object of such concern in several of the colonies that regulations were made prohibiting horses below a certain size to run at large, and forbidding the breeding of undersized horses. Following this legislation, efforts were made to maintain the size and strength of the horse by judicious breeding, and the typical American horse of to-day may be said to have sprung from the stock imported into Acadia, Virginia, New York, and Massachusetts, constantly crossed by stock of the best breeds of the Old World.

Breeding.—The first horses imported for breeding purposes were the English thoroughbreds, a cross between the Arabian and the Barb. They were brought to this country about 1750, but the total number imported prior to the Revolution did not exceed fifty horses and twenty mares, which were distributed in Maryland, Virginia, New York, and North Carolina. Immediately after the Revolution, however, racing became popular and many thoroughbreds were imported.

The French Canadian horse is the descendant of horses brought to Canada by the French. They have become reduced in size, but still retain the good qualities of their Norman ancestors and constitute one of the best breeds of farm horses.

Roadsters and, in a less degree, coach horses are bred from trotting stock. There are English and other foreign breeds or types of coach horses, but they are not much used in this country. The American-bred roadsters may be said to comprise practically all the light harness and coach horses in the country.

Foreign draft horses of all the well-known breeds are constantly being imported into this country, but the English Draft, the Clydesdale, and the Percheron are most common. There are also Belgian and German horses. The breeders of draft horses, however, have not followed studbook lines, and have bred for the qualities desired regardless of breed.

NUMBER AND VALUE OF HORSES.

Horses were reported on 4,532,018 farms and ranges, June 1, 1900, and in 1,373,661 barns and other inclosures not on farms or ranges. The number on farms and ranges comprised 1,315,208 colts under 1 year old, 1,447,747 horses 1 and under 2 years, and 15,517,052 horses 2 years and over. The numbers not on farms or ranges were, for the three classes named, 33,090, 30,402, and 2,873,389, respectively. There was, therefore, a total for the United States of 18,390,441 work horses and 2,826,447 too young for work, making a grand total of 21,216,888 horses, of which 86.2 per cent were on farms and ranges and 13.8 per cent in barns and inclosures elsewhere.

Statistics of horses on farms and ranges are found in Tables 28 to 35, inclusive, and a summary for animals of both classes, in Tables 26 and 27.

Table CLXXVII gives the number of horses and colts of specified ages on farms and ranges, June 1, 1900, and their total and average values. Table CLXXVIII presents a summary of the horses and colts not on farms or ranges, with estimates of their values, and also the estimated value of all horses in the country at the date of enumeration. In preparing the estimates of table CLXXVIII, the average value of horses not on farms or ranges was assumed to be the same as that of those on farms or ranges. It is probably somewhat higher, consequently the estimate is below rather than above the correct value. The estimated value of the horses not on farms was $154,013,750, making, with the reported value of horses on farms and ranges, which was $896,955,343, a total of $1,050,969,093.

TABLE CLXXVII.—NUMBER AND VALUE OF HORSES AND COLTS ON FARMS AND RANGES IN THE UNITED STATES, JUNE 1, 1900, WITH AVERAGE VALUES.

CLASSES.	Number.	Value.	Average value.
All horses	18,280,007	$896,955,343	$49.07
Colts, under 1 year	1,315,208	25,900,109	19.69
Colts, 1 and under 2 years	1,447,747	48,335,128	33.39
Horses, 2 years and over	15,517,052	822,720,106	53.02

TABLE CLXXVIII.—NUMBER AND ESTIMATED VALUE OF HORSES AND COLTS NOT ON FARMS OR RANGES, AND ESTIMATED VALUE OF ALL HORSES IN THE UNITED STATES, JUNE 1, 1900.

CLASSES.	NOT ON FARMS AND RANGES.		Estimated value of all horses.
	Number.	Estimated value.	
All horses	2,936,881	$154,013,750	$1,050,969,093
Colts, under 1 year	33,090	651,542	26,551,651
Colts, 1 and under 2 years	30,402	1,015,123	49,350,251
Horses, 2 years and over	2,873,389	152,347,085	975,067,191

Table CLXXIX shows, by geographic divisions, the number of horses and colts on farms and ranges, and the percentage which each class constitutes of the total for each division and for the United States.

TABLE CLXXIX.—NUMBER OF HORSES AND COLTS ON FARMS AND RANGES, JUNE 1, 1900, WITH PERCENTAGES, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total.	Colts under 1.	Colts 1 and under 2.	Horses 2 years and over.	PER CENT.		
					Colts under 1.	Colts 1 and under 2.	Horses.
The United States	18,280,007	1,315,208	1,447,747	15,517,052	7.2	7.9	84.9
North Atlantic	1,699,139	57,744	82,978	1,558,417	3.4	4.9	91.7
South Atlantic	1,071,070	56,527	60,944	953,599	5.3	5.7	89.0
North Central	9,794,262	723,896	802,439	8,267,927	7.4	8.2	84.4
South Central	3,424,763	248,894	241,086	2,934,783	7.3	7.0	85.7
Western	2,277,786	227,768	258,778	1,791,240	10.0	11.4	78.6
Alaska and Hawaii	12,987	379	1,522	11,086	2.9	11.7	85.4

Sections of the Country Raising Horses for the Market.—Exclusive of Hawaii, where the number of horses is so small as to be relatively unimportant, the

largest percentages of colts under 1 year, and of yearling colts, are shown in the Western division, being 10.0 and 11.4 per cent, respectively. These percentages show that the farmers and ranchmen of the Western states were more generally engaged in raising horses for the market than those of any other section of the country. Taking the yearling colts as the best measure, it is found that the Western states had more than twice the proportional number of colts reported by the North Atlantic states, and approximately twice as many as the South Atlantic states. The small per cent of colts among the horses of the two geographic divisions last mentioned indicates that the farmers therein were raising comparatively few horses for sale and possibly not enough to supply their farm needs. The supply for cities and for exportation is derived principally from the Western, North Central, and South Central states and territories. Omaha and Kansas City, near the center of the vast territory from which horses are gathered, are the two most important markets for the horse trade.

In every geographic division except the South Central the number of colts under 1 year was less than that of colts 1 and under 2 years old. Of the other divisions, Hawaii showed the greatest excess of yearling colts and the South Atlantic division the least. The variations shown are attributable largely to the season for foaling. In the South Central and South Atlantic divisions, the foaling had generally come to an end before the date of enumeration, hence the number of young colts was approximately the same as the number of colts 1 and less than 2 years old. The proportion in the South Central division was such as to indicate that the foaling season there had been nearly completed, the excess of young colts over those between 1 and 2 years of age forming about the number that might be expected to die before reaching 1 year of age. In the North Atlantic division not more than two-thirds, and in Hawaii not more than one-fourth of the colts of 1900 had been foaled at the date of enumeration.

Average Value of Horses.—Table 34 gives, by states and territories, the average value of horses on farms. On June 1, 1900, the average value of horses in the United States was $49.07 per head. The North Atlantic division reported the highest average value, $72.60, and the Western division the lowest, $29.01.

The very low average for Arizona, $13.61, was due to the large numbers of Indian ponies on reservations. As a result of this fact, and owing to the inferior grade of many horses on ranges, average values were reduced in nearly all the Western states and territories. The highest average value for any state or territory was for Rhode Island, $86.12.

For the United States, the average value of colts under 1 year was $19.69; of colts 1 and under 2 years, $33.39; and of horses over 2 years, $53.02. In nearly every state there was a similiar gradation of average values for the 3 classes. A few noteworthy exceptions were found, however. In New Jersey, the price of colts under 1 year was $83.93; of those 1 and under 2 years, $78.71; while horses 2 years and over were worth $80.64. The high average value of horses and particularly of colts in this state was due to a few farms which made a specialty of raising blooded stock for track purposes. On one such farm in Monmouth county the number of young colts was sufficient, in view of the small relative number of colts in the state, to raise the average for the youngest class above that for either of the other classes.

In Kentucky the number of stock farms in Fayette county raised the average value of colts 1 and under 2 years in the state, above that of horses 2 years and over. The average value of such colts in this county was $377.78. For Kentucky, exclusive of Fayette county, the yearling colts had an average value of approximately $43, which harmonizes with the value for other horses.

In North Dakota the importation of many valuable horses of working age raised the average value of horses 2 years old and over much above that of the younger horses, while in South Dakota large numbers of cheap ponies on the Rosebud and other Indian reservations greatly reduced the average value of all classes of horses.

Horses to 100,000 Acres of Farm Land.—Table CLXXX presents a statement of the number of horses to 100,000 acres of farm land, and also to 100,000 acres of cultivated land from which crops are harvested.

TABLE CLXXX.—AVERAGE NUMBER OF HORSES ON FARMS AND RANGES, JUNE 1, 1900, TO 100,000 ACRES OF FARM LAND AND TO 100,000 ACRES OF CULTIVATED LAND, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	TO 100,000 ACRES OF FARM LAND.		To 100,000 acres of cultivated land, horses, 2 years and over.
	All horses, including colts.	Horses, 2 years and over.	
The United States	2,173	1,843	5,354
North Atlantic	2,598	2,383	6,314
South Atlantic	1,027	914	3,266
North Central	3,086	2,605	5,072
South Central	1,329	1,139	5,219
Western	2,428	1,910	10,776
Alaska and Hawaii	497	425	12,749

The figures of this table should be studied in connection with the corresponding table for mules, or they may lead to incorrect conclusions. The proportion of horses to the area of farm land was greatest in the North Central division, in Hawaii, and in the Western division. One of the most important uses of the horse in the last division is to assist the herdsman in caring for his cattle and sheep. If allowance be made for the number of horses required for this purpose and for the large number of mules in the South Atlantic and South Central divisions, the variation in the number of horses to 100,000 acres of cultivated land for the different divisions would be relatively small.

Horses on Farms and Elsewhere.—Table CLXXXI gives, by geographic divisions, a summary from Table 26 of all horses on farms and ranges and elsewhere,

June 1, 1900. An estimate of the value of these animals was presented in table CLXXVIII.

TABLE CLXXXI.—NUMBER OF HORSES AND COLTS ON FARMS AND RANGES AND ELSEWHERE IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total.	Colts under 1.	Colts 1 and under 2.	Horses 2 years and over.
The United States	21,216,888	1,348,298	1,478,149	18,390,441
North Atlantic	2,679,523	60,141	86,422	2,432,960
South Atlantic	1,229,620	57,833	62,455	1,109,332
North Central	11,116,235	742,489	818,374	9,555,372
South Central	3,756,044	255,581	246,755	3,253,708
Western	2,522,479	231,875	262,621	2,027,983
Alaska and Hawaii	12,987	379	1,522	11,086

Of the total number of horses and colts, 6.4 per cent were colts under 1 year; 7.0 per cent, colts 1 and under 2 years; and 86.6 per cent, horses of working age, 2 years and over. The per cent of work horses was greater, and that of colts smaller, in cities than on farms. The horses in cities and towns are largely supplied from the farm as comparatively little breeding is done elsewhere.

But three states reported more than 1,000,000 horses and colts on farms and ranges. They were Iowa, with 1,392,573; Illinois, with 1,350,219; and Texas, with 1,269,432. Of other states with great numbers of horses, Kansas reported 979,695; Ohio, 878,205; Missouri, 967,037; Nebraska, 795,318; and Indiana, 751,715. These states are in sections extensively engaged in agriculture, where horses are raised for use on the farm and for sale.

Horses in Cities of 25,000 Inhabitants and over.—Table CLXXXII presents a brief summary of the number of horses in cities of 25,000 inhabitants and over, based upon Tables 41 and 42, which give the statistics of domestic animals in cities.

TABLE CLXXXII.—NUMBER OF HORSES, JUNE 1, 1900, IN CITIES OF SPECIFIED NUMBERS OF INHABITANTS.

CLASSIFIED BY POPULATION.	Number to 100,000 inhabitants.
All cities of over 25,000 inhabitants	4,396
Cities of 25,000 to 50,000 inhabitants	5,321
Cities of 50,000 to 100,000 inhabitants	4,443
Cities of over 100,000 inhabitants	4,204

The average number of horses to 100,000 inhabitants was but little greater for cities with from 50,000 to 100,000 than for those with over 100,000. For the former, it was 4,443; and for the latter, 4,204. For cities with 25,000 to 50,000 inhabitants, the average was considerably greater—5,321. More horses were owned by individuals in the small cities than in the large, owing to the fact that in the former fewer public conveyances, such as street cars, were operated. The introduction of the automobile will doubtless make this variation still greater.

Of cities containing over 100,000 inhabitants, Kansas City and Los Angeles reported the largest proportional numbers of horses. The former had 6,970, and the latter, 6,523 horses for every 100,000 inhabitants. The great sales stables in Kansas City probably account for the large proportional number in that city. Omaha reported 5,956; Denver, 6,018; and Indianapolis 6,259. In the case of these cities, also, the large numbers may be explained by the presence of sales stables and stock yards. In all cities the territorial extent and the amount of farm land included within the corporate limits greatly influence the proportionate number of horses.

THE DEMAND FOR HORSES ON FARMS AND ELSEWHERE.

The horses 2 years old and upward in the United States, June 1, 1900, numbered 18,390,441. These were the horses of working age. Taking the colts 1 and under 2 years old as the best measure of the number of young horses required to meet the annual demand for horses for use on farms and elsewhere, the conclusion is reached that the number required was approximately 1,478,149. Assuming that this number of colts is sufficient to offset the losses by disease, old age, etc., the figures, taken in connection with the number of horses of working age, indicate an average life for horses on farms and elsewhere of approximately 15 years, or an effective life of 13 years. The working life of a horse is probably longer on farms than in cities.

To supply the demand for horses in cities in the United States, exclusive of providing horses for exportation, animals must be bred to the number of about 300,000 annually. To supply the demand for horses on farms and elsewhere, exclusive of cities, 1,200,000 more must be bred annually. The demand from cities and towns is, therefore, one-fifth of the total for the United States. These figures will aid greatly in measuring the force of the influence that was active for a series of years prior to 1885 in advancing the average price of horses, and in determining the causes of the depression in values between 1885 and 1896 and of the steady advance in prices since the last-named year.

Changes in Methods of Locomotion, and Their Effect on Horse Values.—When street cars began to be generally used, horses were increasing at the most rapid rate ever known. The West was expanding and cities and towns everywhere were growing rapidly, while trade and prices in general were good. The introduction of horse cars added to the demand for horses in cities, while the short life of animals so used, due to rough pavements and ill usage, kept the markets from becoming oversupplied. There was more breeding carried on then than at any other time, and between 1884 and 1895 the supply began to overtake the demand. Prices were slowly forced down, but the average, as reported by

the Department of Agriculture, declined only about $5 in the six years ending with 1890. During this time, the cable and electric systems of street railways were perfected, and in many places were substituted for the horse-car system. The electric plants were installed with wonderful rapidity, and by 1895 had practically displaced horses on street railways. Large numbers of ex-streetcar horses were sold for whatever they would bring, and, as a result, the market for cheaper grades of horses was, in a short time, ruined.

In the meantime, bicycles became very popular, and horse breeders were frightened by constant predictions that the wheel would in many ways supplant the horse. Nevertheless, the horse trade was not seriously injured and would probably have quickly recovered from the effects of these inventions, but for the panic of 1893. In two years prices dropped over 40 per cent; but, in the general stagnation which extended to all lines of business, there was little trade even at the lowest prices. Horses had steadily increased in number until the beginning of the business depression, but with the great fall in prices breeding became unprofitable and almost ceased. It was commonly predicted that horses would not be in general use much longer, and that breeding could never be made to pay in the future. The great number of cyclists, most of whom probably had never owned a horse, were represented to the imagination of the horse breeder as having given up horses for the wheel, while the automobile, then an unknown quantity, was announced as about to complete what the bicycle had left unfinished. These predictions were largely influential in causing the fall in prices indicated by the estimates of the Department of Agriculture, given in table CLXXXIII.

TABLE CLXXXIII.—ESTIMATED AVERAGE VALUE OF HORSES IN THE UNITED STATES: SUMMARY 1880 TO 1900.

[Department of Agriculture.]

YEAR.	Value.	YEAR.	Value.	YEAR.	Value.
1880	$54.75	1888	$71.82	1896	$33.07
1881	58.44	1889	71.89	1897	31.51
1882	58.53	1890	68.84	1898	34.26
1883	70.59	1891	67.00	1899	37.40
1884	74.64	1892	65.01	1900	44.61
1885	73.70	1893	61.22	Census, 1900	49.07
1886	71.27	1894	47.83		
1887	72.15	1895	36.29		

It is probable that the decline in number was not so great or so long continued as was estimated. Indeed, it can be demonstrated from the figures of this census that such was not the case. The estimates might easily have been excessive, as they were based on reports of the per cent of increase and decrease since the preceding census received from different parts of the country, which were doubtless influenced by the same exaggerations so alarming to horse owners in general. The effects of any great calamity are usually overrated, and it should cause little surprise that, in the wave of pessimism that swept over the country in 1893 and 1894, the reduction in number and value of horses and mules was greatly overestimated.

Recent Exportation of Horses.—About 1896, a factor began to be influential in the American market that soon counterbalanced the decrease in the demand for horses, due to the introduction of electricity and cables on city tramways, and caused an advance in prices. This new factor was the demand for American horses for export. Exportation was first stimulated by the exceedingly low prices of horses in the United States, and later by the demand in South Africa and elsewhere abroad. The extent of this demand may be seen from table CLXXXIV, which presents, by years since 1890, the number of horses exported from the United States.

TABLE CLXXXIV.—NUMBER OF HORSES EXPORTED FROM THE UNITED STATES: SUMMARY 1891 TO 1901.

YEAR.	Number.	YEAR.	Number.	YEAR.	Number.
1891	3,110	1895	13,984	1899	45,778
1892	3,226	1896	25,126	1900	64,722
1893	2,907	1897	39,532	1901	82,250
1894	5,246	1898	51,160		

The increase since 1894 in the number of horses exported annually is nearly, if not quite, equal to one-fifth the number ordinarily required to supply the demand in cities and elsewhere outside the farms. Such a great relative increase in the demand for horses could not fail to powerfully affect selling values.

Number of Colts: 1890 and 1900.—The decrease in the average value of horses gradually led to a diminution in the number of colts foaled, which may be noted by comparing the statistics of colts in 1890 and in 1900. In 1890 the census reported 1,813,413 colts foaled in 1889. In 1900 the colts 1 and under 2 years on farms and ranges numbered 1,447,747, and those under 1 year, 1,315,208. Not all the colts of 1900 were foaled at the time of the enumeration, but the number of yearling colts, with an allowance for those dying from disease or accident, probably approximates the number foaled in 1899. After allowing for all such losses and omissions it is certain that fewer colts, actually and relatively, were foaled in 1899 and 1900 than ten years before. The decrease was not less than 10.0 per cent, and may have amounted to 15.0 per cent, but was overbalanced by the decrease in the demand for horses until 1896.

The extension of trolley roads into the country, and the growth of population along them, in some instances caused more horses to be kept, as some families who move to the country spend, in the keeping of horses money formerly used in the paying of rent. As a result of general prosperity, also, some families have been enabled to own country places, and many to keep more and better horses, both on the farm and in the city. The great demand since 1895 for wheat and other cereals for export calls for the use of more horses and mules to cultivate the land. The increased call for beef and

animal products, for home consumption and for exportation, requires the production of increased quantities of corn and hay for feeding purposes, and indirectly necessitates the employment of more horses and mules on the farms.

These have been the most potent factors in creating a demand for horses. Prices began to advance slowly about 1897, and since that time have risen sharply, as is shown in table CLXXXIII of the average values given by the Department of Agriculture.

The advance from 1899 to 1900 was $7.21, and the returns of the census, made about seven months later than the reports on which the last Agricultural Department estimates were based, show a further advance, raising the average value for all horses to $49.07, and for work horses 2 years old and over to $53.02; the former being $4.46 and the latter $8.41 above the last estimates of the Department. These gains are substantially equal to those realized in the preceding year.

The Permanent Demand for Horses.—While changes in the methods of long-distance transportation have tended to displace the horse to a great extent, they have on the other hand, for almost a century, tended to increase the use of horses for other purposes. The construction of the Erie canal, begun early in the Nineteenth century, was at the time opposed by some of the farmers along the projected route, because the extensive business of hauling goods by team through that section created a constant demand for horses, and they believed that when the canal was completed horses would no longer be used in hauling freight, and that, as a consequence, the sale of corn and oats for feed would decrease. But the canal eventually so stimulated general transportation, that the increase in the number of dray horses required in the cities and towns greatly exceeded the number displaced along the route of the canal. A similar result followed the introduction and development of the railroad. The degree to which these changes in transportation have increased the demand for the horse since 1850, in industries other than agriculture, is emphasized by the following facts:

In 1850 the white male draymen, teamsters, hostlers, and liverymen reported by the census numbered 47,037, or 2.03 per thousand of population. In 1870 there were 146,637 male draymen, teamsters, hostlers, and liverymen, or 3.80 per thousand of population; in 1900 there were 603,382, or 7.91 per thousand of population. In making the comparison with 1850, the number of white males is used, as no returns were made in 1850 or 1860 for the occupations of the negro slaves. For the year 1870, and later, the occupations of the white and colored races were reported.

IMPROVED BREEDS OF HORSES.

Improvement in the breeds of horses has had a greater permanent influence in reducing the total and proportional number of horses on the farm and elsewhere than all the other factors mentioned. The introduction of the Norman, Percheron, English draft, and other breeds of stallions, and the crossing of these with native stock, have, since 1870, greatly improved the average effectiveness of the American horse.

The effect of this crossbreeding, in increasing the average capacity of horses and thereby decreasing the number required to perform the work, can not be accurately estimated.

HORSES AND FARM MACHINERY.

Improved machinery requires less horsepower for its operation. Reapers and mowers are much lighter than formerly and their gearing is arranged on a more scientific basis. The selfbinding reaper is hauled by 2 horses, while the old reaper required 4. Many 1-horse mowers are now in use which perform the work formerly accomplished by 2 horses. The 2-horse mowers are made to cut a wider swath. The improved plows enable a team to turn a 12-inch furrow, where twenty years ago one only two-thirds as wide could be turned. Similar advances have been made in all classes of farm appliances. The improvement in country roads, begun in the last decade, will result in making more effective the power of the work horse, and will, therefore, still further reduce the number required to do the work of the farm.

HORSES ON FARMS CLASSIFIED BY AREA.

Table CLXXXV shows the total and average number of horses to a farm on farms of specified areas.

TABLE CLXXXV.—TOTAL NUMBER OF HORSES, JUNE 1, 1900, ON FARMS OF SPECIFIED AREAS IN ACRES, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY AREA IN ACRES.	Number of farms.	Farms reporting horses.	Per cent of all farms reporting horses.	Number of horses.	Per cent of all horses in group.	Average number of horses per farm reporting.
Total	5,739,657	4,532,018	79.0	18,280,007	100.0	4.0
Under 3	41,882	21,075	50.3	139,160	0.8	6.6
3 and under 10	226,564	117,227	51.7	201,092	1.1	1.7
10 and under 20	407,012	235,772	57.9	406,549	2.2	1.7
20 and under 50	1,257,785	834,478	66.4	1,759,606	9.6	2.1
50 and under 100	1,366,167	1,123,856	82.3	3,173,353	17.4	2.8
100 and under 175	1,422,328	1,260,144	88.6	5,245,846	28.7	4.2
175 and under 260	490,104	446,688	91.1	2,374,602	13.0	5.3
260 and under 500	377,992	352,138	93.2	2,633,082	14.4	7.5
500 and under 1,000	102,547	96,107	93.7	1,076,957	5.9	11.2
1,000 and over	47,276	44,598	94.2	1,269,700	6.9	28.5

The per cent of farms with horses was smallest for those of least area, and increased in a more or less regular series to those of largest area. Of the farms containing less than 3 acres, only 50.3 per cent reported horses, while of those with 1,000 acres and over, 94.2 per cent reported horses, and many of those that did not report horses reported mules. The average number of horses to a farm containing from 3 to 20 acres was 1.7. The average for farms of less than 3 acres was several times larger than for the group mentioned owing, as

heretofore stated, to the use by many of these small farms of the public domain as ranges, and, in a lesser degree, to the use of vacant city lots. The horses on these tracts are generally employed for other than farming purposes.

HORSES ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME.

Table CLXXXVI presents the total and average number of horses, June 1, 1900, on farms of specified principal sources of income, with percentages.

TABLE CLXXXVI.—TOTAL NUMBER OF HORSES, JUNE 1, 1900, ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	Number of farms.	Farms reporting horses.	Per cent of all farms reporting	Number of horses.	Per cent of all horses in group.	Average number of horses per farm reporting.
Total	5,739,657	4,532,018	79.0	18,280,007	100.0	4.0
Hay and grain	1,319,856	1,092,154	82.7	5,347,807	29.3	4.9
Vegetables	155,398	123,628	79.3	336,785	1.8	2.7
Fruits	82,176	64,363	78.3	177,888	1.0	2.8
Live stock	1,564,714	1,428,488	91.3	7,645,960	41.8	5.4
Dairy produce	357,578	327,161	91.5	1,165,464	6.4	3.6
Tobacco	106,272	77,034	72.5	182,277	1.0	2.4
Cotton	1,071,545	587,008	54.8	1,191,148	6.5	2.0
Rice	5,717	3,769	65.9	18,687	0.1	3.6
Sugar	7,344	6,043	82.3	24,060	0.1	4.0
Flowers and plants	6,159	2,140	34.7	3,815	(1)	1.8
Nursery products	2,029	1,010	49.7	3,667	(1)	3.6
Taro	441	214	48.5	850	(1)	4.0
Coffee	512	274	53.5	805	(1)	2.9
Miscellaneous	1,059,416	818,672	77.3	2,185,794	12.0	2.7

[1] Less than one-tenth of 1 per cent.

From the foregoing table it may be seen that the per cent of horses for florists' establishments was smaller than that for any other class of farms, only 34.7 out of every 100 having horses. Of the other classes of farms, exclusive of taro and coffee, those raising cotton show the smallest per cent, 54.8. This was due especially to the extensive use of the mule on Southern farms where cotton is grown, and in part to the fact that many of the tenants on cotton plantations secure the use of horses and mules from the plantation owner. Consequently cotton farms reported the smallest average number of horses to a farm, 2.0, and live-stock farms the largest, 5.4.

HORSES ON FARMS OF SPECIFIED TENURES.

Table CLXXXVII, condensed from Table 29, presents the leading statistics of horses on farms of different tenures.

TABLE CLXXXVII.—TOTAL NUMBER OF HORSES, JUNE 1, 1900, ON FARMS OF SPECIFIED TENURES, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY TENURE.	Number of farms.	Farms reporting horses.	Per cent of all farms reporting.	Number of horses.	Per cent of all horses in group.	Average number of horses per farm reporting.
Total	5,739,657	4,532,018	79.0	18,280,007	100.0	4.0
Owners	3,149,344	2,653,618	84.3	10,303,686	56.4	3.9
Part owners	451,515	406,117	89.9	2,387,429	13.1	5.9
Owners and tenants	53,299	48,103	90.3	229,441	1.2	4.8
Managers	59,213	47,928	80.9	660,393	3.6	13.8
Cash tenants	752,920	511,461	67.9	1,724,891	9.4	3.4
Share tenants	1,273,366	864,796	67.9	2,974,167	16.3	3.4

The per cent of farms with horses is much smaller for farms of tenants than for farms of owners. In connection with the cotton farms, mention has already been made of the principal cause of this variation. The farms of managers reported more than three times the average number of horses reported by any other class, which was due to the small number of these farms, and to the great proportional number of large horse ranches and public institutions among them. The number of horses varied with the average area of farms, as has been shown in this report. Allowing for variations due to this cause, the differences in the proportional numbers of horses do not appear very marked.

HORSES ON FARMS OF WHITE AND COLORED FARMERS.

Table CLXXXVIII presents some facts contained in Tables 30 and 31, and shows the total and average number of horses on farms of white and colored farmers, together with percentages.

TABLE CLXXXVIII.—TOTAL AND AVERAGE NUMBER OF HORSES ON FARMS OF WHITE AND COLORED FARMERS JUNE 1, 1900, WITH PERCENTAGES, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting horses.	Per cent of farms reporting.	Number of horses.	Per cent of horses in group.	Average number per farm reporting.
The United States	4,970,129	4,170,456	83.9	17,442,498	100.0	4.2
North Atlantic	675,366	591,304	87.6	1,695,136	9.7	2.9
South Atlantic	673,354	431,211	64.0	935,066	5.4	2.2
North Central	2,179,667	2,012,565	92.3	9,719,134	55.7	4.8
South Central	1,206,367	925,538	76.7	2,957,845	17.0	3.0
Western	234,854	209,453	89.2	2,129,052	12.2	10.2
Alaska and Hawaii	521	385	73.9	6,265	[1] 0.0	16.3

TABLE CLXXXVIII.—TOTAL AND AVERAGE NUMBER OF HORSES ON FARMS OF WHITE AND COLORED FARMERS JUNE 1, 1900, WITH PERCENTAGES, BY GEOGRAPHIC DIVISIONS—Continued.

B.—FARMS OF COLORED FARMERS.[1]

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting horses.	Per cent of farms reporting.	Number of horses.	Per cent of horses in group.	Average number per farm reporting.
The United States..	769,528	361,562	47.0	887,509	100.0	2.3
North Atlantic	2,140	1,755	82.0	4,003	0.5	2.3
South Atlantic	288,871	103,099	35.7	136,004	16.2	1.3
North Central	16,900	14,468	85.6	75,128	9.0	5.2
South Central	451,799	234,120	51.8	466,918	55.7	2.0
Western	8,054	7,215	89.6	148,784	17.8	20.6
Alaska and Hawaii.....	1,764	1,005	57.0	6,722	0.8	6.7

[1] Less than one-tenth of 1 per cent.

Of the 4,970,129 farms operated by white farmers 4,170,456, or 83.9 per cent, reported horses, while of the 769,528 farms of colored farmers only 361,562, or 47.0 per cent, reported them. The proportion both for white and colored farmers was lowest in the South Atlantic division, by reason of the extensive use of mules in those states. The principal cause for the low per cent of horses on farms of colored farmers is due to the fact that the great majority of the negro farmers in the South were tenants, great numbers of whom, secure the use of work animals from the owners of the the farms.

The average number of horses was 4.2 for farms operated by whites and 2.3 for those of colored farmers. The average for both races was much higher in the Western division than elsewhere. For the white farmers it was due to the large relative number of farms operated by managers, of which mention has already been made. The large number on farms of colored farmers in that division is due to the great number of horses on some of the Indian reservations. In some cases no individual reports were made of Indian farms, a general report being made for the reservation, thus decreasing the number of farms and unduly increasing the averages.

If, instead of using as a divisor the number of farms reporting horses, the total number of farms be used, the average number of horses per farm is naturally much smaller than in table CLXXXVIII. The averages thus calculated are given in table CLXXXIX.

TABLE CLXXXIX.—NUMBER OF ALL FARMS OF WHITE AND COLORED FARMERS IN THE UNITED STATES, JUNE 1, 1900, AND TOTAL AND AVERAGE NUMBER OF HORSES, WITH PERCENTAGES.

RACE OF FARMER.	FARMS.		HORSES.		
	Number.	Per cent.	Number.	Per cent.	Average number per farm.
Total	5,739,657	100.0	18,280,007	100.0	3.2
White	4,970,129	86.6	17,442,498	95.4	3.5
Colored.....	769,528	13.4	887,509	4.6	1.1

The average was 3.5 for farms operated by whites and only 1.1 for those of colored farmers. Although the latter operated 13.4 per cent of the farms, they had only 8.0 per cent of the horses, or barely one-half as many, relatively, as the white race, but the fact should be borne in mind that on the farms in Southern states operated by colored farmers the mule largely takes the place of the horse.

INCREASE IN NUMBER OF HORSES SINCE 1890.

Fewer difficulties are met with in comparing the census statistics of horses and mules for various years than those of neat cattle or sheep. The reasons for this are as follows: In the earlier years a smaller relative number of horses and mules were on ranges, and hence a comparatively small number were omitted from the enumerations. Some colts were unquestionably reported as horses and mules in the census years 1860 to 1890, inclusive, in the same manner as calves were enumerated as "other cattle," which has been explained at length in the discussion of neat cattle statistics. The error in the case of horses and mules is unquestionably less than that of cattle, since farmers often call young horses and mules colts until they are 2 years of age, and the probable number of yearling colts omitted, balances those of less than 1 year enumerated. Hence the number of horses 1 year old in 1900 can be compared with the total number reported in preceding census years.

TABLE CXC.—NUMBER OF HORSES ON FARMS AND RANGES IN THE UNITED STATES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1850 TO 1900.

[Expressed in thousands.]

GEOGRAPHIC DIVISIONS.	[1]1900	[2]1890	[2]1880	[2]1870	[2]1860	[2]1850
The United States.....	16,965	[3]15,266	10,357	7,145	6,249	4,337
North Atlantic	1,641	1,739	1,555	1,336	1,280	1,074
South Atlantic	1,015	880	801	591	774	771
North Central	9,070	[3]8,574	5,467	3,613	2,542	1,399
South Central	3,176	[3]2,462	1,921	1,311	1,436	1,056
Western	2,050	[3]1,611	613	294	217	37
Alaska and Hawaii.....	13	.....	.....	.....	.....	.....

[1] Exclusive of spring colts.
[2] No separate report or estimate of range animals made.
[3] Including estimated number of range animals separately reported.

The great increase in the number of horses shown by the foregoing table was caused principally by the growth of agriculture, largely due to the development of new lands and to the application of new methods of cultivation. In the last decade 98.8 per cent of the total gain in the number of horses was west of the Mississippi, considering both Minnesota and Louisiana as west of that river. The states west of the Mississippi include most of the new land settled during the past ten years.

Since 1850 the number of farms has increased 296.1 per cent; of acres of improved land, 267.0 per cent; and of horses, 291.2 per cent. This close agreement in the rates of increase is somewhat surprising, in view of the great changes in methods of agriculture. The rela-

tion between the number and acreage of farms and the horses on those farms may not appear to be close, but the interesting fact remains that the number of horses has increased in about the same ratio as the number of farms.

As has been stated, agriculture has been benefited by the application of new methods in cultivation and harvesting. Machinery requiring the horse for motive power has largely displaced labor formerly performed by hand, and has thus increased the usefulness of the horse.

With the improvement of public roads, permitting the use of lighter vehicles and more rapid travel, the horse began to supplant the ox as a draft animal, as will be noted by the following figures: The census of 1850 reported 1,700,744 working oxen on farms. This number rose to 2,254,911 in 1860, but declined to 1,117,494 in 1890. Oxen were not enumerated as a separate class in 1900, and their number is now uncertain. In the North Atlantic division there were 167,943 in 1890, and according to the Twelfth Census there were 59,303 steers 3 years and over. This does not permit a very accurate comparison, but it shows that there has been a very marked decline in the number of oxen. In the other geographic divisions the raising of beef is largely carried on, and the number of steers and working oxen have so little relation to each other that no comparison can be made. All the information obtainable, however, indicates a decline in oxen almost as great as that in the North Atlantic division. If they have decreased in other sections as greatly as in New England there were probably 50 or 60 per cent less working oxen in 1900 than in 1890.

Table CXCI presents a comparative statement by states and territories, and by geographic divisions, of the number of horses in the United States since 1880.

TABLE CXCI.—NUMBER OF HORSES, EXCLUSIVE OF COLTS, WITH PER CENT OF INCREASE AND DECREASE, BY STATES AND TERRITORIES: SUMMARY 1880, 1890, AND 1900.

[Expressed in thousands.]

STATES AND TERRITORIES.	1900[1]	1890[2]	1880[2]	PER CENT OF INCREASE.	
				1890 to 1900.	1880 to 1890.
The United States	16,965	15,266	10,357	11.1	47.3
North Atlantic division	1,641	1,739	1,555	[3]5.6	11.8
Maine	104	109	88	[3]5.2	24.3
New Hampshire	54	52	47	3.3	12.2
Vermont	83	90	75	[3]7.7	19.6
Massachusetts	74	64	60	16.7	6.7
Rhode Island	11	10	10	14.5	2.1
Connecticut	52	44	45	19.2	[3]2.6
New York	608	664	610	[3]8.4	8.9
New Jersey	92	87	87	6.1	(3)
Pennsylvania	563	619	533	[3]9.1	15.9

[1] Exclusive of spring colts. [2] Horses as reported. [3] Decrease.

TABLE CXCI—NUMBER OF HORSES, EXCLUSIVE OF COLTS, WITH PER CENT OF INCREASE AND DECREASE, BY STATES AND TERRITORIES: SUMMARY 1880, 1890, AND 1900—Continued.

STATES AND TERRITORIES.	1900[1]	1890[2]	1880[2]	PER CENT OF INCREASE.	
				1890 to 1900.	1880 to 1890.
South Atlantic division	1,015	880	801	15.2	9.9
Delaware	28	26	22	9.7	17.0
Maryland	140	130	118	7.4	10.7
District of Columbia	1	1	1	1.5	[3]19.6
Virginia	279	242	219	15.2	10.8
West Virginia	173	155	126	12.0	22.7
North Carolina	153	131	134	16.7	[3]1.7
South Carolina	76	60	61	26.4	[3]1.3
Georgia	124	103	98	19.2	5.1
Florida	41	32	22	27.6	40.5
North Central division	9,070	8,574	5,467	5.8	56.8
Ohio	823	881	737	[3]6.6	19.6
Indiana	699	720	581	[3]2.9	23.8
Illinois	1,242	1,335	1,023	[3]7.0	30.5
Michigan	555	516	379	7.6	36.3
Wisconsin	522	461	352	13.3	30.7
Minnesota	651	462	257	41.1	79.4
Iowa	1,268	1,312	792	[3]3.4	65.6
Missouri	909	946	668	[3]4.0	41.7
North Dakota[2]	331	131	42	153.1	821.3
South Dakota	434	253	.....	71.4	.....
Nebraska	729	627	205	16.2	206.0
Kansas	907	930	431	[3]2.5	115.9
South Central division	3,176	2,462	1,921	29.0	28.1
Kentucky	425	401	373	5.9	7.7
Tennessee	328	312	266	5.4	17.2
Alabama	144	121	114	18.7	6.4
Mississippi	212	155	112	36.9	38.1
Louisiana	181	127	104	42.7	21.4
Texas	1,174	1,126	806	4.3	39.8
Oklahoma	277	29	.....	846.9	.....
Indian Territory	198	4	.....	5,110.8	.....
Arkansas	237	187	146	26.7	27.7
Western division	2,050	1,611	613	27.3	162.8
Montana	290	176	35	64.9	400.9
Wyoming	119	93	12	28.4	672.5
Colorado	213	186	42	14.2	341.1
New Mexico	114	92	15	24.0	534.6
Arizona	106	34	7	209.0	405.1
Utah	104	87	38	19.7	128.9
Nevada	70	57	32	22.4	77.0
Idaho	152	84	24	80.6	240.2
Washington	222	154	46	44.1	235.4
Oregon	262	225	124	16.4	81.3
California	398	423	238	[3]5.7	77.7
Alaska and Hawaii	13	.....	.....	.....	.....

[1] Exclusive of spring colts. [2] Horses as reported. [3] Decrease.

As heretofore stated, since 1850 horses on farms in the United States have increased from 4,336,719 to 16,964,799, or 291.2 per cent. In the first decade they gained in numbers 1,912,455; in the second, 896,196; in the third, 3,212,118; in the fourth, 4,908,756; and in the last, 1,698,555. They increased from 1,073,641 to 1,641,395, or 52.8 per cent, in the North Atlantic division; from 770,806 to 1,014,543, or 31.6 per cent, in the South Atlantic; from 1,398,749 to 9,070,366, or 548.5 per cent, in the North Central; from 1,056,250 to 3,175,869, or 200.6 per cent, in the South Central; and from 37,273 to 2,050,018, or 5,400.0 per cent, in the Western division.

ASSES AND BURROS.

INTRODUCTION AND HISTORY IN THE UNITED STATES.

That asses were domesticated before horses, is shown by the frequent mention made of them in the earliest writings. Modern writers rarely mention this animal, and information regarding its introduction into America is both meager in extent and uncertain in value.

They were undoubtedly introduced into America by the Spaniards, and first taken to Mexico about 1591 to serve as a beast of burden. During most of the period since that date asses have been imported into this country solely for the purpose of breeding mules. The first recorded importations in the East were in Connecticut, a short time before the Revolution, and as the Spanish ports were then closed, the jacks were brought from the Cape Verde Islands.

The date of their introduction into the South is uncertain, but it was doubtless before the Revolution, as the more intelligent planters early recognized the advantages possessed by the mule in their climate and under their system of slave labor. General Washington was much interested in the subject, and it was undoubtedly in response to his oft expressed wish that the King of Spain and Marquis de Lafayette sent him two jacks of Andalusian breed, which he named "King's Gift" and "Knight of Malta." These jacks were used at Mount Vernon, some of their mules selling for more than $200. Some jacks were imported during the early part of the last century, naval officers on the *Constitution* being known to have brought some from Malta, but little more can be learned of imports at that time. There was a slowly growing interest in mules among Southern farmers, as they were proven to be better adapted to their needs than horses. In 1832 Henry Clay, who was a great advocate of the use of mules, brought the first pure-blooded Catalonian jack to Kentucky. It was about that time that the prejudice against mules finally gave way, and from then until the Civil War quite a number of jacks were imported into the South, principally into Tennessee and Kentucky.

With the revival of business after the war there arose a great demand for jacks, and they were imported from all the Mediterranean countries. Until this time there had been but two breeds of asses generally recognized in this country, the Maltese and Spanish. The Andalusian and Catalonian from the mainland, and the Majorcan from the Island of Majorca, were formerly all known as Spanish. The jacks of Malta have practically all been exported until there are scarcely any left on the island. At one time many jacks were brought from Italy, but they were not a success as mule breeders. The oldest breed is the French Poitou, known as early as 1017, but very few have been brought to this country.

The importations into Tennessee and Kentucky have resulted in the production of a native type that is regarded by some breeders as better than any now imported, and it is doubtful if any foreign breed, with the possible exception of the Poitou, can improve the native stock.

In addition to large asses, a great number of small donkeys, or burros, were reported in 1900 from several states and territories in the West and Southwest. They are descendants of the small asses brought into Mexico and New Mexico at the early settlement of that section by the Spaniards, and are used principally by the Spanish and Mexican element in that portion of the country. They prove themselves most useful in the mountainous sections. Both the large and small species are reported under the single classification "asses and burros."

NUMBER AND VALUE OF ASSES.

Asses and burros were reported on 33,875 farms and in 6,929 barns and inclosures not on farms. The number on farms, June 1, 1900, was 95,603, valued at $5,824,539, and in barns and inclosures elsewhere, 15,847; those on farms constituting 85.8 per cent of the total number. The number reported on farms in 1890 was exceeded in 1900 by 46,514, a gain of 94.8 per cent. It is probable that a large part of this gain is the result of more perfect enumeration of burros in the South Central and Western states than was secured in 1890. Prior to 1890 asses were not separately reported, but were included with mules.

Table CXCII gives a summary of the number, value, and average value of asses and burros, by geographic divisions.

TABLE CXCII.—NUMBER, VALUE, AND AVERAGE VALUE OF ASSES AND BURROS IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Farms reporting asses and burros.	Number.	Value.	Average value.
The United States	33,875	95,603	$5,824,539	$60.92
North Atlantic	538	1,137	39,071	34.36
South Atlantic	1,416	2,301	216,228	93.97
North Central	8,709	19,890	2,221,290	111.68
South Central	16,421	40,057	2,899,075	72.37
Western	6,500	30,780	435,520	14.15
Alaska and Hawaii	291	1,438	13,355	9.29

Estimating the average value of the asses and burros not on farms to be the same as of those on farms, the former value is found to be $965,399, and that for all asses and burros in the country, $6,789,938.

The census reports show that asses and burros had a higher average value than either horses or mules, and that there were very wide differences in the averages for the several divisions. In the North Atlantic and Western divisions the value was less than half, and in

the North Central division more than twice as great as the value of horses. These variations in value are due to the inclusion of all the animals of this kind under one head. Under the classification adopted, the large-size, high-grade jacks used for breeding mules, valued sometimes as high as $5,000, are counted with the little Spanish burros, which are worth only a few dollars.

The average value for the North Atlantic division was $34.36. There were not many in this division, and they included a nondescript class of donkeys, sometimes worth only $2, and some valuable breeding jacks. A similar condition prevailed in the South Atlantic division, but breeding jacks were more numerous and the average value was $93.97. For this division West Virginia reported the highest average value, $131.33.

In the North Central division the average was $111.68, which was the highest reported by any division. Nebraska reported an average value of $159.50, and North Dakota, Missouri, Indiana, and Kansas had averages well above $100. The South Central division also had a great many fine animals. The average value of $72.37 for the division was less than that for any state therein except Texas. That state had many good animals, but the large number of very low-priced burros caused a greatly reduced average, $52.94.

For the Western division the average value was only $14.15. Half of the total number were in New Mexico, where the average value was only $4.06, while in Arizona and Colorado the value was not much more. They were mostly burros, and but few of the better grades were reported. The average value in California was $65.87, as breeding jacks were quite numerous in that state. In the other states of this division there were only 2,513 of these animals, but the average value was generally high. In Montana, Nevada, Oregon, and Washington it was over $100.

ASSES AND BURROS ON FARMS OF SPECIFIED TENURES, AREAS, AND PRINCIPAL SOURCES OF INCOME.

The following tables present a summary of the principal facts brought out in Tables 29 and 32 relating to asses and burros on farms of specified areas, principal sources of income, and tenures.

TABLE CXCIII.—TOTAL NUMBER OF ASSES AND BURROS, JUNE 1, 1900, ON FARMS OF SPECIFIED AREAS, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY AREA IN ACRES.	Number of farms.	Farms reporting asses and burros.	Per cent of all farms reporting asses and burros.	Number of asses and burros.	Per cent of all asses and burros in group.	Average number of asses and burros per farm reporting.
Total	5,739,657	33,875	0.6	95,603	100.0	2.8
Under 3	41,882	630	1.5	3,226	3.4	5.1
3 and under 10	226,564	1,295	0.6	3,078	3.2	2.4
10 and under 20	407,012	1,334	0.3	2,987	3.1	2.2
20 and under 50	1,257,785	2,735	0.2	5,648	5.9	2.1
50 and under 100	1,366,167	4,212	0.3	8,183	8.6	1.9
100 and under 175	1,422,328	8,160	0.6	20,848	21.8	2.6
175 and under 260	490,104	4,388	0.9	10,374	10.8	2.4
260 and under 500	377,992	5,312	1.4	14,170	14.8	2.7
500 and under 1,000	102,547	2,712	2.6	8,178	8.6	3.0
1,000 and over	47,276	3,097	6.6	18,911	19.8	6.1

TABLE CXCIV.—TOTAL NUMBER OF ASSES AND BURROS, JUNE 1, 1900, ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	Number of farms.	Farms reporting asses and burros.	Per cent of farms all reporting asses and burros.	Number of asses and burros.	Per cent of all asses and burros in group.	Average number of asses and burros per farm reporting.
Total	5,739,657	33,875	0.6	95,603	100.0	2.8
Hay and grain	1,319,857	6,444	0.5	15,402	16.1	2.4
Vegetables	155,898	468	0.3	1,272	1.3	2.7
Fruits	82,176	265	0.3	663	0.7	2.5
Live stock	1,564,714	16,671	1.1	57,876	60.5	3.5
Dairy produce	357,578	1,648	0.5	3,905	4.1	2.4
Tobacco	106,272	316	0.3	730	0.8	2.3
Cotton	1,071,545	3,180	0.3	5,359	5.6	1.7
Rice	5,717	13	0.2	24	(1)	1.8
Sugar	7,344	132	1.8	714	0.8	5.4
Flowers and plants	6,159	(2)	(1)	(2)	(1)	(2)
Nursery products	2,029	3	0.1	12	(1)	4.0
Taro	441	39	8.8	96	0.1	2.5
Coffee	512	100	19.5	360	0.4	3.6
Miscellaneous	1,059,416	4,596	0.4	9,190	9.6	2.0

[1] Less than one-tenth of 1 per cent. [2] No asses and burros reported.

TABLE CXCV.—TOTAL NUMBER OF ASSES AND BURROS, JUNE 1, 1900, ON FARMS OF SPECIFIED TENURES, WITH PERCENTAGES AND AVERAGES,

FARMS CLASSIFIED BY TENURE.	Number of farms.	Farms reporting asses and burros.	Per cent of all farms reporting asses and burros.	Number of asses and burros.	Per cent of all asses and burros in group.	Average number of asses and burros per farm reporting.
Total	5,739,657	33,875	0.6	95,603	100.0	2.8
Owners	3,149,344	22,692	0.7	62,307	65.2	2.7
Part owners	451,515	4,052	0.9	12,173	12.7	3.0
Owners and tenants	53,209	579	1.1	1,361	1.4	2.4
Managers	59,213	1,127	1.9	8,583	9.0	7.6
Cash tenants	752,920	2,138	0.3	4,682	4.9	2.2
Share tenants	1,273,366	3,287	0.3	6,497	6.8	2.0

Table CXCIII shows that farms containing from 100 to 175 acres had 21.8 per cent of the total number of these animals. This per cent is larger than that for farms of any other size. The per cent of farms reporting, as well as the average number per farm, was greatest for farms of 1,000 acres and over.

Table CXCIV shows that over one-half of the asses and burros were on live-stock farms, chiefly animals used for breeding mules for market.

Table CXCV shows that nearly two-thirds of all asses and burros were reported on farms of owners, although a larger per cent of managers than of any other tenure kept these animals. Managers had, also, the largest number per farm.

ASSES AND BURROS ON FARMS OF WHITE AND COLORED FARMERS.

Table CXCVI shows the total and average number of asses and burros on farms of white and colored farmers, June 1, 1900, with percentages and averages, by geographic divisions.

TABLE CXCVI.—TOTAL NUMBER OF ASSES AND BURROS, JUNE 1, 1900, ON FARMS OF WHITE AND COLORED FARMERS, WITH PERCENTAGES AND AVERAGES, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting asses and burros.	Per cent of all farms reporting asses and burros.	Number of asses and burros.	Per cent of allasses and burros in groups.	Average number of asses and burros per farm reporting.
The United States...	4,970,129	31,294	0.6	87,922	100.0	2.8
North Atlantic	675,306	537	0.1	1,136	1.3	2.1
South Atlantic	673,354	1,299	0.2	2,117	2.4	1.6
North Central	2,179,667	8,665	0.4	19,796	22.5	2.3
South Central	1,206,367	16,036	1.3	38,767	44.1	2.5
Western	284,854	5,096	2.2	25,361	28.8	5.0
Alaska and Hawaii	521	61	11.7	755	0.9	12.4

B.—FARMS OF COLORED FARMERS.

The United States...	769,528	2,581	0.3	7,081	100.0	3.0
North Atlantic	2,140	1	[1]	1	[1]	1.0
South Atlantic	288,871	117	[1]	184	2.4	1.6
North Central	16,900	44	0.3	94	1.2	2.1
South Central	451,799	785	0.2	1,300	16.9	1.7
Western	8,054	1,404	17.4	5,419	70.6	3.9
Alaska and Hawaii	1,764	230	13.0	683	8.9	3.0

[1] Less than one-tenth of 1 per cent.

While colored farmers made greater relative use of mules than did white farmers, this table shows that the asses for breeding purposes were mostly in the possession of white farmers. When account is taken of the small burros in the Western division in the possession of Indians, this fact is even more forcibly emphasized.

NUMBER OF ASSES AND BURROS BY STATES AND TERRITORIES: 1890 AND 1900.

Table CXCVII presents an exhibit of the number of asses and burros, as reported in 1890 and 1900, by states and territories.

TABLE CXCVII.—NUMBER OF ASSES AND BURROS, WITH PER CENT OF INCREASE, BY STATES AND TERRITORIES: SUMMARY 1890 AND 1900.

STATES AND TERRITORIES.	1900	1890	Per cent of increase, 1890 to 1900.
The United States	95,603	63,198	51.3
North Atlantic division	1,187	747	52.2
Maine	48	30	60.0
New Hampshire	27	8	237.5
Vermont	25	17	47.1
Massachusetts	51	39	30.8

[1] Decrease.

TABLE CXCVII.—NUMBER OF ASSES AND BURROS, WITH PER CENT OF INCREASE, BY STATES AND TERRITORIES: SUMMARY 1890 AND 1900—Continued.

STATES AND TERRITORIES.	1900	1890	Per cent of increase, 1890 to 1900.
North Atlantic division—Continued.			
Rhode Island	5	2	150.0
Connecticut	24	12	100.0
New York	338	250	35.2
New Jersey	43	61	[1]29.5
Pennsylvania	576	328	75.6
South Atlantic division	2,301	2,303	[1]0.1
Delaware	15	29	[1]48.3
Maryland	69	97	[1]28.9
District of Columbia	.....	1	[1]100.0
Virginia	412	414	[1]0.5
West Virginia	116	169	[1]31.4
North Carolina	825	712	15.9
South Carolina	247	233	6.0
Georgia	519	517	0.4
Florida	98	131	[1]25.2
North Central division	19,890	13,781	44.3
Ohio	250	365	[1]31.5
Indiana	1,008	976	3.3
Illinois	2,529	1,695	49.2
Michigan	95	152	[1]37.5
Wisconsin	428	346	23.7
Minnesota	161	196	[1]17.9
Iowa	1,832	902	103.1
Missouri	8,777	6,441	36.3
North Dakota	96	44	118.2
South Dakota	195	119	63.9
Nebraska	732	540	35.6
Kansas	3,787	2,005	88.9
South Central division	40,057	21,993	82.1
Kentucky	5,259	5,128	2.6
Tennessee	8,852	5,467	61.9
Alabama	1,819	908	100.3
Mississippi	1,773	1,043	70.0
Louisiana	683	489	39.7
Texas	16,409	7,305	124.6
Oklahoma	1,521	48	3,068.8
Indian Territory	1,262	5	25,140.0
Arkansas	2,479	1,600	54.9
Western division	30,780	24,374	26.3
Montana	128	20	540.0
Wyoming	414	61	578.7
Colorado	5,513	2,024	172.4
New Mexico	15,902	19,032	[1]16.4
Arizona	4,625	735	529.3
Utah	888	432	105.6
Nevada	256	91	181.3
Idaho	362	36	905.6
Washington	130	33	384.8
Oregon	305	190	60.5
California	2,227	1,720	29.5
Alaska and Hawaii	1,438	.....	.....

[1] Decrease.

An examination of this table shows that the number of asses has increased in every geographic division except the South Atlantic. This increase is due to the greater importance of the mule in American agriculture, which calls for an increasing number of asses for breeding purposes. The South Central division showed the greatest numerical as well as the largest relative increase, the latter being 82.1 per cent. The South Atlantic showed a loss of 0.1 per cent.

MULES.

NUMBER AND VALUE OF MULES.

Mules were reported by the proprietors of 1,480,913 farms and ranges, and of 53,627 barns and other inclosures. On farms and ranges there were 231,697 mule colts under 1 year; 279,925 colts 1 and under 2 years; and 2,759,499 mules 2 years and over. In barns and inclosures not on farms, there were 3,156 colts under 1 year; 4,328 colts 1 and under 2 years; and 166,424 mules over 2 years. The total number of work mules 2 years and over in the United States on June 1, 1900, was 2,925,923, and the number of growing mules under 2 years was 519,106, making a grand total of 3,445,029 mules, of which 95 per cent were on farms and ranges.

The census of 1890 reported 157,022 mule colts foaled on farms in 1889. A comparison of this number with the number of mule colts 1 and under 2 years, or of those under 1 year, on hand June 1, 1900, shows that the breeding of mules in 1899 and 1900 was very much more extensive than ten years before. Accompanying this increase, there has been a material addition to the total number of mules on farms. Assuming that the mule colts foaled in 1890 were not included with the mules reported in that year, it is found that the number on farms and ranges increased in the decade from 2,251,876 to 3,039,424, or 35.0 per cent. The increases in the five geographic divisions were as follows: In the North Atlantic division, from 42,936 to 46,033, a gain of 7.2 per cent; South Atlantic, from 415,090 to 545,840, or 31.5 per cent; North Central, from 643,881 to 652,360, a gain of 1.3 per cent; South Central, from 1,073,991 to 1,677,607, or 56.2 per cent; and in the Western, from 75,978 to 111,147, or 46.3 per cent.

The five states reporting over 200,000 mules each in 1900 were as follows: Texas, 474,737; Missouri, 242,095; Tennessee, 228,976; Mississippi, 206,678; and Georgia, 205,832.

The average value of mules, as of horses, was highest in the North Atlantic division and lowest in the Western. In the former it was $75.22 and in the latter $49.85, while for the United States it was $60.17. The highest state average, $81.78, was in Connecticut and the lowest, $27.81, in Utah. The low average for the latter state and in a number of other Western states was due to the inferior grade of mares used in breeding mules.

Table CXCVIII gives the number, value, and average value of the three classes of mules June 1, 1900, on farms and ranges in the United States, and table CXCIX presents the number and estimated value of all mules in the United States, June 1, 1900. It is assumed that the mules not on farms or ranges have the same average value as those on farms.

TABLE CXCVIII.—NUMBER AND VALUE OF MULES AND MULE COLTS ON FARMS AND RANGES IN THE UNITED STATES, JUNE 1, 1900, WITH AVERAGES.

CLASSES.	Number.	Value.	Average value.
All mules	3,271,121	$196,812,560	$60.17
Colts, under 1 year	231,697	6,203,286	26.77
Colts, 1 and under 2 years	279,925	11,775,191	42.07
Mules, 2 years and over	2,759,499	178,834,083	64.81

TABLE CXCIX.—NUMBER AND ESTIMATED VALUE OF MULES AND MULE COLTS NOT ON FARMS OR RANGES, AND ESTIMATED VALUE OF ALL MULES IN THE UNITED STATES, JUNE 1, 1900.

CLASSES.	NOT ON FARMS OR RANGES.		Estimated value of all mules.
	Number.	Estimated value.	
All mules	178,908	$11,052,504	$207,865,064
Colts under 1 year	3,156	84,486	6,287,772
Colts 1 and under 2 years	4,328	182,079	11,957,270
Mules 2 years and over	166,424	10,785,939	189,620,022

The number of mules and mule colts on farms and ranges, by geographic divisions, is presented in table CC.

TABLE CC.—NUMBER OF MULES AND MULE COLTS ON FARMS AND RANGES, JUNE 1, 1900, WITH PERCENTAGES, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total.	Colts under 1 year.	Colts 1 year and under 2 years.	Mules 2 years and over.	PER CENT.		
					Colts under 1 year.	Colts 1 year and under 2 years.	Mules.
The United States.	3,271,121	231,697	279,925	2,759,499	7.1	8.5	84.4
North Atlantic	47,655	1,622	4,211	41,822	3.4	8.8	87.8
South Atlantic	555,129	9,289	20,552	525,288	1.7	3.7	94.6
North Central	750,655	98,295	103,422	548,938	13.1	13.8	73.1
South Central	1,789,438	111,831	139,781	1,537,826	6.3	7.8	85.9
Western	121,788	10,591	11,535	99,612	8.7	9.5	81.8
Alaska and Hawaii	6,506	69	424	6,013	1.1	6.5	92.4

The great majority of mules were bred in the North Central and South Central divisions. The greater relative number used for work in the South Central states made the mule colts relatively fewer than in the North Central; although the latter states breed a slightly greater number of mules than is indicated in the table by the figures for colts of various ages, many being shipped to Southern markets.

NUMBER OF HORSES AND MULES TO 100,000 ACRES OF FARM LAND.

Table CCI presents the average number of horses and mules, including colts, June 1, 1900, to each 100,000 acres of farm land, by geographic divisions.

TABLE CCI.—AVERAGE NUMBER OF HORSES AND MULES, INCLUDING COLTS, TO EACH 100,000 ACRES OF FARM LAND AND CULTIVATED LAND, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	TO 100,000 ACRES OF FARM LAND.			TO 100,000 ACRES OF CULTIVATED LAND.		
	Total.	Horses.	Mules.	Total.	Horses.	Mules.
The United States	2,562	2,173	389	7,436	6,307	1,129
North Atlantic	2,671	2,598	73	7,077	6,884	193
South Atlantic	1,559	1,027	532	5,571	3,669	1,902
North Central	3,323	3,086	237	6,470	6,009	461
South Central	2,023	1,329	694	9,272	6,090	3,182
Western	2,558	2,428	130	14,435	13,703	732
Alaska and Hawaii	746	497	249	22,417	14,935	7,482

The average number of mules and mule colts to 100,000 acres of farm land was small in the North Atlantic, North Central, and Western divisions, and large in the South Central and South Atlantic divisions. Alabama, Georgia, and South Carolina had more mules than horses, and in Mississippi, Louisiana, and North Carolina the numbers were nearly equal. There are many reasons for the extensive use of mules in the Southern states. The hot, moist climate is quickly fatal to horses when hard worked, while mules bear it with impunity and endure hardship, overwork, and ill usage without great loss, an element of considerable importance in a country where work animals are handled largely by ignorant and careless laborers. Their hoofs are very hard, and are shod either not at all or at infrequent intervals. Their average working life is longer than that of horses. It is claimed that the mule will do equal work on less food than the horse, but this is open to serious doubt. They will, however, eat coarser forage, and can be carried through the winter in fair condition at less expense. These causes operate with varying force in different parts of the South. On the cotton, rice, and sugar plantations, mules are used in the actual farm work more than horses, while in Kentucky, Missouri, and several other states they are extensively raised for shipment south, and this has caused them to be more commonly used than in states otherwise similarly situated where this trade does not exist.

Table CCII gives the number of all mules in the United States, June 1, 1900, by geographic divisions. There are no very striking variations from the figures for mules on farms, as shown in Table CC.

TABLE CCII.—NUMBER OF MULES AND MULE COLTS ON FARMS AND RANGES, AND ELSEWHERE, IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total.	Colts under 1 year.	Colts 1 and under 2 years.	Mules 2 years and over.
The United States	3,445,029	284,853	284,253	2,925,923
North Atlantic	73,511	1,092	4,429	67,990
South Atlantic	581,388	9,476	20,980	550,932
North Central	793,531	99,596	104,930	589,005
South Central	1,857,990	113,261	141,769	1,602,960
Western	132,103	10,759	11,721	109,623
Alaska and Hawaii	6,506	69	424	6,013

MULES ON FARMS OF SPECIFIED AREAS.

Table CCIII shows the total and average value of mules on farms of specified areas, June 1, 1900, with percentages.

TABLE CCIII.—TOTAL NUMBER OF MULES ON FARMS OF SPECIFIED AREAS, JUNE 1, 1900, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY AREA IN ACRES.	Number of farms.	Farms reporting mules.	Per cent of all farms reporting mules.	Number of mules.	Per cent of all mules in group.	Average number of mules per farm reporting.
Total	5,739,657	1,480,913	25.8	3,271,121	100.0	2.2
Under 3	41,882	1,717	4.1	4,806	0.1	2.8
3 and under 10	226,564	13,675	6.0	19,926	0.6	1.5
10 and under 20	407,012	70,632	17.4	90,220	2.8	1.3
20 and under 50	1,257,785	341,995	27.2	480,712	14.7	1.4
50 and under 100	1,366,107	341,127	25.0	619,864	19.0	1.8
100 and under 175	1,422,328	368,545	25.9	780,227	23.9	2.1
175 and under 260	490,104	153,423	31.3	403,766	12.3	2.6
260 and under 500	377,992	125,979	33.3	417,041	12.7	3.3
500 and under 1,000	102,547	41,848	40.3	208,128	6.4	5.0
1,000 and over	47,276	22,477	47.5	246,431	7.5	11.0

The above table shows that the farms reporting mules were relatively fewest for minor areas. Of the farms under 3 acres, those reporting mules were only 4.1 per cent. This proportion increased constantly, with one exception, from the group of the smallest area to that of the largest, rising rapidly to the group of farms with from 20 to 50 acres, and less rapidly for the farms of larger areas. The averages show that the typical farm with mules is what the Southerner calls a "one-mule" farm until the size of 50 acres is reached, when it becomes a "two-mule" farm, and thereafter the farms of larger sizes are practically "two-mule" farms until the area reaches 260 acres.

MULES ON FARMS CLASSIFIED BY *PRINCIPAL SOURCE OF* INCOME.

Table CCIV shows the total and average number of mules on farms classified by principal source of income, June 1, 1900, with percentages.

TABLE CCIV.—TOTAL NUMBER OF MULES ON FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, JUNE 1, 1900, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF *INCOME*.	Number of farms.	Farms reporting mules.	Per cent of all farms reporting mules.	Number of mules.	Per cent of all mules in group.	Average number of mules per farm reporting.
Total	5,739,657	1,480,913	25.8	3,271,121	100.0	2.2
Hay and grain	1,319,856	247,329	18.7	653,241	20.0	2.6
Vegetables	155,898	18,514	11.8	36,262	1.1	2.0
Fruits	82,176	7,826	9.5	18,039	0.5	2.3
Live stock	1,564,714	303,076	19.4	849,196	26.0	2.8
Dairy produce	357,578	25,660	7.2	59,103	1.8	2.3
Tobacco	106,272	32,427	30.5	61,007	1.9	1.9
Cotton	1,071,545	603,201	56.3	1,081,474	33.1	1.8
Rice	5,717	1,796	31.4	8,201	0.2	4.6
Sugar	7,344	3,950	53.8	43,358	1.3	11.0
Flowers and plants	6,159	53	0.9	127	(1)	2.4
Nursery products	2,029	179	8.8	634	(1)	3.5
Taro	441	47	10.7	135	(1)	2.9
Coffee	512	46	9.0	199	(1)	4.3
Miscellaneous	1,059,416	236,809	22.4	460,055	14.1	1.9

[1] Less than one-tenth of 1 per cent.

Cotton farms, of which 56.3 per cent reported mules, reported 33.1 per cent of all mules on farms. The average number per farm was more than twice as large for sugar farms than for any other class.

MULES ON FARMS OF SPECIFIED TENURES.

Table CCV gives a summary of the most important facts concerning the number of mules on farms of specified tenures.

TABLE CCV.—TOTAL NUMBER OF MULES ON FARMS CLASSIFIED BY TENURE, JUNE 1, 1900, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY TENURE.	Number of farms.	Farms reporting mules.	Per cent of all farms reporting mules.	Number of mules.	Per cent of all mules in group.	Average number of mules per farm reporting.
Total	5,739,657	1,480,913	25.8	3,271,121	100.0	2.2
Owners	3,149,344	689,348	21.9	1,687,269	50.0	2.4
Part owners	451,515	112,565	24.9	305,420	9.3	2.7
Owners and tenants	53,299	15,049	28.2	38,539	1.2	2.6
Managers	59,213	15,027	25.4	125,062	3.8	8.3
Cash tenants	752,920	263,038	34.9	459,773	14.1	1.7
Share tenants	1,273,366	385,886	30.3	705,058	21.6	1.8

The mule was the only animal reported in relatively larger numbers by the operators of tenant farms than by those of any other tenure. The conditions under which the negro tenant works in the South make it desirable that he be furnished with a mule rather than a horse, and this fact is reflected in the percentages of the foregoing table. These tenant farms were small, as a rule, and hence the average number of mules to a tenant farm was slightly less than on farms operated by owners.

MULES ON FARMS OF WHITE AND COLORED FARMERS.

Table CCVI shows the total and average number of mules on farms of white and colored farmers June 1, 1900, with percentages, by geographic divisions. Table CCVII shows the number of farms of white and colored farmers in the United States and the number reporting mules, with percentages and averages.

TABLE CCVI.—TOTAL NUMBER OF MULES ON FARMS OF WHITE AND COLORED FARMERS, JUNE 1, 1900, WITH PERCENTAGES AND AVERAGES, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting mules.	Per cent of all farms reporting mules.	Number of mules.	Per cent of all mules in group.	Average number of mules per farm reporting.
The United States	4,970,129	1,130,206	22.7	2,756,960	100.0	2.4
North Atlantic	675,366	19,889	2.9	47,518	1.7	2.4
South Atlantic	673,354	231,882	34.4	408,949	14.9	1.8
North Central	2,179,667	288,576	13.0	744,176	27.0	2.6
South Central	1,206,367	576,157	47.8	1,431,696	51.9	2.5
Western	234,854	18,681	7.9	118,713	4.3	6.4
Alaska and Hawaii	521	121	23.2	5,908	0.2	48.8

TABLE CCVI.—TOTAL NUMBER OF MULES, JUNE 1, 1900, ON FARMS OF WHITE AND COLORED FARMERS, WITH PERCENTAGES AND AVERAGES, BY GEOGRAPHIC DIVISIONS—Continued.

B.—FARMS OF COLORED FARMERS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting mules.	Per cent of all farms reporting mules.	Number of mules.	Per cent of all mules in group.	Average number of mules per farm reporting.
The United States	769,528	350,707	45.6	514,161	100.0	1.5
North Atlantic	2,140	71	3.3	137	(1)	1.9
South Atlantic	288,871	115,209	39.9	146,180	28.4	1.3
North Central	16,900	3,037	18.0	6,479	1.3	2.1
South Central	451,799	231,562	51.3	357,742	69.6	1.5
Western	8,054	688	8.5	3,025	0.6	4.4
Alaska and Hawaii	1,764	140	7.9	598	0.1	4.3

[1] Less than one-tenth of 1 per cent.

TABLE CCVII.—NUMBER OF FARMS OF WHITE AND COLORED FARMERS IN THE UNITED STATES, JUNE 1, 1900, AND THE NUMBER REPORTING MULES, WITH PERCENTAGES AND AVERAGES.

RACE OF FARMER.	TOTAL FARMS.		FARMS REPORTING.		MULES.		
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Average per farm reporting.
Total	5,739,657	100.0	1,480,913	100.0	3,271,121	100.0	2.2
White	4,970,129	86.6	1,130,206	76.3	2,756,960	84.3	2.4
Colored	769,528	13.4	350,707	23.7	514,161	15.7	1.5

The number of farms with mules was relatively greater for the colored than for the white race in every geographic division except in Hawaii, where the colored race is Hawaiian and not negro.

Colored farmers operated 13.4 per cent of all farms, and reported 15.7 per cent of all mules. Attention has already been called to the fact that the mules and horses on many farms operated by negro tenants were owned by the plantation proprietor, and were reported by him on his home farm, not on the farms of his tenants. But for this fact the figures of tables CCVI and CCVII would record a much greater average number of mules on the farms of the colored race.

NUMBER OF MULES BY GEOGRAPHIC DIVISIONS.

Table CCVIII presents the number of mules by states and territories, 1890 and 1900, and table CCIX presents a summary, with increases, by decades from 1850 to 1900.

TABLE CCVIII.—NUMBER OF MULES, EXCLUSIVE OF COLTS UNDER ONE YEAR, WITH PER CENT OF INCREASE, BY STATES AND TERRITORIES: SUMMARY 1890 AND 1900.

STATES AND TERRITORIES.	1900	1890	Per cent of increase.
The United States	3,039,424	2,251,876	35.0
North Atlantic division	46,033	42,936	7.2
Maine	261	248	5.2
New Hampshire	85	115	[1]26.1
Vermont	293	313	[1]6.4
Massachusetts	241	157	53.5
Rhode Island	38	49	[1]22.4
Connecticut	258	267	[1]3.4
New York	3,121	4,386	[1]28.8
New Jersey	4,821	8,166	[1]41.0
Pennsylvania	36,915	29,235	26.3
South Atlantic division	545,840	415,090	31.5
Delaware	4,638	4,790	[1]3.2
Maryland	17,106	14,064	21.6
District of Columbia	81	40	102.5
Virginia	44,595	37,119	20.1
West Virginia	10,643	7,221	47.4
North Carolina	132,534	99,299	33.5
South Carolina	116,849	86,073	35.8
Georgia	205,832	156,860	31.2
Florida	13,562	9,024	40.9
North Central division	652,360	643,881	1.3
Ohio	15,307	18,493	[1]17.2
Indiana	59,552	58,668	1.5
Illinois	110,840	106,180	4.4
Michigan	2,567	3,670	[1]30.1
Wisconsin	3,947	5,406	[1]27.0
Minnesota	7,617	9,315	[1]18.2
Iowa	49,259	40,746	20.9
Missouri	242,095	245,273	[1]1.3
North Dakota	6,472	8,665	[1]25.3
South Dakota	5,886	7,561	[1]22.2
Nebraska	48,923	45,972	6.4
Kansas	99,895	93,932	6.3
South Central division	1,677,607	1,073,991	56.2
Kentucky	169,955	146,521	16.0
Tennessee	228,976	198,172	15.5
Alabama	187,375	133,892	39.9
Mississippi	206,678	155,712	32.7
Louisiana	141,645	87,539	61.8
Texas	474,787	222,100	113.7
Oklahoma	49,405	5,013	885.5
Indian Territory	52,569	146	35,906.2
Arkansas	166,267	124,896	33.1
Western division	111,147	75,978	46.3
Montana	2,153	1,084	98.6
Wyoming	1,018	1,275	[1]20.2
Colorado	5,891	5,180	13.7
New Mexico	4,750	3,600	31.9
Arizona	3,632	1,414	156.9
Utah	1,658	1,122	47.8
Nevada	2,185	1,632	33.9
Idaho	1,518	976	55.5
Washington	2,249	1,312	71.4
Oregon	6,355	4,756	33.6
California	79,738	53,627	48.7
Alaska and Hawaii	6,437	.....	.....

[1] Decrease.

TABLE CCIX.—NUMBER OF MULES, WITH INCREASES BY DECADES AND PER CENT OF INCREASE: SUMMARY 1850 TO 1900.

YEAR.	Number.	Increase.	Per cent of increase.
1900	3,039,424	787,548	34.9
1890	2,251,876	439,068	24.2
1880[1]	1,812,808	687,393	61.0
1870[1]	1,125,415	[2]25,733	[2]2.2
1860[1]	1,151,148	591,817	105.8
1850[1]	559,331	.....	.....

[1] Mules and asses. [2] Decrease.

From a study of the various tables, it is evident that mules have increased more rapidly than horses. In 1850 mules constituted but 11.4 per cent of the combined number of horses and mules; forty years later, in 1890, they constituted 13.3 per cent. The census of 1890 reported that horses had increased nearly twice as rapidly as mules between 1880 and 1890, while in the last census period, mules gained at a rate approximately three times as great as that for horses. They have, therefore, gained as much on horses in the last decade as in the forty years preceding. It is well known that mules are not universally used in the United States, and when this is considered, the relative rate of increase appears even greater. In order to illustrate this, the following divisions have been made:

In the northern tier of states, including the New England States, New York, Michigan, Wisconsin, Minnesota, the Dakotas, Montana, Wyoming, Idaho, and Washington, but few mules were found. In 1890 there were 44,799, and in 1900, 37,724, a decline of 15.8 per cent. In none of these states were mules more than about 1 per cent of all working animals, except in North Dakota, where they were about 2 per cent.

Of the tier of states just south of those given above, mules were most numerous in West Virginia, Arizona, and New Mexico; but in all of these states they were reported in comparatively insignificant numbers and were not increasing rapidly. They constituted from 2 to 6 per cent of all work animals, and in 1890 numbered 332,385, while in 1900 there were 360,731, a gain of 8.5 per cent. In some states, notably Pennsylvania and West Virginia, they are increasing rapidly, but the causes for this have little to do with the general increase in the country.

In the remaining states, which include the states of the South Atlantic division except West Virginia, the South Central division, and Missouri, Kansas, and California, mules constitute approximately from 11 to 62 per cent of all horses and mules. They increased from 1,874,692 in 1890 to 2,634,532 in 1900, or 40.5 per cent. In all the states except Delaware and Oklahoma they increased more rapidly than horses. In Texas the rate of increase for horses was 14.4 per cent, and for mules 113.7 per cent.

SHEEP AND WOOL.

EARLY HISTORY OF THE SHEEP INDUSTRY IN THE UNITED STATES.

No domesticated sheep were found by the early explorers of North America. The wild Rocky Mountain sheep was known to the first settlers in that region, but efforts toward domestication were not successful, and crosses between it and the domesticated sheep proved failures.

The introduction of sheep into the United States may be traced to two general sources, the Spanish discoverers and the English settlers. In 1493 sheep of Spanish origin were brought to this continent by Columbus. Those introduced later into Mexico by the Spaniards increased greatly and spread both to the north and the south, becoming the progenitors of the immense flocks in New Mexico, Utah, and Texas. In 1750 sheep raising for both meat and wool was the chief agricultural occupation in New Mexico.

In 1565 Spanish sheep were introduced into Florida, and those in that state to-day preserve traces of their Spanish origin. In 1773 they were introduced into California, and, under the care of the priests in charge of the missions, rapidly increased until, in 1825, it was estimated that 17 of these missions, located on a line extending from San Diego to San Francisco, held an aggregate of 1,003,970 sheep, exclusive of flocks owned by ranchers. It was claimed by earlier authorities that the sheep introduced into Florida and California were Merinos, but more recent authorities affirm that they were the Churro, or common sheep of Spain. It is probable that both breeds were imported, but in what proportion can not be determined.

Sheep were introduced into Virginia from England in 1609, but owing to the depredations of wolves they did not greatly increase, and in 1648 there were but 3,000 in that colony. The first sheep imported into New York were brought from Holland in 1625, but there were only a few in the colony in 1643, the laws then in existence being unfavorable to sheep raising. In 1767, however, under English rule, sheep were to be found throughout the provinces, and woolen cloth and linsey-woolsey were manufactured in quantities sufficient for home consumption. In New Jersey and Delaware, sheep were introduced by the Swedes, who in 1634 had some good flocks, but when they passed under English rule the Swedish sheep gave way to English breeds, as did the Holland stock in New York. Sheep raising in Pennsylvania dates back to 1683. There was considerable diversity in the breeds found in the various middle colonies, but the early breeds were the progenitors of a stock which in 1800 was known as "native" sheep. By continued crossing, the characteristics of the several original breeds were blended, and they were still further modified by importations made between 1783 and 1799.

Sheep were introduced into Massachusetts as early as 1624, and into the other New England states as they were settled. It is probable that the first sheep brought to these colonies were of the kinds common to England at that time, namely, the Wiltshire, the Romney Marsh, the Herefordshire, the Norfolk, and the old Southdown. The characteristics of all these grades were discernible in the different flocks of the Eastern and Middle states at the beginning of the Nineteenth century. The old English breeds are now extinct, but they were the foundation of sheep husbandry in this part of the United States.

The importation of sheep into the Carolinas and Georgia began at an early date, and the stock as a rule was of a superior kind both for wool and for meat. These animals were probably crosses between the English and Spanish breeds.

After the middle of the Eighteenth century more attention was paid to sheep raising, the colonial assemblies taking decided action toward increasing the number and improving the breeds, but during the War of the Revolution the industry was greatly neglected. Its subsequent revival was obstructed by stringent laws in England prohibiting importations from that country, so that the few sheep that reached the United States had but small effect on the native flocks. At this time Virginia wool was regarded as better than that of the other states.

At the beginning of the Nineteenth century the sheep found in the Eastern and Middle states, along the Atlantic coast as far south as Georgia, and as far westward as English-speaking settlers had gone, were descendants of various English breeds, and were of a long-wooled type. In the pine woods of the South Atlantic states and the Gulf coast, in Texas, and across the continent to the Pacific coast, were found the descendants of the early Spanish importations—the American scrub of to-day—which is fast disappearing under crossbreeding. A few Merinos were found, these being in the North Atlantic states.

Sheep and Wool from 1810 to 1845.—In 1810, owing to the desire of the people of the United States for home manufactures and fine wool, 26,000 of the finest Merino sheep were purchased abroad by private individuals and distributed throughout this country. The Merinos had been highly appreciated for years, and the introduction of this breed marked a new era in sheep husbandry, and also a transfer of the woolen industry from the household to the factory.

The Merino is supposed to have originated in Asia Minor. Following the track of civilization it was introduced into Spain, where it received great care, and its improvement, culminating there, caused it to be known as the finest wool breed in the world. The excellence of the Merino lies in the fineness of the wool and in the weight of each individual fleece, which is, under all conditions, so close as to enable the sheep to endure extreme cold weather. Owing to its ability to subsist on the coarsest food, and its unequaled docility, the Merino, wherever imported, has proven satisfactory, and instead of deteriorating it has frequently surpassed the parent stock.

When the Merino began to assert its sway by reason of its weight of fleece, there was strong temptation to increase profits by breeding to grease and folds or wrinkles in order to give extra weight. Upon scouring such wool its weight was found a delusion, two-thirds or more of the substance disappearing in the cleansing. A discrimination in the price was necessary, and eventually excessive grease and weight of fleece were found unprofitable; hence wrinkles began to disappear, and smoother and lighter fleeces were sought.

The distribution of Merino sheep was quite general until the failure of manufactures in 1815–16, when entire flocks were slaughtered, as their fleeces found no market. Upon the revival of manufactures after 1820, attention was again given to the Spanish Merino, but, through the demand for better fabrics, a still finer wool was required, and Saxony Merinos, the result of years of cross-breeding of the Spanish Merino with the native Saxon sheep, were largely imported during 1822–23. In the Saxony Merino an extreme fineness of wool had been developed at a material sacrifice of other qualities, and at the time of its importation this sheep was at the period of its greatest physical weakness.

The first noticeable effect of the introduction of the Saxony Merino was the practical extinction of the old Spanish Merino. After the passage of the tariff of 1828, however, wool again declined in value; and as both the mutton qualities and the general hardiness of the Saxony Merino were very much inferior to those of the Spanish Merino, the former breed lost its popularity, and sheep of Spanish origin gradually supplanted it.

By 1842 the manufacture of worsted goods called for longer fleeces, but, under the tariff of 1846 the breeding of all classes of sheep was suspended.

Changes in the Industry in the Last Half Century.—The period from 1845 to 1855 marks the transition from fine-wool sheep to coarse-wool and mutton sheep. In the sixties, owing to the scarcity of English combing wool, and inability to secure a sufficient supply from abroad, manufacturers urged the importation of mutton breeds. These sheep were brought from Canada and England and distributed through the country east of the Mississippi River, and thus increased the production of distinctively combing wools. As the results of this importation were not satisfactory either in the quantity or quality of wool produced, the French Merino was introduced and bred to the American Merino. The French sheep, which were the first to become essentially a mutton breed, while producing combing wool of a much finer quality than the English, were not at first favorably received; but their merits were afterwards appreciated, and they are now widely distributed throughout the country. When crossed with the earlier imported stock of Merinos they are considered by many the best all-purpose mutton and wool sheep.

The promoters of American Merino improvement were opposed to this crossing, as they thought it would degrade the finest wool sheep in the world to a mutton sheep, yet, knowing the demand for combing wool, a few breeders began to work for longer fiber and larger carcass, or from a distinctively fine wool in the direction of mutton and combing wool. From these experiments have been produced the following popular and widely distributed subbreeds: Dickenson Delaine, Standard Delaine, Improved Delaine, National Delaine, Black Top Spanish, and Improved Black Top Merino. This progress has been continuous and persistent for the past thirty years, and has proved the most successful of the breeding experiments which have marked the history of wool growing.

The other line of development of combing wools, through the increase in the number of pure and cross-bred English sheep, has run almost parallel to the Delaine improvement in the Merino. It has steadily increased the supply of coarse combing wools, making the worsted industry nearly independent of foreign wools, and has enlarged also the supply of materials for flannels and other cloths.

In the states east of the Mississippi River, mutton breeds have gradually gained the supremacy. As population increased in the middle West, meat became more important than wool, and mutton breeds were generally selected, largely taking the place of Merinos; and, though the number of sheep has decreased, their average value has been nearly doubled in the last thirty years, owing to the gain in size and quality.

The Merino and English types of sheep are nearly equal in number, the former predominating in the range territory and the latter in the farming states. At the present time the tendency of breeding seems to be toward an increase in Merinos, due to a relative scarcity of wools of Class one of the customs schedule. This tendency is felt even where mutton sheep largely predominate and meat is the first consideration. In this breeding the French type is preferred to the earlier established breed of Merino, because, while aiming to increase the quantity of fine wool, the value of the mutton is not overlooked.

In 1870 more than four-fifths of all the sheep in the United States were either pure-bred or grade Merinos. In the Middle states and in the Ohio Valley there were a few Downs and small flocks of various long-wool breeds, and in Texas and New Mexico there were some degenerate Mexican sheep, but these together made a very small fraction of the whole, the Spanish-American Merino being the almost universal breed.

During the past ten years the tendency to increase mutton breeds has been marked. In the central West the numbers of sheep have been greatly reduced, and

number of sheep to a farm in the various geographic divisions is presented in the following table.

TABLE CCXIV.—AVERAGE NUMBER OF SPECIFIED KINDS OF SHEEP PER FARM REPORTING THE SAME, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	All sheep.	Lambs.	Ewes.	Rams and wethers.
The United States	80.7	28.4	41.8	10.5
North Atlantic	35.3	14.2	18.8	2.3
South Atlantic	25.4	9.3	13.0	3.1
North Central	45.1	17.1	24.2	3.8
South Central	32.0	10.2	16.0	5.8
Western	1,300.6	437.6	663.9	199.0
Hawaii	4,083.9	699.7	2,465.8	918.4

In the four divisions other than the Western, the average number of sheep per farm varied from 25.4 in the South Atlantic division to 45.1 in the North Central. The number of sheep over 1 year old averaged 16.1 in the South Atlantic and 28.0 in the North Central. The average number of lambs on hand, June 1, 1900, was 9.3 in the former division and 17.1 in the latter. These averages stand in marked contrast to those for the Western division, where the number of all sheep per farm reporting was 1,300.6, of which 437.6 were lambs and 862.9 were sheep of wool-bearing age. Hawaii had an average of 4,083.9 per farm, of which 699.7 were lambs; 2,465.8, ewes; and 918.4, rams and wethers.

Table 33 gives, by states and territories, the distribution of sheep on farms classified by principal source of income.

The following table gives by geographic divisions the number of live-stock farms reporting sheep, the total and average numbers per farm, and the number of all other farms reporting sheep, with like totals and averages.

TABLE CCXV.—TOTAL AND AVERAGE NUMBER OF SHEEP AND LAMBS ON LIVE-STOCK AND OTHER FARMS, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

A.—LIVE-STOCK FARMS.

GEOGRAPHIC DIVISIONS.	Farms reporting sheep.	Sheep.	Lambs.	AVERAGE NUMBER PER FARM.	
				Sheep.	Lambs.
The United States	366,103	33,084,285	17,517,623	90.4	47.8
North Atlantic	46,811	1,271,012	802,361	27.2	17.1
South Atlantic	40,774	911,019	567,611	22.3	13.9
North Central	204,019	7,221,024	4,289,880	35.4	21.0
South Central	60,023	2,285,395	1,018,416	38.1	17.0
Western	14,465	21,313,912	10,822,282	1,473.5	748.2
Hawaii	11	81,923	17,123	7,447.5	1,556.6

B.—ALL OTHER FARMS.

The United States	397,440	6,853,288	4,150,615	17.2	10.4
North Atlantic	73,566	1,262,567	911,160	17.2	12.4
South Atlantic	65,646	795,180	425,105	12.1	6.5
North Central	154,550	2,834,697	1,835,005	18.3	11.9
South Central	92,371	1,043,453	530,209	11.3	5.7
Western	11,293	914,708	448,767	81.0	39.7
Hawaii	14	2,683	369	191.6	26.4

In the Western division, of the 25,758 farms reporting sheep, 14,465, or 56.1 per cent, were classed as live-stock farms. The principal income of the greater number of these was derived from the sale of sheep and wool. On June 1, 1900, they had, on an average, 1,473.5 sheep 1 year old and over, and 748.2 lambs per farm. The wool, sheep, and lambs sold annually from such farms insured good incomes, independent of other resources and products, and they may properly be termed sheep ranches.

In addition to the classified live-stock farms, with large average holdings of sheep, the Western division had nearly as many other farms with sheep; but on these, sheep raising was secondary to other agricultural pursuits. Nevertheless, the average holdings of sheep on such farms in this division were larger than those on the live-stock farms in any other section of the United States except Hawaii.

Table CCXVI presents for the Western division a summary, by states and territories, of the number of live-stock farms reporting sheep, together with the total and average number of sheep reported.

TABLE CCXVI.—THE TOTAL AND AVERAGE NUMBER OF SHEEP AND LAMBS ON LIVE-STOCK FARMS IN THE WESTERN DIVISION, JUNE 1, 1900, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Farms reporting sheep.	Sheep.	Lambs.	AVERAGE NUMBER PER FARM.	
				Sheep.	Lambs.
Western division	14,465	21,313,912	10,822,282	1,473.5	748.2
Arizona	397	442,684	177,127	1,115.1	446.2
California	1,695	1,466,149	712,478	865.0	420.3
Colorado	892	1,303,253	663,774	1,461.0	744.1
Idaho	1,089	1,946,769	1,146,097	1,787.7	1,052.4
Montana	1,282	4,192,608	1,941,300	3,270.4	1,514.3
Nevada	179	561,026	315,275	3,134.2	1,761.3
New Mexico	2,017	3,242,332	1,528,514	1,607.5	757.8
Oregon	2,862	1,810,382	981,596	632.6	343.0
Utah	1,946	2,518,599	1,241,498	1,291.7	638.9
Washington	1,156	518,442	346,033	448.5	299.3
Wyoming	950	3,316,668	1,768,585	3,491.2	1,861.7

The 950 live-stock farms in Wyoming in 1900 reported the largest average flocks in this division, consisting of 1,861.7 lambs and 3,491.2 sheep, or an average total of 5,352.9. In herding sheep on the western plains good management requires their separation into flocks not greatly exceeding 3,000. Each flock is under the care of a herder, and there should be reported as many farms as flocks. Practically all flocks in Wyoming were of this maximum size. The averages for Montana were but little smaller than those for Wyoming. There were 1,514.3 lambs and 3,270.4 sheep, or a total of 4,784.7.

In this connection, attention is again called to table CCXII. It is to be noted that the farms of less than 3 acres, representing, as has been explained, farms of ranchmen using the public domain without owning or leasing any land, have, in the North Central, South Central, and Western divisions, an average number of sheep greater than is shown for all live-stock farms in those divisions, as given in table CCXV.

In Hawaii the live-stock farms with sheep had an average of 7,447.5 sheep and 1,556.6 lambs, a total of 9,004.1. The figures of table CCXIV for the divisions, other than the Western and Hawaii, show clearly by their small average numbers that but few farmers derived their principal income from sheep or wool. Ohio, the greatest sheep-raising state east of the hundredth meridian, reported, in 1900, 73,636 farms with sheep. This is 26.6 per cent of all the farms in the state. The average number of sheep and lambs on these farms was 54.6. The average on the 45,441 live-stock farms of the state was 63.7, of which 42.6 were sheep and 21.1 lambs. The other farms in the state had an average of 40.0, of which 14.7 were lambs and 25.3 were sheep.

SHEEP ON FARMS OF SPECIFIED AREAS.

Table 32 gives for the United States, for each geographic division and for each state and territory, the number of farms reporting sheep, classified by area, and also the number of sheep and lambs reported.

A summary of these facts for the United States is given in table CCXVII.

TABLE CCXVII.—TOTAL AND AVERAGE NUMBER OF SHEEP AND LAMBS ON FARMS OF SPECIFIED AREAS IN THE UNITED STATES, JUNE 1, 1900.

FARMS CLASSIFIED BY AREA IN ACRES.	Farms reporting sheep.	Sheep.	Lambs.	AVERAGE NUMBER PER FARM.	
				Sheep.	Lambs.
Total	763,543	39,937,573	21,668,288	52.3	28.4
Under 3	1,859	3,524,480	1,757,336	1,895.9	945.3
3 and under 10	3,666	197,048	81,500	53.8	22.2
10 and under 20	9,377	322,591	143,817	34.4	15.3
20 and under 50	59,031	1,049,278	551,036	17.8	9.3
50 and under 100	187,519	2,948,806	1,854,358	15.7	9.9
100 and under 175	270,724	7,852,033	4,693,655	29.0	17.3
175 and under 260	117,032	3,823,758	2,292,581	32.7	19.6
260 and under 500	83,694	5,022,436	2,880,861	60.0	33.8
500 and under 1,000	21,078	3,408,539	1,776,117	161.7	84.3
1,000 and over	9,563	11,788,654	5,686,377	1,232.7	594.6

The high average for farms containing less than 3 acres was due principally to the existence of the ranches using the unfenced public domain in the Western division, and the same explanation is applicable to many of the farms in the groups of from 3 to 10 acres and from 10 to 20 acres, which had higher averages than those in the next larger group.

In table CCXVIII, farms are classified according to area, and the average number of sheep, exclusive of lambs, is given for each geographic division and for each group of farms. It will be noted that, for the North Atlantic division, the average increases with the acreage, being lowest for farms of 3 and less than 10 acres and highest for farms of 1,000 acres and over. In the other geographic divisions the same general character of the averages is retained for farms of 20 acres and over, while, in the two classes preceding this, the most marked variation will be found in those divisions where the public domain is available for grazing purposes.

TABLE CCXVIII.—AVERAGE NUMBER OF SHEEP, EXCLUSIVE OF LAMBS, PER FARM REPORTING, ON FARMS OF SPECIFIED AREAS, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

FARMS CLASSIFIED BY AREA IN ACRES.	The United States.	GEOGRAPHIC DIVISIONS.					
		North Atlantic.	South Atlantic.	North Central.	South Central.	Western.	Hawaii.
Total	52.3	21.0	16.0	28.0	21.8	863.0	3,384.2
Under 3	1,895.9	6.7	29.9	424.5	288.7	2,437.3	.....
3 and under 10	53.8	5.1	4.7	8.2	8.9	298.3	40.0
10 and under 20	34.4	6.1	5.7	9.1	6.0	352.6	7.0
20 and under 50	17.8	8.1	6.8	9.8	7.0	296.6	23.0
50 and under 100	15.7	12.9	8.4	15.3	8.1	236.2	52.0
100 and under 175	29.0	20.0	12.9	24.9	11.9	384.9	.....
175 and under 260	32.7	28.8	17.9	34.0	16.3	302.4	18.0
260 and under 500	60.0	40.2	25.0	48.0	26.3	470.1	.....
500 and under 1,000	161.7	55.1	38.3	90.1	50.0	959.9	134.0
1,000 and over	1,232.7	72.1	76.8	336.2	496.3	3,148.2	4,677.9

The facts shown in table CCXVIII should be considered in connection with the table "Race of Farmers Reporting Sheep." The average area of farms of colored farmers in the South Central and South Atlantic divisions, was less than one-third as great as that for farms of white farmers, being 52.1 acres for colored, compared with 172.1 acres for white farmers. This accounts in part also for the variation in the average holdings of sheep on farms operated by the two races, to which attention has already been called.

SHEEP ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME.

Table CCXIX presents some facts derived by calculation from Table 33. It shows for each group of farms of specified principal sources of income, the average number of sheep and lambs, and the per cent of the total number of farms and of sheep, and also the per cent of farms in each class.

TABLE CCXIX.—AVERAGE NUMBER OF SHEEP AND LAMBS PER FARM REPORTING IN THE UNITED STATES ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	AVERAGE NUMBER PER FARM.		PER CENT OF TOTAL IN GROUP.		Per cent of all farms in groups.
	Sheep.	Lambs.	Farms reporting.	Sheep.[1]	
Total	52.3	28.4	100.0	100.0	100.0
Hay and grain	20.0	12.8	18.9	7.3	23.0
Vegetables	17.3	11.0	1.1	0.4	2.7
Fruits	28.7	14.6	0.6	0.3	1.4
Live stock	90.4	47.8	47.9	82.8	27.3
Dairy produce	16.1	9.8	5.9	1.7	6.2
Tobacco	18.0	13.1	0.9	0.3	1.9
Cotton	12.1	4.1	3.3	0.8	18.7
Rice	27.3	9.0	[2]	[2]	0.1
Sugar	32.2	9.0	[2]	[2]	0.1
Flowers and plants	15.4	8.0	[2]	[2]	0.1
Nursery products	29.5	13.7	[2]	[2]	[2]
Miscellaneous	15.7	9.3	21.3	6.4	18.5
Taro	.....	1.0	[2]	[2]	[2]
Coffee	9.5	.....	[2]	[2]	[2]

[1] Sheep exclusive of lambs. [2] Less than one-tenth of 1 per cent.

The small average number of sheep on all live-stock farms shows that in the other groups sheep raising was widely carried on as incidental to other farming operations.

SHEEP INDUSTRY ON FARMS OF SPECIFIED TENURES.

Table 29 presents detailed statistics, by states and territories, of the number of farms of six specified tenures reporting sheep, and gives the number of sheep and lambs. Tables 30 and 31 present the same facts separately for white and colored farmers. The first-mentioned of these tables shows that the average number of sheep 1 year old on all farms in the United States reporting them was 52.3. The corresponding averages for farms of specified tenures were as follows: Owners, 40.2; part owners, 93.2; owners and tenants, 32.2; managers, 806.2; cash tenants, 44.7; and share tenants, 24.9.

As shown by Table 2, the average area of farms in the United States was 146.6 acres. For the several tenures the areas were as follows: Owners, 134.1; part owners, 276.7; owners and tenants, 171.7; managers, 1,514.3; cash tenants, 102.7; share tenants, 92.4 acres. A comparison of these figures with those immediately preceding demonstrates that the average number of sheep kept was in close accord with the size of farms. The farms of managers, being the largest, had the greatest number of sheep, while those of part owners had twice the average area of those of owners and reported substantially twice the number of sheep. On the other hand, the farms of cash tenants showed a higher average than those of owners, although the farms of the last-named class had a larger average acreage. This condition is reversed as between owners, and owners and tenants.

The explanation of the marked variation in the case of owners and cash tenants is doubtless found in the fact that, in the Northern states, relatively large numbers of cash tenants with small farms were engaged in raising garden truck and fruit, or in keeping dairies near cities and towns, and in the Southern states in growing cotton. The character of these agricultural operations on a small acreage does not permit sheep raising; consequently, the proportion of farms reporting sheep among cash tenants was over one-half less than that among an equal number of owners of farms. For the large farms of cash tenants, devoted to various branches of agriculture, the average number of sheep was substantially the same as on farms of similar size operated by owners; but, as most of the small farms of cash tenants did not report sheep, this average of the cash tenants on the large farms was not reduced in the general total by combination with a lower average on smaller farms, as occurs in the case of owners, where sheep were more generally reported on small farms.

TABLE CCXX.—NUMBER OF SHEEP AND LAMBS ON FARMS OF SPECIFIED TENURES IN THE UNITED STATES, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY TENURE.	Farms reporting sheep.	Sheep.	Lambs.	PER CENT OF—		
				Farms.	Sheep.	Lambs.
Total	763,543	39,937,573	21,668,238	100.0	100.0	100.0
Owners	553,913	22,261,037	12,342,293	72.5	55.7	56.9
Part owners	66,378	6,188,525	3,265,372	8.7	15.5	15.1
Owners and tenants	12,233	393,388	234,477	1.6	1.0	1.1
Managers	9,177	7,398,748	3,629,444	1.2	18.5	16.7
Cash tenants	33,555	1,500,056	840,090	4.4	3.8	3.9
Share tenants	88,287	2,195,819	1,356,562	11.6	5.5	6.3

Table 5 gives the per cent of all farms of specified tenures in the United States as follows: Owners, 54.9; part owners, 7.9; owners and tenants, 0.9; managers, 1.0; cash tenants, 13.1; and share tenants, 22.2. These percentages should be considered in connection with the figures given in table CCXX, in which are classified by tenure the number of farms reporting sheep, the number of sheep and lambs reported, and the per cent of the farms, sheep, and lambs belonging to each tenure. A comparison of the first column of percentages with those here given for all farms recalls the fact, previously referred to, that sheep are kept by a relatively smaller number of cash and share tenants than of the four other groups of tenures. The owners have 54.9 per cent of all farms, and form 72.5 per cent of all sheep-keeping farmers. Cash tenants have 13.1 per cent of all farms, but constitute only 4.4 per cent of such farmers, while share tenants, with 22.2 per cent of all farms, hold 11.6 per cent of those reporting sheep.

RACE OF FARMERS REPORTING SHEEP.

Tables 30 and 31 present statistics of sheep on farms of white and colored farmers. Table CCXXI presents a summary of a few of the most important facts shown in these tables.

TABLE CCXXI.—TOTAL AND AVERAGE NUMBER OF SHEEP AND LAMBS ON FARMS OF WHITE AND COLORED FARMERS, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Farms reporting sheep.	Sheep.	Lambs.	AVERAGE NUMBER PER FARM.	
				Sheep.	Lambs.
The United States	756,736	39,494,520	21,503,105	52.2	28.4
North Atlantic	120,308	2,531,816	1,712,906	21.0	14.2
South Atlantic	104,461	1,688,727	984,228	16.2	9.4
North Central	358,023	10,045,232	6,118,849	28.1	17.1
South Central	148,988	3,286,082	1,533,008	22.1	10.3
Western	24,936	21,858,214	11,136,636	876.6	446.6
Hawaii	20	84,499	17,478	4,224.9	873.9

B.—FARMS OF COLORED FARMERS.

The United States	6,807	443,053	165,133	65.1	24.3
North Atlantic	69	1,763	615	25.6	8.9
South Atlantic	1,959	17,472	8,488	8.9	4.3
North Central	546	10,489	5,986	19.2	11.0
South Central	3,406	42,816	15,617	12.6	4.6
Western	822	370,406	134,413	450.6	163.5
Hawaii	5	107	14	21.4	2.8

The foregoing table shows that, of the 763,543 farms reporting sheep, white farmers operated 756,736, or 99.1 per cent, and colored farmers only 6,807, or 0.9 per cent.

Negroes far outnumbered all other colored farmers in the United States, but they owned fewer sheep than the Indians. Of the 165,133 lambs and 443,053 sheep reported by colored farmers, 97,265 lambs and 282,880 sheep were owned by 304 Indian farmers in Arizona, and 31,205 lambs and 72,442 sheep were owned by 340 farmers of the same race in New Mexico. Indians in these two territories were thus possessors of 77.8 per cent of the total number of lambs and 80.2 per cent of all sheep owned by all colored races in the United States. A few other sheep were reported by Indians in various parts of the country, but it was found impracticable to include them in the tabulation by race. The 746,717 negro farmers, constituting 13.0 per cent of the farmers of the country, therefore, controlled about 0.2 per cent of the total number of sheep in the country.

Indians in Arizona and New Mexico operated 644 of the 822 farms of colored farmers reporting sheep in the Western division. The remaining 178 farms operated by colored farmers reported 5,943 lambs and 15,084 sheep, or an average of only 33.4 lambs and 84.7 sheep. Some of these 178 farms, also, were operated by Indians, so that if the statistics of all farms of Indians were excluded, the average for colored farmers would be little, if any, larger than that in other geographic divisions where the raising of sheep does not prevail to such an extent as in the Western division.

The following table shows the number of all farms operated by white and colored farmers in the South Central and South Atlantic divisions, the number of those reporting sheep, and the number of sheep and lambs, with percentages. It shows more fully the relation of race to the sheep industry.

TABLE CCXXII.—NUMBER OF FARMS OF WHITE AND COLORED FARMERS IN THE SOUTH ATLANTIC AND SOUTH CENTRAL STATES, JUNE 1, 1900, THE NUMBER OF SUCH FARMS REPORTING SHEEP, AND THE NUMBER OF SHEEP AND LAMBS REPORTED, WITH PERCENTAGES AND AVERAGES.

RACE OF FARMER.	TOTAL FARMS.		FARMS REPORTING.	
	Number.	Per cent.	Number.	Per cent.
Total	2,620,391	100.0	268,814	100.0
White	1,879,721	71.7	253,449	97.9
Colored	740,670	28.3	5,365	2.1

RACE OF FARMER.	SHEEP.			LAMBS.		
	Number.	Per cent.	Average per farm reporting.	Number.	Per cent.	Average per farm reporting.
Total	5,035,047	100.0	19.5	2,541,341	100.0	9.8
White	4,974,759	98.8	19.6	2,517,236	99.1	9.9
Colored	60,288	1.2	11.2	24,105	0.9	4.5

In the Southern states the colored farmers constituted 28.3 per cent of all farmers, but only 2.1 per cent of those raising sheep. The average number of sheep on the farms of white farmers was about double that on those of colored farmers, the latter reporting only 0.9 per cent of the lambs and 1.2 per cent of the sheep. In proportion to their number, the colored farmers in the South kept only about one twenty-eighth as many sheep as their white neighbors. The farms of colored operators were generally smaller, necessitating smaller flocks. Further, the custom of keeping dogs, almost universal among the Southern negroes, precludes the possibility of deriving any profit from small flocks in sections where colored farmers are very numerous.

TOTAL AND AVERAGE VALUE OF SHEEP AND LAMBS IN 1900.

The total and average values of sheep and lambs on farms and ranges in 1900, with other data, appear in Tables 28 and 34. A summary is presented in table CCXXIII.

TABLE CCXXIII.—TOTAL AND AVERAGE VALUE OF SHEEP AND LAMBS IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	TOTAL VALUE.			AVERAGE VALUE.		
	Lambs.	Ewes.	Rams and wethers.	Lambs.	Ewes.	Rams and wethers.
The United States	$42,027,828	$101,376,142	$26,993,032	$1.94	$3.18	$3.36
North Atlantic	4,141,901	8,232,125	1,072,645	2.42	3.64	3.92
South Atlantic	2,238,563	3,767,442	755,264	2.25	2.73	2.92
North Central	11,863,771	30,960,874	6,287,044	1.94	3.57	3.83
South Central	3,221,223	5,962,405	2,180,461	2.08	2.44	2.45
Western	20,550,870	52,365,884	17,602,657	1.82	3.06	3.43
Hawaii	11,500	87,412	34,971	0.66	1.42	1.52

The total value of all sheep on farms, June 1, 1900, was $170,337,002. The lambs had an average value of $1.94, and a total value of $42,027,828; the ewes an average value of $3.18, and a total value of $101,376,142; and the rams and wethers an average value of $3.36, and a total value of $26,993,032. The average for sheep of all ages was $2.76. The average amount per head realized by the farmers and ranchmen from the sale of lambs and sheep was probably about equal to the average amount received from the sale of rams and wethers, or from $3.00 to $3.25. It may have exceeded this average, for the great slaughtering and meat packing establishments in their reports to the manufactures division of the census showed an average value of $4.04 for the 9,190,490 sheep and lambs purchased by them in the business year 1899–1900.

The average value of sheep, including lambs, was highest in the North Atlantic and lowest in the South Central division, being $3.17 in the former and $2.33 in the latter. Of the individual states, New Jersey

showed the highest average, $4.24, and Georgia, the lowest, $1.30. As a rule, the average values of lambs, ewes, and rams and wethers bore nearly the relation one to another in the several states that they did in the country as a whole. Whenever variations occurred, they were generally caused, as in Delaware, by the proximity of some market which consumes large numbers of spring lambs at comparatively high prices.

Large Lamb Crop of 1900.—The special agents employed by the census in the collection of live-stock statistics in the range states and territories reported that the lamb crop of 1900 was exceptionally large, while that of 1899 was smaller than the average. The correspondence of the National Association of Wool Manufacturers furnished that organization information to the same effect.[1] The reasons assigned by the agents of the census for the large lamb crop may be briefly summarized as follows: The winter of 1899–1900 in most of the range states was mild, hay and forage were plentiful, the lambing season was exceptionally favorable, and the grass excellent. The flock masters, moreover, owing to the increase in the value of sheep, gave their flocks better care and attention.

Some agents of the census estimated the lamb crop as 10 per cent above the average.

There were reported on farms, June 1, 1890, a total of 35,935,364 sheep, exclusive of those estimated as being on ranges. With those sheep there were dropped in 1889, 12,623,257 lambs, or 35.1 per cent of the sheep reported the following year. In 1900 the number of lambs on hand June 1 was equal to 54.3 per cent of the sheep 1 year old and over. Allowing for those slaughtered, and assuming the total number dropped to have been about 22,000,000, the percentage of lambs dropped in 1899 to sheep reported June 1, 1900, was 55.1.

All information points to the conclusion that the year 1889 was as much below the average in production of lambs as 1900 was above it. The variation from the average year in both cases may have been as great as 10 per cent, although probably less. The proportion of wethers kept in flocks had greatly decreased, and that of ewes had increased in the intervening ten years, and, by crossbreeding, the average ewe had become more prolific; but, after allowing for all these facts, there is a wide margin between the relative number of lambs indicated by the percentages in 1890 and in 1900. That variation is explainable only by assuming that some of the lambs of 1890 were included in the enumeration of sheep in that year, as has been mentioned in the discussion of the statistics of neat cattle, and that, therefore, the actual ratio of lambs to sheep 1 year old and over was greater in 1890 than appears from the census figures given.

Number and Value of Sheep and Lambs Sold on Farms and Ranges in 1899.—No attempt was made to secure reports, upon the ordinary farm schedule, of the number of sheep sold and slaughtered on farms. Inquiry was made, however, upon the special range schedule concerning the number of sheep purchased and the number sold by the large ranches whose statistics were collected on these schedules. Only partial reports were obtained of the sale of sheep and no statement concerning the sale of lambs. Nearly all of the special agents, in their reports, refer to the fact that they had extreme difficulty in obtaining statements concerning the sales of sheep and other animals, and said they feared that the parts of their schedules relating to the sales of animals were more or less defective. Under these conditions, the only statement of the number and value of sheep thus sold that can be offered must be in the nature of an estimate based upon the known movements of sheep upon farms and ranges.

The lambs sold in 1899 belonged to the lamb crop of that year, a crop that was somewhat below, as that of 1900 was above, the average. The 1899 crop of lambs could not, therefore, have greatly exceeded 19,000,000 in number. The census of 1890 secured statistics of sheep and lambs killed by dogs, and of the number that died from disease or exposure in 1889. The number lost by these causes was practically equal to one-fourth the number of lambs dropped in that year. It is probable that, owing to greater care by the flock masters, and better provision by them for winter feeding of the sheep, the per cent of loss in 1899 was less than that of 1889. Ignoring this probability, however, and accepting the assumption that there was substantially the same per cent of loss by disease, dogs, etc., as ten years before, the experience of the farmers in 1889 points to a maximum loss of sheep and lambs in the year 1899 of four and a half millions. If better care and feeding had any appreciable effect, the loss must have been materially less. There was, however, a large loss, which, in order to keep the flocks up to their condition at the beginning of the season, it was necessary to make good out of the lambs dropped in that year.

The loss by disease and accident would leave 15,000,000 sheep and lambs to be sold or slaughtered in 1899. Those who have not become convinced that great progress has been made in the last ten years in caring for sheep and lambs will doubtless estimate this number as less by at least 500,000. Of those sold, 9,190,490 were killed in the most important slaughtering and meat packing establishments, and the remainder on farms and in small slaughtering houses throughout the country. The value of the sheep slaughtered, or sold for slaughter, was not far from $50,000,000.

DOMESTIC WOOL SUPPLY.

Domestic wool is of two distinct classes; that shorn from living sheep, usually designated in the trade as "fleece wool," and that taken from carcasses, and known

[1] Annual Wool Review, National Association of Wool Manufacturers, December, 1901, page 4.

as "pulled wool." The enumerators did not report pulled wool. The report of fleece wool embraces the shearings from sheep enumerated as on the farm during the year ending June 1, 1900.

The great majority of sheep on American farms are shorn but once each year, generally in the spring, though in Southern and Southwestern states some are shorn both in the spring and fall. For these there were reported two fleeces, each of an average weight a trifle more than one-half that of a whole year's growth. In many sections of the country about one-eighth of the sheep shorn on farms and ranges were sold or slaughtered on the farm about six weeks or two months prior to June 1, 1900; so that the number of fleeces reported exceeded the number of sheep on hand on that date by from 1 to 5 per cent.

Where sheep were purchased in the fall and fattened on the farm for the spring market, as is done in many parts of Iowa, Minnesota, Illinois, and other Western states, and in Maryland in the East, the relative number of fleeces reported was even larger than the proportion stated above. A similar condition existed in such range states as Idaho, where the flock masters owned alfalfa farms on which they raised great quantities of hay for feeding their sheep in the winter. An excess of fleeces, due to the slaughter of sheep, or sale for slaughter, was reported in all the states where double shearing was practiced, since in those states an extra fleece was secured for every sheep that was sold at any time after the fall shearing and before the enumeration in June, a period covering more than one-half the year.

Not all the fleece wool of the country was reported, as considerable quantities were shorn in the large feeding yards maintained near the Western live-stock centers.

Wool Shorn Fall of 1899 and Spring of 1900.—Table CCXXIV presents, by geographic divisions, a summary of the most important facts relating to the wool clip of the fall of 1899 and spring of 1900, as reported by the farmers and ranchmen, and given in full in Tables 48 and 49.

TABLE CCXXIV.—THE NUMBER OF SHEEP AND FLEECES, POUNDS, AND VALUE OF WOOL, REPORTED ON FARMS AND RANGES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	SHEEP.		WOOL.			
	Farms reporting.	Number.	Farms reporting.	Fleeces.	Pounds.	Value.
The United States....	763,543	39,937,573	756,082	44,092,948	276,991,812	$45,723,739
North Atlantic.	120,377	2,533,579	119,399	2,651,881	17,110,249	3,544,145
South Atlantic.	106,420	1,706,199	105,362	1,794,984	7,892,212	1,599,937
North Central..	358,569	10,055,721	355,230	10,767,623	73,909,116	14 652,337
South Central..	152,394	3,328,848	151,221	4,121,651	17,687,629	2,979,294
Western.....	25,758	22,228,620	24,851	24,663,090	159,968,378	22,894,340
Hawaii.....	25	84,606	19	93,719	424,228	53,686

The foregoing table shows 44,092,948 fleeces of wool shorn on farms and ranges, with a total weight of 276,991,812 pounds. The number of sheep 1 year old and over reported June 1, 1900, was 39,937,573, so that the number of fleeces exceeded that of sheep by 4,155,375, or 10.4 per cent.

Double Shearing and the Average Weight of Fleeces.—From 251 counties in Alabama, Arizona, Arkansas, California, Georgia, Kentucky, Mississippi, New Mexico, North Carolina, Tennessee, and Texas, the number of fleeces reported by the majority of sheep owners was practically twice that of the sheep on hand June 1, 1900; but the average weight of the fleeces did not exceed 60 per cent of the normal weight of a year's growth of wool in those sections. These reports indicated double shearing, and investigation by correspondence verified the presumption. The total number of sheep reported from these 251 counties was 4,177,988, and that of fleeces 6,967,461, or 2,789,473 more fleeces than sheep. The estimated number of sheep from which two fleeces were shorn during the census year in the states mentioned was approximately 2,225,000.

Judging from the special correspondence upon the subject, the conclusion is reached that double shearing prevailed to a limited extent in other counties than those included in table CCXXV, and that the total number of sheep in the United States shorn twice within the census year was not far from 2,500,000. If this estimate is substantially correct, the wool reported practically represents that shorn from 41,592,948 sheep in the twelve months preceding June 1, 1900. This gives an average weight of wool for each sheep shorn of 6.66 pounds, which is 0.20 of a pound, or 3.0 per cent in excess of the average weight of fleece wool per sheep in that year, as estimated by the secretary of the National Association of Wool Manufacturers.[1] This estimate was based upon the actual weight of large numbers of fleeces handled in the trade from every state, and its close approximation to the actual results of the census confirm the accuracy of the methods adopted in making them.

Wool Shorn From Sheep Sold for Slaughter.—Deducting from the probable number of sheep from which the wool reported in 1900 was shorn, the number of sheep on hand June 1, 1900, the sheep disposed of for slaughter and slaughtered on farms must have numbered 1,605,375, and the quantity of wool obtained from this number of sheep shorn in the early spring before sale or slaughter must have been approximately 10,691,798 pounds.

The practice of double shearing was more general in California than in any other state, as 81.6 per cent of its sheep were reported as double sheared. Arizona and Texas reported 48.3 and 47.4 per cent, respectively; Alabama, 44.6 per cent; Arkansas, 45.4 per cent; New

[1] Annual Wool Review of National Association of Wool Manufacturers, December, 1901, page 3.

Mexico, 40.2 per cent; North Carolina, 25.1 per cent; Georgia, 16.5 per cent; Kentucky, 7.3 per cent; Tennessee, 22.3 per cent; and Mississippi, 13.2 per cent.

The reasons for double shearing are varied, and the custom is by no means universal in the sections where it is practiced. The matter of climate is an essential factor, as the special reports mention heat and loss of wool as causes. Arkansas practices double shearing in all sections, while California reports it universally in the northern portions of the state, and more or less in other sections. The times of shearing are variously reported. April is coupled with August, September, and October, and May with August and September. The most common times are April and September. Other reasons given for this practice were that the health of the sheep requires double shearing in warm climates, and that it assists in preventing scab. It is stated that the increase in wool does not in all cases compensate for the expense of the additional shearing.

Possible Erroneous Reports of Wool Shorn.—Table CCXXV presents for the 11 states mentioned, for which reports and correspondence indicated double shearing, the number of counties where it was practiced and the number of sheep and fleeces reported therefrom. It gives also the same information for Idaho and Oregon, in which states the number of reported fleeces was greatly in excess of the number of sheep reported.

TABLE CCXXV.—NUMBER OF COUNTIES IN SPECIFIED STATES THAT REPORT FLEECES GREATLY IN EXCESS OF NUMBER OF SHEEP, TOGETHER WITH THE NUMBER OF SHEEP AND FLEECES REPORTED, JUNE 1, 1900.

STATES AND TERRITORIES.	Number of counties.	Number of sheep.	Number of fleeces.
Total	268	5,603,219	[1]8,733,116
Alabama	27	102,208	164,880
Arizona	6	322,567	438,667
Arkansas	33	76,653	106,190
California	39	1,407,240	2,810,209
Georgia	13	42,617	67,873
Idaho	7	710,738	906,337
Kentucky	16	51,977	89,873
Mississippi	15	31,313	50,475
New Mexico	12	1,339,986	1,661,763
North Carolina	18	52,435	85,301
Oregon	10	714,493	858,818
Tennessee	22	68,773	103,680
Texas	50	682,129	1,388,490

[1] Excess of fleeces 3,129,897.

Many of the reports of excess fleeces received from Idaho and Oregon are known to be correct, as they represented the wool secured by the ranchmen from sheep fattened on alfalfa and sold for slaughter. Others represented wool shorn from sheep feeding in other counties than that in which the farm of the person reporting was located.

PULLED WOOL.

All statements relating to pulled wool are estimates based upon the number of sheep and lambs slaughtered in a year, or dying from disease. Nearly one fourth of the sheep are shorn a comparatively short time before being slaughtered. The others have wool more or less grown. The average weight of unscoured wool from each sheep slaughtered can not much exceed two pounds, and the wool obtained from a lamb is a little more. The total wool obtained from the 15,000,000 sheep and lambs estimated to have been slaughtered in 1899, was therefore, not far from 33,000,000 pounds, and the total production of wool for the United States, in the year ending June 1, 1900, was as follows:

Reported from farms by enumerators	276,991,812
Pulled wool (estimated)	33,000,000
Total	309,991,812

As this does not include any estimate of the fleece wool shorn in the feeding yards near large cities, the quantity thus obtained might be suggested as more than an offset to any wool erroneously included with that enumerated for farms.

CONSUMPTION OF WOOL IN 1900.

During the year 1900 the average price of wool continuously declined; manufacturers allowed their stock of wool on hand to decrease, and the visible supply of domestic and foreign wool in the country correspondingly increased, although imports of foreign wool had decreased, owing to the fall in price.

The visible supply of domestic wool January 1, 1900, was 123,348,500 pounds, while on January 1, 1901, it was 204,345,500 pounds, an increase of 80,997,000 pounds, and that of foreign wool in the same period increased from 25,265,000 to 29,483,500 pounds, an increase of 4,218,500 pounds. During that period the quantity of foreign wool imported for consumption was 136,862,780 pounds, while in 1899 the factories reported to the census a consumption of 139,881,799 pounds.[1]

Under the circumstances no very close comparison as to wool produced and consumed is possible between the figures of the agricultural and manufactures divisions of the census of 1900. The two sets of figures cover two different years, the year of the manufactures report closing before much of the wool reported by the division of agriculture was shorn. The division of manufactures reported in the business year 1899–1900 a consumption by factories of 272,441,631 pounds of wool. It cost the factories an average of 23.8 cents a pound, while the wool reported by the farmers had a farm value of only 16.5 cents. The great variation in average values indicates that some of the wool purchased by the factories was washed and some of it scoured, while none of that reported by the farmers was scoured and but a small portion of it washed. Allowing for this fact, the value of the wool reported by farmers through the enumerators, plus that of the estimated pulled wool, harmonizes with the value reported by the division of manu-

[1] Bureau of Statistics, United States Treasury Department.

factures. The great increase in the visible supply of wool and the decrease in importation, so far as they are entitled to consideration in this connection, tend to show less wool produced than is accounted for by the stocks in trade and the wool used by factories.

STATISTICS OF SHEEP AND WOOL: 1850 TO 1900.

In the discussion of the statistics of neat cattle attention was called to a number of facts which seemed to indicate that some of the calves, colts, and lambs of 1890 and earlier census years were included in the totals of "other cattle," horses, and sheep. This probability should be kept in mind in comparing the number of sheep in 1900, exclusive of all lambs, with previous census reports.

A summary of the most important census statistics of sheep and wool in the United States from 1850 to 1900 is presented in Table 61. More detailed statistics for sheep in 1900 are given in Tables 26 to 38, inclusive, and 40 to 42, inclusive, and for wool in Tables 48 and 49.

In making use of the figures of these tables, and especially those of Table 61, allowance must be made for the fact that prior to 1900 no attempt was made to enumerate sheep not on farms or ranges, and no estimates were made of their number. This number, however, was small in all parts of the country and may be disregarded. But there were in 1850, 1860, and 1870 many other sheep that were not enumerated. The census authorities in 1860, through the assistance of the United States marshals, who made the enumeration of farms and population, secured careful estimates of all sheep not enumerated in that year, as shown by states and territories in table CCXXVI.

TABLE CCXXVI.—ESTIMATED NUMBER OF UNENUMERATED SHEEP IN 1860, AS RETURNED BY ASSISTANT UNITED STATES MARSHALS.

STATES AND TERRITORIES.	Number of sheep.	STATES AND TERRITORIES.	Number of sheep.
The United States....	1,505,810	Mississippi	1,062
		Missouri	96,005
Alabama	12,404	Nebraska	52
Arkansas	6,481	New Hampshire	6,191
California	23,414	New Jersey	12,093
Connecticut	2,700	New Mexico	142,110
Delaware	559	New York	3,065
District of Columbia	62	North Carolina	77,296
Florida	1,675	Ohio	132,653
Georgia	120,596	Oregon	10,788
Illinois	33,822	Pennsylvania	53,225
Indiana	32,012	Rhode Island	5,455
Iowa	22,267	South Carolina	
Kansas	1,145	Tennessee	29,854
Kentucky	67,161	Texas	320,926
Louisiana	21,643	Utah	4,325
Maine	61,926	Vermont	18,015
Maryland	1,135	Virginia	112,591
Massachusetts	8,616	Washington	212
Michigan	47,916	Wisconsin	11,885
Minnesota	2,478		

In any careful study of the sheep industry in the United States, account must be taken of the sheep referred to in the foregoing table. They are not included with enumerated sheep in Table 61, because there were no similar estimates for 1850 or 1870. The number of unenumerated sheep in 1860 was estimated at 1,505,810, or nearly 7 per cent of those reported. In 1850, the number of unenumerated sheep must have been fully 1,000,000 greater than in 1860. This estimate is based upon the fact that as early as 1825 the sheep of California were reported to number over 1,000,000, and in 1860 the census reported 1,088,002, while the estimate of unenumerated sheep was 23,414, making a total of 1,111,416. Taking these facts into consideration it is safe to assert that there were in 1850 more than 1,000,000 unenumerated sheep in California alone, since the number enumerated was only 17,574. Similar facts make it very probable that the unenumerated sheep in Texas in 1850 were also more numerous than in 1860, and that in all the other states the number was proportionately great. This presumption would give for 1850 a total number of sheep in the United States of approximately 24,000,000. The number in 1860, as derived from the combination of the enumerated and the unenumerated sheep, is 23,977,085, or substantially the same.

In 1870 the number of unenumerated sheep in most of the Northern states east of the Mississippi River was probably small. The increase in the number of farms in the preceding decade lessened the area of the unfenced domain in those states, and nearly all the owners of sheep were so conducting agricultural operations as to be classed as farmers, and their sheep were reported as on farms. There can, therefore, be no material error in accepting the reported figures of those states in 1870 as including all sheep.

In the territories and in the Western and Southwestern states the situation was different. From 1860 to 1870 there had been extensive settlements on the frontier, and the settlers were everywhere making use of the public domain for keeping domestic animals. No estimates were made of the number of unenumerated sheep in those states and territories, although they were made for unenumerated horses and cattle; but the number of unenumerated sheep on the public domain must have been greater than in 1860, though probably less than in 1880.

The unenumerated sheep in the frontier states and territories of those earlier years were of two kinds. One class consisted of those owned and cared for by individuals who neither owned nor leased land, but made exclusive use of the unfenced public domain. Having no land, they were considered as having no farms, and their animals were not enumerated. Another class of unenumerated live stock was that of ranches or farms which, by reason of their isolation, were neglected by the enumerators. The census authorities in 1880 first fully appreciated the importance of obtaining careful estimates of the unenumerated animals, and employed a corps of experienced special agents who secured very satisfactory data relative to the number of these animals, including sheep. This was done also in the

census of 1890. The estimates of the number of these sheep are shown in the following table.

TABLE CCXXVII.—NUMBER OF UNENUMERATED RANCH SHEEP IN 1880 AND 1890, AS ESTIMATED BY THE TENTH AND ELEVENTH CENSUSES.

STATES AND TERRITORIES.	1890	1880
Total	4,940,948	7,000,000
Arizona	412,709	390,000
California	897,896	1,575,000
Colorado	178,820	345,000
Florida	.....	49,000
Idaho	.....	90,000
Indian Territory	.....	55,000
Kansas	.....	130,000
Montana	493,870	95,000
Nebraska	.....	48,000
Nevada	.....	97,000
New Mexico	1,225,524	1,850,000
Oregon	.....	285,000
South Dakota	70	[1]55,000
Texas	809,329	1,240,000
Utah	922,780	290,000
Washington	.....	96,000
Wyoming	.....	310,000

[1] Dakota territory in 1880.

It is to be noted that 39 states and territories were represented in 1860 in the estimates of unenumerated sheep; 17 in 1880, and only 8 in 1890. The census of Indian Territory in 1890 did not include an enumeration of farm animals, and presented no estimates of the numbers of sheep in that territory. The enumeration by that census of the range country as a whole was, however, more perfect than that of any preceding census, and included all ranch or range animals in more than half of the states covered by the estimates of ten years before. It extended to that section the system that had previously been adopted for the older states, and included all farm animals, instead of omitting many as in 1850 and 1860, thus demonstrating the desirability of so conducting a live-stock census that the rule applied to all but 8 states in 1890 should be extended to the remainder. That has been done by the Twelfth Census, which includes in its report the ranches using the public domain, as well as all farms.

The census of 1850 directed the enumerators to include in their reports of sheep only those which were one or more years old. Later census statisticians, prior to 1900, failed to furnish any instructions upon this subject. It is probable, however, that not more than 10 per cent of the sheep reported by any census were lambs, and that the per cent so included was practically the same for all census years previous to 1900. All comparisons in this report are based upon that assumption.

CHANGES IN LOCATION OF FLOCKS.

Table CCXXVIII gives, in thousands, the number of sheep on farms and ranges, as reported or estimated in the successive census years since 1860, with the exception of the year 1870, in which no estimates were made. The census of 1900 is believed to have included all sheep in its enumeration. The fact that in the census reports for 1860, 1880, and 1890, some lambs were returned as sheep, should be taken into consideration when using the following tables for purposes of comparison and deduction.

TABLE CCXXVIII.—NUMBER OF SHEEP IN THE UNITED STATES, BY STATES AND TERRITORIES: SUMMARY 1860, 1880, 1890, AND 1900.

[Expressed in thousands.]

STATES AND TERRITORIES.	[1]1900	[2]1890	[2]1880	[2]1860
The United States	39,938	40,876	42,192	23,975
North Atlantic division	2,533	4,133	4,971	6,335
Maine	252	371	566	514
New Hampshire	65	132	212	317
Vermont	182	334	440	770
Massachusetts	34	51	68	123
Rhode Island	7	11	17	38
Connecticut	23	38	59	120
New York	985	1,529	1,715	2,521
New Jersey	26	55	117	147
Pennsylvania	959	1,612	1,777	1,685
South Atlantic division	1,706	2,445	2,579	2,855
Delaware	7	12	22	19
Maryland	111	133	171	157
District of Columbia	.....	.....	.....	.....
Virginia	392	495	497	1,156
West Virginia	573	785	675	.....
North Carolina	209	402	462	624
South Carolina	52	80	119	234
Georgia	259	440	527	633
Florida	103	98	106	32
North Central division	10,056	12,332	13,663	8,521
Ohio	2,648	4,061	4,903	3,679
Indiana	1,011	1,081	1,101	1,023
Illinois	629	923	1,037	803
Michigan	1,026	2,400	2,189	1,320
Wisconsin	986	985	1,337	345
Minnesota	360	399	268	16
Iowa	658	547	455	281
Missouri	664	951	1,411	1,033
North Dakota	451	136	85	.....
South Dakota	507	239	.....	.....
Nebraska	336	209	247	2
Kansas	180	401	630	19
South Central division	3,329	7,027	6,397	4,032
Kentucky	716	937	1,000	1,006
Tennessee	308	541	673	803
Alabama	229	386	347	383
Mississippi	236	452	288	354
Louisiana	169	186	136	203
Texas	1,440	4,264	3,651	1,074
Oklahoma	49	17	.....	.....
Indian Territory	13	.....	55	.....
Arkansas	169	244	247	209
Western division	22,229	14,939	14,582	2,232
Montana	4,215	2,353	279	.....
Wyoming	3,327	713	450	.....
Colorado	1,358	897	1,092	.....
New Mexico	3,334	2,475	3,939	972
Arizona	669	515	467	.....
Utah	2,553	1,937	523	42
Nevada	568	273	231	.....
Idaho	1,966	358	117	.....
Washington	558	265	389	10
Oregon	1,961	1,780	1,368	97
California	1,725	3,378	5,727	1,111
Hawaii	85	.....	.....	.....

[1] Exclusive of spring lambs.
[2] Reported by enumerators and probably includes some lambs.

To show the continuous movement of the sheep industry, from the East and the South to the far West, there is given in table CCXXIX, by geographic divisions, the per cent which the number of sheep, exclusive of lambs, in each division, formed of the total number in the country, in 1860, 1880, 1890, and 1900.

TABLE CCXXIX.—PER CENT OF THE NUMBER OF SHEEP IN THE UNITED STATES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1860 TO 1900.

GEOGRAPHIC DIVISIONS.	[1] 1900	[2] 1890	[2] 1880	[2] 1860
The United States	100.0	100.0	100.0	100.0
North Atlantic	6.3	10.1	11.8	26.4
South Atlantic	4.3	6.0	6.1	11.9
North Central	25.2	30.2	32.4	35.6
South Central	8.3	17.2	15.2	16.8
Western	55.7	36.5	34.6	9.3
Hawaii	0.2	.....	.....	.....

[1] Per cent of sheep, exclusive of spring lambs.
[2] Per cent of the number of sheep as reported. The numbers probably include some spring lambs.

In 1860 the North Atlantic division contained 26.4 per cent of the total number of sheep, while in 1900 it had only 6.3 per cent. The Western division contained in 1860 only 9.3 per cent of all the sheep in the country, while in 1900 it reported 55.7 per cent.

The losses in the East and South from dogs were proportionately as great as those in the range country from wolves, coyotes, and weather conditions. Under these circumstances, there has been a tendency to transfer the sheep flocks to the cheaper lands of the West, where their care constitutes a special industry, instead of being merely incidental to other farming operations, as in the East and South.

The sheep in the North Atlantic division decreased from 4,133,027 in 1890 to 2,533,579 in 1900, a loss of 38.7 per cent. No increase was shown for any state of the group. There were notable decreases in New Hampshire, Vermont, New Jersey, New York, and Pennsylvania, amounting to over 50 per cent in both New Hampshire and New Jersey. The largest decreases in numbers were in New York and Pennsylvania. In the latter state, the decrease was from 1,612,107 to 959,483, or 40.5 per cent, and in New York, from 1,528,979 to 984,516, or 35.6 per cent.

The number of sheep in the South Atlantic division decreased from 2,445,386 in 1890 to 1,706,199 in 1900, or 30.2 per cent. Of all the states in this division Florida alone showed an increase, amounting to 4,434. It is more than probable, however, that this increase was more apparent than real, and was caused by the enumeration of range sheep in that state, which was not done in the census of 1890. There were notable decreases in Delaware, West Virginia, North Carolina, and Georgia.

The number of sheep in the North Central division decreased in ten years 18.5 per cent, or from 12,332,154 to 10,055,721. Increases occurred in Wisconsin, Iowa, North Dakota, South Dakota, and Nebraska. The most notable decreases were in Ohio, Michigan, Illinois, Missouri, and Kansas, amounting to 55.2 per cent in the last-named state. In Ohio the decrease in number was 1,412,479, or 34.8 per cent, and in Michigan 774,388, or 32.3 per cent.

In the South Central division the number of sheep decreased from 7,027,197 in 1890 to 3,328,848 in 1900, a loss of 52.6 per cent. An increase was shown for Oklahoma only, amounting to 31,970. Notable decreases were shown for Kentucky, Tennessee, Alabama, Mississippi, and Texas, the number in the last-named state falling from 4,264,187 to 1,439,940, or 66.2 per cent.

In the Western division the number increased from 14,938,548 to 22,228,620, a gain of 48.8 per cent. A decrease was shown for only one state, California, which suffered a loss of 48.9 per cent. Notable gains were shown for nearly all of the other states. The per cent of gain in Montana was 79.2; in Wyoming, 367.0; in Colorado, 50.8; in New Mexico, 34.7; in Utah, 31.8; in Idaho, 449.5; in Nevada, 107.8; and in Washington, 110.4.

CHANGES IN WOOL CLIP SINCE 1850.

Owing to the special causes already mentioned, it is difficult to make a trustworthy comparison of census reports of the wool clip. In 1860 the census failed to include reports of the wool for at least 9 per cent of the enumerated sheep, as is indicated by the special examination of the reports of the census of 1880. Besides this omission, the census of 1860 gave no estimate of the wool from the 1,505,810 unenumerated sheep. Taking these facts into consideration, it becomes probable that the wool clip of that year was at least 20 per cent greater than indicated by the enumeration and shown in Table 61. The total shortage for 1850 was even greater, owing to the failure to enumerate the large number of sheep in California and Texas. As no estimates were made of unenumerated sheep in 1870, no reliable comparison of the wool product of the country is possible for that year; but it can be made for the North Atlantic division, the only geographic division not having more or less unenumerated range sheep at the time.

For 1890 estimates of the unreported wool for the United States were made, but not by states and geographic divisions. The best possible comparison for the country of the sheep industry and wool product, exclusive of pulled wool or that from slaughtered sheep, is therefore afforded by the following table.

TABLE CCXXX.—NUMBER OF SHEEP, WITH TOTAL AND AVERAGE WEIGHT OF WOOL, ON FARMS AND RANGES: SUMMARY 1880 TO 1900.

YEARS.	Sheep.	POUNDS OF WOOL.	
		Total.[1]	Average per sheep.
1900	39,987,573	265,991,812	[2] 6.7
1890	40,876,312	227,826,735	5.6
1880	42,192,074	202,681,751	4.8

[1] Exclusive of 1,000,000 pounds of wool shorn from sheep sold for slaughter in 1900, and pulled wool, as follows: 1900, 33,000,000 pounds; 1890, 42,000,000 pounds; 1880, 38,000,000 pounds.
[2] The average of the fleeces, exclusive of those obtained by the fall shearing of 1899.

From 1880 to 1890 the wool clip increased 25,144,984 pounds, or 12.4 per cent, and in the next decade 38,165,077 pounds, or 16.8 per cent. The average weight per fleece in 1900 was 6.7 pounds, or 1.1 pounds greater than in 1890 and 1.9 pounds greater than in 1880. If the number of sheep in former census reports included 10.0 per cent lambs, the average product of wool per sheep would have been 6.7 pounds in 1900, 6.1 pounds in 1890, and 5.3 pounds in 1880. If the special investigation of the Tenth Census concerning the omitted wool of the Ninth and earlier census reports may be taken as a measure of their defects, that average in 1850 was about 2.75 pounds, and 2.96 pounds in 1860. In the fifty years since the first agricultural census, the average production of wool per sheep has increased approximately 140 per cent; so that while sheep in the United States increased from about 24,000,000 to 39,937,573, or about 67 per cent, the total wool production has increased 300.0 per cent. The 24,000,000 sheep of 1850 probably produced, exclusive of pulled wool, at least 64,000,000 pounds instead of the 52,516,959 pounds as reported. That would not have been far from 2.75 pounds per capita of population. In 1900, exclusive of wool from slaughtered sheep, there were produced 265,991,812 pounds, or 3.52 pounds per capita of population, a relative increase of about one-fourth.

GOATS AND MOHAIR.

ANGORA GOATS.

The Angora goat, a native of Asia Minor, was introduced into this country in 1849, and has been bred extensively in the United States. It crosses readily with the common goat, and the crossbreed frequently becomes the foundation of a good flock of fleece-bearing animals.

Angoras are among the most useful of domestic animals. Their fleeces, called mohair, furnish material for the manufacture of some of the finest fabrics, their flesh is exceedingly delicate and nutritious, and their milk is richer than that of the cow. Their habit of browsing enables the farmer in a wooded locality to keep them to advantage while clearing the land.

NUMBER OF GOATS IN 1900.

Previous to 1900 there had been no enumeration of goats in the United States. In that year they were reported by the operators of 77,534 farms and ranges, and by 22,167 owners and renters of barns and inclosures elsewhere. The total number of goats in the United States, June 1, 1900, was 1,949,605, all but 4.0 per cent of which were on farms and ranges, those not on farms or ranges numbering only 78,353.

The following table presents a summary of the number of goats on farms and ranges, June 1, 1900, by geographic divisions.

TABLE CCXXXI.—NUMBER, VALUE, AND AVERAGE VALUE OF GOATS ON FARMS AND RANGES IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	GOATS ON FARMS AND RANGES.			
	Farms reporting goats.	Number.	Value.	Average value.
The United States	77,534	1,871,252	$3,266,080	$1.75
North Atlantic	1,945	6,391	30,114	4.71
South Atlantic	19,101	205,289	173,764	0.85
North Central	13,392	120,036	393,771	3.28
South Central	34,917	942,433	1,249,197	1.33
Western	8,160	596,450	1,418,503	2.38
Alaska and Hawaii	19	653	731	1.12

Of the 77,534 farms and ranges in the United States reporting 1,871,252 goats, the South Central division alone had 34,917, or 45.0 per cent of the farms, with 942,433, or 50.4 per cent of the goats. Texas reported 627,333 goats, or 66.5 per cent of the total number in the South Central division, and 33.5 per cent of all goats reported on farms and ranges in the United States. The Western division had 8,160 farms reporting 596,450 goats, or 31.9 per cent of the total number. Of the four states and territories which had over 100,000 goats, June 1, 1900, all, with the exception of Texas, are located in the Western division. Texas led with 627,333; New Mexico, 224,136; Oregon, 109,661; and California, 109,021.

The average value of goats in the North Atlantic division was $4.71, and was higher than in any other geographic division or in the United States. The average value for the United States was $1.75; for the South Central division, $1.33; and for the Western division, $2.38. These averages indicate that the goats raised in the North Atlantic and North Central divisions are of a finer breed than those raised in any other division.

GOATS ON FARMS CLASSIFIED BY AREA, PRINCIPAL SOURCE OF INCOME, TENURE, AND RACE OF FARMER.

A summary for the United States of the number of farms of each of the ten specified areas on which goats were reported, and the number of goats, as taken from Table 32, is presented in table CCXXXII. The average number of goats on such farms is given by geographic divisions in table CCXXXIII.

TABLE CCXXXII.—NUMBER OF FARMS IN THE UNITED STATES CLASSIFIED BY AREA REPORTING GOATS, JUNE 1, 1900, WITH THE TOTAL AND AVERAGE NUMBER PER FARM.

FARMS CLASSIFIED BY AREA IN ACRES.	Farms reporting.	Number.	Average number per farm.
Total	77,534	1,871,252	24.1
Under 3	692	74,877	108.2
3 and under 10	2,022	38,044	18.8
10 and under 20	3,167	50,998	16.1
20 and under 50	10,388	126,614	12.1
50 and under 100	13,813	155,418	11.3
100 and under 175	20,607	390,851	19.0
175 and under 260	9,809	151,591	15.5
260 and under 500	9,686	230,748	23.8
500 and under 1,000	4,252	201,786	47.5
1,000 and over	3,098	450,330	145.4

TABLE CCXXXIII.—AVERAGE NUMBER OF GOATS REPORTED ON FARMS CLASSIFIED BY AREA, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

FARMS CLASSIFIED BY AREA IN ACRES.	The United States.	GEOGRAPHIC DIVISIONS.					
		North Atlantic.	South Atlantic.	North Central.	South Central.	Western.	Hawaii.
Total	24	3	11	9	27	73	34
Under 3	108	1	5	3	104	143	1
3 and under 10	19	1	4	3	14	43	1
10 and under 20	16	2	5	3	17	37	2
20 and under 50	12	2	8	6	10	51	2
50 and under 100	11	3	9	6	12	38	3
100 and under 175	19	4	11	7	16	73	.....
175 and under 260	15	6	12	9	17	49	3
260 and under 500	24	4	14	11	25	71	254
500 and under 1,000	47	5	15	20	50	141	28
1,000 and over	145	8	19	47	207	137	22

The high average shown in table CCXXXIII for farms containing less than 3 acres was principally due to the existence of ranches using the public domain in the Western division. In the North Atlantic division, where the flocks graze wholly upon fenced land, the averages increase with the size of the farms. This is also the case in all other geographic divisions except the Western and South Central.

The following table presents some facts derived by calculation from Table 33. It shows for the farms of specified sources of income the average number of goats per farm, the per cent of the total number of farms reporting goats, and of goats that are in each group, and the per cent of all farms in each group. The small average number of goats in all the groups of farms, with the exception of the live-stock farms, reflects the fact that goat raising is secondary to other more important farming operations.

TABLE CCXXXIV.—TOTAL AND AVERAGE NUMBER OF GOATS PER FARM, ON FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	Farms reporting.	NUMBER OF GOATS.		PER CENT OF TOTAL IN GROUPS.		Per cent of all farms in groups.
		Total.	Average per farm.	Farms reporting.	Goats.	
All farms	77,534	1,871,252	24.1	100.0	100.0	100.0
Hay and grain	10,161	152,892	15.0	13.1	8.2	23.0
Vegetables	1,674	24,384	14.6	2.2	1.3	2.7
Fruits	634	9,260	14.6	0.8	0.5	1.4
Live stock	22,742	1,098,340	48.3	29.3	58.7	27.3
Dairy produce	3,156	50,005	15.8	4.1	2.7	6.2
Tobacco	929	9,016	9.7	1.2	0.5	1.9
Cotton	19,161	215,268	11.2	24.7	11.5	18.7
Rice	77	941	12.2	0.1	(1)	0.1
Sugar	166	2,004	12.1	0.2	0.1	0.1
Flowers and plants	7	8	1.1	(1)	(1)	0.1
Nursery products	12	60	5.0	(1)	(1)	(1)
Taro	3	5	1.7	(1)	(1)	(1)
Coffee	3	7	2.3	(1)	(1)	18.5
Miscellaneous	18,809	309,062	16.4	24.3	16.5	(1)

[1] Less than one-tenth of 1 per cent.

From this table it is apparent that few farms in the United States derive their income entirely from goats. The exceptions are to be found in Arizona, New Mexico, and California.

The following table presents the number of farms of specified tenures in the United States reporting goats, together witht he number of goats reported.

TABLE CCXXXV.—NUMBER OF FARMS OF SPECIFIED TENURES IN THE UNITED STATES REPORTING GOATS, WITH THE NUMBER OF GOATS REPORTED, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY TENURE.	Farms reporting goats.	Number of goats.	Per cent of farms.	Per cent of goats.	Average number per farm.
Total	77,534	1,871,252	100.0	100.0	24.1
Owners	51,454	1,205,569	64.4	64.4	23.4
Part owners	6,410	213,256	8.3	11.4	33.3
Owners and tenants	822	13,015	1.0	0.7	15.8
Managers	1,381	181,660	1.8	9.7	131.5
Cash tenants	8,807	146,080	11.3	7.8	16.5
Share tenants	8,660	112,722	11.2	6.0	13.0

From the foregoing table it will be seen that farms conducted by managers had four times as many goats per farm as those of any other tenure. This was due to the larger size of farms, many of them being live-stock ranges. The smallest average was on farms of share tenants. The largest number of goats, 64.4 per cent of the total, were on farms of owners, while the farms of owners and tenants reported the smallest number, or 7.0 per cent.

White farmers operated 67,617, or 87.2 per cent, of the 77,534 farms reporting goats, and colored farmers only 9,917, or 12.8 per cent. The negroes owned a considerable portion of the goats reported by colored farmers. Of the 136,116 goats reported by colored farmers, 61,224 were owned by 262 Indian farmers in Arizona, 7,640 by 298 farmers of the same race in New Mexico, and a few other goats were reported by Indians in various parts of the country.

The following table shows the number of farms operated by white and colored farmers reporting goats, the number of goats reported, and the average number per farm.

TABLE CCXXXVI.—TOTAL AND AVERAGE NUMBER OF GOATS ON FARMS OF WHITE AND COLORED FARMERS, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Farms reporting goats.	Number of goats.	Average number per farm.
The United States	67,617	1,735,136	25.7
North Atlantic	1,943	6,377	3.3
South Atlantic	15,283	183,422	12.0
North Central	13,255	119,310	9.0
South Central	29,630	899,842	30.4
Western	7,545	526,099	69.7
Hawaii	11	86	7.8

B.—FARMS OF COLORED FARMERS.

The United States	9,917	136,116	13.7
North Atlantic	2	14	7.0
South Atlantic	3,868	21,867	5.7
North Central	137	726	5.3
South Central	5,287	42,591	8.1
Western	615	70,351	114.4
Hawaii	8	567	70.9

MOHAIR.

Table CCXXXVII shows, by geographic divisions, the number of farms reporting mohair and goat hair, with the number of fleeces shorn, their weight in pounds, and value.

TABLE CCXXXVII.—PRODUCTION AND VALUE OF MOHAIR AND GOAT HAIR IN 1899, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Farms reporting.	Fleeces shorn.	Weight of fleeces in pounds (unwashed).	Value.
The United States	4,081	454,932	961,328	$267,864
North Atlantic	43	1,163	2,852	1,008
South Atlantic	52	676	1,718	501
North Central	685	21,234	58,095	17,227
South Central	838	195,992	281,158	79,185
Western	2,463	235,867	617,505	169,943

The total number of fleeces, according to the above table, was 454,932. Table CCXXXI shows that the total number of goats was 1,871,252. It is apparent, therefore, that but 24.3 per cent of all goats were shorn during the year preceding June 1, 1900.

The Western division produced the greatest weight of mohair, 64.2 per cent of the total, and the South Atlantic the least, 0.2 per cent. The South Central states furnished the largest and the South Atlantic the smallest number of fleeces per farm. The greatest average weight per fleece, 2.7 pounds, was for the North Central division, while the highest average value per pound was for the North Atlantic.

SWINE.

ORIGIN OF BREEDS IN THE UNITED STATES.

The swine introduced into the United States by the early colonists were of inferior stock, and the improvement in breed is the result of careful selection, breeding, and feeding in comparatively recent years. Size was formerly the chief aim of breeders, and was insisted upon, regardless of proportions, per cent of offal, or cost of production.

Between 1818 and 1830 the Chester White was evolved as a distinct breed by the crossing of some large white stock from Bedfordshire, England, with the white hogs then common in Chester county, Pa. The Berkshire was introduced from England about 1830, but did not come into general favor until the decade 1870 to 1880. The Poland-China originated in southwestern Ohio between 1838 and 1840, from the crossing of various minor breeds. It was known by many names, from among which, in 1872, that of "Poland-China" was selected by the national convention of swine breeders. This breed was crossed with the Berkshire, resulting in better form and fattening qualities and in establishing the black color with white markings.

The interest in swine breeding in recent years is illustrated by the dates of first registration of the different swine breeders' associations, which were as follows: American Berkshire, 1875; Standard Poland-China, 1877; Central Poland-China, 1879; American Chester White, 1884; American Essex, 1887; American Duroc-Jersey, 1890; and Standard Chester White, 1890. As a result of this interest on the part of breeders, swine in this country have attained an admirable standard with regard to form, bone, per cent of offal, and line of maturity.

Because of its favorable conditions of soil and climate, and its vast annual crops of Indian corn, the chief food for swine, the North Central division has become the seat of the swine-rearing industry of the world.

NUMBER AND VALUE.

Swine were reported, June 1, 1900, from 4,335,989 farms and ranges, and from 462,861 barns and inclosures not on farms. The total number was 64,694,222, of which 62,876,108, or 97.2 per cent, were on farms and ranges, and 1,818,114, or 2.8 per cent, were in barns and inclosures elsewhere.

Table CCXXXVIII gives, by geographic divisions, a summary of the number of swine on farms and ranges, with their total and average values.

TABLE CCXXXVIII.—NUMBER, VALUE, AND AVERAGE VALUE OF SWINE ON FARMS AND RANGES IN THE UNITED STATES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Farms reporting.	Number.	Value.	Average value.
The United States	4,335,989	62,876,108	$232,027,707	$3.69
North Atlantic	453,306	2,322,206	13,011,651	5.60
South Atlantic	767,439	5,562,762	12,738,747	2.29
North Central	1,740,132	40,474,289	167,776,242	4.15
South Central	1,266,069	13,047,827	32,233,204	2.47
Western	118,417	1,460,957	6,218,187	4.26
Alaska and Hawaii	626	8,067	49,676	6.16

Estimating the average value of swine not on farms to be the same as that of swine on farms, the total value of the former would be $6,708,841, and that of all swine in the country $238,736,548. The average value of swine in the United States was $3.69.

Aside from Alaska and Hawaii, the North Atlantic division showed the highest average, $5.60; the Western division showing, $4.26; the North Central, $4.15; the South Central, $2.47; and the South Atlantic, $2.29. The high average value in the first-named division was doubtless due to the large number of swine used by the butchers in the great centers of population and sold direct to the consumer as fresh pork. In the Western

division the value reported, was what the animal was worth to the consumer himself, without the intervention of any middleman or butcher. This is proved by the fact that prices were highest in Montana and Wyoming, where there are no large cities or markets, while they were lowest in California and Oregon, which states have larger and better markets. The high average values in the North Central states reflect the presence of the many large packing establishments in this division.

The swine of all New England states had an average value of over $6.50, and in the remaining states of the North Atlantic division the average exceeded $5.25, being highest in Rhode Island, where it was $7.87. The high values in Delaware and Maryland, of the South Atlantic division, were due to the proximity of large cities and ready markets. Iowa has the reputation of producing the "perfect hog," but the average value was exceeded in three other states of the North Central division. In North Dakota, which showed the highest average, the same reason holds which has been given for Montana and Wyoming. In Nebraska and Kansas the smaller numbers of swine perhaps explain the slightly higher prices, although the difference may possibly be peculiar to the year 1900. The average value was higher in Iowa, according to the Department of Agriculture, than in either Kansas or Nebraska.

The lowest average values of swine were in the states of the South Atlantic division, ranging from $2.45 in Tennessee to $1.51 in Florida. Without exception, the states bordering this region on the north and west had smaller averages than those of any of the other states north or west of them, indicating very clearly that in the Southeastern section much less attention is given to the improvement of swine than elsewhere in the United States.

Nearly two-thirds of the swine were raised in the North Central states. Iowa ranked first with 9,723,791, or 15.5 per cent of the total number on farms and ranges, and 18.9 per cent of the total value of swine. Next to Iowa, the most important swine-raising states were, in the order named: Illinois, with 5,915,468; Missouri, 4,524,664; Nebraska, 4,128,000; Indiana, 3,763,389; and Kansas, 3,594,859.

SWINE ON FARMS, CLASSIFIED BY AREA, PRINCIPAL SOURCE OF INCOME, TENURE, AND RACE OF FARMER.

Table CCXXXIX shows the total and average number of swine on farms of specified areas, June 1, 1900, with percentages.

TABLE CCXXXIX.—TOTAL AND AVERAGE NUMBER OF SWINE ON FARMS OF SPECIFIED AREAS, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY AREA IN ACRES.	Number of farms.	Farms reporting swine.	Per cent of all farms reporting swine.	Number of swine.	Per cent of all swine.	Average number per farm reporting.
Total	5,739,657	4,335,989	75.5	62,876,108	100.0	14.5
Under 3	41,882	12,576	30.0	68,243	0.1	5.4
3 and under 10	226,564	99,981	44.1	424,801	0.7	4.2
10 and under 20	407,012	221,641	54.5	1,119,391	1.8	5.1
20 and under 50	1,257,785	857,267	68.2	5,638,406	8.9	6.6
50 and under 100	1,366,167	1,086,116	79.5	11,447,953	18.2	10.5
100 and under 175	1,422,328	1,179,232	82.9	19,543,611	31.1	16.6
175 and under 260	490,104	432,313	88.2	10,568,018	16.8	24.5
260 and under 500	377,992	327,585	86.7	9,814,244	15.6	30.0
500 and under 1,000	102,547	85,265	83.1	2,872,203	4.6	33.7
1,000 and over	47,276	34,013	71.9	1,379,238	2.2	40.6

The greatest numbers of swine were kept on farms containing from 50 to 260 acres, these farms reporting 66.1 per cent of the total number. The average number for the smaller farms was approximately 5, and for farms containing over 50 acres the number increased with the size of farms.

Table CCXL gives the total and average number of swine on farms of specified principal sources of income, June 1, 1900, with percentages.

TABLE CCXL.—TOTAL AND AVERAGE NUMBER OF SWINE ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	Number of farms.	Farms reporting swine.	Per cent of all farms reporting swine.	Number of swine.	Per cent of all swine.	Average number per farm reporting.
Total	5,739,657	4,335,989	75.5	62,876,108	100.0	14.5
Hay and grain	1,319,856	947,770	71.9	15,218,019	24.2	16.1
Vegetables	155,898	82,501	52.9	553,953	0.9	6.7
Fruits	82,176	37,941	46.1	271,779	0.4	7.3
Live stock	1,564,714	1,318,440	84.3	30,649,508	48.8	23.2
Dairy produce	357,678	256,286	71.7	2,247,465	3.6	8.8
Tobacco	106,272	80,908	76.1	650,525	1.0	8.0
Cotton	1,071,545	795,094	74.3	6,073,824	9.7	7.6
Rice	5,717	3,047	53.3	25,133	.....	8.2
Sugar	7,344	4,314	58.7	48,623	0.1	11.3
Flowers and plants	6,159	289	4.7	1,228	.....	4.2
Nursery products	2,029	536	26.4	4,588	.....	8.6
Taro	441	94	21.3	1,590	.....	16.9
Coffee	512	122	23.8	678	.....	5.6
Miscellaneous	1,059,416	808,947	76.4	7,129,195	11.3	8.8

Nearly one-half of the swine were kept on live stock farms, and one-fourth on hay and grain farms. A large proportion of cotton farms had swine, but the average number per farm was smaller than for the two other classes referred to. Of the sugar farms, 58.7 per cent reported swine, the average number per farm being 11.3.

Table CCXLI shows the total and average number of swine on farms of specified tenures, June 1, 1900, with percentages

TABLE CCXLI.—TOTAL AND AVERAGE NUMBER OF SWINE ON FARMS OF SPECIFIED TENURES, JUNE 1, 1900, WITH PERCENTAGES.

FARMS CLASSIFIED BY TENURE.	Number of farms.	Farms reporting swine.	Per cent of all farms reporting swine.	Number of swine.	Per cent of all swine.	Average number per farm reporting.
Total	5,739,657	4,335,989	75.5	62,876,108	100.0	14.5
Owners	3,149,344	2,418,348	76.8	35,701,309	56.8	14.8
Part owners	451,515	380,673	84.3	7,749,588	12.3	20.4
Owners and tenants	53,299	45,963	86.2	899,786	1.4	19.6
Managers	59,213	36,058	60.9	1,089,764	1.7	30.2
Cash tenants	752,920	535,437	71.1	6,947,074	11.1	13.0
Share tenants	1,273,366	919,510	72.2	10,488,587	16.7	11.4

Owners reported a greater number of swine than farmers of all other tenures, or 56.8 per cent of the entire number. The per cent of "owners and tenants" reporting swine was 86.2, which was greater than that for any other tenure, the smallest per cent, 60.9, being for managers. As in the case of most other domestic animals, the average number of swine to a farm was largest on farms of managers, and smallest on those of share tenants.

The numbers of swine kept on farms of white and colored farmers in the United States are given in the following table:

TABLE CCXLII.—TOTAL AND AVERAGE NUMBER OF SWINE ON FARMS OF WHITE AND COLORED FARMERS, JUNE 1, 1900, WITH PERCENTAGES, BY GEOGRAPHIC DIVISIONS.

A.—FARMS OF WHITE FARMERS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting swine.	Per cent of all farms reporting swine.	Number of swine.	Per cent of all swine.	Average number per farm reporting.
The United States	4,970,129	3,814,372	76.7	59,741,164	100.0	15.7
North Atlantic	675,366	452,134	66.9	2,317,019	3.9	5.1
South Atlantic	673,354	552,013	82.0	4,637,128	7.8	8.4
North Central	2,179,667	1,730,956	79.4	40,379,130	67.6	23.3
South Central	1,206,367	962,000	79.7	10,958,382	18.3	11.4
Western	234,854	117,053	49.8	1,447,656	2.4	12.4
Alaska and Hawaii	521	216	41.5	1,849	(1)	8.6

B.—FARMS OF COLORED FARMERS.

The United States	769,528	521,617	67.8	3,134,944	100.0	6.0
North Atlantic	2,140	1,172	54.8	5,187	0.2	4.4
South Atlantic	288,871	205,426	71.1	925,634	29.5	4.5
North Central	16,900	9,176	54.3	95,159	3.0	10.4
South Central	451,799	304,069	67.3	2,089,445	66.7	6.9
Western	8,054	1,364	16.9	13,301	0.4	9.8
Alaska and Hawaii	1,764	410	23.2	6,218	0.2	15.2

[1] Less than one-tenth of 1 per cent.

Taking the United States as a whole, this table shows that the number of white farmers keeping swine was relatively greater than that of colored farmers. The most of these animals in the United States were in the North Central division, in which there were comparatively few colored farmers. In the South Central and South Atlantic divisions, the number of farmers keeping swine was relatively greater than in any other division, but the average number per farm was smaller. In the South Atlantic division the per cent of the total number of white farmers reporting swine was 82.0, while that of colored farmers was 71.1, and in the South Central the per cent of white was 79.7, and that of colored, 67.3. In the South Atlantic division the white farmers reported 4,637,128 swine, and the colored farmers, 925,634. The latter constituted 27.1 per cent of all farmers reporting swine, and reported 16.6 per cent of all swine on farms in that division.

NUMBER OF SWINE IN 1900 AND IN PRECEDING CENSUS YEARS COMPARED.

Fewer swine than any other class of animals are kept on ranges, hence comparisons in number between one census and another can be made with greater facility, and with a smaller margin of error, than for other live stock.

Table CCXLIII gives the number of swine as reported in 1890 and 1900, for all states and territories, and table CCXLIV presents a summary for the census years 1850 to 1900.

TABLE CCXLIII.—NUMBER OF SWINE, 1890 AND 1900, AND PER CENT OF INCREASE, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	1900	1890	Per cent of increase.
The United States	62,876,108	57,426,859	9.5
North Atlantic division	2,322,206	2,753,349	[1] 15.7
Maine	79,018	91,297	[1] 13.5
New Hampshire	51,211	58,585	[1] 12.6
Vermont	95,090	92,083	3.3
Massachusetts	78,925	91,483	[1] 13.7
Rhode Island	11,508	12,055	[1] 4.5
Connecticut	46,447	62,087	[1] 25.2
New York	676,639	848,342	[1] 19.8
New Jersey	175,387	224,388	[1] 21.8
Pennsylvania	1,107,981	1,278,029	[1] 13.3
South Atlantic division	5,562,762	5,082,321	9.5
Delaware	46,782	44,981	3.9
Maryland	317,902	312,020	1.9
District of Columbia	802	1,306	[1] 38.6
Virginia	946,443	796,691	18.8
West Virginia	442,844	411,018	7.7
North Carolina	1,300,469	1,251,006	4.0
South Carolina	618,995	494,696	25.1
Georgia	1,424,298	1,396,362	2.0
Florida	464,277	374,241	24.1
North Central division	40,474,289	37,624,632	7.6
Ohio	3,188,563	3,275,922	[1] 2.7
Indiana	3,763,389	3,320,817	13.3
Illinois	5,915,468	5,924,818	[1] 0.2
Michigan	1,165,200	1,126,141	3.5
Wisconsin	2,014,631	1,347,750	49.5
Minnesota	1,440,806	853,715	68.8
Iowa	9,723,791	8,266,779	17.6
Missouri	4,524,664	4,987,432	[1] 9.3
North Dakota	191,798	92,213	107.9
South Dakota	823,120	590,465	39.4
Nebraska	4,128,000	3,815,647	8.2
Kansas	3,594,859	4,022,933	[1] 10.6

[1] Decrease.

TABLE CCXLIII.—NUMBER OF SWINE, 1890 AND 1900, AND PER CENT OF INCREASE, BY STATES AND TERRITORIES—Continued.

STATES AND TERRITORIES.	1900	1890	Per cent of increase.
South Central division	13,047,827	10,898,586	19.7
Kentucky	1,954,537	2,036,746	[1]4.0
Tennessee	1,976,984	1,922,912	2.8
Alabama	1,423,329	1,421,884	0.1
Mississippi	1 290,498	1,163,141	10.9
Louisiana	788,425	569,935	38.3
Texas	2,665,614	2,255,220	18.2
Oklahoma	584,878	21,962	2,563.1
Indian Territory	650,255	1,572	41,264.8
Arkansas	1,713,307	1,505,214	13.8
Western division	1,460,957	1,067,971	36.8
Montana	49,496	17,151	188.6
Wyoming	15,471	6,794	127.7
Colorado	101,198	64,391	57.2
New Mexico	20,426	11,256	81.5
Arizona	18,103	9,230	96.1
Utah	65,732	27,046	143.0
Nevada	15,174	7,373	105.8
Idaho	114,080	32,188	254.4
Washington	181,535	90,274	101.1
Oregon	281,406	208,259	35.1
California	598,336	594,009	0.7
Alaska and Hawaii [2]	8,067	.....	.....

[1] Decrease. [2] No report prior to 1900.

TABLE CCXLIV.—NUMBER OF SWINE, WITH INCREASE AND PER CENT OF INCREASE BY DECADES: SUMMARY 1850 TO 1900.

YEAR.	Number.	Increase.	Per cent of increase.
1900	62,876,108	5,449,249	9.5
1890	57,426,859	7,654,189	15.4
1880	49,772,670	24,638,101	98.0
1870	25,134,569	[1]8,378,298	[1]25.0
1860	33,512,867	3,158,654	10.4
1850	30,354,213	.....	.....

[1] Decrease.

The fact that the reported number of swine in the decade from 1890 to 1900 increased only 9.5 per cent, while the population increased over 20 per cent, may be construed as evidence in support of the contention that in the last ten years the meat supply of the country has not kept pace with the demand. In statistics relating to this subject there are, however, margins of possible error. Neither in 1890 nor in 1900 were swine classified by age, and it is impossible to ascertain from the figures of either census the number of young swine that were included in the enumeration.

The increase in the number of swine during the last decade was 5,449,249. The North Atlantic division was the only one to show a decrease, reporting 431,143, or 15.7 per cent less in 1900 than in 1890. Every state except Vermont shared in this decrease, which ranged from 547, or 4.5 per cent, in Rhode Island, to 170,048, or 13.3 per cent, in Pennsylvania. New Jersey showed the greatest per cent of decrease, 21.8. The increase in Vermont was only 3,007, or 3.3 per cent. The decrease in the total number for this division was probably due largely to declining transportation rates, making it more practicable to obtain meats from sections where the cost of production was less. An explanation, perhaps equally important, is found in the increase in city marketing of milk, and decreased butter production, in this section, and the consequent reduction of the supply of skim milk and buttermilk for swine feeding.

The North Central division showed the largest numerical increase, 2,849,657, and the smallest per cent of increase, 7.6. The highest per cent of gain was in the Western division, where it amounted to 36.8. The increase in the South Atlantic division was 480,441, or 9.5 per cent, the same ratio as that for the United States, and that in the South Central 2,149,241, or 19.7 per cent. In total number of swine reported, the five geographic divisions ranked as they did ten years before.

Excepting the District of Columbia, every state and territory of the South Atlantic and Western divisions, and all except Kentucky, in the South Central, showed gains. In the North Central division, however, four states showed losses, those in Kansas and Missouri being especially noteworthy, while Illinois practically stood still, the loss being but 0.2 per cent. The decreases in Kansas and Missouri were doubtless due to the practice of marketing the stock at an earlier age than formerly, which custom accounts also for the small per cent of change in the states where hogs are raised most extensively for market, and the relatively great change in states where their principal use was for home consumption.

Iowa led in numerical increase, having gained 1,457,012, or more than double the increase of any other state or territory. Wisconsin, Indian Territory, Minnesota, and Oklahoma followed, in the order named. The opening of new settlements and farms in the states and territories of the Western division within the past ten years, explains the changes there. California gained but 0.7 per cent, while Idaho increased 254.4 per cent.

INCOME FROM SALES OF LIVE STOCK.

ANIMALS SOLD.

The enumerators and special agents secured reports of the amounts received from the sale of live animals in 1899, and of the value of animals slaughtered on farms. With reference to reports of sales, the enumerators were instructed to deduct from the amount received from sales the amount paid for animals purchased. The blanks used by the special agents called for separate reports of the value of animals sold and animals purchased. These were tabulated separately, and the differences of the two results are shown in the reports here presented.

The special agents experienced great difficulty in securing reports of the value of animals sold, and stated that this portion of their work was more or less defective. This fact is reflected in table 4, which gives the number of live-stock farms that reported no income. There were 2,841 such farms in the Western division, 2,633 with reported income of less than $50, and 3,259 with incomes of $50 and less than $100. Could correct reports have been obtained from these farms, they would doubtless have been classed quite differently, so far as income was concerned. The same remark applies with less force to all similar farms in other geographic divisions.

The farms with no incomes reported had live stock to the value of $44,851,749; those with incomes of less than $50, $18,570,816; and those with incomes of $50 and under $100 each, $36,055,821. The total for these three classes was $99,478,386, or 3.2 per cent of the value of all live stock. It may safely be assumed that the report of sales of live stock and of animals slaughtered is short of the actual amount by at least this percentage, and many indications are found that the actual shortage is nearer 10 per cent than 3.

Table CCXLV gives, by geographic divisions, the total reported receipts from sales of live stock, with the averages per farm, and table CCXLVI the reported value of animals slaughtered on farms.

TABLE CCXLV.—RECEIPTS FROM SALES OF LIVE ANIMALS ON FARMS AND RANGES, IN 1899, WITH PERCENTAGES AND AVERAGES AND NUMBER OF FARMS REPORTING, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Farms reporting domestic animals.	Farms reporting sales of animals.	Per cent of farms with animals reporting sales.	Amount of sales.	Average amount of sales per farm.
The United States	5,499,988	3,024,962	55.0	$722,913,114	$238.98
North Atlantic	638,503	401,941	62.9	41,273,839	102.69
South Atlantic	913,816	310,328	34.0	22,931,535	73.89
North Central	2,127,712	1,576,856	74.1	510,050,897	323.46
South Central	1,589,403	631,805	39.8	88,095,371	139.43
Western	228,983	103,802	45.3	60,262,686	580.55
Alaska and Hawaii	1,571	230	14.6	298,786	1,299.07

TABLE CCXLVI.—VALUE OF ANIMALS SLAUGHTERED ON FARMS AND RANGES IN 1899, WITH PERCENTAGES AND AVERAGES AND NUMBER OF FARMS REPORTING, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Farms reporting domestic animals.	Farms reporting animals slaughtered.	Per cent of farms with animals slaughtered.	Value of animals slaughtered.	Average value of animals slaughtered per farm.
The United States	5,499,988	4,124,278	75.0	$189,873,310	$46.04
North Atlantic	638,503	468,725	73.4	26,674,965	56.91
South Atlantic	913,816	705,002	77.1	28,344,028	40.20
North Central	2,127,712	1,719,591	80.8	75,825,258	44.09
South Central	1,589,403	1,123,591	70.7	48,928,502	43.55
Western	228,983	107,236	46.8	10,086,476	93.59
Alaska and Hawaii	1,571	128	8.1	64,081	500.63

The number of farms reporting sales of animals was proportionately large in the North. The percentage in the Western division was low, 45.3, and in Hawaii only 14.6. These percentages confirm what has been said above concerning the failure of the enumerators and special agents to secure proper reports of sales in the western part of the country and concerning the possible shortage in the amount of sales and the value of animals slaughtered.

The average sales of animals for the farms reporting them was $238.98. For Alaska and Hawaii the average was $1,299.07; for the Western division, $580.55; North Central, $323.46; North Atlantic, $102.69; South Central, $139.43; and South Atlantic, $73.89. The value of slaughtered animals averaged $46.04 for the farms reporting. For Alaska and Hawaii the average was $500.63; for the Western division, $93.59; North Central, $44.09; North Atlantic, $56.91; South Central, $43.55; and South Atlantic, $40.20.

The number and value of the various classes of domestic animals, as reported by the present census, may be made the basis of an estimate of the combined value of the animals sold from farms or slaughtered thereon, and thus furnish some assistance in determining the probable correctness of the census reports of the value of animals sold and slaughtered.

The number of steers of various ages, as reported by the census of 1900, suggests that there were slaughtered on farms, or sold therefrom for slaughter, in 1899, not less than 1,744,863 steers 1 and under 2 years old; 2,117,296, 2 and under 3; and 3,086,029, 3 years old and over. In the same period, not less than 7,183,916 cows and heifers and about 3,000,000 calves were slaughtered. Allowing a minimum of $20, $30, and $40 for the three classes of steers, $25 for the cows and heifers, and $6 for the calves, the value of the neat cattle slaughtered, or sold for slaughter, on farms was, approximately $419,455,200.

The 15,000,000 sheep and lambs sold and slaughtered had a farm value of approximately $50,000,000. The

number of swine annually slaughtered usually exceeds that on hand at any time during the year. In other words, the number sold or slaughtered in 1899 was probably in excess of 63,000,000. An average market value of a little less than $8 would make these animals aggregate $500,000,000.

To provide the 64,722 horses and 43,369 mules exported, and to meet the local demand for the cities, mines, and other calls than for the farm, not less than 400,000 horses and mules were sold, for which an average of $75 each, or $30,000,000, was received.

The aggregate of these several amounts is approximately $1,000,000,000, or substantially 10 per cent above the combined amounts reported as the value of animals slaughtered on farms and animals sold from farms. The above estimates are low, for the manufactures division of the census reports the average value of beef cattle slaughtered in the packing houses in 1899 as $44.57; sheep, $4.04; hogs, $9.28; and calves, $8.15. These averages, together with the analysis of the possible sale or slaughter of the animals mentioned, are presented to assist the student in forming a reasonable opinion concerning the possible correctness or incorrectness of the reported value of animals slaughtered on farms and of those sold for slaughter or for other purposes. Considering all these facts, it is believed that a shortage is indicated of at least 10 per cent, and possibly more, in the total reported value of animals thus disposed of.

POULTRY AND EGGS.

ORIGIN AND BREEDS OF DOMESTIC FOWLS.

With the exception of the turkey, all the different species of poultry now kept on American farms are of European or Asiatic origin. The most numerous and important of these species is the ordinary domestic fowl, designated in the tables of this report as "chickens." This fowl is unquestionably of Asiatic origin and was early domesticated, probably even in prehistoric times. It was introduced into the United States from Europe by the early colonists.

The chickens of the United States may be divided into ten classes. The American class includes the Plymouth Rock, Wyandotte, Java, American Dominique, and Jersey Blue. The Asiatic class embraces the Brahma, Cochin, and Langshan. The Mediterranean class includes the Leghorn, Minorca, Andalusian, and Spanish. The Polish class includes the White Crested, Black, Golden, Silver, White and Bearded Golden, Bearded White, Bearded Silver, and Buff Laced. The Hamburg class includes the Hamburgs, Red Caps, and Campines. The Houdans, Crêve Coeurs, and La Fleche constitute the French class. The game and game Bantam class is made up of Black-Breasted Red, Brown Red, Golden and Silver Duckwing, Red Pyle, White, Black, Birchen, Cornish and Indian games, and Malays. The Bantams, other than games, include the Sebrights, Rose Combed, Booted, White, Cochin, Japanese, and Polish. The English class includes the Dorkings and the Orpingtons, but lately introduced into the United States. The miscellaneous class comprises the Russian, Sumatra, Silky, Sultan, Frizzles, Rumpless, Yokohama, and Naked Neck.

Classified according to their prominent characteristics, the domestic fowls may be divided, more or less arbitrarily, into (1) the egg breeds, or those breeds which are the greatest egg producers; (2) the meat breeds, or those breeds whose chief value is as meat producers; (3) the general utility fowls, and (4) the fancy breeds.

The egg breeds are small and medium-sized fowls. They are generally poor setters, are easily frightened, and are very nervous in movement. In this class are the Leghorns, Spanish, Minorcas, and Hamburgs.

The meat breeds embrace those fowls which are heavy-bodied, such as the Brahma, Cochin, and Langshan. They are generally poor layers, but of gentle disposition and good setters.

The general-utility fowls are of medium size and furnish fair quantities of eggs and meat. The Plymouth Rock and Wyandotte belong to this class.

The fancy breeds, reared chiefly on account of their appearance, are, as a rule, poor egg and meat producers. The Polish, games, bantams, and some miscellaneous breeds are the chief representatives of this class.

For general purposes the Plymouth Rock and Wyandotte are the most popular of all fowls, the Plymouth Rock in particular being in great favor. Its medium size, hardy growth, and good laying qualities make it a practical fowl for the farmer. The Barred Plymouth Rock is the best known, and its history dates back over a quarter of a century. It is supposed to have come originally from a cross between the American Dominique and the Black Java. The Plymouth Rocks mature early and make excellent "broilers" when from 8 to 12 weeks old. They are good layers the year round.

The Wyandotte ranks next to the Plymouth Rock as a general-purpose fowl. It is supposed to have come originally from the Dark Brahma, Silver Spangled Hamburg, and the Breda, a French fowl. Its average weight is a pound less than that of the Plymouth Rock. There are five standard varieties of the Wyandotte, the Silver, Golden, White, Buff, and Black.

Improved Poultry Stock.—The farmer is often unaware of the advantages to be derived from good poultry stock, although there is probably no branch of animal industry in which the keeping of good stock pays better. This is particularly true when the business is conducted on a large scale.

Fowls of common or mongrel stock require as much time and labor as those of improved breeds, while the returns are far less. When good stock is purchased the outlay at the beginning is somewhat larger, but the additional expense is more than repaid by the value of the product and that of the fowls at all times.

The practice of crossbreeding pure poultry stock has

of late years received considerable attention. The intelligent pursuit of such crossbreeding is often very profitable, one of the principal advantages being the great hardiness of the fowls produced.

Poultry Raising.—It is only within comparatively recent years that the production of poultry and poultry products has assumed the proportions of a distinct industry. It was, and to a decreased extent is yet, a sort of collateral undertaking, or mere incident in general farming, conducted by the farmer's wife. With but little attention given to the welfare of fowls, the returns are often meager and unsatisfactory, but when intelligently conducted there is probably no branch of animal industry from which are secured such quick returns on money invested. The poultry keeper can, if he so desires, follow a special branch of the industry. Egg production, "broiler" raising, capon rearing, and the dressed-poultry market all offer inducements.

Around several of the large centers of consumption, such as Boston, Philadelphia, Chicago, and New York, the raising of early spring chickens, or "broilers," is carried on extensively. Often the early chickens are secured by means of the "hothouse" plan, the chickens being kept indoors under glass where weather conditions do not affect them. Hammonton, N. J., has for many years been the site of large farms for raising broilers, but of late years the industry has somewhat declined in that place. It is a business requiring skill, energy, and some capital. Good prices are obtained and, if thoroughly understood, the business proves lucrative. The principal requisites of a good broiler are a rich yellow skin free from pin feathers, a short back, deep body, full breast, and short legs.

The poultry fancier strives to raise stock as near as possible to the requirements of the standard set up by the American Poultry Association. The requirements of certain fowls, as fixed by the association, are sought after and bred for by the fancier, and if successful in reaching this high mark he realizes handsomely. During the past decade poultry shows have been of inestimable value in promoting good poultry stock. Under their influence crosses have been made and new points developed, and the fancier and the poultry industry in general have profited greatly.

TURKEYS.

The turkey is an American bird, though both its English and its French name (dinde, dindon) indicate a supposed Eastern origin. The wild turkey was once found all along the Atlantic coast, throughout Mexico, Central America, and the great interior plains of North America. There are two distinct species of native turkeys, one inhabiting the United States and Mexico, while the other is found in Honduras. The latter is sometimes called the ocellated turkey. The former is of several varieties, the best known being the Mexican turkey, from which the domesticated fowl is descended.

The wild turkey is rapidly nearing extinction, through the incessant warfare waged by hunters. In his native haunts the wild turkey is quick and alert, and also hardier and healthier than the domestic turkey, and a cross between the two has often proved beneficial to the domestic variety. In many respects the domestic turkey still exhibits the natural traits of its wild ancestry. Among these are its desire for free range and the secrecy in which it makes its nest.

The recognized varieties of the domestic turkey are the Bronze, Narragansett, White, Holland, Buff, Slate, and Black. The Bronze turkey has been termed the "King of American fowls." At two years of age many specimens weigh between 35 and 40 pounds.

DUCKS.

These fowls are raised principally for their meat, which is largely consumed on the farm. The raising of young ducks for city trade has proved profitable on a somewhat extensive scale, especially on Long Island, New York. It was formerly thought that they could not be raised away from water, but this has been conclusively disproved. The most prominent breeds of ducks are the White Pekin, White Aylesbury, Colored Rouen, Black Cayuga, Colored Muscovy, White Muscovy, Gray Call, White Call, Black East Indian, and Crested White. The six first named are found most profitable. The Calls and Black East Indian are bantams, bred mostly for exhibition. The Pekin is the most popular breed in the United States. They are large, pure white, and good layers, and easily distinguished by their upright carriage. The Aylesbury, so called from the county town of Buckinghamshire, England, is bred in large numbers in England and Europe.

GEESE.

The rearing of geese is not carried on very extensively in the United States. They thrive best around ponds of water and require free range, where they are, as a rule, long-lived. The most prominent breeds of geese are the Toulouse, African, Embden, Chinese, Wild, and Egyptian. There are also many mongrel breeds of geese, probably descended from those brought over by the early settlers of the country.

THE PRODUCER AND THE MARKET.

The preparation of poultry for market is of the greatest importance. There are two general ways of preparing dressed poultry—(1) by scalding, (2) by dry picking. Markets have their peculiarities, and these must be noted and conformed to if the largest returns are to be secured. The Philadelphia and Boston markets demand brown eggs, and will pay more for them than they will for white eggs, while New York and San Francisco prefer white eggs. Philadelphia will not take scalded poultry, while Boston will. The Washington market demands scalded poultry and white eggs, although within recent years the demand for dry-picked poultry has grown.

DISEASES.

Disease is one of the greatest drawbacks in poultry raising, and yet it is said, upon competent authority, that two-thirds of the loss from this cause is due to neglect and mismanagement on the part of the producers. Poultry diseases are very much the same the country over. The various affections, such as colds, cholera, roup, gapes, etc., attack poultry in all sections of the country. There are few, if any, diseases that are purely sectional. The years 1899 and 1900 appear to have been normal in respect to disease.

ARTIFICIAL INCUBATION.

The use of incubators has exerted a very great influence in promoting the growth of the poultry industry. Artificial incubation is by no means new, as early travelers in the Orient mention ovens for hatching eggs. The Egyptians practiced artificial incubation over two thousand years ago by means of ovens and the use of straw. The secret was carefully guarded, and transmitted by word of mouth from father to son. The Chinese, too, have for centuries made use of artificial means for hatching on a large scale.

The records of the Patent Office prior to 1847 do not contain any account of a machine for hatching purposes, but in that year two patents were issued, both upon methods of artificial hatching rather than on machines. From 1847 to 1870, a period of twenty-three years, there were no patents either for machines or for methods of incubation. In 1900 fourteen incubator patents were granted.

The introduction of the commercially valuable incubator dates from 1887. Efforts made prior to that year were attended with indifferent success, but since then each year has brought new improvements, until artificial incubation is no longer a mere experiment. Not only has the use of incubators increased wonderfully in the United States, but American incubators are in demand abroad and are shipped from the United States to Australia, England, and various other countries.

The dictum "follow nature" has nowhere been more closely observed than in the invention of incubators. The hen's method has been closely watched and studied, and the incubator has been made to conform as nearly as possible thereto.

The incubator helps the producer to overcome the difficulty of weather conditions. By its aid he can secure chicks at such times and in such numbers as he desires. To secure pullets that may furnish a good supply of eggs for the better markets of autumn and winter, it is necessary that chicks be hatched in March and April. This is often difficult if dependence be placed upon the hen, but is always practicable with the aid of incubators.

The incubator is also of the greatest value in raising "broilers" for the market. It is only by its use that it is possible to have "broilers," as well as autumn and winter laying pullets, in sufficient number to make poultry farming successful. The proportion of eggs hatched is probably as large as by the hen. One of the great advantages of the incubator is that its use prevents the young chicks from becoming covered with vermin, as is often the case with natural incubation. The continued use of the incubator tends to make the hen forget, in a measure, her maternal instincts. It is said that in Egypt, where artificial incubation has been employed for centuries, the hens exhibit very little tendency to become "broody," and much of the time formerly spent in being "broody" is available for egg laying. This fact assumes gigantic importance when it is remembered that it has been discovered that there are 600 embryo eggs in the ovary of a hen. It has been further ascertained that two-thirds of this number can be secured in the first two years of the hen's life, provided suitable measures are employed. If the tendency to become "broody" can be suppressed, and more time can be given to egg laying, incubation being left to the artificial incubator, and if, in addition, egg-producing food be fed, the problem of getting the greatest number of the eggs from the hen in the first two years of her life will be very near solution.

BROODERS.

The hatching of chickens by means of the incubator is comparatively easy. The great difficulty is encountered in rearing the young chickens artificially. To meet this necessity many brooder machines have been patented. The difficulty in rearing young chicks is to maintain a fixed temperature during the first few days of the chick's life, when sudden changes are fatal.

POULTRY RAISING.

The development of modern transportation has revolutionized many branches of agriculture, and its effect upon poultry raising has been especially marked. So long as the market was restricted to the limited demands of the vicinity, there was no incentive to have a surplus beyond a certain amount, but as modern transportation opened up new markets, the raising of poultry began to grow into an important industry.

The centers of consumption were also benefited. Formerly they were dependent upon the local supply, but with the growth of carrying facilities, their supply was augmented by large shipments from the West and Southwest.

The development of transportation facilities promotes the selection of the very best locations for all branches of production, and gradually, in the poultry and egg industry, the areas best suited because of natural conditions are beginning to be utilized by producers. It is true, from the nature of the industry, that poultry and egg raising will always be carried on throughout the entire country, but the business will tend to centralize more and more in certain favored areas.

Animal industries of all kinds follow corn production. Gradually, as the corn belt moved westward, the animal industries changed their seat. Cincinnati, once foremost as a packing center, gave way to Chicago, and although Chicago seems likely always to occupy a prominent place in the live-stock business, Kansas City and Omaha have recently shown tendencies to become the great centers of the industry. The most favored area is thus marked by the greatest group of packing houses.

In 1899, corn was grown on 4,697,799 farms in the United States, and of this number 1,866,242, or 39.7 per cent, were located in the North Central division, and they produced 1,941,220,100 bushels of corn, or 72.8 per cent of the entire crop of the United States. Poultry and eggs were reported from 5,096,252 farms, and 39.5 per cent of these farms were in the North Central division. Of the total number of farms in this division, 2,196,567, or 85.0 per cent raised corn, and 91.7 per cent raised poultry. Corn, while not so distinctly a food for poultry as for hogs, is nevertheless the best grain for fattening, and since a great part of the energy of this region is directed to the production of poultry for the market, it is not surprising that over one-half of all the poultry in the United States was reported by this division, as well as 55.4 per cent of the eggs produced.

A considerable area included in the North and South Central divisions, covering eastern Kansas, southeastern Nebraska, Arkansas, Missouri, southern Iowa, northern Texas, Oklahoma, and adjacent territory, with Kansas City as a center, forms the region where grain is cheapest, and is therefore especially favorable for animal industries. Freight rates, a not insignificant factor in determining the margin of profit, have materially decreased, while mild winters with an early hatching season greatly lessen the cost of rearing and housing poultry and render this region especially favorable for its production on a large scale. These advantages will be utilized more and more as poultry keepers come to realize them.

The shipments of poultry and eggs from this region are already large. In 1890 about 2,500,000 pounds of dressed poultry were shipped from Kansas City, and by 1900 the shipments had increased to over 7,000,000 pounds of dressed, and over 1,000,000 pounds of live poultry.

COLD STORAGE.

Another powerful factor in developing the poultry industry is cold storage. Applied in transportation it has worked a great change in business methods. The first attempts at preservation of perishable products were made by the agency of ice and snow. Cellars, caves, and ice chambers were utilized to prevent decay. Resort was also had to water glass, a silicate of soda, vaseline, limewater, and numerous other chemicals, with varying degrees of success. While several of these means of preservation have been successful in retarding decay, they are not practicable for preserving eggs in large quantities. To the farmer they are of more or less value, enabling him to hold his eggs for better prices, but for commercial purposes they do not answer. Ice and snow were long considered the best means of preservation in large quantities, but a constant difficulty in their use was the inability to maintain a fixed temperature and to control the humidity. Experiments, costly and tedious, led to the general adoption by all large dealers of mechanical refrigeration. The product to be preserved is thus cooled to a definite temperature, which is maintained with as little variation as possible.

In the early application of cold storage, eggs were stored only as a last resort. There was no selection with cold storage in view, and inferior goods were too often stored, bringing the method under suspicion. Losses followed, and it was seen that the primary consideration in successful cold storage was a judicious selection of products. With this lesson thoroughly learned, cold storage began to play an important part in the poultry and egg industry.

Cold Storage and Prices.—Cold storage acts as a balance wheel in regulating prices. During the spring and early summer, when production is heaviest, dealers lay in their supply. Their demands relieve the producer of a large part of his surplus at a time when he has most trouble in disposing of it, and prices are well sustained. In the winter, when the supply of fresh eggs and poultry is cut off, the hoards of the cold-storage houses are sent into the market, and the price is moderated by the fuller supply and thus the consumer is benefited. Fluctuations are not so pronounced as formerly.

In 1900 the amount of space in cold-storage rooms of packing houses, creameries, and breweries was at least 150,000,000 cubic feet, and in other cold stores about 100,000,000 cubic feet more, making an approximate total of 250,000,000 cubic feet. The space for eggs and poultry was 500.0 per cent greater than in 1890. In minimizing waste, the method has the perfection of an exact science.

Only perfect eggs are stored, those cracked in transit and the small and dirty-shelled ones being canned and frozen. Such eggs are sold to large baking establishments at prices below those of fresh eggs, thus taking the bakers out, to a large extent, from the winter demand, and having a moderating effect upon prices. In 1900 over 1,000 dozen eggs were frozen in Kansas City alone. Eggs found to be tainted are used in dressing leather for gloves and bookbinding, an industry largely carried on in foreign tenement districts of large cities. A disinfectant is also made of the tainted eggs, and they are extensively used in the preparation of a shoe blacking. The shells are used to make fertilizers.

Beside the culinary use of eggs, millions are consumed each year by wine clarifiers, calico print works,

dye manufacturers, and in the preparation of photographers' dry plates. A considerable trade in "dessicated" eggs has sprung up in recent years. By a process of evaporation all or most of the white or yolk, as the case may be, is dried out. Eggs thus treated are used to some extent in the family trade, but more by bakers, and are of special service in provisioning camping parties and expeditions.

Location of Storage Houses.—The present tendency of cold storage is to find a location near a transportation center, within reach of a large number of consumers at points to which railroad competition has brought low transportation rates. This is shown by the large storing establishments in New Jersey, near New York City, by the extensive houses at Indianapolis, near the Cincinnati markets, and by the growth of cold-storage facilities at St. Louis and Chicago.

POULTRY ON FARMS, JUNE 1, 1900.

The general statistics of the poultry industry are found in Tables 45 and 47. A summary of the number of fowls on hand June 1, 1900, is given by geographic divisions in tables CCXLVII and CCXLVIII. The numbers given in the tables are for fowls three months old and over.

TABLE CCXLVII.—NUMBER OF CHICKENS, INCLUDING GUINEA FOWLS, ON FARMS AND RANGES, JUNE 1, 1900, WITH THE NUMBER OF FARMS, AND FARMS REPORTING POULTRY, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting fowls.	Per cent of farms reporting poultry.	Chickens, including guinea fowls.
The United States	5,739,657	5,096,252	88.8	233,598,085
North Atlantic	677,506	605,782	89.4	27,952,114
South Atlantic	962,225	850,074	88.3	22,293,912
North Central	2,196,567	2,014,138	91.7	123,469,068
South Central	1,658,166	1,441,315	86.9	50,299,631
Western	242,908	184,021	75.8	9,551,296
Alaska and Hawaii	2,285	972	42.5	32,064

TABLE CCXLVIII.—NUMBER OF TURKEYS, GEESE, AND DUCKS ON FARMS AND RANGES, JUNE 1, 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Turkeys.	Geese.	Ducks.
The United States	6,599,367	5,676,863	4,807,358
North Atlantic	529,932	144,527	453,580
South Atlantic	810,975	908,908	458,918
North Central	3,072,456	1,899,026	2,416,327
South Central	1,876,382	2,589,164	1,257,048
Western	304,950	135,163	199,977
Alaska and Hawaii	4,672	75	21,508

Of the 5,739,657 farms in the United States 5,096,252, or 88.8 per cent, had poultry. The per cent so reporting was larger in the North Central division than in any other, and smallest (excluding Alaska and Hawaii) in the Western division, being 91.7 in the former and 75.8 in the latter.

The farmers in the North Central division reported an average of 61.3 chickens to a farm. The corresponding average for the North Atlantic was 46.1; South Atlantic, 26.2; South Central, 34.9; Western, 51.9; and Alaska and Hawaii, 33.0. The farmers of the North Central states engage in poultry raising more as a business, and those in the other divisions more as an occupation merely incidental to other branches of farming operations. The farms of the North Central division reported 52.9 per cent of all the chickens on farms. The five states reporting the greatest number were Iowa, 18,907,673; Illinois, 16,600,728; Missouri, 14,903,601; Ohio, 14,269,525; and Texas, 13,562,302. Of these states, Iowa reported the highest average per farm, 88.0, and Texas the lowest, 44.5.

The total population of the United States, including Alaska and Hawaii, was 76,303,387, and the total number of chickens reported was 233,598,085, or 3.1 chickens per capita. The rural population, as determined by the present census, was 39,528,398. There were, therefore, 5.9 chickens to each unit of rural population.

Considering the whole population, urban and rural, the number of chickens per unit of population in the North Atlantic division was 1.3; South Atlantic, 2.1; North Central, 4.7; South Central, 3.6; and Western, 2.3.

The North Central states raised a little less than half, or 46.6 per cent, of the 6,599,367 turkeys reported for the United States. The percentages for the other geographic divisions did not greatly vary from that for chickens. The number of farms reporting turkeys was not separately tabulated. The five states reporting the largest number of turkeys were Texas, 648,671; Missouri, 466,665; Illinois, 446,020; Iowa, 424,306; and Ohio, 362,924. These are the same states that showed the largest numbers of chickens. The relative importance of the two classes of poultry in these several states is, however, quite different. In chicken raising Iowa led and Texas ranked fifth, while in turkey raising Texas was first and Iowa fourth.

Of the geese reported, the South Central division raised nearly one-half, or 45.6 per cent, and the North Central, 33.5 per cent. The five states raising the largest number of geese were Kentucky, 541,576; Missouri, 428,307; Texas, 415,709; Tennessee, 391,698; and Arkansas, 378,475. Of these states only Missouri and Texas were found among the leading chicken and turkey raisers.

The North Central division led in raising ducks, as well as chickens and turkeys. It reported 50.3 per cent of the total. The five states reporting the most were Iowa, 487,752; Illinois, 382,857; Missouri, 278,140; Texas, 234,664; and Indiana, 230,432. Four of these states lead in chicken raising, while Indiana takes the place of Ohio as the fifth.

VALUE OF POULTRY, JUNE 1, 1900.

The total value of the poultry on farms and ranges, June 1, 1900, was $85,794,996, an average of $16.83 per farm reporting the same. Table CCXLIX gives a summary of poultry values for each geographic division.

TABLE CCXLIX.—TOTAL VALUE OF POULTRY ON FARMS AND RANGES, JUNE 1, 1900, AND AVERAGE VALUE PER FARM REPORTING, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total value.	Average value per farm.
The United States	$85,794,996	$16.83
North Atlantic	13,706,762	22.63
South Atlantic	8,545,899	10.05
North Central	43,416,629	21.56
South Central	15,672,938	10.87
Western	4,414,365	23.99
Alaska and Hawaii	38,403	39.51

The average value was highest in the Western division, although there were no marked differences between that and the averages in the North Atlantic and North Central divisions. The South Atlantic and South Central had an average only about one-half that of the other three. The tables do not permit any satisfactory statement of the average value of the fowls on hand, June 1, since the total values as reported included the value of all young chicks unreported, as well as that of the older fowls.

The five states with the largest value of poultry on hand, June 1, 1900, were Iowa, $6,535,464; Illinois, $6,415,033; Missouri, $5,720,359; Ohio, $5,085,921; and Pennsylvania, $4,483,486. The greater average values of poultry in Pennsylvania bring it into this list, although in number of fowls on hand it ranked materially lower.

POULTRY ON FARMS CLASSIFIED BY AREA.

Table CCL presents a brief summary of the total and average values of poultry on farms of specified areas.

TABLE CCL.—TOTAL AND AVERAGE VALUE OF POULTRY, JUNE 1, 1900, ON ALL FARMS CLASSIFIED BY AREA, WITH AVERAGES AND PERCENTAGES.

AREA IN ACRES.	Number of farms.	Farms reporting poultry.	Per cent of farms reporting poultry.	Value of poultry.	Average value per farm.
Total	5,739,657	5,096,252	88.8	$85,794,996	$16.83
Under 3	41,882	25,180	60.1	358,849	14.25
3 and under 10	226,564	169,849	75.0	2,012,498	11.85
10 and under 20	407,012	313,203	77.0	3,342,597	10.67
20 and under 50	1,257,785	1,075,544	85.5	12,344,073	11.48
50 and under 100	1,366,167	1,251,201	91.6	20,258,135	16.19
100 and under 175	1,422,328	1,312,658	92.3	25,215,833	19.21
175 and under 260	490,104	464,077	94.7	10,433,603	22.48
260 and under 500	377,992	353,634	93.6	8,414,277	23.79
500 and under 1,000	102,547	92,416	90.1	2,317,723	25.08
1,000 and over	47,276	38,490	81.4	1,097,408	28.51

The per cent of farms reporting poultry is highest, 94.7, for farms containing 175 and under 260 acres, decreasing regularly in both directions from that point to farms of largest and smallest areas. With the exception of the groups of farms containing less than 20 acres, the average value of poultry per farm in each group increases with the area, being highest for those with 1,000 acres and over, and lowest for those containing 10 and under 20 acres. The exception for farms under 20 acres is due to the inclusion, in that group, of some small farms near cities and towns, which make a specialty of raising poultry.

POULTRY ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME.

Table CCLI presents a brief summary of the total and average value of poultry on farms of specified principal sources of income. The figures are obtained from Table 33.

TABLE CCLI.—TOTAL AND AVERAGE VALUE OF POULTRY, JUNE 1, 1900, ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	Farms reporting poultry.	Per cent of farms reporting poultry.	Value of poultry.	Average value per farm.
Total	5,739,657	5,096,252	88.8	$85,794,996	$16.83
Hay and grain	1,319,856	1,104,095	83.7	20,275,789	18.36
Vegetables	155,898	121,385	77.9	1,893,324	15.60
Fruits	82,176	62,730	76.3	1,129,372	18.00
Live stock	1,564,714	1,499,252	95.8	34,614,676	23.09
Dairy produce	357,578	324,545	90.8	6,065,908	18.69
Tobacco	106,272	94,019	88.5	1,127,123	11.99
Cotton	1,071,545	903,622	84.3	7,369,150	8.16
Rice	5,717	3,998	69.9	55,342	13.84
Sugar	7,344	5,623	76.6	129,731	23.07
Flowers and plants	6,159	1,012	16.4	21,860	21.60
Nursery products	2,029	835	41.2	22,630	27.10
Taro	441	119	27.0	2,359	19.82
Coffee	512	222	43.4	4,160	18.74
Miscellaneous	1,059,416	974,795	92.0	13,083,022	13.42

Of the larger groups of farms, the live-stock, miscellaneous, and dairy farms show the largest percentages reporting poultry, being 95.8, 92.0, and 90.8, respectively. Cotton farms show a somewhat smaller per cent. Among the larger groups, live-stock, dairy, and hay and grain farms reported large average values, while cotton and miscellaneous farms show smaller ones.

POULTRY ON FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

In Tables 29, 30, and 31 are included comparative statements of the statistics of poultry for farms of white and colored farmers of specified tenures. A brief summary thereof for the United States is presented in the following table.

TABLE CCLII.—TOTAL AND AVERAGE VALUE OF POULTRY, ON ALL FARMS, JUNE 1, 1900, AND ON FARMS OF WHITE AND COLORED FARMERS OF SPECIFIED TENURES, WITH AVERAGES AND PERCENTAGES.

A.—ALL FARMS.

TENURE.	Number of farms.	Farms reporting poultry.	Per cent of farms reporting poultry.	Value of poultry.	Average value per farm.
Total	5,739,657	5,096,252	88.8	$85,794,996	$16.83
Owners	3,149,344	2,850,747	90.5	50,584,642	17.74
Part owners	451,515	426,421	94.4	8,941,934	20.97
Owners and tenants	53,299	50,907	95.5	1,081,804	21.25
Managers	59,213	43,906	74.1	1,156,426	26.33
Cash tenants	752,920	644,145	85.6	9,198,949	14.28
Share tenants	1,273,366	1,080,126	84.8	14,831,241	13.73

B.—FARMS OF WHITE FARMERS.

Total	4,970,129	4,471,939	90.0	81,746,680	18.28
Owners	2,974,497	2,701,505	90.8	49,360,029	18.27
Part owners	420,916	398,666	94.7	8,724,615	21.88
Owners and tenants	51,717	49,532	95.7	1,067,992	21.56
Managers	57,353	42,555	74.2	1,134,377	26.66
Cash tenants	477,100	416,525	87.3	7,850,564	18.85
Share tenants	988,546	863,156	87.3	13,609,103	15.77

C.—FARMS OF COLORED FARMERS.

Total	769,528	624,313	81.1	4,048,316	6.48
Owners	174,847	149,242	85.4	1,224,613	8.21
Part owners	30,599	27,755	90.7	217,319	7.83
Owners and tenants	1,582	1,375	86.9	13,812	10.05
Managers	1,860	1,351	72.6	22,049	16.32
Cash tenants	276,820	227,620	82.5	1,348,385	5.92
Share tenants	284,820	216,970	76.2	1,222,138	5.63

The per cent of white farmers raising poultry was slightly larger than for colored farmers, being 90.0 for the former, and 81.1 for the latter. The average value per farm was $18.28 for white farmers, or nearly three times that for the colored farmers, which was $6.48. A part of this variation was due to the smaller average area of farms in the South, where most of the colored farmers were located, and in part to the fact that few negro farmers made a business of poultry raising. They kept fowls mainly for home use. The proportional investments in poultry of the average white and colored farmers are better seen by comparing those of the two races in the South Atlantic states. For the white farmers this was $11.96, and for the colored, $5.29, or less than one-half.

A greater per cent of owners reported poultry than of either cash or share tenants, the percentages for the three classes being 90.5, 85.6, and 84.8, respectively. A part of this variation is due to the inclusion in the latter classes of so many negro tenants of the South. Owners reported the greatest average value of poultry on hand, $17.74; that for cash tenants was $14.28; and that for share tenants, $13.73.

VALUE OF POULTRY RAISED IN 1899.

Table CCLIII presents a summary of the total value and the average value per farm, of all the poultry raised in 1899. In every geographic division this was greater than the value of the poultry on hand, June 1, 1900.

TABLE CCLIII.—TOTAL VALUE OF POULTRY RAISED ON FARMS AND RANGES IN 1899, WITH AVERAGE VALUE PER FARM REPORTING IN 1900, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Total value.	Average value per farm.
The United States	$136,891,877	$26.86
North Atlantic	20,624,439	34.05
South Atlantic	15,553,805	18.30
North Central	69,828,121	34.67
South Central	24,770,049	17.19
Western	6,053,738	32.90
Alaska and Hawaii	61,725	63.50

The average value per farm of poultry raised was $26.86. The average was comparatively large in the Western, North Central, and North Atlantic divisions, as was the case with the value of poultry on hand June 1, 1900, while for the other two geographic divisions it was considerably smaller. The average value of poultry raised, as of every other item relating to poultry, was exceedingly high in Alaska and Hawaii, owing to the very small supply and the relatively great demand in those territories.

The five states of the highest rank in the value of poultry products in 1899 were Illinois, $11,307,599; Missouri, $9,525,252; Iowa, $9,491,819; Ohio, $8,847,009; and Indiana, $8,172,993.

EGG PRODUCTION IN 1899.

The production of eggs in 1899 was 1,293,819,186 dozens, an average of 5.5 dozens per chicken. No consideration was given to turkeys, geese, or ducks in calculating this average, as eggs from those fowls are used mainly for breeding purposes.

Iowa was the banner state in egg production, as in number of chickens and ducks. It reported 99,621,920 dozens; Ohio ranked second, with 91,766,630 dozens; Illinois third, with 86,402,670 dozens; Missouri fourth, with 85,203,290 dozens; and Kansas fifth, with 73,190,590 dozens. The great egg-producing states are not necessarily those with the largest number of domestic fowls on hand, June 1, 1900, nor those with the highest value of poultry raised in 1899, as will be noted by reference to other tables.

Table CCLIV gives the average number of dozens of eggs reported in 1899, based upon the number of chickens three months old and over on hand June 1, 1900.

TABLE CCLIV.—AVERAGE NUMBER OF DOZENS OF EGGS PRODUCED IN 1899 FOR EACH CHICKEN, THREE MONTHS OLD AND OVER, INCLUDING GUINEA FOWLS, REPORTED ON FARMS AND RANGES, JUNE 1, 1900, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Average number of dozens per chicken.	STATES AND TERRITORIES.	Average number of dozens per chicken.
The United States	5.5	North Central division—Continued.	
North Atlantic division	6.9	Missouri	5.7
Maine	8.5	North Dakota	5.3
New Hampshire	8.0	South Dakota	5.7
Vermont	7.8	Nebraska	5.5
Massachusetts	8.0	Kansas	6.1
Rhode Island	6.4	South Central division	4.4
Connecticut	7.4	Kentucky	5.2
New York	6.9	Tennessee	5.1
New Jersey	6.0	Alabama	4.0
Pennsylvania	6.4	Mississippi	3.6
South Atlantic division	4.7	Louisiana	3.3
Delaware	5.7	Texas	4.3
Maryland	5.9	Oklahoma	5.4
District of Columbia	5.8	Indian Territory	3.5
Virginia	5.6	Arkansas	4.8
West Virginia	6.2	Western division	6.1
North Carolina	4.6	Montana	5.6
South Carolina	3.4	Wyoming	6.6
Georgia	3.4	Colorado	5.9
Florida	3.8	New Mexico	6.4
North Central division	5.8	Arizona	5.0
Ohio	6.4	Utah	6.3
Indiana	6.4	Nevada	5.9
Illinois	5.2	Idaho	5.6
Michigan	6.8	Washington	6.2
Wisconsin	5.7	Oregon	6.0
Minnesota	5.6	California	6.2
Iowa	5.3	Alaska	5.9
		Hawaii	4.9

This average was largest in the North Atlantic and smallest in the South Central division. It doubtless varied as much with the number of young cocks and hens over 3 months old and less than 6 months old on the farm June 1, 1900, as with the actual production per fowl laying eggs, during the preceding year. This latter average can not be ascertained from the tables nor from the data returned by the enumerators. The states in which the climate is favorable to early hatching had a lower average yield than the later hatching states, having more chickens over 3 months old and less than 6 months old at the date of enumeration.

The population of the United States in 1890 was 62,979,766, and the egg production reported by that census for the corresponding year was 819,722,916 dozens, an average per capita production of 13.0 dozens. The number of eggs, per capita, shown by the present census is 17.0 dozens.

PRICE OF EGGS.

The present census is the first to give values of poultry and eggs. The total number of eggs produced in 1899 was 1,293,819,186 dozens, and the total value was $144,286,158, an average value per dozen of 11.2 cents.

The following table shows the value per dozen in 1899 on the farms in the different states and territories:

TABLE CCLV.—AVERAGE VALUE, PER DOZEN, OF EGGS PRODUCED ON FARMS IN 1899, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Value per dozen, in cents.	STATES AND TERRITORIES.	Value per dozen, in cents.
The United States	11.2	North Central division—Continued.	
North Atlantic division	14.9	Missouri	9.8
Maine	15.3	North Dakota	10.5
New Hampshire	17.3	South Dakota	10.0
Vermont	15.3	Nebraska	9.9
Massachusetts	19.9	Kansas	9.9
Rhode Island	20.4	South Central division	9.2
Connecticut	19.1	Kentucky	9.8
New York	18.9	Tennessee	9.8
New Jersey	16.2	Alabama	9.7
Pennsylvania	13.5	Mississippi	9.9
South Atlantic division	11.1	Louisiana	10.0
Delaware	13.7	Texas	8.0
Maryland	12.6	Oklahoma	9.4
District of Columbia	15.2	Indian Territory	9.0
Virginia	11.1	Arkansas	9.1
West Virginia	10.9	Western division	16.0
North Carolina	10.2	Montana	21.0
South Carolina	10.3	Wyoming	17.4
Georgia	10.4	Colorado	15.0
Florida	13.1	New Mexico	18.7
North Central division	10.4	Arizona	19.9
Ohio	11.2	Utah	12.5
Indiana	10.5	Nevada	20.8
Illinois	10.3	Idaho	16.2
Michigan	11.2	Washington	16.8
Wisconsin	10.5	Oregon	15.1
Minnesota	10.3	California	15.8
Iowa	10.1	Alaska	34.5
		Hawaii	29.1

The average values were highest near large cities, in the mining districts, and in such sections as Alaska and Hawaii, where the egg production was very small as compared with population.

Table 63 presents a statement, by states and territories, of the number of chickens, turkeys, geese, and ducks reported at each census since 1860, and of the egg product in 1890 and 1900. A summary of the number of the fowls reported in those years is given, by geographic divisions, in tables CCLVI, CCLVII, CCLVIII, and CCLIX.

TABLE CCLVI.—NUMBER OF CHICKENS, INCLUDING GUINEA FOWLS, ON FARMS AND RANGES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1880 TO 1900.

GEOGRAPHIC DIVISIONS.	1900	1890	1880
The United States	233,598,085	258,871,125	102,272,135
North Atlantic	27,952,114	28,109,950	18,102,653
South Atlantic	22,293,912	33,774,247	10,530,106
North Central	123,469,068	132,702,123	53,906,191
South Central	50,299,631	57,110,004	17,165,766
Western	9,551,296	7,174,801	2,567,419
Alaska and Hawaii[1]	32,064		

[1] No report prior to 1900.

TABLE CCLVII.—NUMBER OF TURKEYS ON FARMS AND RANGES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1890 AND 1900.

GEOGRAPHIC DIVISIONS.	1900	1890
The United States	6,599,367	10,754,060
North Atlantic	529,932	1,246,007
South Atlantic	810,975	1,571,254
North Central	3,072,456	5,326,489
South Central	1,876,382	2,209,861
Western	304,950	400,449
Alaska and Hawaii[1]	4,672	

[1] No report in 1890.

TABLE CCLVIII.—NUMBER OF GEESE ON FARMS AND RANGES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1890 AND 1900.

GEOGRAPHIC DIVISIONS.	1900	1890
The United States	5,676,863	8,440,175
North Atlantic	144,527	258,495
South Atlantic	908,908	1,821,439
North Central	1,899,026	3,040,849
South Central	2,589,164	3,748,728
Western	135,163	70,664
Alaska and Hawaii[1]	75	.....

[1] No report in 1890.

TABLE CCLIX.—NUMBER OF DUCKS ON FARMS AND RANGES, BY GEOGRAPHIC DIVISIONS: SUMMARY 1890 AND 1900.

GEOGRAPHIC DIVISIONS.	1900	1890
The United States	4,807,358	7,544,080
North Atlantic	453,580	945,133
South Atlantic	458,918	1,047,476
North Central	2,416,327	3,753,534
South Central	1,257,048	1,557,423
Western	199,977	240,514
Alaska and Hawaii[1]	21,508	.....

[1] No report in 1890.

In 1900 the instructions to the enumerators were to exclude all fowls under 3 months old, and this restriction was far-reaching in its effects. While there is no doubt that the total number of chickens of all ages on farms increased in the country during the last decade, the present census returns show a loss for the United States of 9.8 per cent.

In the North Atlantic division, the exclusion of the young chickens affected New Jersey most, because of the fact that a large part of the poultry industry in that state is directed toward "broiler and roaster" raising, and the number of chickens under 3 months old, June 1, was very large.

The Southern states generally were affected more than other states, and this can be readily understood when it is remembered that the number of young chickens at the time of the taking of the census in June was far greater in the early-hatching states than in other sections, and the exclusion of young fowls caused a material reduction of the total number of chickens reported for those states. But it is an undoubted fact that there was an increase in their number in the last decade. In Kentucky and Tennessee the apparent decreases were too large to be accounted for solely by the limitation in regard to the chickens under 3 months old, as the poultry industry flourished in these two states during the last decade, which is shown by the increased egg production. Particularly in the raising of early-market poultry was there a great advance. In June, when the census figures were collected, the numbers in these states had already been materially reduced by the shipment of young fowls ranging from 10 weeks to 3 months old, and over.

Two of the extreme Southern states—Florida and Louisiana—show decided increases in the number of chickens, due to the fact that the stimulus to general farming in those states has acted favorably upon poultry raising. This stimulus was sufficiently great to overcome the reduction which the exclusion of chickens under 3 months old tended to produce, and to bring about, in addition, a substantial increase. All of the states in the Western division show increases in the number of chickens, and this is true of Texas and Oklahoma in the South Central division, where the opening of new farms and the great strides made in general farming resulted in an increased number of fowls.

The number of turkeys reported on farms and ranges in the last decade decreased 38.6 per cent. In the North Atlantic division the decrease was 57.5 per cent; in the South Atlantic, 48.4 per cent; in the North Central, 42.3 per cent; in the South Central, 15.1 per cent, and in the Western, 23.8 per cent. Several causes may be assigned for this decrease in turkeys, the principal one being the exclusion of those less than 3 months old from the reports of 1900. Disease in many sections, due in part to an excess of inbreeding, has reduced the number. The turkey ranges freely, and, as population increases and farms become smaller, is a source of annoyance to the farmer, who for this reason discontinues raising these fowls.

The number of ducks showed a decrease of 36.3 per cent in the last decade. All the geographic divisions shared in this decrease, the per cent of decline for the North Atlantic division being 52.0; South Atlantic, 56.2; North Central, 35.6; South Central, 19.3; and Western, 16.9. The instructions to the enumerators to exclude fowls under 3 months old from the reports also caused a large portion of the apparent decrease here noticed.

The number of geese reported decreased in the United States 32.7 per cent. In the North Atlantic division the decrease was 44.1 per cent, in the South Atlantic, 31.2 per cent; North Central, 37.5 per cent; South Central, 30.9 per cent. The Western division was the only one to report an increase, amounting to 91.3 per cent. The principal cause of the apparent decrease in the four geographic divisions was the same for geese as for all other kinds of poultry. Geese can be kept profitably only where large range, green pasture, and water are at hand, and this is often impossible on the ordinary farm. The Western division, with its large area, offers an abundance of range; hence the increase in the number of geese is not surprising.

Table CCLX gives the total and average production of eggs per chicken in 1890 and 1900, as reported by geographic divisions.

TABLE CCLX.—TOTAL REPORTED PRODUCTION OF EGGS, IN DOZENS, IN 1890 AND 1900, AND AVERAGE PER CHICKEN, INCLUDING GUINEA FOWLS, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	1900		1890		Per cent of increase.
	Total.	Average.	Total.	Average.	
The United States.	1,293,819,186	5.6	819,722,916	3.2	57.8
North Atlantic	191,764,000	6.9	139,426,826	5.0	37.5
South Atlantic	105,349,996	4.7	66,282,877	2.0	59.1
North Central	716,668,710	5.8	464,001,953	3.5	54.5
South Central	222,096,860	4.4	122,842,441	2.2	80.8
Western	57,787,867	6.1	27,218,819	3.8	112.3
Alaska and Hawaii[1]	156,753	4.9	.....	.....	.....

[1] No report in 1890.

The main factor operating to cause the large apparent increase in the average production was unquestionably the inclusion of young fowls in 1890, and their exclusion in 1900. From the reports of poultry on hand it appears certain, however, that an actual increase has occurred in the average production during the ten years, due to better care given to fowls, but this increase was much less than is expressed by the table.

The increase in total egg production is a fair index to the growth of the poultry and egg industry in the several states during the past decade. In the North Atlantic division the increase in eggs was 37.5 per cent, Rhode Island leading with a gain of 59.2 per cent. In the South Atlantic division the increase was 59.1 per cent, West Virginia showing a gain of 73.8 per cent. The production of eggs in the North Central division exceeded the product returned in 1890 by 54.5 per cent—Minnesota, with a gain of 112.3 per cent, and North Dakota, with 109.4 per cent, showing the greatest progress. The South Central division gained 80.8 per cent. Oklahoma returned but 989,625 dozens in 1890, when the territory was just opened to settlement, and the figures for the present census, 13,724,900 dozens, showed a gain of 1,286.9 per cent. Tennessee and Kentucky both showed decreases in number of fowls, but increases of 37.3 per cent and 43.1 per cent, respectively, in egg production, proving conclusively that the industry prospered there, as already explained. The Western division, with its almost unparalleled advance in all lines of agricultural industry, gained 112.3 per cent in egg production. Idaho and Montana made the greatest progress, the gain for the former being 290.3 per cent, and for the latter, 260.0 per cent.

UNENUMERATED POULTRY NOT ON FARMS.

No enumeration was attempted in 1900 of the poultry or poultry product not on farms or ranges, and only the most imperfect estimate can be made. The poultry not on farms probably bears about the same relation to that on farms and ranges, as the swine not on farms or ranges to those thereon. Of the swine, it was found that only 2.8 per cent were not on farms. The percentage of individuals keeping swine was larger than this, but the average number kept by them was small, so that the aggregate number of swine not on farms constituted a comparatively trifling percentage of all in the country. It is probably very much the same for the poultry and eggs produced elsewhere than on farms, which, as understood by the present census, can not be 5 per cent of those for the entire country. This excessive estimate would give, approximately, 12,000,000 chickens not on farms. The number of other fowls was unquestionably very small, not more than 1 per cent of those on farms. The aggregate value of this poultry not on farms would be not far from $4,500,000; that of poultry raised in 1899, $7,000,000; and of eggs produced, $7,000,000.

Another method of arriving at the same conclusion starts from the probable number of persons keeping hens. The number of individuals, other than farmers, who reported swine was 462,861. The number keeping poultry can not be much more than one and one-half times as many, or approximately 700,000. If these persons kept an average of 17 chickens over three months old, it would give practically the same aggregate as the foregoing estimate. That estimate may be accepted, therefore, not as being very correct or trustworthy in itself, but as showing how nearly the statistics of farms and ranges cover the poultry and egg industry of the United States.

BEES, HONEY, AND WAX.

HISTORY AND PRODUCTS OF THE BEE.

The date of the introduction of the honeybee into this country is not definitely known, but seems to have been several years subsequent to the first settlements. Little more than a century ago the bee reached the Mississippi, and but half a century has passed since it became known on the Pacific coast.

In the earlier years the parent stock of the honeybee in this country was the common brown or black bee of Germany. In 1860 the Department of Agriculture introduced the Italian bee, about twenty years later the Cyprian, and still later the Carniolan. Other races have been brought here, but the four named have met with greatest favor. The practical value of bees is determined by their industry and skill in gathering and

storing nectar and maturing it into honey, their habits of selection in collecting, their adaptation to local climatic conditions, their temper or disposition, and their rate of increase.

Plants that are valuable as sources of supply for nectar are numerous, and are to be found throughout the country. Secretion of nectar varies greatly in many plants under different conditions of soil, climate, and atmosphere. For example, alfalfa, so valuable for bee forage in the West, does not produce nectar east of the Mississippi. The leading nectar-producing plants are: For the North Atlantic and North Central sections of the United States, the white and alsike clovers, linden, buckwheat, and raspberry, reenforced by the epilobium, aster, and similar wild herbs; for the South Atlantic and South Central sections, the tulip, sourwood, gum, palmetto, mangrove, and citrus trees; and for the West, sage, alfalfa, manzanita, cleome, monarda, mesquite, and fruit trees.

The color, aroma, and flavor of honey depend, to a considerable extent, upon the source from which the nectar is procured, At certain seasons a single kind of plant may furnish the principal source of supply, giving to the honey a distinctive quality, while at other seasons the sources may be numerous, resulting in the blending of many qualities. When extracted from the flower, nectar contains a much larger percentage of water than is needed in honey making. During the flight of the bee, and after the nectar is deposited in the cell, a part of the water is evaporated, and undesirable essential oils are removed. The whole product is modified and softened by the manipulation given it within the hive.

Wax is not gathered directly from plants, but is produced from honey transformed within the bodies of the bees themselves. From the waxen scales excreted, the bee builds the hexagonal cells in which to store surplus honey. Pollen is gathered and brought in as pellets, adhering to the hind legs of the bees, and is largely used in making combs for brood purposes and for the temporary storage of food honey. Wax, as a product, is expensive to the bee and to the bee keeper. Experiments show that from 18 to 20 pounds of honey are required to produce one pound of white comb for surplus storage, and perhaps half that quantity for one pound of brown comb for brood rearing.

BEES, HONEY, AND WAX, CENSUS OF 1900.

The general statistics of bees, honey, and wax, as reported by the enumerators of the census of 1900, are presented in Tables 46 and 47. Brief summaries of the most important facts are given in tables CCLXI and CCLXII.

TABLE CCLXI.—NUMBER AND VALUE OF SWARMS OF BEES, JUNE 1, 1900, ON FARMS AND RANGES, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	Number of farms.	Farms reporting bees.	Per cent of farms reporting bees.	Swarms of bees.	Value of bees.
The United States..	5,739,657	707,261	12.3	4,109,626	$10,186,513
North Atlantic.....	677,506	64,110	9.5	413,709	1,370,732
South Atlantic.....	902,225	151,863	16.8	854,909	1,664,636
North Central.....	2,196,567	233,721	10.6	1,187,856	3,505,675
South Central.....	1,658,166	225,100	13.6	1,289,384	2,513,397
Western.....	242,908	32,421	13.3	362,381	1,128,647
Alaska and Hawaii....	2,285	46	2.0	1,387	8,426

TABLE CCLXII.—POUNDS AND VALUE OF HONEY AND WAX PRODUCED ON FARMS AND RANGES IN 1899, WITH AVERAGES PER FARM REPORTING, BY GEOGRAPHIC DIVISIONS.

GEOGRAPHIC DIVISIONS.	POUNDS OF HONEY.		POUNDS OF WAX.		VALUE OF HONEY AND WAX.	
	Total.	Average.	Total.	Average.	Total.	Average.
The United States..	61,196,160	86.5	1,765,315	2.5	$6,664,904	$9.42
North Atlantic.....	6,855,027	106.9	182,819	2.9	801,147	12.50
South Atlantic.....	9,468,843	62.4	379,192	2.5	1,029,233	6.78
North Central.....	20,055,502	85.8	396,604	1.7	2,353,001	10.07
South Central.....	14,849,824	66.0	588,960	2.6	1,553,141	6.90
Western.....	9,870,094	304.4	216,020	6.7	920,089	28.38
Alaska and Hawaii.....	96,870	2,105.9	1,720	37.4	8,293	180.28

The number of farms reporting bees was largest in the North Central states, where it was 233,721, and (aside from Alaska and Hawaii) smallest in the Western, 32,421. The average number of swarms to a farm was 11.2 in the Western division and 5.1 in the North Central.

The Western division reported the greatest average production of honey to a swarm, 27.2 pounds, and the South Atlantic the smallest, 11.1 pounds.

Taking the number of farms keeping bees as the basis, the five most important bee-keeping states, June 1, 1900, were Texas, with 60,043 farms reporting; Kentucky, with 44,974; Missouri, with 41,145; North Carolina, with 41,051; and Tennessee, with 38,225.

Taking the number of swarms, or colonies, of bees as the basis, the five leading states were Texas, with 392,644; North Carolina, 244,539; Tennessee, 225,788; Alabama, 205,369; and Missouri, 205,110. Of the states included in the series given first, Texas, Missouri, Tennessee, and North Carolina are found in the second.

Taking the value of the bees as the basis of classification, the five leading states were Texas, with $749,483; New York, $593,784; Pennsylvania, $531,578; Kentucky, $527,098; and Missouri, $508,217.

The five greatest producers of honey in 1899 were Texas, with 4,780,204 pounds; California, 3,667,738; New York, 3,422,497; Missouri, 3,018,929; and Illinois,

2,961,080. California, which has not been included in any of the preceding classifications, here stands second.

Of the states producing wax, Alabama led with 162,020 pounds; Texas was second, with 159,690; North Carolina third, with 135,920; California fourth, with 115,330; and New York fifth, with 84,075.

Table CCLXII presents an exhibit, by states and territories, of the average value of bees, the average pounds of honey and wax produced, and the average value of products per swarm.

TABLE CCLXIII.—AVERAGE VALUE OF BEES, AND PRODUCTION OF HONEY AND WAX, PER SWARM, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Value of bees.	Pounds of honey.	Pounds of wax.	Value of honey and wax.
The United States	$2.48	14.9	43	$1.62
North Atlantic division	3.31	16.6	44	1.94
Maine	4.74	18.4	61	3.17
New Hampshire	4.47	16.2	61	3.20
Vermont	3.66	14.2	67	2.13
Massachusetts	4.27	13.0	75	2.20
Rhode Island	4.04	16.9	53	3.07
Connecticut	3.54	10.8	36	1.45
New York	3.17	13.3	45	1.88
New Jersey	2.78	12.3	54	1.66
Pennsylvania	3.29	15.6	38	1.89
South Atlantic division	1.95	11.1	44	1.20
Delaware	1.99	10.0	19	1.03
Maryland	2.18	11.0	28	1.39
District of Columbia	3.37	9.0	.....	0.93
Virginia	2.22	12.3	43	1.41
West Virginia	3.37	15.0	27	1.79
North Carolina	1.76	10.1	56	1.08
South Carolina	1.52	9.3	40	0.99
Georgia	1.29	8.8	39	0.90
Florida	2.11	17.0	81	1.47
North Central division	2.95	16.9	33	1.98
Ohio	2.66	13.1	23	1.67
Indiana	2.38	14.4	24	1.87
Illinois	2.70	16.5	42	1.91
Michigan	3.51	20.9	39	2.29
Wisconsin	3.55	25.2	42	2.55
Minnesota	3.65	21.5	45	2.59
Iowa	3.20	18.3	36	2.20
Missouri	2.48	14.7	34	1.70
North Dakota	5.28	27.0	32	4.12
South Dakota	4.89	23.9	37	3.03
Nebraska	3.83	16.6	31	2.03
Kansas	3.14	18.4	22	1.71
South Central division	1.95	11.5	46	1.20
Kentucky	2.59	13.2	26	1.43
Tennessee	2.15	10.6	35	1.15
Alabama	1.40	9.4	79	0.96
Mississippi	1.67	11.0	52	1.19
Louisiana	1.54	12.1	58	1.28
Texas	1.91	12.2	41	1.19
Oklahoma	3.66	8.7	21	1.18
Indian Territory	2.11	8.6	28	1.05
Arkansas	1.84	12.6	53	1.41
Western division	3.10	27.2	60	2.54
Montana	4.52	11.1	7	2.06
Wyoming	5.22	18.8	33	2.62
Colorado	3.26	29.0	42	2.87
New Mexico	3.37	22.7	37	2.24
Arizona	3.50	49.0	69	3.55
Utah	3.30	38.2	70	2.79
Nevada	3.54	31.4	59	3.01
Idaho	3.38	19.7	34	2.22
Washington	3.46	17.2	31	2.11
Oregon	2.89	17.6	30	1.97
California	2.81	28.3	89	2.56
Alaska and Hawaii	6.07	69.8	124	5.98

The average value per swarm was much less in the Southern states than in the Northern or Western, and so was that of the honey produced. The average production of wax was greatest in the Western division and least in the North Central. The value of the product per swarm was greatest in the Western division and smallest in the two Southern divisions.

VALUE OF BEES ON FARMS OF SPECIFIED AREAS.

Table CCLXIV shows the value of bees on farms of specified areas, June 1, 1900, together with the number of farms reporting, with percentages and averages.

TABLE CCLXIV.—VALUE OF BEES ON FARMS OF SPECIFIED AREAS, AND THE NUMBER OF FARMS REPORTING, JUNE 1, 1900, WITH PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY AREA IN ACRES.	Number of farms.	Farms reporting bees.	Per cent of farms reporting bees.	Value.	Average value per farm.
Total	5,739,657	707,261	12.3	$10,186,513	$14.40
Under 3	41,882	2,068	4.9	138,838	67.14
3 and under 10	226,564	11,743	5.2	275,623	23.47
10 and under 20	407,012	22,475	5.5	350,386	15.59
20 and under 50	1,257,785	98,978	7.9	1,253,579	12.67
50 and under 100	1,366,167	173,590	12.7	2,201,909	12.68
100 and under 175	1,422,328	210,690	14.8	2,937,475	13.94
175 and under 260	490,104	93,760	19.1	1,881,293	14.73
260 and under 500	377,992	69,088	18.3	1,114,636	16.13
500 and under 1,000	102,547	18,098	17.6	365,976	20.22
1,000 and over	47,276	6,776	14.3	166,798	24.62

The average value of bees to a farm was greatest for farms containing less than 3 acres. It was also large for farms containing from 3 to 10 acres, and over 500 acres. The averages varied widely in different parts of the country, and local factors greatly affected the results.

BEES ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME.

Table CCLXV presents value of bees on farms of specified principal sources of income, June 1, 1900, together with the number of farms reporting, with percentages and averages.

TABLE CCLXV.—VALUE OF BEES ON FARMS OF SPECIFIED PRINCIPAL SOURCES OF INCOME, WITH THE NUMBER OF FARMS REPORTING, JUNE 1, 1900, AND PERCENTAGES AND AVERAGES.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.	Number of farms.	Farms reporting bees.	Per cent of farms reporting bees.	Value.	Average value per farm.
Total	5,739,657	707,261	12.3	$10,186,513	$14.40
Hay and grain	1,319,856	117,192	8.9	1,541,947	13.16
Vegetables	155,898	10,111	6.5	168,447	16.66
Fruits	82,176	9,325	11.3	212,444	22.78
Live stock	1,564,714	267,273	17.1	4,763,868	17.82
Dairy produce	357,578	29,487	8.2	596,044	20.21
Tobacco	106,272	13,161	12.4	129,255	9.82
Cotton	1,071,545	105,467	9.8	853,104	8.09
Rice	5,717	153	2.7	1,875	12.25
Sugar	7,344	414	5.6	5,607	13.54
Flowers and plants	6,159	111	1.8	3,577	32.23
Nursery products	2,029	194	9.6	5,758	29.68
Taro	441	3	0.7	249	83.00
Coffee	512	21	4.1	1,297	61.76
Miscellaneous	1,059,416	154,349	14.6	1,903,041	12.33

Of the large groups of farms, the average value of bees to a farm was greatest for fruit and dairy farms, being $22.78 and $20.21, respectively.

VALUE OF BEES ON FARMS OF WHITE AND COLORED FARMERS OF SPECIFIED TENURES.

Table CCLXVI presents value of bees on farms of white and colored farmers of specified tenures, June 1, 1900, and the number of farms reporting, with percentages and averages.

TABLE CCLXVI.—VALUE OF BEES ON FARMS OF WHITE AND COLORED FARMERS OF SPECIFIED TENURES, WITH THE NUMBER OF FARMS REPORTING, JUNE 1, 1900, AND PERCENTAGES AND AVERAGES.

A.—ALL FARMS.

FARMS CLASSIFIED BY TENURE.	Number of farms.	Farms reporting bees.	Per cent of farms reporting bees.	Value.	Average value per farm.
Total	5,739,657	707,261	12.3	$10,186,513	$14.40
Owners	3,149,344	483,340	15.3	7,380,009	15.27
Part owners	451,515	65,236	14.4	951,677	14.59
Owners and tenants	53,299	11,607	21.8	175,968	15.16
Managers	69,213	4,708	8.0	92,619	19.67
Cash tenants	752,920	46,455	6.2	581,575	12.52
Share tenants	1,273,366	95,915	7.5	1,004,665	10.47

B.—FARMS OF WHITE FARMERS.

Total	4,970,129	677,985	13.6	$9,997,958	$14.75
Owners	2,974,497	472,172	15.9	7,292,019	15.44
Part owners	420,916	63,175	15.0	937,403	14.84
Owners and tenants	51,717	11,459	22.2	174,652	15.24
Managers	57,353	4,617	8.1	91,584	19.83
Cash tenants	477,100	37,934	8.0	535,025	14.10
Share tenants	988,546	88,628	9.0	967,325	10.91

C.—FARMS OF COLORED FARMERS.

Total	769,528	29,276	3.8	$188,555	$6.44
Owners	174,847	11,168	6.4	87,990	7.88
Part owners	30,599	2,061	6.7	14,274	6.93
Owners and tenants	1,582	148	9.4	1,316	8.89
Managers	1,860	91	4.9	1,085	11.92
Cash tenants	275,820	8,521	3.1	46,550	5.46
Share tenants	284,820	7,287	2.6	37,340	5.12

Of the farms reporting bees, 95.9 per cent were operated by white farmers and 4.1 per cent by colored farmers. Since the colored farmers constituted 13.4 per cent of all farmers, relatively less than one-third as many of them kept bees as of the white farmers. This variation was not due to locality, since bees were kept in the South more extensively, if anything, than in the North. This table shows that the average value of bees on a farm was $14.40; the average for the white farmers was $14.75, and for the colored farmers, $6.44.

PRECEDING CENSUS REPORTS.

Table CCLXVII presents a comparative statement of the production of honey and wax in the United States, as reported in the various census years from 1860 to 1900, inclusive.

TABLE CCLXVII.—POUNDS OF HONEY AND WAX PRODUCED IN THE UNITED STATES: SUMMARY 1860 TO 1900.

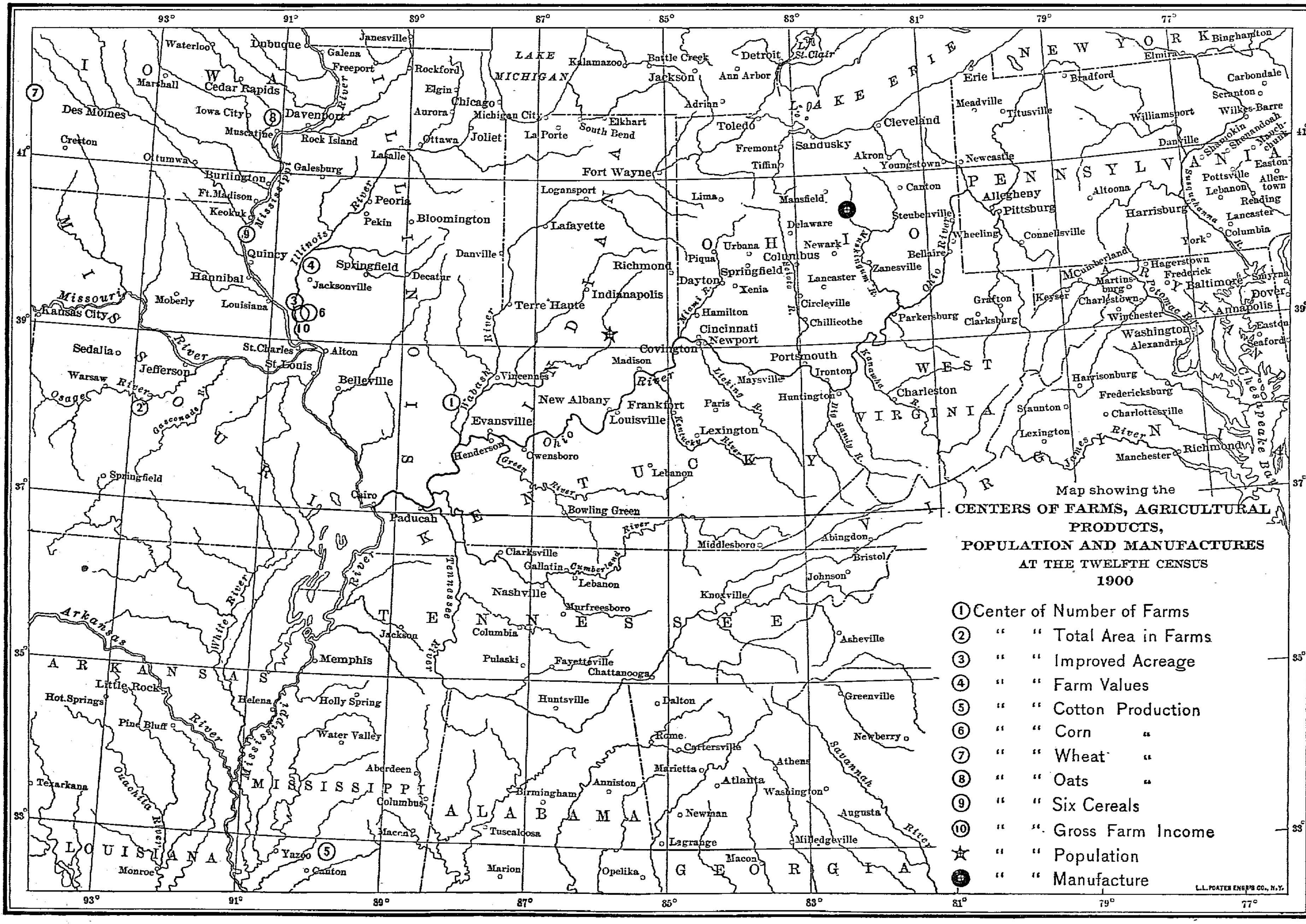
YEARS.	Honey.	Wax.
1900	61,196,160	1,765,315
1890	63,897,327	1,166,588
1880	25,743,308	1,105,689
1870	14,702,815	631,129
1860	23,366,357	1,322,787

The census of 1860 reported 23,366,357 pounds of honey and 1,322,787 pounds of wax, or 17.7 pounds of the former to 1.0 pound of the latter. The five greatest honey-producing states were: New York, with 2,369,751 pounds; North Carolina, 2,055,969; Kentucky, 1,768,692; Missouri, 1,585,983; and Tennessee, 1,519,390. The five greatest wax producers were: North Carolina, 170,495 pounds; New York, 121,020; Alabama, 100,987; Tennesssee, 98,892; and Virginia, 94,860. California reported only 12,276 pounds of honey and 584 pounds of wax.

The census of 1870 reported 14,702,815 pounds of honey and 631,129 pounds of wax, or 23.3 pounds of the former to 1.0 pound of the latter. The production of wax was less than one-half, and that of honey nearly two-thirds of the reported product of ten years before. The five greatest honey-producing states were: Illinois, 1,547,178 pounds; North Carolina, 1,404,040; Kentucky, 1,171,500; Missouri, 1,156,444; and Tennessee, 1,039,550. The five greatest wax-producing states were: North Carolina, 109,054; New York, 86,333; Tennessee, 51,685; Missouri, 35,248; and Kentucky, 32,557.

The census of 1880 reported 25,743,208 pounds of honey, or a trifle more than in 1860, and nearly twice that in 1870. The wax production was 1,105,689 pounds, or 23.3 pounds of honey to 1.0 pound of wax, the same proportion as in 1870. The five greatest honey-producing states were: Tennessee, 2,130,689 pounds; New York, 2,088,845; Ohio, 1,626,847; North Carolina, 1,591,590; and Kentucky, 1,500,565. The five greatest producers of wax were: North Carolina, 126,268; Tennessee, 86,421; New York, 79,756; Georgia, 69,318; and Alabama, 66,876.

The census of 1890 reported 63,897,327 pounds of honey and 1,166,588 pounds of wax, the ratio of honey to wax being 54.8, or nearly two and one-half times what had been reported in the two preceding decades. The five most important producers of honey were: Iowa, 6,813,412 pounds; Illinois, 4,602,941; Missouri, 4,492,178; New York, 4,281,964; and California, 3,929,899. The five greatest reports of wax were: From North Carolina, 126,447 pounds; Missouri,


Map showing the
CENTERS OF FARMS, AGRICULTURAL
PRODUCTS,
POPULATION AND MANUFACTURES
AT THE TWELFTH CENSUS
1900
① Center of Number of Farms
② " " Total Area in Farms
③ " " Improved Acreage
④ " " Farm Values
⑤ " " Cotton Production
⑥ " " Corn "
⑦ " " Wheat "
⑧ " " Oats "
⑨ " " Six Cereals
⑩ " " Gross Farm Income
" " Population
" " Manufacture
L.L. POATES ENGR'G CO., N.Y.

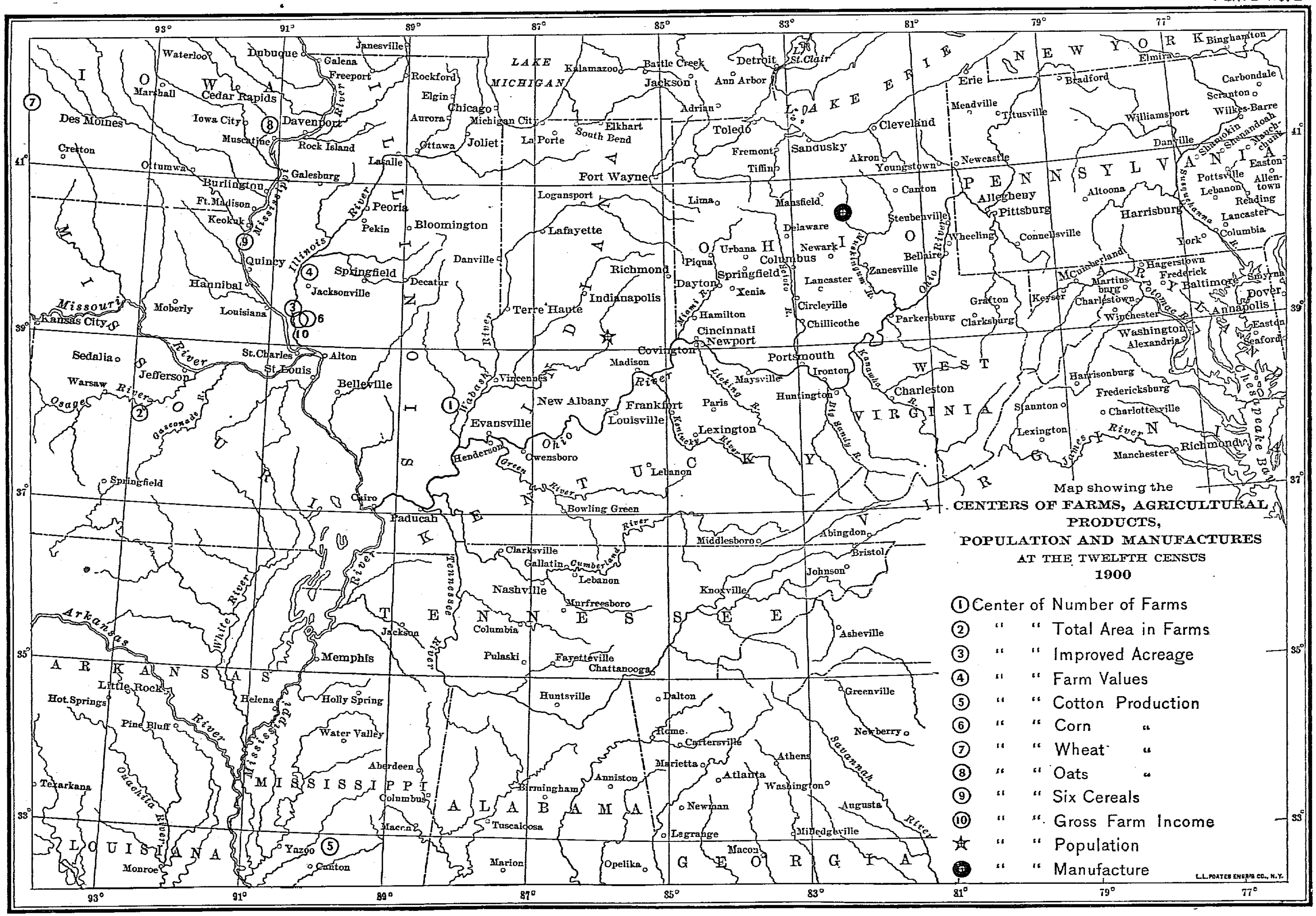

Map showing the
CENTERS OF FARMS, AGRICULTURAL PRODUCTS,
POPULATION AND MANUFACTURES
AT THE TWELFTH CENSUS
1900
(1) Center of Number of Farms
(2) " " Total Area in Farms
(3) " " Improved Acreage
(4) " " Farm Values
(5) " " Cotton Production
(6) " " Corn "
(7) " " Wheat "
(8) " " Oats "
(9) " " Six Cereals
(10) " " Gross Farm Income
" " Population
" " Manufacture
L.L. POATES ENGR'G CO., N.Y.

PLATE No.3

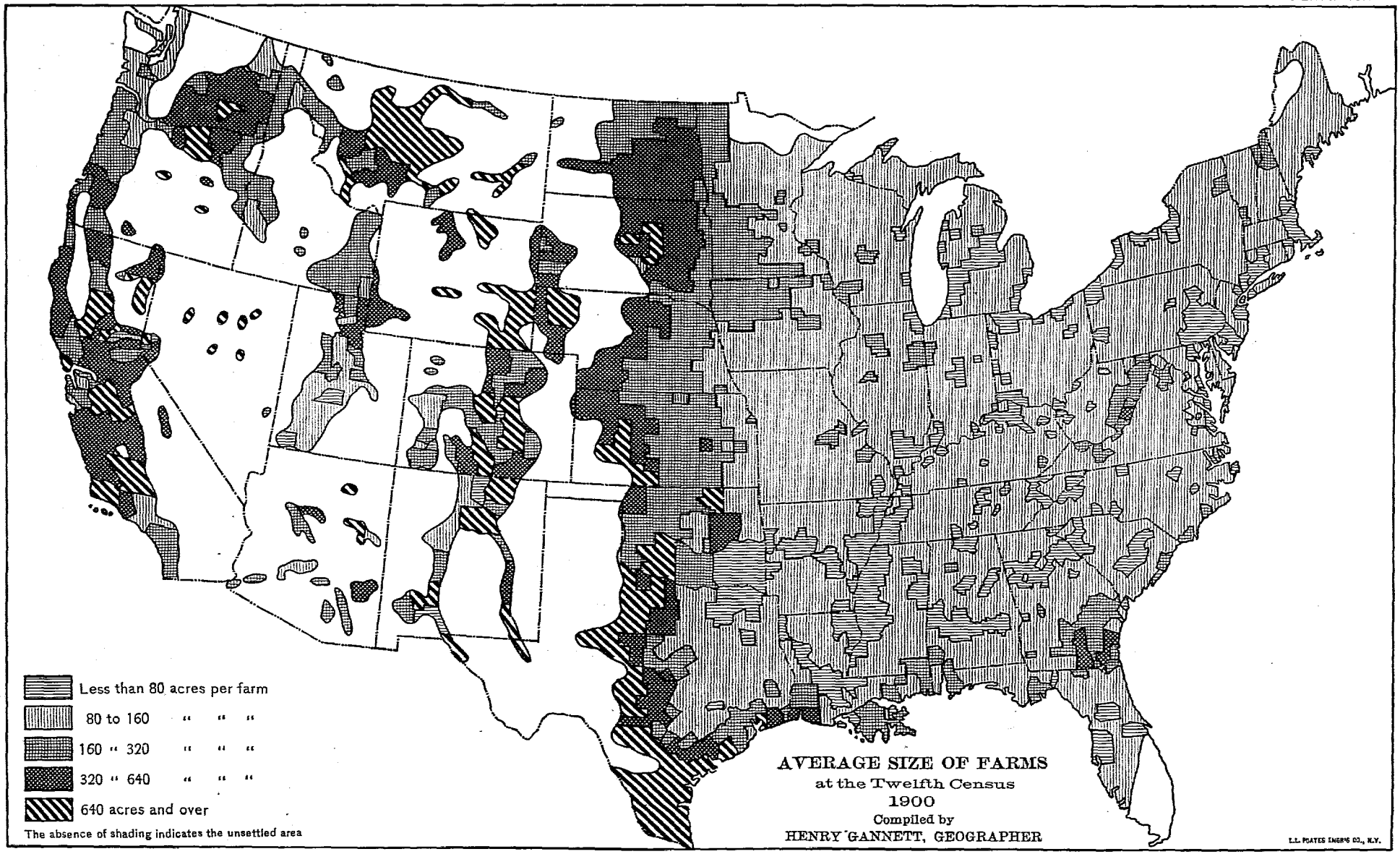


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PLATE No.4

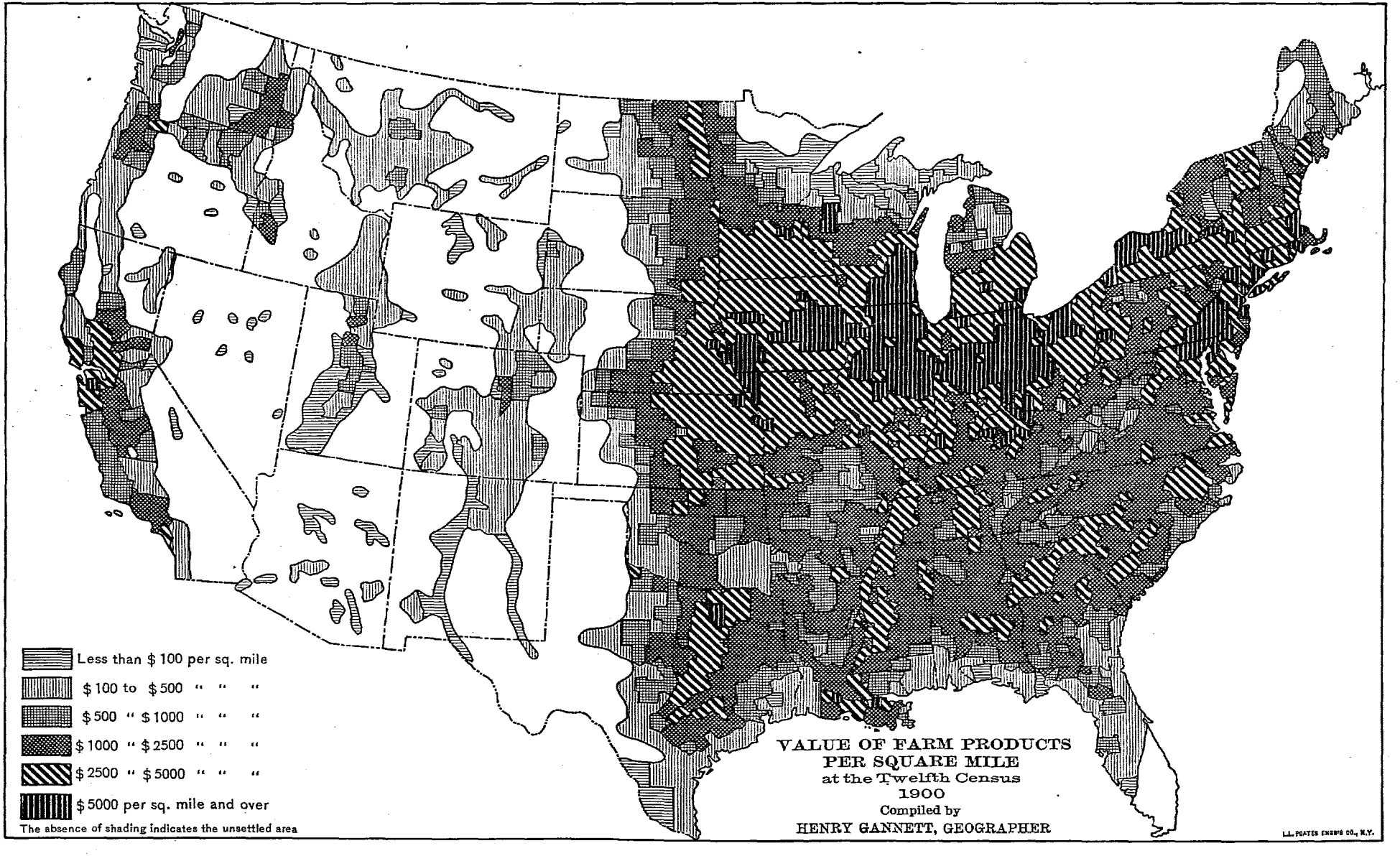
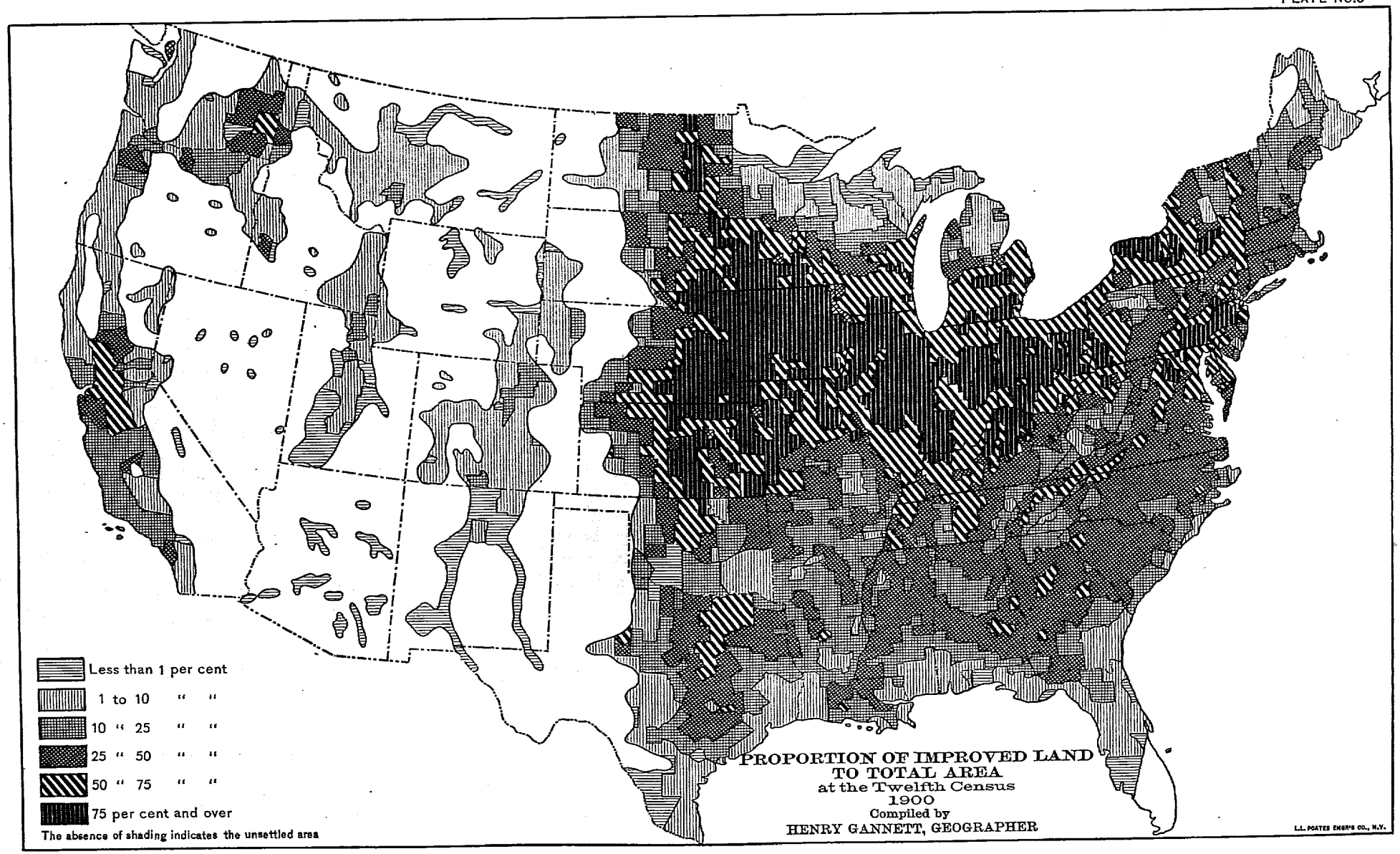

Less than $ 100 per sq. mile
$ 100 to $ 500 " " "
$ 500 " $ 1000 " " "
$ 1000 " $ 2500 " " "
$ 2500 " $ 5000 " " "
$ 5000 per sq. mile and over
The absence of shading indicates the unsettled area
VALUE OF FARM PRODUCTS
PER SQUARE MILE
at the Twelfth Census
1900
Compiled by
HENRY GANNETT, GEOGRAPHER
L.L. PRATT'S ENGRG CO., N.Y.

PLATE No.5

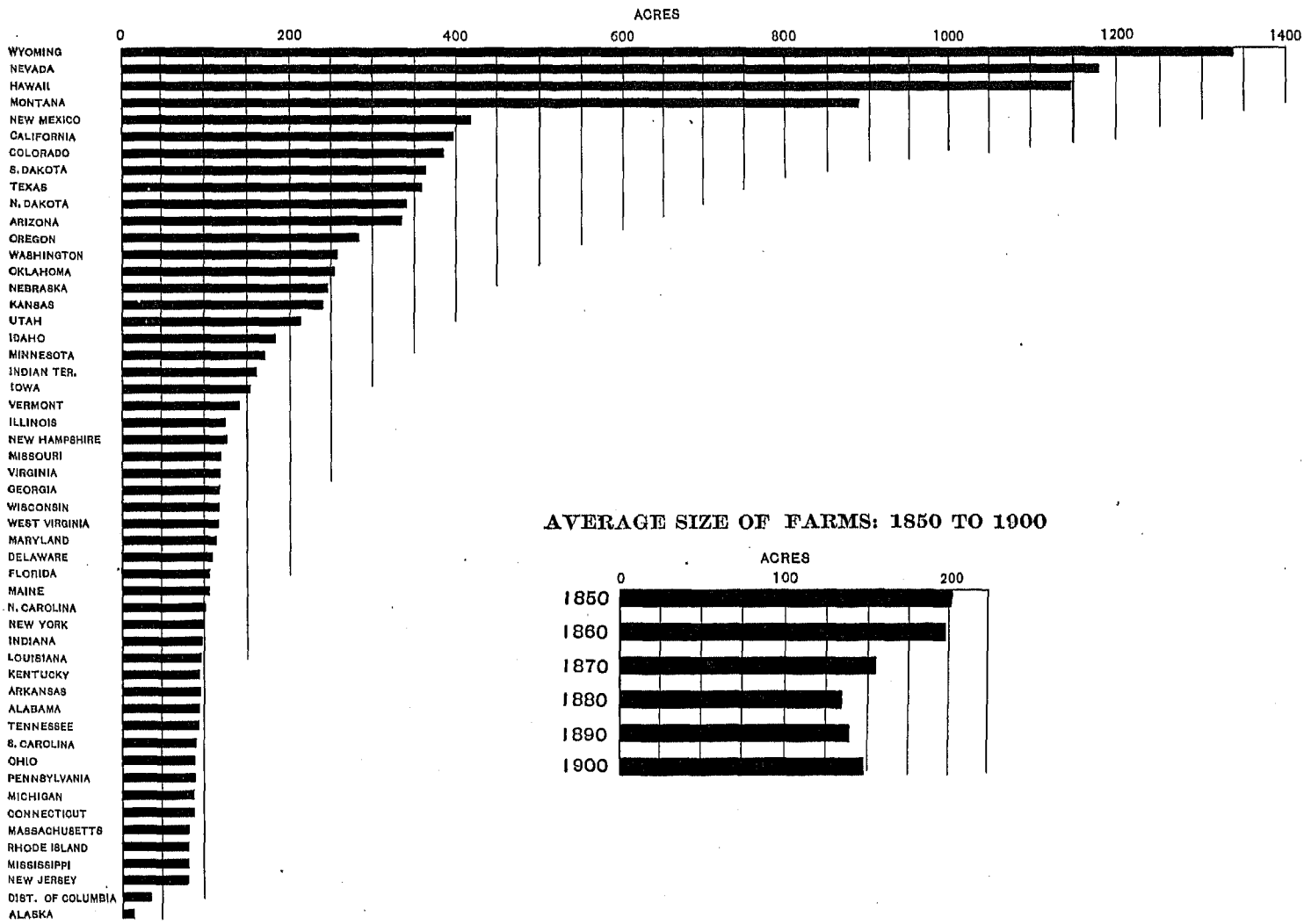


PROPORTION OF IMPROVED LAND TO TOTAL AREA

at the Twelfth Census
1900
Compiled by
HENRY GANNETT, GEOGRAPHER

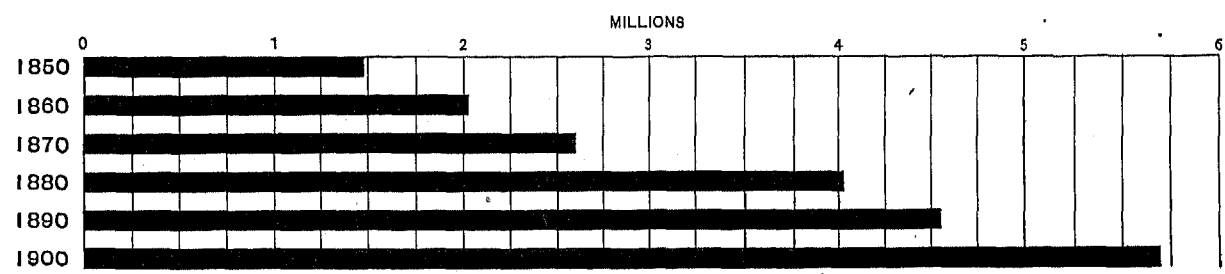
L.L. POATES ENGR'G CO., N.Y.

AVERAGE SIZE OF FARMS: 1900

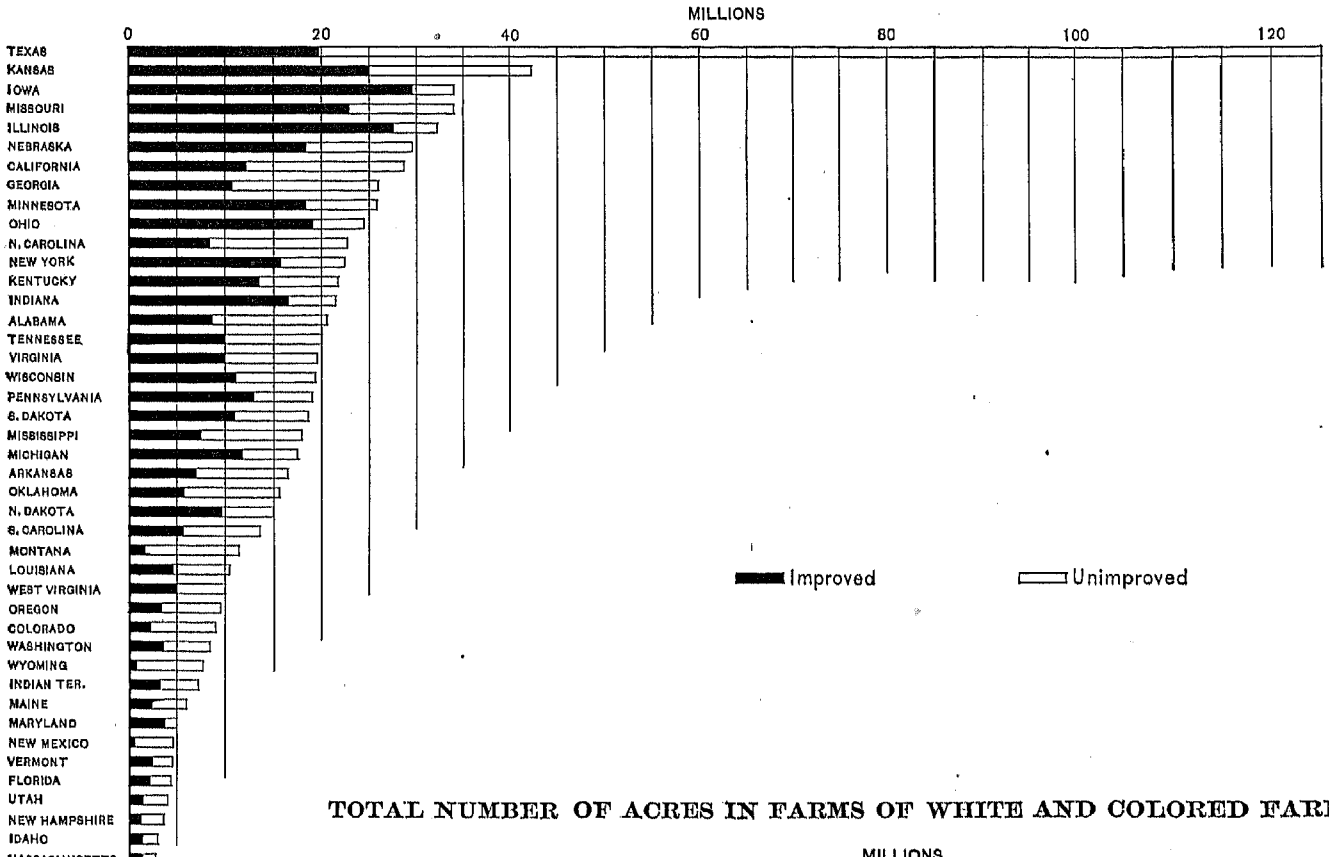


AVERAGE SIZE OF FARMS: 1850 TO 1900

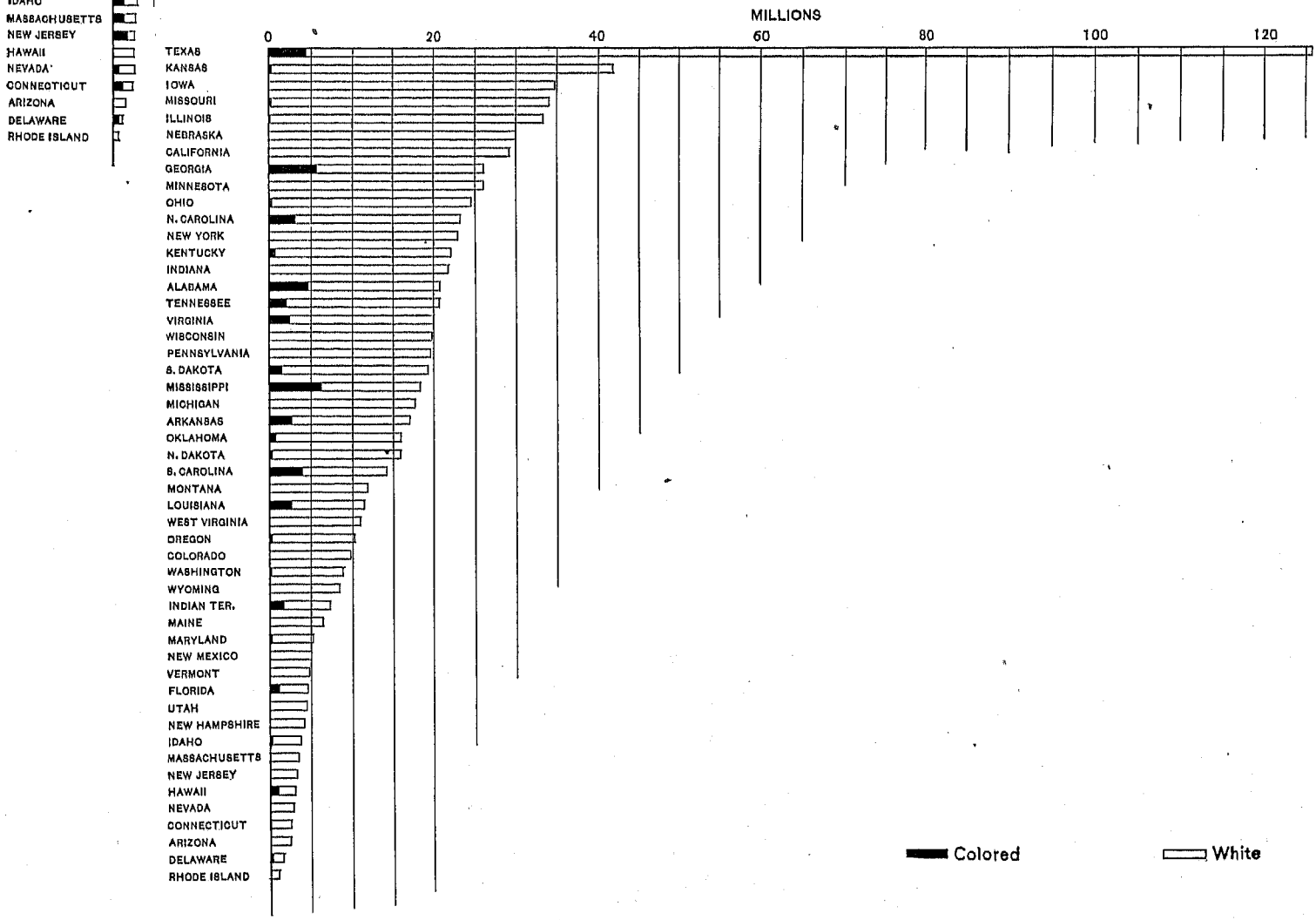
NUMBER OF FARMS: 1850 TO 1900



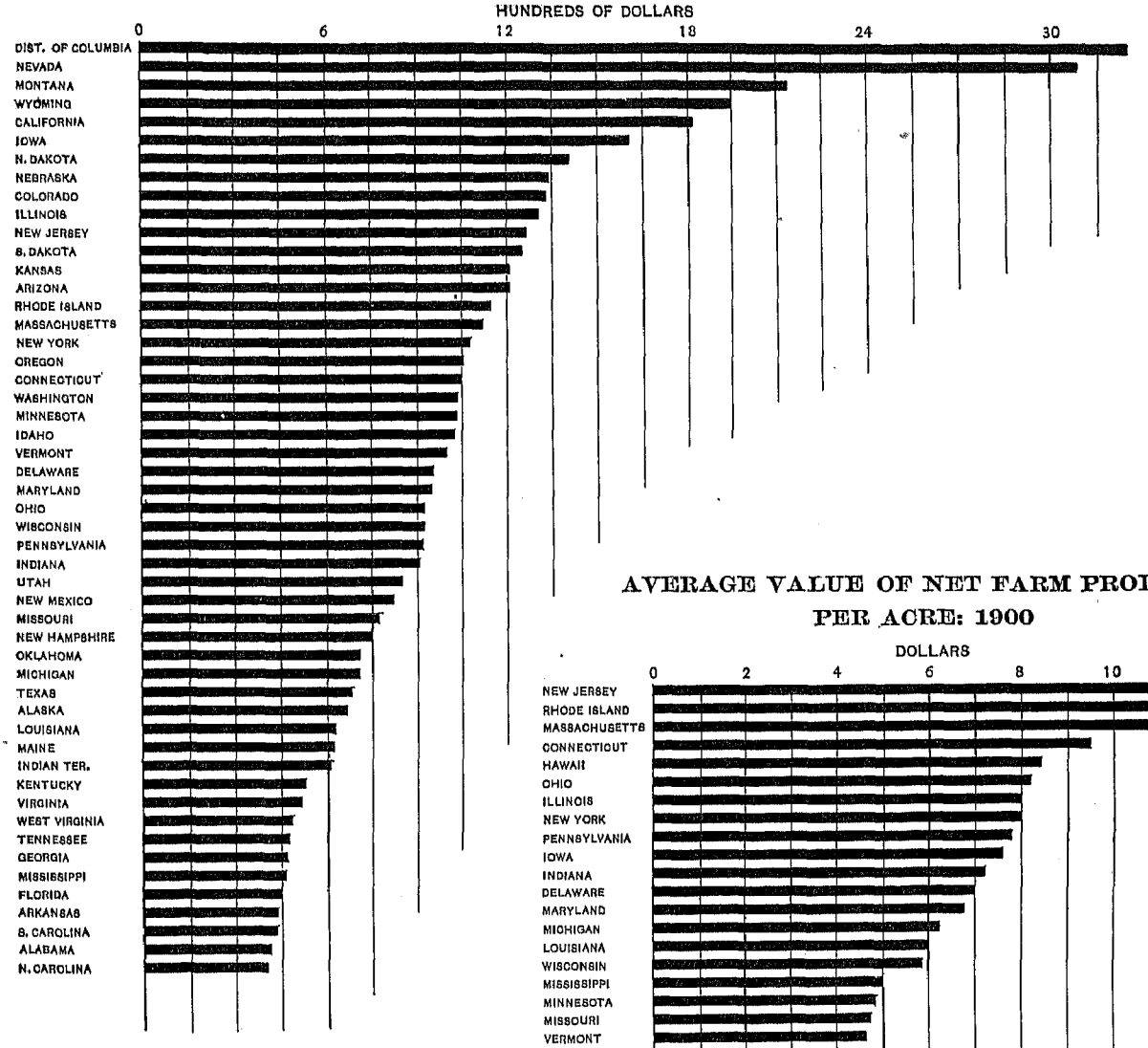
TOTAL NUMBER OF IMPROVED AND UNIMPROVED ACRES IN FARMS: 1900



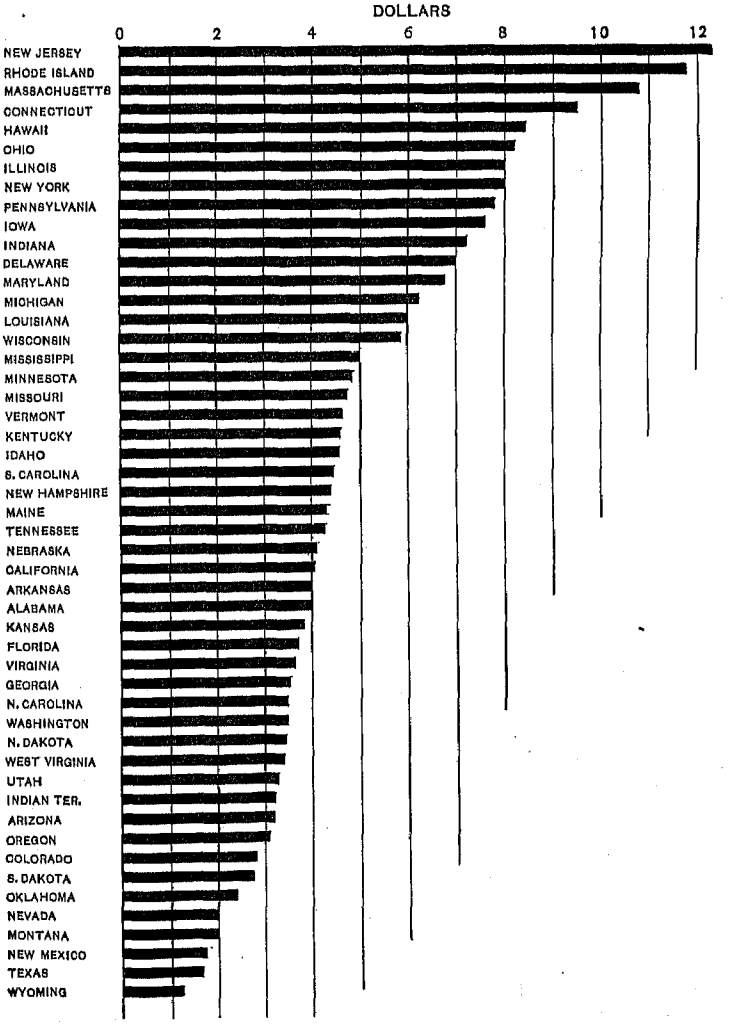
TOTAL NUMBER OF ACRES IN FARMS OF WHITE AND COLORED FARMERS: 1900



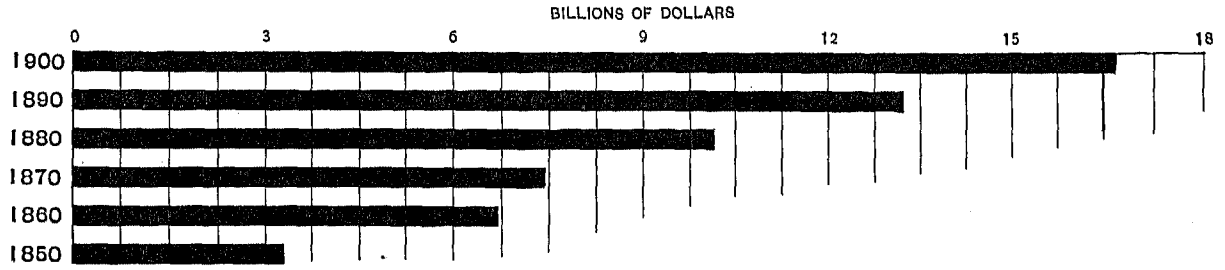
AVERAGE VALUE OF FARM PRODUCTS PER FARM: 1900



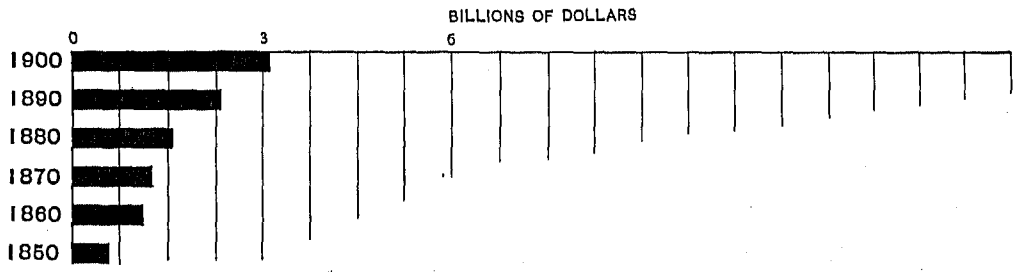
AVERAGE VALUE OF NET FARM PRODUCTS PER ACRE: 1900



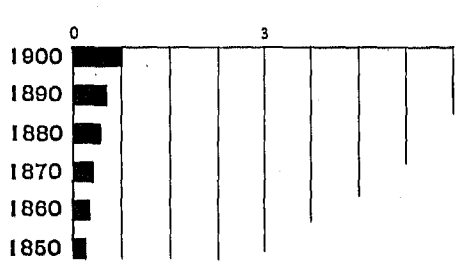
VALUE OF FARM LAND WITH IMPROVEMENTS: 1850 TO 1900



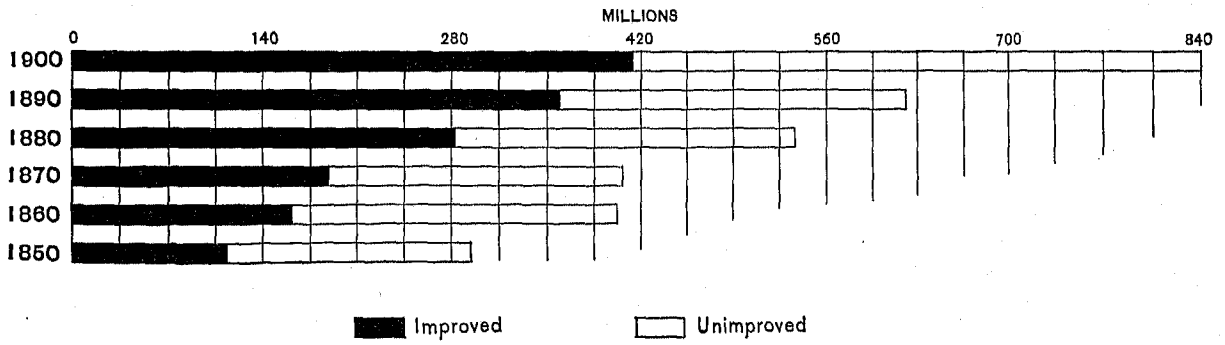
VALUE OF LIVE STOCK ON FARMS: 1850 TO 1900



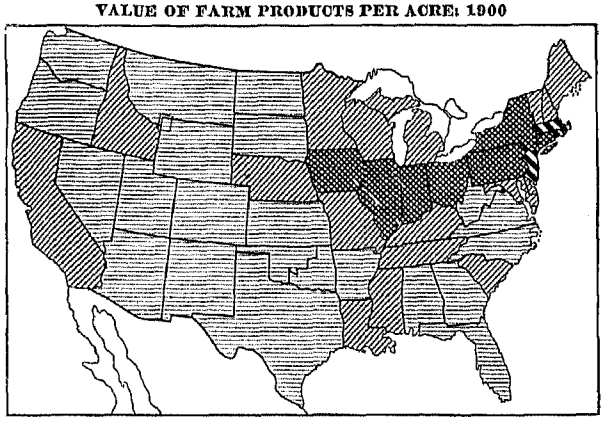
VALUE OF IMPLEMENTS AND MACHINERY ON FARMS: 1850 TO 1900



TOTAL NUMBER OF IMPROVED AND UNIMPROVED ACRES IN FARMS: 1850 TO 1900

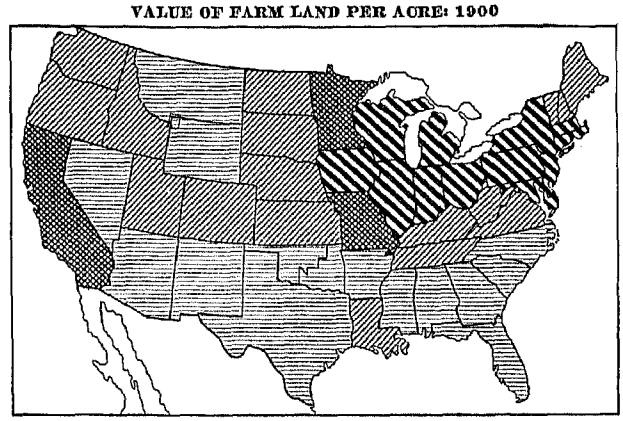


VALUE OF FARM PRODUCTS PER ACRE: 1900



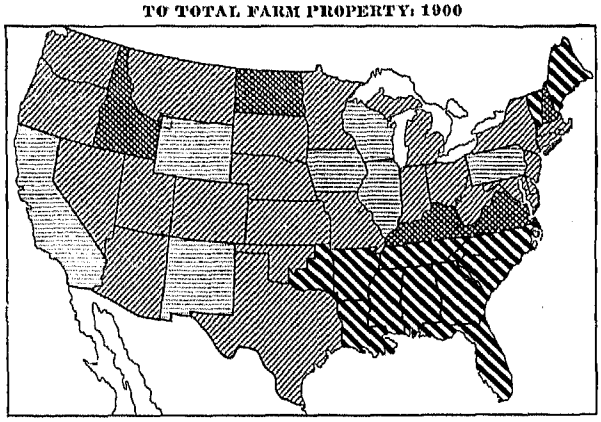
Less than $4 per acre | $4 to 7 per acre | $7 to 10 per acre | $10 per acre and over

VALUE OF FARM LAND PER ACRE: 1900



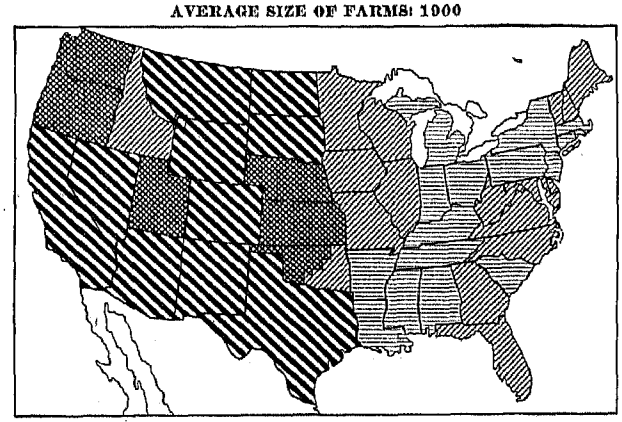
Less than $10 per acre | $10 to 20 per acre | $20 to 30 per acre | $30 per acre and over

PROPORTION OF GROSS FARM INCOME TO TOTAL FARM PROPERTY: 1900



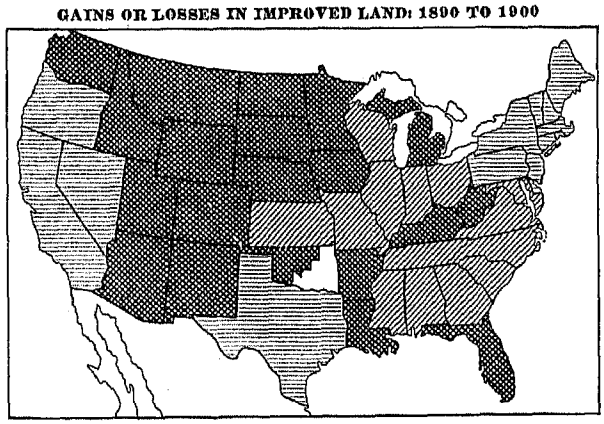
Less than 20 per cent | 20 to 25 per cent | 25 to 30 per cent | 30 per cent and over

AVERAGE SIZE OF FARMS: 1900



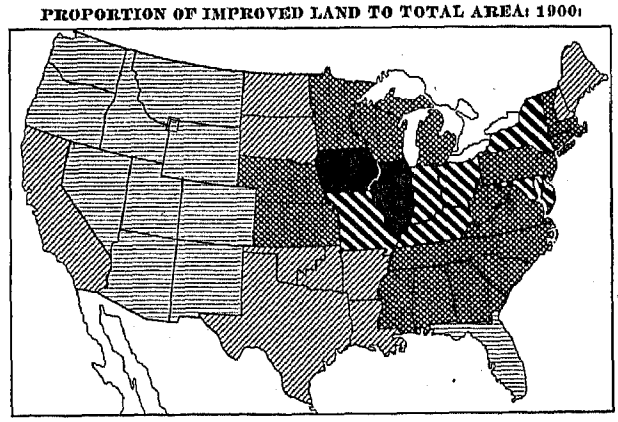
Less than 100 acres | 100 to 200 acres | 200 to 300 acres | 300 acres and over

GAINS OR LOSSES IN IMPROVED LAND: 1890 TO 1900



Loss | Gain less than 16 per cent | Gain 16 per cent and over

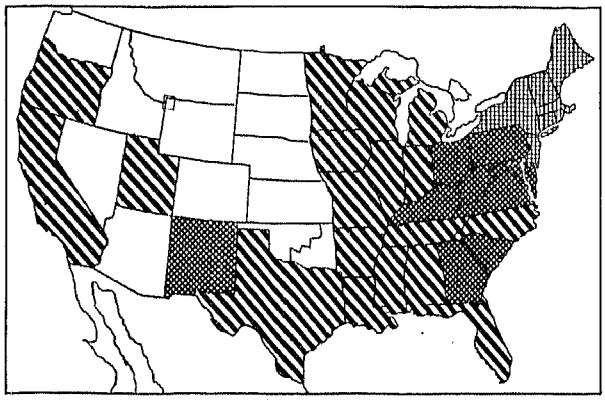
PROPORTION OF IMPROVED LAND TO TOTAL AREA: 1900



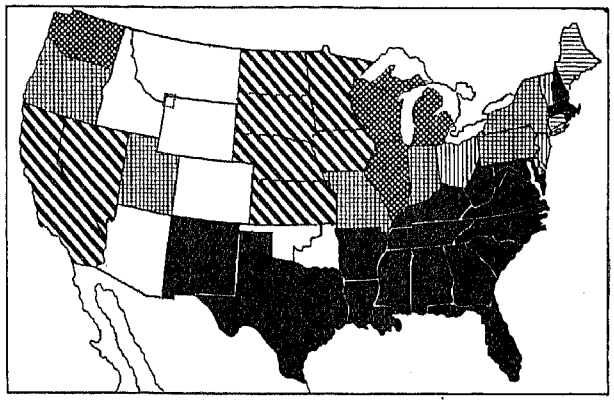
Less than 10 per cent | 10 to 25 per cent | 25 to 50 per cent | 50 to 75 per cent | 75 per cent and over

PERCENTAGE OF INCREASE IN THE VALUE OF FARMS AND IMPROVEMENTS: 1850 TO 1900

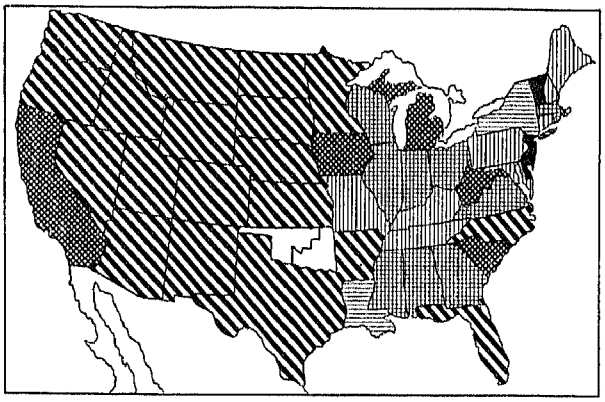
1850 TO 1860



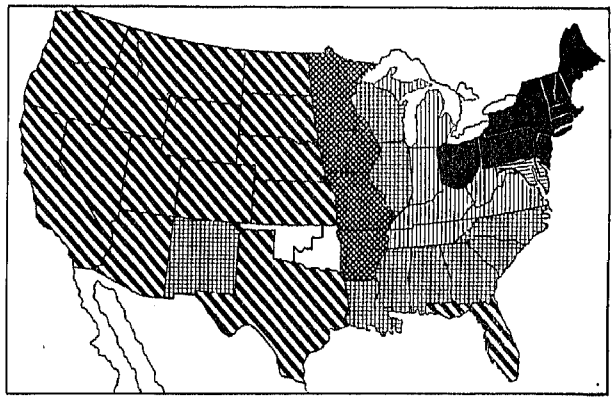
1860 TO 1870



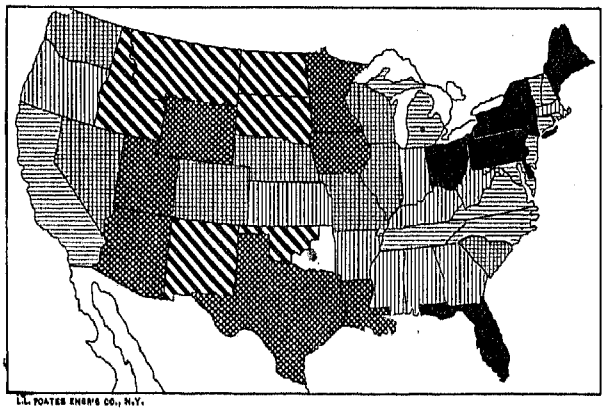
1870 TO 1880



1880 TO 1890



1890 TO 1900



L.L. POATER ENGR'G CO., N.Y.

- Less than 10 per cent increase
- 10 to 25 " " "
- 25 " 50 " " "
- 50 " 100 " " "
- 100 per cent and above
- Decrease

White areas no report

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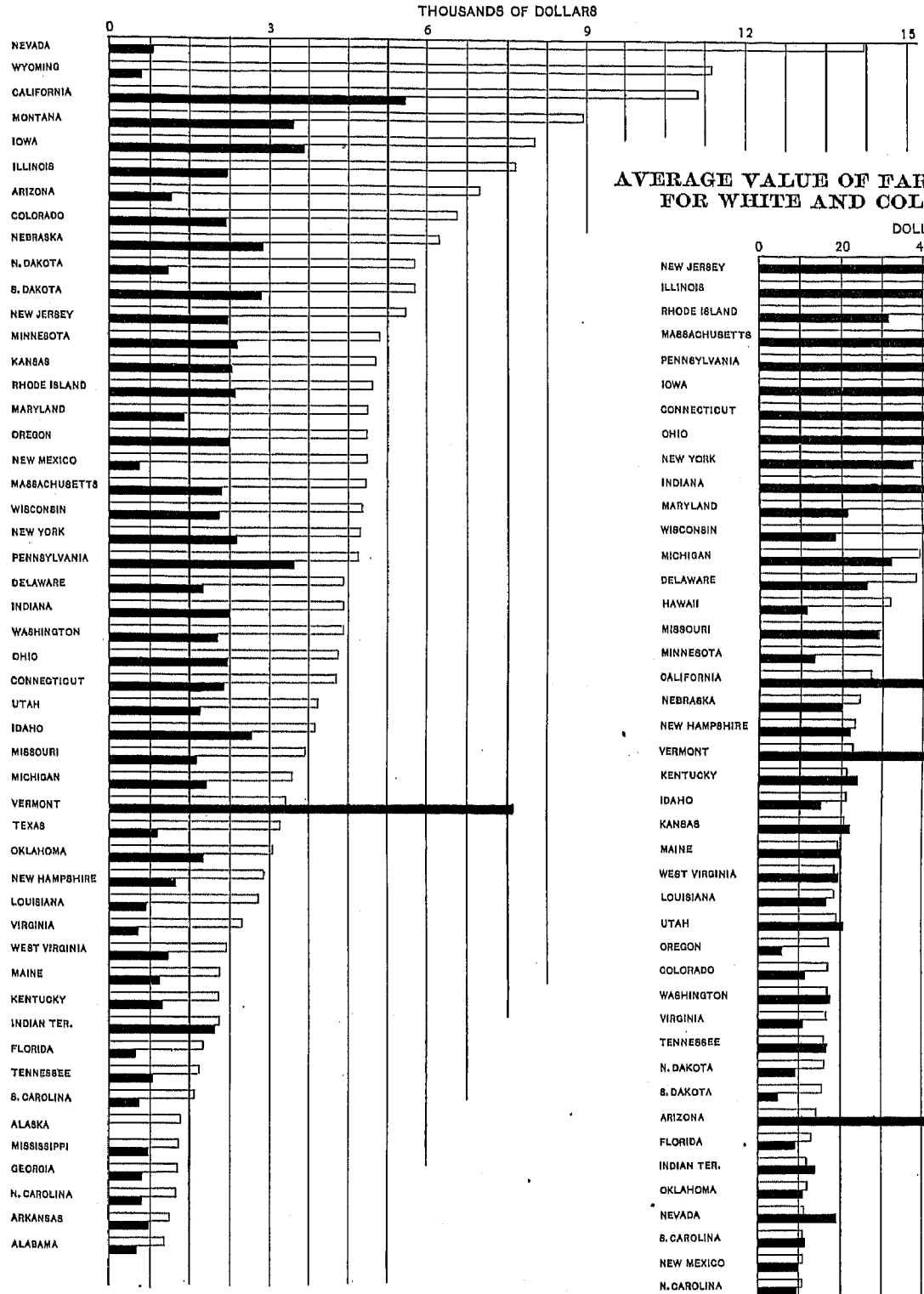
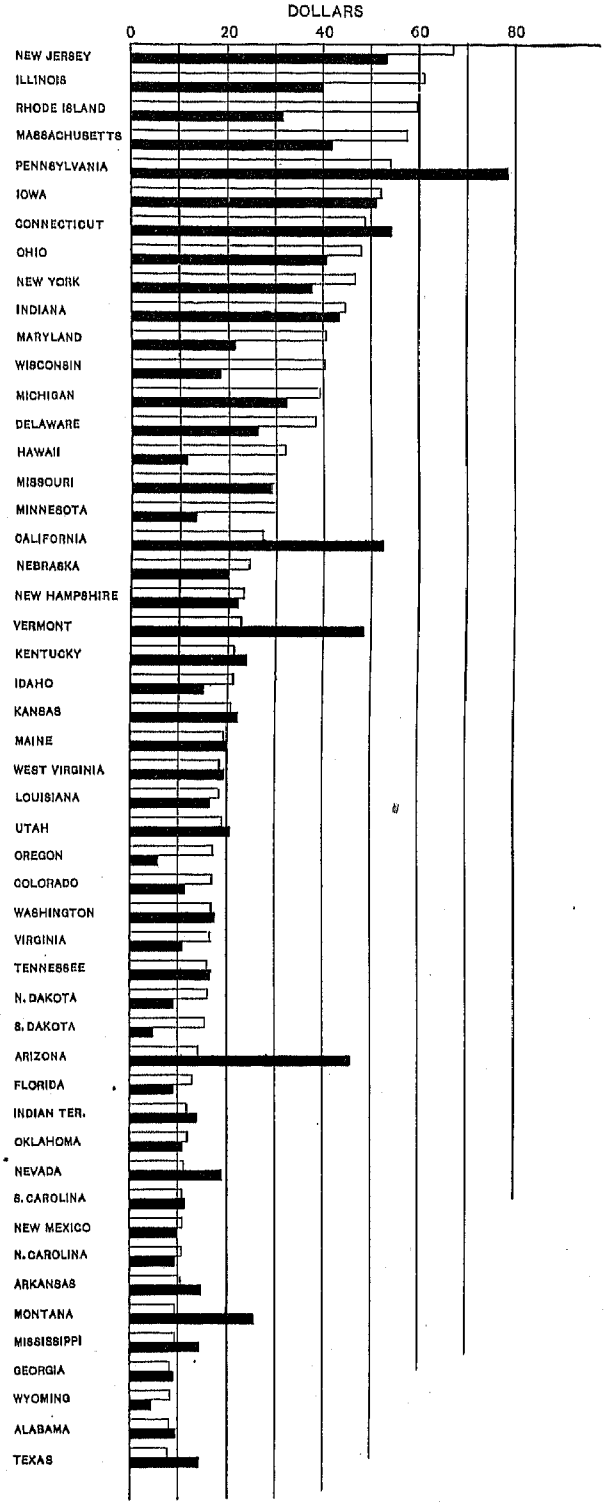
AVERAGE VALUE OF FARM PROPERTY PER FARM FOR WHITE AND COLORED FARMERS: 1900

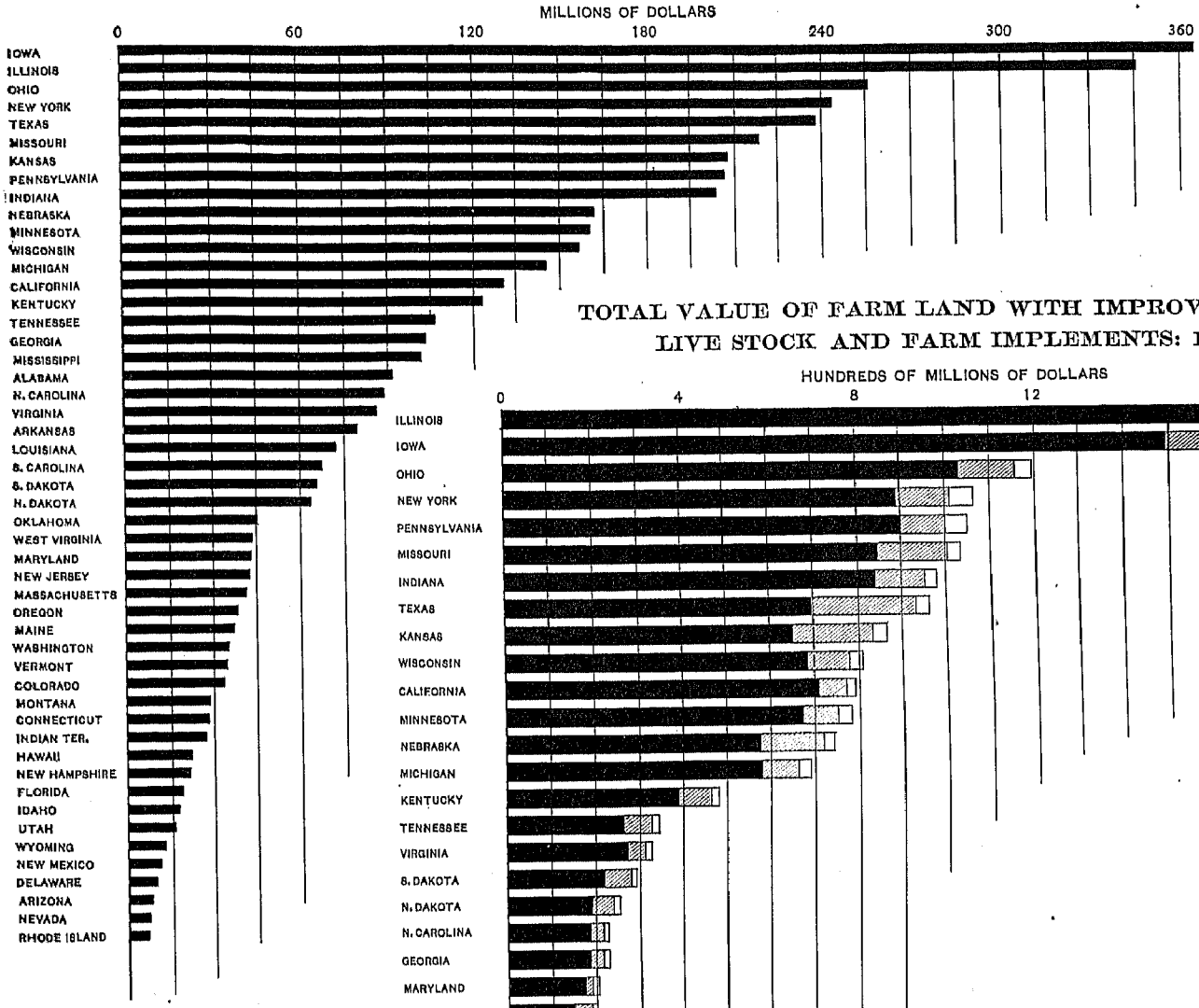


AVERAGE VALUE OF FARM PROPERTY PER ACRE FOR WHITE AND COLORED FARMERS: 1900

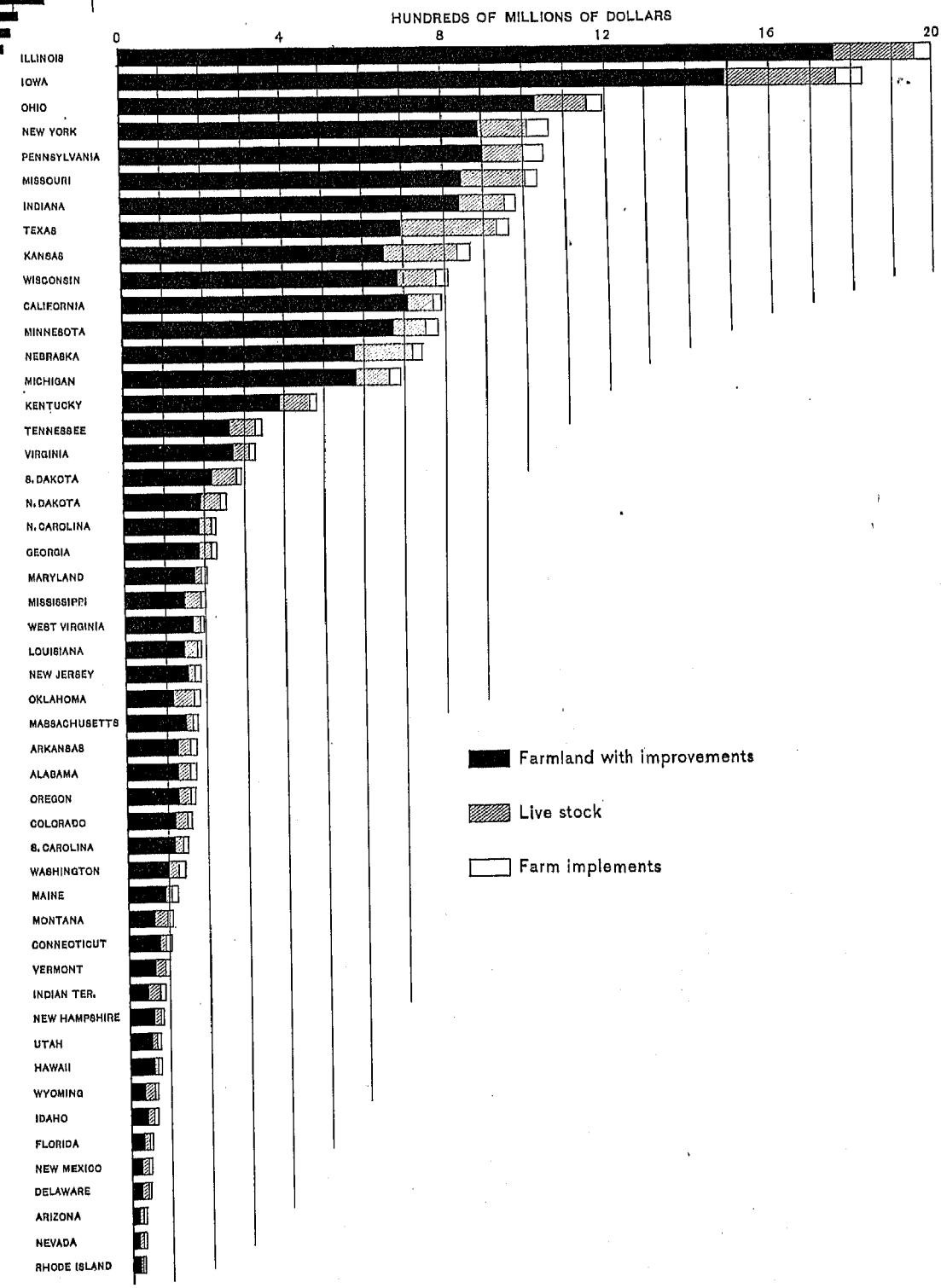


White Colored

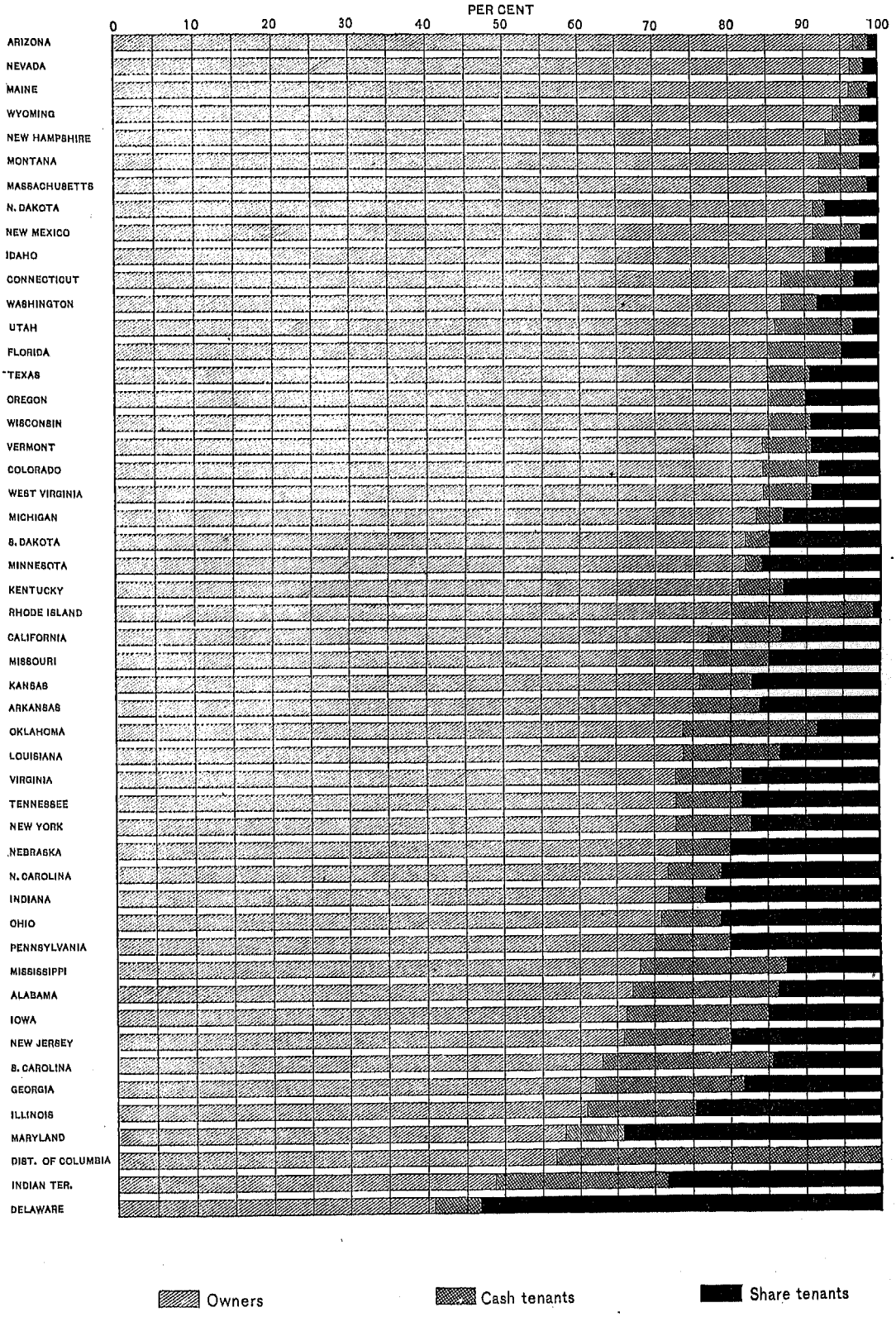
TOTAL VALUE OF FARM PRODUCTS: 1900



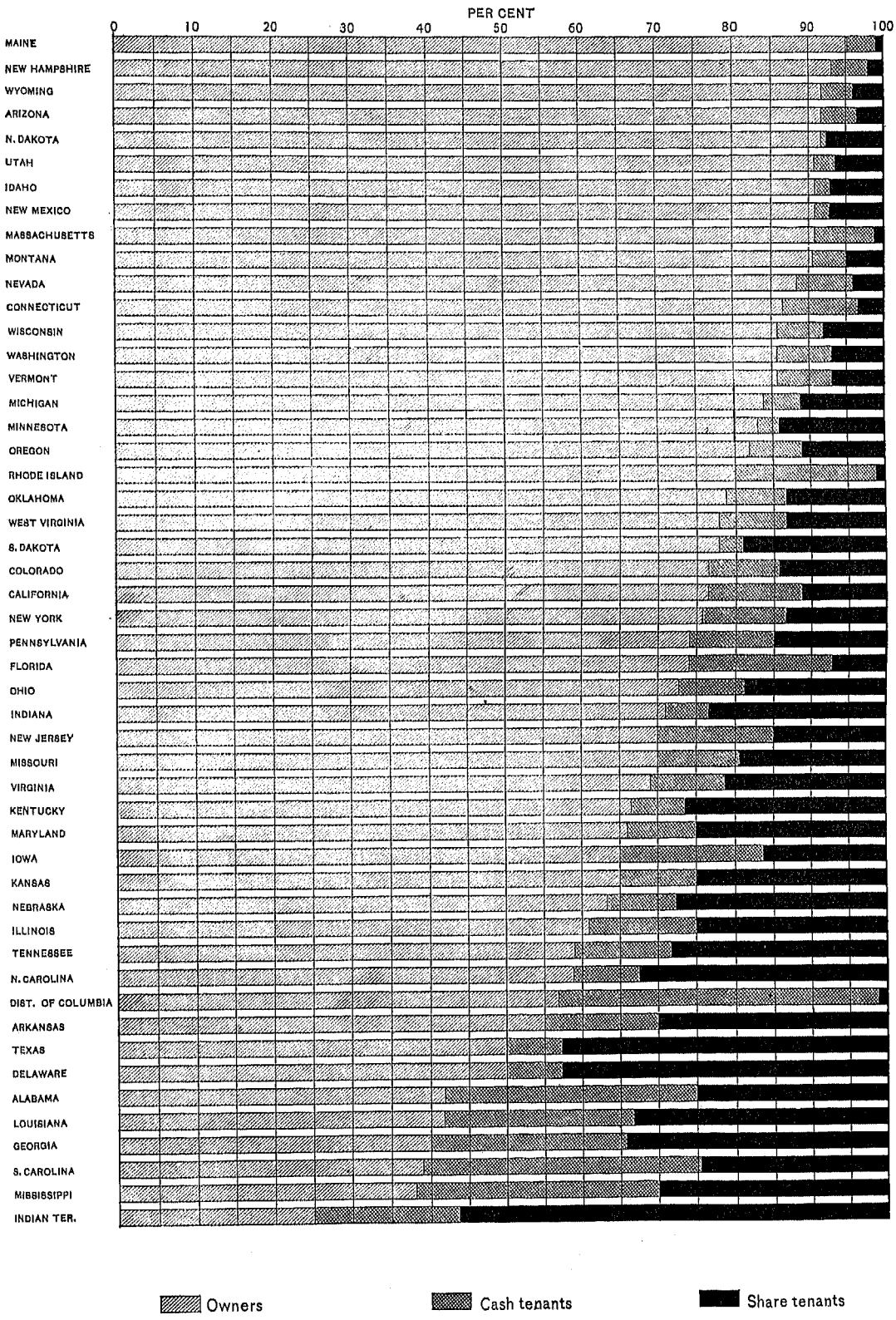
TOTAL VALUE OF FARM LAND WITH IMPROVEMENTS, LIVE STOCK AND FARM IMPLEMENTS: 1900



CLASSIFICATION OF FARM AREA BY TENURE: 1900

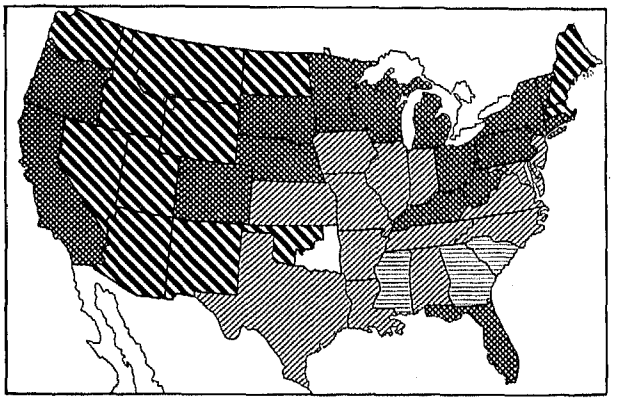


CLASSIFICATION OF NUMBER OF FARMS BY TENURE: 1900



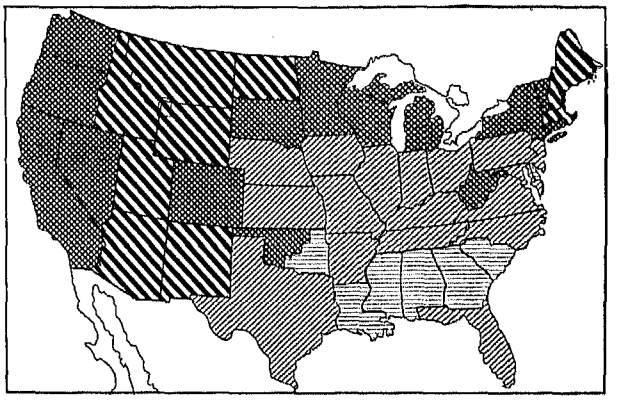
PROPORTION OF FARMS OWNED TO ALL FARMS

1890



Less than 50 per cent | 50 to 75 per cent

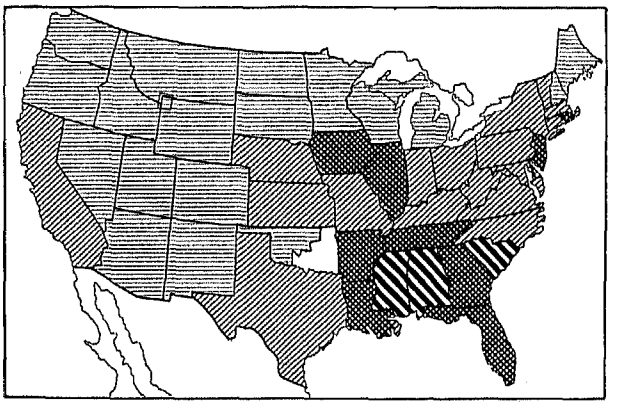
1900



75 to 90 per cent | 90 per cent and over

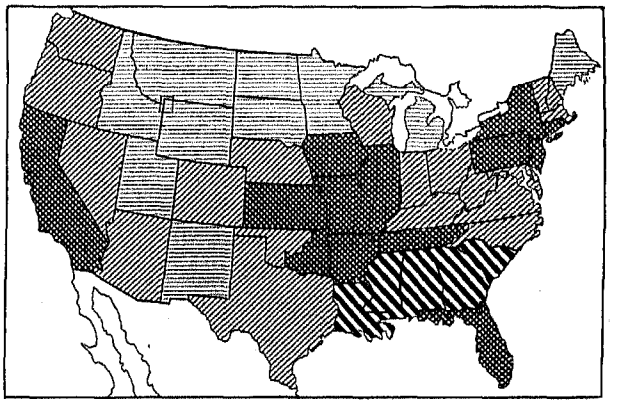
PROPORTION OF FARMS RENTED FOR CASH TO ALL FARMS

1890



Less than 5 per cent | 5 to 10 per cent

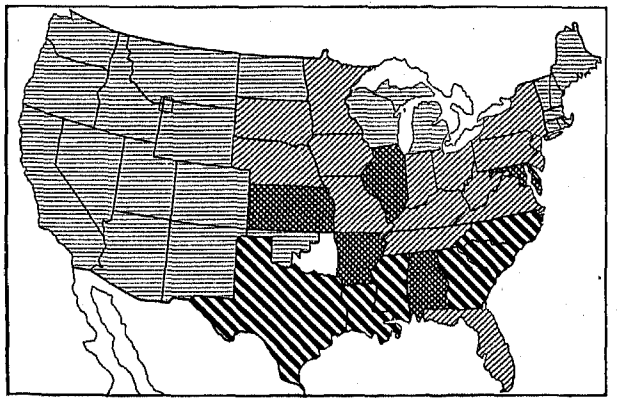
1900



10 to 20 per cent | 20 per cent and over

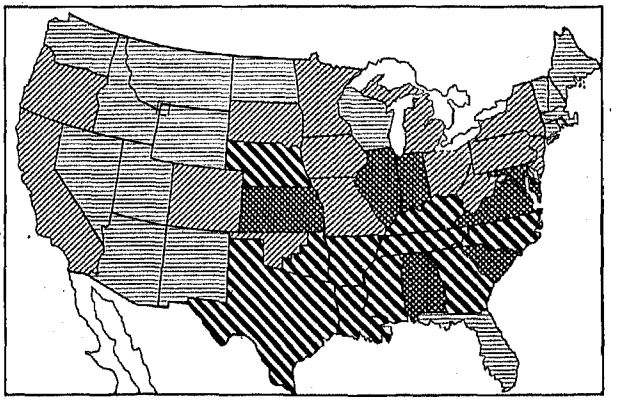
PROPORTION OF FARMS RENTED ON SHARES TO ALL FARMS

1890



Less than 10 per cent | 10 to 20 per cent

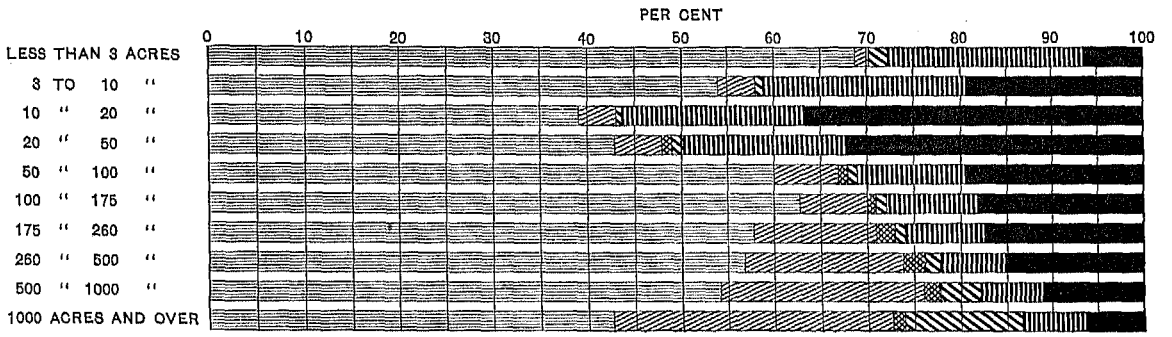
1900



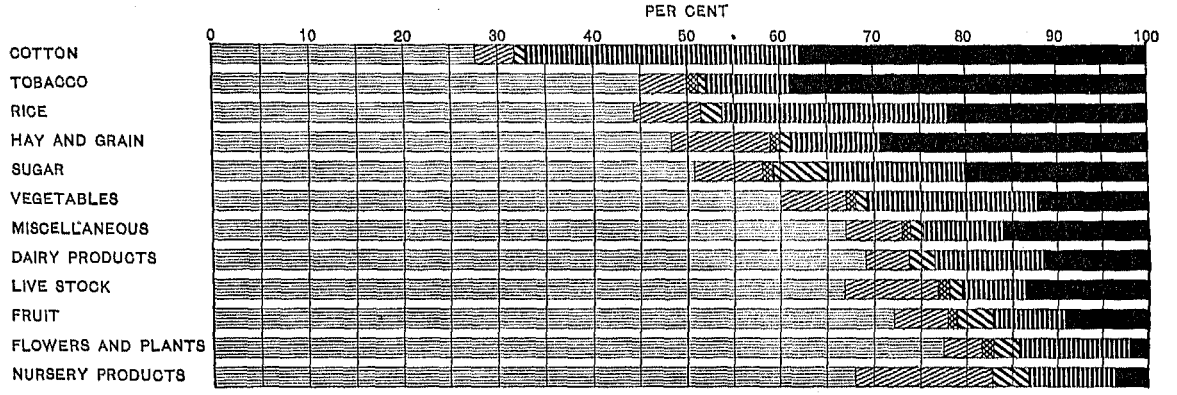
20 to 25 per cent | 25 per cent and over

PERCENTAGES OF THE NUMBER OF FARMS, OF SPECIFIED TENURES: 1900

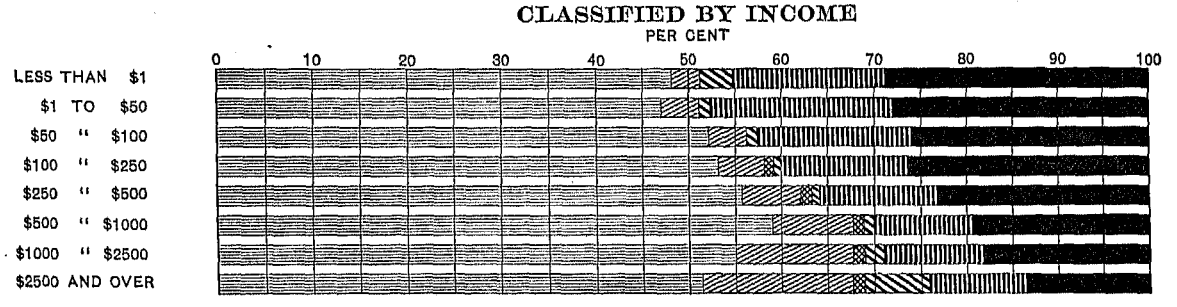
CLASSIFIED BY AREA



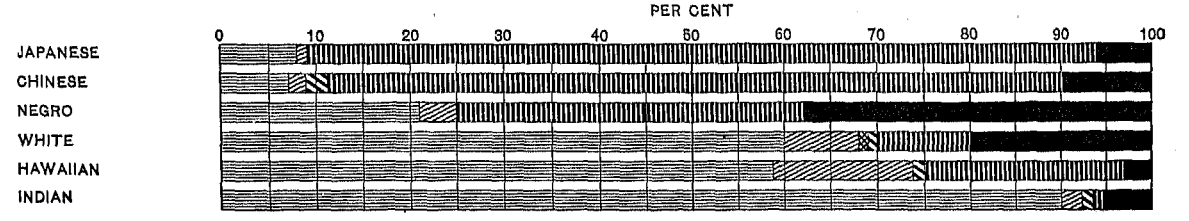
CLASSIFIED BY SOURCE OF INCOME



CLASSIFIED BY INCOME

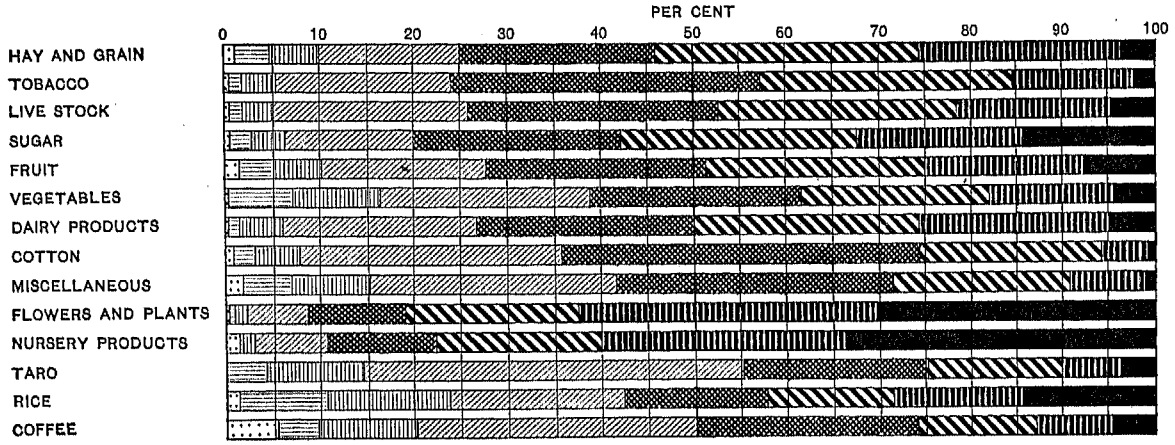


CLASSIFIED BY RACE

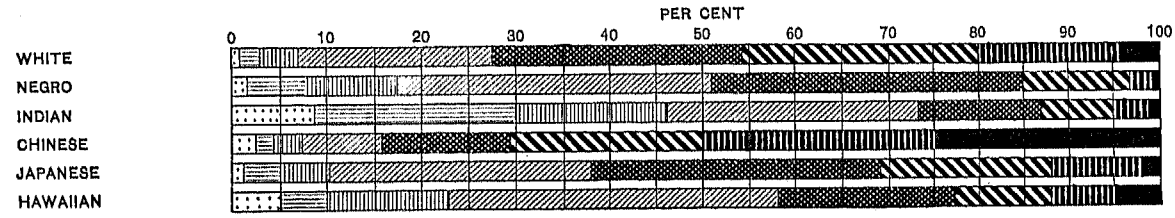


PERCENTAGES OF THE NUMBER OF FARMS OF SPECIFIED INCOMES: 1900

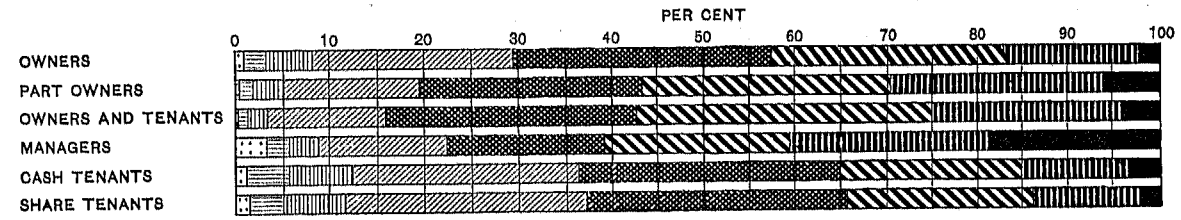
CLASSIFIED BY PRINCIPAL SOURCE OF INCOME



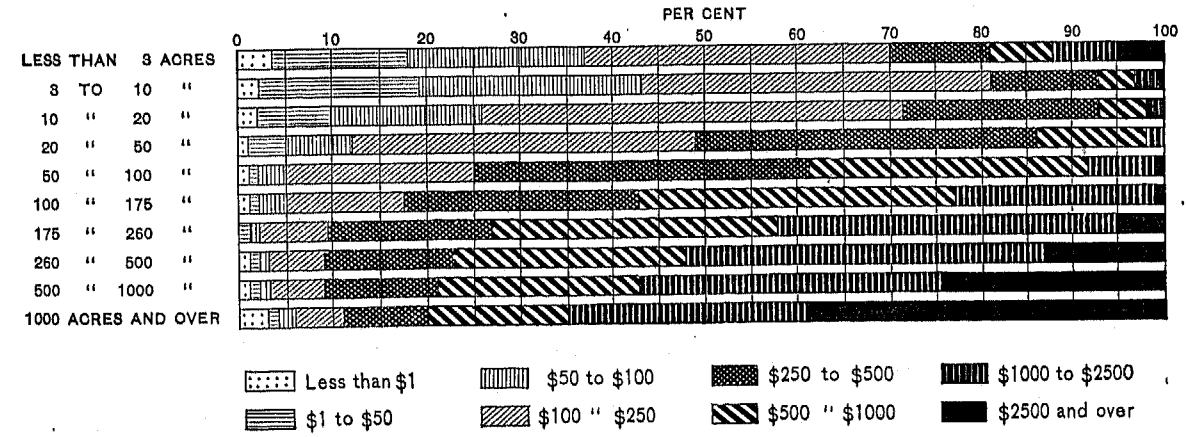
CLASSIFIED BY RACE OF FARMER



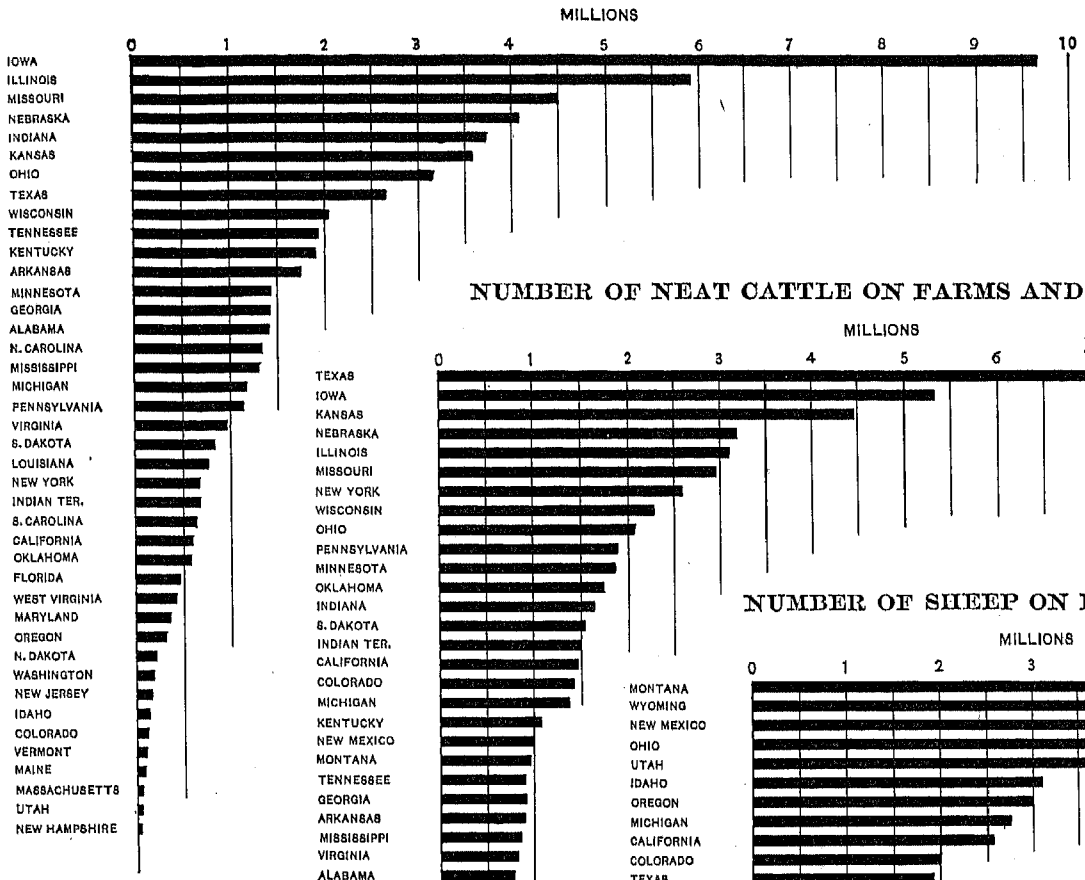
CLASSIFIED BY TENURE



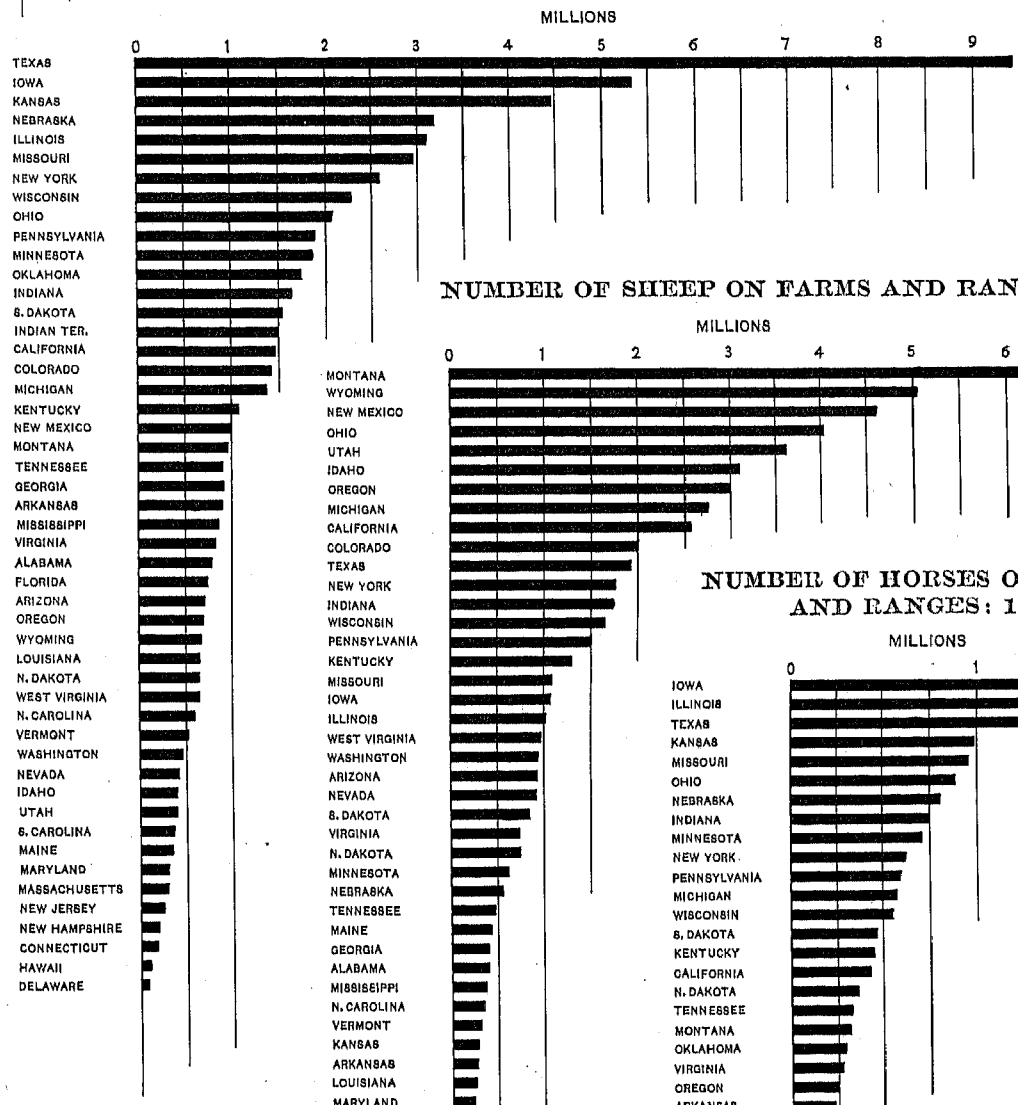
CLASSIFIED BY AREA



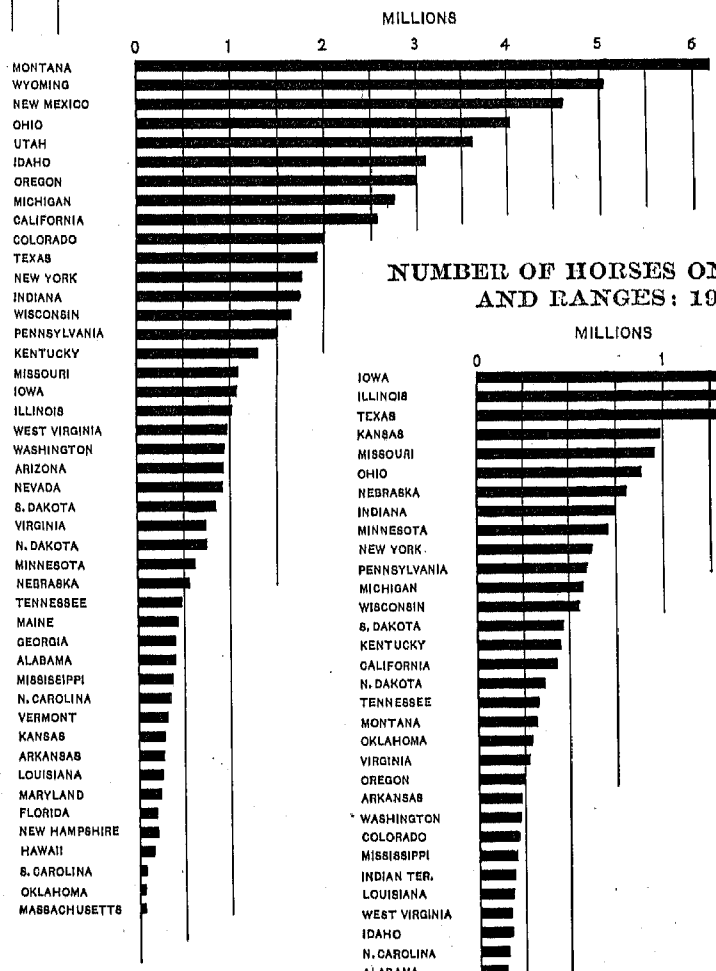
NUMBER OF SWINE ON FARMS AND RANGES: 1900



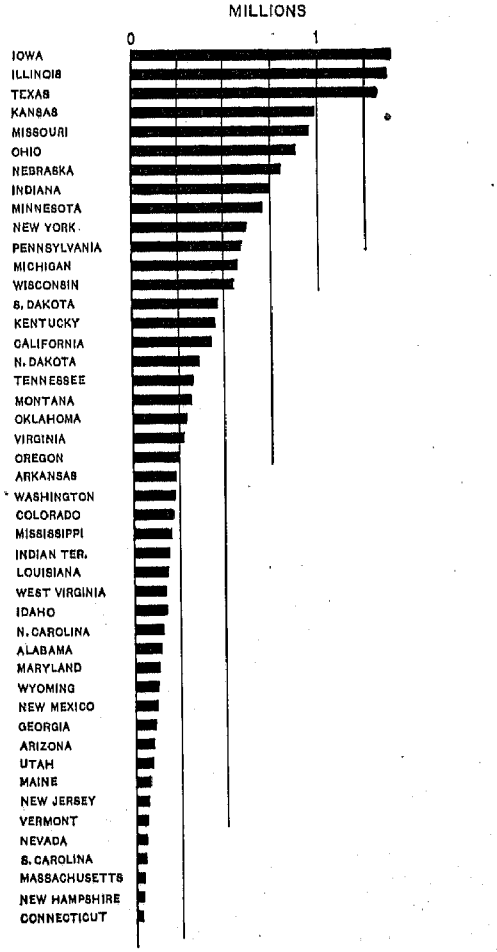
NUMBER OF NEAT CATTLE ON FARMS AND RANGES: 1900



NUMBER OF SHEEP ON FARMS AND RANGES: 1900



NUMBER OF HORSES ON FARMS AND RANGES: 1900



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