

1964 UNITED STATES CENSUS OF AGRICULTURE

FARMS
FARM CHARACTERISTICS
LIVESTOCK AND PRODUCTS
CROPS
FRUITS
VALUES



VOLUME II CHAPTER 9

Irrigation, Land Improvement Practices, and Use of Agricultural Chemicals

U.S. DEPARTMENT OF COMMERCE

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Volume II—Chapter 9

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Chapter 9. Irrigation, Land Improvement Practices, and Use of Agricultural Chemicals

Introduction—Farm production, particularly crop production, is affected significantly by water supply, the supply of plant nutrients, the control of plant insects and diseases, the control of weeds, and other cultural practices. In some parts of the United States, there is inadequate precipitation for the production of most crops and crop production is possible only because water is supplied by irrigation. In other parts of the United States, the water supply for maximum plant growth is not adequate during some parts of the growing season because of the variation in rainfall or inadequate rainfall. Irrigation and water management are important factors in securing satisfactory crop yields. Contour cultivation is used to conserve moisture by creating ridges and trenches which temporarily retain water, allowing more time for the water to infiltrate the soil and thus reduce water run off. Stripcropping in which alternate strips of close growing crops and intertilled crops or bands of fallow land are grown with rows at right angles to the slope, slows down the movement of water, filters out silt, permits greater water infiltration, and helps prevent soil blowing.

The application of dusts and spraying for the prevention and control of insects and diseases has become widespread and is an important practice for maintaining and improving crop production. The elimination of weeds in crops through the use of chemicals is a relatively new farm practice. Weeds compete with crops for soil nutrients, water, and light. The weed problem is important in all climates or areas of the United States. In arid regions where irrigation is used, the water toll taken by weeds is large. In semi-arid areas, the elimination of poor quality herbage and useless shrubs is important for the improvement of grazing lands. Until recently the control of weeds depended upon the use of machinery, animal energy, and human energy. Recently, chemical herbicides have partially replaced mechanical weed control for many crops and in many areas.

The increased use of fertilizer and lime has been an important factor in increasing crop yields and crop

production. The use of fertilizer and lime and the more effective use of water have continued to increase the efficiency of plant nutrients and water by increasing the amount of vegetation above ground, reducing water run off, increasing water infiltration, reducing water evaporation, hastening the maturity of crops which is very important in semi-arid areas and overall by significantly increasing yields.

This chapter presents data obtained in the 1964 Census of Agriculture relating to the extent of the use of the farm management practices of irrigation, use of contour farming, use of stripcropping, use of sprays and dusts for the control of insects and diseases, use of herbicides, the control of insects on livestock by spraying, dusting, or other methods, and the use of fertilizer and lime. Data on the use of sprays and dusts for the control of insects and diseases on crops, on the use of herbicides, and in the treatment of livestock for the control of insects were obtained in 1964 for the first time in any nationwide census of agriculture.

The statistics on use of irrigation were collected for all farms. The data for the use of agricultural chemicals, fertilizer, lime, contour farming, and stripcropping were collected for a sample comprising all farms with 1,000 acres or more, all farms with less than 1,000 acres and with a value of all farm products sold of \$100,000 or more, and one-fifth of the remaining farms. The statistics for items for which information was collected for a sample of farms represents estimates for all farms. For a more detailed description of the sample, the procedures used in making estimates for all farms based upon data for the sample, and for a statement of the reliability of the estimates, reference should be made to the introduction to this volume.

This chapter has three parts— part 1 contains data relating to irrigation; part 2 contains data relating to the use of fertilizer and lime; and part 3 contains statistics relating to contour farming, stripcropping, and the use of agricultural chemicals, except fertilizer and lime.

Part 1—Irrigation

Introduction—Irrigation of agricultural land is important in all areas of the United States and is particularly important in the western part where precipitation is not adequate for the production of many crops without the use of irrigation.

Questions regarding irrigation of farm and ranch lands have been included in each decennial census of agriculture beginning with 1890, and in each mid-decennial census beginning with 1935. The kinds of irrigation information in each census of agriculture is summarized briefly below:

Census of—Information obtained

- 1890. . Total acres irrigated
Number of artesian wells flowing
- 1900. . Acres irrigated by water
 - (a) from natural streams and
 - (b) from pumped or artesian wells
- 1910. . Acres of land irrigated
Acres of pasture irrigated

- 1920. . Acres of land irrigated
Expenditure for irrigation water
- 1930. . Acres of irrigated cropland and
acres and quantity of each crop
harvested on irrigated land
- 1935. . Total acres from which irrigated
crops were harvested
- 1940. . Acres of land from which irrigated crops
were harvested and total acres of irrigated
land used only for pasture
- 1945. . Total acres of land irrigated
- 1950. . Total acres of land irrigated and acres
irrigated by sprinklers
- 1954. . Total acres irrigated
- 1959. . Total acres irrigated and acres
irrigated by sprinklers
- 1964. . Total acres irrigated
Acres of irrigated land used only for
pasture or grazing
Acres of cropland harvested irrigated
Quantity of selected crops harvested from
irrigated land
Acres of each crop harvested from irrigated
land

Since irrigation has been of much greater importance in the West, more detailed information on irrigation in the Western States has been obtained in each census since 1900. Beginning with 1902, and continuing for 1910, 1920, 1930, 1940, 1950 and 1960, a special census of irrigation enterprises has been taken in 17 to 20 States, including the 17 Western States. Moreover, more detailed data on the use of irrigated land and on the acreage and quantity of crops harvested from irrigated land have been obtained for the Western States for most censuses. For a more detailed description of data obtained for irrigated land, and for data for censuses prior to 1964 see the introduction to volume III, Irrigation of Agricultural Lands, 1959 Census of Agriculture.

Irrigation data for the 1964 Census of Agriculture—
Data are available for all States for 1964 for—

- Farms with irrigation
- Land in irrigated farms
- Irrigated land in farms
- Irrigated land used only for pasture or grazing
- Irrigated land from which crops were harvested
- Acres of each crop harvested from irrigated land
- Data for acres and quantity harvested for some crops harvested from irrigated land

The data for farms with irrigation and irrigated land in farms are given in county table 1 of volume I of the reports of the 1964 Census of Agriculture. Data for the number of farms and uses of land in farms with irrigation are presented in county table 2, and data for the acres and quantity harvested for selected crops are given in county table 14 of volume I of the reports of the 1964 Census of Agriculture.

For 1964, the data on acreage and quantity harvested for crops harvested from irrigated land varies by Region and State. For the States of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas, and for the States east of these States, except the State of Louisiana, data are available for crops harvested on irrigated land as follows:

1. Acres irrigated and the quantity harvested for one or two important irrigated crops in each State.

The list of crops and the acreage of these crops harvested from irrigated land and the relation of the irrigated land from which these crops were harvested to the total acreage of irrigated land from which crops were harvested are given in the following table. For 36 States, the acreage in the selected crops harvested from irrigated land represented 59 percent of the total acreage of irrigated cropland harvested in these States.

2. The acreage for each "other" crop harvested from irrigated land.

For the 17 Western States (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Montana, Wyoming, Colorado, New Mexico, Utah, Nevada, Idaho, Arizona, Washington, Oregon, and California) and Louisiana and Hawaii, data for crops harvested from irrigated land were tabulated separately for:

1. Crops harvested from irrigated land for which all the acreage of the crop harvested on the farm was harvested from irrigated land. For these crops, totals were obtained for acres harvested and quantity harvested during the office processing.

State	Acres of irrigated land from which crops were harvested	Crops for which acres and quantity harvested for portion of crop irrigated were obtained		
		Name of crops	Total acres of crops harvested from irrigated land	Acres for 1 or 2 crops harvested from irrigated land as a percent of irrigated cropland harvested
United States....	11,965,485		7,045,729	58.9
The North.....	3,560,509		2,197,537	61.7
The South.....	8,404,976		4,848,192	57.7
New England:				
Maine.....	3,987	Irish potatoes	1,768	44.3
New Hampshire....	2,406	Irish potatoes	210	8.7
Vermont.....	863	Irish potatoes	5	0.6
Massachusetts....	22,953	Irish potatoes, tobacco	2,289	10.0
Rhode Island.....	1,334	Irish potatoes	490	36.7
Connecticut.....	13,786	Irish potatoes, tobacco	8,806	63.9
Middle Atlantic:				
New York.....	76,910	Irish potatoes, corn for grain	32,802	42.6
New Jersey.....	95,106	Irish potatoes, corn for grain	14,606	15.4
Pennsylvania.....	20,177	Irish potatoes, corn for grain	4,340	21.5
East North Central:				
Ohio.....	16,930	Irish potatoes, corn for grain	3,133	18.5
Indiana.....	16,720	Irish potatoes, corn for grain	9,034	54.0
Illinois.....	14,147	Corn for grain, soybeans for beans	6,171	43.6
Michigan.....	47,215	Irish potatoes, corn for grain	11,020	23.3
Wisconsin.....	60,614	Irish potatoes, corn for grain	28,815	47.5
West North Central:				
Minnesota.....	17,164	Irish potatoes, corn for grain	10,155	59.2
Iowa.....	21,464	Corn for grain, soybeans for beans	15,981	74.5
Missouri.....	56,739	Cotton, soybeans for beans	22,534	39.7
North Dakota.....	48,745	Barley, spring wheat other than durum	6,566	13.5
South Dakota.....	113,475	Barley, spring wheat other than durum	5,030	4.4
Nebraska.....	2,061,747	Corn for grain, sorghums for grain	1,477,997	71.7
Kansas.....	848,027	Wheat, sorghums for grain	535,785	63.2
South Atlantic:				
Delaware.....	17,372	Irish potatoes, corn for grain	7,131	41.0
Maryland.....	15,266	Irish potatoes, corn for grain	1,527	10.0
Virginia.....	48,291	Irish potatoes, tobacco	24,871	51.5
West Virginia....	1,931	Irish potatoes, corn for grain	175	9.1
North Carolina...	94,324	Irish potatoes, tobacco	80,600	85.5
South Carolina...	16,851	Tobacco, cotton	8,433	50.0
Georgia.....	59,260	Tobacco, cotton	36,165	61.0
Florida.....	881,173	Tobacco, corn for grain	14,404	1.6
East South Central:				
Kentucky.....	13,548	Tobacco, corn for grain	10,957	80.9
Tennessee.....	9,156	Tobacco, corn for grain	2,525	27.6
Alabama.....	11,126	Cotton, corn for grain	6,737	60.6
Mississippi.....	117,608	Cotton, corn for grain	56,179	47.8
West South Central:				
Arkansas.....	960,219	Cotton, soybeans for beans	506,636	52.8
Oklahoma.....	260,027	Cotton, wheat	129,925	50.0
Texas.....	5,898,824	Cotton, sorghums for grain	3,961,927	67.2

Data for the most important crops in this group of crops are published in county table 14 of volume I of the reports of the 1964 Census of Agriculture, under the heading "Crops for which the entire acreage was irrigated."

2. Crops harvested from irrigated land for which only part of the acres of the crop harvested was harvested from irrigated land. For these crops, only the acres harvested from irrigated land were obtained. The irrigated acreage for each of the important crops for the 19 States is given in table 8. Data for the important crops in this group are published for each county in county table 14, of volume I of the reports for the 1964 Census of Agriculture under the heading "Crops for which only a part of the acreage was irrigated."

Irrigated land in farms—Irrigation has made possible the use of arid and semi-arid lands in the West for agricultural purposes. To a much smaller extent, it is used in the humid areas of the East and in Hawaii and has increased production of some crops significantly in these areas. In 1964, irrigated lands in the United States totaled 37.1 million acres. The regional distribution of this land was as follows:

Area	Million acres
11 Western States and Hawaii.....	23.3
6 Great Plains States (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas).....	10.0
31 Eastern States.....	3.8

Much of the irrigated land is concentrated in special areas: in the cotton; fruit; and vegetable-producing areas and valleys of California; in the High Plains and Lower Rio Grande Valley of Texas; in Southern Idaho; in a few valleys in Oregon, Washington, and Colorado; and on livestock ranches scattered throughout the West where irrigated land produces hay for use between grazing seasons.

The acreage of irrigated land increased almost 4 million acres from 1959 to 1964. More than half the increase occurred in the South. States with an increase of more than 100,000 acres from 1959 to 1964 were: Kansas, 242,000; Florida, 804,000; Arkansas, 262,000; Oklahoma, 104,000; Texas, 729,000; Idaho, 225,000; Wyoming, 101,000; Nevada, 282,000; Washington, 143,000; Oregon, 223,000; and California, 203,000.

The acreage and increase of irrigated land in farms, 1890 to 1964, were as follows:

Year and area	Acres irrigated (million acres)	Increase from preceding census (million acres)
United States:		
1964.....	37.1	3.9
1959.....	33.2	3.6
1954.....	29.6	3.8
1950.....	25.8	5.3
1945.....	20.5	2.5
1940.....	18.0	5.0
1935.....	13.0	-1.6
1930.....	14.6	6.9
1900.....	7.7	4.0
1890.....	3.7	-

The change in the area of irrigated land since 1950 by areas are indicated by the following data:

Irrigated acres	11 Western States and Hawaii (million acres)	6 Great Plains States (million acres)	31 Eastern States (million acres)
1964.....	23.3	10.0	3.8
1959.....	22.0	9.0	2.2
1954.....	20.5	6.4	2.7
1950.....	20.0	4.1	1.7

More than half of the 11.2 million acre increase in irrigated land since 1950, occurred in the Great Plains States. The increase in the Eastern States was almost as large as in the 11 Western States. The increase in the Great Plains States resulted from the expansion of well irrigation in the High Plains area of Texas, Oklahoma, and Kansas, and in Western Nebraska.

Irrigated land by use, 1964-- The acreage of irrigated land by use for 1964 was as follows:

Subject	Million acres
Total.....	37.1
Cropland harvested.....	30.8
Pasture or grazing.....	5.5
Other cropland uses.....	.8

The other cropland uses were primarily for soil-improvement crops, and land in summer fallow.

Crops harvested from irrigated land, 1964 and 1959—

Tables 5 and 6 present data for the 31.6 million acres of crops harvested from the 30.7 million acres of irrigated land from which crops were harvested in 1964. Table 7 also shows for the 1959 census the acreage of each crop harvested from irrigated land. The data for the 1959 census are not fully comparable with those for the 1964 census, as the acreage represents totals for acres harvested from irrigated land in 1960 for 30 Eastern States and for acres harvested from irrigated land in 1959 for 17 Western States, Louisiana, and Hawaii.

Table 8 presents comparative data for each crop harvested for 17 Western States, Louisiana, and Hawaii for the 1964 and 1959 censuses.

914 IRRIGATION, LAND IMPROVEMENT PRACTICES, AND USE OF AGRICULTURAL CHEMICALS

TABLE 1. Farms With Irrigation and Irrigated Land, for the United States, 19 Western States, and all Other States: 1950 to 1964

Area and subject	1964	1959	1954 ¹	1950
UNITED STATES				
Farms with irrigation.....(1,000)..	297	308	320	306
percent of all farms..	9.4	8.3	6.7	5.7
Irrigated land.....acres (1,000)..	37,056	33,163	29,552	25,905
average acres per farm..	124.6	107.7	92.3	84.6
percent of all land in farms..	3.3	3.0	2.6	2.2
Irrigated cropland harvested.....acres (1,000)..	273	(NA)	(NA)	(NA)
average acres per farm..	112.8	(NA)	(NA)	(NA)
percent of all irrigated land..	83.0	(NA)	(NA)	(NA)
19 STATES (17 Western States, Louisiana, and Hawaii)				
Farms with irrigation.....(1,000)..	239	269	287	290
percent of all farms..	25.6	25.6	22.2	20.2
Irrigated land.....acres (1,000)..	33,933	31,364	27,679	24,965
average acres per farm..	142.0	116.7	96.5	86.1
percent of all land in farms..	4.7	4.4	3.9	3.5
Irrigated cropland harvested.....acres (1,000)..	28,014	26,271	23,262	20,381
average acres per farm..	117.2	97.8	89.7	70.3
percent of all irrigated land..	82.6	83.8	84.0	81.6
31 STATES (All States except 17 Western States, Louisiana, and Hawaii)				
Farms with irrigation.....(1,000)..	58	39	33	16
percent of all farms..	2.6	1.5	1.0	0.4
Irrigated land.....acres (1,000)..	3,123	1,799	1,844	940
average acres per farm..	53.5	46.0	55.1	58.2
percent of all land in farms..	0.8	0.4	0.4	0.2
Irrigated cropland harvested.....acres (1,000)..	2,735	(NA)	(NA)	(NA)
average acres per farm..	46.8	(NA)	(NA)	(NA)
percent of all irrigated land..	87.6	(NA)	(NA)	(NA)

NA Not available.
¹Hawaii not included.

TABLE 2. Irrigated Farms—Number, Total Land in Farms, and Irrigated Land, by Use, by Regions and States: 1964 and 1959

Region and State	Number of irrigated farms				Land in irrigated farms				Irrigated land in farms			
	1964	1959	Percent of all farms		Total acres		Average per farm (acres)		Total acres irrigated		Increase or decrease (-) 1959-1964	
			1964	1959	1964	1959	1964	1959	1964	1959	Acres	Percent
1 United States.	297,387	1306,532	9.4	(NA)	249,770,627	(NA)	839.9	(NA)	37,056,083	133,021,799	4,034,284	(NA)
2 The North..	38,504	36,273	2.6	2.1	23,991,604	(NA)	623.1	(NA)	3,858,872	3,356,861	502,011	15.0
3 The South..	79,932	63,011	5.8	3.8	51,669,487	(NA)	646.4	(NA)	9,885,964	7,783,403	2,102,561	27.0
4 The West...	178,951	1207,248	58.6	(NA)	174,109,536	168,391,842	972.9	812.5	23,311,247	121,881,535	1,429,712	(NA)
New England:												
5 Maine.....	206	138	1.6	0.8	65,159	(X)	316.3	(X)	4,157	2,214	1,943	87.8
6 New Hampshire...	159	76	3.4	1.2	29,676	(X)	186.6	(X)	2,648	1,249	1,399	112.0
7 Vermont.....	77	72	0.8	0.6	17,417	(X)	226.2	(X)	1,063	1,612	-549	-34.1
8 Massachusetts...	1,229	1,093	15.3	9.8	158,121	(X)	128.7	(X)	24,178	19,999	4,179	20.9
9 Rhode Island....	66	34	6.0	2.4	9,674	(X)	146.6	(X)	1,428	406	1,022	251.7
10 Connecticut.....	381	205	6.3	2.5	64,000	(X)	168.0	(X)	14,452	5,171	9,281	179.5
Middle Atlantic:												
11 New York.....	1,917	1,741	2.9	2.1	354,095	(X)	184.7	(X)	79,193	57,997	21,196	36.5
12 New Jersey.....	2,009	1,902	18.9	12.3	318,051	(X)	158.3	(X)	96,433	73,873	22,560	30.5
13 Pennsylvania....	1,006	787	1.2	0.8	201,973	(X)	200.8	(X)	22,734	16,523	6,211	37.6
East North Central:												
14 Ohio.....	750	575	0.6	0.4	100,477	(X)	134.0	(X)	17,405	11,972	5,433	45.4
15 Indiana.....	558	480	0.5	0.4	147,258	(X)	263.9	(X)	16,924	17,237	-313	-1.8
16 Illinois.....	327	332	0.2	0.2	103,355	(X)	316.1	(X)	14,375	10,127	4,248	41.9
17 Michigan.....	2,041	1,909	2.2	1.7	356,911	(X)	174.9	(X)	48,991	40,178	8,813	21.9
18 Wisconsin.....	813	638	0.7	0.5	384,709	(X)	473.2	(X)	62,302	31,862	30,440	95.5
West North Central:												
19 Minnesota.....	470	387	0.4	0.3	104,685	(X)	222.7	(X)	17,510	14,991	2,519	16.8
20 Iowa.....	291	313	0.2	0.2	120,101	(X)	412.7	(X)	21,528	18,181	3,347	18.4
21 Missouri.....	822	590	0.6	0.3	399,104	(X)	485.5	(X)	59,426	29,957	29,469	98.4
22 North Dakota....	442	471	0.9	0.9	791,581	688,180	1,790.9	1,461.1	50,548	47,656	2,892	6.1
23 South Dakota....	1,005	1,002	2.0	1.8	2,176,430	2,243,966	2,165.6	2,239.5	130,050	115,629	14,421	12.5
24 Nebraska.....	18,833	18,936	23.5	20.9	12,039,813	10,519,045	639.3	555.5	2,169,317	2,077,926	91,391	4.4
25 Kansas.....	5,102	4,592	5.5	4.4	6,049,014	4,818,612	1,185.6	1,049.3	1,004,210	762,101	242,109	31.8
South Atlantic:												
26 Delaware.....	158	156	3.6	3.0	79,246	(X)	501.6	(X)	17,542	15,533	2,009	12.9
27 Maryland.....	467	328	2.2	1.3	139,455	(X)	298.6	(X)	15,996	11,174	4,822	43.2
28 Virginia.....	4,452	1,996	5.5	2.0	913,248	(X)	205.1	(X)	50,968	31,101	19,867	63.9
29 West Virginia...	79	66	0.2	0.1	31,785	(X)	402.3	(X)	2,420	1,115	1,305	117.0
30 North Carolina..	12,583	8,537	8.5	4.5	1,802,124	(X)	143.2	(X)	96,874	65,743	31,131	47.4
31 South Carolina..	1,337	1,398	2.4	1.8	465,952	(X)	348.5	(X)	18,524	24,952	-6,428	-25.8
32 Georgia.....	6,907	2,194	8.3	2.1	2,104,388	(X)	304.7	(X)	64,112	33,700	30,412	90.2
33 Florida.....	8,129	4,249	20.1	9.4	6,006,522	(X)	738.9	(X)	1,217,192	413,526	803,666	194.3
East South Central:												
34 Kentucky.....	2,708	1,130	2.0	0.7	692,061	(X)	255.6	(X)	14,405	8,605	5,800	67.4
35 Tennessee.....	1,086	1,005	0.8	0.6	294,686	(X)	271.3	(X)	10,737	10,979	-242	-2.2
36 Alabama.....	318	328	0.3	0.3	182,254	(X)	573.1	(X)	11,768	17,357	-5,589	-32.2
37 Mississippi.....	857	790	0.8	0.6	989,931	(X)	1,155.1	(X)	123,398	99,686	23,712	23.8
West South Central:												
38 Arkansas.....	6,220	5,652	7.8	5.9	3,839,555	(X)	617.3	(X)	974,297	711,812	262,485	36.9
39 Louisiana.....	4,844	4,817	7.8	6.5	2,019,224	1,766,593	416.9	366.7	580,687	484,850	95,837	19.8
40 Oklahoma.....	2,673	2,481	3.0	2.6	2,375,716	1,744,647	888.8	703.2	302,081	197,632	104,449	52.9
41 Texas.....	27,114	27,884	13.2	12.3	29,733,340	24,116,410	1,096.6	864.9	6,384,963	5,655,638	729,325	12.9
Mountain:												
42 Montana.....	10,843	11,935	40.1	41.2	25,467,110	25,444,553	2,348.7	2,131.9	1,893,360	1,874,520	18,840	1.0
43 Idaho.....	22,251	25,383	75.0	75.4	9,698,515	9,591,651	435.9	377.9	2,801,500	2,576,580	224,920	8.7
44 Wyoming.....	5,923	6,412	65.5	65.8	20,792,839	19,406,526	3,510.5	3,026.6	1,571,192	1,469,911	101,281	6.9
45 Colorado.....	18,317	20,312	61.5	60.8	19,264,443	18,687,592	1,051.7	920.0	2,690,018	2,684,757	5,261	0.2
46 New Mexico.....	8,274	8,850	58.2	55.6	14,382,804	12,225,180	1,738.3	1,381.4	812,723	731,835	80,888	11.1
47 Arizona.....	4,697	5,391	72.5	74.5	22,102,778	20,261,106	4,705.7	3,758.3	1,125,376	1,152,450	-27,074	-2.3
48 Utah.....	13,762	15,701	87.3	88.2	10,277,297	8,891,138	746.8	566.3	1,092,270	1,061,683	30,587	2.9
49 Nevada.....	2,018	2,110	93.6	89.6	7,662,088	8,945,608	3,796.9	4,239.6	824,511	542,976	281,535	51.9
Pacific:												
50 Washington.....	16,488	19,292	36.2	37.4	6,991,392	6,216,373	424.0	322.2	1,149,842	1,006,969	142,873	14.2
51 Oregon.....	15,869	17,724	39.9	41.6	13,321,757	13,733,452	839.5	774.9	1,607,659	1,384,284	223,375	16.1
52 California.....	59,429	74,138	73.5	74.7	23,207,478	24,029,765	390.5	324.1	7,598,698	7,395,570	203,128	2.7
53 Alaska.....	10	(NA)	2.6	(NA)	2,713	(NA)	271.3	(NA)	158	(NA)	(NA)	(NA)
54 Hawaii.....	1,070	1,251	22.0	20.0	938,322	958,898	876.9	766.5	143,940	141,179	2,761	2.0

NA Not available. X Not applicable.
 1 Does not include Alaska.

916 IRRIGATION, LAND IMPROVEMENT PRACTICES, AND USE OF AGRICULTURAL CHEMICALS

TABLE 2. Irrigated Farms—Number, Total Land in Farms, and Irrigated Land, by Use, by Regions and States: 1964 and 1959—Continued

Region and State	Irrigated land in farms—Continued		Irrigated cropland harvested					Irrigated pasture or grazing land, 1964			Other irrigated land	
	Acres irrigated per farm		Farms		Acres irrigated		Acres irrigated per farm, 1964	Farms	Acres irrigated	Acres irrigated per farm	Acres	
	1964	1959	1964	1959	1964	1959					1964 ¹	1959
1 United States..	124.6	² 107.7	272,586	(NA)	30,748,788	(NA)	112.8	92,751	5,500,008	59.3	807,287	(NA)
2 The North..	100.2	92.5	37,636	(NA)	3,560,509	(NA)	94.6	4,255	132,842	31.2	165,521	(NA)
3 The South..	123.7	123.5	76,877	(NA)	8,953,986	(NA)	116.5	9,046	761,474	84.2	170,504	(NA)
4 The West..	130.3	² 105.6	158,073	² 184,593	18,234,293	² 17,415,782	115.4	79,450	4,605,692	58.0	471,262	² 4,606,932
New England:												
5 Maine.....	20.2	16.0	186	(X)	3,987	(X)	21.4	21	153	7.3	17	(X)
6 New Hampshire..	16.7	16.4	143	(X)	2,406	(X)	16.8	16	210	13.1	32	(X)
7 Vermont.....	13.8	22.4	67	(X)	863	(X)	12.9	12	154	12.8	46	(X)
8 Massachusetts..	19.7	18.3	1,174	(X)	22,953	(X)	19.6	30	707	23.6	518	(X)
9 Rhode Island....	21.6	11.9	63	(X)	1,334	(X)	21.2	4	56	14.0	38	(X)
10 Connecticut.....	37.9	25.2	367	(X)	13,786	(X)	37.6	24	498	20.8	168	(X)
Middle Atlantic:												
11 New York.....	41.3	33.3	1,838	(X)	76,910	(X)	41.8	106	1,665	15.7	618	(X)
12 New Jersey.....	48.0	38.8	1,990	(X)	95,106	(X)	47.8	38	441	11.6	886	(X)
13 Pennsylvania....	22.6	21.0	880	(X)	20,177	(X)	22.9	167	2,156	12.9	401	(X)
East North Central:												
14 Ohio.....	23.2	20.8	737	(X)	16,930	(X)	23.0	15	223	14.9	252	(X)
15 Indiana.....	30.3	35.9	549	(X)	16,720	(X)	30.5	8	121	15.1	83	(X)
16 Illinois.....	44.0	30.5	321	(X)	14,147	(X)	44.1	8	140	17.5	88	(X)
17 Michigan.....	24.0	21.0	1,997	(X)	47,215	(X)	23.6	45	728	16.2	1,048	(X)
18 Wisconsin.....	76.6	49.9	751	(X)	60,614	(X)	80.7	74	1,373	18.6	315	(X)
West North Central:												
19 Minnesota.....	37.3	38.7	466	(X)	17,164	(X)	36.8	21	311	14.8	35	(X)
20 Iowa.....	74.0	58.1	290	(X)	21,464	(X)	74.0	3	53	17.7	11	(X)
21 Missouri.....	72.3	50.8	787	(X)	56,739	(X)	72.1	83	2,214	26.7	473	(X)
22 North Dakota....	114.4	101.2	437	(X)	48,745	(X)	111.5	51	1,423	27.9	380	(X)
23 South Dakota....	129.4	115.4	967	(X)	13,475	(X)	117.3	291	15,861	54.5	714	(X)
24 Nebraska.....	115.2	109.7	18,604	(X)	2,061,747	(X)	110.8	2,530	79,592	31.5	27,978	(X)
25 Kansas.....	196.8	166.0	5,022	(X)	848,027	(X)	168.9	708	24,763	35.0	131,420	(X)
South Atlantic:												
26 Delaware.....	111.0	99.6	157	(X)	17,372	(X)	110.6	7	166	23.7	4	(X)
27 Maryland.....	34.3	34.1	446	(X)	15,266	(X)	34.2	37	703	19.0	27	(X)
28 Virginia.....	11.4	15.6	4,388	(X)	48,291	(X)	11.0	142	2,519	17.7	158	(X)
29 West Virginia...	30.6	16.9	66	(X)	1,931	(X)	29.3	19	478	25.2	11	(X)
30 North Carolina..	7.7	7.7	12,492	(X)	94,324	(X)	7.6	148	1,957	13.2	593	(X)
31 South Carolina..	13.9	17.8	1,297	(X)	16,851	(X)	13.0	53	1,574	29.7	99	(X)
32 Georgia.....	9.3	15.4	6,754	(X)	59,260	(X)	8.8	241	4,272	17.7	580	(X)
33 Florida.....	149.7	97.3	7,754	(X)	881,173	(X)	113.6	575	310,923	540.7	25,096	(X)
East South Central:												
34 Kentucky.....	5.3	7.6	2,693	(X)	13,548	(X)	5.0	42	830	19.8	27	(X)
35 Tennessee.....	9.9	10.9	1,055	(X)	9,156	(X)	8.7	56	1,423	25.4	158	(X)
36 Alabama.....	37.0	52.9	296	(X)	11,126	(X)	37.6	28	563	20.1	79	(X)
37 Mississippi.....	144.0	126.2	824	(X)	117,608	(X)	142.7	74	5,070	68.5	720	(X)
West South Central:												
38 Arkansas.....	156.6	125.9	6,116	(X)	960,219	(X)	157.0	363	13,287	36.6	791	(X)
39 Louisiana.....	119.9	100.7	4,710	(X)	549,010	(X)	116.6	388	31,124	80.2	553	(X)
40 Oklahoma.....	113.0	79.7	2,441	(X)	260,027	(X)	106.5	687	30,121	43.8	11,933	(X)
41 Texas.....	235.5	202.8	25,388	(X)	5,898,824	(X)	232.3	6,186	356,464	57.6	129,675	(X)
Mountain:												
42 Montana.....	174.6	157.1	9,967	(X)	1,380,121	(X)	138.5	6,035	489,306	81.1	23,933	(X)
43 Idaho.....	125.9	101.5	19,804	(X)	2,238,637	(X)	113.0	16,041	533,472	33.3	29,391	(X)
44 Wyoming.....	265.3	229.2	5,499	(X)	1,103,739	(X)	200.7	3,350	458,626	136.9	8,827	(X)
45 Colorado.....	146.9	132.2	17,108	(X)	2,043,693	(X)	119.5	7,592	590,445	77.8	55,880	(X)
46 New Mexico.....	98.2	82.7	7,695	(X)	688,200	(X)	89.4	2,560	86,283	33.7	38,240	(X)
47 Arizona.....	239.6	213.8	4,102	(X)	1,005,456	(X)	245.1	1,555	79,659	51.2	40,261	(X)
48 Utah.....	79.4	67.6	12,849	(X)	769,012	(X)	59.8	7,065	308,468	43.7	14,790	(X)
49 Nevada.....	408.6	257.3	1,843	(X)	503,239	(X)	273.1	1,174	315,972	269.1	5,300	(X)
Pacific:												
50 Washington.....	69.7	52.2	14,330	(X)	909,444	(X)	63.5	7,645	214,041	28.0	26,357	(X)
51 Oregon.....	101.3	78.1	12,335	(X)	1,085,581	(X)	88.0	9,746	503,768	51.7	18,310	(X)
52 California.....	127.9	99.8	51,495	(X)	6,436,789	(X)	125.0	16,642	1,022,912	61.5	138,997	(X)
53 Alaska.....	15.8	(NA)	9	(NA)	98	(NA)	10.9	2	60	30.0	-	(NA)
54 Hawaii.....	134.5	112.9	1,037	(X)	70,284	(X)	67.8	43	2,680	62.3	70,976	(X)

NA Not available.

X Not applicable.

¹Data does not include irrigated pasture or grazing land.

²Does not include Alaska.

TABLE 3. Irrigated Farms—Farms and Acreage, by Use, by Regions and States: 1964

Region and State	Irrigated farms reporting land use in 1964 (farms)						Acres of land in irrigated farms according to use in 1964					
	Number of farms	Cropland harvested	Cropland used only for pasture	Cropland not harvested and not pastured	Other pasture		Total acres	Cropland harvested	Cropland used only for pasture	Other pasture		
					Total	Improved				Total	Improved	
United States.	297,387	279,163	98,590	122,707	117,205	60,248	249,770,627	47,148,561	9,319,095	158,110,170	8,565,993	
The North..	38,504	38,358	9,883	27,632	20,279	5,826	23,991,604	8,479,838	554,032	9,693,650	512,302	
The South..	79,932	78,680	26,036	40,485	28,506	15,081	51,669,487	16,149,662	3,378,429	28,314,036	2,837,418	
The West...	178,951	162,125	62,671	54,590	68,420	39,341	174,109,536	22,519,061	5,386,634	120,102,484	5,216,273	
New England:												
Maine.....	206	205	54	107	36	16	65,159	15,823	1,159	1,639	365	
New Hampshire...	159	158	38	72	33	9	29,676	7,754	974	762	293	
Vermont.....	77	77	25	21	28	12	17,417	4,335	992	2,108	374	
Massachusetts...	1,229	1,225	111	409	108	22	158,121	40,919	4,206	4,679	547	
Rhode Island....	66	66	17	23	5	2	9,674	5,185	531	98	12	
Connecticut.....	381	380	64	167	75	35	64,000	29,303	2,763	3,192	1,149	
Middle Atlantic:												
New York.....	1,917	1,914	308	879	309	128	354,095	206,089	12,359	21,689	4,731	
New Jersey.....	2,009	2,005	209	1,052	179	53	318,051	174,828	4,658	7,237	968	
Pennsylvania....	1,006	998	286	460	322	170	201,973	108,289	10,004	13,343	6,311	
East North Central:												
Ohio.....	750	748	89	393	140	60	100,477	56,314	3,539	7,714	2,775	
Indiana.....	558	557	170	312	191	86	147,258	80,755	6,894	12,283	2,936	
Illinois.....	327	326	60	167	48	21	103,355	70,461	4,674	2,151	856	
Michigan.....	2,041	2,038	332	1,423	166	49	356,911	173,265	10,147	8,061	1,358	
Wisconsin.....	813	810	228	486	130	44	384,709	142,579	7,558	10,269	1,333	
West North Central:												
Minnesota.....	470	470	85	271	95	28	104,685	57,616	3,174	5,665	1,151	
Iowa.....	291	291	99	202	71	28	120,101	79,748	4,197	4,756	1,598	
Missouri.....	822	818	316	435	211	121	399,104	254,741	28,505	22,526	11,349	
North Dakota....	442	440	116	362	329	85	791,581	178,104	13,437	491,129	32,384	
South Dakota....	1,005	992	316	511	865	311	2,176,430	291,437	26,121	1,729,323	36,278	
Nebraska.....	18,833	18,753	5,355	15,277	13,460	3,897	12,039,813	4,286,185	280,999	5,445,282	275,009	
Kansas.....	5,102	5,087	1,605	4,603	3,478	649	6,049,014	2,216,108	127,141	1,899,744	130,525	
South Atlantic:												
Delaware.....	158	158	44	64	11	6	79,246	54,034	1,532	1,617	376	
Maryland.....	467	467	139	221	80	42	139,455	78,981	5,091	5,108	2,619	
Virginia.....	4,452	4,446	1,336	2,399	2,050	1,181	913,248	221,851	49,256	123,341	66,864	
West Virginia...	79	78	27	35	40	29	31,785	8,481	1,734	4,045	2,310	
North Carolina...	12,583	12,575	3,018	7,433	4,494	3,009	1,802,124	523,675	51,863	99,621	57,309	
South Carolina...	1,337	1,336	493	675	298	179	465,952	155,786	25,197	17,235	8,233	
Georgia.....	6,907	6,897	2,306	3,174	3,166	2,677	2,104,388	706,685	70,871	122,234	90,824	
Florida.....	8,129	7,948	1,102	2,358	1,748	1,373	6,006,522	1,252,042	241,023	2,079,169	797,087	
East South Central:												
Kentucky.....	2,708	2,708	1,850	1,032	945	459	692,061	202,385	226,847	81,326	29,866	
Tennessee.....	1,086	1,082	703	401	412	232	294,686	91,622	58,750	40,692	22,565	
Alabama.....	318	317	106	145	111	83	182,254	56,483	14,637	24,448	14,509	
Mississippi.....	857	853	230	445	246	163	989,931	549,516	55,053	63,374	38,003	
West South Central:												
Arkansas.....	6,220	6,193	1,366	1,695	1,168	588	3,839,555	2,588,940	148,391	175,421	94,075	
Louisiana.....	4,844	4,783	2,848	1,157	1,267	586	2,019,224	735,092	621,850	187,300	65,634	
Oklahoma.....	2,673	2,617	1,362	1,804	1,983	727	2,375,716	766,393	133,667	10,113,360	103,487	
Texas.....	27,114	26,222	9,106	17,450	10,507	-3,753	29,733,340	8,157,696	1,672,667	15,175,745	1,443,657	
Mountain:												
Montana.....	10,843	10,272	4,266	4,766	8,204	4,189	25,467,110	2,311,671	563,654	20,009,141	665,823	
Idaho.....	22,251	20,084	12,772	7,924	9,821	6,294	9,698,515	570,390	4,948,308	455,044		
Wyoming.....	5,923	5,548	2,500	1,502	4,492	2,158	20,792,839	1,234,367	422,454	18,475,288	503,291	
Colorado.....	18,317	17,278	6,360	7,508	9,714	4,743	19,264,443	2,595,721	700,245	13,044,205	679,475	
New Mexico.....	8,274	7,743	2,811	3,362	3,222	1,011	14,382,804	749,474	210,834	11,242,369	89,961	
Arizona.....	4,697	4,141	1,474	1,860	1,225	432	22,102,778	1,023,336	106,369	15,001,713	399,426	
Utah.....	13,762	12,967	5,593	5,563	7,102	4,186	10,277,297	916,212	398,635	7,665,285	444,248	
Nevada.....	2,018	1,846	911	546	1,224	625	7,662,088	506,972	189,409	6,736,733	390,671	
Pacific:												
Washington.....	16,488	15,085	6,258	4,172	4,981	3,131	6,991,392	1,416,466	298,295	3,452,002	160,339	
Oregon.....	15,869	13,722	7,499	4,843	7,426	4,899	13,321,757	1,702,544	554,833	8,528,136	439,201	
California.....	59,429	52,386	12,160	12,166	10,882	7,634	23,207,478	7,243,325	1,361,764	10,537,563	724,025	
Alaska.....	10	10	5	5	1	1	2,713	544	232	15	5	
Hawaii.....	1,070	1,043	62	373	126	38	938,322	115,098	9,520	461,726	264,764	

918 IRRIGATION, LAND IMPROVEMENT PRACTICES, AND USE OF AGRICULTURAL CHEMICALS

TABLE 4. Irrigated Farms--Number by Total Acres Irrigated and by Acres of Cropland Harvested, 1964; and Irrigated Cropland Harvested as a Percent of Cropland Harvested, 1964 and 1959, by Regions and States

	Region and State	Irrigated farms by number of acres irrigated								Irrigated farms by total number of acres of cropland harvested			
		Total farms	1 to 9 acres	10 to 49 acres	50 to 99 acres	100 to 199 acres	200 to 499 acres	500 to 999 acres	1,000 or more acres	Total reporting cropland harvested	1 to 9 acres	10 to 49 acres	50 to 99 acres
1	United States..	297,387	72,631	84,696	46,899	45,884	34,307	9,101	3,869	279,163	44,468	77,002	43,585
2	The North..	38,504	6,047	9,655	9,417	8,673	3,973	603	136	38,358	3,388	4,626	5,006
3	The South..	79,932	30,350	17,565	7,716	9,080	10,921	3,348	952	78,680	9,709	22,135	11,041
4	The West...	178,951	36,234	57,476	29,766	28,131	19,413	5,150	2,781	162,125	31,371	50,241	27,538
	New England:												
5	Maine.....	206	120	58	17	9	2	-	-	205	71	53	30
6	New Hampshire...	159	105	42	8	2	2	-	-	158	52	61	18
7	Vermont.....	77	50	20	7	-	-	-	-	77	23	22	14
8	Massachusetts...	1,229	709	418	67	22	10	2	1	1,225	585	410	136
9	Rhode Island.....	66	30	28	6	1	1	-	-	66	16	24	13
10	Connecticut.....	381	170	140	38	23	5	4	1	380	93	132	75
	Middle Atlantic:												
11	New York.....	1,917	731	672	291	156	60	7	-	1,914	448	494	368
12	New Jersey.....	2,009	588	834	310	208	61	7	1	2,005	420	647	390
13	Pennsylvania.....	1,006	489	400	73	34	8	2	-	998	197	259	248
	East North Central:												
14	Ohio.....	750	455	205	52	20	16	2	-	748	281	214	84
15	Indiana.....	558	337	138	47	23	11	1	1	557	132	145	82
16	Illinois.....	327	116	116	55	24	16	-	-	326	59	47	45
17	Michigan.....	2,041	928	851	157	86	18	1	-	2,038	378	688	406
18	Wisconsin.....	813	263	274	109	87	60	15	5	810	124	185	148
	West North Central:												
19	Minnesota.....	470	203	152	71	30	14	-	-	470	127	97	60
20	Iowa.....	291	53	102	64	40	31	1	-	291	29	40	25
21	Missouri.....	822	159	291	156	142	69	5	-	818	76	128	95
22	North Dakota.....	442	29	104	110	119	74	6	-	440	10	17	21
23	South Dakota.....	1,005	44	221	250	277	191	21	1	992	28	79	129
24	Nebraska.....	18,833	286	3,460	6,383	6,228	2,308	154	14	18,753	152	720	2,337
25	Kansas.....	5,102	182	1,129	1,146	1,142	1,016	375	112	5,087	87	164	282
	South Atlantic:												
26	Delaware.....	158	14	47	34	34	26	3	-	158	7	10	10
27	Maryland.....	467	160	214	58	27	5	3	-	467	73	112	68
28	Virginia.....	4,452	3,530	757	95	48	18	3	1	4,446	1,080	2,365	545
29	West Virginia...	79	35	30	6	6	2	-	-	78	12	27	13
30	North Carolina..	12,583	9,717	2,799	48	12	4	2	1	12,575	2,330	7,420	1,855
31	South Carolina..	1,337	917	354	17	18	10	1	-	1,336	147	579	227
32	Georgia.....	6,907	5,614	1,129	101	37	21	4	1	6,897	436	2,076	2,161
33	Florida.....	8,129	2,810	2,939	899	577	507	204	193	7,948	1,943	2,744	1,256
	East South Central:												
34	Kentucky.....	2,708	2,397	284	17	8	2	-	-	2,708	512	1,084	584
35	Tennessee.....	1,086	887	150	29	11	8	1	-	1,082	248	438	181
36	Alabama.....	318	126	26	29	22	15	-	-	317	59	91	42
37	Mississippi.....	857	140	215	101	173	176	47	5	853	76	125	44
	West South Central:												
38	Arkansas.....	6,220	760	1,593	1,072	1,223	1,136	370	66	6,193	332	700	510
39	Louisiana.....	4,844	1,076	1,083	742	892	905	126	20	4,783	921	972	702
40	Oklahoma.....	2,673	157	888	774	480	298	57	19	2,617	65	209	381
41	Texas.....	27,114	2,010	4,957	3,674	5,512	7,788	2,527	646	26,222	1,468	3,183	2,464
	Mountain:												
42	Montana.....	10,843	713	2,382	2,271	2,837	2,053	400	187	10,272	532	1,739	1,990
43	Idaho.....	22,251	2,300	5,632	5,306	5,408	2,889	540	176	20,084	1,504	5,232	5,150
44	Wyoming.....	5,923	230	927	1,036	1,596	1,490	410	234	5,548	170	907	1,024
45	Colorado.....	18,317	1,795	4,547	3,676	4,589	2,952	541	217	17,278	1,872	4,152	3,250
46	New Mexico.....	8,274	2,341	2,717	1,077	1,025	820	230	66	7,743	2,451	2,401	954
47	Arizona.....	4,697	1,123	1,175	541	534	713	382	225	4,141	1,007	927	483
48	Utah.....	13,762	2,231	5,332	2,922	2,102	994	140	41	12,967	2,179	5,306	2,868
49	Nevada.....	2,018	152	447	367	339	377	153	183	1,846	162	475	340
	Pacific:												
50	Washington.....	16,488	4,268	6,611	2,225	1,997	1,169	171	47	15,085	3,865	5,624	2,124
51	Oregon.....	15,869	3,979	5,822	2,466	1,943	1,163	328	168	13,722	2,767	4,640	2,340
52	California.....	59,429	16,170	21,779	7,870	5,755	4,790	1,852	1,213	52,386	13,968	18,718	7,005
53	Alaska.....	10	8	1	-	1	-	-	-	10	3	4	1
54	Hawaii.....	1,070	924	106	9	5	3	20	-	1,043	891	116	8

TABLE 4. Irrigated Farms--Number by Total Acres Irrigated and by Acres of Cropland Harvested, 1964; and Irrigated Cropland Harvested as a Percent of Cropland Harvested, 1964 and 1959, by Regions and States--Continued

Region and State	Irrigated farms by total number of acres of cropland harvested--Continued					Irrigated farms		Irrigated cropland harvested as a percentage of total cropland harvested on irrigated farms (acres)	
	100 to 199 acres	200 to 499 acres	500 to 999 acres	1,000 or more acres	No cropland harvested	Total reporting irrigated cropland harvested	With cropland harvested but none irrigated	1964	1959
1 United States.	47,714	46,058	14,541	5,795	18,224	272,586	6,577	65.2	168.1
2 The North..	10,231	11,651	2,768	688	146	37,636	722	42.0	(X)
3 The South..	11,917	15,614	6,057	2,207	1,252	76,877	1,803	55.4	(X)
4 The West...	25,566	18,793	5,716	2,900	16,826	158,073	4,052	81.0	(X)
New England:									
5 Maine.....	31	18	1	1	1	186	19	25.2	(X)
6 New Hampshire...	18	8	1	-	1	143	15	31.0	(X)
7 Vermont.....	17	1	-	-	-	67	10	19.9	(X)
8 Massachusetts...	64	24	4	2	4	1,174	51	56.1	(X)
9 Rhode Island....	4	8	1	-	-	63	3	25.7	(X)
10 Connecticut.....	50	23	4	3	1	367	13	47.0	(X)
Middle Atlantic:									
11 New York.....	340	190	64	10	3	1,838	76	37.3	(X)
12 New Jersey.....	328	193	21	6	4	1,990	15	54.4	(X)
13 Pennsylvania....	173	91	22	8	8	880	118	18.6	(X)
East North Central:									
14 Ohio.....	86	62	21	-	2	737	11	30.1	(X)
15 Indiana.....	84	83	22	9	1	549	8	20.7	(X)
16 Illinois.....	53	94	21	7	1	321	5	20.1	(X)
17 Michigan.....	338	200	23	5	3	1,997	41	27.3	(X)
18 Wisconsin.....	146	146	44	17	3	751	59	42.5	(X)
West North Central:									
19 Minnesota.....	95	75	12	4	-	466	4	29.8	(X)
20 Iowa.....	58	95	35	9	-	290	1	26.9	(X)
21 Missouri.....	140	220	116	43	4	787	31	22.3	(X)
22 North Dakota....	111	169	83	29	2	437	3	27.4	27.6
23 South Dakota....	272	331	114	39	13	967	25	38.9	42.3
24 Nebraska.....	7,001	7,446	950	147	80	18,604	149	48.1	45.5
25 Kansas.....	822	2,174	1,209	349	15	5,022	65	38.3	32.8
South Atlantic:									
26 Delaware.....	28	79	15	9	-	157	1	32.2	(X)
27 Maryland.....	99	78	28	11	-	446	21	19.3	(X)
28 Virginia.....	276	136	34	10	6	4,388	58	21.8	(X)
29 West Virginia...	17	6	2	1	1	66	12	22.8	(X)
30 North Carolina..	693	225	41	11	8	12,492	83	18.0	(X)
31 South Carolina..	180	128	62	13	1	1,297	39	10.8	(X)
32 Georgia.....	1,491	615	93	25	10	6,754	143	8.4	(X)
33 Florida.....	877	704	238	186	181	7,754	194	70.4	(X)
East South Central:									
34 Kentucky.....	318	162	39	9	-	2,693	15	6.7	(X)
35 Tennessee.....	104	83	19	9	4	1,055	27	10.0	(X)
36 Alabama.....	34	54	30	7	1	296	21	19.7	(X)
37 Mississippi.....	55	157	216	180	4	824	29	21.4	(X)
West South Central:									
38 Arkansas.....	953	1,953	1,229	516	27	6,116	77	37.1	(X)
39 Louisiana.....	925	996	216	51	61	4,710	73	74.7	80.7
40 Oklahoma.....	671	858	335	98	56	2,441	176	33.9	30.8
41 Texas.....	5,196	9,380	3,460	1,071	892	25,388	834	72.3	64.0
Mountain:									
42 Montana.....	2,596	2,366	734	315	571	9,967	305	59.7	60.0
43 Idaho.....	4,740	2,661	597	200	2,167	19,804	280	82.8	80.2
44 Wyoming.....	1,642	1,337	314	154	375	5,499	49	89.4	87.9
45 Colorado.....	4,213	2,918	657	216	1,039	17,108	170	78.7	79.6
46 New Mexico.....	905	753	216	63	531	7,695	48	91.8	87.5
47 Arizona.....	491	684	343	206	556	4,102	39	98.3	98.0
48 Utah.....	1,752	718	115	29	795	12,849	118	83.9	82.5
49 Nevada.....	332	326	117	94	172	1,843	3	99.3	92.4
Pacific:									
50 Washington.....	1,825	1,165	311	171	1,403	14,330	755	64.2	59.5
51 Oregon.....	1,930	1,414	432	199	2,147	12,335	1,387	63.8	60.6
52 California.....	5,136	4,448	1,880	1,230	7,043	51,495	891	88.9	85.6
53 Alaska.....	1	1	-	-	-	9	1	18.0	(X)
54 Hawaii.....	3	2	-	23	27	1,037	6	61.1	66.6

X Not applicable.
 * Represents 19 states with 1959 data.

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TABLE 5. Total Acres Harvested and Acres Harvested From Irrigated Land for Selected Crops, for the United States: 1964

Crop	Total acres harvested	Acres harvested from irrigated land	Crop	Total acres harvested	Acres harvested from irrigated land
Total, specified crops.....	288,306,406	30,047,278	Field seed crops—Continued		
Corn for all purposes.....	63,514,906	2,428,000	Bentgrass.....	30,778	2,382
Harvested for grain.....	53,751,095	1,759,798	Bahia grass.....	22,502	1,548
Cut for silage.....	8,372,691	638,125	Brome grass.....	74,834	1,022
Green or dry fodder and hogged or grazed.....	1,391,120	30,077	Bermuda grass.....	11,762	11,990
Sorghums for all purposes.....	14,965,707	3,377,778	Bluegrass.....	71,506	16,207
Harvested for grain.....	11,168,607	3,091,424	Bluestem.....	7,316	536
Cut for silage.....	1,150,180	150,343	Buffalo grass.....	1,761	-
Dry forage or hay and hogged or grazed.....	2,634,873	135,855	Canarygrass.....	17,839	251
Sirup.....	12,047	156	Carpetgrass.....	1,634	-
All wheat.....	47,958,362	1,963,525	Dallisgrass.....	50	-
Winter wheat.....	36,620,459	1,566,140	Fescue.....	344,968	1,592
Spring wheat.....	11,337,893	397,385	Gramagrass.....	261	226
Durum wheat.....	2,445,022	4,786	Meadow foxtail.....	443	120
All other spring wheat.....	8,892,871	392,599	Millet (foxtail).....	9,713	1,417
Oats harvested for grain.....	18,935,713	300,039	Orchardgrass.....	79,964	837
Barley harvested for grain.....	9,805,327	1,503,666	Redtop.....	33,007	10
Rye harvested for grain.....	1,640,020	14,975	Rescuegrass.....	83	-
Flaxseed harvested.....	2,650,628	2,533	Ryegrass.....	162,393	1,866
Buckwheat harvested.....	47,656	40	Sudangrass.....	41,625	20,865
Emmer and spelt harvested.....	32,759	-	Wheatgrass.....	40,547	4,639
Rice harvested.....	1,815,013	1,815,013	Rapeseed.....	4,294	6
Proso millet.....	237,629	287	All other field seeds.....	26,573	5,536
Mustard seed.....	16,363	43	Other crops:		
Safflower seed.....	301,095	159,325	Cotton harvested.....	13,916,648	3,769,194
Mixed grains harvested.....	156,228	124,723	Tobacco harvested.....	1,025,240	172,321
Other grains harvested.....	298,582	29,828	Popcorn.....	142,884	6,116
Soybeans grown for all purposes.....	30,351,248	427,206	Broomcorn.....	150,341	126,511
Harvested for beans.....	29,843,540	426,360	Sugarcane harvested.....	675,024	208,063
Cut for hay.....	421,853	707	For sirup.....	6,775	23
Hogged or grazed or cut for silage.....	85,855	139	For sugar or for sale.....	643,417	205,138
Cowpeas grown for all purposes.....	162,974	3,570	Cut for seed.....	24,832	2,902
Harvested for peas.....	78,531	2,726	Sugar beets for sugar.....	1,376,026	1,099,481
Cut for hay.....	50,244	410	Irish potatoes.....	1,025,240	608,880
Hogged or grazed or cut for silage.....	34,199	434	Sweetpotatoes.....	112,128	18,156
Peanuts harvested for nuts.....	1,347,253	70,910	Root and grain crops hogged or grazed.....	186,093	699
Velvetbeans for all purposes.....	11,670	15	Castor beans.....	49,320	44,651
Dry field and seed beans harvested for beans.....	1,338,304	600,789	Chufas for nuts.....	230	-
Dry field and seed peas harvested for peas.....	299,991	44,312	Dill for oil.....	905	905
Hay crops.....	65,294,703	8,229,598	Guar.....	24,328	727
Alfalfa and alfalfa mixtures cut for hay and for dehydrating.....	28,211,434	5,209,709	Ging r root.....	27	8
Clover, timothy and mixtures of clover and grasses cut for hay.....	13,412,593	940,155	Lotus root.....	33	33
Lespedeza cut for hay.....	2,338,945	2,894	Hops.....	32,451	32,451
Oats, wheat, barley, rye, or other small grains cut for hay.....	2,815,242	268,576	Lentils.....	67,424	424
Coastal Bermuda grass cut for hay.....	269,006	2,191	Mint for oil.....	54,753	39,340
Vetch or peas, alone or mixed with oats or other grains, cut for hay.....	25,910	5,148	Mung beans.....	19,613	387
Wild hay.....	10,364,254	1,444,167	Pineapples.....	38,415	3,674
Other hay.....	6,050,613	223,336	Seesame for seed.....	1,644	1,560
Grass silage made from grasses, alfalfa, clover, or small grains.....	1,806,706	133,422	Sugar beet seed.....	4,991	4,991
Field seed crops.....	3,329,159	415,275	Sunflower seed.....	38,745	3,663
Alfalfa.....	675,009	282,038	Sweet corn for seed.....	5,946	5,236
Red clover.....	822,474	30,727	Taro, dryland.....	25	-
Lespedeza.....	251,106	9,044	Taro, wetland.....	405	405
Timothy.....	200,685	576	Wormseed oil.....	73	-
Sweetclover.....	110,756	2,101	All other crops.....	9,912	1
Crimson clover.....	45,551	764	Berries and small fruits, total.....	161,137	71,844
Alsike clover.....	4,313	1,162	Strawberries.....	66,171	34,905
White clover.....	26,747	1,471	Blackberries and dewberries.....	7,712	2,801
Ladino clover.....	15,458	14,545	Raspberries.....	19,147	4,439
Alyce clover.....	7,091	-	Blueberries.....	43,394	6,947
Austrian winter peas.....	43,564	180	Cranberries.....	20,493	20,493
Birdsfoot trefoil.....	13,668	1,097	Boysenberries.....	2,620	1,771
Orotalaria.....	72	-	Loganberries.....	518	76
Hairy indigo.....	3,773	212	Youngberries.....	29	191
Lupine.....	2,174	27	Currants.....	689	157
Vetch.....	109,894	644	Gooseberries.....	222	39
Wild winter peas.....	12,971	37	All other berries.....	142	25
			Land in orchards, groves, vineyards and planted nut trees.....	4,251,130	2,203,342
			Nursery and greenhouse products, flowers, vegetable seeds and plants, and bulbs.....	275,307	112,765

TABLE 6. Total Acres Harvested and Acres of Vegetables Harvested From Irrigated Land, for the United States: 1964

Crop	Total acres harvested	Total acres harvested from irrigated land	Crop	Total acres harvested	Total acres harvested from irrigated land
Vegetables harvested for sale (other than Irish and sweet potatoes), total.....	3,333,772	1,543,821	Kale.....	3,008	1,384
Artichokes (globe).....	8,895	8,819	Lettuce and romaine.....	210,255	202,159
Asparagus.....	139,439	81,961	Mustard greens.....	9,667	4,789
Snap beans (bush and pole types).....	280,316	116,903	Okra.....	17,818	4,177
Green lima beans.....	89,303	33,464	Dry onions.....	92,826	63,920
Beets (table).....	19,410	8,943	Green onions and shallots.....	14,148	10,503
Broccoli.....	36,089	30,161	Parsley.....	2,764	2,426
Brussels sprouts.....	6,558	6,018	Parsnips.....	1,739	1,048
Cabbage.....	105,724	58,651	Green peas.....	394,549	39,341
Cantaloups, honeydews, and muskmelons.....	124,207	93,821	Hot peppers.....	10,162	8,255
Carrots.....	79,912	72,008	Sweet peppers including pimientos.....	53,355	29,246
Cauliflower.....	24,883	21,476	Pumpkins.....	14,368	3,117
Celery.....	31,768	30,819	Radishes.....	30,229	23,183
Chinese cabbage.....	1,985	1,649	Rhubarb.....	2,653	563
Collards.....	11,442	4,144	Spinach.....	40,791	28,915
Sweet corn.....	545,563	157,164	Squash.....	42,387	19,915
Blackeyes and other green cowpeas.....	88,154	5,932	Tomatoes.....	388,541	251,784
Cucumbers and pickles.....	110,491	38,356	Turnips.....	17,981	7,336
Eggplant.....	4,343	2,739	Turnip greens.....	11,465	5,092
Escarole, endive, and chicory.....	9,867	8,303	Watermelons.....	245,761	46,118
			Other vegetables.....	10,956	9,219

TABLE 7. Acres Harvested and Acres Harvested From Irrigated Land for Selected Crops, for the United States: 1964 and 1959

Crop	1964		1959	
	Total acres harvested	Acres harvested from irrigated land	Total acres harvested	Acres harvested from irrigated land ¹
Total specified crops.....	284,291,387	29,196,140	309,128,753	26,426,573
Corn for all purposes.....	63,514,906	2,428,000	79,616,031	2,640,231
Sorghums for all purposes.....	14,965,707	3,377,778	17,927,257	2,890,343
All wheat.....	47,958,362	1,963,525	49,566,924	1,761,108
Oats harvested.....	18,935,713	300,039	26,572,824	381,830
Barley harvested.....	9,805,327	1,503,666	14,199,311	1,656,102
Rye harvested.....	1,640,020	14,975	1,392,072	15,286
Flaxseed harvested.....	2,650,628	2,533	2,848,239	37,760
Rice harvested.....	1,815,013	1,815,013	1,617,037	1,617,037
Soybeans grown for all purposes.....	30,351,248	427,206	23,070,254	339,387
Cowpeas grown for all purposes.....	162,974	3,570	549,055	12,780
Peanuts harvested for nuts.....	1,347,253	70,910	1,333,056	49,186
Dry field and seed beans harvested for beans.....	1,338,304	600,789	1,414,163	666,120
Dry field and seed peas.....	299,991	44,312	343,773	48,125
Hay crops.....	65,294,703	8,229,598	63,548,557	7,298,948
Alfalfa seed.....	675,009	282,038	672,788	244,432
Red clover seed.....	822,474	30,727	1,141,269	41,972
Lespedeza seed.....	251,106	9,044	422,415	3,514
Cotton harvested.....	13,916,648	3,769,194	14,649,264	3,615,931
Tobacco harvested.....	1,025,240	172,321	1,108,274	89,211
Popcorn.....	142,884	6,116	131,169	5,294
Sugar beets for sugar.....	1,376,026	1,099,481	911,796	701,572
Irish potatoes.....	1,173,918	608,880	1,200,431	537,741
Sweet potatoes.....	112,128	18,156	218,461	17,998
Hops.....	32,451	32,577	33,129	32,736
Strawberries.....	66,171	34,905	85,228	36,983
Blackberries and dewberries.....	7,712	2,801	9,411	2,043
Raspberries tame.....	19,147	4,439	24,215	3,346
Blueberries.....	43,394	6,947	43,094	3,887
Cranberries.....	20,493	20,493	21,317	21,317
Land in orchards.....	4,251,130	2,203,342	4,185,407	1,612,693
Nursery products, flowers, and greenhouse products.....	275,307	112,765	272,532	41,660

¹Acres include totals for crops harvested from irrigated land in 1959 for 17 Western States, and Louisiana plus acres of crops harvested in 1960 from irrigated land in 30 Eastern States. See text.

TABLE 9. Crops Irrigated--Acres of Selected Crops Harvested From Irrigated Land, by Regions and States: 1964

Region and State	Total cropland harvested		Irrigated cropland harvested		Total area irrigated for specified crops (acres)	Corn			Sorghums			
	Farms	Acres	Farms	Acres		Total (acres)	For grain (acres)	For silage (acres)	Total (acres)	For grain (acres)	For silage (acres)	
1 United States.....	2,701,694	286,891,974	272,586	30,748,788	31,355,550	2,428,000	1,759,798	638,125	3,377,778	3,091,424	150,343	
2 The North...	1,352,061	181,200,399	37,636	3,560,509	3,573,383	1,535,554	1,385,296	144,768	659,522	590,157	55,775	
3 The South...	1,106,894	68,535,247	76,877	8,953,986	9,024,541	101,109	54,899	43,237	2,018,133	1,901,791	40,251	
4 The West...	242,739	37,156,328	158,073	18,234,293	18,757,626	791,337	319,603	450,120	700,123	599,476	54,317	
New England:												
5 Maine.....	11,007	594,434	186	3,987	3,745	13	-	13	-	-	-	
6 New Hampshire...	3,895	168,044	143	2,406	2,437	198	8	190	-	-	-	
7 Vermont.....	8,619	657,282	67	863	931	86	5	81	-	-	-	
8 Massachusetts.....	6,498	234,443	1,174	22,953	22,173	297	34	263	-	-	-	
9 Rhode Island.....	825	28,897	63	1,334	1,366	14	-	14	-	-	-	
10 Connecticut.....	4,833	205,861	367	13,786	13,765	314	4	310	-	-	-	
Middle Atlantic:												
11 New York.....	61,978	4,742,718	1,838	76,910	78,527	1,979	395	1,582	-	-	-	
12 New Jersey.....	8,759	560,266	1,990	95,106	101,048	801	587	214	-	-	-	
13 Pennsylvania.....	76,600	4,534,073	880	20,177	20,774	2,060	1,363	687	4	-	4	
East North Central:												
14 Ohio.....	110,194	9,276,437	737	16,930	17,433	442	349	93	-	-	-	
15 Indiana.....	95,846	10,298,855	549	16,720	17,250	5,354	5,070	232	7	7	-	
16 Illinois.....	123,174	20,058,321	321	14,147	15,721	5,472	5,406	64	9	-	9	
17 Michigan.....	87,947	6,738,032	1,997	47,215	47,607	2,199	2,077	119	-	-	-	
18 Wisconsin.....	112,963	9,038,263	751	60,614	60,755	3,231	2,877	318	1	-	-	
West North Central:												
19 Minnesota.....	124,424	17,514,799	466	17,164	17,308	5,224	3,992	1,232	-	-	-	
20 Iowa.....	143,701	19,951,672	290	21,464	21,149	15,425	14,962	438	502	478	24	
21 Missouri.....	119,569	11,067,975	787	56,739	62,048	19,252	18,603	627	444	174	219	
22 North Dakota.....	47,070	17,695,162	437	48,745	47,804	6,426	918	166	-	-	101	
23 South Dakota.....	46,230	14,445,400	967	113,475	113,957	30,341	20,694	7,830	3,945	2,057	807	
24 Nebraska.....	73,758	15,229,112	18,604	2,061,747	2,064,122	1,275,079	1,191,743	80,431	311,427	286,254	20,940	
25 Kansas.....	84,171	18,160,353	5,022	848,027	843,463	161,347	116,209	44,650	343,017	301,187	33,671	
South Atlantic:												
26 Delaware.....	3,646	418,538	157	17,372	18,704	942	877	65	25	-	25	
27 Maryland.....	18,685	1,420,692	446	15,266	16,621	928	817	111	-	-	-	
28 Virginia.....	71,748	2,566,117	4,388	48,291	48,737	5,480	2,203	3,252	484	2	415	
29 West Virginia...	31,296	733,499	66	1,931	1,943	318	139	179	-	-	-	
30 North Carolina...	137,737	3,985,904	12,492	94,324	92,228	2,320	1,481	769	51	-	39	
31 South Carolina...	50,005	2,263,258	1,297	16,851	17,126	594	375	211	18	-	18	
32 Georgia.....	65,059	3,950,518	6,754	59,260	59,413	3,448	3,081	197	42	20	22	
33 Florida.....	32,425	2,203,676	7,754	881,173	859,315	6,446	4,692	1,473	452	120	332	
East South Central:												
34 Kentucky.....	123,100	3,473,047	2,693	13,548	13,509	882	727	145	37	37	-	
35 Tennessee.....	115,755	3,617,961	1,055	9,156	9,933	1,232	684	521	16	14	-	
36 Alabama.....	74,409	2,989,719	296	11,126	11,242	950	804	140	59	-	20	
37 Mississippi.....	88,229	4,400,143	824	117,608	117,965	1,922	1,415	507	213	15	198	
West South Central:												
38 Arkansas.....	55,518	6,087,610	6,116	960,219	968,858	3,786	3,030	688	1,396	263	608	
39 Louisiana.....	41,419	2,672,631	4,710	549,010	551,501	4,416	3,851	379	277	-	59	
40 Oklahoma.....	59,360	8,343,588	2,441	260,027	261,626	7,218	445	6,615	60,920	51,472	4,395	
41 Texas.....	138,503	19,408,346	25,388	5,898,824	5,975,820	60,227	30,278	27,985	1,954,143	1,849,848	34,120	
Mountain:												
42 Montana.....	24,308	7,812,612	9,967	1,380,121	1,385,333	28,718	2,485	24,511	63	40	15	
43 Idaho.....	25,636	3,934,659	19,804	2,238,637	2,264,456	75,177	18,548	54,563	276	232	31	
44 Wyoming.....	7,624	1,702,311	5,499	1,103,739	1,106,741	41,344	13,268	25,280	1,097	13	410	
45 Colorado.....	24,998	4,725,734	17,108	2,043,693	2,053,449	295,383	135,923	154,678	124,073	90,950	17,441	
46 New Mexico.....	8,828	905,867	7,695	688,200	700,709	29,133	11,868	15,541	154,205	129,336	8,572	
47 Arizona.....	4,191	1,025,494	4,102	1,005,456	1,078,954	17,316	7,878	9,114	135,601	115,452	17,083	
48 Utah.....	13,759	1,039,040	12,849	769,012	794,057	37,950	2,332	33,357	401	229	164	
49 Nevada.....	1,854	507,210	1,843	503,239	503,956	4,619	143	4,404	71	5	66	
Pacific:												
50 Washington.....	35,815	4,423,400	14,330	909,444	933,479	52,600	21,931	28,782	278	164	114	
51 Oregon.....	29,981	3,050,278	12,335	1,085,581	1,098,306	25,434	6,895	17,749	-	-	-	
52 California.....	62,078	7,845,816	51,495	6,436,789	6,765,819	183,653	98,322	82,141	284,058	263,055	10,421	
53 Alaska.....	305	16,410	9	26	26	-	-	-	-	-	-	
54 Hawaii.....	3,422	167,497	1,037	70,284	72,341	10	10	-	-	-	-	

TABLE 9. Crops Irrigated--Acres of Selected Crops Harvested From Irrigated Land, by Regions and States: 1964--Continued

Region and State	Hay crops cut								Field seed crops			
	Total (acres)	Alfalfa and alfalfa mixtures (acres)	Clover, timothy, and mixtures of clover and timothy (acres)	Oats, wheat, barley, rye or other small grains cut for hay (acres)	Lespedeza (acres)	Wild hay (acres)	All other hay (acres)	Grass silage from grasses, alfalfa, clover, or small grasses (acres)	Total (acres)	Alfalfa seed (acres)	Red clover seed (acres)	Other (acres)
1 United States..	8,229,598	5,209,709	940,155	273,724	2,894	1,444,167	225,527	133,422	415,275	282,038	30,727	102,510
2 The North..	397,048	337,021	4,281	6,405	34	28,989	10,952	9,366	7,737	4,260	50	3,427
3 The South..	222,016	91,615	5,787	9,768	2,860	3,225	100,244	8,517	21,049	2,359	10	18,680
4 The West..	7,610,534	4,781,073	930,087	257,551	-	1,411,953	114,331	115,539	386,489	275,419	30,667	80,403
New England:												
5 Maine.....	60	5	46	3	-	-	6	-	-	-	-	-
6 New Hampshire..	222	163	39	-	-	-	6	14	-	-	-	-
7 Vermont.....	470	226	99	3	-	-	102	40	-	-	-	-
8 Massachusetts...	366	95	184	10	-	-	70	7	-	-	-	-
9 Rhode Island....	102	54	44	-	-	-	-	4	-	-	-	-
10 Connecticut....	359	76	148	-	-	-	80	55	-	-	-	-
Middle Atlantic:												
11 New York.....	3,079	2,121	535	22	-	-	102	299	5	-	-	5
12 New Jersey.....	1,168	931	116	1	-	-	60	60	-	-	-	-
13 Pennsylvania....	2,284	1,418	348	3	-	-	179	336	2	2	-	-
East North Central:												
14 Ohio.....	413	270	139	-	-	-	4	-	-	-	-	-
15 Indiana.....	252	174	18	13	-	-	-	47	4	-	-	4
16 Illinois.....	467	315	25	7	-	-	5	115	3	3	-	-
17 Michigan.....	784	535	55	42	-	75	30	47	-	-	-	-
18 Wisconsin.....	1,148	911	94	2	-	5	10	126	-	-	-	-
West North Central:												
19 Minnesota.....	1,352	1,155	125	-	-	59	-	13	-	-	-	-
20 Iowa.....	343	247	27	-	-	-	-	69	-	-	-	-
21 Missouri.....	2,648	2,201	146	85	34	-	112	70	70	-	-	70
22 North Dakota...	18,383	15,980	66	-	-	1,704	111	237	23	-	10	13
23 South Dakota...	52,640	44,999	688	1,253	-	4,745	680	275	988	787	-	201
24 Nebraska.....	249,748	211,065	1,290	4,192	-	21,853	5,037	6,311	3,563	2,556	37	970
25 Kansas.....	60,760	54,080	49	484	-	548	4,358	1,241	3,079	915	-	2,164
South Atlantic:												
26 Delaware.....	224	191	31	-	-	-	-	2	-	-	-	-
27 Maryland.....	462	266	38	4	34	-	78	42	-	-	-	-
28 Virginia.....	3,929	2,584	346	101	192	-	404	302	-	-	-	-
29 West Virginia...	403	287	116	-	-	-	-	-	-	-	-	-
30 North Carolina..	1,267	826	69	44	27	-	186	115	2	-	-	2
31 South Carolina..	298	19	-	27	23	-	218	11	2	-	-	2
32 Georgia.....	1,020	-	-	30	-	-	960	30	256	-	-	256
33 Florida.....	12,996	861	1,735	50	-	-	8,445	1,905	2,451	-	-	2,451
East South Central:												
34 Kentucky.....	593	398	52	2	47	-	47	47	64	-	10	54
35 Tennessee.....	1,111	657	125	12	6	-	289	22	-	-	-	-
36 Alabama.....	333	22	5	-	5	-	301	-	-	-	-	-
37 Mississippi....	438	17	-	10	69	-	312	30	-	-	-	-
West South Central:												
38 Arkansas.....	5,604	1,014	359	165	1,823	508	1,735	-	9,064	-	-	9,064
39 Louisiana.....	7,832	324	1,430	312	558	-	4,649	559	333	-	-	333
40 Oklahoma.....	28,323	25,364	142	225	76	195	2,106	215	1,072	744	-	328
41 Texas.....	157,183	58,785	1,339	8,788	-	2,522	80,514	5,237	7,805	1,615	-	6,190
Mountain:												
42 Montana.....	1,039,953	558,330	184,653	16,011	-	261,710	13,761	5,488	11,308	8,987	1,231	1,090
43 Idaho.....	947,924	784,041	67,274	10,951	-	74,391	6,743	4,524	57,078	36,887	16,205	3,986
44 Wyoming.....	844,856	359,274	153,889	10,294	-	294,948	20,850	5,601	5,087	3,326	497	1,264
45 Colorado.....	1,019,493	566,932	200,228	29,059	-	193,160	15,388	14,726	9,606	7,643	140	1,823
46 New Mexico.....	206,540	169,192	12,697	7,615	-	10,008	5,390	1,638	5,842	5,268	-	574
47 Arizona.....	218,724	194,359	-	9,180	-	546	7,255	7,384	27,745	15,539	-	12,206
48 Utah.....	496,835	386,368	37,760	8,488	-	56,150	3,397	4,672	38,208	37,436	94	678
49 Nevada.....	446,300	147,479	50,593	11,001	-	232,773	2,746	1,708	9,335	8,622	598	115
Pacific:												
50 Washington.....	328,100	268,586	33,071	11,758	-	4,901	2,576	7,208	42,075	30,209	5,266	6,600
51 Oregon.....	669,959	289,847	98,990	32,650	-	225,948	12,415	10,109	40,836	20,811	5,068	14,957
52 California.....	1,391,304	1,056,437	90,932	110,544	-	57,418	23,652	52,321	139,369	100,691	1,568	37,110
53 Alaska.....	-	-	-	-	-	-	-	-	-	-	-	-
54 Hawaii.....	546	228	-	-	-	-	158	160	-	-	-	-

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TABLE 9. Crops Irrigated--Acres of Selected Crops Harvested From Irrigated Land, by Regions and States: 1964--Continued

	Region and State	Cotton (acres)	Tobacco (acres)	Irish potatoes (acres)	Sweet potatoes (acres)	Sugar beets for sugar (acres)	Hops (acres)	All other field crops (acres)
1	United States..	3,769,194	172,321	608,880	18,156	1,099,481	32,441	857,815
2	The North..	11,245	8,042	114,802	3,702	129,708	-	85,139
3	The South..	2,443,847	164,279	51,128	5,791	21,087	-	188,916
4	The West...	1,314,102	-	442,950	8,663	948,686	32,441	583,760
	New England:							
5	Maine.....	-	-	1,768	-	-	-	6
6	New Hampshire..	-	-	210	-	-	-	-
7	Vermont.....	-	-	5	-	-	-	-
8	Massachusetts...	-	1,839	450	-	-	-	-
9	Rhode Island....	-	-	490	-	-	-	-
10	Connecticut.....	-	5,139	3,667	-	-	-	1
	Middle Atlantic:							
11	New York.....	-	-	32,407	(2)	-	-	246
12	New Jersey.....	-	-	14,019	3,239	-	-	-
13	Pennsylvania....	-	565	2,977	5	-	-	12
	East North Central:							
14	Ohio.....	-	79	2,784	-	281	-	-
15	Indiana.....	-	386	3,964	2	-	-	1,186
16	Illinois.....	-	-	766	6	4	-	38
17	Michigan.....	-	-	8,943	156	620	-	2,012
18	Wisconsin.....	-	7	25,938	-	-	-	361
	West North Central:							
19	Minnesota.....	-	-	6,163	-	283	-	-
20	Iowa.....	-	-	711	145	824	-	-
21	Missouri.....	11,245	27	354	63	-	-	70
22	North Dakota....	-	-	404	-	7,887	-	2,921
23	South Dakota....	-	-	570	-	10,644	-	1,209
24	Nebraska.....	-	-	8,055	-	85,621	-	71,181
25	Kansas.....	-	-	157	86	23,544	-	5,896
	South Atlantic:							
26	Delaware.....	-	-	6,254	7	-	-	-
27	Maryland.....	-	1,541	710	584	-	-	-
28	Virginia.....	31	20,090	4,781	750	-	-	8
29	West Virginia...	-	7	36	-	-	-	-
30	North Carolina..	140	79,787	813	345	-	-	-
31	South Carolina..	1,613	6,820	185	120	-	-	-
32	Georgia.....	1,991	34,174	3	2,257	-	-	69
33	Florida.....	6	9,712	24,486	312	-	-	142,173
	East South Central:							
34	Kentucky.....	-	10,230	87	7	-	-	15
35	Tennessee.....	346	1,841	4	25	-	-	-
36	Alabama.....	5,933	75	542	147	-	-	-
37	Mississippi....	54,764	-	(2)	17	-	-	135
	West South Central:							
38	Arkansas.....	182,914	-	128	136	1	-	-
39	Louisiana.....	13,447	2	18	295	-	-	3,609
40	Oklahoma.....	70,583	-	20	149	-	-	759
41	Texas.....	2,112,079	-	13,061	640	21,086	-	42,148
	Mountain:							
42	Montana.....	-	-	6,226	-	68,105	-	13,196
43	Idaho.....	-	-	226,815	4	169,566	3,872	134,960
44	Wyoming.....	-	-	2,693	-	64,126	-	45,392
45	Colorado.....	-	-	43,734	1	175,524	-	63,662
46	New Mexico.....	185,225	-	1,075	545	2,322	-	11,199
47	Arizona.....	365,937	-	6,140	789	100	-	3,252
48	Utah.....	-	-	7,581	-	32,017	-	256
49	Nevada.....	3,488	-	577	-	2,023	-	132
	Pacific:							
50	Washington.....	-	-	32,799	-	58,122	20,920	60,785
51	Oregon.....	-	-	32,540	331	22,007	4,191	22,534
52	California.....	759,452	-	82,755	6,907	354,774	3,458	161,885
53	Alaska.....	-	-	1	-	-	-	-
54	Hawaii.....	-	-	14	86	-	-	66,507

Z Reported in small fractions.

TABLE 9. Crops Irrigated--Acres of Selected Crops Harvested From Irrigated Land, by Regions and States: 1964--Continued

Region and State	Vegetables harvested for sale					Berries and small fruits			Land in bearing and nonbearing fruit orchards, groves, vineyards, and planted nut trees (acres)	Nursery products (acres)
	Total (acres)	Tomatoes (acres)	Sweet corn (acres)	Snap beans (acres)	Lettuce and romaine (acres)	Total (acres)	Strawberries (acres)	Other (acres)		
1 United States..	1,543,821	251,784	157,164	116,903	202,159	71,844	34,905	36,939	2,203,342	112,765
2 The North..	173,440	20,273	28,002	34,269	8,939	37,639	9,906	27,733	30,011	24,995
3 The South..	467,930	64,436	52,859	50,610	11,033	6,176	5,966	210	499,391	37,715
4 The West...	902,451	167,075	76,303	32,024	182,187	28,029	19,033	8,996	1,673,940	50,055
New England:										
5 Maine.....	1,377	27	305	48	285	414	85	329	2	104
6 New Hampshire...	1,512	68	728	68	16	50	24	26	185	60
7 Vermont.....	112	2	62	1	(2)	28	25	3	186	44
8 Massachusetts...	6,990	395	2,375	361	328	11,354	121	11,233	89	785
9 Rhode Island....	443	91	143	21	1	66	4	62	106	145
10 Connecticut.....	2,819	257	791	97	141	87	68	19	46	1,313
Middle Atlantic:										
11 New York.....	29,769	2,350	4,987	3,392	2,519	1,565	1,413	152	5,067	3,413
12 New Jersey.....	57,032	11,450	7,220	9,800	3,404	9,118	1,685	7,433	10,055	4,959
13 Pennsylvania....	5,967	1,566	1,887	276	46	377	309	68	4,328	1,881
East North Central:										
14 Ohio.....	9,342	726	3,074	386	564	432	327	105	1,194	1,948
15 Indiana.....	4,115	355	466	509	152	317	207	110	320	417
16 Illinois.....	5,354	190	511	3,205	74	279	250	29	479	1,935
17 Michigan.....	16,900	1,892	1,750	1,623	596	8,069	4,296	3,773	4,665	2,859
18 Wisconsin.....	24,003	144	1,723	14,196	737	4,845	508	4,337	35	525
West North Central:										
19 Minnesota.....	1,947	136	796	40	29	265	213	52	14	1,186
20 Iowa.....	982	64	46	2	1	69	69	-	11	1,118
21 Missouri.....	2,383	346	584	138	40	225	224	1	2,337	1,235
22 North Dakota....	131	15	57	5	1	4	4	-	31	121
23 South Dakota....	151	28	72	-	-	42	42	-	35	7
24 Nebraska.....	545	59	162	72	-	(2)	(2)	-	111	347
25 Kansas.....	1,566	112	263	29	5	33	32	1	715	593
South Atlantic:										
26 Delaware.....	10,146	666	824	1,820	-	34	29	5	294	306
27 Maryland.....	9,944	1,277	1,027	3,333	11	157	146	11	1,230	719
28 Virginia.....	7,941	1,201	1,020	931	11	360	360	-	1,104	2,969
29 West Virginia...	275	123	147	5	-	15	12	3	720	140
30 North Carolina..	3,775	446	356	538	11	377	242	135	874	1,438
31 South Carolina..	3,756	985	71	564	(2)	26	23	3	2,461	574
32 Georgia.....	6,616	441	227	909	196	12	11	1	895	5,618
33 Florida.....	218,607	38,379	41,198	33,798	2,971	1,834	1,811	23	422,310	16,696
East South Central:										
34 Kentucky.....	953	298	150	77	21	187	183	4	154	234
35 Tennessee.....	3,446	102	129	648	9	188	188	-	498	550
36 Alabama.....	1,328	143	213	331	-	17	15	2	19	1,827
37 Mississippi....	1,163	120	16	56	-	12	12	-	32	467
West South Central:										
38 Arkansas.....	6,537	859	195	808	6	577	571	6	707	271
39 Louisiana.....	1,724	96	53	189	(2)	1,817	1,817	6	732	496
40 Oklahoma.....	2,927	111	46	425	5	88	82	6	295	1,533
41 Texas.....	188,792	19,189	7,187	6,178	7,792	475	464	11	67,066	3,877
Mountain:										
42 Montana.....	1,585	17	523	(2)	13	53	23	30	1,181	91
43 Idaho.....	19,927	48	11,353	846	238	163	92	71	14,465	2,482
44 Wyoming.....	1,040	6	393	155	(2)	(2)	(2)	(2)	155	214
45 Colorado.....	30,948	2,283	2,016	2,468	5,920	37	13	24	16,540	3,096
46 New Mexico.....	8,910	1,123	306	52	1,794	5	3	2	13,384	374
47 Arizona.....	86,454	89	170	23	51,381	9	9	-	46,338	2,129
48 Utah.....	11,813	2,442	4,533	489	22	211	78	133	12,505	-
49 Nevada.....	853	36	29	2	28	-	-	-	453	89
Pacific:										
50 Washington.....	47,348	701	16,202	764	558	3,618	1,559	2,059	134,804	2,703
51 Oregon.....	64,933	279	24,627	19,472	172	13,027	8,228	4,799	38,228	4,262
52 California.....	625,602	159,804	15,961	7,577	121,667	10,903	9,025	1,878	1,394,467	33,879
53 Alaska.....	25	-	-	-	9	-	-	-	-	-
54 Hawaii.....	3,013	247	190	176	385	3	3	-	1,420	736

Z Reported in small fractions.

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TABLE 10. Irrigated Crops¹—Farms, Acres Harvested, and Quantity Harvested for Selected Crops Harvested From Irrigated Land, by Regions and States: 1964

Region and State	Corn for grain			Sorghums for grain			Wheat for grain		
	Farms	Acres	Bushels	Farms	Acres	Pounds (1,000)	Farms	Acres	Bushels
United States....	27,793	1,689,935	135,940,974	28,076	3,037,489	11,684,161	33,898	1,704,269	67,914,783
The North.....	17,536	1,335,725	109,122,093	9,409	587,441	2,402,527	2,354	247,102	7,724,596
The South.....	1,138	39,262	2,462,309	13,193	1,883,437	7,191,466	5,719	669,728	22,927,761
The West.....	9,119	314,948	24,356,572	5,474	566,611	2,090,168	25,825	787,439	37,262,426
Middle Atlantic:									
New York.....	35	395	30,058	-	-	-	-	-	-
New Jersey.....	41	587	44,891	-	-	-	-	-	-
Pennsylvania.....	100	1,363	128,259	-	-	-	-	-	-
East North Central:									
Ohio.....	35	349	28,871	-	-	-	-	-	-
Indiana.....	98	5,070	485,237	-	-	-	-	-	-
Illinois.....	77	5,406	498,552	-	-	-	-	-	-
Michigan.....	71	2,077	124,303	-	-	-	-	-	-
Wisconsin.....	69	2,877	196,719	-	-	-	-	-	-
West North Central:									
Minnesota.....	110	3,992	250,742	-	-	-	-	-	-
Iowa.....	172	14,962	1,431,798	-	-	-	-	-	-
South Dakota.....	263	12,938	694,003	-	-	-	-	-	-
Nebraska.....	15,420	1,191,743	97,381,891	6,339	286,254	1,250,351	403	12,504	311,925
Kansas.....	1,045	93,966	7,826,769	3,070	301,187	1,152,176	1,951	234,598	7,412,671
South Atlantic:									
Delaware.....	28	877	55,181	-	-	-	-	-	-
Maryland.....	28	817	67,471	-	-	-	-	-	-
West Virginia.....	7	139	10,400	-	-	-	-	-	-
Florida.....	108	4,692	189,555	-	-	-	-	-	-
East South Central:									
Kentucky.....	66	727	51,159	-	-	-	-	-	-
Tennessee.....	44	684	45,933	-	-	-	-	-	-
Alabama.....	28	804	41,303	-	-	-	-	-	-
Mississippi.....	69	1,415	86,206	-	-	-	-	-	-
West South Central:									
Oklahoma.....	-	-	-	359	33,589	109,278	675	59,342	1,741,183
Texas.....	760	29,107	1,915,101	12,834	1,849,848	7,082,188	5,044	610,386	21,186,578
Mountain:									
Montana.....	86	2,469	156,802	-	-	-	2,267	74,091	2,572,424
Idaho.....	1,226	18,548	1,372,135	-	-	-	11,223	277,710	3,484,261
Wyoming.....	474	13,238	767,124	-	-	-	355	6,976	218,481
Colorado.....	3,986	134,387	10,464,306	1,236	75,741	203,876	2,280	64,791	2,006,347
New Mexico.....	619	11,818	442,290	1,069	117,175	414,672	558	47,448	1,699,801
Arizona.....	93	5,871	306,362	800	115,452	486,790	397	27,863	1,320,888
Utah.....	205	2,332	169,137	-	-	-	3,284	40,638	1,647,569
Nevada.....	10	143	7,792	-	-	-	227	20,303	729,228
Pacific:									
Washington.....	795	21,931	2,164,137	7	164	757	2,847	107,847	7,619,197
Oregon.....	359	6,648	519,139	-	-	-	1,488	45,286	2,469,388
California.....	1,266	97,563	7,987,348	2,362	258,079	984,073	899	74,486	3,494,842

¹Data are for only that part of the irrigated acreage of each crop for which both acres harvested and quantity harvested are available. See text.

Part 2—Use of Fertilizer and Lime

Definitions and explanations.—The farm operators and census enumerators were instructed to include all commercial fertilizer and lime used in 1964, regardless of when it was purchased, or whether purchased by the landlord, the tenant, or both, jointly. Regardless of who purchased the fertilizer, it was to be reported on the questionnaire for the person who was operating the land on which it was applied. If the landlord was the purchaser but the tenant used the fertilizer on his crops, he (the tenant) was to report the fertilizer on his questionnaire. Manure, straw, gypsum, and refuse materials were not to be reported as fertilizer. Lime included ground limestone, hydrated and burnt lime, marl, oyster shells, and other forms of lime. Lime used for spray or sanitation purposes was excluded.

The fertilizer and lime may have been purchased in 1963, and used in 1964 on crops planted in 1963 for harvest in 1964, or on crops planted in 1964 for harvest in 1965. If several applications were made during the year, the total amounts of fertilizer and lime were reported, but the acreage was counted only once.

The data shown for the census on the use of fertilizer and lime do not represent the total fertilizer and lime used in the United States. Considerable quantities are used on places not included in the census of agriculture, such as golf courses, lawns and gardens of homes, places with insufficient agricultural operations to qualify them as census farms, and farms entirely in the Soil Bank. In some States the quantity of fertilizer and lime used by such nonfarm places comprises a significant amount of the fertilizer and lime used in the State.

The number of tons is the only measure of the quantity of fertilizer used obtained in the census, and

fertilizer or fertilizing materials used may not indicate accurately the relative amounts of plant nutrients used for various crops or areas. There is wide variation in the plant nutrient content of fertilizers.

Commercial fertilizers and lime used under soil-conservation programs were to be reported.

The fertilizer inquiries on the questionnaire for both the 1964 and 1959 censuses contained six parts listing the crops to which fertilizer might be applied. Three parts were uniform for all States:

- a. Hay and cropland pasture
- b. Other pasture (not cropland)
- c. All other crops

The other three parts related to specified crops, which varied by State, so that it was possible to obtain detailed data for three important crops commonly fertilized in each State. Fertilizer applied to crops, other than the three selected for each State, was to be reported under "All other crops." If two or more crops were harvested from the same land or if one crop was harvested and the land then planted to another crop for harvest next year and both crops were fertilized, then the acreage fertilized was to be reported for each crop. For example, in the case of wheat and some other crops planted in the fall of 1964 and fertilized at the time of planting, the acreage fertilized may relate to the acreage for harvest in 1965 and not to the acreage harvested in 1964. The inquiries regarding fertilizer and lime for 1964 appeared in section 10 of the agriculture questionnaire (see copy in introduction to this volume). In the following table an X indicates that the acreage fertilized was obtained separately for the State.

Regions and States	Hay and cropland pasture	Other pasture	Corn	Wheat	Sorghums	Soybeans	Cotton	Tobacco	Barley	Irish potatoes	Oats	Rice	Sugar beets	Sugarcane	Pineapples	Coffee	Other crops
New England:																	
Maine.....	X	X	X							X	X						X
New Hampshire..	X	X	X							X	X						X
Vermont.....	X	X	X							X	X						X
Massachusetts...	X	X	X					X		X							X
Rhode Island....	X	X	X							X	X						X
Connecticut.....	X	X	X					X		X							X
Middle Atlantic:																	
New York.....	X	X	X	X						X							X
New Jersey.....	X	X	X	X						X							X
Pennsylvania....	X	X	X	X						X							X
East North Central:																	
Ohio.....	X	X	X	X			X										X
Indiana.....	X	X	X	X			X										X
Illinois.....	X	X	X	X			X										X
Michigan.....	X	X	X	X									X				X
Wisconsin.....	X	X	X				X			X							X
West North Central:																	
Minnesota.....	X	X	X				X			X							X
Iowa.....	X	X	X	X			X			X							X
Missouri.....	X	X	X	X			X										X
North Dakota....	X	X	X	X						X							X
South Dakota....	X	X	X	X						X							X
Nebraska.....	X	X	X	X						X							X
Kansas.....	X	X	X	X			X										X
South Atlantic:																	
Delaware.....	X	X	X				X			X							X
Maryland.....	X	X	X				X			X							X
Virginia.....	X	X	X	X				X									X
West Virginia...	X	X	X	X						X							X
North Carolina..	X	X	X					X	X								X
South Carolina..	X	X	X				X	X	X								X
Georgia.....	X	X	X				X	X	X								X
Florida.....	X	X	X				X	X		X							X

Regions and States	Hay and cropland pasture	Other pasture	Corn	Wheat	Sorghums	Soybeans	Cotton	Tobacco	Barley	Irish potatoes	Oats	Rice	Sugar beets	Sugarcane	Pineapples	Coffee	Other crops
East South Central:																	
Kentucky.....	X	X	X	X				X									X
Tennessee.....	X	X	X	X			X	X									X
Alabama.....	X	X	X	X			X	X									X
Mississippi.....	X	X	X	X			X	X									X
West South Central:																	
Arkansas.....	X	X	X	X			X	X				X					X
Louisiana.....	X	X	X	X			X	X				X					X
Oklahoma.....	X	X	X	X		X	X	X				X					X
Texas.....	X	X	X	X		X	X	X				X					X
Mountain:																	
Montana.....	X	X		X					X				X				X
Idaho.....	X	X		X						X			X				X
Wyoming.....	X	X	X	X						X			X				X
Colorado.....	X	X		X						X			X				X
New Mexico.....	X	X		X						X			X				X
Arizona.....	X	X		X		X				X			X				X
Utah.....	X	X		X						X			X				X
Nevada.....	X	X		X				X		X			X				X
Pacific:																	
Washington.....	X	X		X					X				X				X
Oregon.....	X	X		X					X				X				X
California.....	X	X		X			X			X			X				X
Alaska.....	X	X		X						X			X				X
Hawaii.....	X	X		X						X			X		X	X	X

The information on fertilizer and lime used was obtained for a sample of farms. The sample comprised all farms of 1,000 acres or more, all farms of less than 1,000 acres with a value of farm products sold of \$100,000 or more in 1964, and one-fifth of the remaining farms. The acres of crops fertilized may exceed the acres of crops harvested, because of differences due to

sampling, when the entire acreage of the crop is fertilized, or to crop failure when the crop was not harvested from all the acreage planted or fertilized, or because the part of the acreage fertilized in 1964 was for harvest in 1965 or later. The following table shows where other data regarding use of fertilizer are published.

Where found	Geographic area for which available	Period	Presentation of data
Volume I—Parts 1 to 50.....	Counties and States...	1964 and 1959...	County table 9. State and county totals for use of commercial fertilizer, lime and liming materials, and crops on which commercial fertilizer was used.
		1964.....	County table 5. State and county totals for expenditures for commercial fertilizer and fertilizing materials.
	States only.....	1930 to 1964....	State table 4. State totals for commercial fertilizer and fertilizing materials for 1964 with available comparative data from earlier censuses to 1930.
		1964.....	State totals on use of commercial fertilizer, lime and liming materials, and the crops on which commercial fertilizer was used, classified as follows: State table 17. By economic class of farm. State table 18. By tenure of farm operator. State table 19. By age of operator. State table 20. By size of farm. State table 21. By economic class by type of farm. State table 22. By type of farm. State table 6. Expenditures for commercial fertilizer and fertilizing materials by expenditure per farm.
Volume II. Chapter 3..	United States only....	1964.....	Size of farm. United States totals for tons of fertilizer and the specified crops and acres on which it was used. Also expenditures for fertilizer and fertilizing materials.
Volume II. Chapter 8..	United States.....	1964.....	Tenure of operator. Tons of commercial fertilizer used; and tons, acres, and specified crops on which used for the United States. Also expenditures for fertilizer and fertilizing materials.
Volume II. Chapter 6..	United States.....	1964.....	Economic class of farm. Acres and tons of commercial fertilizer used, and specified crops on which they were used. Also expenditures for fertilizer and fertilizing materials.
Volume II. Chapter 10.	United States.....	1964.....	Type of farm. Tons of commercial fertilizer used and tons, acres, and crops on which fertilizer was used. Also expenditures for fertilizers and fertilizing materials.
Volume II. Chapter 5..	United States.....	1964.....	Age of operator. Tons of commercial fertilizer used and the specified crops and acres on which used, also expenditures for fertilizer and fertilizing materials.
Volume II. Chapter 7..	States and United States.	1964.....	Expenditures for fertilizer and fertilizing materials.

The following summary indicates the data covering fertilizer and fertilizing materials obtained for 1964 and prior censuses.

Census of—	Kind of data obtained
1964.....	Commercial fertilizer and fertilizing materials in 1964—tons separately for dry and liquid materials and acres on which used. There were separate inquiries for hay and cropland pasture, other pasture (not cropland pasture), and three important crops (the crops varied by State) and for all other crops. There was a separate question in 1964 for expenditure for fertilizer and fertilizing materials.
1959.....	Commercial fertilizer and fertilizing materials in 1959—tons (separately for dry and liquid) and acres on which used. In- were obtained separately for hay and cropland pasture, other pasture (not cropland), three important crops (which varied by States), and for all other crops.
1954 ¹	Commercial fertilizer and fertilizing materials in 1954—tons, acres on which used, and cost. Inquiries were obtained separately for hay and cropland pasture; other pasture; two important crops (which varied by States); fruits, vegetables, and potatoes; and for all other crops.
1945 ¹	Commercial fertilizer in 1944—cost only.
1940 ¹	Quantity and cost of commercial fertilizer bought in 1939.
1930 ¹	Quantity of commercial fertilizer bought in 1929. Amount expended was for commercial fertilizer, manure, marl, lime, and limestone. (No separate expenditure data were obtained for fertilizer alone.)
1925 ¹	Amount expended in 1924 for manure and fertilizer, including lime and ground limestones. (No separate data were obtained for fertilizer alone.)
1920.....	Amount expended in 1919 for manure and fertilizer.
1910.....	Amount expended in 1909 for manure and other fertilizer.
1900 ¹	Amount expended for fertilizer in 1899.
1890 ¹	Amount expended for fertilizer in 1889.
1880 ¹	Amount expended for fertilizer in 1879.

¹Alaska and Hawaii not included.

Use of fertilizer in 1964—Fertilizer was used on nearly 2 out of 3 farms in 1964. The proportion of farms using fertilizer was much higher in the North and the South than in the West. The 2,110,000 farms reporting fertilizer use in the United States in 1964 were equivalent to 78 percent of the farms reporting cropland harvested.

The land fertilized in 1964 totaled 150,651,000 acres. This acreage was equivalent to 18 percent of the total acreage of land from which crops were harvested and of all pastureland, except woodland pasture. The total acreage fertilized minus the acreage of hay and pasture fertilized would be equivalent to 55 percent of the acres of all crops, other than hay crops harvested.

The distribution of acres fertilized and fertilizer used on crops or groups of crops in 1964 were as follows:

Total acres.....	100.0
Hay and cropland pasture.....	11.4
Other pasture.....	4.3
Corn.....	33.2
All other crops.....	51.1

Data for use of fertilizer for corn, sorghums, wheat, soybeans, cotton, tobacco, Irish potatoes, sugar beets, oats, barley, sugarcane, pineapples, coffee, and rice were not obtained for all States, hence, the data given for each of these crops understate the use of fertilizer on these crops. (see the following table.) In the States for which data were not obtained separately in 1964 for these crops, the data were included with all other crops.

Crop	States with separate inquiry for fertilizer use for the crop	Acreage of crop for all States	Acreage of crop in States with separate inquiry on fertilizer use for the crop	
			Total	Percent of acreage for crop for all States
Hay and cropland pasture.....	50	122,713,567	122,713,567	100.0
Other pasture (not cropland).....	50	572,516,646	572,516,646	100.0
Corn for all purposes.....	37	63,514,906	62,553,053	98.5
Sorghums for all purposes.....	6	14,965,707	12,888,440	86.1
Wheat.....	24	47,958,362	41,792,523	87.1
Soybeans for all purposes.....	15	30,351,248	25,555,591	84.2
Cotton.....	14	13,916,648	13,525,083	97.2
Tobacco.....	6	1,025,240	776,644	75.8
Irish potatoes.....	23	1,173,918	963,625	82.1
Sugar beets.....	8	1,376,026	1,002,351	72.8
Oats.....	4	18,935,713	47,939	0.3
Barley.....	7	9,805,327	2,611,953	26.6
Sugarcane.....	1	643,417	233,387	36.3
Pineapples (in crop).....	1	51,514	51,514	100.0
Coffee.....	1	4,711	4,711	100.0
Rice.....	1	1,815,013	513,571	28.3

More fertilizer is used on corn than on any other crop. In 1964 about one-third of all fertilizer used was for corn, accounting for approximately one-third of the acreage fertilized in 1964. Nearly 4 out of every 5 acres of corn harvested in 1964 were fertilized. In the nine States having 2 million or more acres of corn harvested in 1964, 78 percent of the corn acreage was fertilized.

On the basis of acres fertilized, wheat ranked second. In the 24 States for which data were obtained on wheat fertilized, 22.6 million acres were fertilized in 1964. However, the quantity of fertilizer used was less for wheat than for cotton and hay and cropland pasture.

In 1964, more than 17 million acres of hay and cropland pasture were fertilized, representing 11.4 percent of the acreage of all land fertilized, and the fertilizer applied comprised 11.7 percent of all fertilizer used in 1964.

The acreage of cotton fertilized represented about 7 percent of the acreage of all crops fertilized in 1964. The data were obtained in the 14 most important cotton growing States. The acreage of cotton harvested in these States comprised 97 percent of the acres of cotton harvested in all States, and the acres of cotton fertilized were equal to 77 percent of the acres harvested.

The acreage of other pasture (not cropland) fertilized in 1964 totaled 6.5 million acres, represented 4 percent of the acreage fertilized in 1964, and equaled 1.1 percent of the acreage of other and woodland pasture, and 18.1 percent of the acreage of improved other pasture. About 4 percent of the fertilizer used in 1964 was applied on other pasture.

Approximately 6.4 million acres of sorghums were fertilized in 1964. The acres of sorghums fertilized were equal to 43 percent of the acreage of sorghums harvested for all purposes in 1964. The fertilizer used comprised only 2 percent of the fertilizer used on farms in 1964.

Crop	Farms reporting use of fertilizer			Tons used		Acres fertilized			Pounds used per acre	Percent distribution of—	
	Total	Percent of all farms in the United States	Percent of all farms using fertilizer	Total	Average per farm reporting	Total	Average per farm reporting	Percent of acreage of crop harvested		Tons used	Acres fertilized
United States, total.....	2,109,512	66.8	100.0	23,286,428	11.0	150,651,146	71.4	15.3	309	100.0	100.0
Hay and cropland pastured.....	577,961	18.3	27.4	2,728,139	4.7	17,115,476	29.6	13.9	319	11.7	11.4
Other pasture (not cropland).....	185,746	5.9	8.8	1,026,388	5.5	6,541,974	35.2	1.1	314	4.4	4.3
Corn.....	1,256,113	39.8	58.5	7,706,379	6.1	50,002,106	39.8	79.9	308	33.1	33.2
Sorghums.....	86,176	2.7	4.1	495,085	5.7	6,423,945	74.5	49.8	154	2.1	4.3
Wheat.....	437,959	13.9	20.8	1,676,649	3.8	22,638,144	51.7	54.2	148	7.2	15.0
Soybeans.....	107,486	3.4	5.1	497,594	4.6	4,737,329	44.1	18.5	210	2.1	3.1
Cotton.....	277,660	8.8	13.2	2,037,767	7.3	10,460,906	37.7	77.3	390	8.8	6.9
Tobacco.....	255,920	8.1	12.1	700,585	2.7	771,388	3.0	99.3	1,816	3.0	0.5
Irish potatoes.....	19,446	0.6	0.9	490,212	25.2	963,773	49.6	100.0	1,017	2.1	0.6
Sugar beets.....	16,832	0.5	0.8	259,427	15.4	1,017,068	60.4	101.5	510	1.1	0.7
Oats.....	1,076	(¹)	0.1	3,691	3.4	25,601	23.8	53.4	288	(¹)	(¹)
Berley.....	10,543	0.3	0.5	52,485	5.0	882,855	83.7	33.8	119	0.2	0.6
Sugarcane.....	697	(¹)	(¹)	131,132	188.3	224,239	321.7	96.1	1,170	0.6	0.1
Pineapples.....	71	(¹)	(¹)	24,055	338.8	48,639	685.1	94.4	989	0.1	(¹)
Coffee.....	776	(¹)	(¹)	1,744	2.2	3,784	4.9	80.3	922	(¹)	(¹)
Rice.....	3,205	0.1	0.2	63,429	19.8	488,718	152.5	95.2	260	0.3	0.3
Unspecified other crops.....	(NA)	(NA)	(NA)	5,391,667	(NA)	28,305,201	(NA)	21.9	381	23.2	18.8

NA Not available.
¹Less than 0.5 percent.

Data on the use of fertilizer on sorghum crops were obtained in six States. These States accounted for 86 percent of sorghums harvested for all purposes in 1964.

Almost 5 million acres of soybeans were fertilized in 1964. This acreage was equal to 16 percent of the acreage of soybeans harvested in 1964. The quantity of fertilizer applied on soybeans was equal to 2 percent of the United States total.

All of the acreage of sugar beets harvested in 1964 was fertilized. The acres fertilized totaled over 1 million acres, and were equivalent to 1 percent of the total acreage of all crops fertilized in 1964.

Data were obtained for tobacco fertilized for 6 out of the 26 States reporting tobacco harvested. In the six States for which data were obtained, 99.3 percent of the tobacco acreage was fertilized. In the 20 States for which figures were not obtained, nearly all the acreage of tobacco harvested was fertilized.

Figures on oats fertilized were obtained in only four States. These States had 3 percent of the acreage of oats harvested in 1964.

Information on the use of fertilizer on Irish potatoes was obtained for 23 States. These States accounted for 82 percent of the acreage of Irish potatoes harvested in 1964.

The use of fertilizer on sugarcane in 1964 was limited to the State of Hawaii. The summary for Hawaii follows:

Percent of farms with sugarcane reporting use of fertilizer....	89
Acres fertilized, total.....	224,239
Percent of acres in sugarcane.....	96
Tons of fertilizer used, total.....	131,132
Average per acre fertilized, pounds.....	1,170

Data are not available on the use of fertilizer on the acres of sugarcane harvested in States other than Hawaii.

Data were obtained on rice fertilized only for Louisiana. In 1964, 95 percent of the acreage of rice harvested was fertilized, with an average of 260 pounds applied per acre.

Pineapples are of commercial importance only in Hawaii and information on the use of fertilizer was obtained only for that State. The summary for pineapples is as follows:

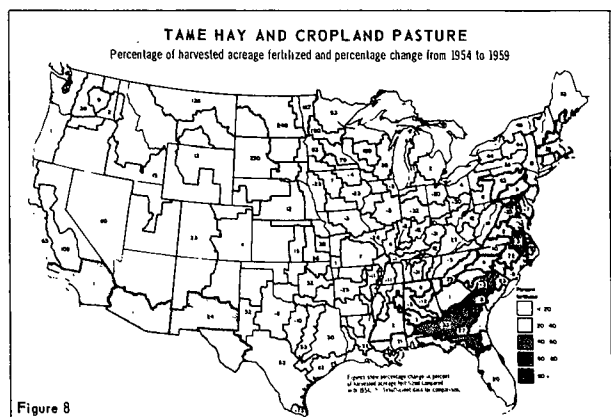
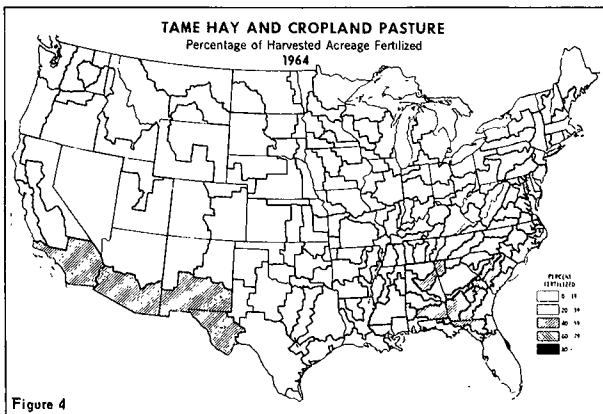
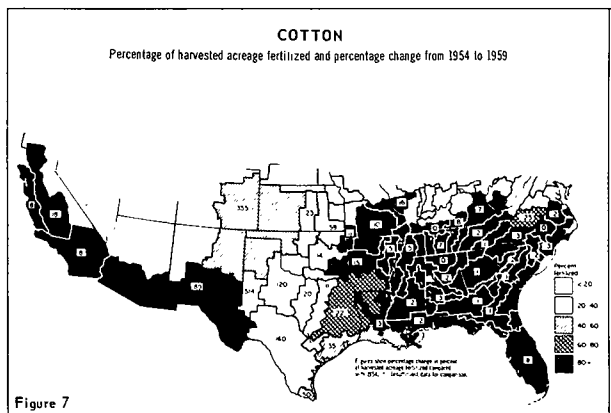
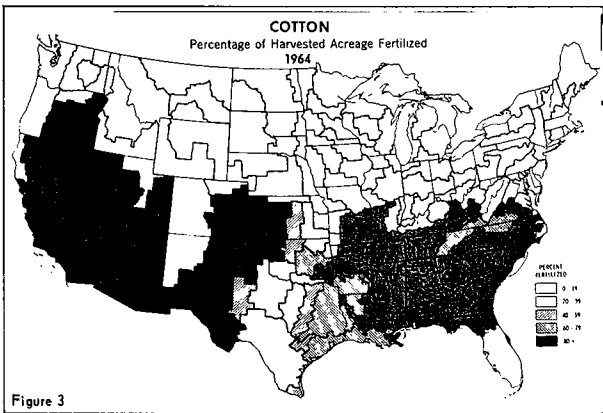
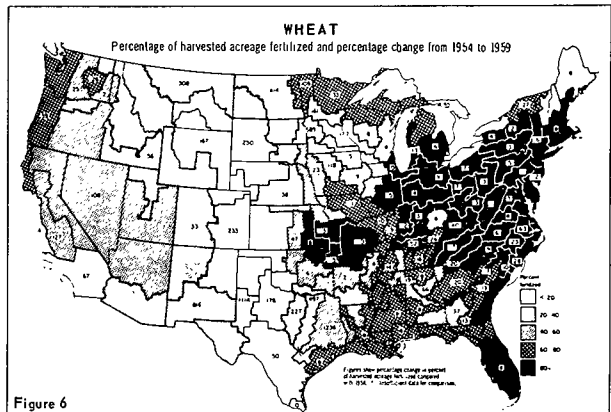
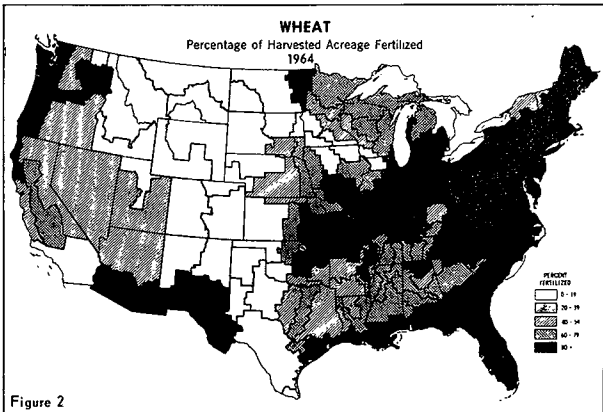
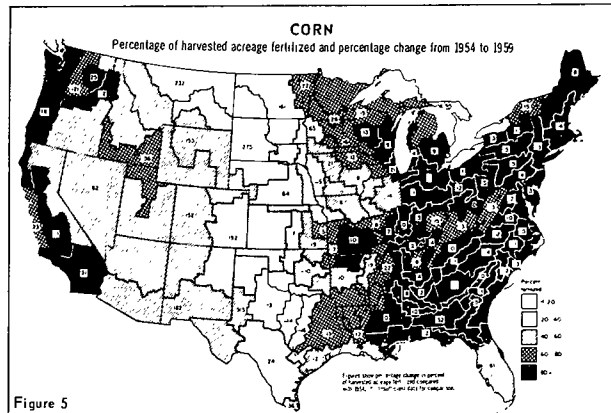
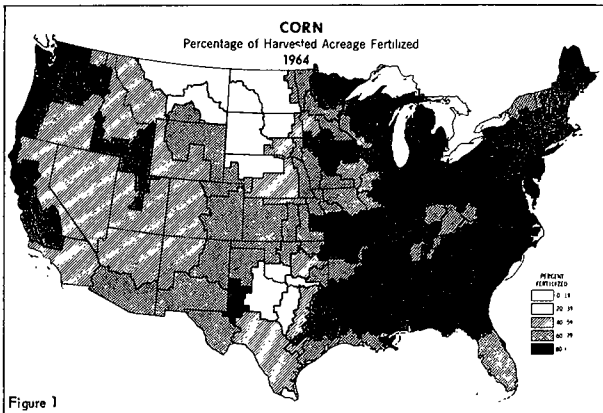
Percent of farms with pineapples reporting use of fertilizer....	89
Acres fertilized, total.....	48,639
Percent of acres in pineapples.....	94.4
Tons of fertilizer used, total.....	24,055
Average per acre fertilized, pounds.....	989

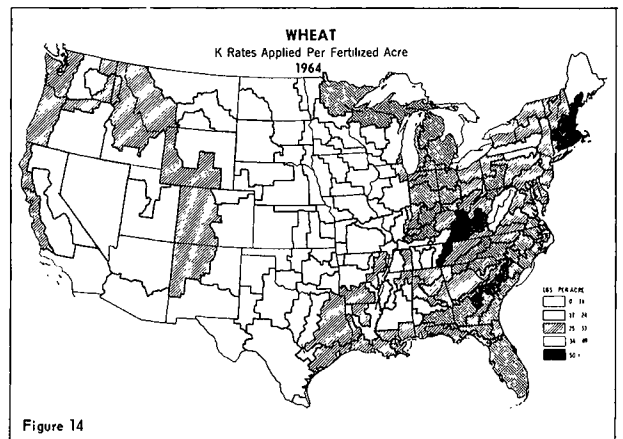
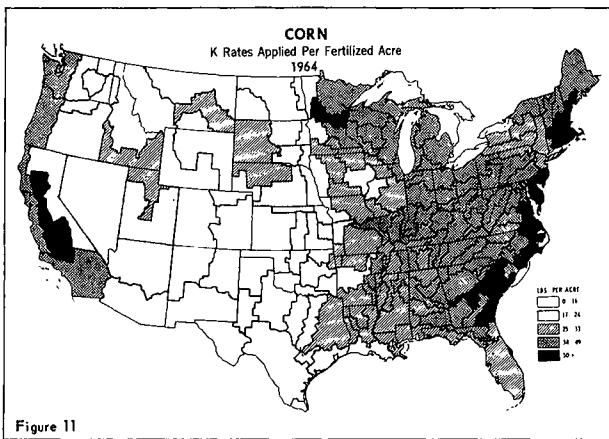
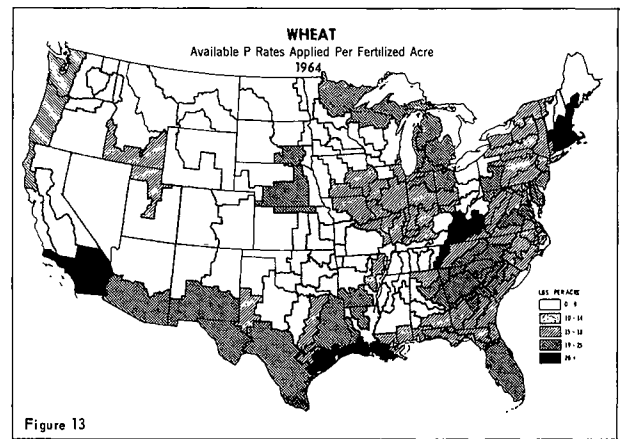
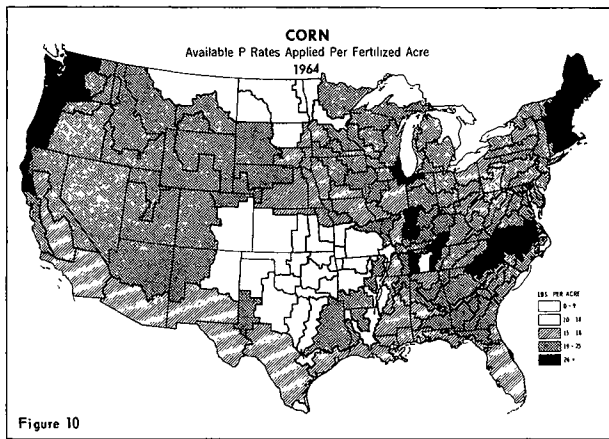
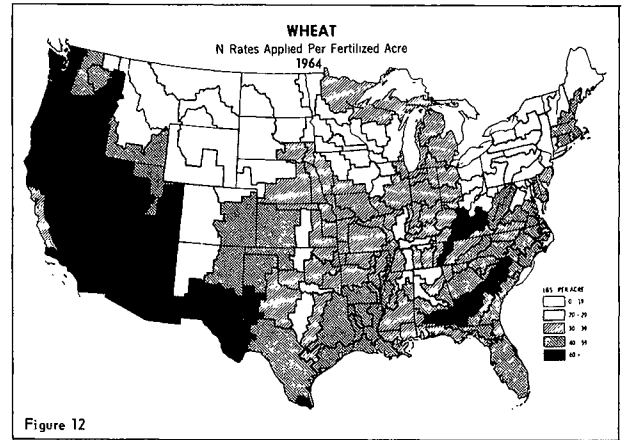
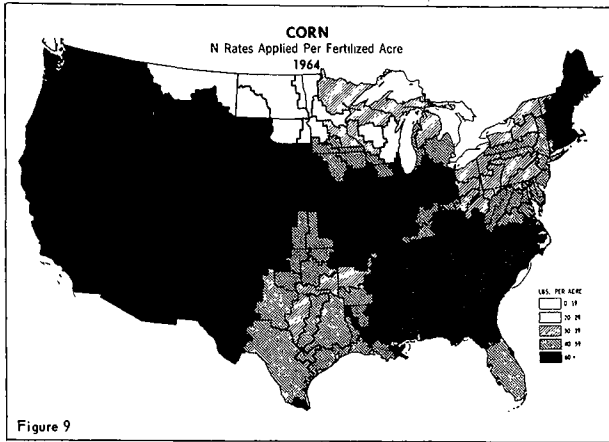
Coffee is a commercial crop only in Hawaii. The following data summarize the use of fertilizer on coffee in 1964.

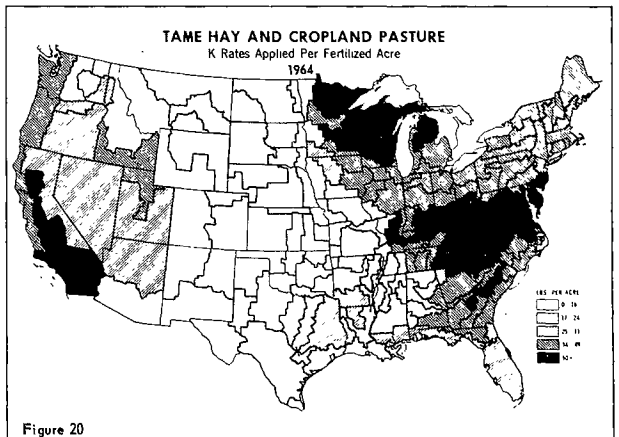
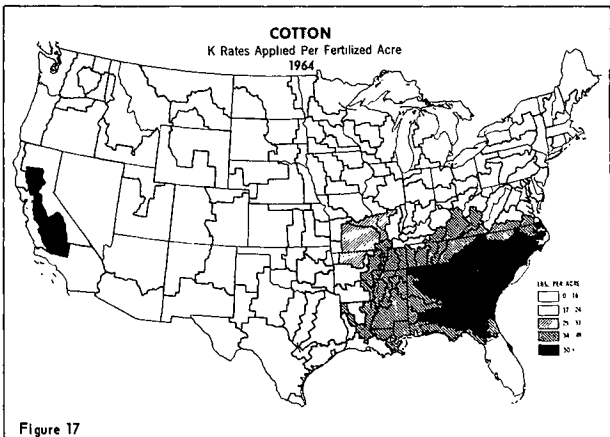
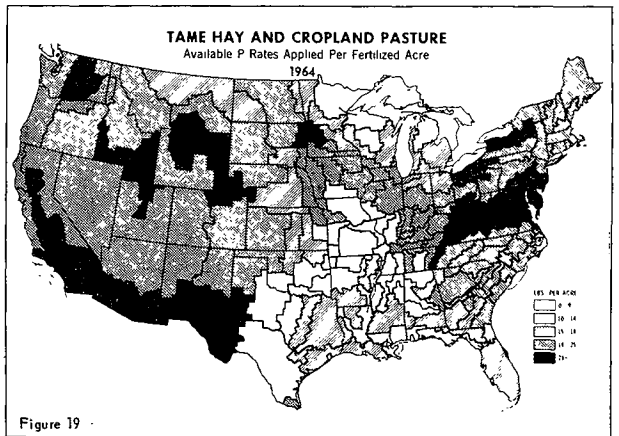
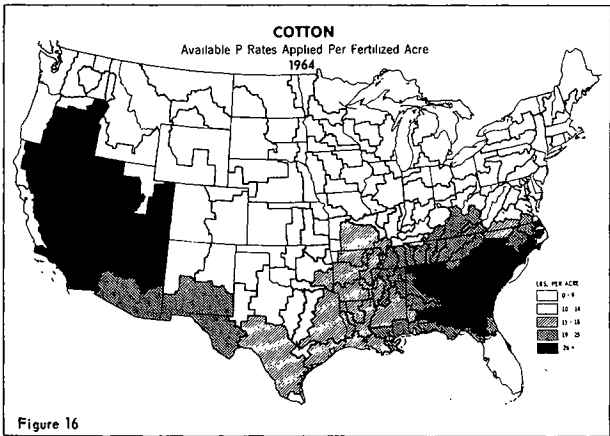
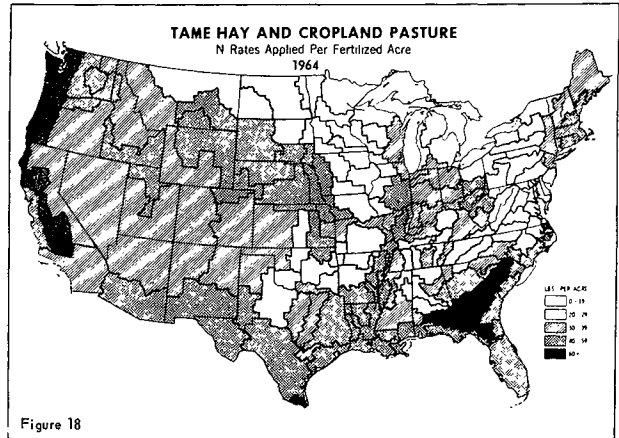
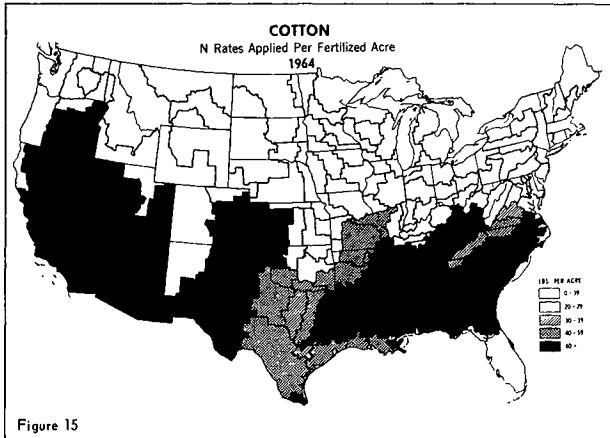
Percent of farms with coffee reporting use of fertilizer.....	87
Acres fertilized, total.....	3,784
Percent of acres in coffee.....	80.3
Tons of fertilizer used, total.....	1,744
Average per acre fertilized, pounds.....	922

Variations in use of fertilizer—There are large variations in the use of fertilizer, by areas and by crops. The percentage of each crop fertilized varies greatly by area. Figures 1 to 8 indicate the variation in the percentage of the acreage fertilized for four important crops by 220 State parts of agriculture subregions for 1964 and 1959. These four crops—corn, wheat, cotton, and hay and cropland pasture—accounted for approximately two-thirds of the acreage of all crops fertilized in the United States.

The rate of application per acre for each crop varies from area to area. Also, the plant nutrient content of fertilizers varies greatly from area to area and by crop. The data obtained in the census, on quantity of fertilizer used, were in units of tons of liquid and dry materials. The plant nutrient content of dry materials and liquid materials differs greatly among the two groups of nutrients. The quantities of materials as shown by the 1964 census have been converted to pounds of plant nutrients, nitrogen (N), phosphorous (P), and potassium (K) by a cooperative undertaking of the U.S. Department of Agriculture and State agricultural colleges. Figures 9 to 20 indicate the variation in 1964 among State parts of agriculture subregions in the average pounds of each of the three plant nutrients used for the four important crops—corn, wheat, cotton, and hay and cropland pasture—fertilized in 1964.







Use of lime and liming materials—In 1964 about 1 out of 6 farms reported the use of lime and liming materials. The use of lime is concentrated largely in the Northern States and the South Atlantic States. The number of farms reporting the use of lime was larger in 1964 than in 1959, and the proportion of farms reporting the use of lime increased from 12.2 to 15.6 percent.

The following summary indicates the data covering lime and liming materials obtained for 1964 and prior censuses.

Census of—	Kind of data obtained
1964 and 1959.	Tons of lime and liming materials and acres limed. Ground limestone, hydrated and burnt lime, marl, oyster shells, etc., to be included. Lime used for sprays or sanitation to be omitted. Lime furnished under the Agriculture Conservation Program to be included.
1954.....	Lime or liming materials purchased in 1954 (tons and cost) and acres limed. Ground limestone, hydrated and burnt lime, marl, oyster shells, etc., to be included. Lime used for sprays or sanitation to be omitted. Lime furnished under the Agriculture Conservation Program to be included.
1945.....	Cost of lime or liming materials purchased in 1944. Ground limestone, hydrated and burnt lime, marl, oyster shells, etc., to be included. Lime used for sprays or sanitation to be omitted. Lime furnished under the Agriculture Conservation Program to be included.
1940.....	Tons and cost of liming materials—lime, marl, gypsum, etc., bought in 1939.
1930.....	Amount expended in 1929 for commercial fertilizer, manure, marl, lime, and ground limestone. (No separate data for liming materials.)
1925.....	Amount expended in 1924 for manure and fertilizer, including lime and ground limestone. (No separate data for liming materials.)

The tons of lime and liming materials used in 1964 were 27 percent greater than in 1959 while the acreage limed was 21 percent greater. The average amount of lime and liming materials used per acre was 3,955 pounds in 1964, or approximately the same as for 1959. The increase from 1959 to 1964 in the tons of lime and liming materials used was largely the result of the increase in eight States—Illinois, Missouri, Indiana, Kentucky, Tennessee, Mississippi, Arkansas, and Florida.

Census year	Farms		Tons of lime and liming materials used	
	Number of farms	Percent increase over preceding census	Total	Percent increase over preceding census
1964.....	491,961	8.3	24,380,838	27.2
1959.....	454,223	-12.7	19,166,696	10.9
1954.....	520,445	-35.8	17,276,170	1102.9
1944.....	811,222	71.9	(NA)	(NA)
1939.....	471,807	(NA)	8,516,107	(NA)

NA Not available.
¹Percent increase over 1939.

Changes in the use of fertilizers—Increased fertilizer use probably has contributed more than any other single practice to the phenomenal increase in yields for many crops. Information on extent and level of fertilizer use provides important measures of changes in farm technology as well as bases for projecting changes in crop yields and crop production.

Census year	Farms reporting fertilizer used or purchased		
	Total	Increase over preceding census	
		Number of farms	Percent
1964.....	2,109,512	-268,942	-11.3
1959.....	2,378,454	-537,952	-18.4
1954.....	2,916,406	336,135	13.0
1944.....	2,580,271	243,240	10.4
1939.....	2,337,031	12,941	0.6
1929.....	2,324,090	140,034	6.4
1924.....	2,184,056	-87,123	-3.8
1919.....	2,271,179	448,147	24.6
1909.....	1,823,032	(NA)	(NA)

NA Not available.

The tonnage of fertilizer used increased almost a fifth from 1959 to 1964. The quantity of fertilizer used in 1964 was almost three and one-third times the amount used 25 years earlier. Because of the increasing use of fertilizers and fertilizing materials containing a higher percentage of primary plant nutrients, the increase in the quantity of plant nutrients, nitrogen, phosphorous, and potassium, has been much greater than the increase in tonnage of fertilizer.

Census year	Tons of fertilizer used		
	Total	Increase over preceding census	
		Tons	Percent
1964.....	23,286,168	3,483,993	17.6
1959.....	19,802,175	848,515	4.5
1954.....	18,953,360	11,949,534	170.6
1939.....	7,003,826	-531,196	-7.0
1929.....	7,535,022	(NA)	(NA)

NA Not available.

There has been a significant increase in the use of liquid fertilizing materials. Liquid fertilizing materials totaled 3,018,000 tons in 1964, compared with 1,591,000 tons in 1959.

The crops on which a large part of the tonnage of liquid fertilizers was used and the proportion of the tonnage used on these crops were as follows: corn, 45.6 percent; wheat, 6.9 percent; cotton, 22.6 percent; and hay and cropland pasture, 3.7 percent.

Use of fertilizer and fertilizing materials by crop—There are four crops for which the data on farms using fertilizer, acres fertilized, and amount of fertilizer used relate to almost the entire acreage for each crop in the United States. These crops and the data relating thereto were as follows:

	Hay and cropland pasture	Other pasture	Corn	Cotton	All crops
Farms using fertilizer (1,000).....					
.....1964..	578	186	1,256	278	2,110
.....1959..	490	155	1,570	382	2,378
.....1954..	575	160	1,990	568	2,916
Acres fertilized (1,000).....					
.....1964..	17,116	6,542	50,001	10,462	150,651
.....1959..	13,401	4,458	51,001	8,546	133,260
.....1954..	13,232	4,273	46,519	9,784	122,730
Fertilizer used tons (1,000).....					
.....1964..	2,728	1,026	7,706	2,038	23,286
.....1959..	2,195	746	6,760	1,636	19,802
.....1954..	2,001	649	6,018	1,827	18,869
Average pounds used per acre.....					
.....1964..	319	314	308	390	309
.....1959..	328	334	265	383	297
.....1954..	302	304	259	374	307

These four crops accounted for 55.8 percent of the acres of crops fertilized in 1964, 58.1 percent in 1959, and 60.1 percent in 1954. The fertilizer used on these crops represented 58 percent of all fertilizer used in 1964, 57.3 percent in 1959, and 56 percent in 1954. The increase in the acreage of these crops fertilized accounted for 6,715,000 of the 17,391,000 acre increase in acres of all crops fertilized from 1959 to 1964, and 10,313,000 of the 27,921,000 acre increase in the acres of all crops fertilized from 1954 to 1964. The increase in the tons of fertilizer used on these crops accounted for 2,162,000 tons of the 3,484,000 ton increase in fertilizer used from 1959 to 1964, and 3,003,000 tons of the 4,417,000 ton increase in the tons of fertilizer used on all crops from 1954 to 1964. The increase in the tons of fertilizer used from 1959 to 1964 on hay and cropland pasture, other pasture, and cotton was largely the result of increases in acres fertilized, while the increased use of fertilizer on corn was largely the result of increased amounts used per acre. The pro-

portion of the acreage of corn fertilized increased from 60 percent in 1954, to 64 percent in 1959, and to 79 percent in 1964. The proportion of the acreage of cotton fertilized increased from 52 percent in 1954, to 58 percent in 1959, and to 75 percent in 1964.

The change in acres and the increase in the quantity of fertilizer used in the States for which data are available for both 1964 and 1959 for other important crops from 1959 to 1964 were as follows:

Crop	Acres fertilized (1,000)		Tons used (1,000)	
	1964	1959	1964	1959
Wheat.....	22,640	17,486	1,677	1,406
Sorghums.....	6,423	2,359	495	155
Soybeans.....	4,737	2,731	498	280
Tobacco.....	771	818	701	655
Irish potatoes.....	962	870	490	449

TABLE 11. Commercial Fertilizer—Farms, Acres Fertilized, Quantity of Fertilizer and Fertilizing Materials Used, and Expenditures for Fertilizer Materials, by Regions and States: 1964 and 1959—Continued

[Data are estimates based upon reports for only a sample of farms. See text]

Region and State	Hay and cropland pasture										
	Farms		Acres fertilized (1,000)		Fertilizer and fertilizer materials used (tons)						
	1964	1959	1964	1959	Total		Dry materials		Liquid materials		
				1964	1959	1964	1959	1964	1959	1964	1959
1 United States..	577,961	490,330	17,116	13,401	2,728,139	2,195,396	2,617,034	2,143,726	111,105	51,670	
2 The North..	244,863	203,145	6,506	4,986	916,852	781,091	896,636	767,520	20,216	13,571	
3 The South..	278,241	238,430	7,736	6,344	1,483,975	1,163,236	1,412,948	1,141,352	71,027	21,884	
4 The West...	54,857	48,755	2,874	2,071	327,312	251,069	307,450	234,854	19,862	16,215	
New England:											
5 Maine.....	2,880	3,456	73	77	15,961	20,206	15,884	20,149	77	57	
6 New Hampshire..	1,502	2,054	52	56	9,935	12,099	9,915	11,984	20	115	
7 Vermont.....	4,755	6,675	209	208	31,968	41,705	31,905	41,558	63	147	
8 Massachusetts...	2,416	3,133	81	93	16,686	20,361	16,632	20,299	54	62	
9 Rhode Island....	368	336	11	8	2,729	2,284	2,729	2,284	-	-	
10 Connecticut.....	1,829	2,661	71	82	14,495	19,641	14,382	19,373	113	268	
Middle Atlantic:											
11 New York.....	14,629	15,743	430	353	67,228	63,600	66,620	63,284	608	316	
12 New Jersey.....	2,310	3,136	89	112	19,635	28,465	19,553	28,427	82	38	
13 Pennsylvania....	22,016	22,615	561	542	105,719	107,798	103,492	107,289	2,227	509	
East North Central:											
14 Ohio.....	15,786	13,729	341	279	55,646	42,857	54,938	42,437	708	420	
15 Indiana.....	17,410	13,249	382	302	56,130	41,661	54,346	40,379	1,784	1,282	
16 Illinois.....	12,708	11,219	293	319	54,570	78,634	52,530	76,600	2,040	2,034	
17 Michigan.....	13,624	12,238	357	275	46,359	35,682	45,830	35,536	529	146	
18 Wisconsin.....	20,704	18,609	542	375	72,829	50,834	72,401	49,887	428	947	
West North Central:											
19 Minnesota.....	24,052	24,362	574	568	58,930	56,313	58,252	54,855	678	1,458	
20 Iowa.....	20,767	12,266	519	325	52,732	35,997	50,809	34,133	1,923	1,864	
21 Missouri.....	37,881	22,547	983	518	159,832	85,783	157,233	84,470	2,599	1,313	
22 North Dakota....	1,303	1,206	53	56	3,003	2,545	2,983	2,501	20	44	
23 South Dakota....	4,775	2,477	167	76	11,425	5,446	11,094	5,428	331	18	
24 Nebraska.....	10,676	4,601	328	141	28,683	11,661	25,690	9,967	2,993	1,694	
25 Kansas.....	12,472	6,833	390	221	32,357	17,519	29,418	16,680	2,939	839	
South Atlantic:											
26 Delaware.....	766	900	20	32	4,147	6,349	4,143	6,343	4	6	
27 Maryland.....	5,237	5,474	169	164	34,780	34,437	34,232	34,220	548	217	
28 Virginia.....	24,056	24,773	443	489	117,728	133,829	117,113	133,301	615	528	
29 West Virginia...	8,317	8,757	115	117	25,600	27,702	25,585	27,699	15	3	
30 North Carolina..	29,261	34,443	379	448	101,337	103,974	98,228	102,606	3,109	1,368	
31 South Carolina..	11,307	12,512	345	357	98,030	76,102	85,528	71,736	12,502	4,366	
32 Georgia.....	19,494	20,319	627	729	174,232	156,227	150,948	148,062	23,284	8,165	
33 Florida.....	4,219	3,841	305	321	69,071	66,373	65,046	65,118	4,025	1,255	
East South Central:											
34 Kentucky.....	32,874	26,153	705	488	136,579	94,867	134,637	93,942	1,942	925	
35 Tennessee.....	39,197	33,251	908	661	155,504	110,312	153,148	109,830	2,356	482	
36 Alabama.....	14,882	12,370	562	483	131,417	95,651	124,548	95,154	6,869	497	
37 Mississippi.....	17,388	14,435	453	409	89,200	74,349	87,644	73,184	1,556	1,165	
West South Central:											
38 Arkansas.....	12,112	8,676	358	245	49,282	31,422	48,251	31,055	1,031	367	
39 Louisiana.....	9,919	6,978	363	283	60,910	40,427	58,132	39,733	2,778	694	
40 Oklahoma.....	13,086	7,776	497	323	50,365	26,712	49,039	26,507	1,326	205	
41 Texas.....	36,126	17,772	1,487	795	185,793	84,503	176,726	82,862	9,067	1,641	
Mountain:											
42 Montana.....	4,414	3,152	281	157	20,949	10,786	20,608	10,618	341	168	
43 Idaho.....	8,953	9,429	374	293	36,429	30,031	35,630	29,524	799	507	
44 Wyoming.....	1,623	1,307	104	64	9,032	5,853	8,872	5,660	160	193	
45 Colorado.....	4,712	3,159	207	102	19,219	9,496	18,570	9,230	649	266	
46 New Mexico.....	2,402	1,894	132	88	14,889	10,715	14,325	10,527	564	188	
47 Arizona.....	1,170	827	120	100	14,027	11,696	11,018	9,251	3,009	2,445	
48 Utah.....	3,352	2,960	90	64	9,892	7,056	9,873	7,032	19	24	
49 Nevada.....	368	387	31	25	3,210	3,064	3,179	3,033	31	31	
Pacific:											
50 Washington.....	9,595	8,303	361	256	41,222	29,096	38,123	26,702	3,099	2,394	
51 Oregon.....	10,244	8,730	384	275	42,009	30,556	41,258	29,138	751	1,418	
52 California.....	7,773	8,381	776	639	113,541	100,442	103,101	91,863	10,440	8,579	
53 Alaska.....	205	146	12	5	2,582	823	2,582	823	-	-	
54 Hawaii.....	46	80	2	3	311	1,455	311	1,453	-	2	

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TABLE 11. Commercial Fertilizer—Farms, Acres Fertilized, Quantity of Fertilizer and Fertilizing Materials Used, and Expenditures for Fertilizer Materials, by Regions and States: 1964 and 1959—Continued

[Data are estimates based upon reports for only a sample of farms. See text.]

Region and State	Other pasture (not cropland)									
	Farms		Acres fertilized (1,000)		Fertilizer and fertilizer materials used (tons)					
					Total		Dry materials		Liquid materials	
	1964	1959	1964	1959	1964	1959	1964	1959	1964	1959
1 United States..	185,746	154,727	6,542	4,458	1,026,388	745,547	977,621	728,819	48,767	16,728
2 The North..	52,104	48,139	1,146	868	147,544	128,842	141,092	125,766	6,452	3,076
3 The South..	123,472	96,143	5,031	3,306	840,189	581,535	799,805	569,174	40,384	12,361
4 The West...	10,170	10,445	365	284	38,655	35,170	36,724	33,879	1,931	1,291
New England:										
5 Maine.....	384	660	5	7	1,063	2,016	1,063	1,992	-	24
6 New Hampshire...	221	328	3	4	569	1,014	569	1,010	-	4
7 Vermont.....	1,341	1,816	27	29	3,723	5,161	3,723	5,158	-	3
8 Massachusetts...	503	672	9	12	1,790	2,427	1,790	2,427	-	-
9 Rhode Island....	68	71	1	1	190	201	190	201	(2)	-
10 Connecticut....	407	730	7	16	1,498	3,052	1,498	3,043	-	9
Middle Atlantic:										
11 New York.....	2,790	3,569	51	49	8,138	8,431	7,960	8,413	178	18
12 New Jersey.....	592	613	13	13	2,695	2,546	2,688	2,546	7	-
13 Pennsylvania....	6,329	8,179	98	113	17,717	21,720	17,279	21,581	438	139
East North Central:										
14 Ohio.....	3,824	5,119	69	85	11,540	12,924	11,408	12,720	132	204
15 Indiana.....	3,870	3,382	68	60	9,652	7,743	9,112	7,561	540	182
16 Illinois.....	3,050	2,576	63	54	9,235	10,616	8,502	10,238	733	378
17 Michigan.....	1,050	1,468	17	23	2,039	2,710	2,022	2,697	17	13
18 Wisconsin.....	2,308	3,508	34	42	4,743	5,892	4,682	5,764	61	128
West North Central:										
19 Minnesota.....	1,947	2,589	36	42	3,332	4,341	3,195	4,137	137	204
20 Iowa.....	4,143	1,854	98	46	9,525	4,480	8,847	4,163	678	317
21 Missouri.....	9,964	6,838	246	150	37,580	24,786	36,830	24,291	750	495
22 North Dakota....	234	135	11	5	491	273	491	273	-	-
23 South Dakota....	1,071	363	38	10	2,183	635	2,051	630	132	5
24 Nebraska.....	4,766	1,850	132	47	10,512	3,644	9,026	2,920	1,486	724
25 Kansas.....	3,242	1,819	120	60	9,329	4,230	8,166	4,001	1,163	229
South Atlantic:										
26 Delaware.....	145	240	4	7	785	1,325	785	1,300	-	25
27 Maryland.....	1,903	2,110	50	50	9,701	10,071	9,460	10,016	241	55
28 Virginia.....	9,967	10,032	221	226	54,975	59,140	54,478	58,678	497	462
29 West Virginia...	2,917	2,841	47	45	10,215	10,434	10,210	10,434	5	-
30 North Carolina..	13,822	14,602	237	213	54,911	48,630	52,772	48,009	2,139	621
31 South Carolina..	4,507	4,296	150	136	35,202	26,670	32,378	25,281	2,824	1,389
32 Georgia.....	14,663	10,814	560	369	129,825	74,358	113,441	69,510	16,384	4,848
33 Florida.....	5,520	4,382	977	605	154,712	103,407	146,216	100,546	8,496	2,861
East South Central:										
34 Kentucky.....	5,239	5,965	106	115	19,738	21,454	19,510	21,161	228	293
35 Tennessee.....	9,088	7,496	190	137	36,057	20,528	35,083	20,484	974	44
36 Alabama.....	10,004	7,456	464	359	90,296	67,308	86,668	66,981	3,628	327
37 Mississippi.....	11,627	7,912	405	256	66,557	48,491	65,670	47,997	887	494
West South Central:										
38 Arkansas.....	4,936	2,768	163	79	20,155	9,740	19,961	9,574	194	166
39 Louisiana.....	4,717	2,785	181	109	26,024	16,073	25,098	15,870	926	203
40 Oklahoma.....	6,969	3,226	323	156	28,895	13,316	28,336	13,288	559	28
41 Texas.....	17,448	9,218	953	444	102,141	50,590	99,739	50,045	2,402	545
Mountain:										
42 Montana.....	816	479	34	17	2,239	1,075	2,172	1,058	67	17
43 Idaho.....	1,096	1,296	23	20	2,230	1,941	2,145	1,901	85	40
44 Wyoming.....	174	132	7	4	674	390	638	348	36	42
45 Colorado.....	607	352	20	10	1,668	629	1,624	598	44	31
46 New Mexico.....	281	120	7	2	683	200	564	196	119	4
47 Arizona.....	90	92	3	2	244	267	151	231	93	36
48 Utah.....	384	411	7	6	698	564	645	558	53	6
49 Nevada.....	41	39	2	1	180	112	177	102	3	10
Pacific:										
50 Washington.....	1,826	2,066	42	34	4,513	4,093	4,172	3,684	341	409
51 Oregon.....	2,741	2,639	69	52	7,862	5,329	7,774	5,049	88	280
52 California.....	1,968	2,601	141	127	16,582	19,028	15,581	18,662	1,001	366
53 Alaska.....	1	10	(1)	(1)	6	21	6	21	-	-
54 Hawaii.....	145	208	10	9	1,076	1,521	1,075	1,471	1	50

2 Reported in small fractions. 1 Less than 500 acres.

TABLE 11. Commercial Fertilizer—Farms, Acres Fertilized, Quantity of Fertilizer and Fertilizing Materials Used, and Expenditures for Fertilizer Materials, by Regions and States: 1964 and 1959—Continued

[Data are estimates based upon reports for only a sample of farms. See text]

Region and State	Corn									
	Farms		Acres fertilized (1,000)		Fertilizer and fertilizer materials used (tons)					
					Total		Dry materials		Liquid materials	
	1964	1959	1964	1959	1964	1959	1964	1959	1964	1959
1 United States..	1,256,113	1,570,233	50,001	51,001	7,706,379	6,759,814	6,331,400	6,131,993	1,374,979	1,627,821
2 The North..	760,951	830,465	40,984	37,954	5,222,902	4,287,069	4,389,111	3,790,345	1,133,791	496,724
3 The South..	494,524	734,129	8,992	12,800	2,180,356	2,449,687	1,939,374	2,324,315	240,982	125,372
4 The West...	638	5,639	25	247	3,121	23,058	2,915	17,333	206	5,725
New England:										
5 Maine.....	637	1,052	9	8	3,063	2,752	3,051	2,749	12	3
6 New Hampshire...	574	797	9	9	2,887	2,308	2,866	2,269	21	39
7 Vermont.....	2,325	3,279	38	39	8,331	9,194	8,316	9,149	15	45
8 Massachusetts...	1,202	1,758	21	19	6,421	5,625	6,382	5,591	39	34
9 Rhode Island....	211	306	4	4	1,696	1,447	1,696	1,397	-	50
10 Connecticut.....	1,415	1,916	32	28	10,223	8,340	10,195	8,267	28	73
Middle Atlantic:										
11 New York.....	25,594	33,198	570	579	116,750	106,353	112,790	105,483	3,960	870
12 New Jersey.....	3,083	4,639	99	122	25,968	31,883	25,403	31,766	565	117
13 Pennsylvania....	48,645	61,414	1,033	1,054	228,073	205,726	223,101	203,496	4,972	2,230
East North Central:										
14 Ohio.....	76,617	99,052	3,049	3,411	543,881	510,562	493,865	488,966	50,016	21,596
15 Indiana.....	72,302	94,418	4,285	4,836	751,185	639,699	614,091	581,508	137,094	58,191
16 Illinois.....	96,861	95,830	8,141	6,584	1,256,195	821,495	903,946	697,148	352,249	124,347
17 Michigan.....	49,064	61,585	1,748	1,732	261,297	205,517	237,220	196,481	24,077	9,036
18 Wisconsin.....	72,505	86,128	2,166	2,435	261,920	256,329	243,554	246,351	18,366	9,978
West North Central:										
19 Minnesota.....	69,356	67,498	4,139	3,968	392,699	331,944	332,384	287,553	60,315	44,391
20 Iowa.....	109,577	90,459	7,975	6,354	855,562	559,737	621,016	485,446	234,546	74,291
21 Missouri.....	56,703	68,181	2,674	2,781	371,793	298,944	303,987	266,957	67,806	31,987
22 North Dakota....	3,791	4,417	253	291	11,344	10,420	11,100	10,394	244	26
23 South Dakota....	10,519	5,662	846	379	55,184	22,528	44,992	21,078	10,192	1,450
24 Nebraska.....	38,166	32,541	2,863	2,622	261,783	207,635	116,763	96,509	145,020	111,126
25 Kansas.....	21,804	16,335	1,030	699	96,647	48,631	72,393	41,787	24,254	6,844
South Atlantic:										
26 Delaware.....	2,423	3,195	155	135	39,853	27,387	38,295	25,789	1,558	1,598
27 Maryland.....	11,659	14,680	464	431	114,910	86,957	108,990	84,540	5,920	2,417
28 Virginia.....	38,768	53,794	579	673	176,766	174,708	167,413	167,201	9,353	7,507
29 West Virginia...	6,107	10,483	66	75	13,816	14,543	13,707	14,543	109	-
30 North Carolina..	96,216	139,932	1,305	1,740	423,031	458,586	339,866	405,251	83,165	53,335
31 South Carolina..	33,880	54,808	446	748	134,651	168,078	121,450	162,955	13,201	5,123
32 Georgia.....	45,193	70,936	1,574	2,351	415,846	461,674	361,398	442,914	54,448	18,760
33 Florida.....	8,559	9,315	376	395	85,275	70,291	76,973	67,399	8,302	2,892
East South Central:										
34 Kentucky.....	50,216	75,429	915	1,357	195,122	226,860	179,189	218,562	15,933	8,298
35 Tennessee.....	50,056	76,844	789	1,145	154,642	170,466	139,236	165,256	15,406	5,210
36 Alabama.....	52,572	78,649	1,015	1,775	220,064	310,555	204,145	307,600	15,919	2,955
37 Mississippi.....	51,155	77,584	588	1,008	114,792	169,618	108,467	162,343	6,325	7,275
West South Central:										
38 Arkansas.....	10,000	19,117	116	227	16,158	28,202	14,833	26,107	1,325	2,095
39 Louisiana.....	15,995	23,053	176	281	26,227	35,344	22,007	30,335	4,220	5,009
40 Oklahoma.....	(NA)	4,282	(NA)	86	(NA)	6,775	(NA)	6,589	(NA)	186
41 Texas.....	21,725	22,028	428	373	49,203	39,643	43,405	36,931	5,798	2,712
Mountain:										
42 Montana.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
43 Idaho.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
44 Wyoming.....	638	520	25	18	3,121	1,658	2,915	1,259	206	399
45 Colorado.....	(NA)	5,119	(NA)	229	(NA)	21,400	(NA)	16,074	(NA)	5,326
46 New Mexico.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
47 Arizona.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
48 Utah.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
49 Nevada.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Pacific:										
50 Washington.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
51 Oregon.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
52 California.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
53 Alaska.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
54 Hawaii.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

NA Not available.
 1 Data for Oklahoma and Colorado included in 1959 totals but not available in 1964.

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TABLE 11. Commercial Fertilizer—Farms, Acres Fertilized, Quantity of Fertilizer and Fertilizing Materials Used, and Expenditures for Fertilizer Materials, by Regions and States: 1964 and 1959—Continued

[Data are estimates based upon reports for only a sample of farms. See text]

Region and State	Total, all other crops ¹								
	Acres fertilized (1,000)		Fertilizer and fertilizer materials used (tons)						
			Total		Dry materials		Liquid materials		
	1964	1959	1964	1959	1964	1959	1964	1959	
1 United States.....	77,241	64,461	11,826,487	10,101,418	10,343,023	9,206,141	1,483,464	895,277	
2 The North..	34,671	30,116	3,537,548	3,316,819	3,284,100	3,194,054	253,448	122,765	
3 The South..	27,761	22,347	5,962,258	4,918,364	5,387,768	4,644,475	574,490	273,889	
4 The West...	14,809	11,998	2,326,681	1,866,235	1,671,155	1,367,612	655,526	498,623	
New England:									
5 Maine.....	178	174	122,605	127,142	122,446	126,596	159	546	
6 New Hampshire...	11	10	2,924	4,000	2,894	3,984	30	16	
7 Vermont.....	16	23	3,736	6,967	3,713	6,956	23	11	
8 Massachusetts....	50	43	24,679	24,547	24,468	24,440	211	107	
9 Rhode Island.....	8	9	6,357	8,505	6,357	8,283	-	222	
10 Connecticut.....	37	36	29,159	30,664	29,132	30,584	27	80	
Middle Atlantic:									
11 New York.....	1,037	1,189	273,863	313,336	270,463	309,805	3,400	3,531	
12 New Jersey.....	261	276	121,266	141,279	118,900	137,331	2,366	3,948	
13 Pennsylvania....	1,097	1,279	219,756	255,162	216,773	252,664	2,983	2,498	
East North Central:									
14 Ohio.....	2,446	2,611	353,667	367,053	346,000	358,402	7,667	8,651	
15 Indiana.....	2,778	2,818	320,647	315,809	305,655	304,570	14,992	11,239	
16 Illinois.....	2,625	2,225	307,065	309,076	294,295	289,586	12,770	19,490	
17 Michigan.....	2,499	2,684	369,789	372,661	363,805	364,597	5,984	8,064	
18 Wisconsin.....	1,070	1,152	154,348	149,624	151,715	147,409	2,633	2,215	
West North Central:									
19 Minnesota.....	2,671	2,087	166,855	118,194	157,138	113,819	9,717	4,375	
20 Iowa.....	688	689	61,746	60,698	57,326	57,464	4,420	3,234	
21 Missouri.....	2,255	2,476	264,018	260,546	239,504	250,103	24,514	10,443	
22 North Dakota....	5,221	4,881	164,410	143,879	160,861	142,788	3,549	1,091	
23 South Dakota....	667	315	31,510	14,718	29,690	14,485	1,820	233	
24 Nebraska.....	2,565	1,084	165,317	71,502	89,869	49,693	75,448	21,809	
25 Kansas.....	6,531	4,053	373,831	221,457	293,096	200,495	80,735	20,962	
South Atlantic:									
26 Delaware.....	182	158	45,408	38,979	45,069	37,069	339	1,910	
27 Maryland.....	437	460	112,445	118,342	110,724	115,671	1,721	2,671	
28 Virginia.....	729	849	245,079	261,343	241,818	259,244	3,261	2,099	
29 West Virginia...	56	71	11,179	11,148	14,607	14,606	31	1	
30 North Carolina..	1,714	1,901	726,859	700,499	712,454	694,099	14,405	6,400	
31 South Carolina..	1,303	1,433	443,371	418,425	427,017	413,502	16,354	4,923	
32 Georgia.....	1,575	1,795	507,961	505,334	474,686	496,557	33,275	8,777	
33 Florida.....	1,655	1,146	1,172,802	841,445	1,155,180	837,383	17,622	4,062	
East South Central:									
34 Kentucky.....	470	509	227,752	219,116	225,334	217,137	2,418	1,979	
35 Tennessee.....	870	989	215,105	224,680	204,644	220,275	10,461	4,405	
36 Alabama.....	1,289	1,297	360,846	330,148	346,610	328,365	14,236	1,783	
37 Mississippi.....	1,828	1,810	328,402	293,878	264,219	248,967	64,183	44,911	
West South Central:									
38 Arkansas.....	2,669	2,167	331,799	266,161	286,081	235,800	45,718	30,361	
39 Louisiana.....	1,497	1,311	203,261	197,212	153,974	132,921	49,287	24,291	
40 Oklahoma.....	3,401	1,910	211,727	99,313	178,317	94,333	33,410	4,980	
41 Texas.....	8,086	4,541	818,262	428,882	550,493	298,546	267,769	130,336	
Mountain:									
42 Montana.....	1,578	1,162	56,903	37,346	52,455	34,746	4,448	2,600	
43 Idaho.....	1,243	980	189,625	120,175	164,306	102,405	25,319	17,770	
44 Wyoming.....	120	81	18,324	8,735	17,588	7,571	736	1,164	
45 Colorado.....	832	371	102,637	41,974	85,132	36,263	17,505	5,711	
46 New Mexico.....	406	262	56,129	31,858	41,013	25,405	15,116	6,453	
47 Arizona.....	778	712	151,368	127,021	108,392	103,822	42,976	23,199	
48 Utah.....	133	122	22,199	16,884	15,906	15,906	385	978	
49 Nevada.....	32	31	5,793	4,430	4,685	3,959	1,108	471	
Pacific:									
50 Washington.....	2,831	2,206	224,995	156,854	128,977	91,174	96,018	65,680	
51 Oregon.....	1,397	1,416	176,694	139,312	153,554	113,950	23,140	25,362	
52 California.....	5,167	4,361	1,158,477	986,395	775,120	705,161	383,397	281,234	
53 Alaska.....	4	8	1,079	1,343	-	-	-	-	
54 Hawaii.....	288	286	162,458	193,908	117,040	125,907	45,418	68,001	

¹See table 12, for data for specified crops included in total.

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TABLE 12. Specified Crops Fertilized—Farms, Acres Fertilized, and Tons of Fertilizer and Fertilizing Materials Used, by Crop, by States: 1964 and 1959—Continued

[Data are estimates based upon reports for only a sample of farms. See text]

Crop and State	Farms		Acres fertilized (1,000)		Fertilizer and fertilizing materials used (tons)					
	1964	1959	1964	1959	Total		Dry materials		Liquid materials	
					1964	1959	1964	1959	1964	1959
IRISH POTATOES										
Total, specified States.....	¹ 19,446	¹ 29,140	¹ 962	¹ 870	¹ 490,212	¹ 449,284	¹ 481,515	¹ 438,822	¹ 8,697	¹ 10,462
Alaska.....	61	85	1	1	526	323	526	323	-	-
California.....	661	907	81	82	40,363	35,581	36,772	32,736	3,591	2,845
Colorado.....	718	¹ 1,025	40	39	7,644	6,211	7,451	6,020	193	191
Connecticut.....	124	378	6	4	5,086	5,276	7,081	5,251	5	25
Delaware.....	88	86	9	5	11,103	5,592	11,103	5,592	-	-
Florida.....	310	398	34	28	41,282	28,627	41,107	28,617	175	10
Idaho.....	3,505	4,361	234	174	55,954	30,954	52,361	27,805	3,593	3,149
Maine.....	2,191	2,938	131	132	113,479	116,531	113,479	116,114	-	417
Maryland.....	558	768	3	3	2,522	2,421	2,522	2,421	-	-
Massachusetts.....	382	478	7	6	6,466	6,642	6,451	6,607	15	35
Minnesota.....	¹ 1,042	¹ 1,352	90	76	17,091	13,400	16,948	13,353	143	47
New Hampshire.....	131	203	1	1	538	1,228	538	1,228	-	-
New Jersey.....	302	633	15	22	16,872	25,428	16,872	25,410	-	18
New York.....	2,137	2,801	72	83	79,232	92,962	79,057	90,716	175	2,246
North Dakota.....	769	714	98	87	11,815	9,629	11,549	9,440	266	189
Oregon.....	774	949	34	30	13,127	9,759	12,808	9,227	319	532
Pennsylvania.....	3,551	4,488	38	35	26,084	24,214	26,011	23,799	73	415
Rhode Island.....	54	118	4	6	4,527	7,442	4,527	7,235	-	207
South Dakota.....	110	45	5	2	360	246	360	246	-	-
Vermont.....	167	478	1	3	1,198	2,587	1,198	2,587	-	-
West Virginia.....	685	4,263	1	3	512	1,249	512	1,249	-	-
Wisconsin.....	¹ 1,081	¹ 1,599	55	46	31,808	22,700	31,671	22,576	137	124
Wyoming.....	45	73	2	2	623	282	611	270	12	12
COTTON										
Total, specified States.....	¹ 277,660	¹ 381,919	¹ 10,462	¹ 8,546	¹ 2,037,767	¹ 1,636,264	¹ 1,656,471	¹ 1,425,654	¹ 381,296	¹ 210,610
Alabama.....	41,689	63,761	783	782	236,553	219,963	224,143	218,401	12,410	1,562
Arizona.....	1,833	2,025	362	315	67,938	53,291	50,013	43,524	9,725	9,767
Arkansas.....	21,393	34,470	¹ 2,223	¹ 1,310	184,604	180,313	148,702	157,612	35,902	22,701
California.....	6,131	8,324	733	824	187,146	188,901	109,723	117,643	77,423	71,258
Georgia.....	22,258	42,186	597	625	214,355	207,055	194,299	203,359	20,056	3,696
Louisiana.....	15,644	24,131	502	469	77,667	60,536	53,894	51,878	23,773	8,658
Mississippi.....	50,009	76,958	¹ 4,428	¹ 4,436	275,109	243,107	216,554	203,553	58,555	39,554
Nevada.....	19	(NA)	4	(NA)	1,430	(NA)	1,250	(NA)	180	(NA)
New Mexico.....	2,187	2,372	162	155	24,829	21,232	21,138	17,946	3,691	3,286
North Carolina.....	29,053	52,837	360	366	121,932	110,968	117,090	110,508	4,842	4,660
Oklahoma.....	5,021	5,461	274	204	21,176	15,031	18,069	13,410	3,107	1,621
South Carolina.....	25,715	44,941	524	541	207,349	174,460	196,597	173,326	10,752	1,134
Tennessee.....	26,877	(NA)	482	(NA)	112,149	(NA)	103,685	(NA)	8,464	(NA)
Texas.....	29,831	24,453	3,028	1,519	305,530	161,407	201,314	114,494	104,216	46,913
TOBACCO										
Total, specified States.....	255,920	312,654	771	818	700,585	655,244	700,348	653,576	237	1,668
Connecticut.....	178	335	8	9	13,216	15,973	13,216	15,967	-	6
Kentucky.....	91,503	105,953	208	208	184,023	170,588	183,923	169,894	100	694
Massachusetts.....	191	240	3	4	5,338	6,094	5,338	6,094	-	-
North Carolina.....	86,427	110,285	408	442	386,324	346,744	386,245	345,889	79	855
Tennessee.....	51,705	63,009	66	72	51,021	54,519	50,979	54,418	42	101
Virginia.....	25,916	32,832	78	83	60,663	61,326	60,647	61,314	16	12
SUGAR BEETS										
Total, specified States.....	¹ 16,832	¹ 17,557	¹ 1,018	¹ 638	¹ 259,427	¹ 143,346	¹ 195,606	¹ 108,298	¹ 63,821	¹ 35,048
California.....	2,361	1,934	356	199	93,932	49,444	49,355	27,509	44,577	21,935
Colorado.....	3,442	3,796	175	128	31,126	18,426	25,893	15,045	5,233	3,381
Idaho.....	3,612	3,926	171	84	52,438	22,182	45,413	19,610	7,025	2,572
Michigan.....	2,724	3,206	76	74	25,896	22,498	24,404	20,805	1,092	1,693
Montana.....	1,101	1,243	76	57	15,806	10,062	13,511	8,798	2,295	1,304
Nevada.....	(NA)	2	(NA)	(?)	44	44	(NA)	44	(NA)	-
Utah.....	1,338	1,586	34	30	8,325	5,721	5,236	5,238	-	483
Washington.....	1,175	998	60	32	18,674	10,034	19,422	7,112	2,852	2,922
Wyoming.....	1,079	857	70	33	13,230	4,935	12,572	4,177	658	758
SUGARCANE										
Total, specified States.....	697	966	224	210	131,132	156,044	87,516	88,288	43,616	67,756
Hawaii.....	697	966	224	210	131,132	156,044	87,516	88,288	43,616	67,756
PINEAPPLES										
Total, specified States.....	71	111	49	57	24,055	28,275	22,278	28,160	1,777	115
Hawaii.....	71	111	49	57	24,055	28,275	22,278	28,160	1,777	115
COFFEE										
Total, specified States.....	776	1,215	4	8	1,744	4,174	1,734	4,162	10	12
Hawaii.....	776	1,215	4	8	1,744	4,174	1,734	4,162	10	12

NA Not available.

¹Data represents totals for States for which data were available in each census year. Totals for 1964 and 1959 are not comparable because data are not available for all of the specified States for both 1964 and 1959.

²Less than 500 acres.

TABLE 13. Lime—Farms, Acres Limed, and Tons of Lime Used, by Regions and States: 1964 and 1959

[Data are estimates based upon reports for only a sample of farms. See text]

Region and State	Farms		Acres Limed		Lime and liming materials used (tons)	
	1964	1959	1964	1959	1964	1959
1 United States..	491,961	454,223	12,330,393	10,199,157	24,380,838	19,166,696
2 The North..	282,908	270,004	7,097,021	6,075,116	16,666,628	13,512,821
3 The South..	205,722	180,756	5,166,045	4,062,369	7,603,446	5,548,747
4 The West...	3,331	3,463	67,327	61,672	110,764	105,128
New England:						
5 Maine.....	4,197	4,589	92,054	81,616	83,534	68,554
6 New Hampshire...	1,113	1,376	15,030	17,172	23,669	25,512
7 Vermont.....	3,588	4,591	65,985	70,266	95,449	96,464
8 Massachusetts...	2,302	3,183	33,457	39,562	57,253	63,855
9 Rhode Island....	313	283	4,681	4,287	5,147	4,007
10 Connecticut.....	1,435	2,013	28,078	30,278	34,697	36,189
Middle Atlantic:						
11 New York.....	20,330	24,140	393,001	454,118	868,793	924,463
12 New Jersey.....	3,135	4,252	103,274	116,687	111,947	116,832
13 Pennsylvania....	27,307	31,360	520,915	554,356	866,150	887,304
East North Central:						
14 Ohio.....	29,352	30,288	672,051	674,015	1,582,006	1,437,156
15 Indiana.....	29,263	29,610	835,375	747,936	1,990,483	1,645,702
16 Illinois.....	42,768	38,567	1,428,747	1,104,105	3,744,195	2,688,051
17 Michigan.....	10,038	9,019	207,494	165,047	487,764	389,715
18 Wisconsin.....	22,541	28,461	421,137	486,379	1,127,620	1,368,029
West North Central:						
19 Minnesota.....	8,245	9,433	192,213	212,192	476,997	455,927
20 Iowa.....	24,421	14,264	745,408	409,331	1,808,968	948,244
21 Missouri.....	42,760	27,149	1,075,109	676,512	2,667,893	1,836,391
22 North Dakota....	-	-	-	-	-	-
23 South Dakota....	-	-	-	-	-	-
24 Nebraska.....	3,335	1,572	88,997	41,866	187,180	75,558
25 Kansas.....	6,465	5,854	174,015	189,391	446,883	444,868
South Atlantic:						
26 Delaware.....	1,309	1,666	59,108	69,171	57,710	64,571
27 Maryland.....	7,800	8,044	254,853	235,949	279,035	250,972
28 Virginia.....	17,655	19,089	355,932	362,461	558,783	530,054
29 West Virginia...	8,184	6,906	101,941	85,508	203,439	169,276
30 North Carolina..	30,779	34,522	441,125	375,733	536,768	418,761
31 South Carolina..	6,345	4,246	218,970	134,956	207,012	128,667
32 Georgia.....	16,036	14,978	441,509	414,941	454,109	409,880
33 Florida.....	7,866	7,801	631,411	488,738	645,922	471,435
East South Central:						
34 Kentucky.....	32,235	23,624	640,527	436,463	1,479,881	965,175
35 Tennessee.....	28,096	24,344	540,514	411,549	1,073,796	785,523
36 Alabama.....	10,948	8,991	320,737	290,795	371,768	325,940
37 Mississippi....	15,280	11,822	412,726	298,922	515,558	335,663
West South Central:						
38 Arkansas.....	8,873	6,518	264,051	172,146	514,590	312,767
39 Louisiana.....	4,934	2,925	146,215	96,510	216,665	128,414
40 Oklahoma.....	4,344	1,862	131,142	59,117	257,493	106,615
41 Texas.....	5,038	3,418	205,284	129,410	230,917	145,034
Mountain:						
42 Montana.....	-	-	-	-	-	-
43 Idaho.....	-	-	-	-	-	-
44 Wyoming.....	-	-	-	-	-	-
45 Colorado.....	-	1	-	45	-	270
46 New Mexico.....	-	-	-	-	-	-
47 Arizona.....	-	-	-	-	-	-
48 Utah.....	-	15	-	90	-	100
49 Nevada.....	-	-	-	-	-	-
Pacific:						
50 Washington.....	678	713	15,287	10,438	23,763	16,895
51 Oregon.....	1,955	2,090	31,973	34,683	64,413	58,769
52 California.....	288	375	3,131	10,774	4,014	23,738
53 Alaska.....	15	6	53	8	101	8
54 Hawaii.....	395	263	16,883	5,634	18,473	5,348

Part 3—Other Land Improvement Practices, Crop Diversion, and Use of Sprays and Dusts to Control Insects and Diseases on Animals

Introduction—In 1964, for the third time, information was obtained on land-use practices related to soil conservation and land improvement. Information regarding the number of ponds, reservoirs, etc., on farms was collected in 1964. This information was also collected for the 1954 census. Data for farms participating in the wheat and feed grain programs and for animals treated externally by spraying, dusting, or methods for the purpose of controlling insects were obtained in 1964 for the first time in any census.

Cropland used for grain or row crops farmed on the contour—The inquiry regarding cropland used for grain or row crops farmed on the contour was included in the 1964 census for all States except Alaska. A similar inquiry was included in the 1959 census for all States except Hawaii and Alaska, and in the 1954 census for all States except Florida, Alaska, and Hawaii. Crops are planted on the contour when the rows or strips are laid out at right angles to the natural slope of the land. Generally, alternate strips or rows of different crops are used to retard soil and water losses. The usual arrangement is to alternate row crops with close seeded crops.

Cropland used for grain or row crops farmed on the contour was reported for one-tenth of the farms in the United States, and totaled 21.6 million acres or 5.0 percent of the total cropland. The acreage in 1954 was slightly more than the acreage in 1959 and 1964.

Growing of crops on the contour is a widely used practice in the central and southern Great Plains States, some of the more rolling parts of the Corn Belt, Pennsylvania, and in parts of the cotton-producing area of the South.

The change in the number of farms with cropland used for grain or row crops farmed on the contour and the acreage on which this land-use practice was used were for the last three censuses.

Subject	1964	1959	1954
Farms.....(1,000)..	324	356	435
Acres.....(1,000)..	21,565	22,321	22,435

Land in stripcropping systems for soil-erosion control—Stripcropping was defined as a practice of alternating close grown crops with strips or bands of row crops or of alternating either close grown crops or row crops with bands of cultivated fallow land. Wind stripcropping, stubble mulching, and other conservation practices help control soil blowing. Wind stripcropping involves the planting of crops in strips of uniform width, which are arranged at right angles to the direction of prevailing winds. Small grain crops and cultivated summer fallow often occupy alternating strips. The data for stripcropping for 1964 relate to all States except Alaska. The comparable data for 1959 are for all States except Alaska. The 1954 data relate only to 14 States and part of Texas.

This conservation practice is most important in the wheat producing areas in the Great Plains. Of the 16.7 million acres in 1964, over 11 million acres were in

Montana, North Dakota, South Dakota, Nebraska, and Colorado.

The number of farms with land in stripcropping systems for erosion control declined 5 percent from 1959 to 1964, while the acreage increased 4 percent.

Artificial ponds, pits, reservoirs, and earthen tanks—More than 1 farm out of 4 had one or more artificial ponds, pits, reservoirs, or earthen tanks in 1964. The total number of ponds, etc., was 2,156,000 and the total area covered by these ponds, etc., when they were filled totaled 2,131,000 acres. In 1954, there were 907,000 farms with a total of 1,768,000 ponds, etc. Most of the artificial ponds are located in the Great Plains and Western States. The six States (Missouri, Kansas, Kentucky, Tennessee, Oklahoma, Texas) with more than 100,000 ponds, etc., had more than half of all the artificial ponds, pits, reservoirs, and earthen tanks in 1964.

Crops treated for the control of insects and diseases—The agriculture questionnaire for the 1964 census contained six questions relating to the acres of groups of crops treated by spraying, dusting, or other methods to control insects and diseases. The six groups of crops for which data were obtained, were:

1. Grain crops (corn, wheat, oats, barley, rice, etc.)
2. Alfalfa, clover and other hay crops
3. Cotton
4. Vegetables grown for sale
5. Fruits and nuts
6. All other crops

The question regarding cotton appeared on the agriculture questionnaire for the 17 important cotton-producing States. These 17 States had over 99 percent of the acreage of cotton harvested in 1964.

Farm operators and the census enumerators were instructed to count acres only once, when the acreage was treated more than once.

In 1964, nearly 1 out of every 7 acres from which crops were harvested was treated by spraying, dusting, or other methods for the control of insects and diseases. Approximately 11.3 percent of the acreage from which grain crops were harvested, was sprayed or dusted. More than 2.2 million acres, or 3.5 percent of the acreage of alfalfa, clover, and other hay crops harvested were treated by spraying, dusting, or other methods for the control of insects and diseases. Almost 3 out of 5 acres of cotton harvested were treated for the control of insects and diseases.

Approximately 6 out of every 10 acres of land from which vegetables were harvested in 1964, were sprayed, dusted, or treated by other methods for the control of insects and diseases. Of the 4 million acres in bearing and nonbearing fruit orchards, groves, vineyards, coffee, and planted nut trees, 3 million acres were sprayed, dusted, or treated by other methods for the control of insects and diseases.

Land treated for the control of weeds or brush—The agriculture questionnaire asked for the acres treated in 1964 by spraying, dusting, or other methods for the purpose of controlling weeds or brush for five groups of crops:

1. Corn
2. Small grains (wheat, oats, barley, rye, rice, etc.)
3. Cotton
4. Other crops
5. Pastureland and rangeland

The inquiry relating to cotton was asked for the 17 most important cotton-growing States. These 17 States had over 99 percent of the cotton acreage harvested in 1964.

Farm operators and census enumerators were instructed to count acres treated only once if the acreage was treated more than once.

In 1964, 64.5 million acres were treated for the control of weeds or brush. Of the 63.5 million acres of corn harvested in 1964, 27.1 million acres were treated for the control of weeds or brush in 1964. The acreage of pastureland does not include all land treated for weed or brush control in 1964 as considerable

acreage of rangeland not in census farms, were treated for weed and brush control in 1964.

The 21 million acres of small grains treated for the control of weeds in 1964 were equivalent to 25.2 percent of the acreage of all small grains harvested for grain. Approximately one-third of the cotton acreage in 1964, was treated for weed control and 0.6 percent of the 630 million acres of pastureland in farms was treated for the control of weeds or brush in 1964. The acreage of pastureland does not include all land treated for weed or brush control in 1964 as considerable acreage of rangeland not in census farms, were treated for weed and brush control in 1964.

Livestock treated externally for the control of insects, etc.—The questions regarding the number of cattle and calves, other than milk cows, and the number of hogs, sheep, and goats treated externally by spraying, dusting, or other methods for the purpose of controlling insects or diseases were included in the nationwide census for the first time in 1964.

The number of cattle and calves, other than milk cows, treated externally for the control of insects in 1964 was equivalent to half of the cattle and calves, other than milk cows, on farms. The number of hogs, sheep, and goats treated externally for the control of insects in 1964 was equal to 44 percent of the number of hogs, sheep, and goats on farms.

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TABLE 14. Land-Use Practices, by Regions and States: 1964 and 1959

[Data are estimates based upon reports for only a sample of farms. See text]

Region and State	Number of farms		Cropland used for grain or row crops farmed on the contour										Land in stripcropping systems for soil-erosion control	
	1964	1959	Farms		Percent of all farms		Acres		Percent of total cropland		Percent of cropland harvested		Farms	
			1964	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964	1959
1 United States..	3,157,857	3,710,503	324,301	¹ 356,069	10.3	¹ 9.6	21,565,297	¹ 22,323,391	5.0	¹ 5.0	7.5	¹ 7.2	118,722	¹ 124,578
2 The North..	1,479,581	1,715,441	165,859	180,104	11.2	10.5	10,997,846	11,210,322	4.4	4.4	6.1	5.7	87,617	90,696
3 The South..	1,372,732	1,645,949	151,486	169,550	11.0	10.3	9,051,229	9,891,438	7.8	8.0	13.2	13.2	19,646	22,104
4 The West...	305,544	349,113	6,956	⁶ 415	2.3	¹ 1.8	1,516,222	¹ 1,221,631	2.3	¹ 1.8	4.1	¹ 3.1	11,459	¹ 11,778
New England:														
5 Maine.....	12,875	17,360	445	604	3.5	3.5	14,088	19,631	1.6	1.8	2.4	2.8	328	538
6 New Hampshire....	4,648	6,542	77	65	1.7	1.0	787	1,121	0.3	0.4	0.5	0.5	74	44
7 Vermont.....	9,247	12,099	204	413	2.2	3.4	3,408	6,220	0.4	0.6	0.5	0.8	176	188
8 Massachusetts....	8,019	11,179	152	140	1.9	1.3	1,883	7,598	0.5	1.7	0.8	2.6	86	137
9 Rhode Island.....	1,100	1,395	19	55	1.7	3.9	242	950	0.5	1.7	0.8	2.8	8	2
10 Connecticut.....	6,068	8,292	104	161	1.7	1.9	1,748	1,845	0.6	0.5	0.8	0.8	129	143
Middle Atlantic:														
11 New York.....	66,510	82,356	2,453	3,457	3.7	4.2	74,456	91,629	1.2	1.3	1.6	1.8	2,940	3,028
12 New Jersey.....	10,641	15,459	398	577	3.7	3.7	15,219	19,840	2.0	2.2	2.7	3.0	465	453
13 Pennsylvania....	83,086	100,052	11,529	12,257	13.9	12.3	467,759	456,348	7.7	6.9	10.3	9.4	14,809	15,882
East North Central:														
14 Ohio.....	120,381	140,353	6,733	8,161	5.6	5.8	196,194	219,192	1.7	1.8	2.1	2.2	6,149	7,053
15 Indiana.....	108,082	128,160	3,528	5,189	3.3	4.0	111,904	181,958	0.8	1.3	1.1	1.6	1,169	1,335
16 Illinois.....	132,822	154,644	11,118	12,772	8.4	8.3	522,568	617,074	2.2	2.6	2.6	2.9	2,516	2,744
17 Michigan.....	93,504	111,817	1,651	3,003	1.8	2.7	53,426	87,290	0.6	0.9	0.8	1.2	2,442	2,808
18 Wisconsin.....	118,816	131,215	15,548	16,810	13.1	12.8	606,063	613,281	5.0	5.0	6.7	6.4	16,526	17,035
West North Central:														
19 Minnesota.....	131,163	145,662	9,208	9,619	7.0	6.6	454,368	516,365	2.0	2.4	2.6	2.7	8,366	8,502
20 Iowa.....	154,162	174,707	37,394	40,845	24.3	23.4	2,308,846	2,673,296	8.8	10.1	11.6	11.7	6,338	6,346
21 Missouri.....	147,315	168,672	15,165	17,929	10.3	10.6	761,554	872,479	4.2	4.8	6.9	7.2	1,994	2,102
22 North Dakota....	48,836	54,928	1,382	1,528	2.8	2.8	191,699	240,407	0.7	0.9	1.1	1.2	10,803	9,526
23 South Dakota....	49,703	55,727	2,597	2,762	5.2	5.0	232,258	265,057	1.2	1.4	1.6	1.9	3,160	3,073
24 Nebraska.....	80,163	90,475	18,644	19,498	23.3	21.6	1,643,531	1,753,407	7.4	7.7	10.8	9.7	4,683	5,189
25 Kansas.....	92,440	104,347	27,510	24,259	29.8	23.2	3,335,845	2,565,334	11.3	8.7	18.4	12.5	4,456	4,568
South Atlantic:														
26 Delaware.....	4,401	5,208	56	125	1.3	2.4	4,176	6,602	0.8	1.3	1.0	1.6	16	23
27 Maryland.....	20,760	25,122	1,771	1,903	8.5	7.6	75,579	75,330	4.1	3.9	5.3	5.2	1,956	2,068
28 Virginia.....	80,354	97,623	5,818	6,678	7.2	6.8	113,893	125,257	2.8	2.8	4.4	4.4	3,593	4,059
29 West Virginia....	34,504	44,011	1,203	1,841	3.5	4.2	16,179	21,183	1.3	1.4	2.2	2.5	1,050	1,303
30 North Carolina..	148,202	190,567	17,635	22,794	11.9	12.0	321,385	368,698	5.6	5.7	8.1	7.8	2,917	3,641
31 South Carolina..	56,248	78,172	5,289	7,468	9.4	9.6	203,725	292,856	5.8	7.3	9.0	10.9	478	686
32 Georgia.....	83,366	106,350	13,157	14,449	15.8	13.6	660,536	724,381	10.4	9.7	16.7	14.7	872	940
33 Florida.....	40,542	45,100	1,270	1,176	3.1	2.6	62,279	68,686	1.7	2.0	2.8	3.6	164	161
East South Central:														
34 Kentucky.....	133,038	150,986	6,378	8,467	4.8	5.6	91,831	125,205	1.0	1.3	2.6	3.1	1,055	615
35 Tennessee.....	133,446	157,688	7,606	10,066	5.7	6.4	188,013	223,441	2.4	2.6	5.2	5.4	984	1,059
36 Alabama.....	92,530	115,788	19,856	17,854	21.5	15.4	705,898	636,599	13.8	10.6	23.6	17.1	723	551
37 Mississippi.....	109,141	138,142	15,848	16,469	14.5	11.9	307,681	355,257	4.7	5.0	7.0	7.8	313	485
West South Central:														
38 Arkansas.....	79,898	95,007	2,679	4,012	3.4	4.2	70,803	123,597	0.8	1.5	1.2	2.3	299	325
39 Louisiana.....	62,466	74,438	2,031	2,575	3.3	3.5	63,888	71,318	1.3	1.5	2.4	2.9	162	132
40 Oklahoma.....	88,726	94,676	14,922	15,600	16.8	16.5	1,883,847	1,624,035	14.5	11.6	22.6	18.1	1,185	1,712
41 Texas.....	205,110	227,071	35,967	38,073	17.5	16.8	4,281,516	5,048,993	12.5	14.2	22.1	22.7	3,879	4,344
Mountain:														
42 Montana.....	27,020	28,959	674	605	2.5	2.1	78,079	84,603	0.5	0.6	1.0	1.0	8,070	8,334
43 Idaho.....	29,661	33,670	664	786	2.2	2.3	124,122	115,348	2.1	2.0	3.2	3.0	268	248
44 Wyoming.....	9,038	9,744	178	205	2.0	2.1	14,306	14,689	0.5	0.5	0.8	0.9	783	802
45 Colorado.....	29,798	33,390	879	1,014	2.9	3.0	121,217	178,560	1.1	1.6	2.6	3.0	1,403	1,713
46 New Mexico....	14,206	15,919	465	407	3.3	2.6	62,379	68,119	2.7	3.0	6.9	6.3	108	49
47 Arizona.....	6,477	7,233	51	53	0.8	0.7	5,939	10,891	0.4	0.7	0.6	1.1	8	16
48 Utah.....	15,759	17,811	343	184	2.2	1.0	40,883	38,981	2.0	1.9	3.9	3.7	118	96
49 Nevada.....	2,156	2,354	15	25	0.7	1.1	3,043	997	0.4	0.1	0.6	0.3	-	11
Pacific:														
50 Washington....	45,574	51,577	1,300	1,000	2.9	1.9	558,316	315,360	6.9	4.0	12.6	7.1	223	239
51 Oregon.....	39,757	42,573	517	650	1.3	1.5	104,318	97,418	2.0	1.8	3.4	3.1	173	134
52 California.....	80,852	99,274	1,695	1,404	2.1	1.4	320,230	269,184	2.7	2.1	4.1	3.4	265	105
53 Alaska.....	382	367	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
54 Hawaii.....	4,864	6,242	175	82	3.6	1.3	83,390	27,481	22.5	5.5	49.8	15.6	37	31

NA Not available.
¹Does not include Alaska.

954 IRRIGATION, LAND IMPROVEMENT PRACTICES, AND USE OF AGRICULTURAL CHEMICALS

TABLE 16. Land Treated for Control of Weeds, Grass, or Brush--Farms and Acres of Crops and Pastureland, by Regions and States: 1964

[Data are estimates based upon reports for only a sample of farms. See text.]

Region and State	Total acres treated for control of weeds, brush, etc.	Corn		Small grains (wheat, oats, barley, etc.)		Cotton		Other crops		Pastureland and rangeland	
		Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
1 United States.	64,471,882	518,304	27,130,733	182,008	21,079,359	70,309	4,046,666	150,576	8,526,448	83,779	3,688,676
2 The North..	42,480,793	437,302	24,564,086	133,947	12,175,253	2,536	156,871	93,585	4,588,594	41,898	995,989
3 The South..	11,528,690	71,326	2,196,986	10,222	1,172,963	64,814	3,535,562	35,285	2,445,737	30,097	2,177,442
4 The West...	10,462,399	9,676	369,661	37,839	7,731,143	2,959	354,233	21,706	1,492,117	11,784	515,265
New England:											
5 Maine.....	161,877	456	6,863	878	24,079	(NA)	(NA)	2,107	130,523	55	42
6 New Hampshire...	9,982	379	7,347	6	35	(NA)	(NA)	149	2,250	32	330
7 Vermont.....	28,242	1,448	23,068	89	1,636	(NA)	(NA)	223	2,975	35	563
8 Massachusetts...	26,870	717	14,335	2	71	(NA)	(NA)	744	11,726	63	73
9 Rhode Island....	6,680	147	3,489	1	40	(NA)	(NA)	68	3,141	1	10
10 Connecticut.....	36,529	1,159	28,288	12	230	(NA)	(NA)	348	7,550	50	461
Middle Atlantic:											
11 New York.....	773,439	15,491	394,949	9,326	198,684	(NA)	(NA)	4,180	173,785	350	6,021
12 New Jersey.....	98,049	1,286	47,538	157	3,963	(NA)	(NA)	821	45,999	42	549
13 Pennsylvania....	770,993	25,424	590,807	7,671	127,470	(NA)	(NA)	1,864	44,907	566	7,809
East North Central:											
14 Ohio.....	2,392,450	45,044	2,084,441	2,805	51,213	(NA)	(NA)	6,359	240,304	974	16,492
15 Indiana.....	3,020,331	38,288	2,571,300	1,000	22,685	(NA)	(NA)	9,437	409,621	1,397	16,725
16 Illinois.....	5,502,141	58,843	4,823,743	2,198	62,418	(NA)	(NA)	9,948	575,584	2,561	40,596
17 Michigan.....	1,185,336	21,070	878,575	5,156	110,608	(NA)	(NA)	5,685	188,440	464	7,713
18 Wisconsin.....	1,738,179	42,135	1,259,872	13,232	314,943	(NA)	(NA)	3,019	126,262	2,926	37,102
West North Central:											
19 Minnesota.....	5,386,210	48,980	2,913,543	30,874	2,063,612	(NA)	(NA)	7,043	337,029	4,984	72,026
20 Iowa.....	4,998,430	67,163	4,446,617	4,585	95,761	(NA)	(NA)	6,070	229,579	12,161	226,473
21 Missouri.....	1,829,275	22,159	1,323,922	876	32,016	2,536	156,871	4,108	254,059	2,338	62,407
22 North Dakota....	6,901,844	2,010	109,961	31,092	6,714,095	(NA)	(NA)	744	63,147	1,465	14,641
23 South Dakota....	3,448,467	16,532	1,385,734	16,751	1,879,285	(NA)	(NA)	2,375	133,239	1,683	50,269
24 Nebraska.....	2,291,398	18,548	1,185,322	2,661	102,786	(NA)	(NA)	13,707	787,028	6,002	216,262
25 Kansas.....	1,874,071	10,023	464,372	4,575	369,623	(NA)	(NA)	14,586	821,446	4,749	218,630
South Atlantic:											
26 Delaware.....	163,309	1,652	116,819	40	2,079	(NA)	(NA)	591	44,274	8	137
27 Maryland.....	282,216	3,984	219,311	114	4,086	(NA)	(NA)	890	55,299	179	3,520
28 Virginia.....	420,557	9,347	276,206	183	7,711	(NA)	(NA)	1,924	78,673	2,117	57,967
29 West Virginia..	46,632	2,014	33,262	16	315	(NA)	(NA)	222	2,340	403	10,715
30 North Carolina..	795,167	21,160	505,200	845	23,549	5,335	138,270	5,965	104,511	1,307	23,637
31 South Carolina..	441,447	1,310	42,721	949	64,478	5,191	239,724	957	50,084	1,009	44,440
32 Georgia.....	743,952	3,494	137,031	313	20,389	6,245	272,157	6,107	245,547	1,750	68,828
33 Florida.....	388,748	268	15,465	23	2,100	150	2,290	2,001	333,048	379	35,845
East South Central:											
34 Kentucky.....	458,335	11,536	373,251	138	5,413	45	3,058	2,069	57,770	908	18,843
35 Tennessee.....	554,723	7,951	239,772	110	2,808	8,616	232,528	1,787	59,317	1,084	20,298
36 Alabama.....	530,174	1,789	60,756	163	13,833	6,589	287,324	1,482	60,053	1,154	108,208
37 Mississippi.....	1,289,395	3,750	87,700	229	38,106	14,353	857,041	1,051	170,170	2,003	136,378
West South Central:											
38 Arkansas.....	1,230,482	570	14,855	1,899	235,176	6,673	637,683	1,859	231,790	2,204	110,978
39 Louisiana.....	1,022,674	1,389	40,629	1,451	215,243	4,761	294,937	1,973	305,197	1,785	166,668
40 Oklahoma.....	454,401	441	12,771	892	56,366	644	37,723	1,151	77,880	3,329	269,661
41 Texas.....	2,706,478	671	21,237	2,857	481,311	6,212	532,827	5,256	569,784	10,478	1,101,319
Mountain:											
42 Montana.....	4,024,464	487	20,319	11,519	3,897,395	(NA)	(NA)	622	32,942	1,183	73,808
43 Idaho.....	732,115	1,410	28,438	6,822	568,923	(NA)	(NA)	1,700	82,537	2,233	52,217
44 Wyoming.....	169,047	584	23,710	1,027	66,612	(NA)	(NA)	484	25,212	1,127	53,513
45 Colorado.....	712,564	4,051	189,520	3,077	296,921	(NA)	(NA)	2,335	130,777	1,217	95,346
46 New Mexico....	100,668	100	7,503	98	7,086	419	30,782	397	50,744	78	4,553
47 Arizona.....	212,009	29	1,692	32	4,905	717	145,159	274	41,177	99	19,076
48 Utah.....	136,426	1,234	20,188	2,399	94,051	(NA)	(NA)	441	5,251	484	16,936
49 Nevada.....	27,500	28	1,907	106	12,682	(NA)	(NA)	35	1,092	79	11,819
Pacific:											
50 Washington.....	1,599,160	864	24,303	5,683	1,431,146	(NA)	(NA)	2,000	108,137	1,889	35,574
51 Oregon.....	1,013,916	581	13,189	4,706	736,274	(NA)	(NA)	2,817	218,282	2,127	46,171
52 California.....	1,455,661	308	38,892	2,320	613,378	1,823	178,292	8,956	558,179	1,093	66,961
53 Alaska.....	3,942	(NA)	(NA)	50	1,770	(NA)	(NA)	59	2,128	4	44
54 Hawaii.....	274,927	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	1,586	235,659	171	39,268

NA Not available.
 *Includes sugarcane, pineapples, coffee, etc.

TABLE 17. Livestock Treated Externally for Control of Insects—Farms and Number, by Regions and States: 1964

[Data for livestock treated are estimates based upon reports for only a sample of farms. See text]

Region and State	Cattle and calves other than milk cows treated		Hogs, sheep and goats treated		Livestock on farms	
	Farms	Number	Farms	Number	Cattle and calves other than milk cows	Hogs, sheep and goats
1 United States..	678,634	45,524,555	225,167	36,892,131	90,935,226	83,462,069
2 The North..	301,514	18,111,297	157,032	25,335,185	42,824,709	53,524,817
3 The South..	311,393	18,482,459	58,308	7,943,969	30,168,950	17,239,115
4 The West...	65,727	8,930,799	9,821	3,612,977	17,941,567	12,698,137
New England:						
5 Maine.....	1,853	30,744	266	8,633	82,012	36,498
6 New Hampshire.....	934	15,085	56	2,650	37,969	18,999
7 Vermont.....	2,295	63,064	133	4,078	137,918	16,426
8 Massachusetts.....	1,058	26,092	176	10,737	47,922	90,670
9 Rhode Island.....	119	3,129	16	711	5,225	10,782
10 Connecticut.....	798	21,990	108	3,474	51,228	18,741
Middle Atlantic:						
11 New York.....	11,637	306,087	1,005	65,132	824,889	224,181
12 New Jersey.....	894	31,940	189	54,174	55,577	131,547
13 Pennsylvania.....	12,630	321,257	2,271	140,548	998,113	639,767
East North Central:						
14 Ohio.....	14,358	486,259	10,606	1,480,940	1,619,405	3,350,630
15 Indiana.....	15,744	611,496	14,267	2,912,074	1,725,352	4,857,245
16 Illinois.....	20,388	1,295,230	18,830	4,045,193	3,328,340	7,870,679
17 Michigan.....	13,920	392,054	3,233	357,496	1,151,412	1,038,824
18 Wisconsin.....	26,834	744,200	5,614	578,364	2,300,417	1,938,152
West North Central:						
19 Minnesota.....	25,077	962,505	12,639	1,621,347	3,044,497	4,170,650
20 Iowa.....	35,388	2,486,703	39,440	7,668,876	6,549,258	15,038,933
21 Missouri.....	41,509	1,935,836	17,979	2,423,337	4,061,259	4,370,810
22 North Dakota.....	11,912	905,056	2,048	270,007	2,236,810	938,936
23 South Dakota.....	14,061	1,687,215	8,084	1,282,596	3,921,573	3,375,465
24 Nebraska.....	21,893	2,840,012	12,926	1,599,256	5,736,448	3,531,277
25 Kansas.....	28,212	2,945,343	7,152	805,562	4,909,085	1,855,607
South Atlantic:						
26 Delaware.....	211	5,464	103	9,506	19,458	35,367
27 Maryland.....	2,596	118,066	643	56,748	239,893	173,925
28 Virginia.....	10,711	476,696	3,424	269,440	1,066,420	702,643
29 West Virginia.....	4,633	120,039	1,435	77,356	398,593	272,903
30 North Carolina.....	10,862	288,092	5,485	422,117	708,321	1,072,581
31 South Carolina.....	5,846	238,103	1,440	99,990	478,274	374,336
32 Georgia.....	15,405	843,568	7,449	698,558	1,594,384	1,285,316
33 Florida.....	7,299	1,293,572	1,566	135,764	1,645,718	305,543
East South Central:						
34 Kentucky.....	28,978	1,014,815	6,070	587,664	1,933,576	1,282,407
35 Tennessee.....	26,575	819,910	6,932	473,778	1,766,054	1,055,933
36 Alabama.....	15,124	899,860	4,198	320,406	1,687,213	733,625
37 Mississippi.....	23,748	1,154,126	2,355	113,670	2,103,348	407,623
West South Central:						
38 Arkansas.....	23,005	880,622	1,849	87,572	1,441,559	234,428
39 Louisiana.....	16,182	1,000,511	933	37,506	1,679,757	224,053
40 Oklahoma.....	37,282	2,521,278	3,065	177,565	4,031,817	422,831
41 Texas.....	82,936	6,807,737	11,361	4,376,329	9,374,565	8,655,601
Mountain:						
42 Montana.....	7,269	1,053,966	989	327,140	2,818,323	1,628,049
43 Idaho.....	7,776	654,116	914	325,523	1,438,161	1,113,157
44 Wyoming.....	3,104	635,308	708	556,287	1,324,874	2,059,473
45 Colorado.....	8,315	1,433,873	1,398	416,929	2,406,515	1,651,827
46 New Mexico.....	3,283	676,351	469	348,342	1,168,040	1,005,672
47 Arizona.....	1,094	520,528	47	555,427	1,058,354	570,045
48 Utah.....	3,790	291,612	565	149,890	673,021	1,143,423
49 Nevada.....	665	238,168	59	1,739	596,021	241,861
Pacific:						
50 Washington.....	10,584	635,663	1,162	141,684	1,183,333	308,647
51 Oregon.....	10,055	792,308	2,097	269,244	1,493,748	759,624
52 California.....	9,202	1,896,301	1,215	477,317	3,370,884	2,114,771
53 Alaska.....	33	611	5	16,292	5,716	21,989
54 Hawaii.....	557	101,994	193	27,163	204,577	79,599



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