of Manufactures, published in the census reports of the United States Department of Commerce.

In arriving at annual average weights for each class of livestock consideration was given to weights of animals federally inspected and to total commercial-slaughter weights as published by the Bureau of the Census. Certain rather uniform relationships were found between average weights of animals federally inspected and those of animals not federally inspected. For example, average weights of animals slaughtered in federally inspected plants were consistently heavier than those of animals killed in nonfederally inspected plants or of animals slaughtered on farms. These relationships seemed reasonably satisfactory as a basis for making final adjustments on the average weights for each class of livestock. State average weights of meat animals slaughtered on farms, available from unpublished data in the Bureau of Agricultural Economics, were used without revision.

3. TOTAL POUNDS SLAUGHTERED (LIVE WEIGHT).—Total pounds of federally inspected, nonfederally inspected, and farm slaughter, for each class of livestock, expressed in terms of live-weight equivalents, were derived by multiplying the final estimated head count by the respective average weights for each type of processor.

COMPUTATION OF COEFFICIENT OF CORRELATION OF HUMAN POPULATION TO COMMERCIAL SLAUGHTER OF LIVESTOCK, 12 WESTERN STATES, BY CLASS, FOR PERIODS 1925–48 AND 1925–41

Year n	Human population x	Commercial slaughter				
		Total y	Cattle y	Calves y	Sheep and lambs y	Hogs y
	Millions	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
1925	16.0	3,063.3	1,839.4	367.6	196.3	660.0
1926	16.4	2,971.0	1,862.0	281.9	204.3	622.8
1927	16.8	2,923.3	1,708.4	330.6	205.6	678.7
1928	17.2	2,993.8	1,642.2	321.8	210.2	819.6
1929	17.4	2,845.1	1,555.5	273.4	220.1	796.1
1930	17.8	2,798.0	1,546.1	270.2	261.0	720.7
1931	18.0	2,872.5	1,573.1	246.4	323.8	729.2
1932	18.2	2,936.0	1,525.8	248.5	339.3	822.4
1933	18.3	3,124.0	1,693.5	260.6	299.8	870.1
1934	18.5	3,135.6	1,814.6	297.9	260.1	763.0
1935	18.8	3,149.7	2,016.6	313.1	316.1	503.9
1936	19.2	3,669.9	2,300.8	330.5	326.3	712.3
1937	19.5	3,807.6	2,370.2	388.2	348.4	700.8
1938	19.8	3,787.8	2,356.8	334.6	371.4	725.0
1939	20.0	3,983.1	2,386.1	348.2	353.0	895.8
1940	20.4	3,995.6	2,259.1	309.4	348.6	1,078.5
1941	21.2	4,253.9	2,482.0	305.5	348.2	1,118.2
1942	22.0	4,761.4	2,753.4	363.1	414.5	1,230.4
1943	23.1	5,159.6	2,726.1	351.5	474.6	1,607.4
1944	23.2	6,446.3	3,415.7	819.2	468.7	1,742.7
1945	23.4	6,444.6	3,898.1	811.9	578.4	1,156.2
1946	24.5	6,792.7	3,986.7	679.3	593.9	1,532.8
1947	25.2	6,555.6	4,092.1	722.5	422.5	1,318.5
1948	26.5	5,999.7	3,630.9	591.7	458.3	1,318.8
Period 1925-48:						
Σ	481.4	98,470.1	57,435.2	9,567.6	8,343.4	23,123.9
Σx^2	9,855.9					
Σxy		2,063,156.8	1,204,565.4	201,219.4	174,079.9	483,292.2
Σy^2		447,757,995	153,426,876	4,553,774	3,186,425	24,948,954
M	20.058	4,102.9	2,393.2	398.65	347.64	963.50
M^2	402.32	16,833,788.4	5,727,406.2	158,921.8	120,853.6	928,332.2
$n=24$						

COMPUTATION OF COEFFICIENT OF CORRELATION OF HUMAN POPULATION TO COMMERCIAL SLAUGHTER OF LIVESTOCK, 12 WESTERN STATES, BY CLASS, FOR PERIODS 1925–48 AND 1925–41—CONTINUED

Year n	Human population x	Commercial slaughter				
		Total y	Cattle y	Calves y	Sheep and lambs y	Hogs y
	Millions	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
		rxy= .9410	rxy= .9286	rxy= .7653	rxy= .8894	rxy= .8424
		b=440.22	b=262.65	b= 46.56	b= 33.64	b= 97.36
Period 1925-41:						
Σ	313.5	56,310.2	32,932.2	5,228.4	4,932.5	13,217.1
Σx^2	5,815.0					
Σxy		1,048,247.1	613,544.0	96,577.8	92,246.7	245,878.7
Σy^2		190,264,876	65,729,359	1,634,546	1,493,881	10,650,382
M	18.441	3,312.4	1,937.2	307.55	290.15	777.48
M^2	340.07	10,971,993.8	3,752,743.8	94,587.0	84,187.0	604,475.2
n=17						
		rxy= .8724	rxy= .7710	rxy= .1698	rxy= .8825	rxy= .6013
		b=291.71	b=185.20	b= 4.77	b= 38.18	b= 63.55

Formulas Used

Coefficient of correlation:

$$rxy = \frac{\Sigma(xy) - n\,Mx\,My}{\sqrt{[\Sigma(x^2) - n\,Mx^2]\,[\Sigma(y^2) - n\,My^2]}}$$

Trend line:

$$\Sigma\,Y = Na + b\Sigma X$$
$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

LITERATURE CITED

(1) CALIFORNIA STATE DEPARTMENT OF AGRICULTURE AND BUREAU OF AGRICULTURAL ECONOMICS.
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STATISTICAL TABLES

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48*

CATTLE

Year	Number					Live weight				
	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Non-federally inspected	Total			Federally inspected	Non-federally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
1925	1,068	975	2,043	204	2,247	940.5	898.8	1,839.4	159.5	1,998.8
1926	1,028	996	2,024	189	2,213	934.1	927.9	1,862.0	148.3	2,010.2
1927	1,039	813	1,852	191	2,043	945.2	763.2	1,708.4	149.8	1,858.2
1928	924	854	1,778	129	1,907	845.0	797.2	1,642.2	100.5	1,742.7
1929	860	822	1,682	112	1,794	785.6	769.9	1,555.5	87.4	1,642.9
1930	786	897	1,683	118	1,801	718.2	827.9	1,546.1	90.3	1,636.4
1931	780	945	1,725	130	1,855	709.0	864.1	1,573.1	99.4	1,672.5
1932	694	988	1,682	186	1,868	627.0	898.7	1,525.8	138.0	1,663.7
1933	795	1,022	1,817	249	2,066	735.8	957.7	1,693.5	181.9	1,875.4
1934	789	1,204	1,993	206	2,199	704.7	1,109.9	1,814.6	150.6	1,965.2
1935	1,192	1,047	2,239	125	2,364	1,056.4	960.2	2,016.6	92.3	2,108.9
1936	1,218	1,327	2,545	121	2,666	1,104.6	1,196.2	2,300.8	89.4	2,390.2
1937	1,408	1,356	2,764	118	2,882	1,186.8	1,183.5	2,370.2	86.6	2,456.8
1938	1,254	1,446	2,700	124	2,824	1,085.7	1,271.1	2,356.8	93.3	2,450.1
1939	1,081	1,613	2,694	138	2,832	961.8	1,424.3	2,386.1	104.7	2,490.8
1940	1,090	1,475	2,565	135	2,700	965.7	1,293.4	2,259.1	106.0	2,365.1
1941	1,316	1,419	2,735	134	2,869	1,208.4	1,273.6	2,482.0	104.1	2,586.1
1942	1,796	1,233	3,029	148	3,177	1,659.0	1,094.4	2,753.4	113.7	2,867.1
1943	2,046	964	3,010	132	3,142	1,926.3	799.8	2,726.1	97.7	2,823.8
1944	2,674	1,143	3,817	154	3,971	2,482.3	933.4	3,415.7	111.1	3,526.7
1945	3,071	1,203	4,274	151	4,425	2,903.5	994.6	3,898.1	110.9	4,008.9
1946	2,715	1,670	4,385	172	4,557	2,554.7	1,432.0	3,986.7	130.5	4,117.2
1947	3,199	1,391	4,590	145	4,735	2,932.4	1,159.7	4,092.1	110.1	4,202.3
1948[1]	2,760	1,217	3,977	135	4,112	2,602.6	1,028.3	3,630.9	103.9	3,734.8

CALVES

1925	612	834	1,446	196	1,642	154.6	212.9	367.6	43.1	410.6
1926	446	641	1,087	184	1,271	117.0	164.8	281.9	40.2	322.1
1927	506	711	1,217	165	1,382	139.9	190.8	330.6	35.3	366.0
1928	489	693	1,182	199	1,381	135.7	186.2	321.8	42.2	364.0
1929	436	583	1,019	182	1,201	122.3	151.1	273.4	38.7	312.1
1930	378	618	996	180	1,176	108.0	162.2	270.2	38.6	308.9
1931	350	555	905	207	1,112	103.1	143.3	246.4	44.6	291.0
1932	279	644	923	244	1,167	79.6	168.9	248.5	56.0	304.4
1933	332	638	970	228	1,198	94.6	166.1	260.6	49.5	310.1
1934	392	708	1,100	254	1,354	114.0	183.8	297.8	55.6	353.4
1935	492	668	1,160	200	1,360	140.6	172.6	313.1	41.0	354.2
1936	456	727	1,183	201	1,384	136.5	194.0	330.5	41.2	371.7
1937	479	860	1,339	211	1,550	146.6	241.6	388.2	43.4	431.6
1938	403	809	1,212	204	1,416	120.2	214.4	334.6	42.7	377.3
1939	385	879	1,264	234	1,498	113.9	234.3	348.2	49.3	397.5
1940	350	750	1,100	225	1,325	104.5	204.9	309.4	51.0	360.4
1941	362	701	1,063	208	1,271	109.1	196.4	305.5	48.7	354.2
1942	527	681	1,208	196	1,404	162.2	201.0	363.1	50.0	413.1
1943	596	529	1,125	177	1,302	187.6	163.9	351.5	48.3	399.8
1944	1,063	1,430	2,493	203	2,696	334.1	485.1	819.2	58.8	878.1
1945	1,095	1,368	2,463	190	2,653	333.1	478.8	811.9	54.6	866.5
1946	871	1,271	2,142	201	2,343	244.4	434.9	679.3	59.3	738.6
1947	1,114	1,140	2,254	184	2,438	340.5	382.0	722.5	56.9	779.4
1948[1]	911	912	1,823	164	1,987	276.8	314.9	591.7	52.5	644.2

SHEEP AND LAMBS

1925	1,097	1,338	2,435	283	2,718	89.5	106.8	196.3	25.4	221.7
1926	1,206	1,332	2,538	293	2,831	98.7	105.5	204.3	26.3	230.6
1927	1,183	1,346	2,529	303	2,832	98.0	107.6	205.6	27.0	232.6
1928	1,191	1,364	2,555	313	2,868	99.5	110.6	210.2	29.6	239.7
1929	1,298	1,362	2,660	317	2,977	108.9	111.1	220.1	28.7	248.8
1930	1,358	1,857	3,215	328	3,543	111.8	149.2	261.0	29.6	290.6
1931	1,988	2,108	4,096	429	4,525	159.6	164.2	323.8	39.2	363.0
1932	2,028	2,210	4,238	473	4,711	162.8	176.4	339.3	43.1	382.4
1933	1,728	1,985	3,713	499	4,212	140.5	159.3	299.8	45.1	345.0
1934	1,303	1,850	3,153	509	3,662	107.6	152.6	260.1	45.8	306.0
1935	1,779	1,950	3,729	497	4,226	148.1	168.0	316.1	45.1	361.2
1936	1,839	1,961	3,800	465	4,265	153.6	172.7	326.3	41.4	367.7
1937	2,113	1,939	4,052	440	4,492	178.0	170.4	348.4	40.4	388.8
1938	2,202	2,130	4,332	460	4,792	188.1	183.3	371.4	41.8	413.2
1939	1,904	2,179	4,083	449	4,532	163.4	189.6	353.0	40.9	393.9
1940	2,101	1,947	4,048	425	4,473	180.5	168.1	348.6	38.3	386.9
1941	2,197	1,796	3,993	436	4,429	191.3	156.9	348.2	39.6	387.7
1942	3,139	1,596	4,735	431	5,166	272.6	141.9	414.5	38.8	453.4
1943	4,495	835	5,330	420	5,750	398.3	76.3	474.6	37.7	512.3
1944	4,475	780	5,255	415	5,670	397.5	71.2	468.7	36.9	505.6
1945	5,611	851	6,462	425	6,887	500.3	78.1	578.4	37.7	616.1
1946	5,648	856	6,504	432	6,936	518.3	75.6	593.9	38.2	632.0
1947	3,936	604	4,540	418	4,958	368.3	54.3	422.5	35.8	458.3
1948[1]	4,109	719	4,828	413	5,241	391.0	67.3	458.3	35.6	493.9

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48—Continued*

HOGS

Year	Number					Live weight				
	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Non-federally inspected	Total			Federally inspected	Non-federally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thounsads*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
1925	2,001	1,291	3,292	1,468	4,760	412.2	247.8	660.0	352.7	1,012.7
1926	1,758	1,309	3,067	1,410	4,477	367.9	254.9	622.8	339.2	962.0
1927	1,933	1,474	3,407	1,400	4,807	395.1	283.6	678.7	344.9	1,023.6
1928	2,537	1,545	4,082	1,439	5,521	521.1	298.5	819.6	345.8	1,165.3
1929	2,352	1,571	3,923	1,460	5,383	491.8	304.4	796.1	353.3	1,149.5
1930	1,959	1,608	3,567	1,413	4,980	412.7	308.0	720.7	341.1	1,061.9
1931	2,036	1,651	3,687	1,554	5,241	420.7	308.4	729.2	378.0	1,107.2
1932	2,207	1,976	4,183	1,718	5,901	452.7	369.7	822.4	417.8	1,240.1
1933	2,465	2,030	4,495	1,727	6,222	492.0	378.1	870.1	421.2	1,291.3
1934	2,178	1,637	3,815	1,659	5,474	444.8	318.2	763.0	394.6	1,157.6
1935	1,489	999	2,488	1,291	3,779	309.0	194.9	503.9	303.5	807.4
1936	2,056	1,496	3,552	1,458	5,010	417.5	294.8	712.3	342.9	1,055.2
1937	1,864	1,630	3,494	1,402	4,896	380.3	320.7	701.0	342.9	1,043.9
1938	1,902	1,698	3,600	1,414	5,014	391.0	334.0	725.0	345.7	1,070.7
1939	2,245	2,067	4,312	1,565	5,877	478.4	417.4	895.8	376.5	1,272.2
1940	3,016	2,209	5,225	1,553	6,778	633.9	444.6	1,078.5	361.5	1,440.0
1941	2,960	2,252	5,212	1,396	6,608	648.8	469.4	1,118.2	325.8	1,444.0
1942	3,563	1,987	5,550	1,361	6,911	804.6	425.8	1,230.4	318.8	1,549.2
1943	5,299	1,753	7,052	1,555	8,607	1,222.0	385.3	1,607.4	365.4	1,972.8
1944	5,867	1,715	7,582	1,418	9,000	1,365.2	377.4	1,742.7	331.9	2,074.5
1945	3,216	1,404	4,620	1,434	6,054	836.5	319.7	1,156.2	344.2	1,500.4
1946	3,707	2,565	6,272	1,470	7,742	920.4	612.3	1,532.8	371.4	1,904.2
1947	3,842	1,616	5,458	1,330	6,788	937.2	381.4	1,318.5	342.4	1,661.0
1948[1]	3,870	1,679	5,549	1,305	6,854	932.9	385.9	1,318.8	333.3	1,652.1

TOTAL LIVE WEIGHT OF ALL LIVESTOCK

1925						1,596.9	1,466.3	3,063.2	580.7	3,643.8
1926						1,517.7	1,453.1	2,970.8	554.0	3,524.8
1927						1,578.2	1,345.2	2,923.4	557.0	3,480.4
1928						1,601.3	1,392.5	2,993.7	518.1	3,511.8
1929						1,508.6	1,336.4	2,845.0	508.1	3,353.2
1930						1,350.7	1,447.3	2,798.0	499.6	3,297.7
1931						1,392.5	1,480.0	2,872.5	561.2	3,433.7
1932						1,322.2	1,613.7	2,935.9	654.8	3,590.7
1933						1,462.9	1,661.1	3,124.0	697.7	3,821.8
1934						1,371.1	1,764.4	3,135.5	646.6	3,782.1
1935						1,654.1	1,495.6	3,149.7	481.9	3,631.6
1936						1,812.2	1,857.6	3,669.9	514.9	4,184.8
1937						1,891.7	1,916.2	3,807.9	513.3	4,321.2
1938						1,785.0	2,002.8	3,787.8	523.5	4,311.3
1939						1,717.5	2,265.5	3,983.1	571.4	4,554.5
1940						1,884.6	2,111.0	3,995.6	556.8	4,552.4
1941						2,157.5	2,096.2	4,253.7	518.2	4,771.9
1942						2,898.4	1,863.1	4,761.4	521.3	5,282.8
1943						3,734.2	1,425.3	5,159.6	549.1	5,708.6
1944						4,579.1	1,867.1	6,446.2	538.7	6,984.9
1945						4,573.3	1,871.3	6,444.6	547.3	6,992.0
1946						4,237.8	2,554.8	6,792.6	599.5	7,392.1
1947						4,578.3	1,977.4	6,555.7	545.2	7,100.9
1948[1]						4,203.4	1,796.4	5,999.7	525.3	6,525.0

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48—Continued*

CATTLE

Year	Number														
	Pacific coast area					Southwestern area					Intermountain area				
	Commercial			Farm	Total	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Non-federally inspected	Total			Federally inspected	Non-federally inspected	Total			Federally inspected	Non-federally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*
1925	364	629	993	100	1,093	538	194	732	51	783	166	152	318	53	371
1926	380	622	1,002	80	1,082	489	253	742	45	787	159	121	280	64	344
1927	386	593	979	80	1,059	492	105	597	47	644	161	115	276	64	340
1928	343	600	943	43	986	428	132	560	35	595	153	122	275	51	326
1929	326	603	929	37	966	376	102	478	33	511	158	117	275	42	317
1930	314	630	944	40	984	333	149	482	36	518	139	118	257	42	299
1931	309	660	969	42	1,011	331	147	478	39	517	140	138	278	49	327
1932	295	705	1,000	47	1,047	270	170	440	77	517	129	113	242	62	304
1933	339	761	1,100	63	1,163	309	141	450	119	569	147	120	267	67	334
1934	282	918	1,200	67	1,267	345	160	505	74	579	162	126	288	65	353
1935	406	846	1,252	44	1,296	580	77	657	36	693	206	124	330	45	375
1936	458	902	1,360	37	1,397	534	274	808	38	846	226	151	377	46	423
1937	457	959	1,416	38	1,454	731	208	939	35	974	220	189	409	45	454
1938	435	915	1,350	37	1,387	623	345	968	36	1,004	196	186	382	51	433
1939	406	922	1,328	46	1,374	481	494	975	38	1,013	194	197	391	54	445
1940	443	862	1,305	44	1,349	451	429	880	43	923	196	184	380	48	428
1941	537	838	1,375	47	1,422	547	393	940	38	978	232	188	420	49	469
1942	760	685	1,445	56	1,501	699	363	1,062	37	1,099	337	185	522	55	577
1943	1,118	282	1,400	49	1,449	558	482	1,040	31	1,071	370	200	570	52	622
1944	1,521	441	1,962	60	2,022	696	530	1,226	39	1,265	457	172	629	55	684
1945	1,768	472	2,240	61	2,301	792	450	1,242	32	1,274	511	281	792	58	850
1946	1,606	657	2,263	66	2,329	645	698	1,343	34	1,377	464	315	779	72	851
1947	1,660	606	2,266	56	2,322	970	567	1,537	29	1,566	569	218	787	60	847
1948[1]	1,446	505	1,951	51	2,002	830	522	1,352	28	1,380	484	190	674	56	730

Live weight

	Mil. lb.	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*
1925	366.5	634.3	1,000.9	82.9	1,083.8	414.8	127.6	542.4	33.4	575.8	159.2	136.9	296.1	43.2	339.2
1926	383.4	633.6	1,017.0	66.5	1,083.6	397.1	184.7	581.7	29.5	611.2	153.6	109.6	263.2	52.2	315.5
1927	387.5	585.7	973.2	66.6	1,039.8	402.9	76.4	479.4	30.9	510.2	154.7	101.1	255.9	52.4	308.2
1928	344.0	592.4	936.4	35.9	972.2	356.5	96.0	452.5	23.0	475.5	144.4	108.8	253.3	41.7	295.0
1929	325.7	593.4	919.1	31.4	950.5	314.7	73.9	388.6	21.7	410.3	145.2	102.6	247.8	34.3	282.1
1930	312.4	617.4	929.8	32.9	962.7	281.1	110.3	391.4	23.7	415.0	124.7	100.2	224.9	33.7	258.6
1931	306.5	644.9	951.4	34.5	985.9	281.7	106.0	387.7	25.6	413.2	120.8	113.3	234.1	39.3	273.4
1932	289.4	682.6	972.0	37.9	1,009.9	227.6	127.5	355.1	50.3	405.4	110.0	88.6	198.7	49.8	248.5
1933	340.7	753.8	1,094.5	50.3	1,144.8	266.4	104.9	371.3	77.5	448.8	128.8	99.0	227.8	54.1	281.9
1934	277.5	891.3	1,168.8	53.4	1,222.2	290.5	118.6	409.1	45.8	454.9	136.7	100.0	236.7	51.4	288.1
1935	393.4	806.8	1,200.2	35.1	1,235.3	473.9	49.8	523.6	22.5	546.1	189.1	103.6	292.7	34.7	327.4
1936	445.2	863.1	1,308.3	29.6	1,338.0	454.4	202.5	656.9	23.8	680.7	205.0	130.5	335.5	36.0	371.6
1937	430.5	891.3	1,321.8	30.0	1,351.8	558.5	131.7	690.2	21.7	711.9	197.8	160.5	358.3	34.8	393.1
1938	419.3	868.6	1,287.9	29.4	1,317.3	487.8	241.1	728.9	23.6	752.5	178.6	161.4	340.0	40.4	380.3
1939	397.9	889.9	1,287.7	36.5	1,324.2	386.2	362.6	748.8	24.9	773.7	177.7	171.9	349.6	43.3	392.9
1940	433.3	830.0	1,263.2	36.1	1,299.3	357.6	307.6	665.3	30.3	695.6	174.8	155.8	330.6	39.6	370.2
1941	538.1	825.9	1,364.0	38.0	1,402.0	450.2	283.1	733.3	26.2	759.4	220.2	164.6	384.7	39.9	424.7
1942	762.3	672.6	1,434.9	44.2	1,479.1	573.9	256.6	830.5	25.3	855.8	322.8	165.2	488.1	44.2	532.2
1943	1,116.9	267.7	1,384.6	37.3	1,421.9	455.3	353.8	809.1	19.9	829.1	354.1	178.3	532.4	40.4	572.8
1944	1,488.1	409.6	1,897.7	43.9	1,941.6	559.3	373.4	932.6	25.4	958.0	434.9	150.4	585.3	41.7	627.1
1945	1,758.6	447.8	2,206.4	45.6	2,252.0	638.9	316.2	955.1	21.0	976.1	506.0	230.5	736.6	44.3	780.9
1946	1,584.0	631.2	2,215.2	50.5	2,265.7	513.3	506.5	1,019.9	23.4	1,043.3	457.4	294.3	751.7	56.6	808.3
1947	1,625.5	570.2	2,195.8	44.4	2,240.2	764.1	396.4	1,160.5	19.4	1,179.9	542.8	193.0	735.8	46.3	782.1
1948[1]	1,452.5	489.5	1,942.0	40.9	1,982.9	676.7	371.5	1,048.2	19.0	1,067.2	473.3	167.3	640.6	44.0	684.7

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48—Continued*

CALVES

Year	Number														
	Pacific coast area					Southwestern area					Intermountain area				
	Commercial			Farm	Total	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*
1925	83	377	460	81	541	490	399	889	51	940	39	58	97	64	161
1926	75	375	450	83	533	335	217	552	50	602	36	49	85	51	136
1927	67	390	457	77	534	407	265	672	42	714	32	56	88	46	134
1928	55	385	440	105	545	401	259	660	44	704	33	49	82	50	132
1929	56	365	421	98	519	344	166	510	40	550	36	52	88	44	132
1930	57	353	410	92	502	289	219	508	44	552	32	46	78	44	122
1931	56	359	415	104	519	258	158	416	53	469	36	38	74	50	124
1932	47	385	432	94	526	202	216	418	105	523	30	43	73	45	118
1933	61	409	470	98	568	239	183	422	76	498	32	46	78	54	132
1934	74	446	520	94	614	267	213	480	107	587	51	49	100	53	153
1935	78	422	500	102	602	357	193	550	52	602	57	53	110	46	156
1936	94	444	538	100	638	310	220	530	56	586	52	63	115	45	160
1937	94	485	579	103	682	331	306	637	54	691	54	69	123	54	177
1938	89	461	550	99	649	273	287	560	58	618	41	61	102	47	149
1939	77	449	526	115	641	268	356	624	67	691	40	74	114	52	166
1940	67	413	480	110	590	242	278	520	68	588	41	59	100	47	147
1941	89	389	478	104	582	238	262	500	61	561	35	50	85	43	128
1942	147	383	530	100	630	339	239	578	54	632	41	59	100	42	142
1943	222	238	460	86	546	336	239	575	53	628	38	52	90	38	128
1944	406	454	860	87	947	560	859	1,419	72	1,491	97	117	214	44	258
1945	438	337	775	83	858	586	934	1,520	63	1,583	71	97	168	44	212
1946	412	388	800	84	884	412	788	1,200	72	1,272	47	95	142	45	187
1947	526	384	910	81	991	523	673	1,196	63	1,259	65	83	148	40	188
1948[1]	455	278	733	74	807	414	565	979	50	1,029	42	69	111	40	151

Live weight

	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1925	19.3	84.2	103.5	14.2	117.7	126.9	116.7	243.6	14.4	257.9	8.5	12.0	20.5	14.6	35.0
1926	18.8	86.9	105.8	14.3	120.1	89.8	67.5	157.3	14.1	171.4	8.4	10.4	18.8	11.9	30.6
1927	17.6	93.7	111.3	12.8	124.1	114.4	84.5	198.9	11.8	210.7	7.9	12.5	20.4	10.7	31.2
1928	13.4	90.0	103.4	17.7	121.1	114.3	85.7	200.0	12.4	212.4	8.0	10.5	18.5	12.1	30.5
1929	13.0	82.5	95.5	16.8	112.3	100.8	57.8	158.6	11.3	169.9	8.5	10.7	19.3	10.6	29.9
1930	12.8	77.4	90.2	16.0	106.2	87.9	74.7	162.6	12.5	175.0	7.4	10.1	17.5	10.2	27.7
1931	12.4	76.6	89.0	18.0	107.0	82.3	58.2	140.5	14.9	155.4	8.4	8.4	16.9	11.7	28.6
1932	10.2	81.3	91.6	16.5	108.1	62.4	78.0	140.4	29.4	169.9	6.9	9.5	16.4	10.0	26.4
1933	13.6	88.4	102.0	17.2	119.2	73.4	67.2	140.5	20.0	160.5	7.6	10.5	18.1	12.3	30.4
1934	17.7	98.3	116.0	16.3	132.3	83.3	74.1	157.4	27.2	184.6	13.0	11.4	24.4	12.0	36.5
1935	18.7	93.2	112.0	17.1	129.1	107.1	66.7	173.8	13.4	187.2	14.8	12.6	27.4	10.6	38.0
1936	23.1	100.6	123.7	16.8	140.5	99.8	77.7	177.6	14.4	192.0	13.6	15.6	29.2	10.1	39.3
1937	23.5	111.9	135.4	17.2	152.6	108.9	112.1	221.0	13.9	234.9	14.2	17.5	31.7	12.3	44.1
1938	20.7	99.2	119.9	16.5	136.4	88.2	100.0	188.2	15.4	203.6	11.2	15.3	26.5	10.7	37.3
1939	16.6	92.7	109.3	19.3	128.6	86.3	122.7	209.0	17.8	226.8	11.0	18.9	29.9	12.2	42.0
1940	15.5	87.7	103.2	19.8	123.0	77.7	101.7	179.4	19.6	199.0	11.3	15.5	26.8	11.7	38.5
1941	21.3	87.2	108.5	19.4	128.0	77.8	95.7	173.5	18.3	191.8	10.0	13.5	23.5	11.0	34.4
1942	36.3	90.9	127.2	20.4	147.6	113.6	93.4	206.9	18.0	225.0	12.3	16.7	29.0	11.6	40.6
1943	60.6	55.8	116.4	18.7	135.1	115.2	92.9	208.2	18.4	226.5	11.7	15.3	27.0	11.1	38.1
1944	116.8	112.2	229.0	20.2	249.1	185.9	337.9	523.8	25.0	548.8	31.4	35.0	66.4	13.7	80.1
1945	115.7	87.4	203.1	19.0	222.0	194.5	360.3	554.8	21.9	576.7	22.9	31.2	54.1	13.8	67.9
1946	92.1	89.8	182.0	20.8	202.7	137.3	314.2	451.5	24.7	476.2	15.0	30.9	45.8	13.9	59.7
1947	133.9	94.6	228.5	20.9	249.3	186.0	261.2	447.2	22.6	469.8	20.5	26.3	46.8	13.4	60.3
1948[1]	107.7	63.0	170.7	20.0	190.7	155.4	231.2	386.6	18.5	405.1	13.7	20.6	34.4	14.0	48.4

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48—Continued*

SHEEP AND LAMBS

Year	Number														
	Pacific coast area					Southwestern area					Intermountain area				
	Commercial			Farm	Total	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*
1925	780	1,215	1,995	65	2,060	137	40	177	114	291	180	83	263	104	367
1926	784	1,214	1,998	65	2,063	203	19	222	115	337	219	99	318	113	431
1927	748	1,222	1,970	66	2,036	226	29	255	117	372	209	95	304	120	424
1928	742	1,236	1,978	57	2,035	228	30	258	121	379	221	98	319	135	454
1929	762	1,220	1,982	62	2,044	299	41	340	120	460	237	101	338	135	473
1930	826	1,639	2,465	72	2,537	256	124	380	121	501	276	94	370	135	505
1931	1,019	1,920	2,939	80	3,019	626	54	680	200	880	343	134	477	149	626
1932	918	2,032	2,950	82	3,032	825	85	910	215	1,125	285	93	378	176	554
1933	893	1,832	2,725	86	2,811	578	60	638	240	878	257	93	350	173	523
1934	801	1,729	2,530	84	2,614	335	27	362	260	622	167	94	261	165	426
1935	988	1,822	2,810	68	2,878	492	44	536	256	792	299	84	383	173	556
1936	975	1,820	2,795	62	2,857	486	49	535	244	779	378	92	470	159	629
1937	954	1,818	2,772	66	2,838	683	29	712	222	934	476	92	568	152	720
1938	919	1,956	2,875	69	2,944	780	82	862	228	1,090	503	92	595	163	758
1939	910	1,945	2,855	64	2,919	560	105	665	230	895	434	129	563	155	718
1940	1,049	1,776	2,825	59	2,884	673	72	745	218	963	379	99	478	148	626
1941	1,205	1,645	2,850	58	2,908	577	61	638	231	869	415	90	505	147	652
1942	1,605	1,395	3,000	56	3,056	1,049	111	1,160	233	1,393	485	90	575	142	717
1943	2,566	614	3,180	54	3,234	1,256	134	1,390	223	1,613	673	87	760	143	903
1944	2,522	579	3,101	52	3,153	1,173	102	1,275	230	1,505	780	99	879	133	1,012
1945	3,175	525	3,700	57	3,757	1,396	146	1,542	226	1,768	1,040	180	1,220	142	1,362
1946	3,066	558	3,624	54	3,678	1,426	214	1,640	237	1,877	1,156	84	1,240	141	1,381
1947	2,149	450	2,599	48	2,647	967	102	1,069	227	1,296	820	52	872	143	1,015
1948[1]	1,996	500	2,496	45	2,541	1,083	154	1,237	221	1,458	1,030	65	1,095	147	1,242

Live weight

	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1925	62.4	96.0	158.4	5.9	164.3	11.3	3.4	14.7	10.3	25.0	15.8	7.4	23.1	9.2	32.3
1926	62.7	95.1	157.8	5.7	163.5	16.8	1.6	18.4	10.5	28.9	19.2	8.8	28.0	10.1	38.1
1927	60.6	96.6	157.2	5.8	163.0	19.2	2.5	21.7	10.6	32.3	18.3	8.5	26.8	10.6	37.4
1928	60.8	99.4	160.2	5.0	165.2	19.5	2.6	22.2	12.7	34.8	19.1	8.6	27.8	11.9	39.7
1929	62.5	98.6	161.1	5.5	166.6	25.9	3.6	29.6	11.3	40.9	20.5	8.9	29.4	11.9	41.3
1930	66.9	130.3	197.2	6.3	203.5	21.5	10.8	32.3	11.4	43.7	23.4	8.1	31.5	11.9	43.4
1931	82.5	148.6	231.2	7.1	238.3	48.7	4.3	53.0	18.8	71.8	28.3	11.3	39.6	13.3	52.9
1932	74.4	161.6	236.0	7.2	243.2	64.9	7.0	71.9	20.0	91.9	23.6	7.8	31.4	15.9	47.3
1933	74.1	146.6	220.7	7.6	228.4	45.4	5.0	50.4	22.0	72.4	21.0	7.7	28.7	15.5	44.2
1934	68.1	143.5	211.6	7.4	219.0	26.1	2.0	28.1	23.8	51.9	13.4	7.1	20.4	14.7	35.1
1935	84.0	157.0	240.9	6.0	247.0	38.2	3.6	41.8	23.9	65.7	25.9	7.4	33.3	15.1	48.5
1936	82.9	160.3	243.2	5.5	248.6	38.2	4.0	42.3	22.4	64.7	32.5	8.4	40.9	13.5	54.4
1937	83.0	159.8	242.8	5.8	248.6	53.9	2.4	56.2	21.3	77.5	41.1	8.3	49.4	13.3	62.7
1938	81.9	168.2	250.1	6.1	256.3	62.2	6.8	69.0	21.2	90.2	44.1	8.3	52.4	14.4	66.8
1939	80.0	169.2	249.2	5.6	254.8	44.7	8.5	53.2	21.4	74.6	38.7	11.9	50.6	13.8	64.4
1940	93.0	152.7	245.8	5.2	251.0	52.9	6.0	58.9	20.1	78.9	34.6	9.4	44.0	13.0	57.0
1941	107.7	143.1	250.8	5.2	256.0	45.3	5.1	50.4	21.3	71.7	38.2	8.7	47.0	13.1	60.0
1942	145.8	124.2	270.0	5.0	275.0	81.3	9.2	90.5	21.2	111.7	45.5	8.6	54.1	12.6	66.7
1943	236.7	55.9	292.6	4.8	297.4	98.0	11.8	109.8	20.1	129.9	63.6	8.6	72.2	12.9	85.1
1944	234.6	52.8	287.4	4.7	292.0	88.1	8.5	96.6	20.3	116.9	74.8	9.9	84.7	12.0	96.7
1945	295.4	48.7	344.1	5.2	349.3	105.1	12.1	117.2	19.8	136.9	99.8	17.4	117.1	12.8	129.9
1946	297.7	51.1	348.8	4.9	353.7	108.0	16.2	124.1	20.6	144.8	112.6	8.3	120.9	12.7	133.6
1947	209.1	40.9	249.9	4.3	254.2	77.6	8.2	85.8	19.0	104.9	81.6	5.2	86.8	12.5	99.2
1948[1]	198.2	47.6	245.8	4.0	249.8	90.2	12.7	102.9	18.4	121.4	102.6	7.0	109.6	13.1	122.8

TABLE 4.—*Estimated number and live weight of livestock slaughtered, by class, by type of processor, 12 Western States and by areas, 1925–48—Continued*

HOGS

Year	Number														
	Pacific coast area					Southwestern area					Intermountain area				
	Commercial			Farm	Total	Commercial			Farm	Total	Commercial			Farm	Total
	Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total			Federally inspected	Nonfederally inspected	Total		
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*
1925	1,015	894	1,909	258	2,167	422	161	583	908	1,491	564	236	800	302	1,102
1926	900	950	1,850	238	2,088	307	133	440	882	1,322	551	226	777	290	1,067
1927	942	1,035	1,977	239	2,216	463	226	689	863	1,552	528	213	741	298	1,039
1928	1,244	1,036	2,280	277	2,557	594	244	838	863	1,701	699	265	964	299	1,263
1929	1,158	1,154	2,312	281	2,593	565	194	759	889	1,648	629	223	852	290	1,142
1930	954	1,241	2,195	263	2,458	420	145	565	839	1,404	585	222	807	311	1,118
1931	1,051	1,274	2,325	277	2,602	369	129	498	962	1,460	616	248	864	315	1,179
1932	1,129	1,586	2,715	301	3,016	413	137	550	1,066	1,616	665	253	918	351	1,269
1933	1,134	1,596	2,730	291	3,021	610	193	803	1,089	1,892	721	241	962	347	1,309
1934	977	1,243	2,220	247	2,467	548	172	720	1,081	1,801	653	222	875	331	1,206
1935	690	788	1,478	203	1,681	417	111	528	841	1,369	382	100	482	247	729
1936	948	927	1,875	215	2,090	546	294	840	954	1,794	562	275	837	289	1,126
1937	888	1,057	1,945	208	2,153	513	315	828	932	1,760	463	258	721	262	983
1938	994	1,156	2,150	206	2,356	447	298	745	944	1,689	461	244	705	264	969
1939	1,174	1,413	2,587	232	2,819	525	375	900	1,017	1,917	546	279	825	316	1,141
1940	1,622	1,558	3,180	218	3,398	648	397	1,045	1,029	2,074	746	254	1,000	306	1,306
1941	1,490	1,435	2,925	210	3,135	778	559	1,337	905	2,242	692	258	950	281	1,231
1942	1,720	1,030	2,750	210	2,960	980	670	1,650	884	2,534	863	287	1,150	267	1,417
1943	2,593	647	3,240	222	3,462	1,493	744	2,237	1,016	3,253	1,213	362	1,575	317	1,892
1944	2,821	653	3,474	221	3,695	1,662	758	2,420	906	3,326	1,384	304	1,688	291	1,979
1945	1,735	640	2,375	222	2,597	709	471	1,180	929	2,109	772	293	1,065	283	1,348
1946	2,031	1,025	3,056	223	3,279	842	1,069	1,911	951	2,862	834	471	1,305	296	1,601
1947	2,017	710	2,727	203	2,930	985	620	1,605	875	2,480	840	286	1,126	252	1,378
1948[1]	2,030	707	2,737	206	2,943	1,120	653	1,773	841	2,614	720	319	1,039	258	1,297

Live weight

	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1925	196.9	165.4	362.3	57.1	419.4	87.7	32.4	120.1	226.6	346.6	127.6	50.0	177.6	69.1	246.7
1926	173.7	176.0	349.7	52.7	402.4	63.0	26.7	89.8	220.1	309.8	131.2	52.2	183.4	66.4	249.8
1927	180.1	191.5	371.6	52.9	424.4	89.3	42.9	132.3	222.7	355.0	125.7	49.2	174.9	69.3	244.2
1928	239.3	191.7	430.9	58.9	489.8	113.3	45.9	159.2	222.0	381.2	168.5	61.0	229.4	64.9	294.3
1929	227.0	214.4	441.4	59.3	500.6	117.5	39.6	157.1	228.7	385.8	147.3	50.4	197.7	65.4	263.0
1930	187.9	229.1	417.1	55.5	472.6	89.1	29.0	118.1	215.7	333.8	135.7	49.9	185.6	69.9	255.5
1931	204.9	231.2	436.1	58.7	494.8	79.4	26.2	105.6	247.8	353.4	136.4	51.1	187.5	71.5	259.0
1932	220.2	290.3	510.4	63.8	574.2	87.7	27.8	115.5	274.3	389.8	144.8	51.6	196.5	79.7	276.1
1933	218.9	291.6	510.5	61.7	572.2	119.5	37.1	156.6	280.7	437.3	153.6	49.4	203.0	78.8	281.8
1934	190.5	235.7	426.2	52.1	478.4	112.1	34.7	146.9	268.6	415.5	142.1	47.7	189.9	73.8	263.7
1935	138.0	151.0	289.0	40.6	329.6	87.1	22.8	109.8	208.1	317.9	84.0	21.1	105.1	54.8	159.8
1936	188.6	180.8	369.4	43.0	412.4	109.2	57.1	166.3	236.2	402.5	119.7	56.9	176.6	63.7	240.3
1937	177.6	205.0	382.6	44.0	426.6	103.5	62.1	165.6	239.7	405.3	99.2	53.7	152.9	59.1	212.0
1938	196.8	224.6	421.4	43.6	465.0	92.8	59.9	152.7	242.7	395.4	101.3	49.5	150.9	59.4	210.3
1939	240.7	280.7	521.4	49.1	570.4	110.2	76.1	186.3	256.3	442.6	127.6	60.5	188.1	71.1	259.2
1940	332.4	313.2	645.5	44.7	690.2	130.1	77.8	208.0	248.0	456.9	171.4	53.6	225.0	68.9	293.9
1941	318.7	298.5	617.2	43.9	661.1	167.7	115.7	283.4	218.1	501.5	162.3	55.2	217.6	63.8	281.3
1942	383.6	221.5	605.0	44.7	649.7	217.7	142.0	359.7	212.2	571.9	203.4	62.3	265.7	61.9	327.6
1943	593.8	141.7	735.5	48.4	783.9	341.1	162.2	503.3	242.8	746.1	287.1	81.5	368.6	74.2	442.7
1944	653.0	143.3	796.4	48.6	845.0	382.3	165.1	547.4	215.8	763.2	329.9	69.0	398.9	67.5	466.4
1945	455.3	138.4	593.8	49.7	643.5	173.1	112.4	285.6	226.3	511.9	208.0	68.9	276.9	68.1	345.0
1946	510.4	248.9	759.2	52.2	811.4	195.6	246.1	441.6	246.1	687.7	214.5	117.4	331.9	73.1	405.0
1947	493.3	167.6	660.9	47.8	708.7	227.5	144.4	371.9	230.7	602.6	216.3	69.4	285.7	63.9	349.6
1948[1]	489.5	160.2	649.7	47.8	697.5	262.8	149.7	412.5	222.2	634.7	180.5	76.0	256.6	63.3	319.9

[1] Figures for 1948 are preliminary.

All weight figures have been rounded from thousands to millions of pounds.

Commercial slaughter estimates based on data from Bureau of Census, U. S. Department of Commerce; and Bureau of Animal Industry, Bureau of Agricultural Economics, and Production and Marketing Administration, U. S. Department of Agriculture.

TABLE 5.—*Surplus and deficit between net marketings and commercial slaughter of total meat animals, live weight, by class, 12 Western States, average 1946–48*[1]

State	Cattle and calves			Sheep and lambs			Hogs			All livestock		
	Net marketings	Commercial slaughter	Surplus or deficit	Net marketings	Commercial slaughter	Surplus or deficit	Net marketings	Commercial slaughter	Surplus or deficit	Net marketings	Commercial slaughter	Surplus or deficit
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*
Arizona	285	83	+202	17	2	+15	6	16	−10	308	101	+207
New Mexico	442	36	+406	48	1	+47	12	9	+3	503	47	+456
Texas	2,345	1,386	+959	285	101	+184	279	383	−104	2,908	1,870	+1,039
Colorado	775	420	+355	165	89	+76	72	165	−93	1,012	674	+338
Idaho	240	75	+165	119	2	+117	54	27	+27	413	104	+309
Montana	576	74	+502	132	1	+131	46	38	+8	753	112	+641
Nevada	123	42	+81	22	1	+21	4	12	−8	149	55	+94
Utah	145	116	+29	76	10	+66	23	43	−20	245	170	+75
Wyoming	332	25	+307	124	2	+122	20	7	+13	476	34	+442
California	1,215	1,743	−528	161	238	−77	137	442	−305	1,514	2,424	−910
Oregon	283	223	+60	46	20	+26	54	98	−44	383	341	+42
Washington	207	345	−138	27	24	+3	42	149	−107	276	518	−242
Total Western Region	6,968	4,568	+2,400	1,223	492	+731	750	1,390	−640	8,940	6,449	+2,491

[1] 1948 preliminary data used.

All figures have been rounded from thousands to millions of pounds.

Commercial slaughter estimates based on data from Bureau of Census, U. S. Department of Commerce; and Bureau of Animal Industry, Bureau of Agricultural Economics, and Production and Marketing Administration, U. S. Department of Agriculture.

TABLE 6.—*Commercial slaughter of livestock at points other than terminal markets, live-weight, by class and by area, 12 Western States, 1925–48*

Year	Pacific Coast [1]				Southwest [2]				Intermountain [3]				12 Western States				Grand Total
	Cattle	Calves	Hogs	Sheep and lambs	Cattle	Calves	Hogs	Sheep and lambs	Cattle	Calves	Hogs	Sheep and lambs	Cattle	Calves	Hogs	Sheep and lambs	
	Mil. lb.	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*	*Mil. lb.*
1925	697.5	80.6	224.4	62.2	126.7	87.1	45.7	2.1	128.5	10.8	75.7	4.2	952.7	178.4	345.8	68.5	1,545.4
1926	659.8	82.3	241.4	139.0	172.5	60.7	35.7	.2	103.4	9.1	75.8	6.2	935.6	152.0	352.8	145.4	1,585.8
1927	592.4	89.1	234.2	130.8	57.8	74.3	57.2	.9	111.2	12.5	72.9	8.2	761.5	175.9	364.4	139.9	1,441.7
1928	582.9	85.1	242.9	132.4	95.3	83.3	64.4	1.8	113.3	11.5	91.9	7.7	791.5	179.9	399.1	142.0	1,512.5
1929	568.7	77.6	284.4	130.0	91.9	60.6	61.5	2.2	109.9	12.5	74.5	6.8	770.5	150.8	420.4	139.0	1,480.7
1930	578.2	72.2	295.5	157.0	132.4	78.4	46.0	9.9	103.3	11.6	71.3	6.8	813.8	162.2	412.7	173.8	1,562.5
1931	567.6	70.4	325.4	176.9	122.5	73.3	46.0	3.0	112.0	10.9	72.7	11.4	802.0	154.7	444.1	191.2	1,592.0
1932	610.4	76.7	410.0	187.3	147.7	88.4	48.3	4.7	86.2	11.5	77.9	8.5	844.3	176.6	536.2	200.6	1,757.7
1933	699.5	85.1	411.6	178.2	154.3	77.3	43.3	7.3	96.4	12.5	68.2	7.8	950.1	174.8	523.0	193.3	1,841.2
1934	599.0	85.6	259.8	160.7	174.2	74.8	54.7	6.2	142.2	14.6	72.7	7.7	915.4	175.1	387.1	174.6	1,652.2
1935	720.2	87.8	217.4	190.8	149.0	69.2	41.4	5.9	114.4	16.2	40.1	7.5	983.7	173.2	298.9	204.2	1,660.0
1936	787.9	93.8	267.9	193.0	268.3	67.7	80.4	7.4	128.2	18.0	81.4	8.7	1,184.3	179.5	429.8	209.1	2,002.7
1937	784.7	101.1	278.6	197.9	245.5	86.8	83.8	5.1	151.5	18.3	73.8	9.0	1,181.7	206.2	436.1	212.1	2,036.1
1938	797.5	92.9	306.9	200.5	347.9	84.0	79.1	7.2	144.2	15.6	77.0	8.2	1,289.6	192.5	463.1	215.9	2,161.1
1939	879.8	89.4	396.5	206.2	392.4	85.1	94.6	8.3	155.6	18.6	98.3	12.4	1,427.8	193.1	589.4	226.9	2,437.2
1940	835.4	83.2	480.3	200.4	339.4	60.4	100.1	0	147.0	16.3	102.4	9.8	1,321.9	159.9	682.8	210.2	2,374.8
1941	886.8	84.2	461.9	200.9	313.6	62.8	152.2	0	162.1	13.2	100.1	7.6	1,362.5	160.3	714.2	208.5	2,445.5
1942	905.6	102.7	438.5	207.7	308.1	60.1	192.5	0	202.9	18.3	96.8	7.4	1,416.7	181.1	727.7	215.1	2,540.6
1943	850.4	98.9	547.3	227.6	387.4	68.4	250.7	0	249.4	17.7	125.9	7.5	1,487.2	185.0	923.8	235.1	2,831.1
1944	1,296.7	195.2	582.1	228.4	404.9	308.5	296.5	.8	242.1	40.3	126.7	19.6	1,943.7	544.0	1,005.4	248.8	3,741.9
1945	1,600.6	176.1	481.0	290.1	543.7	334.3	160.7	0	397.1	34.5	112.1	52.9	2,541.4	544.9	753.7	343.0	4,183.0
1946	1,689.8	161.4	637.9	291.8	677.0	204.5	303.1	7.5	441.0	33.6	154.7	67.5	2,807.8	399.5	1,095.6	366.9	4,669.8
1947	1,560.1	180.4	497.8	202.7	600.2	282.0	208.1	0	322.6	29.1	96.5	26.3	2,482.9	491.5	802.4	229.0	4,005.8
1948[4]	1,361.2	146.3	469.0	191.1	555.6	266.2	229.5	0	287.9	21.0	171.2	21.0	2,204.6	433.6	869.7	212.1	3,720.0

All figures have been rounded from thousands to millions of pounds.

[1] Pacific coast area includes States of California, Oregon, and Washington. Terminal markets in this area are at Los Angeles, Portland, Seattle, San Francisco, Spokane, and Stockton.

[2] Southwest area includes States of Arizona, New Mexico, and Texas. Terminal markets in this area are Ft. Worth, Houston, San Antonio, El Paso, and Laredo.

[3] Intermountain States include Colorado, Idaho, Montana, Nevada, Utah, and Wyoming. Terminal markets in this area include Billings, Denver, North Salt Lake City, Ogden, Pueblo, and Butte.

[4] Figures for 1948 are preliminary.

Commercial slaughter by interior packers estimated by comparing local slaughter at public terminal markets with total commercial slaughter for each area in 12 Western States.

TABLE 7.—*Receipts and local slaughter at terminal markets, and total commercial slaughter, of livestock, in marketing equivalents, 12 Western States, by months, 1947*[1]

Month	Marketing equivalents			Percentage of yearly total		
	At terminal markets		Total commercial slaughter	At terminal markets		Total commercial slaughter
	Receipts	Local slaughter		Receipts	Local slaughter	
	1,000 units	*1,000 units*	*1,000 units*	*Percent*	*Percent*	*Percent*
January	528.1	250.8	681.9	8.3	9.0	9.5
February	342.7	186.1	522.6	5.4	6.6	7.3
March	416.8	200.9	550.5	6.6	7.2	7.7
April	443.3	207.2	560.9	7.0	7.4	7.8
May	482.5	226.4	595.4	7.6	8.1	8.3
June	520.0	239.1	591.6	8.2	8.5	8.3
July	493.2	240.3	607.5	7.8	8.6	8.5
August	437.8	192.2	546.4	6.9	6.9	7.6
September	700.2	258.3	607.6	11.0	9.2	8.5
October	856.0	272.2	658.2	13.4	9.7	9.2
November	637.4	261.6	602.2	10.0	9.3	8.4
December	494.3	264.3	640.4	7.8	9.5	8.9
Total	6,352.3	2,799.4	7,165.2	100.0	100.0	100.0

[1] Marketing equivalent equals 1 head of cattle; 3 calves; 10 sheep; 4 hogs.

U. S. Department of Agriculture—Bureau of Agricultural Economics and Production and Marketing Administration.

TABLE 8.—*Commercial slaughter of livestock and percentage of yearly total, 12 Western States, by class, by months, 1947*

LIVE WEIGHT

Month	Commercial slaughter					Percentage of yearly total				
	Cattle	Calves	Sheep and lambs	Hogs	Total	Cattle	Calves	Sheep and lambs	Hogs	Total
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*	*Million pounds*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
January	369.9	59.8	33.3	164.4	627.4	9.0	8.3	7.9	12.5	9.6
February	290.4	45.2	31.6	118.0	485.2	7.1	6.3	7.5	8.9	7.4
March	334.2	43.6	34.3	92.1	504.2	8.2	6.0	8.1	7.0	7.7
April	327.8	43.3	35.2	104.6	510.9	8.0	6.0	8.3	7.9	7.8
May	344.3	50.3	38.7	101.2	534.5	8.4	7.0	9.2	7.7	8.1
June	350.6	56.2	36.4	93.8	537.0	8.6	7.8	8.6	7.1	8.2
July	364.7	65.8	35.1	92.3	557.9	8.9	9.1	8.3	7.0	8.5
August	328.7	65.2	29.5	80.1	503.5	8.0	9.0	7.0	6.1	7.7
September	356.7	76.0	37.7	85.1	555.5	8.7	10.5	8.9	6.4	8.5
October	378.5	82.0	44.0	98.4	602.9	9.3	11.3	10.4	7.5	9.2
November	316.6	75.1	34.1	122.2	548.1	7.7	10.4	8.1	9.3	8.3
December	329.7	60.0	32.6	166.3	588.6	8.1	8.3	7.7	12.6	9.0
Total	4,092.1	722.5	422.5	1,318.5	6,555.7	100.0	100.0	100.0	100.0	100.0

All figures used have been rounded from thousands to millions of pounds.

U. S. Department of Agriculture, Bureau of Agricultural Economics.

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