U.S. CENSUS OF AGRICULTURE : 1959

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A Graphic Summary of Land Utilization

(A Cooperative Report)

SPECIAL REPORTS

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PREFACE

"A Graphic Summary of Land Utilization, 1959," is a Special Report, 1959 Census of Agriculture. The report presents in graphic form some of the significant facts regarding the major uses of land; regional patterns of land resources and uses; conservation, improvement, and development of land; and farm resources and production.

This report was prepared cooperatively by the Bureau of the Census, U.S. Department of Commerce, and the Farm Economics Division, Economic Research Service, U.S. Department of Agriculture, under the supervision of Ray Hurley, Chief of the Agriculture Division of the Bureau of the Census. George F. Jenks, Professor of Geography, University of Kansas assisted in the preparation of maps. The maps were prepared under the supervision of William T. Fay, Chief, Geography Division, Bureau of the Census.

The report was written by James R. Anderson, formerly Agricultural Economist, Farm Economics Division, Economic Research Service, U.S. Department of Agriculture, now Head of the Geography Department, University of Florida, in cooperation with Hugh H. Wooten, Agricultural Economist, Farm Economics Division, Economics Research Service.

July 1962

UNITED STATES CENSUS OF AGRICULTURE: 1959

FINAL REPORTS

Volume I—Counties—A separate part for each State, Puerto Rico, Guam, Virgin Islands, and American Samoa. Statistics on number of farms; farm characteristics; acreage in farms; cropland and other uses of land; land-use practices; irrigation; farm facilities and equipment; farm labor; farm expenditures; use of commercial fertilizer; number and kind of livestock; acres and production of crops; value of farm products; characteristics of commercial farms, farms classified by tenure, size, type, and economic class; and comparative data from the 1954 Census.

Part	State or States	Part	State or States	Part	State or States	Part	State or States
	New England States:		West North Central:		East South Central:		Mountain—Con.
1	Maine.	15	Minnesota.	30	Kentucky.	44	Utah.
2	New Hampshire.	16	Iowa.	31	Tennessee.	45	Nevada.
3	Vermont.	17	Missouri.	32	Alabama.		Pacific:
4	Massachusetts.	18	North Dakota.	33	Mississippi.	46	Washington.
5	Rhode Island.	19	South Dakota.		West South Central:	47	Oregon.
6	Connecticut.	20	Nebraska.	34	Arkansas.	48	California.
	Middle Atlantic States:	21	Kansas.	35	Louisiana.	49	Alaska.
7	New York.		South Atlantic:	36	Oklahoma.	50	Hawaii.
8	New Jersey.	22	Delaware.	37	Texas.		Other Areas:
9	Pennsylvania.	23	Maryland.		Mountain:	51	American Samoa.
	East North Central:	24	Virginia.	38	Montana.	52	Guam.
10	Ohio.	25	West Virginia.	39	Idaho.	53	Puerto Rico.
11	Indiana.	26	North Carolina.	40	Wyoming.	54	Virgin Islands.
12	Illinois.	27	South Carolina.	41	Colorado.		
13	Michigan.	28	Georgia.	42	New Mexico.		
14	Wisconsin.	29	Florida.	43	Arizona.		

Volume II—General Report—In 1 volume and also as 13 separates (for the Introduction and for each chapter). Statistics by subjects for 1959 and prior censuses. Statistics are presented for the United States, geographic regions, and divisions, and for the States.

Chapter	Title	Chapter	Title
	Introduction.		
I	Farms and Land in Farms.	VII	Field Crops and Vegetables.
II	Age, Residence, Years on Farm, Work Off Farm.	VIII	Fruits and Nuts, Horticultural Specialties, Forest Products.
III	Farm Facilites, Farm Equipment.		
IV	Farm Labor, Use of Fertilizer, Farm Expenditures, and Cash Rent.	IX	Value of Farm Products.
		X	Color, Race, and Tenure of Farm Operator.
V	Size of Farm.	XI	Economic Class of Farm.
VI	Livestock and Livestock Products.	XII	Type of Farm.

Volume III—Irrigation of Agricultural Lands—Data from the Irrigation Censuses of 1959 and 1950, by drainage basins, for the conterminous United States and for each of the 17 western States and Louisiana. Separate maps are available. Report also includes data from the 1959 Census of Agriculture for land irrigated and acres and production of crops on irrigated land in the 18 conterminous States and Hawaii.

Volume IV—Drainage of Agricultural Lands—Statistics for States and counties and for the conterminous United States, presenting 1960 data on number, area, physical works, and costs for drainage projects of 500 or more acres by size, type, and year organized. Maps are included.

Volume V—Special Reports

Part 1.—Special Census of Horticultural Specialties—Statistics for States, except Alaska and Hawaii, and for the conterminous United States, presenting 1959 data on number and kinds of operations, gross receipts and/or sales, sales of specified products, inventories, employment, and structures and equipment.

Part 2.—Irrigation in Humid Areas—Statistics for 30 eastern States showing 1960 data on acres irrigated, number of constructed ponds and reservoirs, source and method of applying water, type of pumping power, acreage of individual crops irrigated, and frequency of irrigation by States and counties.

Part 3.—Ranking Agricultural Counties—Statistics for selected items of inventory and agricultural production for the leading counties in the United States.

Part 4.—Farm Taxes and Farm Mortgage—A cooperative report by the Economic Research Science, U.S. Department of Agriculture and the Bureau of the Census, U.S. Department of Commerce, presenting 1961 data by States on taxes on farms, number of mortgaged farms operated by full owners and part owners, amount of mortgage debt held by principal lending agencies, and amount of interest paid.

Part 5.—1960 Sample Survey of Agriculture—Statistics by economic class and type of farm, showing 1960 data on farm-operator-family income from farm and off-farm sources; inventory and use of selected types of farm equipment, tractors by year made and fuel used; number, size, and materials used for new buildings constructed 1958 to 1960; number of farmers having contracts with dealers, processors, or others for the production and marketing of 15 farm products; and real estate and non-real-estate debts of farm operators and farm landlords by lending agencies.

Part 6.—A Graphic Summary of Agriculture, 1959—A cooperative report by the Economic Research Service, U.S. Department of Agriculture and the Bureau of the Census, U.S. Department of Commerce, presenting graphically for 1959 and prior census years some of the significant uses of agricultural land; the extent and nature of the various kinds of tenure under which farms are held and operated; and changes and developments in the use of agricultural resources and production of agricultural products.

Special Publication—Principal Data-Collection Forms and Procedures: United States Census of Agriculture, 1959, and Related Surveys—Facsimiles of the enumeration forms used, showing variations for the 50 States, Puerto Rico, American Samoa, Guam, and the Virgin Islands, together with brief descriptions of the census field procedures for the census and the related surveys.

Chapter I

LAND UTILIZATION

CHARTS AND MAPS

INTRODUCTION

The uses made of the land resources of this country are the subject of this graphic summary. Using data available from the 1959 Census of Agriculture and information collected from other Federal agencies, it is possible to present graphically the land use situation in the Nation as it exists today and to evaluate some of the changes that are taking place. Compilation and summarization of information about the use of land resources that is available from the several Federal agencies has been completed by the Farm Economics Division, Economic Research Service, of the United States Department of Agriculture in conjunction with the Agriculture Division, Bureau of the Census. These summaries of the major uses of land have also been made in earlier years by the Farm Economics Division.

The historical continuity in the collection, compilation, and interpretation of data about the uses of land in the United States has proved invaluable in the study of present land-resource problems. Planning for future growth is also aided by the existence of reasonably uniform information about major land uses in the past 50 years.

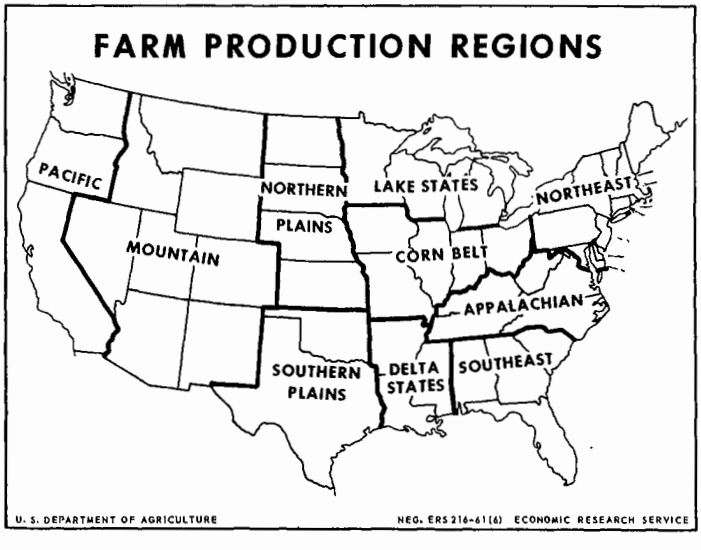
The present extent, location, and productivity of land used for different purposes is graphically presented in this report. Such information is needed for the analysis of present and prospective agricultural and general economic conditions for the country as a whole and also for different areas of the country. The present attention being given to area redevelopment in the United States is an example of the need for careful examination of areal differences in the utilization of resources. A graphic presentation of land use data can serve effectively in bringing about a better understanding of the basic facts about land resources and their use.

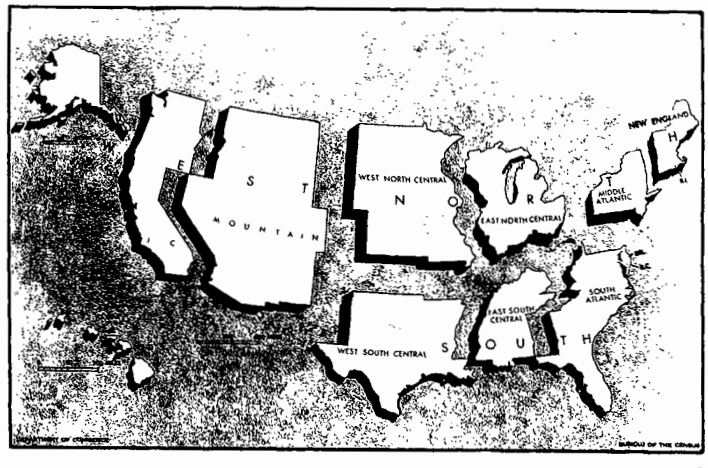
Competition for the use of land is a topic which is currently attracting much attention. Urban development; the creation of more recreational areas, particularly near large centers of population; and the preservation of wilderness areas and natural habitats for wildlife are matters frequently discussed among those interested in resource use. Along with these uses of land for living space, recreation, and wildlife we have the basic uses made of land resources in producing food and fiber and wood products. Our agricultural and forestry requirements must be effectively defined if we are to have adequate land resources to meet the long-term demands for the products of our farms and forests made by an expanding population desiring an improved level of living.

The land resources of our Nation are not inexhaustible. Ours has been a rich heritage of land well suited for the production of crops, the grazing of livestock, the growing of trees, and the enjoyment of life. Our great technological progress has made possible a high level of productivity from these resources. Hardly in world history has a nation been faced by such chronic problems of surplus production of basic agricultural products as have existed in the United States during the past decade. We shall need to strive for solutions to these problems that will be in keeping with the realization that the future welfare of the people not only of our own country but of the whole world will be vitally affected by the decisions that are made now relative to use of our land resources. Such decisions must be based upon the study of many facts, among which are some that are graphically analyzed in this report.

In the maps, charts, and text, terminology consistent with the various definitions contained in the 1959 Census of Agriculture is used. In describing and locating areas, commonly accepted geographical terms are used. In presenting data by States, farm production regions or divisions are used in order to obtain more agriculturally related combinations of States than the geographic divisions used by the census. Use of farm production regions permits the presentation of significant regional differences in land use that are often obscured in census data. Unless otherwise stated, the farm production regions are used throughout this graphic summary. In order to avoid confusion, the comparative grouping of census geographic divisions and farm production regions is shown by the accompanying two maps. In order that Alaska and Hawaii may be included, separate data for these two States have been presented in several instances where it was appropriate to do so.

Since the last graphic summary was published, Alaska and Hawaii have joined the family of States. In recognition of the fact that information about these States has generally been reported separately in previous censuses, particular attention is given to the land-resource characteristics of these States in this report. It is appropriate to do this, since there is need on the part of many who use statistics dealing with land utilization to become acquainted with the impact that inclusion of data for these States will have upon the total statistical picture presented on a 50-State basis rather than the 48-State basis which has been used for nearly 50 years.





A GRAPHIC SUMMARY

MAJOR USES OF LAND

As a country, the United States is large in terms both of its area and the number of its inhabitants. It has 6.9 percent of the world's land area and 6.4 percent of the world's population. Only three countries have more land area and more people. The Soviet Union with 8.6 million square miles of area, China with 3.9, and Canada with 3.8 are larger than the United States with its 3.6 million square miles. Brazil is slightly smaller with 3.3 million square miles. In 1960, China with an estimated 680 million people, India with 430 million, and the Soviet Union with 210 million outranked the United States with its 180 million inhabitants.

This report presents a graphic story about the uses made of their land resources by the 180 million people living in the United States. It is not only a story about the present major uses of land; historical changes are also discussed, since the present patterns of use can be more fully appreciated if the past is reviewed at least briefly.

The 50 States and the District of Columbia have a total area of 3,615,211 square miles, of which 3,548,974 square miles or 2,271,343,000 acres are classified as land area. The remaining 66,237 square miles, or 42,391,680 acres, are inland water areas such as lakes, reservoirs, streams, estuaries, canals, and deeply-indented embayments and sounds and other coastal water behind or sheltered by headlands or islands.

When European colonists began to settle along the Atlantic seaboard early in the 17th century, the United States as it exists today, a nation of 50 States, had a natural cover of vegetation approximately as follows:

	Million acres	*Percent of land area*
Forest and woodland	1,065	47
Grassland	726	32
Desert shrub	266	12
Tundra	214	9
Total	2,271	100

In 1959, more than 350 years after the settlement at Jamestown, Va., the major uses of the entire land area of the 50 States as reported by the Economic Research Service, U.S. Department of Agriculture, were:[1]

	Million acres	*Percent of total land*
Cropland[2]	458	20
Grassland pasture and range	633	28
Forest and woodland (excluding reserved forest areas)	746	33
Special-use areas[3]	157	7
Miscellaneous other land (including 214 million acres of tundra)	277	12
Total	2,271	100

[1] Includes all land, both in farms and not in farms.
[2] The cropland acreage reported by the Bureau of the Census was revised upward slightly by the Economic Research Service to compensate for some under-enumeration.
[3] Includes reserved forest areas in National and State parks, wildlife refuges, and wilderness areas.

A considerable transformation has taken place. Nearly 320 million acres of virgin forest and woodland have been converted to cropland, pasture, and other uses. The total grassland area has diminished considerably, with millions of acres of the native grasses now used as cropland. Some of the present 633 million acres of pasture and range were originally desert shrub. Some of the deserts have also become highly productive areas of irrigated cropland. Nearly all of the original tundra and other unforested area in Alaska has its original vegetative cover.

Definitions of the major uses of land are as follows:

Cropland includes cropland harvested, crop failure, cultivated summer fallow, soil improvement crops, idle cropland, and cropland used only for pasture.

Grassland pasture and range (excluding cropland used only for pasture) is land in grass or other long-term forage growth that is used primarily for grazing. Shade trees or scattered timber trees with less than 10-percent canopy may be present, but the principal plant cover is such as to identify its use primarily as permanent grazing land. The term "pasture" is frequently used to designate areas primarily covered with introduced grasses. The terms "range" or "rangeland" are generally used to designate areas covered predominantly by native grasses; however, in some range areas introduced grasses such as crested wheat grass are replacing native range species.

Forest and woodland includes all lands that are at least 10-percent stocked by forest trees of any size and capable of producing timber or other wood products, or capable of exerting an influence on the water regime. Also included are lands from which the trees have been removed to less than 10-percent stocking, and which have not been developed for other use. Afforested (planted) areas and chaparral areas are also included.

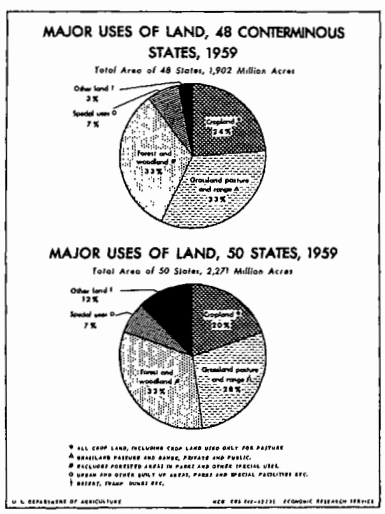
Special uses of land vary widely. This category includes land used for urban areas, highways, railroads, airports, parks, national defense areas, wildlife refuges, farmsteads, farm roads and lanes, and so on.

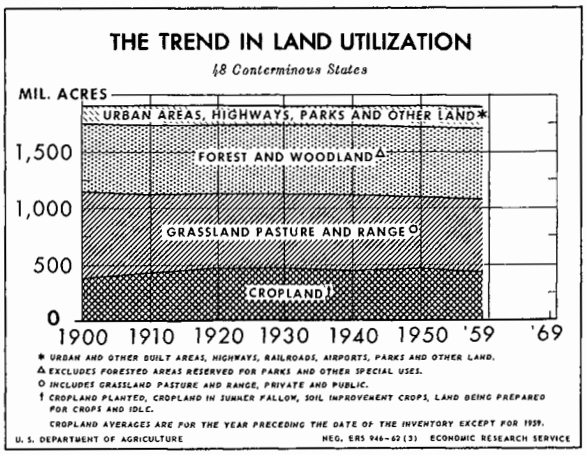
Miscellaneous other land includes areas in marshes, sand dunes, bare rock areas, deserts, and tundra.

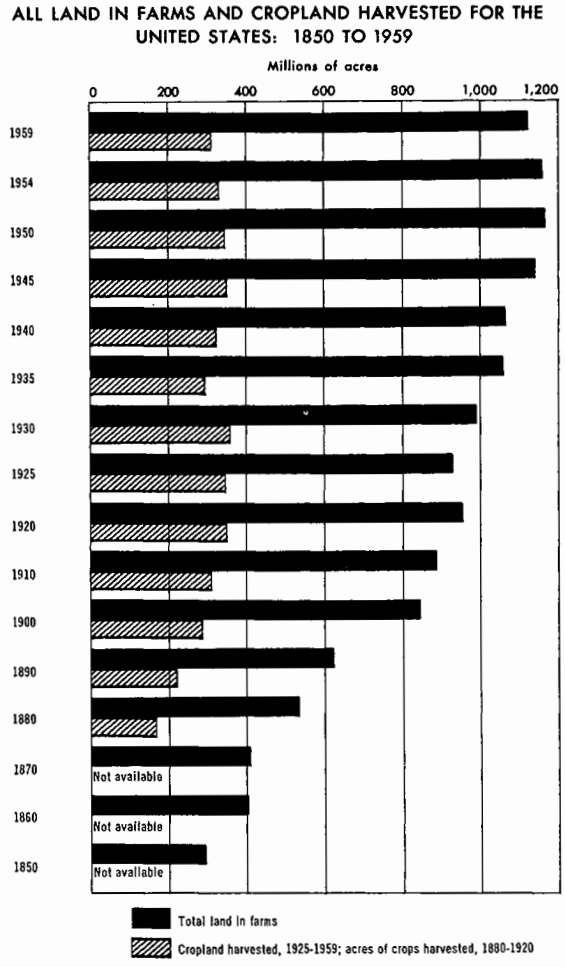
MAJOR USES OF LAND

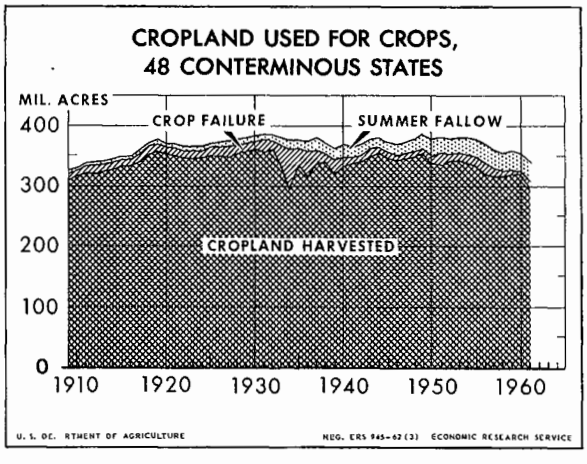
In order to understand the "statistical transition" which has occured with the attainment of Statehood by Alaska and Hawaii, the percentage distribution of major land uses in the 48 contiguous States is compared with that for the new 50-State total. Percentages shown on the accompanying chart are based on the 50-State total.

Major use	*Percent of 48-State total land area*	*Percent of 50-State total land area*
Cropland	24	20
Grassland pasture (excluding cropland used only for pasture)	33	28
Forest and woodland	33	33
Special uses of land	7	7
Miscellaneous land	3	12
Total	100	100
	Million acres	*Million acres*
Total land area	1,902	2,271









THE TREND IN LAND UTILIZATION

The overall or total changes in the major uses of land since 1900 are shown in the accompanying chart and tabulation. Briefly summarized, the following significant changes have occurred: (1) Cropland increased by more than 90 million acres from 1900 to 1920, remained stable during the decade of the 1920's, and since has fluctuated at a level somewhat below the peak of 480 million acres. (2) Grassland pasture and range other than cropland used only for pasture has declined by about 130 million acres. A considerable part of this decline occurred during the first two decades of the present century when large acreages of native grasslands were plowed up for crops before and during World War I. (3) The acreage in forest and woodland has remained fairly stable. The clearing of forest land for crop, pasture, urban, and other uses has been counterbalanced by the natural reversion and, in recent years particularly, the replanting of areas formerly used as cropland and pasture to trees. (4) The increase in the acreage of other land is accounted for to a large extent by the increased demands for land as space for residential, recreational, transportational, military, and other related uses.

TRENDS IN MAJOR LAND USES, 48 CONTERMINOUS STATES, 1900–1959 [1]

Land use [2]	1900	1910	1920	1930	1940	1950	1959
	Million acres	*Million acres*	*Million acres*	*Million acres*	*Million acres*	*Million acres*	*Million acres*
Cropland	389	431	480	480	467	478	457
Available pasture and range (nonforested)	761	693	652	652	650	631	630
Forest and woodland	600	600	602	601	608	612	614
Other land	153	179	169	170	180	183	201
Total	1,903	1,903	1,903	1,903	1,905	1,904	1,902

[1] Exclusive of Alaska and Hawaii. For example, excluded in 1959 are the combined totals for Alaska and Hawaii of less than 1 million acres of cropland, and 3 million acres of grassland pasture and range.
[2] For definitions of the major uses see the preceding page of this report.

LAND IN FARMS AND CROPLAND HARVESTED, 1850–1959

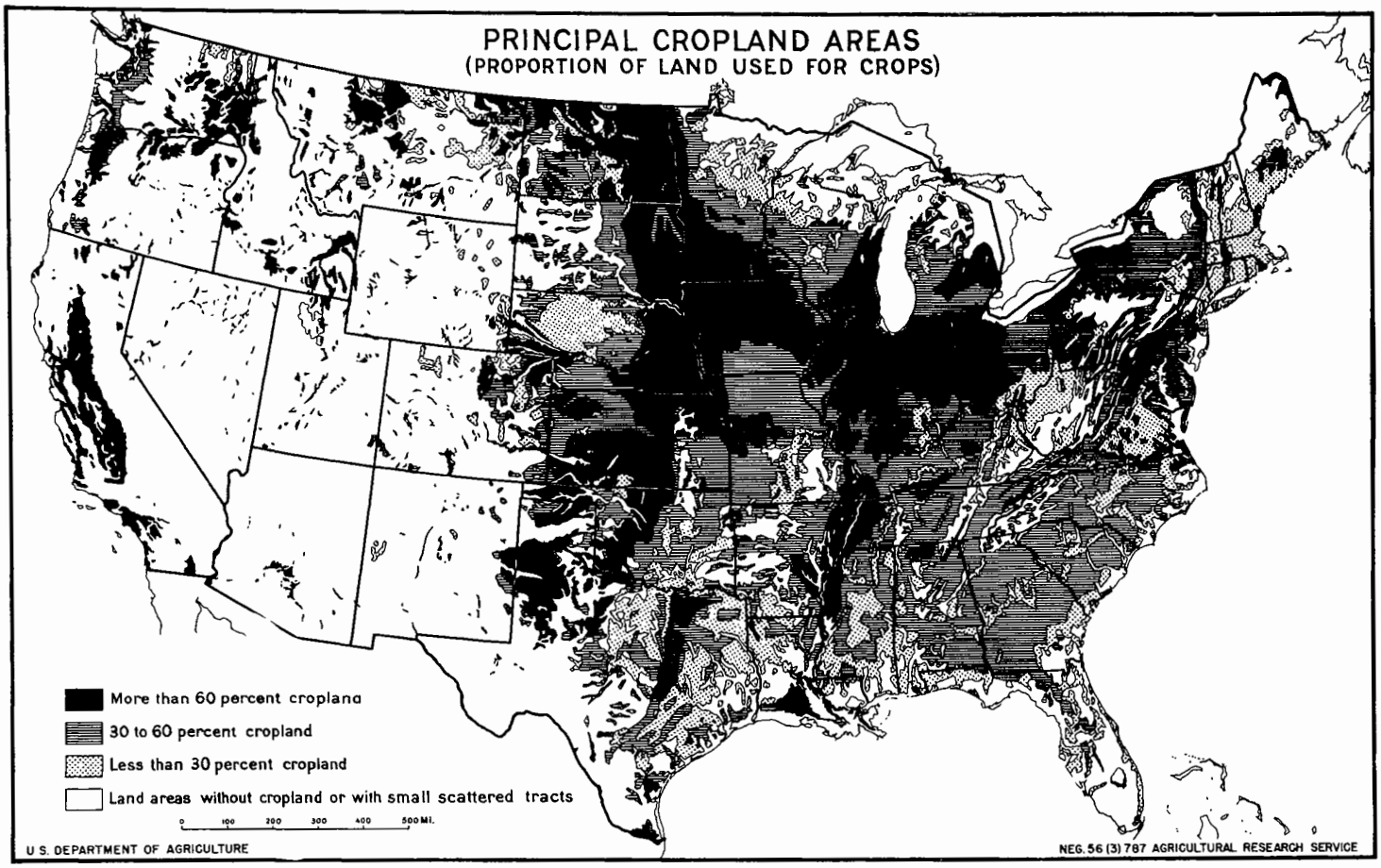
The acreage of land in farms was 1,123 million acres in 1959, which was about 38 million acres less than the acreage reported in 1954. About 5 to 6 million acres of this decrease was due to a change in the definition of a farm for the 1959 Census of Agriculture. The remaining decrease can be attributed to several conditions. Whole farms that had been placed in the Soil Bank Program of the U.S. Department of Agriculture were not enumerated in the 1959 Census. Urban expansion and the building of new highways account for some of the loss. Also, the spread of factories and nonfarm residences, often occupying a number of acres, into rural areas has been increasing considerably. In the 345 counties that include standard metropolitan statistical areas, land in farms declined by 7 million acres.

The 1959 Census of Agriculture reported 311 million acres of cropland harvested, compared with 333 million acres reported in 1954. Except for 1934, when crop failure was extremely high because of the severe drought of that year, the acreage of cropland harvested in 1959 was the lowest since 1909, when the Nation also had 311 million acres.

CROPLAND USED FOR CROPS

In 1959 and 1960, about 60 million acres of harvested cropland were used for the production of export products. This acreage accounted for about 18 percent of the 330 million and 328 million acres of crops harvested, as reported by the Economic Research Service, in 1959 and 1960, respectively. Only during and following World War I, during the Korean conflict, and in 1956 was the acreage as large.

Only about 6 million acres of harvested cropland are now used to produce feed for horses and mules both on and off the farm. This compares to 81 million acres used for that purpose in 1918 and 1919. Thus, about 75 million acres formerly used for the production of energy for use on the farm are now used for the production of human food. The substitution of the tractor for the horse and mule as the major source of energy accounts for this remarkable shift in use of cropland harvested.



PRINCIPAL CROPLAND AREAS

Cropland is the major source of America's food and fiber production. The distribution of the major crop-producing areas of the country is therefore of considerable importance in understanding the Nation's agricultural economy.

In order that the distribution of cropland acreage shown in the map of "Principal Cropland Areas" may be better understood, a brief tabulation of acreages of cropland and the percentages of total land area occupied by all cropland is given here by farm production regions used by the Economic Research Service in studies of American agriculture.

THE MAJOR USES OF CROPLAND, AND ALL CROPLAND AS A PERCENTAGE OF TOTAL LAND AREA, BY FARM PRODUCTION REGIONS, 1959 [1]

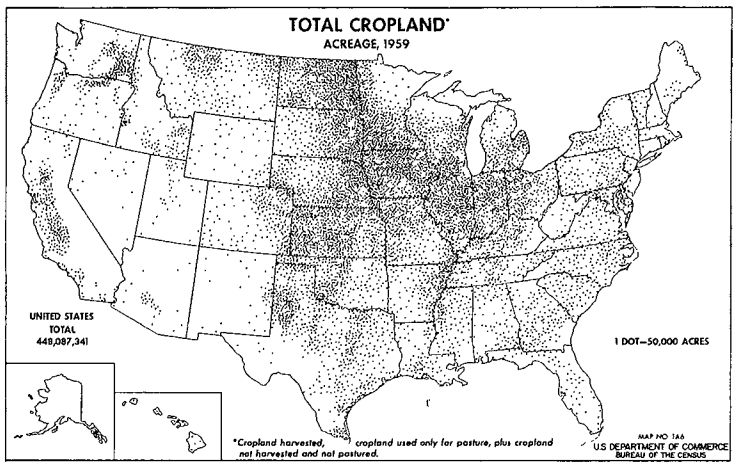
Region	Cropland used for crops	Cropland used for soil improvement crops and idle	Cropland used only for pasture	Total cropland	Total cropland as percentage of total land area
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*Percent*
Northeast	15,189	2,567	3,217	20,973	19
Lake States	36,668	4,170	4,657	45,495	37
Corn Belt	78,814	3,454	12,822	95,090	58
Northern Plains	90,199	6,160	4,695	101,054	52
Appalachian	17,431	3,061	9,498	29,990	24
Southeast	14,566	2,208	4,297	21,071	17
Delta States	13,070	1,806	5,932	20,808	22
Southern Plains	37,651	5,479	10,786	53,916	26
Mountain	34,404	3,710	4,838	42,952	8
Pacific	20,464	971	4,699	26,134	13
48 conterminous States	358,456	33,586	65,441	457,483	24
Alaska	16	4	4	24	[2]
Hawaii	320	13	167	500	12
United States (50 States)	358,792	33,603	65,612	458,007	20

[1] The cropland acreage reported by the Bureau of the Census was revised upward slightly by the Economic Research Service to compensate for some under-enumeration.
[2] Less than 0.05 percent.

From this tabulation it may be seen that the Corn Belt and Northern Plains States have the highest proportion of the total land areas in crops of any of the farm production regions. The acreage of cropland in these two regions accounts for 43 percent of the total cropland of the country (50 States), yet the nine States which comprise these two regions have only 16 percent of the total land area. In contrast, the 13 Western States (Mountain and Pacific regions, Alaska, and Hawaii) have 50 percent of the total land area but only 15 percent of the cropland.

In addition to this major concentration of cropland in the north central part of the United States, in other smaller but highly significant areas a high proportion of the total land area is used as cropland. In the Northeast, the Aroostook area in Maine, the southern shores of Lake Ontario and Lake Erie, and the rolling lands of southeastern Pennsylvania are worthy of note. In the Southern States, parts of the lower Mississippi Valley and the Blacklands of east Texas, the High Plains of west Texas, and western Oklahoma have a heavy concentration of cropland. In the Western States, the nonirrigated wheat-producing areas of north-central Montana and of the Columbia Plateau, the Willamette Valley of Oregon, the Central Valley of California, and many smaller irrigated areas have important concentrations of productive cropland.

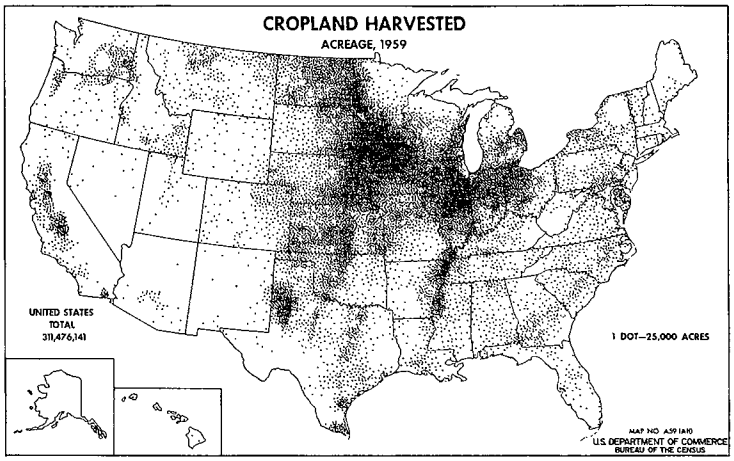
On the other hand, there are large parts of the United States that have practically no cropland. This is particularly evident in the Western States where the availability of water is vital to the use of land for crop production. In Alaska very little development of agriculture has taken place yet, and cropland for the whole State totals 24,000 acres of the 365 million acres of land in that State. Coldness will be a major limiting condition in using much of northern and central Alaska in the near future for crop production. In Hawaii, topography is a major limitation to the expansion of the cropland acreage.



TOTAL CROPLAND

The 1959 Census of Agriculture reported 448 million acres of cropland for the 50 States. (In recognition of some underenumeration, the U.S. Department of Agriculture estimates a total cropland acreage of 458 million acres.)

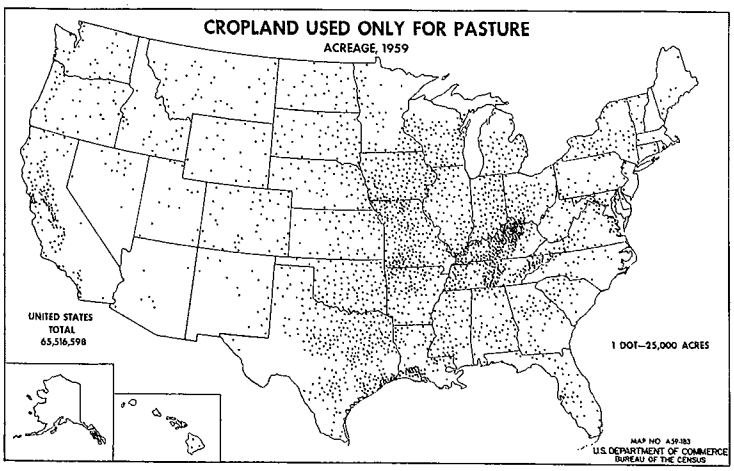
The heaviest concentration of cropland is found in the Corn Belt, lower Lake States, and Northern Plain States where more than half of the Nation's cropland is located, although these States have only a fifth of the land area. The States of Alaska, Arizona, Nevada, New Mexico, Utah, and Wyoming, which have 31 percent of the land area, have less than 10 million acres or only about 2 percent of the cropland area. The new State of Hawaii has about 0.5 million acres of cropland, while Alaska has only about 24,000 acres. Several fairly extensive areas in the Northeastern and Southern part of the United States have very little cropland acreage.



CROPLAND HARVESTED

In comparing the map showing the distribution of cropland harvested with the map showing total cropland, the number of acres represented by each dot should be noted carefully. The pattern of cropland harvested is, of course, very similar to the pattern for total cropland, since cropland harvested represents 70 percent of total cropland. Cropland harvested includes all land from which any crops were harvested in 1959, whether for home use or for sale. It includes land from which hay (including wild hay) was cut, land in berries and other small fruits, and land used for orchards, vineyards, nurseries, and greenhouses. Matured crops hogged off or grazed were considered to have been "crops harvested" and were reported here. Land from which two or more crops were harvested in 1959 was counted only once in the land-use classification.

The high density of cropland harvested in the Corn Belt, the lower Lake States, the Northern Plains States, the lower Mississippi Valley, and the High Plains of Texas, and in irrigated valleys in the Western States is especially conspicuous.

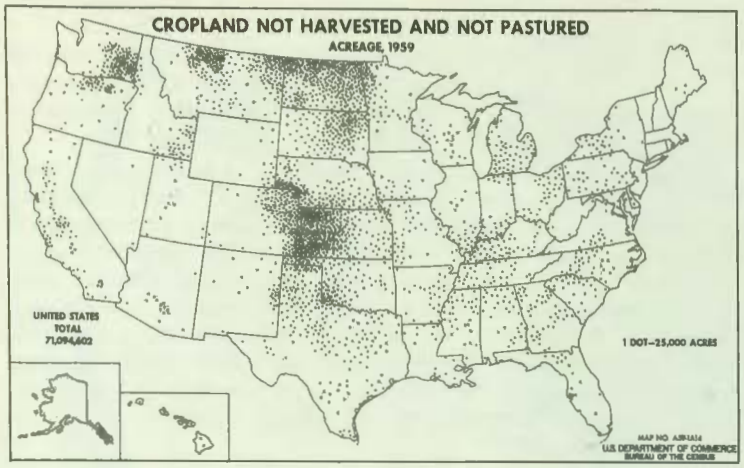


CROPLAND USED ONLY FOR PASTURE

Cropland used only for pasture has been a difficult category of land use to enumerate consistently in the Census of Agriculture because of the difficulty of interpreting the definition uniformly from area to area and from year to year. Rotation pasture is included in this category. Also included is land used only for pasture or grazing, if the operator considered that it could have been used for crops without additional improvement. Permanent open pasture may have been reported either for this item or for "other pasture" depending on whether or not the operator considered it as cropland.

Using pasture in rotation with crops is a fairly common practice in the Corn Belt, Lake States, and Northern and Southern Plains States, and in some of the irrigated areas of the Western States.

In some areas, in Kentucky and Tennessee for instance, there is a tendency for farmers to report permanent pasture as cropland used only for pasture, since these farmers thought such pasture land was capable of being used as cropland. In southern Louisiana, pasture is commonly used in rotation with rice.



CROPLAND NOT HARVESTED AND NOT PASTURED

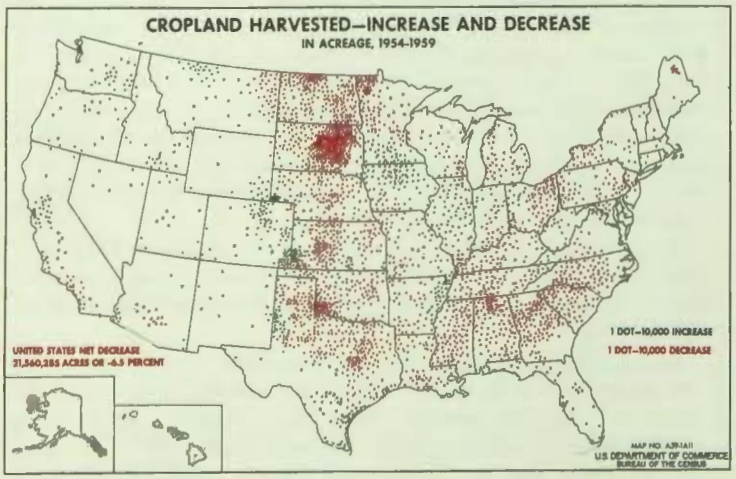
Cultivated summer fallow; land in soil improvement grasses and legumes; idle cropland; land in crops intended for harvest after 1959 (Hawaiian sugarcane for example); and cropland not harvested because of complete crop failure, low prices, labor shortage, or for other reasons, are all included in the category of cropland not harvested and not pastured. The total acreage reported in this land-use category in 1959 was 71 million acres.

The most important single use in the category was cultivated summer fallow, which accounted for about 31 million acres in the 17 Western States. The acreage planted to soil-improvement grasses and legumes amounted to 16 million acres. Crop failure, as estimated by the Economic Research Service of the U.S. Department of Agriculture, has averaged about 10 million acres annually in recent years. The remaining acreage in this category is largely cropland that is temporarily idle or that may be in the process of being retired from cropland use.

CULTIVATED SUMMER FALLOW

Cropland that was plowed and cultivated but left unseeded for the 1959 harvest in order to control weeds and conserve moisture was reported in the Census of Agriculture as cultivated summer fallow. Although the Census of Agriculture reports the acreage of cultivated summer fallow only for the 17 Western States, it should be emphasized that this practice is of little importance in other States. The practice is used mainly in the production of wheat, although some land upon which barley is grown is left fallow for a year in order that improved yields can be obtained through the accumulation of more moisture.

During the 10 years from 1949 to 1959, the wheat acreage in the 17 Western States dropped from 58 million to 38 million acres, and the acreage in cultivated summer fallow increased from 26 million to 31 million acres. Farm program limitations on the acreage that may be planted to wheat encouraged farmers to fallow their land more regularly in order to improve the yields on the remaining acreage they were permitted to plant.

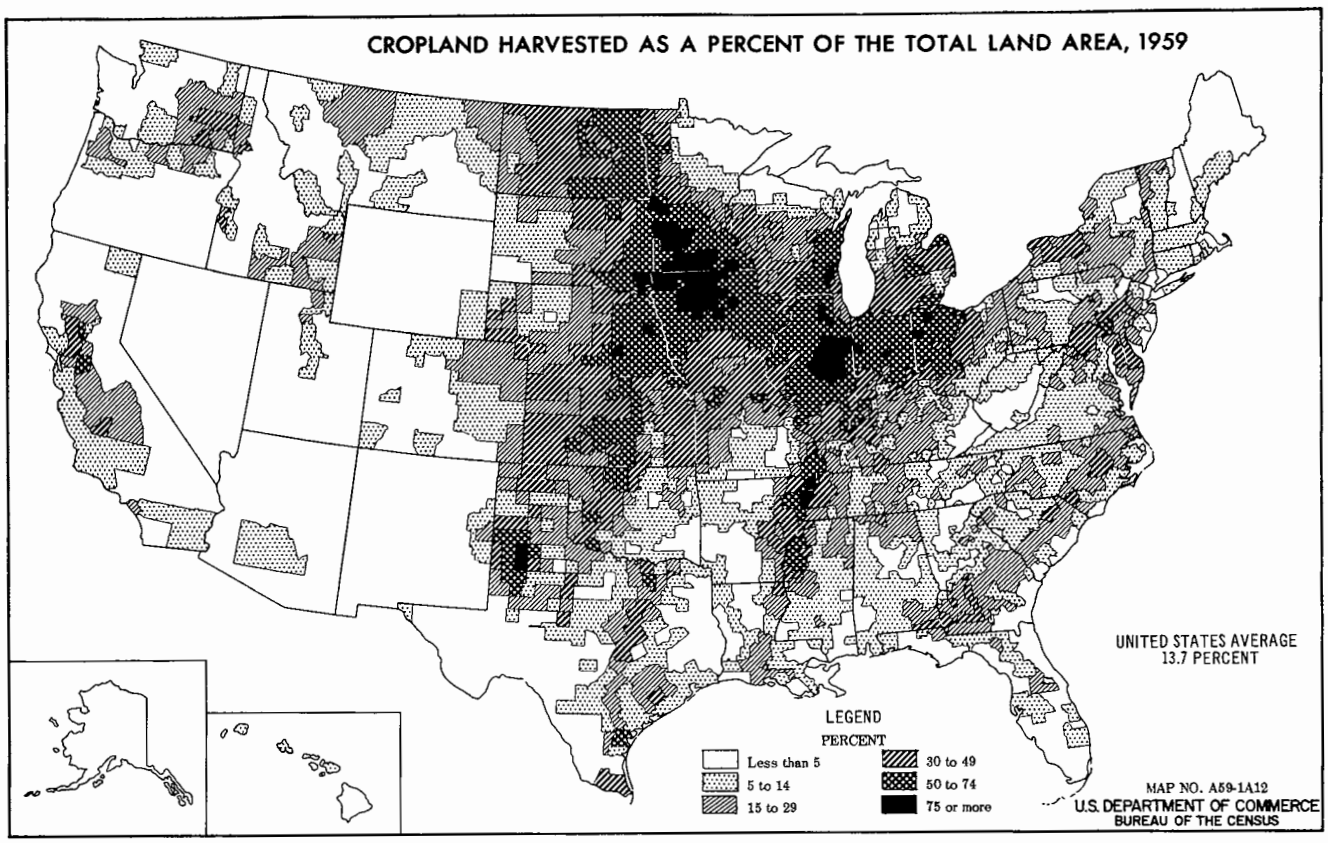


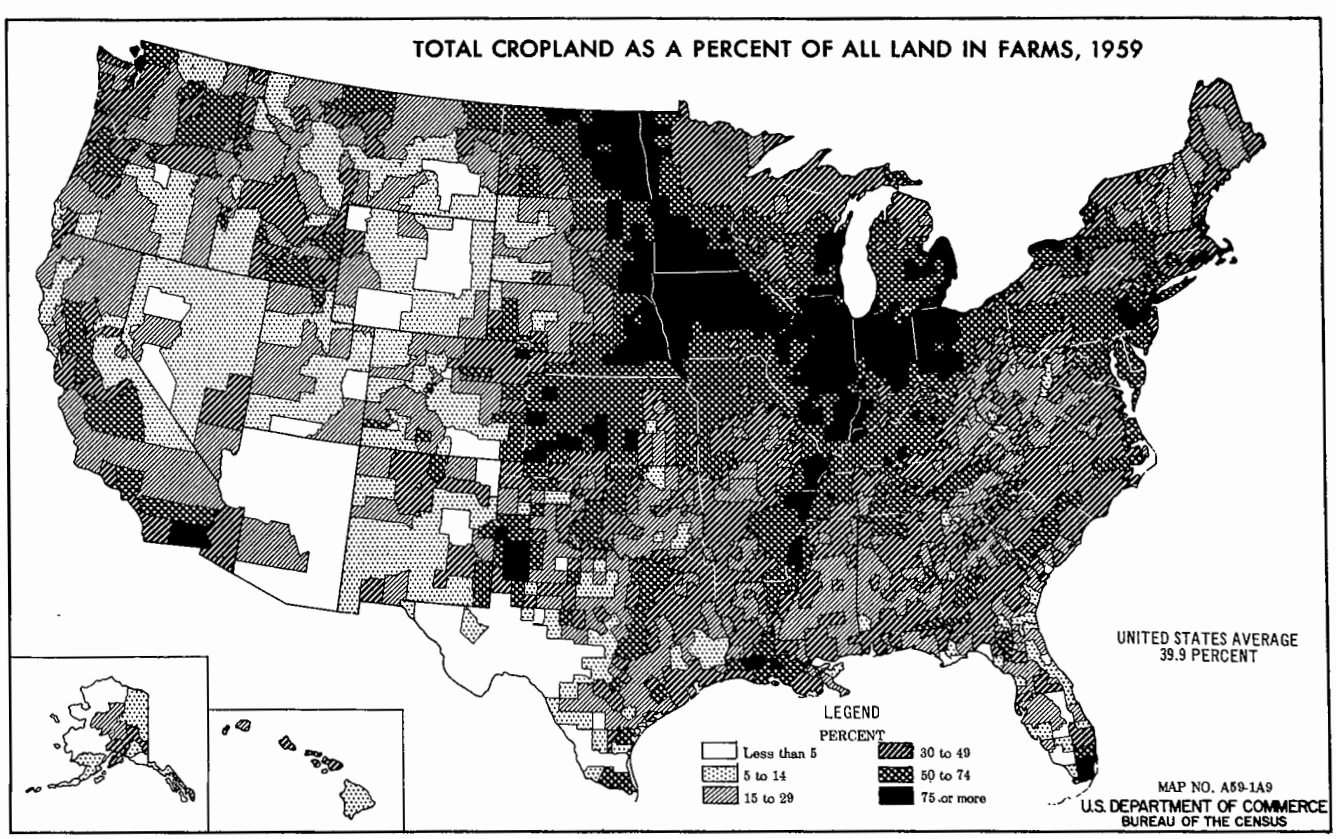
CROPLAND HARVESTED—INCREASE AND DECREASE IN ACREAGE, 1954–59

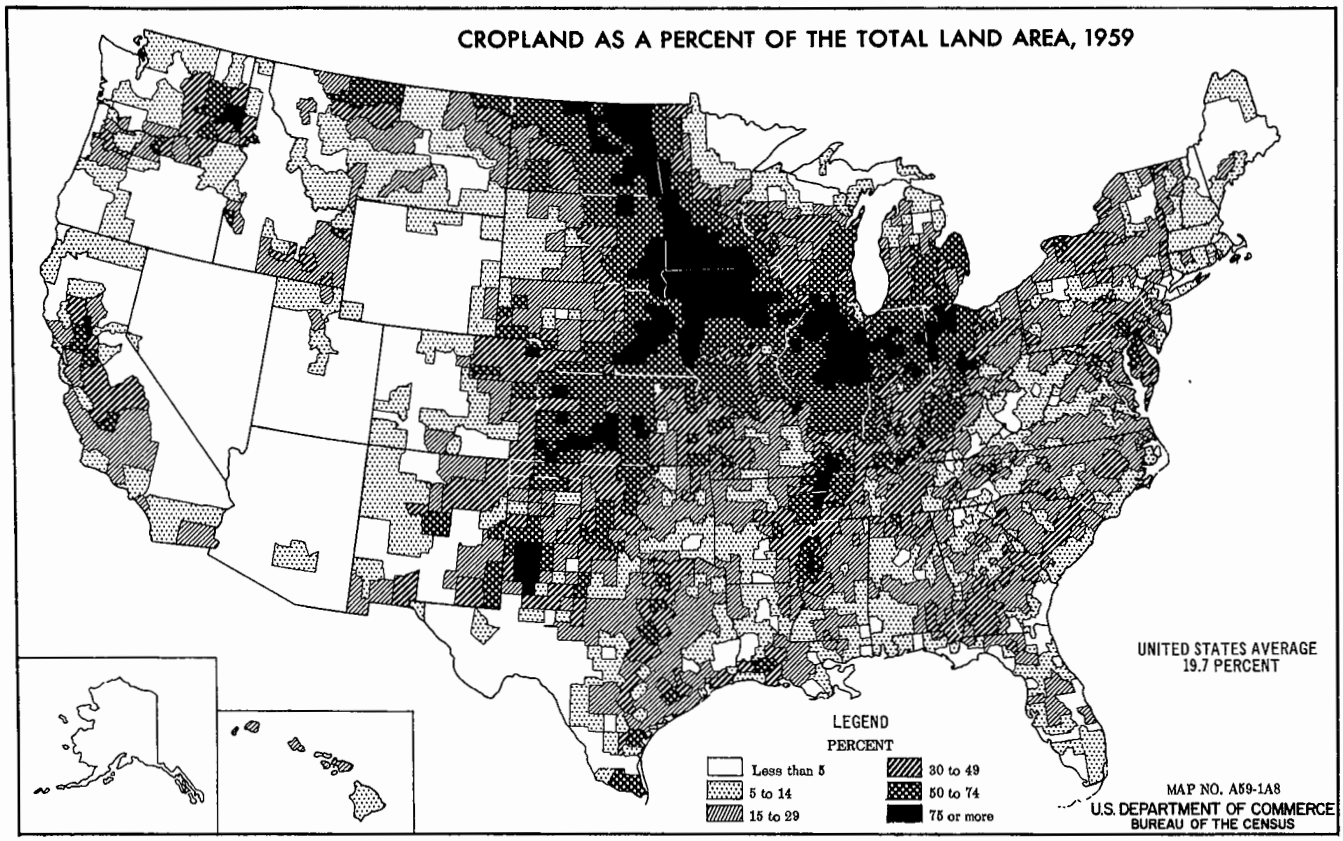
From the accompanying map it may be seen that both significant increases and decreases in the acreage of cropland harvested occurred between 1954 and 1959. The net decrease was about 22 million acres, or about 6 percent.

A major part of the decrease has occurred in the six Great Plains States where wheat acreage allotments have had a striking influence and in the Southern States where cotton allotments and a continuing decline in small farms account for the decrease. The Northeast and the Lake States and some areas in the Western States have also experienced decreases.

The increases in the acreage of cropland harvested have come mainly in the Corn Belt, where further improvement in drainage in some areas has been taking place, in the lower Mississippi Valley where land clearing and drainage has continued at an appreciable rate, and in the Western States where irrigated acreage has increased in several areas.


CROPLAND HARVESTED AS A PERCENT OF THE TOTAL LAND AREA, 1959
UNITED STATES AVERAGE
13.7 PERCENT
LEGEND
PERCENT
Less than 5
5 to 14
15 to 29
30 to 49
50 to 74
75 or more
MAP NO. A59-1A12
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS


TOTAL CROPLAND AS A PERCENT OF ALL LAND IN FARMS, 1959
UNITED STATES AVERAGE
39.9 PERCENT
LEGEND
PERCENT
Less than 5
5 to 14
15 to 29
30 to 49
50 to 74
75 or more
MAP NO. A59-1A9
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



CROPLAND AS A PERCENTAGE OF TOTAL LAND AREA

The proportion of the total land area actually used as cropland is an important, though not the only, indicator of the significance of agriculture in a particular county or part of the country.

On the map two extremes are obvious. In the North Central States there is a relatively compact area in which nearly all of the counties have 60 percent or more of their total area in cropland. Counties with less than 20 percent of the total land area in cropland are at the other extreme. These counties are more widely scattered than are counties having high proportions of cropland. Very few counties in the Western States have more than a fifth of their total area in cropland. This is partly because of their large size and partly because of widespread climatic limitations to crop production. In the East, counties with a low proportion of the total area in cropland are found in most States. The largest areas are associated mainly with rough topography, poor soils, and inadequate natural drainage. In some areas of contiguous counties such as those in southern New England, and in many scattered counties, urbanization has proceeded so far that cropland has become a minor use of land.

Since this map is on a county-unit basis, several important details are obscured. For example, the high proportion of cropland in irrigated areas in the Western States is not clearly indicated. Small areas of rough forested land and poorly drained areas in the Eastern States cannot always be distinctly associated with the physical conditions that limit their use for crop production.

TOTAL CROPLAND AS A PERCENTAGE OF ALL LAND IN FARMS

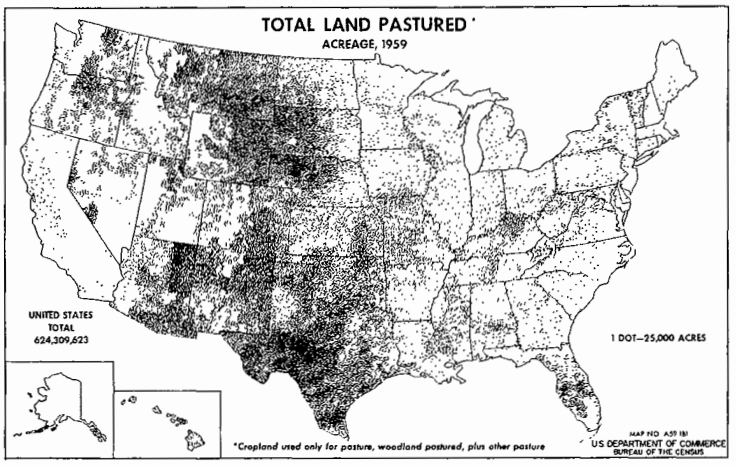
The same overall pattern is found represented in this map as in that showing cropland as a percentage of total land area. However, the map indicates more directly the importance of cropland relative to other uses of farmland.

In the West, ranches with large acreages used for pasture tend to obscure the much higher proportions of cropland on most irrigated farms. In the Southern, Northeastern, and Lake States, much land in farms remains in forest. In some type-of-farming situations, the high proportion of forest land is associated with production of crops with high labor requirements such as tobacco or cotton, which are often concentrated on a few acres of the best farmland. In such instances, little attention is given to the rest of the farm.

CROPLAND HARVESTED AS A PERCENTAGE OF TOTAL LAND AREA

Counties with 75 percent or more of the total land area used for harvested cropland are found mainly in the North Central States. Surrounding these high-density counties are most of the counties with 50 to 74 percent of the total land area in cropland harvested.

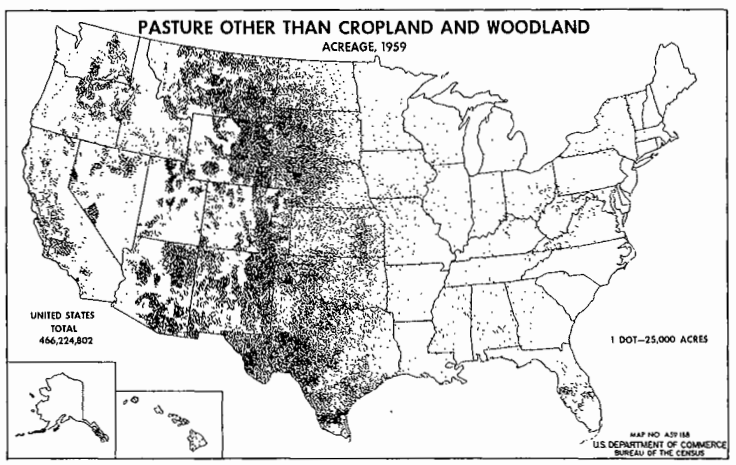
Counties with less than 5 percent of the total land area in harvested cropland are numerous in the Western States, the mountainous and hilly areas of the Eastern States, and the Coastal Plain flatwoods, and in the heavily forested counties of northern New England, the northern parts of the Lake States, and Alaska. Over these extensive areas agriculture is often of little significance except for the grazing of livestock in some of the western areas and in parts of the Southern States.



TOTAL LAND PASTURED

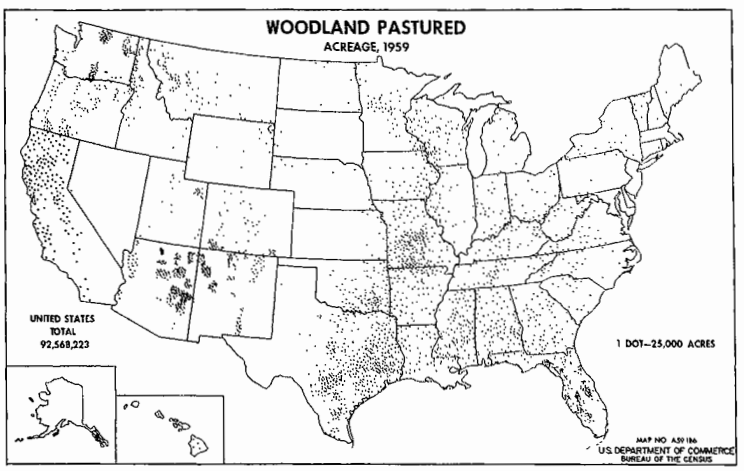
The total acreage of pasture and range in 1959 reported by the Economic Research Service is 944 million acres, including 66 million acres of cropland used only for pasture and 245 million acres of woodland and forest pasture and range. This map shows the distribution of only 624 million acres of pasture that was reported as a part of the acreage of land in farms. A considerable acreage of privately-owned forest land that is grazed in the Southern States and much federally-owned land in the Western States that is grazed by permit rather than by lease is not included in the acreage of pasture reported in the Census of Agriculture.

The regional distribution of the 944 million acres of pasture and range including cropland used only for pasture and forest and woodland grazed was as follows: Northern States (Northeast, Corn Belt, Lake States, and Northern Plains)—168 million acres; Southern States (Appalachian, Southeast, Delta, and Southern Plains)—264 million acres; and Western States (Mountain, Pacific, Alaska, and Hawaii)—512 million acres.



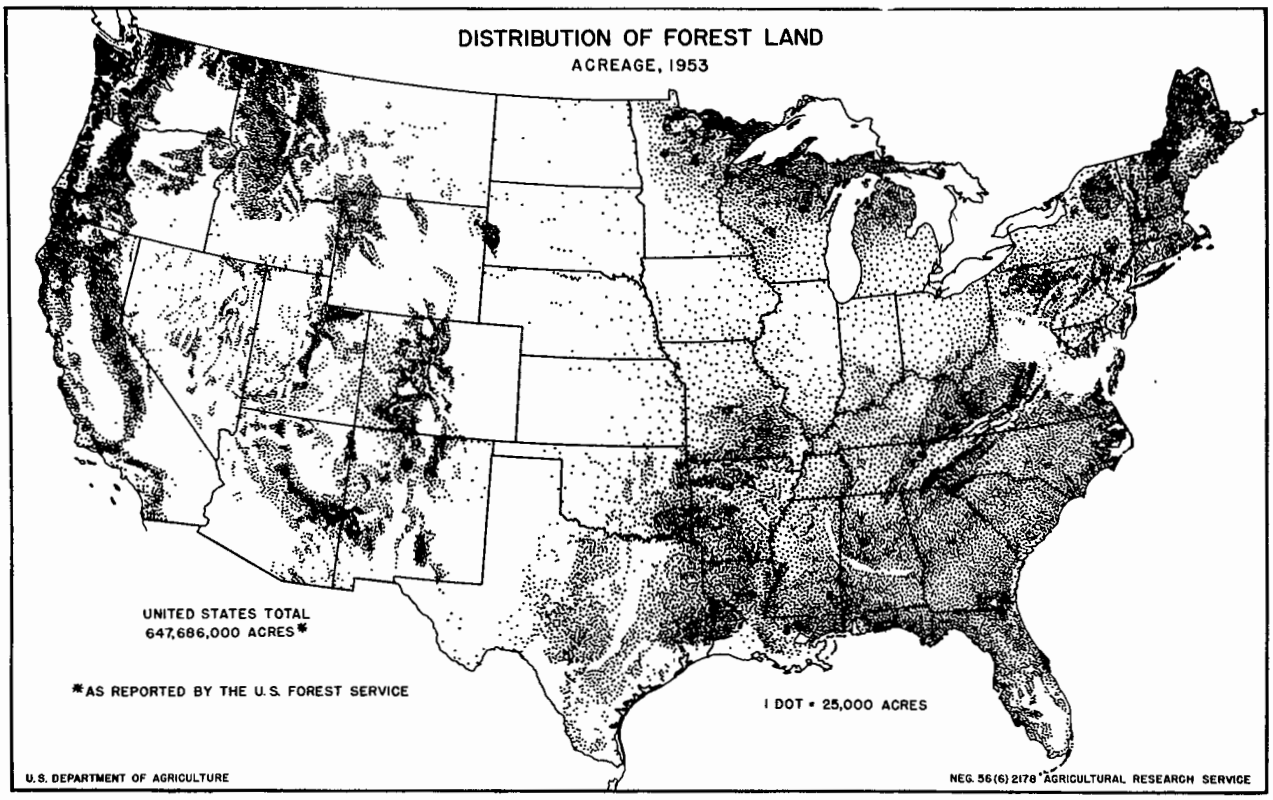
PASTURE OTHER THAN CROPLAND AND WOODLAND

The 466 million acres of pasture other than cropland and woodland reported in the 1959 Census of Agriculture amounts to about three-fourths of the total of 633 million acres of grassland pasture reported by the Economic Research Service. Most of the acreage of grassland pasture not included in the Census of Agriculture is located in the Western States and is federally-owned land grazed under a permit rather than a lease. If this additional grassland pasture and range were indicated on the accompanying map, many of the areas in the Western States in which relatively few dots are found would show a considerably higher acreage. For example, in Utah 9.2 million acres of pasture other than cropland and woodland was reported in the 1959 Census. The Economic Research Service reports 24.7 million acres of grassland pasture and range in Utah for 1959. A county distribution of this 15.5 million acres of grassland pasture and range not reported in the Census of Agriculture is difficult to obtain.



WOODLAND PASTURED

The 93 million acres of woodland pasture reported by the 1959 Census of Agriculture constitutes about 38 percent of the total 245 million acres of woodland and forest pasture and range reported by the Economic Research Service. Both in the Southern and Western States a considerable acreage of forest land that is often grazed on a seasonal basis only is not included in the acreage of woodland pasture reported by the Census of Agriculture. A major reason for this difference is the sizable acreage of federally-owned land administered by the U.S. Forest Service that is grazed primarily on a permit basis when grazing is permitted at all. Other public and private forest land is also grazed on a similar basis and therefore was not included in the census acreage.



DISTRIBUTION OF FOREST LAND

The distribution of the total forest area of the 48 States as estimated by the U.S. Forest Service as of 1953 is shown on the accompanying map. This is the most recent map available showing the distribution of the total forest area.

In estimating the acreage of forest land area, the Forest Service used the following definition of forest land:

Forest land area includes (*a*) lands which are at least 10 percent stocked by trees of any size and capable of producing timber or other wood products, or of exerting an influence on the climate or the water regime; (*b*) land from which the trees described in (*a*) have been removed to less than 10 percent stocking and which have not been developed for other use; (*c*) afforested areas; and (*d*) chaparral areas. It does not include orchard land. The minimum area that qualifies as forest land is 1 acre in the East and 10 acres in the West. Roadside, streamside, and shelterbelt strips of timber, in addition to meeting the above requirements, must be at least 120 feet wide to qualify as forest land.

It is important to note that chaparral areas are included under this definition. The chaparral land area is defined by the Forest Service as including "lands supporting heavily branched dwarf trees or shrubs, usually evergreen, the crown canopy of which covers more than 50 percent of the ground and whose primary value is watershed protection."

Approximately three-fourths of the total forest area in the 48 contiguous States was classified as commercial forest land. (Classification of the total forest area of Alaska and Hawaii has not yet been completed.) The noncommercial area is made up mainly of unproductive and unreserved woodland and forest land. However, about 27 million acres (including 11 million unproductive acres) are reserved for special purposes such as parks and wildlife refuges.

Commercial forest land is made up of all forest land which (1) is producing, or physically capable of producing, usable crops of wood (usually sawtimber or pulpwood), (2) economically available now or prospectively, and (3) not withdrawn from timber utilization.

In appraising the commercial value of forest land in different parts of the United States, it is particularly important to recognize the varying rates of growth associated with differences in climate, soil, topography, drainage, and other conditions. The growth rates for forests in central Alaska or northern Maine are strikingly different from those for Georgia and Louisiana, for example. Thus not only total acreage but the productivity of our forest land must be carefully considered in planning for the Nation's long-range needs for wood products.

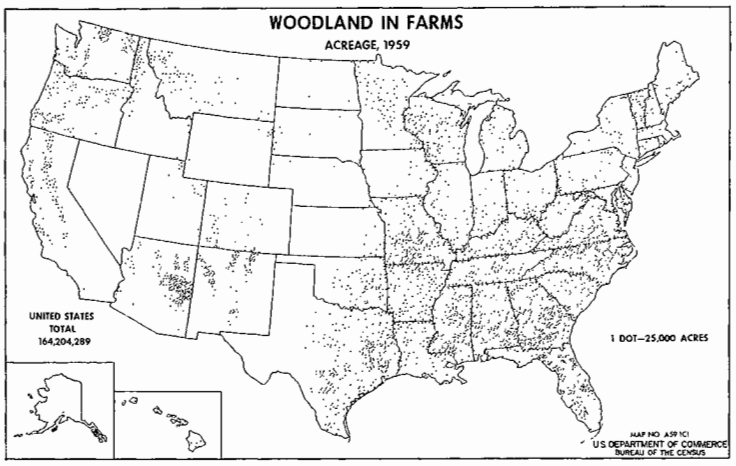
The total forest and woodland area for the 50 States, as of July 1960, was approximately 774 million acres, according to the forest inventory of the U.S. Forest Service. Of this total forest and woodland area, 132 million acres are located in Alaska. Hawaii has about 2 million acres of forest and woodland.

The regional distribution of the forest land area reported by the Forest Service as of 1953 and 1960 is shown by the accompanying table. It should be pointed out that the Forest Service carries out the inventory of forest resources on a continuous basis. Not all parts of the United States have yet had a complete forest inventory. On the other hand, in those States where forest land is of major importance and where marked changes in the acreage and composition of the forest are occurring, two and even three inventories have been completed during the past 25 years.

FOREST LAND AREA IN UNITED STATES, BY REGIONS, 1953 AND 1960 [1]

Region	Forest land	
	1953	1960
	1,000 acres	*1,000 acres*
Northeast	66,365	66,892
Corn Belt	31,229	31,349
Lake States	55,201	54,614
Northern Plains	5,752	5,377
Appalachian	69,307	70,202
Southeast	79,818	77,860
Delta States	51,809	54,170
Southern Plains	48,037	38,150
Mountain	143,498	144,288
Pacific	96,670	96,580
48 conterminous States	647,686	639,482
Alaska	[2]	132,314
Hawaii	[2]	2,000
United States (50 States)		773,796

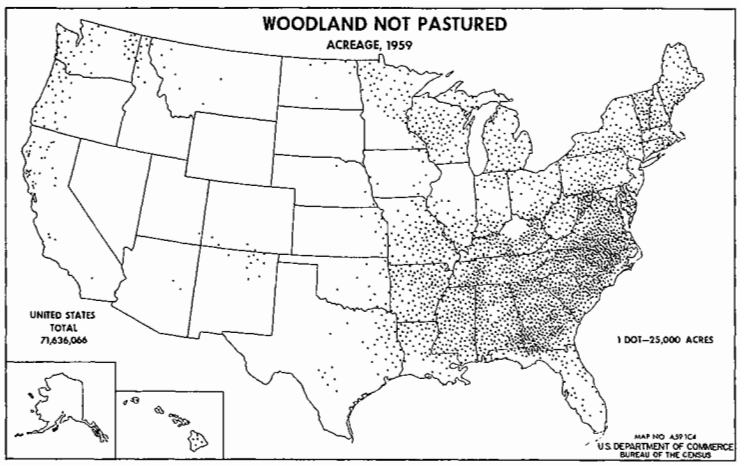
[1] As reported by the U.S. Forest Service. Changes between 1953 and 1960 are in part due to the availability of more detailed surveys for some areas in 1960.
[2] Not available.



WOODLAND IN FARMS

The 1959 Census of Agriculture reported 164 million acres of woodland in farms. The instruction on the questionnaire used in taking the census was as follows: "Include as woodland all wood lots and timber tracts, cutover and deforested land which has value for wood products and has not been improved for pasture." Application of this instruction does not necessarily yield the acreage reported by the U.S. Forest Service, which has gathered its information about forest and woodland acreage through the observations of trained foresters who are applying the definitions cited on the previous page of this report.

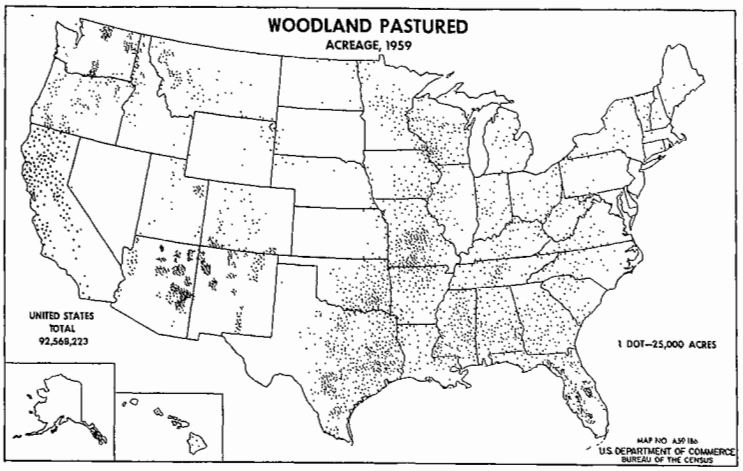
The instructions in the 1959 census questionnaire are somewhat more precise than the corresponding instructions used in the 1954 census. In the 1950 census, no definition of woodland was given apart from an instruction to enumerators to include brush pasture as woodland. It is important to assume in using census data on woodland area that some changes in woodland acreages from one census to another may merely represent differences in interpretation as to what constitutes "woodland."



WOODLAND NOT PASTURED

It is interesting to compare the map showing the distribution of woodland not pastured with the one showing woodland pastured. For that reason the map of woodland pastured is repeated on this page.

The heaviest concentration of nonpastured woodland in farms is located in the Appalachian and Southeastern States. The dominance of such cash crops as cotton, tobacco, and peanuts over extensive parts of these two regions is an important factor accounting for a high proportion of the farm area remaining in forests. Much woodland in this part of the South is physically suitable for crop production. On the other hand, a considerable acreage of woodland in farms in areas of rough topography is not likely to be used for crops or even for pasture. These forest areas are often not operated properly from the standpoint of good forest management.



WOODLAND PASTURED

In some parts of the country, such as the longleaf-slash pine forests of the southeastern Coastal Plain, commercial forest land can be used for grazing livestock with little if any damage to the forest itself, provided of course that harmful practices such as periodic burning are not associated with the grazing operation.

Woodlands of the Southwest, some of which generally have relatively little value for the production of wood products, are among the major woodlands being grazed. There is also some grazing of hardwood forests in the Northeastern and North Central States. Generally the grazing of these hardwood forests is not compatible with good forest management.

REGIONAL PATTERNS OF LAND RESOURCES AND USES

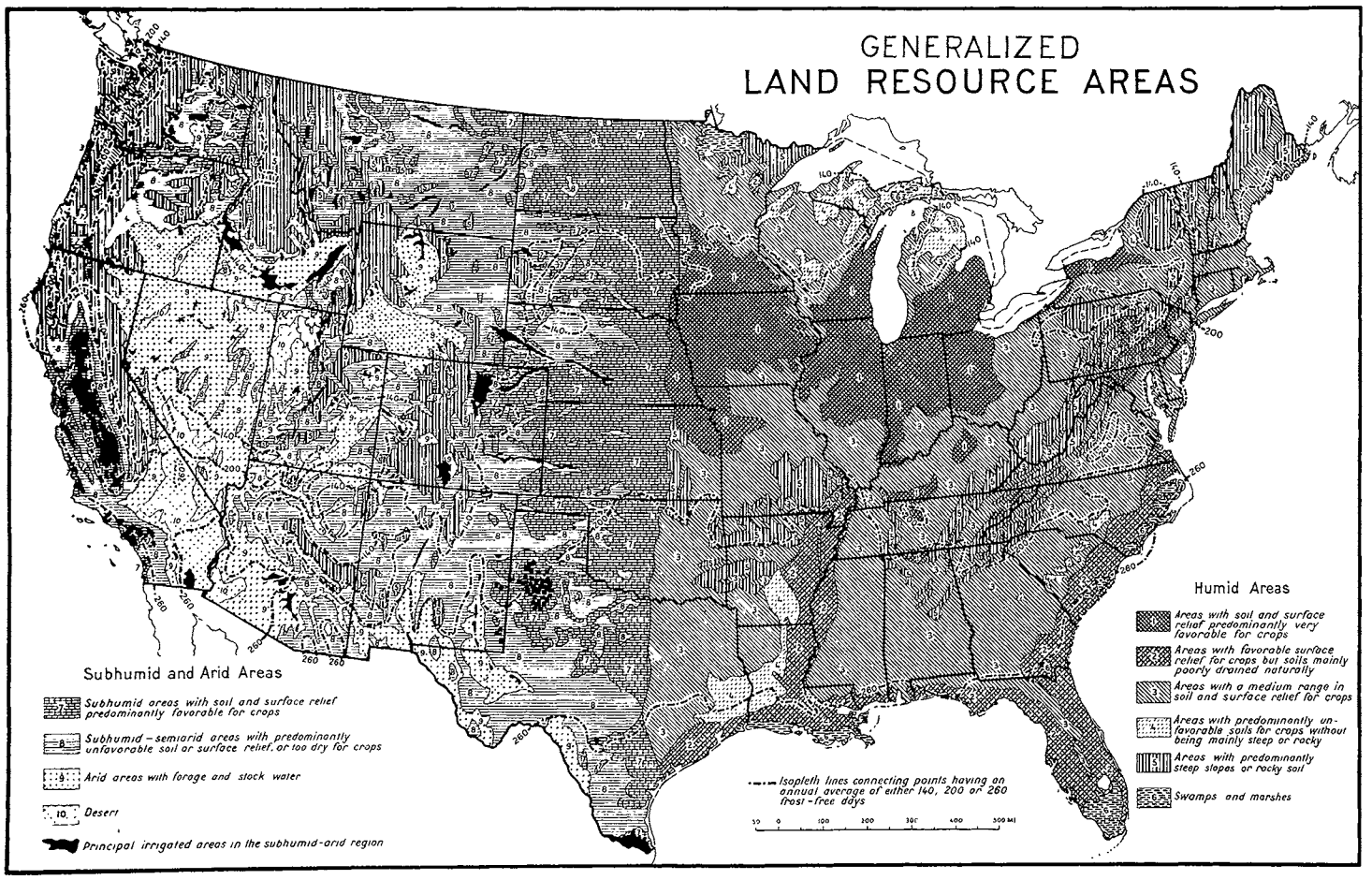
Areal differences in the physical character and the uses made of land resources have always been of great significance in understanding the patterns of such major activities as agriculture and forestry in this country. Major physical characteristics of the land particularly affecting its use for agriculture and forestry are: (1) Annual amount and seasonal distribution of precipitation; (2) temperature and the length of the frost-free season; (3) land relief, including degree and direction of slope; (4) soils; and (5) vegetation.

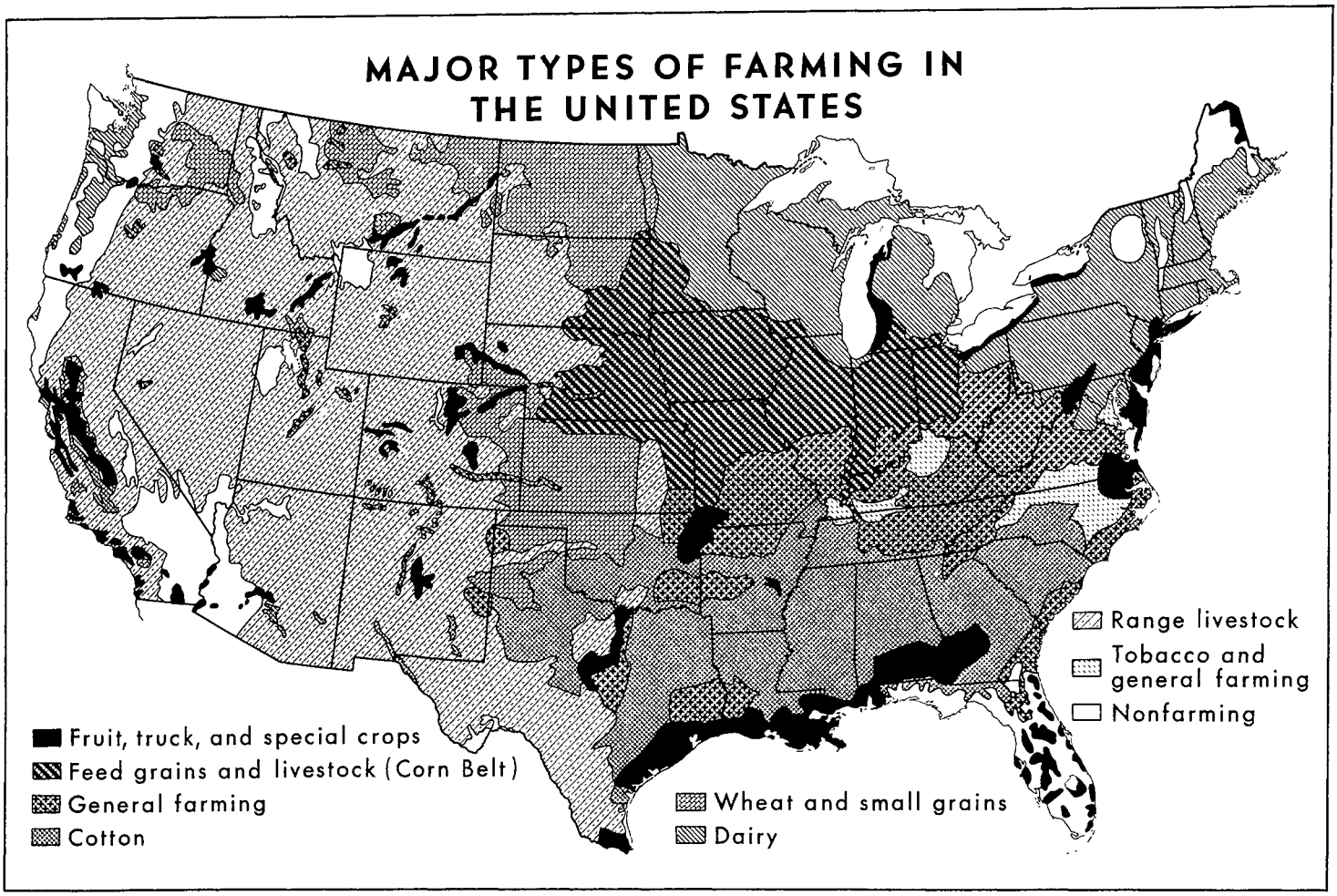
Often the natural environment may be altered in such a way that land resources which in their original condition were not usable for agriculture may become valuable for agricultural production. Land improved by drainage and irrigation falls into this category. Increased use of fertilizer has also proved profitable on land with inherently infertile but efficiently amendable soils.

Numerous other influences also affect the regional patterns of land use. The history of land settlement often plays a very significant role in the present use of resources. Control or ownership of the land may also affect its use. The distribution of population is important too. Changes in the population distribution are occurring, and these shifts of course have a bearing on major changes in the use of land resources. Changing technology is of considerable importance. Improvement in the varieties of grain sorghum, for example, have led to a considerable expansion of land used for that crop. The increasing mechanization of the cotton harvest has played a part in shifting cotton production to more level lands and to larger farms. The presence of mineral production or of manufacturing industries may affect the labor supply and thus play a part in deemphasizing agriculture in a particular area.

Shifts in the use and productivity of land resources among regions have been taking place. The pattern of use may also change within a region. Among some of the changes that have been occurring are (1) the westward migration of cotton production to the Mississippi Delta, to Texas, and to California; (2) increased planting and sustained yield management of forest resources in areas where crop agriculture was formerly important; (3) improvement and expansion of pasture on land formerly used mainly for crop production; (4) introduction and expanded use of such crops as soybeans and grain sorghums in regions where corn or wheat had generally dominated the crop picture for so many years.

The maps in this section of the report are intended to give a general understanding of the differences in the regional distribution of land resources and how they are used. The map of "General Resource Areas" was first published in the 1958 Yearbook of Agriculture as part of a chapter entitled "Our Wealth of Land Resources." The map of "Major Types of Farming in the United States" has served for several years as an effective means of gaining an initial acquaintance with the regional differences in farming found in the several parts of the United States. The map showing the "Major Uses of All Land As Compared With Total Land Area" gives at a glance some of the striking differences in the major uses of land found among the several farm production regions in the United States.





GENERALIZED LAND RESOURCE AREAS

The accompanying map is presented to give an overall view of the combinations of various physical conditions in different parts of the United States. The caption describing the contents of this map in the 1958 Yearbook of Agriculture effectively emphasizes the major points presented by the map, therefore it is cited here: "Our land exhibits a wide range in productive capacity. Climate, surface relief, and soil are the major factors that, through various combinations, have produced the great diversity in the use potentiality of the land. Of these factors, climate is the most important because moisture supply controls land use. The land-resource areas delimited here are therefore first divided according to moisture differences.

"The country is divided into a humid East and a drier West, in which only the higher mountains and the North Pacific Coastal region receive enough precipitation to bring them in the humid category. The line drawn to separate the humid East from the drier West, running almost north and south across the middle of the country, represents no abrupt change, but is placed in the zone of transition between moist and dry. It approximates a line that separates the area where average annual precipitation exceeds average potential evapotranspiration from those where the reverse is true.

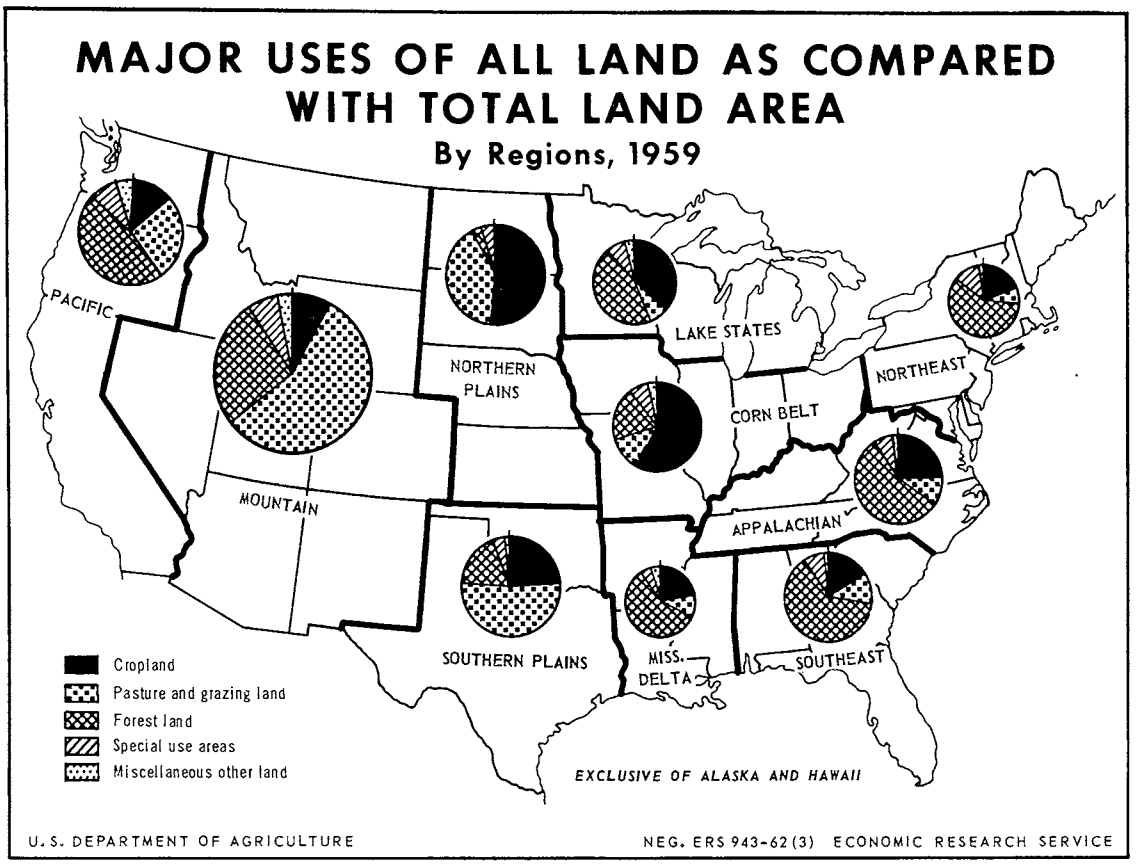
"Broad belts differentiated according to length of frost-free season are used to give some indication of differences in temperature that affect potentialities of land resources. Among the humid areas, differences in surface relief, soils, and drainage account for the different classes of areas shown. Among the subhumid and arid areas, different degrees of aridity overshadow differences in surface relief or soil in all but the moister areas and therefore mainly account for the different classes of drier areas."

MAJOR TYPES OF FARMING

Studies of types of farming in the United States have permitted the periodic assembling of data about the characteristics of American agriculture, including its economic units in terms of crops grown, livestock and livestock products produced, methods used in production, and sources of income. These studies have also aided in explaining the areal differences that have developed in farming in the United States. Type-of-farming studies also provide a classification of the production programs on individual farms into types of farming, which can in turn be generalized by regions and areas.

Types of farming for the United States were first presented in the U.S. Department of Agriculture Yearbook for 1908. Later a map of agricultural provinces in the United States was developed by O. E. Baker and others. By 1930 this map had been refined and the number of provinces, or regions as they were later called, was increased from 10 to 12. As a part of the 1930 Census of Agriculture a detailed study of types of farming was made, and a map was published in 1935. On this map, 514 type-of-farming areas were regionalized into 12 major type-of-farming regions and 100 subregions.

In 1950, the U.S. Department of Agriculture published the results of further study of type-of-farming areas as Agriculture Information Bulletin No. 3. A progressive grouping of State type-of-farming areas, maps of which had been prepared by many of the States prior to and after the 1935 type-of-farming study, gave the most recent generalization of types of farming in the United States. The color map published at that time divides the country into 165 generalized type-of-farming areas, 61 subregions, and 9 major agricultural regions. It is the nine major agricultural regions or major type of farming areas which are presented on the accompanying map.



MAJOR USES OF LAND BY REGIONS

The regional distribution of the major uses of land is shown in the accompanying map and tables. Cropland acreage reported in this table is based on the acreage reported by the Census of Agriculture, adjusted by the Economic Research Service of the U.S. Department of Agriculture for some under-enumeration.

Several striking regional differences in the uses made of land exist. Cropland occupies more than half of the total land area in two of the farm production regions—the Corn Belt and Northern Plains regions. On the other hand, six of the regions have less than 25 percent of the land area used as cropland (Northeast, Appalachian, Southeast, Mississippi Delta, Mountain, and Pacific). Hawaii and Alaska have a relatively small part of the total land area in cropland.

In relation to the other major uses of land, grassland pasture and range dominates the various land uses in the Mountain and Southern Plains States. More than half the total land area of these States is so used. In the Northern Plains, two-fifths of the land area is used for grazing, which combined with the high proportion of land used as cropland (52 percent) gives this region the highest percentage of total land area in agricultural use (93 percent). At the other extreme, only 26 percent of the land area in the Northeast is used for agriculture.

Forest and woodland is the main use of land in 6 of the 10 farm production regions (Northeast, Lake, Appalachian, Southeast, Mississippi Delta, and Pacific States). In the Southeast, 63 percent of the land area is in forest and woodland. More than half the land area is in forest and woodland in the Northeastern, Delta, and Appalachian States. On the other hand, only 3 percent of the land area of the Northern Plains States is in forest and woodland. Most of this is in the Black Hills and along water courses.

Other land includes land in very intensive uses such as urban development and transportation. It also includes some very extensive areas that are being put to relatively little productive use. The large expanse of tundra in Alaska and the desert areas in some of the Western States are examples of such areas.

MAJOR USES OF LAND BY REGIONS, UNITED STATES, 1959

Region	Cropland	Grassland pasture and range	Forest land	Special-use areas	Miscellaneous other land	Total land area
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*
Northern:						
Northeast	20,973	7,999	66,892	13,524	2,936	112,324
Lake States	45,495	8,266	54,614	10,445	3,889	122,709
Corn Belt	95,090	21,806	31,349	12,018	5,021	165,284
Northern Plains	101,054	79,743	5,377	8,218	485	194,877
Total	262,612	117,814	158,232	44,205	12,331	595,194
Southern:						
Appalachian	29,990	12,984	70,202	8,525	2,849	124,550
Southeast	21,071	13,939	77,860	9,939	1,259	124,068
Mississippi Delta	20,808	9,358	54,170	4,890	3,464	92,690
Southern Plains	53,916	109,239	38,150	9,104	1,897	212,306
Total	125,785	145,520	240,382	32,458	9,469	553,614
Western:						
Mountain	42,952	312,832	144,288	29,901	18,475	548,448
Pacific	26,134	53,965	96,580	17,839	9,982	204,500
Alaska	24	2,350	132,314	17,090	213,703	365,481
Hawaii	500	646	2,000	376	584	4,106
Total	69,610	369,793	375,182	65,206	242,744	1,122,535
48 States	457,483	630,131	639,482	124,403	50,257	1,901,756
United States (50 States)	458,007	633,127	773,796	[1] 141,869	264,544	2,271,343

[1] Excludes wilderness areas.

MAJOR USES OF LAND BY REGIONS, UNITED STATES, 1959

Region	Percentage in major uses of total land area				
	Cropland	Grassland pasture and range	Forest and woodland	Other land	Approximate land area
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Northern:					
Northeast	19	7	59	15	100
Lake States	37	7	44	12	100
Corn Belt	58	13	19	10	100
Northern Plains	52	41	3	4	100
Total	44	20	27	9	100
Southern:					
Appalachian	24	11	56	9	100
Southeast	17	11	63	9	100
Mississippi Delta	22	10	59	9	100
Southern Plains	26	51	18	5	100
Total	23	26	43	8	100
Western:					
Mountain	8	57	26	9	100
Pacific	13	26	47	14	100
Alaska	(1)	1	36	63	100
Hawaii	12	16	49	23	100
Total	6	33	33	28	100
48 States	24	33	34	9	100
United States (50 States)	20	28	34	18	100

[1] Less than one-half of 1 percent.

SPECIAL USES OF LAND, BY REGIONS

Special uses of land vary widely. They include such uses as those for urban areas, highways, railroads, airports, parks, national defense areas, wildlife refuges, farmsteads, and farm roads and lanes. For the most part, these uses are nonagricultural. Recent interest in this group of uses centers around the question of whether or not it is desirable to use good agricultural land for urban sites and other similar purposes when less desirable agricultural land suitable for such uses is available. Competing demands for the use of land are particularly acute in good farming areas where urban and industrial expansion has been rapid.

The total acreage occupied by the special uses of land (exclusive of wilderness areas), totaled 142 million acres for all 50 States in 1959. For the 48 States the total was 124 million acres, which compares with 110 million acres estimated to have been in these same uses in 1954. In 1945 and 1950 it was estimated that approximately 100 and 105 million acres respectively were in these uses. Thus during the past 15 years, after allowance is made for some differences in definition, more than 20 million acres have been transferred to this special category of land use.

Use of land for artificial reservoirs is not shown in the above table. As reservoirs are deducted from the land area when completed, they are not included among the special uses of land. Excluding most natural lakes with controlled water levels, such as Lake Okeechobee in Florida, artificial reservoirs occupied approximately 9 million acres in 1959. The water area of reservoirs that were completed between 1950 and 1960 occupies about 2.1 million acres. In addition to the large reservoirs, which are excluded from the land area, there were nearly 7 million acres of water area in small ponds, lakes, and reservoirs of less than 40 acres in size and in small, narrow streams. This acreage has not been deducted from the land area.

SPECIAL USES OF LAND, BY REGIONS, 1959

Region	Urban areas	Rural highways, railroads, and airports	Rural parks	Wildlife areas	National defense, flood control, and industrial areas	State-owned institutions and miscellaneous other uses	Farmsteads, farm roads, and lanes	Total
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*
Northeast	5,821	2,100	3,137	1,234	599	84	549	13,524
Lake States	2,653	2,892	832	2,323	400	101	1,244	10,445
Corn Belt	4,354	3,651	284	392	814	140	2,383	12,018
Northern Plains	615	3,874	430	457	1,548	38	1,256	8,218
Appalachian	2,178	1,911	1,196	575	1,405	220	1,040	8,525
Southeast	2,904	2,030	1,172	788	2,156	318	571	9,939
Delta States	1,118	1,122	80	841	942	71	716	4,890
Southern Plains	3,006	2,110	824	538	1,539	64	1,023	9,104
Mountain	1,254	3,540	8,316	1,321	14,643	137	690	29,901
Pacific	3,218	1,899	6,289	918	4,814	63	638	17,839
48 States	27,121	25,129	22,560	9,387	28,860	1,236	10,110	124,403
50 States	27,217	25,219	29,723	17,216	31,122	1,236	10,136	[1] 141,869

[1] Excludes wilderness areas.

DEVELOPMENT AND CONSERVATION OF LAND RESOURCES

Present development and improvement of land is not comparable to the large-scale pioneering and homesteading of new areas that were so important during the settlement period in American history. However, considerable development and improvement of land, much of it on existing farms, is still taking place. The development of land includes the preparation of unimproved or presently nonarable land for crops and improved pastures by carrying out such practices as installing drainage, clearing woodland or brush, removing stones or old stumps, and leveling, ditching, or terracing unimproved land for irrigation. Improvement of land refers to the application of these various measures to land that is presently used as cropland or improved pasture, but that can be made more productive by carrying out additional land improvement.

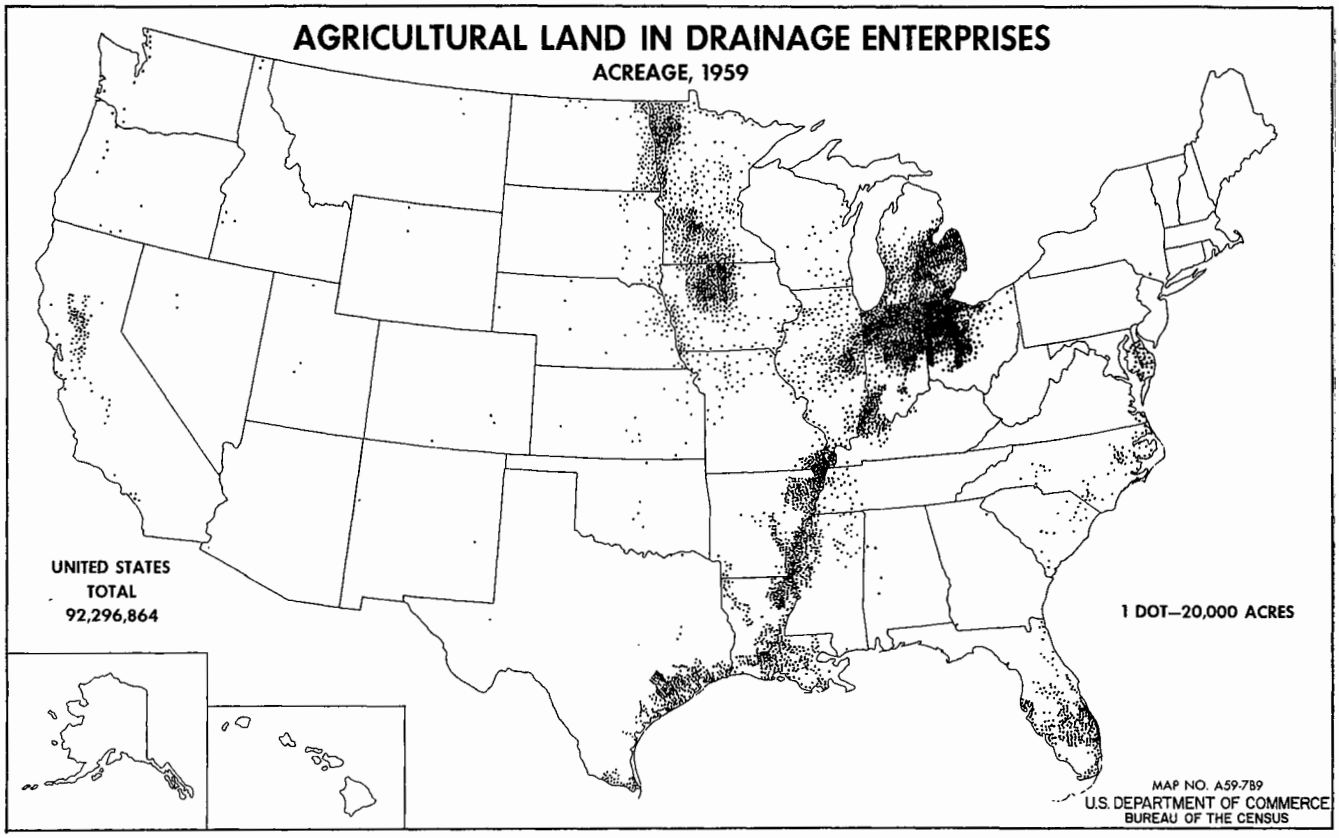
Many farmers have only limited acreages of cropland available with which to expand the farm business. On many small farms on which capital and land resources are limited, more effective use of existing land resources in the farm unit may be possible by carrying out certain development or improvement measures. Operators of large farms may have a choice of making more intensive use of the existing acreage of improved land or of developing additional land in the farm.

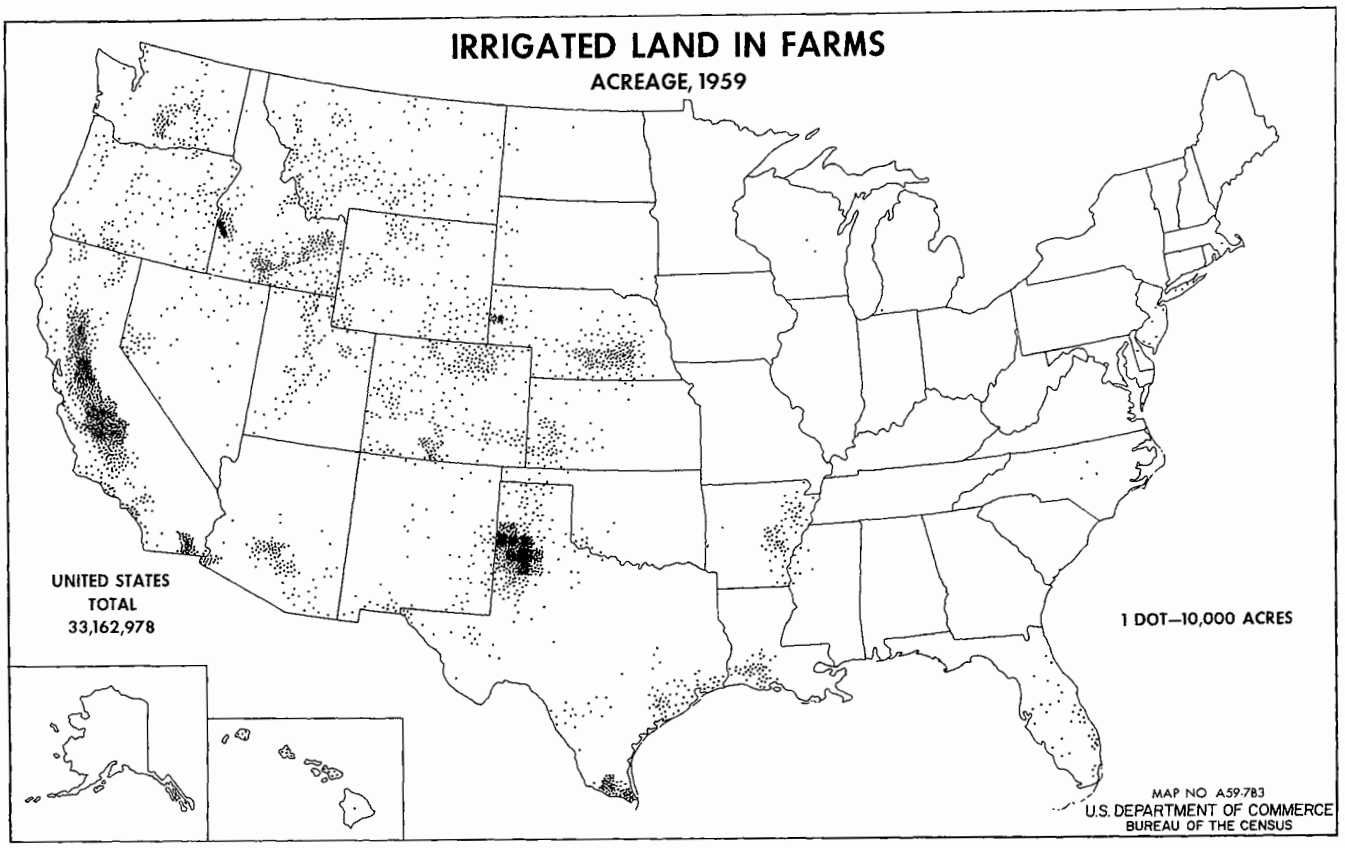
Development and improvement of land by irrigation continues to expand. During the last decade, the acreage irrigated has increased by 7 million acres. About half of this increase represents the development of new cropland. The remainder results from irrigation of dry cropland in the West and the supplemental irrigation of cropland in the humid Eastern States. The productivity of some of the land already being irrigated in the West also may be increased by supplementing the existing sources of water with additional water from new irrigation works. Leveling and releveling of land is an important aspect of development and improvement of land by irrigation in some areas.

The drainage of land for agricultural uses has been a major practice in the development and improvement of land for many years. Approximately 65 million acres were in organized drainage enterprises at the time of the first census of drainage taken in 1920. Land in organized drainage enterprises in 1959 totaled 102 million acres.

The appreciation of the need to conserve such basic resources as soil, water, forests, grassland, and wildlife has resulted in the development of programs aimed at the wise use of natural resources that are a vital part of the Nation's wealth. Recently, several agencies of the U.S. Department of Agriculture working together have completed a National Inventory of Soil and Water Conservation Needs. This inventory contains comprehensive data tabulated to present the major soil and land-use characteristics of the country. This basic information was used in analyzing the present and prospective conservation needs of the country. The results of this inventory are in process of publication.

In this section of the graphic summary, some selected maps and graphs are presented to illustrate the present status and significant changes taking place in the development and conservation of land resources.





AGRICULTURAL LAND IN DRAINAGE ENTERPRISES

In 1960, the area reported in organized drainage districts by the Bureau of the Census was 102 million acres. This was practically no change from the total acreage reported in drainage districts since 1950, when 103 million acres were reported. However, these data should not be construed to mean that very little drainage activity occurred during this period within the existing enterprises and on other land not included in them. Perhaps another 70 million acres had been drained by individual farmers outside drainage districts. Under the Agricultural Conservation Program of the U.S. Department of Agriculture, payments were made for installation of either open or enclosed drains or for shaping of land for drainage on nearly 17 million acres of land. This of course does not include land drained by farmers without Federal assistance.

Approximately 92 million acres of the land within organized drainage districts which had been drained was being used for agricultural production in 1960. The distribution of this acreage by farm production regions is shown in the accompanying text table:

Region	*1,000 acres*	*Percent*
Northeast	752	0.8
Lake States	21,022	22.8
Corn Belt	35,395	38.4
Northern Plains	3,412	3.7
Appalachian	2,893	3.1
Southeast	5,353	5.8
Delta States	14,832	16.1
Southern Plains	5,825	6.3
Mountain	390	0.4
Pacific	2,423	2.6
Total	92,297	100.0

IRRIGATED LAND IN FARMS

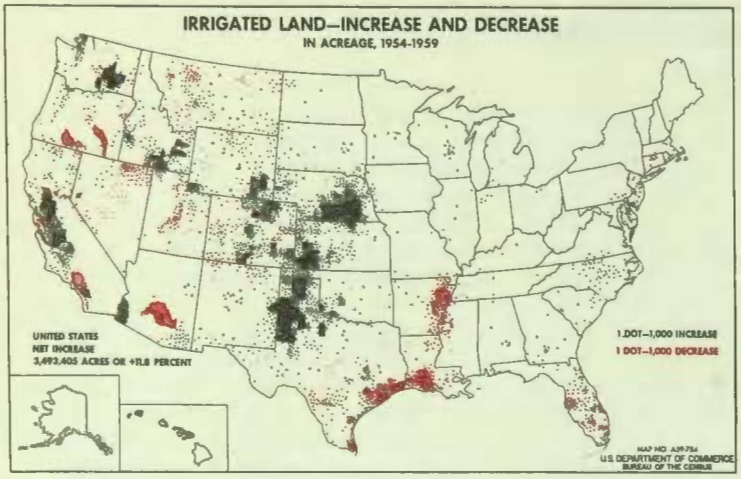
The distribution of the acreage of irrigated land in farms in 1959 is shown in the above map. Most of the irrigated acreage was in the 11 Western States, Texas, and Nebraska. California and Texas together had 13 million acres of the 33 million irrigated in 1959 in the United States.

The accompanying table shows the distribution of the acreage of irrigated land in 1949, 1954, and 1959 by farm production regions. The net change in acreage between 1949 and 1959 is also shown by regions.

IRRIGATED LAND IN FARMS, BY REGIONS, 1949–59

Region	Irrigated land in farms [1]			
	1959	1954	1949	Increase or decrease, 1949–59
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*
Northeast	206	188	87	119
Lake States	87	51	28	59
Corn Belt	87	69	16	71
Appalachian	118	85	7	111
Southeast	490	490	375	115
Delta States	1,296	1,698	1,004	292
Eastern States	2,284	2,581	1,517	767
Northern Plains	3,003	1,631	1,128	1,875
Southern Plains	5,853	4,815	3,166	2,687
Mountain	12,095	11,208	11,643	452
Pacific	9,787	9,317	8,334	1,453
17 Western States	30,738	26,971	24,271	6,467
Hawaii	141	[2]	117	24
Total United States [3]	33,163	[4] 29,552	25,905	7,258

[1] Totals do not add because of rounding.
[2] Not available.
[3] Excludes Alaska. Irrigated acreage in Alaska in 1959 was estimated at only 358 acres by the Alaska Agricultural Experiment Station.
[4] Excludes Hawaii in 1954.

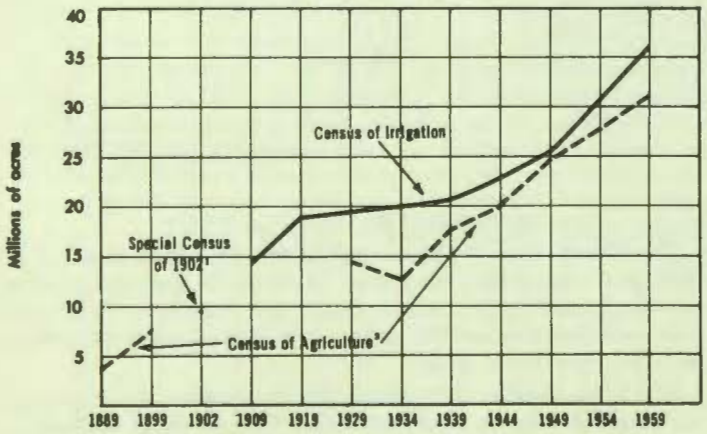


IRRIGATED LAND—INCREASE AND DECREASE

The accompanying map shows several areas with major increases of irrigated land, particularly in the High Plains of Texas, south-central Nebraska and southwestern Kansas, the Columbia Plateau area of Washington, the Central Valley of California, and southern Idaho. Reasons for the increases shown on the map vary with the several areas. The increases either reflect actual expansion of the total irrigated acreage, as in the Columbia Plateau, or in several instances, a recovery from drought conditions existing in 1954.

Decreases in irrigated acreage shown on the map are associated with four main factors: (1) Less acreage of rice in 1959 than in 1954 in Texas, Louisiana, and Arkansas with no substitution of another irrigated crop; (2) urbanization of irrigated areas, particularly in Arizona and California; (3) drought conditions in parts of the West in 1959, which meant less water for irrigation than was available in 1954; (4) adequate or more nearly adequate rainfall in eastern humid areas, which reduced the supplemental irrigated acreage in these areas.

ACREAGE OF IRRIGATED LAND FOR THE 17 WESTERN STATES AND LOUISIANA

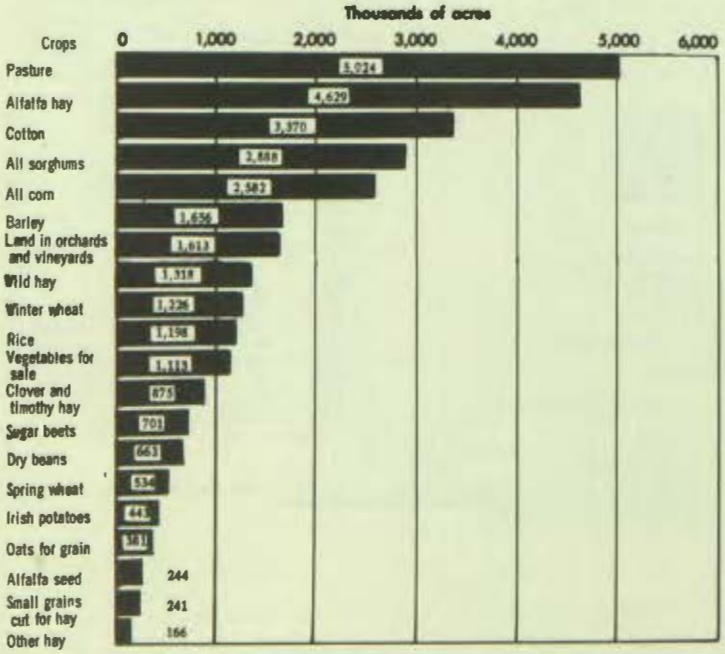


[1]Total irrigated land, all States.
[2]In 1889, 1899 and 1944 through 1959, all irrigated land in farms; 1929 and 1934, acreage of irrigated crops only; 1939, acreage of irrigated crops plus irrigated pasture. Data for 1909 and 1919 not available.

ACREAGE OF IRRIGATED LAND

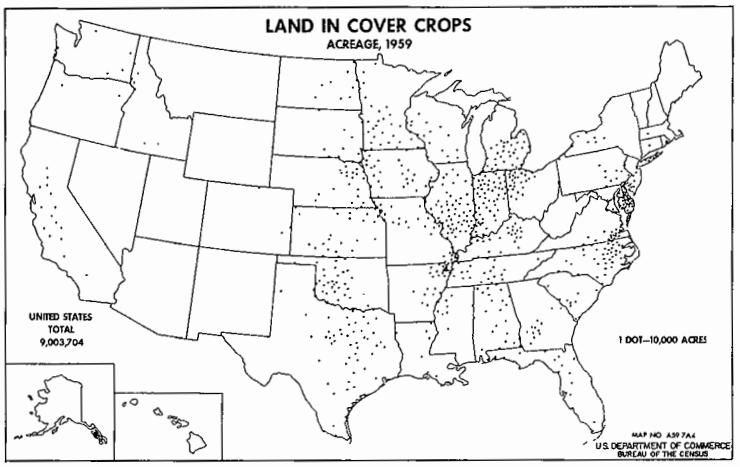
The acreage of irrigated land continued to increase in the United States between 1954 and 1959. The acreage of irrigated land in farms reported in 1959 was 33.2 million acres compared with 29.6 million acres in 1954 and 25.9 million acres in 1949. Thus during the 10 years, 1949–59, there was an increase of 7.3 million acres, or 28 percent in irrigated land in farms. The greatest increase for this 10-year period occurred in Texas, with an increase of 2.5 million acres. Nebraska was second with 1.2 million acres and California was third with 1.0 million acres. Colorado, Nevada, and Utah reported less irrigated land in farms in 1959 than in 1949. The percentage increase in irrigated land in farms in the 31 Eastern States amounted to 51 percent. The acreage was 1.5 million acres in 1949 and 2.3 million acres in 1959. Actually, more acreage was irrigated in the Eastern States in 1954, when 2.6 million acres were irrigated, than in 1959.

IRRIGATED ACREAGE OF SPECIFIED CROPS AND PASTURE IN THE 17 WESTERN STATES AND LOUISIANA: 1959



IRRIGATED ACREAGE OF SPECIFIED CROPS AND PASTURE IN THE 17 WESTERN STATES AND LOUISIANA

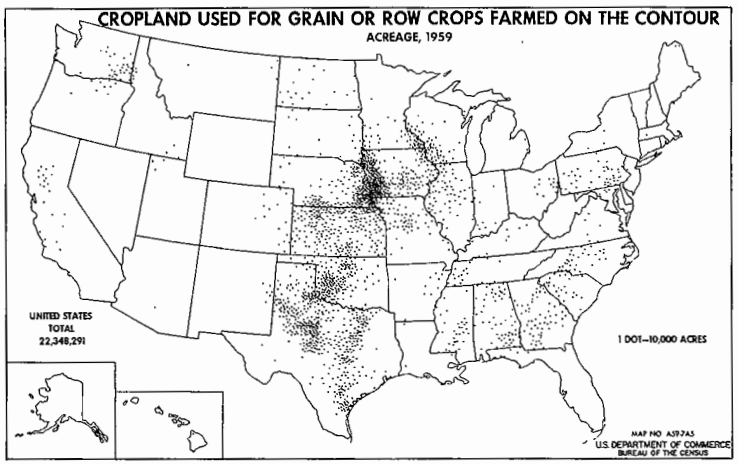
In 1959 irrigated land in the 17 Western States totaled 30.7 million acres. Louisiana had 0.5 million acres. Of this total of 31.2 million acres, the land used for pasture accounted for about 5 million acres, or one-sixth of the total. Hay of different kinds—alfalfa hay, wild hay, clover and timothy hay, small grains cut for hay, and other hay—accounted for about 6.8 million acres. Cotton was a major crop produced on irrigated land, since it occupied about 2.9 million acres. Sorghums, corn, barley, and oats, which are among the major feed grains, occupied about 5.9 million acres. Land in orchards, vineyards, and planted nut trees, winter wheat, rice, and vegetables harvested for sale each were produced on more than 1 million acres of irrigated land. Sugar beets, dry beans, and Irish potatoes accounted for a total of about 1.8 million acres. Altogether the specified crops shown on the accompanying graph accounted for nearly 30 million acres of the total 31.2 million acres of irrigated land in the 18 States indicated.



LAND IN COVER CROPS

About 9 million acres of land were planted in cover crops in 1959. Most of this acreage was found in the North Central and Southern Plains States and in the Southeastern and Appalachian States.

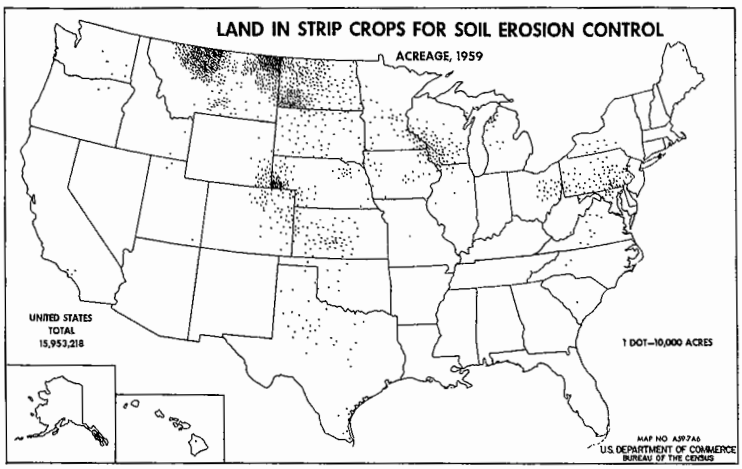
Cover crops are used as a means of enriching and protecting soil resources. Some cover crops are plowed under while still green, to provide organic matter. Other cover crops are more permanent and may occupy the land for a number of years. Annual crops grown for their cover value are generally planted in the fall to furnish cover during the winter months, or in some instances in the spring for protection of land during the summer months when cash and feed crops are not being grown.



CROPLAND USED FOR GRAIN OR ROW CROPS FARMED ON THE CONTOUR

The planting of grain or row crops on the contour has become a major conservation practice in the United States during the past 25 years. More than 22 million acres were reported in the 1959 Census of Agriculture as being farmed on the contour. Crops are planted on the contour when the rows or strips are laid out at right angles to the natural slope of the land. Farming land on the contour generally means that alternating strips or bands of different crops are also used in order to retard soil and water loss. Row crops alternating with close-sown crops is a common arrangement. The different crops commonly grown are also rotated among the different strips of land.

This practice is used especially in the Great Plains States and in the western part of the Corn Belt and Lake States. A considerable acreage is also found in Pennsylvania and eastern Ohio and in parts of the Southern States.



LAND IN STRIP CROPS FOR SOIL EROSION CONTROL

The practice of planting strips of wheat, barley, or oats alternating with strips of cultivated summer fallow at right angles to the prevailing wind direction has been especially common in the northern and central parts of the Great Plains. This practice was in use on approximately 16 million acres in 1959.

Along the dry margin for wheat production in the Great Plains there is a considerable hazard of soil blowing, especially in dry years. Wind stripcropping, stubble mulching, and other conservation practices help to control soil blowing. Some of the land on which these practices are currently being employed are from a physical standpoint better suited for the grazing of livestock than for the production of wheat.

FARM RESOURCES

FARM RESOURCES

Land, labor, and capital are the major inputs used in the production of agricultural commodities. The accompanying table from the U.S. Department of Agriculture Technical Bulletin No. 1238 entitled *Productivity in Agriculture* presents the changes in composition of inputs in agriculture from 1870 to 1957.

CHANGES IN COMPOSITION OF INPUTS, UNITED STATES AGRICULTURE, 1870–1957

Year	Percentage of total inputs [1]			
	Labor	Land real estate	Capital [2]	Total
Inputs Based on 1935–39 Price Weights				
	Percent	*Percent*	*Percent*	*Percent*
1870	65	18	17	100
1880	62	19	19	100
1890	60	18	22	100
1900	57	19	24	100
1910	53	20	27	100
1920	50	18	32	100
1930	46	18	36	100
1940	41	18	41	100
Inputs Based on 1947–49 Price Weights				
1940	56	14	30	100
1950	40	15	45	100
1957	31	15	54	100

[1] The use of different price weights prohibits direct comparison of composition percentages for the periods before and after 1940. However, changes in composition within the two price-weight periods, 1870–1940 and 1940–57, serve to indicate the magnitude of changes in composition of input. Comparisons of periods before and after 1940 substantiate the trend in changes of input mix.

[2] All inputs other than labor and real estate.

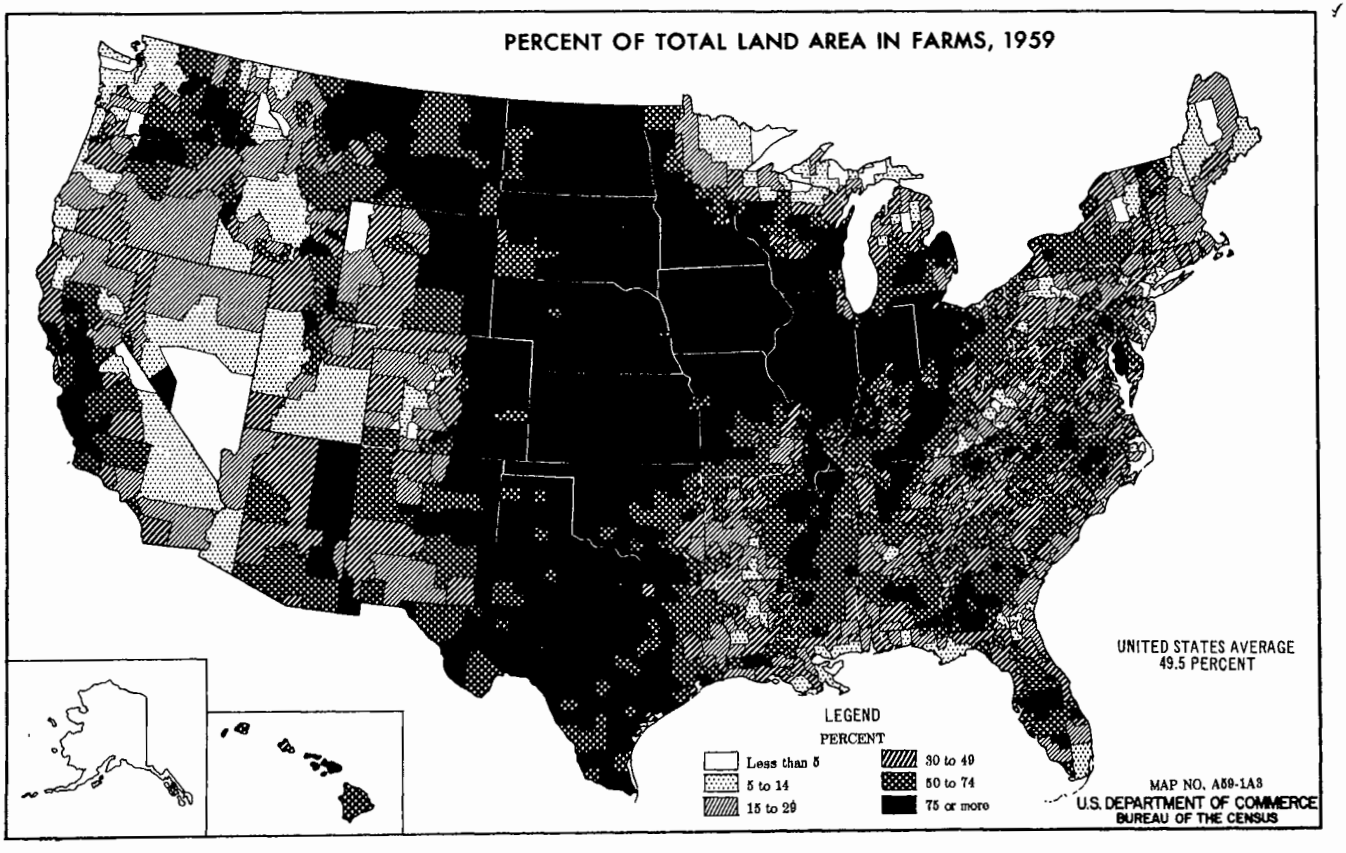
From this table three major conclusions are apparent: (1) Labor inputs have declined considerably as a part of the total inputs; (2) land has remained remarkably constant as an input; (3) capital has now become the dominant input in American agriculture.

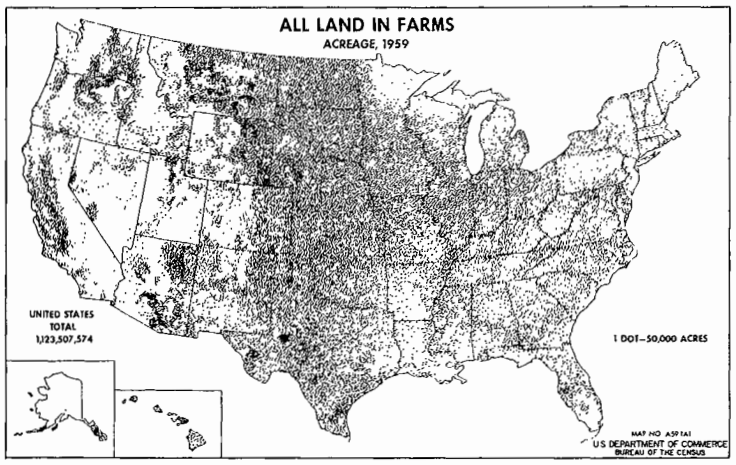
The maps and charts that follow in this section will graphically substantiate the trend indicated in the above table.

The first of the maps shown below indicates the percentage of total land area in farms in 1959 on a county unit basis. This map gives a fairly clear indication of where the major farming areas of the country are located. Not shown on the map is the significant change in the acreage of land in farms that has taken place between 1954 and 1959.

The acreage of land in farms, including that reported for the new States of Alaska and Hawaii, dropped from 1,161 million acres in 1954 to 1,123 million acres in 1959. This drop of 38 million acres was due to several factors. In the first place, a change was made in the definition of a farm between the census of 1954 and that of 1959. However, the decrease in land in farms resulting from this change in definition amounted to only 6 million of the 38 million-acre decrease. Part of the decrease can be attributed to the expansion of urban areas, since 7 million acres of the 38-million-acre decrease was in counties included in standard metropolitan areas. The Soil Bank program, which retired many whole farms from agricultural production, has also been a significant factor. Furthermore, the improvement in highways and the high degree of mobility of the labor force has meant that many farmers have just quit farming and are working full time in industrial jobs while commuting from the home on the farm that they no longer operate.

The retirement of this large acreage from agriculture along with the continued decline in farm population of course indicates that capital is being substituted for land and labor in the production of farm products in practically all parts of the United States.





ALL LAND IN FARMS

The distribution of land in farms is shown in the accompanying map. Land in farms is located in the major divisions of the country as follows:

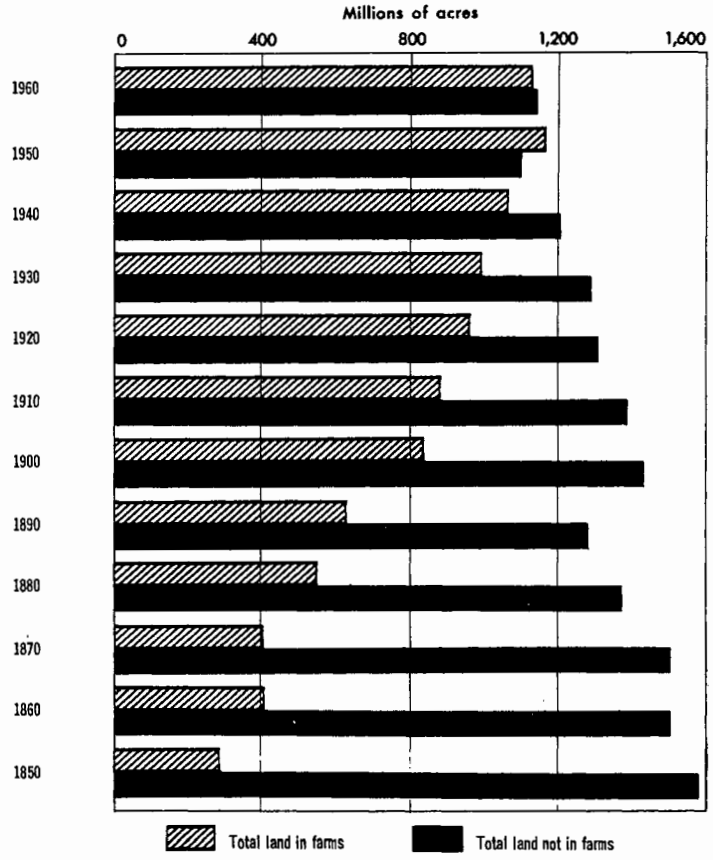
Region	Million acres	Percent of total land area
Northeast	40.3	36
North Central	385.4	80
South	353.2	64
West	341.2	45
Alaska and Hawaii	3.4	1
Total	1,123.5	49

North Central States include those in the Corn Belt, Lake States, and Northern Plains farm production regions.

The South includes those States in the Applachian, Southeast, Delta, and Southern Plains farm production regions.

The West includes the Pacific and Mountain States.

ACREAGE OF LAND IN FARMS AND NOT IN FARMS, FOR THE UNITED STATES: 1850 TO 1960

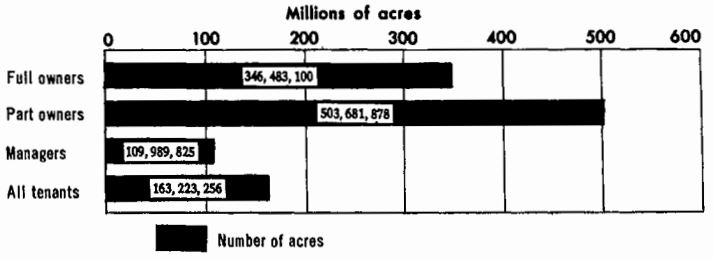


ACREAGE OF LAND IN FARMS AND NOT IN FARMS

From 1954 to 1959, there was a decline of approximately 38 million acres of land in farms in the United States. This was the third and largest decline in the acreage of land in farms since the first census of agriculture was taken in 1850. Furthermore, the acreage of land reported in farms was less than that which was not in farms. As a result primarily of including statistics for the new State of Alaska, the acreage of land in farms as a percent of the total land area declined from 60.8 in 1954 to 49.5 in 1959. The inclusion of data for Alaska was the first addition of territory in the agricultural census since the addition of New Mexico and Arizona as the 47th and 48th States in 1912.

Some of the reasons underlying the 38-million-acre decrease in land in farms between 1954 and 1959 are cited in the general text for this section of the report.

LAND IN FARMS, BY TENURE OF OPERATOR, FOR THE UNITED STATES: 1959

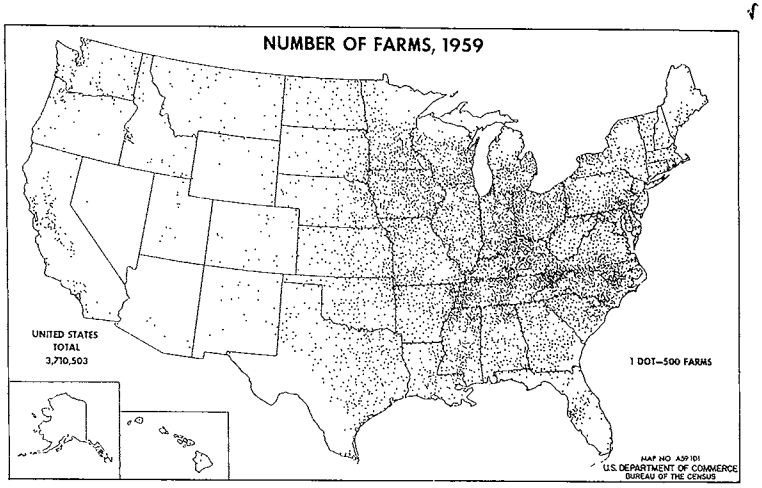


LAND IN FARMS BY TENURE OF OPERATOR

Of the four major tenure groups of farm operators, part owners operate about 44 percent of the total acreage. Full owners account for 31 percent of the total, and land operated entirely by tenants and that operated by managers accounts for about 15 and 10 percent respectively.

	Million acres	Percent of land in farms
Full owners	348.6	31
Part owners	498.3	44
Managers	109.8	10
All tenants	166.8	15
Total	1,123.5	100

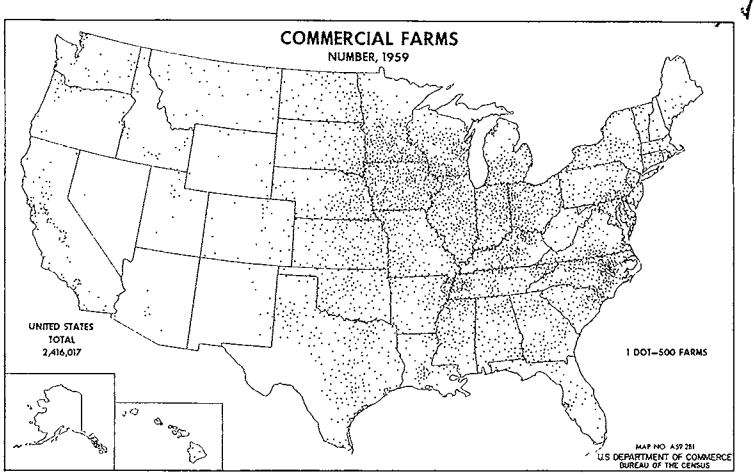
In 1954, full owners were operating 34 percent of the land in farms; part owners, 41 percent; all tenants, 16 percent; and managers, 9 percent.



NUMBER OF FARMS

In the 1959 Census of Agriculture 3.7 million farms were reported, 1.1 million fewer than were reported in 1954. Of this decrease, about 232,000 units that would have been counted as farms in 1954 did not meet the new definition of a farm adopted for the 1959 Census. However, even excepting the reduction in number of farms attributable to a change in the definition of a farm, the change in the number of farms was the greatest ever recorded for any 5-year period by the census of agriculture.

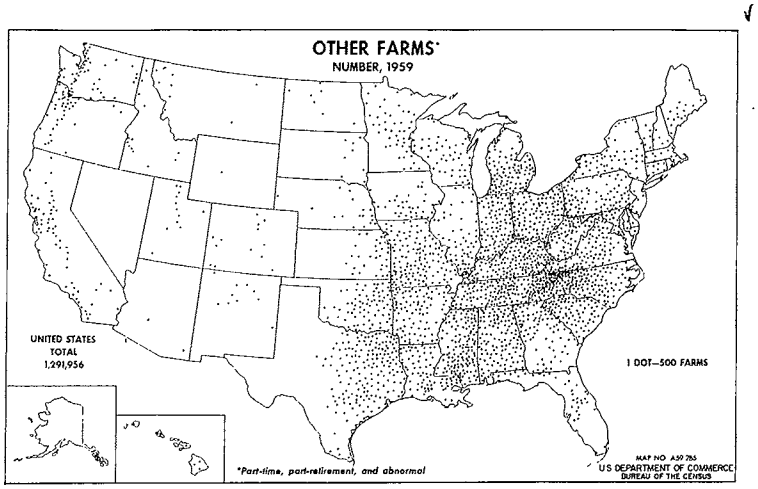
More than two-fifths of all the farms were located in the Southern States, which account for only a fifth of the total land area of the 50 States. On the other hand, the 11 Western States, Alaska, and Hawaii, which have one-half of the total land area, have only about a tenth of all farms. Farms are most evenly distributed among counties in the Corn Belt States. In parts of the Northeast, Southeast, and the Western States there are large areas where practically no farms may be found.



COMMERCIAL FARMS

Nearly two-thirds of all farms reported by the 1959 Census of Agriculture were classified as commercial farms. In general, all farms with a value of sales amounting to $2,500 or more were classified as commercial. Farms with a value of sales of $50 to $2,499 were classified as commercial if the farm operator was under 65 years of age and (1) he did not work off the farm 100 or more days during the year and (2) the income received by the operator and members of his family from nonfarm sources was less than the value of all farm products sold.

Almost half of all commercial farms in the United States were located in the Corn Belt, Lake States, and Northern Plains States. The Corn Belt States alone had nearly a fourth of all commercial farms. Among the States, Iowa had the largest number of commercial farms with 154,329.

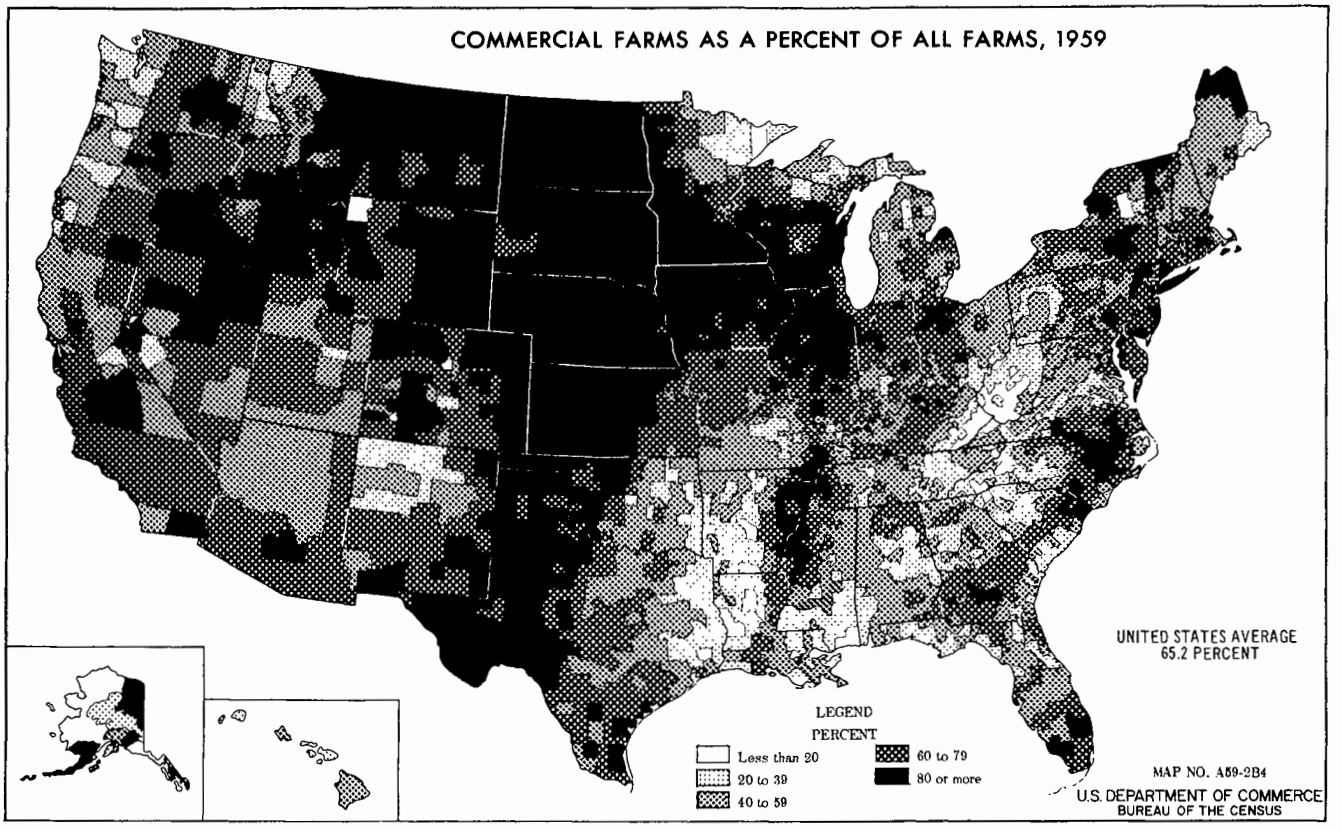


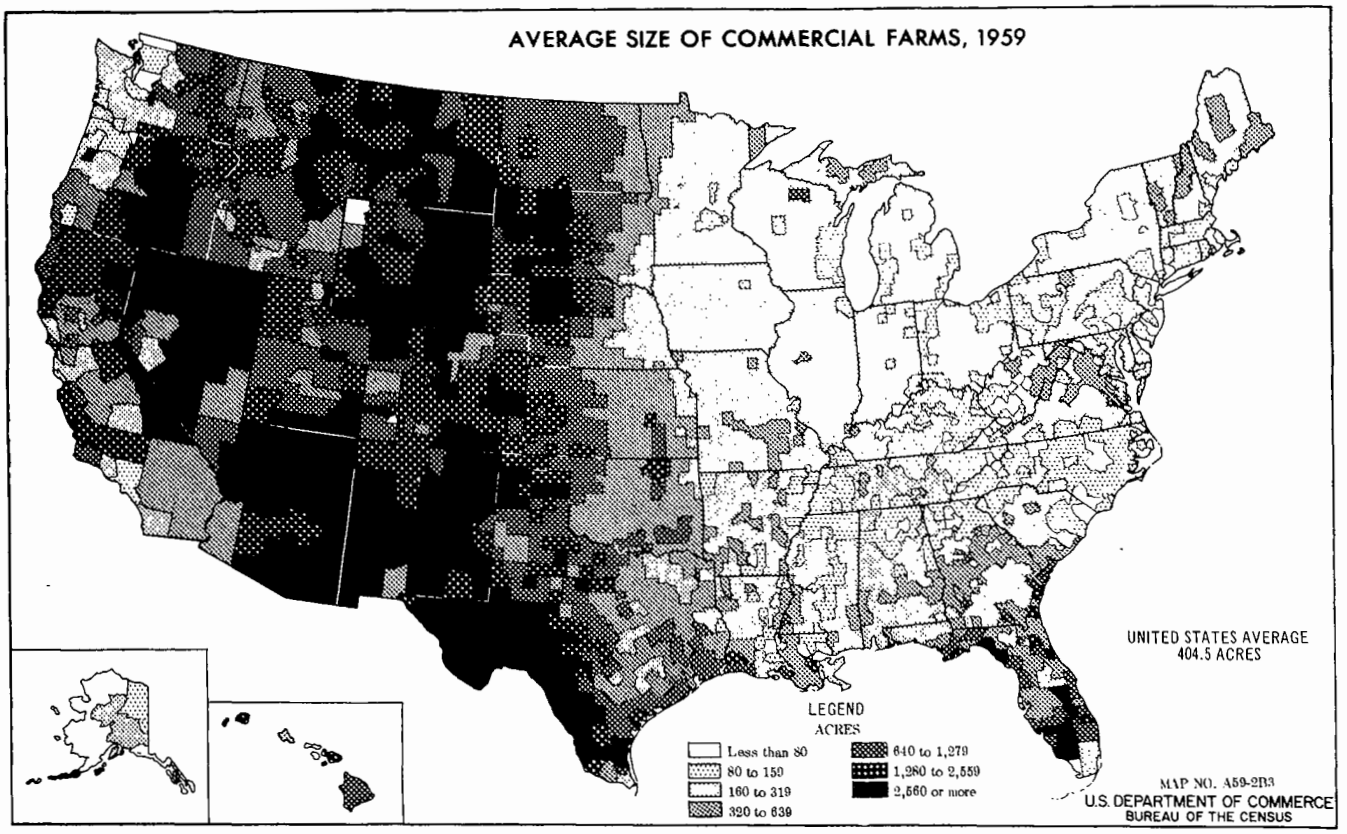
OTHER FARMS

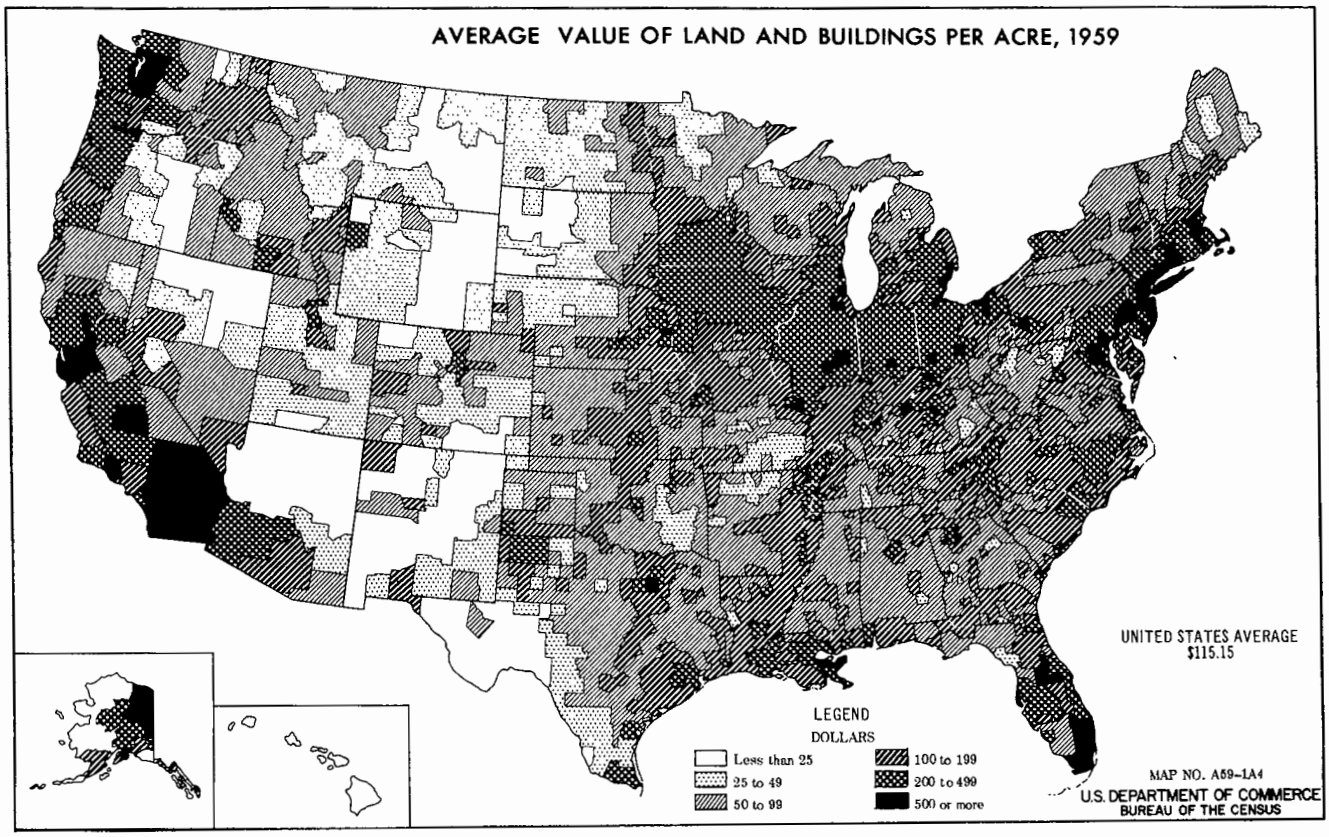
Part-time, part-retirement, and abnormal farms are classed as other farms. They constituted about one-third of all farms in 1959. For the first time the census of agricuture recognized the part-retirement farm in a separate economic class. The operators of these farms were 65 years old or over and the value of sales of farm products was $50 to $2,499. Abnormal farms include all institutional farms and Indian reservations.

The heaviest concentration of such farms is found in the Appalachian States, particularly in the mountainous parts of those States. Numerous part-time farms are scattered about this area. Employment in nearby towns or in the mills located in rural areas is fairly common in the southern Piedmont and Appalachian Mountain regions.

On the other hand there are very few other farms in the Northern Plains States. About 13 percent of all farms in these States were classed as other farms in 1959, whereas from two-fifths to nearly one-half of all farms in the Appalachian, Southeast, and Delta States were so classified.


COMMERCIAL FARMS AS A PERCENT OF ALL FARMS, 1959
UNITED STATES AVERAGE
65.2 PERCENT
LEGEND
PERCENT
Less than 20
20 to 39
40 to 59
60 to 79
80 or more
MAP NO. A59-2B4
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS


AVERAGE SIZE OF COMMERCIAL FARMS, 1959
UNITED STATES AVERAGE
404.5 ACRES
LEGEND
ACRES
Less than 80
80 to 159
160 to 319
320 to 639
640 to 1,279
1,280 to 2,559
2,560 or more
MAP NO. A59-2B3
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS



COMMERCIAL FARMS AS A PERCENTAGE OF ALL FARMS

In the Great Plains States, adjacent parts of the Mountain States, and the western part of the Corn Belt and Lake States a very high percentage of all farms were classified as commercial. Elsewhere, smaller areas of contiguous counties with high proportions of all farms in the commercial class were found mainly in the lower Mississippi Valley and in eastern North Carolina. There were numerous counties, mainly in the Eastern States, where commercial farms constituted less than a fifth of all farms.

AVERAGE SIZE OF COMMERCIAL FARMS

Commercial farms vary greatly in size. In the Western States where grazing of livestock is a common activity, farms or ranches are large. Florida also has some counties in which the average size of commercial farms exceeds 2,560 acres. Partically no counties have commercial farms averaging less than 80 acres per farm; however, numerous counties in areas where tobacco and cotton are grown have commercial farms that average between 80 and 159 acres in size. In the Corn Belt and the Lake States, the average size of commercial farms is between 160 and 319 acres for nearly all counties. This is also a common range in size of farm for many counties in the Northeast, Southeast, and Delta States.

When the average sizes of all farms are compared on a State basis, the range is from 83 acres per farm in North Carolina to 5,558 acres in Arizona. In North Carolina, many small farms producing mainly tobacco are a major factor in the small average size of farm; in Arizona, large Indian reservations make for a high average size.

The average size of all farms in the United States was 302 acres in 1959. This compared with 242 acres per farm in 1954 and 155 acres in 1935. Thus, American farms have approximately doubled in size during the past 25 years.

AVERAGE VALUE OF LAND AND BUILDINGS PER ACRE

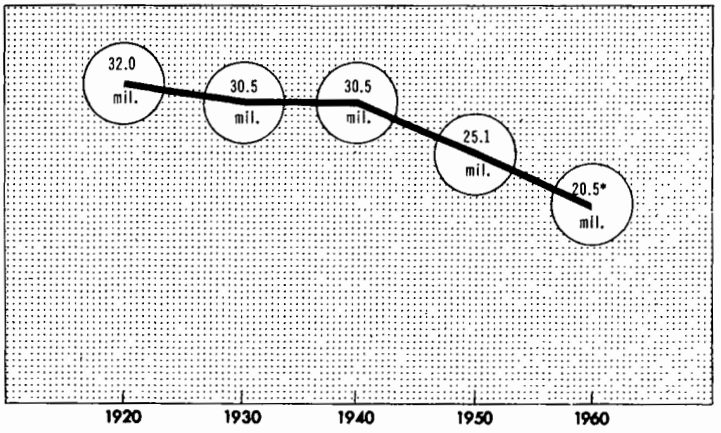
The average value of land and buildings per acre in 1959 varied widely throughout the United States. Among the States, New Jersey had the highest average values with $520 per acre and Wyoming the lowest with $21 per acre. Average values per acre in the Northeast ranged from $81 and $83 in Vermont and Maine to the State high in New Jersey and to $380 and $444 in Rhode Island and Connecticut. In the Lake States the State averages ranged from $132 to $193. In the Corn Belt the range was between $245 and $320, except for Missouri where the State average was only $112. In the Northern and Southern Plains States, $51 to $100 was the overall range by States. In the Appalachian, Southeastern, and Mississippi Delta States, average per-acre values ranged from $74 in West Virginia to $218 in Florida. Among the Western States, California had by far the highest land values with $353 per acre.

An example of the variations in land values associated with the production of different crops may be found in the May 1961 issue of the *Farm Real Estate Market*, in which some of the current developments are summarized. In California and Florida particularly, market values of farmland per acre vary greatly because of the special crops grown and also because of strong demand for land for such nonfarm uses as subdivisions and industrial and commercial sites.

The very high value of irrigated land in California was stressed in this report.

Land in avocado groves had the highest average value per acre ($4,500) in 1961. Orange groves were second, with average values per acre ranging from $3,750 for navel oranges to $3,900 for valencia oranges. Land on which prunes, peaches, apricots, almonds, and walnuts were being grown had average values per acre ranging from $1,600 to $2,375. Land used under irrigation for the production of vegetables averaged between $800 and $2,500 per acre in value, with $1,500 as an overall average. Land on which field crops such as cotton, sugar beets, rice, beans, barley, and alfalfa were being grown under irrigation had values ranging from an average of about $800 per acre for the more intensively used land to $600 for that used mainly for beans, barley, and alfalfa.

UNITED STATES FARM POPULATION 1920 TO 1960

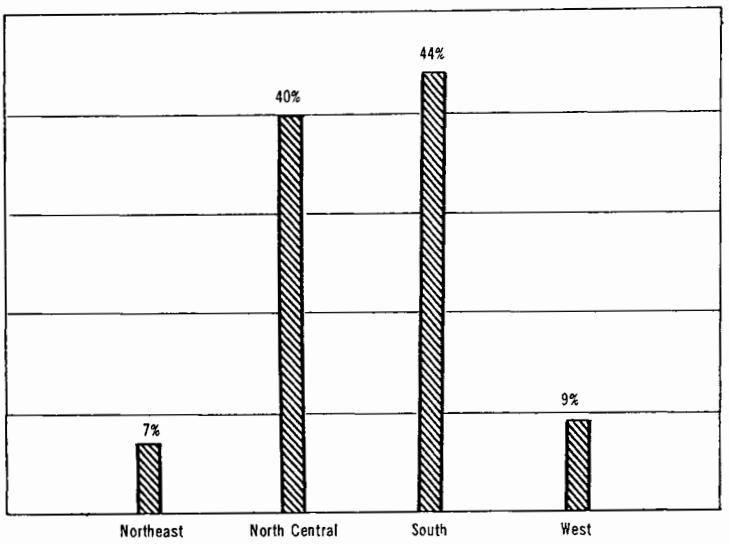


(Estimates from Population Surveys)

*Farm population according to the old definition of current population surveys. Farm population in 1960 estimated by the new definition is 15.6 million.

UNITED STATES FARM POPULATION BY REGIONS, 1960

Percentage of total farm population



U.S. FARM POPULATION

Farm population continued to decline sharply during the decade 1950 to 1960. Using the old definition of farm population in order to obtain comparable figures for 1950 and 1960, one finds that the reduction amounts to 4.6 million, or a 22-percent decrease. In 1950 the 25.1 million persons living on farms constituted 16.6 percent of the total population. The comparable estimate of farm population in 1960 is 20.5 million persons, or 11.4 percent of the total population. Under the new definition, the estimated farm population is only 15.6 million, which comprises only 8.7 percent of the total population.

All of these totals include the rural farm population of Alaska and Hawaii.

PERCENTAGE OF TOTAL POPULATION REPRESENTED BY FARM POPULATION

A change in the definition of farm population was made for the 1960 Census of Population. For this census, farm residence was determined by using the new definition of a farm. It was formerly determined by asking a person whether or not his house was located on a farm or ranch. The number of people living in the open countryside whose livelihood is not gained from farming has been increasing in recent years. Many of these people in replying to questions asked under the old definition tended to report themselves as living on farms. Therefore the effect of applying the new definition was to reduce the farm population sharply by eliminating many persons who sold little or no farm produce but who previously reported themselves as living on farms.

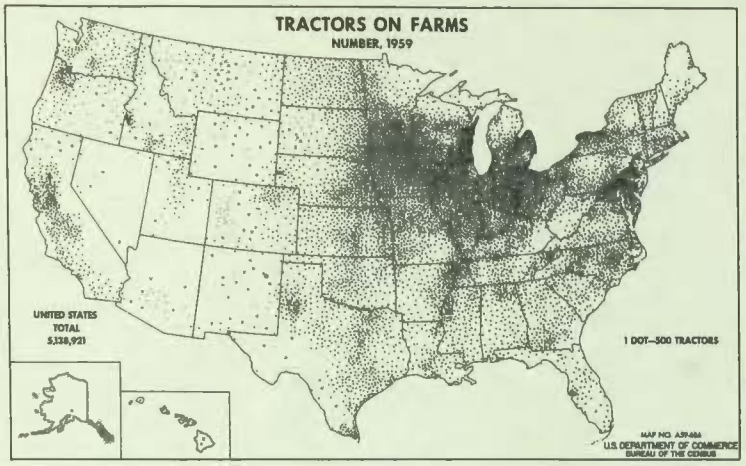
The comparison of the farm population as reported under the old and new definitions is as follows:

New definition: 1960 farm population—15.6 million, or 8.7 percent of the total population.

Old definition: 1960 farm population—20.5 million, or 11.4 percent of the total population.

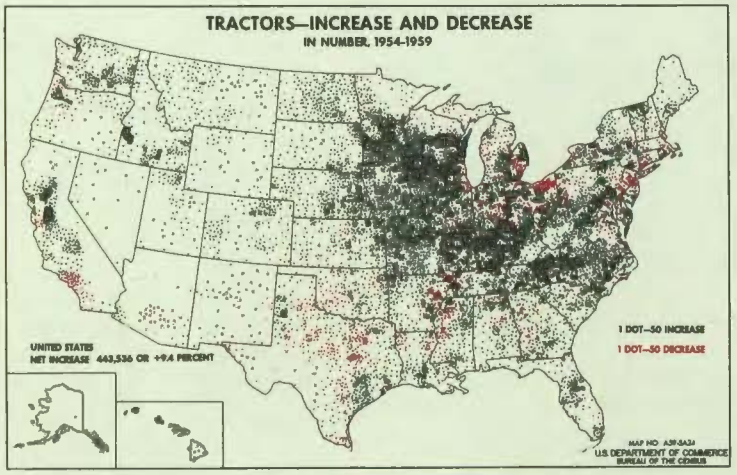
The overall pattern of farm population did not change very much between 1950 and 1960. The greatest concentration of farm population still remains in the South. In areas where tenant-operated cotton and tobacco farms are still numerous and where there are many part-time and residential farms, the percentage of the total population living on farms is relatively high. Of the counties with a relatively small part of the total population living on farms, many are highly urbanized. Mining and forestry are more important activities than farming in numerous other counties with very few farm people.

The regional distribution of the farm population has changed only slightly during the past 40 years. In 1920, the regional distribution was as follows: Northeast, 8 percent; North Central, 32 percent; South, 53 percent; and West, 7 percent. In 1960, the census of population indicated that the Northeast had 7 percent of the farm population; the North Central States, 40 percent; the South, 44 percent; and the West, 9 percent.



TRACTORS ON FARMS

The 5.1 million tractors reported on farms in 1959 represent an increase of nearly a half million in 5 years. Approximately a fourth of all tractors were found on farms in the Corn Belt States in 1959. More than half (52 percent) of all tractors were located in the Corn Belt, Lake States and Northern Plains regions. Many farms of course have more than one tractor, particularly in the highly commercialized agricultural areas. When the distribution of tractors on farms is compared with the distribution of cropland harvested, a close similarity exists, as would be expected, since so much of the tractor power is used in the production of crops. Approximately a half million tractors were reported on farms in both the Northeast and the Appalachian regions. The Southeast, Delta, and Mountain regions each reported about a quarter of a million tractors. The Delta States reported 0.4 million and the Pacific States 0.3 million tractors.

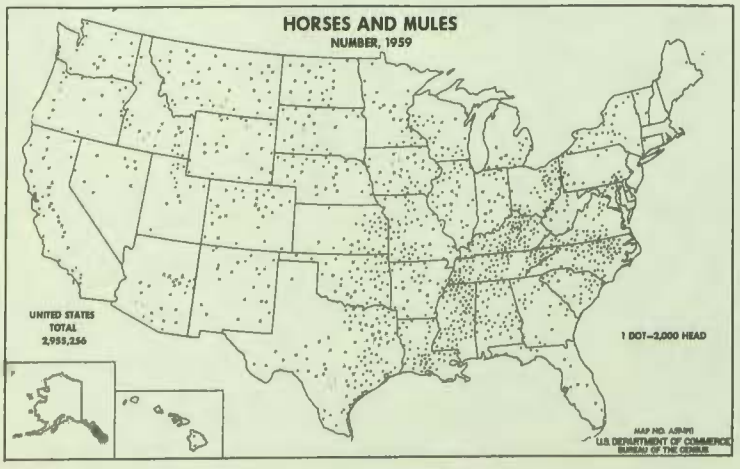


TRACTORS—INCREASE AND DECREASE IN NUMBER

The overall increase in the number of tractors on farms between 1954 and 1959 was about 9 percent. Many counties, however, reported decreases in the number of tractors while others reported increases considerably in excess of the overall 9 percent increase.

The major decreases in the number of tractors occurred mainly in those counties where rapid urbanization was underway and in counties where considerable acreages of cropland were being transferred to pasture and forestry uses.

Major increases took place in many counties of the Appalachian region and in the relatively hilly parts of such States as Ohio, Indiana, and Illinois. The small tractor was undoubtedly becoming popular to farmers growing tobacco and other crops on relatively small farms. Several areas in the West where the irrigated acreage increased sharply also had increases in the number of tractors. Sizable increases also occurred in the productive Corn Belt and in the lower parts of Minnesota and Wisconsin.

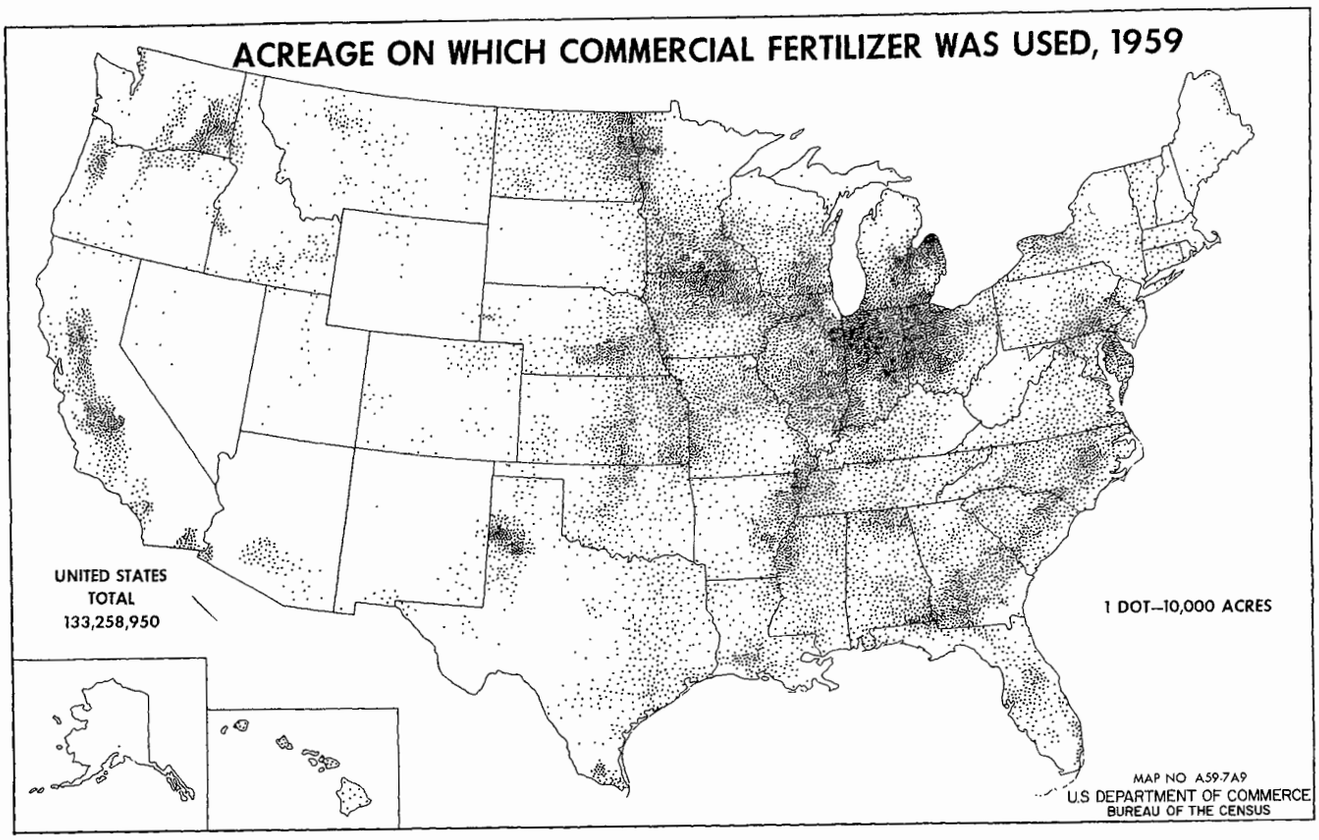


HORSES AND MULES

The number of horses and mules reported on farms in 1959 was less than 3 million. A considerable part of these were cow ponies on western ranches. More than a third of all horses and mules reported on farms were located in the Great Plains, Mountain, and Pacific States where crop production for the most part is highly mechanized.

Another third of the horse and mule population was found in the Appalachian, Southeast, and Delta States regions, where on many small farms horses and, more often, mules are still used for draft purposes.

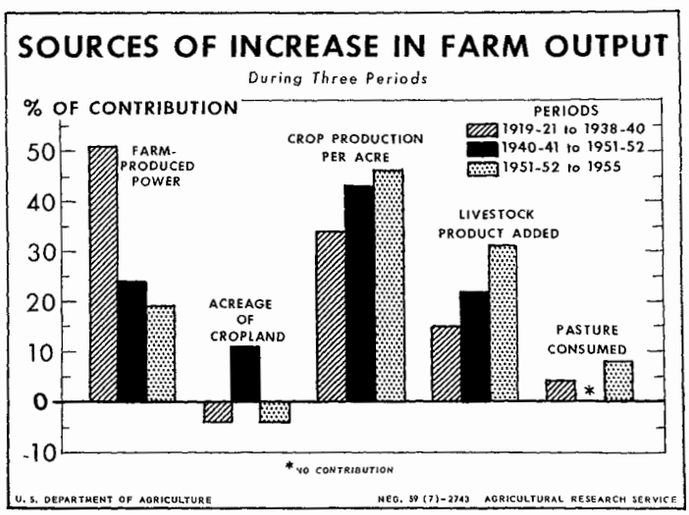
The remaining third of the horses and mules were found in the Corn Belt, Lake States, and Northeast regions. Many of the horses on these farms were used for riding purposes or had been retired from active use on the farms where they were enumerated. In some of the more hilly parts of these regions, however, some draft use of horses and mules may still be found.



ACREAGE ON WHICH COMMERCIAL FERTILIZER WAS USED

Commercial fertilizers were being used on 133 million acres of land in 1959. This represented an increase of 10 million acres over the acreage fertilized in 1954. The principal crops on which fertilizer was being used were:

Crop	*Million acres*	*Percent of total acreage fertilized*
Corn	51.0	38.3
Wheat	17.5	13.1
Hay and cropland pasture	13.4	10.0
Cotton	8.5	6.4
Other pasture (not cropland)	4.5	3.4
Soybeans	2.7	2.0
Sorghum	2.4	1.8
All other crops	33.3	25.0
Total	133.3	100



SOURCES OF INCREASE IN FARM OUTPUT

Three major and two minor sources of increase in farm output since 1920 may be noted on the accompanying graph. During the period of the 1920's and 1930's the substitution of the tractor for farm-produced power (horses and mules) accounted for 51 percent of the increase of livestock and crops available for direct human use. During this same period, a change in crop production per acre accounted for 34 percent of the increase in farm output. The increase in farm output attributed to livestock product amounted to 15 percent. Increased consumption of pasture contributed 4 percent, which was counterbalanced by a 4-percent decrease in the acreage of cropland.

During the decade of the 1940's, the major source of increase in farm output was the greatly accelerated crop production per acre (43 percent). Reduction in farm-produced power and an increase in livestock product added contributed 24 and 22 percent respectively. Acreage used for cropland increased 11 percent.

More recently, during the 1950's, the substitution of inanimate power for animate power on the farm has continued to drop as a source of the increase in farm output (19 percent). Increased crop production per acre accounted for 46 percent of the total increase in farm output for the period from 1951–52 to 1955. Change in product added by all livestock amounted to a 31-percent increase. Pasture consumed by livestock was up 8 percent in 1955 over 1951–52 and cropland used was down 4 percent.

FARM PRODUCTION

From colonial times to about 1920, the major increases in farm production were attributable to the expanding acreage that was being used for agriculture. New farms were created on the frontier of settlement and virgin forests and grassland were cleared and plowed for crops. Later, farmers began to apply manures, rotate crops, put on lime, and carry out other practices in order to maintain production on established farms on which the inherent fertility of the virgin soils had been depleted. Yet the application of these practices was subordinate to the expansion of the total cropland acreage in bringing about increases in production on American farms.

About 1920, or following World War I, a remarkable shift in farming began to take place. The total cropland acreage was to become stabilized at acreages ranging from 480 million acres to about 460 million acres during the next 40 years. Yet during these 40 years the population of the United States increased from 106 million to 181 million people, who now enjoy a level of living superior to that available in 1920. How has agricultural production been increased during the past 40 years so that an additional 75 million persons could be fed better on about the same acreage of cropland? No major changes in farm imports have occurred during this period, except for increased per capita consumption of some foreign agricultural commodities such as coffee and bananas, which are not produced in the 48 original States.

The mechanization taking place on farms has played a significant role in expanding the farm output available for human consumption. About a fourth of the expanded output for human use was a result of the substitution of the tractor for horses and mules on the farms of this country. The other three-fourths of this increase was brought about by a remarkable increase in the per-acre productivity of the land used and also by the increased productivity of the livestock. The development of new techniques and materials through agricultural research and the application of this technology in the farming operation have been highly significant in accounting for this major change.

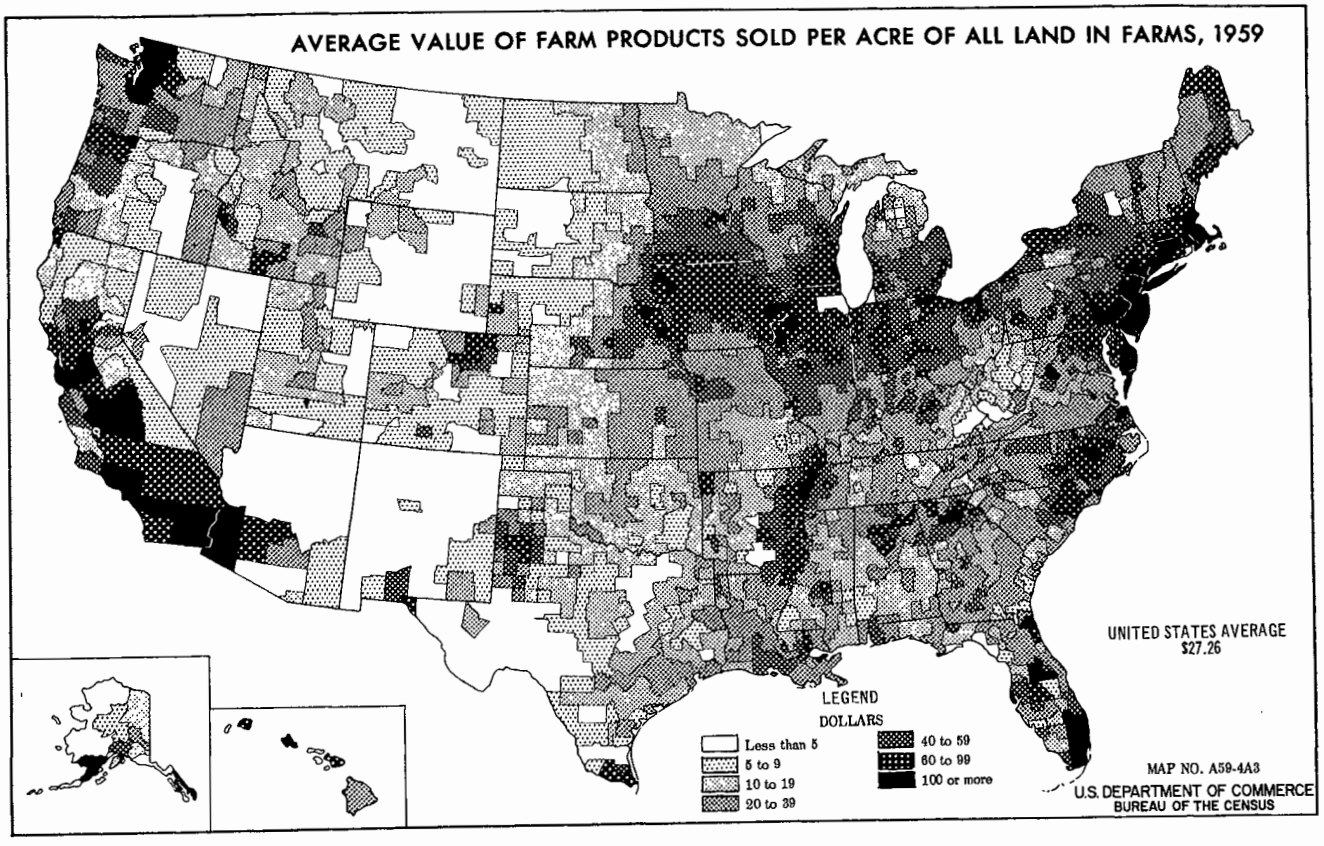
The yields per harvested acre of some of the principal crops indicate how striking this increased productivity of the cropland has been. In the table below, yields of corn, wheat, cotton lint, and hay crops are shown for the 1920's and for the 1950's along with the percentage increases in those yields:

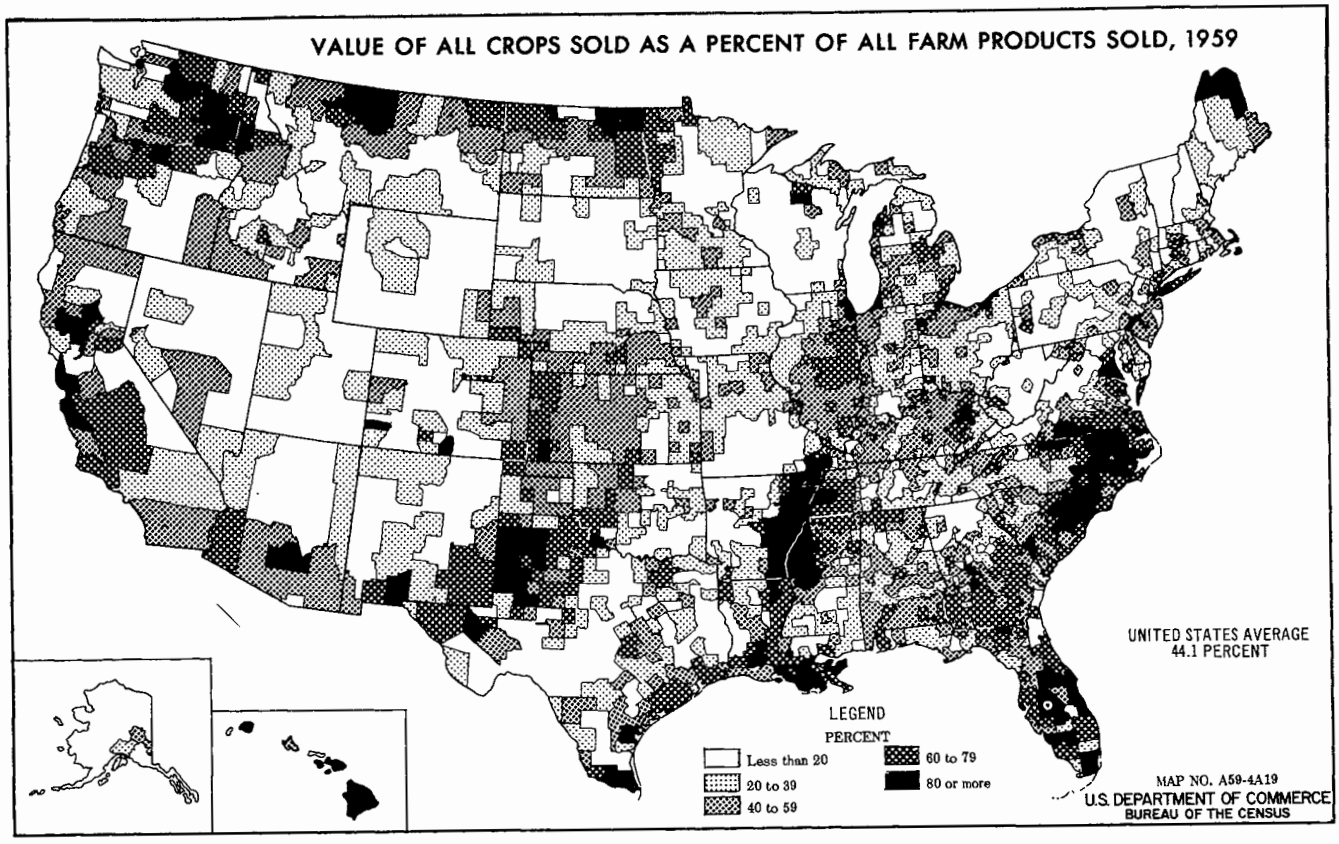
Item	Yield per harvested acre		
	1920	1950	Change (percent)
Corn, bushels	27	43	59
Wheat, bushels	14	20	43
Cotton (lint), pounds	162	363	124
Hay, tons	1.22	1.51	24

The increases in livestock production per breeding unit have also been very striking. This production per breeding unit increased by more than 50 percent between the decades of the 1920's and the 1950's. Milk production per cow increased by nearly 1,400 pounds, which amounts to an increase of one-third over the average for the 1920's. The average laying chicken produced 6 dozen more eggs in the 1950's than were produced per layer in the 1920's.

Striking increases in production also occurred for other crops and other types of livestock, as well as those cited briefly above.

The maps and graphs that follow depict the distribution of the major crop and livestock components of American agriculture and some of the changes that have taken place in recent years. Particularly in the captions that accompany the maps, attention has been given to a brief description of major changes in the distribution of the production of crops and livestock as well as to major changes in the total acreage of crops or number of livestock units which have occurred.





AVERAGE VALUE OF FARM PRODUCTS SOLD PER ACRE OF ALL LAND IN FARMS

The values shown on this map were computed by taking the total dollar value of all farm products sold and dividing this by the acreage of land in farms. Thus the overall average for the United States was 27 dollars per acre and the range was from less than 5 dollars per acre to average values of more than 100 dollars in many counties.

The average value of farm products sold per acre of all land in farms was highest in those areas with inherently fertile soils and with a high proportion of the land in farms used as cropland, and in those areas where it has been profitable to apply large inputs of capital and in some cases labor to produce farm products. Counties in which average values of farm products sold per acre was low were numerous in the Western States where extensive areas are used for grazing.

Counties in the Corn Belt, parts of California and Florida, the lower Mississippi Valley, eastern North Carolina, and counties around large cities throughout the country account for most of the counties with the highest average value of farm products sold per acre of all land in farms. In the Corn Belt and lower Mississippi Valley, a high proportion of inherently fertile cropland per farm is being used in producing relatively high value livestock and cotton, respectively. In California and Florida, citrus fruits and off-season vegetables and—particularly in California—cotton, deciduous fruits, nuts and some dairying and other livestock production contribute high average values of farm products sold. In eastern North Carolina tobacco is a dominant high-value crop. Around the large cities, dairy products and some vegetable production are major factors contributing to the high per-acre values of farm production.

In parts of the Western States, where large acreages of pasture and grazing land are needed for livestock production, the average values of farm products sold per acre are naturally very low. In the Eastern States, rough topography and poor soils are commonly associated with a low value of production per acre in many places.

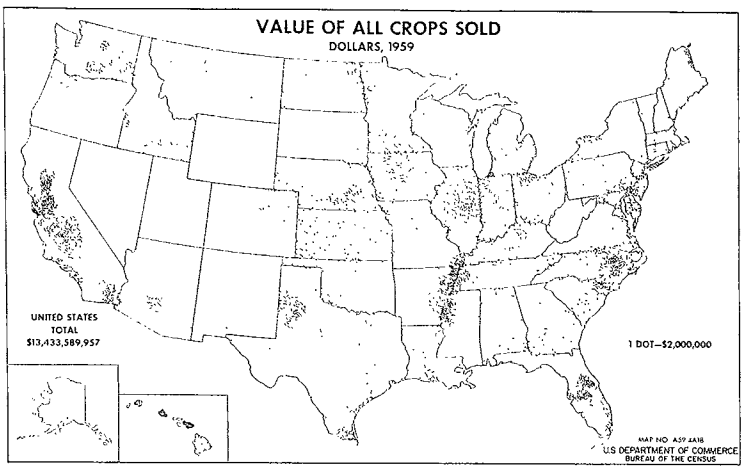
In Alaska and Hawaii, a generally intensive agricultural pattern of use prevails if the land is used at all for agriculture. Some dairying and vegetable products grown on Alaskan farms bring high prices in local markets. In Hawaii, sugarcane and pineapples, which are the two major crops, have a relatively high value per acre grown.

VALUE OF ALL CROPS SOLD AS A PERCENTAGE OF ALL FARM PRODUCTS SOLD

In 1959, the total value of all farm products sold amounted to more than 30 billion dollars. Of this total about 13 billion dollars, or 42 percent of the total value of all farm products sold, was accounted for by crops. Livestock products accounted for most of the remaining value of farm products, although some forest products were sold by farmers.

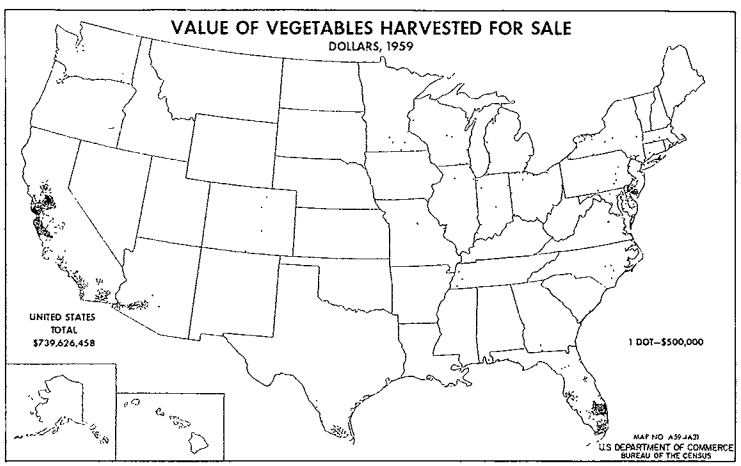
Areas where crop production accounts for 80 percent or more of the total farm production include the Middle Atlantic and Southeastern Coastal Plain where crops such as tobacco, cotton, vegetables, and fruit are important; the lower Mississippi Valley and Texas High Plains cotton areas; and the Columbia River Basin and north-central Montana wheat areas. In parts of the Corn Belt and in many of the irrigated valleys of the West, the value of livestock and crop production is more nearly equal. Over large areas of the West which are suited mainly for grazing there is very little crop production.

The Corn Belt States and Pacific States as groups, account for about 36 percent of the total value of all crops sold.



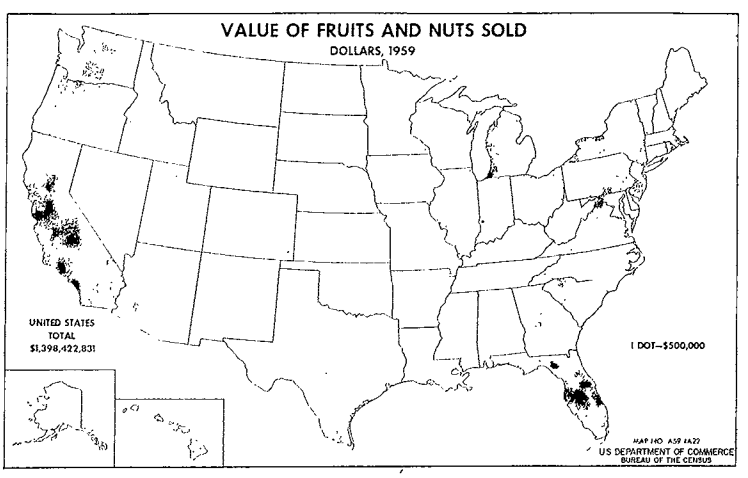
VALUE OF ALL CROPS SOLD

In several parts of the United States, the production of crops for sale is the major agricultural enterprise. On the accompanying map the following are particularly evident: the Central and Imperial Valleys of California with their fruits, nuts, vegetables, cotton, rice, wheat, and other cash crops; the lower Mississippi Valley and the High Plains of Texas where cotton is the leading crop; the central part of Florida with its citrus and vegetables; the lower Rio Grande Valley with its vegetables and citrus; the tobacco and cotton areas of eastern North Carolina and South Carolina; the Salt River Valley of Arizona with its cotton, vegetables, and citrus; the Columbia Plateau wheat area; the Aroostook County, Maine, potato area; the eastern and southern shores of the Great Lakes with important fruit production; and the more widespread cash grain producing areas of the Great Plains and the Corn Belt.



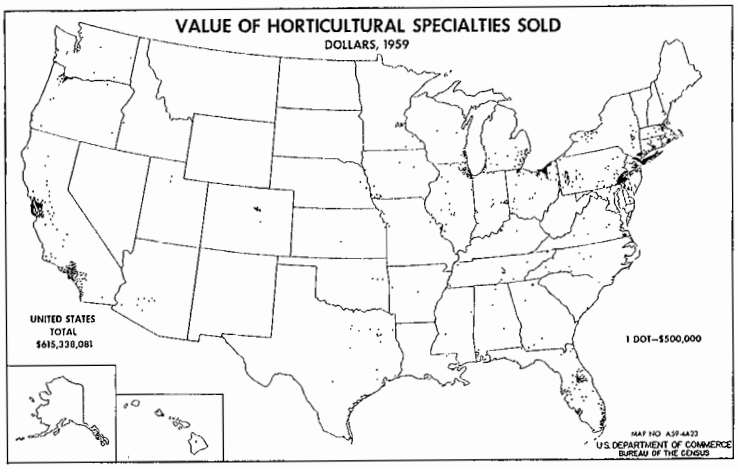
VALUE OF VEGETABLES HARVESTED FOR SALE

The production of vegetables harvested for sale is much more highly concentrated than production on farms for home use. In 1959, four areas had a particularly high dollar value of vegetables harvested for sale: (1) The irrigated areas of California, including parts of the Central Valley, the Imperial Valley, and the Santa Clara and other coastal valleys, some of these areas producing during late fall, winter, and early spring; (2) the south Florida vegetable areas where most of the production takes place during late fall, winter, and early spring when areas farther north are unable to produce vegetables; (3) the lower Rio Grande Valley of Texas which also produces vegetables during the off seasons for northern areas; and (4) the Middle Atlantic Coastal Plain which produces both for processing and for the fresh market.



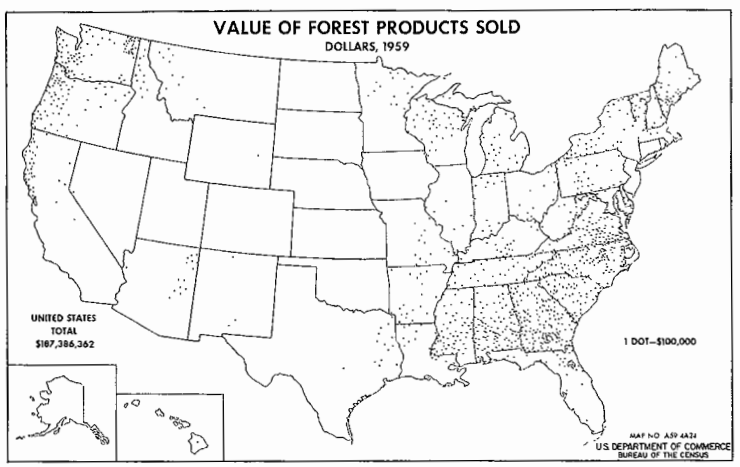
VALUE OF FRUITS AND NUTS SOLD

Fruits bring a relatively high return per acre and their production is highly localized. To a major degree climatic conditions play an important role in the selection of areas for fruit production. California and Florida were the leading fruit producing States in 1959. Two-thirds of the total value of all fruits and nuts sold was contributed by these two States. Both citrus and deciduous fruits are of major importance in California as well as nuts, particularly walnuts and almonds. In Florida citrus fruits dominate, although some small fruits such as strawberries and some pecans are produced. Other important fruit-producing areas contributing a high value of fruits are the irrigated valleys of Washington and Oregon where apples and pears are especially important; the eastern and southern shores of the Great Lakes, and the valley slopes of Virginia and Maryland where apples and peaches are grown.



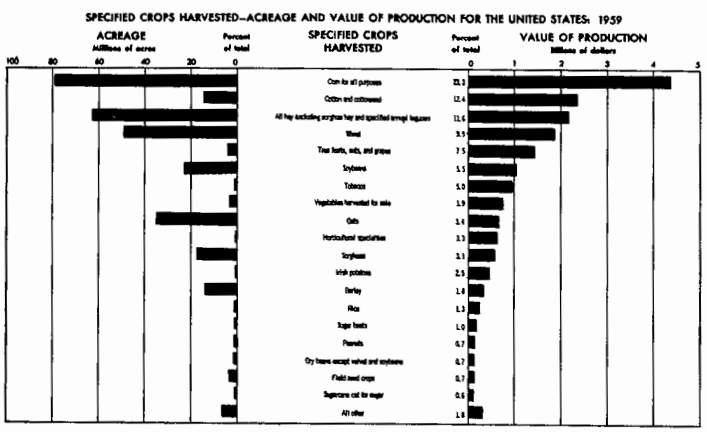
VALUE OF HORTICULTURAL SPECIALTIES SOLD

Horticultural specialties include nursery products such as trees, shrubs, vines, and ornamentals; cut flowers, potted plants, florist greens, and bedding plants; and vegetables grown under glass, flower seeds, vegetable seeds, vegetable plants, bulbs, and mushrooms. More than $600 million worth of these products were produced in 1959. California, Pennsylvania, Ohio, Florida, and New York, in that order, were the leading producing States. From the accompanying map it is obvious that the major producing areas are strongly oriented toward large urban centers. Particularly heavy concentrations are associated with Chicago, Cleveland, New York, and Philadelphia. Mushroom production in southeastern Pennsylvania contributes to the high value of horticultural specialties sold in that area. Other areas of specialization are also characteristic of this type of agricultural production.



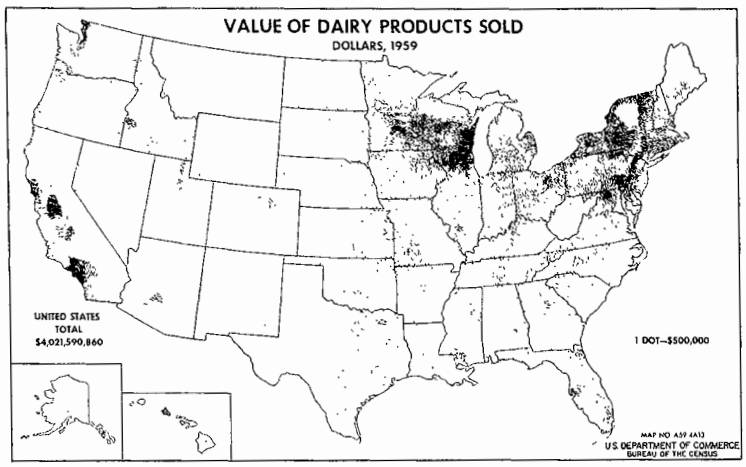
VALUE OF FOREST PRODUCTS SOLD

Some forest products are sold from many farms, hence in contrast to the high degree of concentration found in the production of fruits, vegetables, and horticultural specialties the value realized from the sale of forest products is widely distributed. The value of forest products shown on this map pertains only to those produced on farms, therefore commercial logging operations are generally excluded. Individual forestry products sold from farms include firewood and fuelwood, mine timbers, poles and piling, fence posts, sawlogs, veneer logs, pulpwood, Christmas trees, and maple syrup. The total value of forest products sold in 1959 amounted to 187 million dollars. In some areas such as the Appalachian, Southeast, and Delta States for example, the sale of pulpwood contributes substantially to the income of farms in some years. Naval stores contribute significantly in parts of the Southeast. In general, however, forests located on farms are contributing far below their full potential to the total supply of forest products in this country.



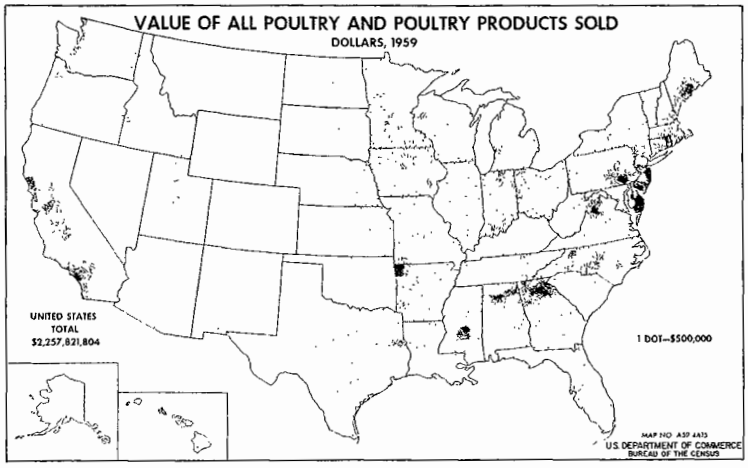
SPECIFIED CROPS HARVESTED: ACREAGE AND VALUE OF PRODUCTION

As in 1954, corn was the leading crop in American agriculture both on the basis of value of production and on the basis of acreage harvested. Cotton, hay crops, wheat, and tree fruits, nuts and grapes continued in that order to be leading crops on a value-of-production basis. Changes in rank of crops according to value of production are particularly interesting to note. Soybeans moved from eighth to sixth in rank between 1954 and 1959, moving ahead of tobacco and oats in value of crop output. Horticultural specialties, which accounted for only 0.7 percent of the total value of crop production in 1954, made up 3.3 percent of the total crop production in 1959—a change from seventeenth to tenth place. Vegetables harvested for sale, sorghums, Irish potatoes, sugar beets, and sugarcane also accounted for a higher percentage of the total value than they did in 1954.



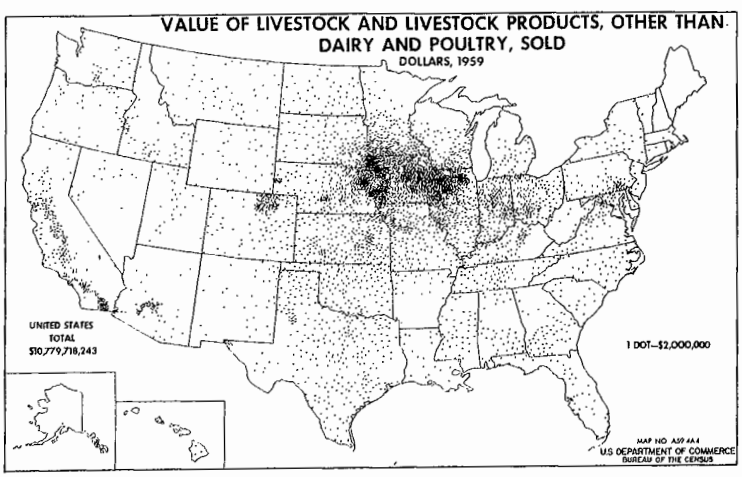
VALUE OF DAIRY PRODUCTS SOLD

When one compares this map showing the distribution of the value of dairy products sold with a map of generalized farming regions, it is very easy to find the Dairy Belt of the United States. It is also worth noting that California is a major dairy State. In the Pacific Northwest and in other parts of the country lesser or secondary areas of dairy production may be noted. Several of these are found near urban centers. Six States account for approximately half the total value of dairy products sold in the United States. These are Wisconsin ($517 million), New York ($409 million), California ($324 million), Pennsylvania ($279 million), Minnesota ($259 million), and Ohio ($167 million). Among the smaller States, Vermont with $83 million worth of dairy products sold, and Maryland with $64 million are especially worthy of note.



VALUE OF POULTRY AND POULTRY PRODUCTS SOLD

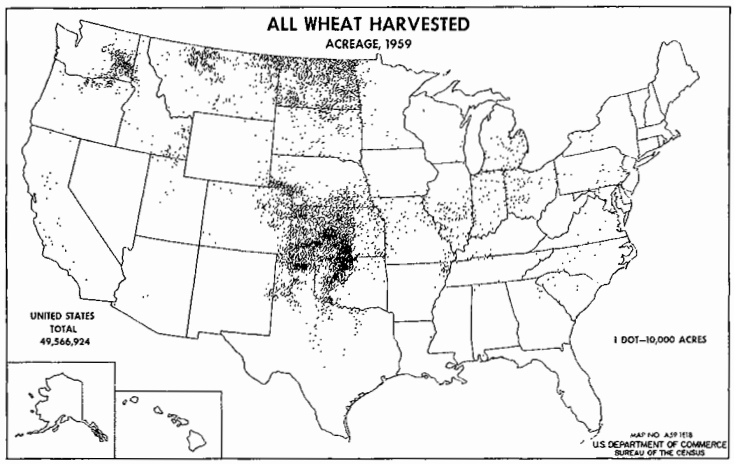
Poultry products sold in this country have increased greatly in total value in recent years. There has also been a marked tendency for specialized areas of production to develop in a few States. In 1959 nearly $2.3 billion worth of poultry and poultry products were sold from American farms. The Northeast farm production region accounted for one-fifth of this total value, the Corn Belt and Southeast regions for about 15 percent each, and the Pacific and Appalachian regions for about 12 and 10 percent respectively. Among the States, California was the leading producer of poultry and poultry products with $210 million worth sold; Georgia was second with $166 million sold, followed by Pennsylvania with $115 million and Texas with $101 million worth sold. Several other States in the farm production regions named above also are major producers.



VALUE OF LIVESTOCK AND LIVESTOCK PRODUCTS OTHER THAN DAIRY AND POULTRY SOLD

In comparing the scale of the maps on this page it is very important to note that the dollar value of each dot varies considerably among the three maps. Thus of the $17 billion of livestock and/or livestock products sold including poultry and poultry products, $10.8 billion worth of livestock and livestock products other than dairy and poultry were sold. Beef cattle, hogs, and sheep (for both wool and meat) were the major sources of the value realized from this group of livestock and livestock products.

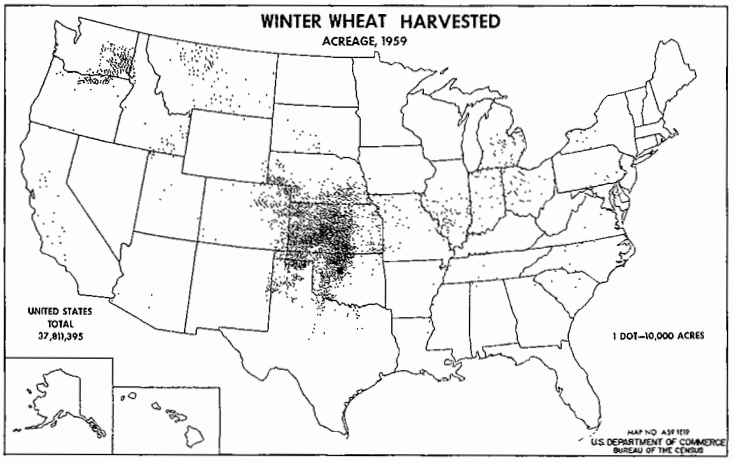
It may be seen from the accompanying map that the Corn Belt has the heaviest single concentration of high value realized from the sale of livestock and livestock products other than dairy and poultry. This concentration is particularly striking in Iowa, northwestern Illinois, and eastern Nebraska. Cattle feeding operations in several of the irrigated areas of the West also may be noted, such as the area in Weld County, Colorado.



ALL WHEAT HARVESTED

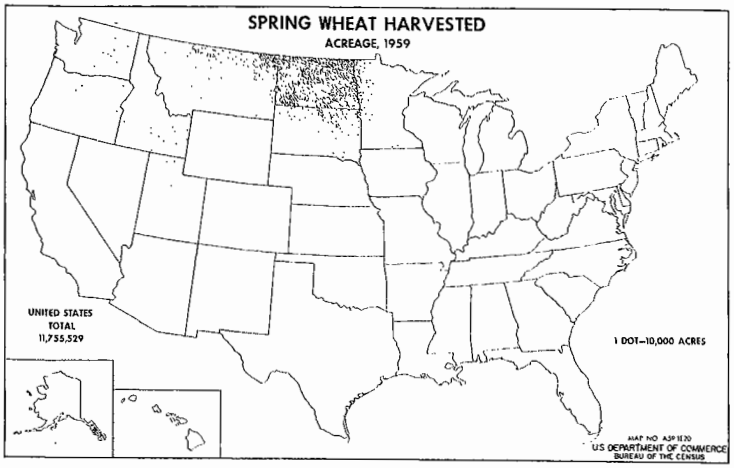
Nearly 50 million acres of wheat were harvested in 1959. This is a major decline from the 71 million acres harvested in 1949. However, 73 million acres were harvested in 1919. Acreage allotment programs have greatly limited the acreage of wheat being planted and harvested in recent years.

Almost three-fourths of the total acreage of wheat harvested in 1959 was in the Great Plains. Another major wheat producing area is located on the Columbia Plateau of Washington, Idaho, and Oregon, where nearly 4 million acres were harvested in 1959. Among the States, Kansas led in acreage harvested with nearly 10 million acres, or almost one-fifth of the total U.S. crop. North Dakota had 6.4 million harvested acres, followed by Oklahoma with 4.3.



WINTER WHEAT HARVESTED

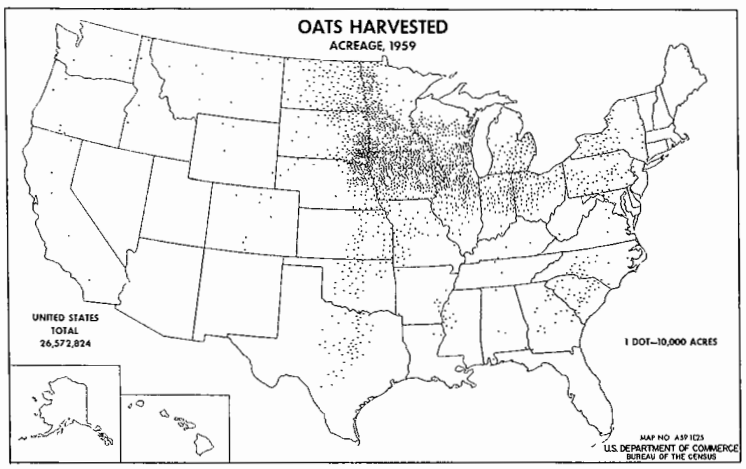
Of all wheat harvested, the acreage of winter wheat accounted for approximately 76 percent of the total. Winter wheat is more widely grown than spring wheat, which is produced mainly in only 6 states. Winter wheat is planted in the fall of the year and is harvested in early summer. Particularly in the southern and central parts of the Great Plains, it is important to get wheat matured before hot dry southwest winds begin to affect yields. Generally, winter wheat yields are higher than spring wheat yields. For the 10-year period 1950–59 the average yield for winter wheat for all of the United States was 20.9 bushels per harvested acre. For the same 10-year period the spring wheat yields averaged 16.4 bushels per harvested acre. Therefore, one finds that winter wheat is more widely grown than spring wheat, which is limited primarily to the northern part of the Great Plains and to the Columbia Plateau where climatic conditions are not favorable for winter wheat production.



SPRING WHEAT HARVESTED

Spring wheat is planted in the late spring and harvested late in summer. In the areas where it is grown a high proportion of the total rainfall comes during the summer months. Evapotranspiration rates are not as high in areas where spring wheat is grown as in the southern Great Plains where much winter wheat is produced, therefore the favorable seasonal distribution and greater effectiveness of the precipitation make it possible to produce wheat with a smaller total annual precipitation.

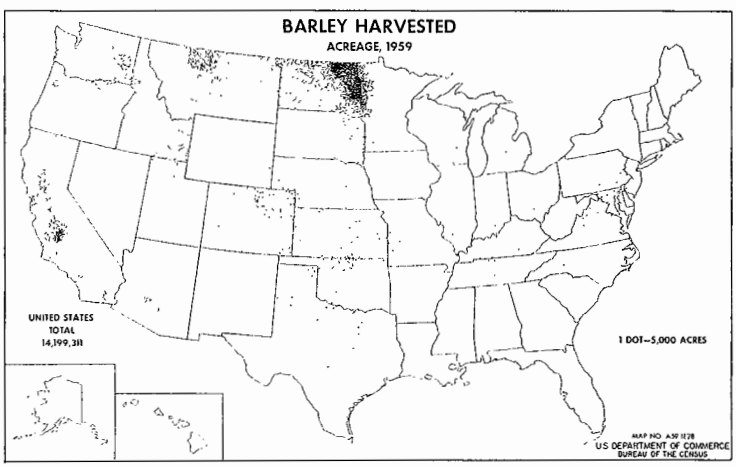
Only about a fourth of the total wheat crop is spring wheat. North Dakota has more than half of the 11.8 million acres of spring wheat that were harvested in 1959. Montana is the second leading State in spring wheat acreage with more than 2 million acres. Durum wheat used in making macaroni and spaghetti has generally been harvested from about 2 million acres in the spring wheat area in recent years.



OATS HARVESTED

Next to wheat, oats have long been the second major small grain produced on American farms. The peak acreage of oats harvested was in 1921 when more than 45 million acres were harvested. This peak acreage nearly coincides with the peak horse and mule population on American farms. Between 1950 and 1959, the acreage of oats harvested ranged from a high of 37.9 million acres in 1954 to 26.6 million acres in 1959. Generally in the last 5 years oats acreage has declined. The decline of about 14 million acres between 1954 and 1959 amounted to a significant change in American agriculture. In part, this decline was related to the use of other surplus grains being fed to livestock and in part to the growing importance of other crops, particularly soybeans in areas where oats have mainly been grown.

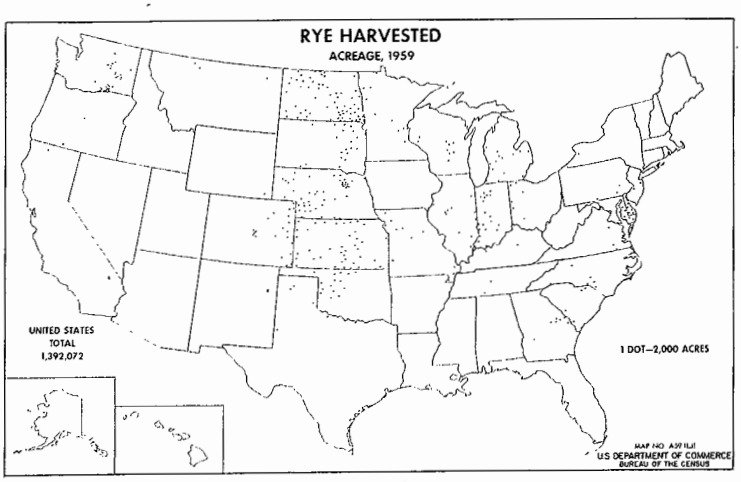
The Corn Belt, Lake States, and Northern Plains are the leading oats-growing areas among the farm production regions. Nearly three-fourths of the total harvested acreage was located in these regions in 1959. Relatively few oats are produced in the southern part of the United States, partly because of climate and partly because they have not been used as a major feed grain there.



BARLEY HARVESTED

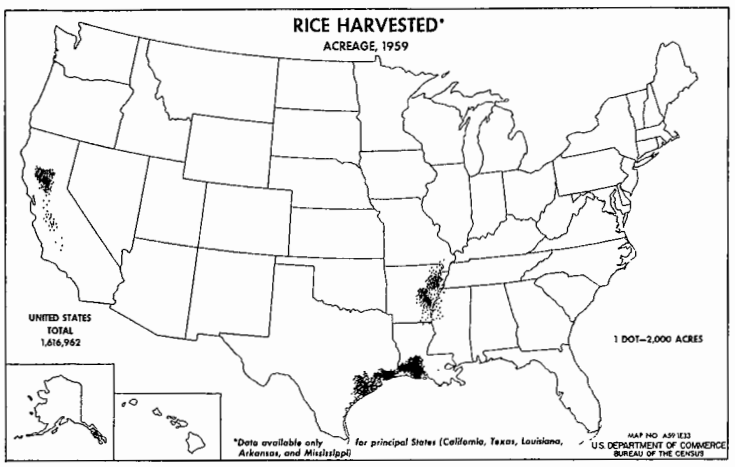
About 14 million acres of barley were harvested in 1959. In contrast to the substantial decrease in acreage of oats, the 1959 harvested acreage of barley was the highest reported by the U.S. Department of Agriculture during the 1950–59 period. Generally, the increases in the acreage of barley harvested have occurred in areas other than where oats acreage has declined.

The major barley State is North Dakota, where in 1959 3.8 million acres were harvested, about one-fourth of the total U.S. crop. The Red River Valley area of eastern North Dakota has an especially heavy concentration of barley acreage. Montana with 1.7 million harvested acres and California with 1.5 million acres were the second and third ranking States in 1959. Very little barley is grown in the eastern or southern parts of the United States.



RYE HARVESTED

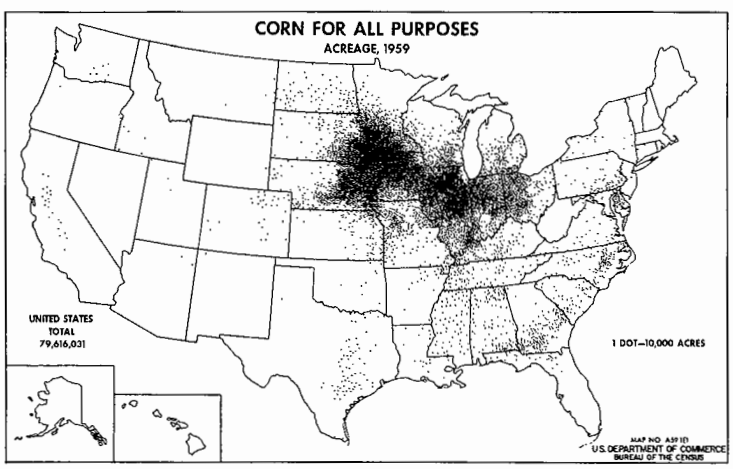
In northwestern Europe and in the Soviet Union rye is a much more important crop than it is in the United States. Only 1.4 million acres of rye were harvested in the United States in 1959. It should be emphasized that in addition to this harvested acreage many acres of rye are planted as a winter cover crop. This often serves as pasture and then is turned under as a green manure crop. About two-fifths of the total acreage of rye harvested in 1959 was located in the Northern Plains farm production region. Washington is the leading State outside the Northern Plains in the acreage of rye harvested. As in the case of oats and barley, very little rye is grown for grain in the eastern and southern parts of the United States.



RICE HARVESTED

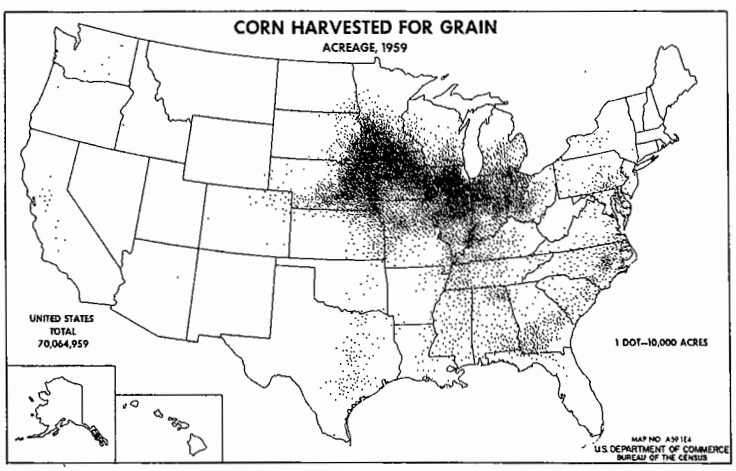
The production of rice in the United States is highly concentrated in three major producing areas. These are (1) the coastal prairies of Louisana and Texas, which grew about 55 percent of the total U.S. acreage harvested in 1959; (2) the Arkansas-Mississippi area, which produced about 25 percent of the total; and (3) the Central Valley of California (particularly the Sacramento Valley), which produced about 20 percent. Historically, the coastal areas of South Carolina and Georgia were important rice-producing areas.

The acreage of rice harvested in this country has increased during the past 60 years. During the first decade of the century the average annual acreage harvested was 0.5 million acres. During the decade of the 1920's the acreage was 1.0 million acres. During the 1950's the average acreage was 1.8 million acres. The peak year in the acreage of rice harvested came in 1954 when 2.5 million acres were harvested. During the first 5 years of the 1950's the average yield per acre was 2,411 pounds. For the last 5 years of the decade the average per acre yield was 3,192 pounds.



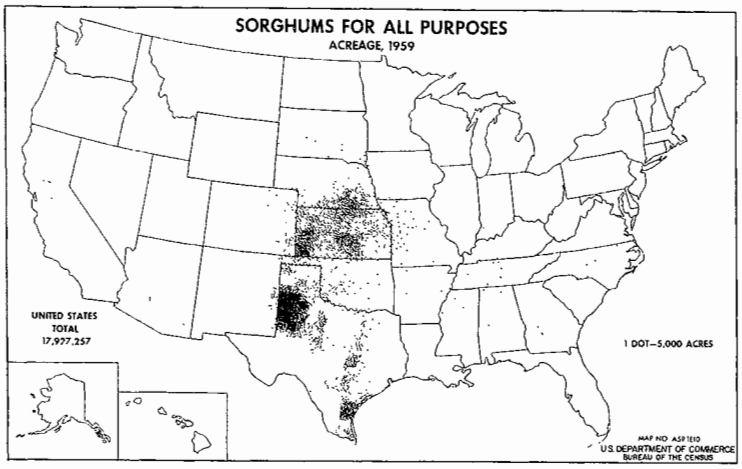
CORN FOR ALL PURPOSES

Corn is the leading crop in American agriculture both in terms of value and of the acreage grown each year. In 1959 nearly 80 million acres were harvested. The peak acreage occurred in 1917, when 111 million acres were harvested for all purposes; this was followed very closely by the year 1932. During the decade of the 1950's, the acreage of corn for all purposes averaged slightly more than 80 million acres a year. About 45 percent of the total corn crop was grown in the Corn Belt. More than three-fourths (77 percent) of the total U.S. acreage was harvested in the Corn Belt, Northern Plains, and Lake States. Although in 1959 the acreage of corn harvested was 31 million acres less than that harvested in 1917, the 80 million acres harvested produced approximately 3.7 billion bushels compared with the 2.9 billion bushels produced on 111 million acres in 1917. Yields averaged 26 bushels per acre in 1917 compared with 53 bushels per acre in 1959.



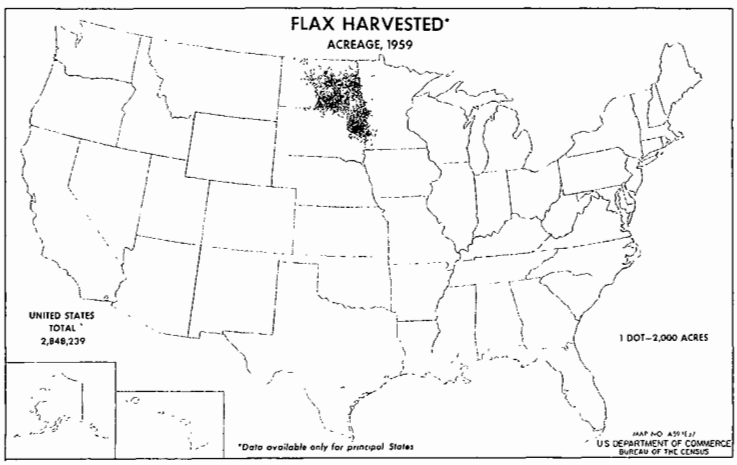
CORN HARVESTED FOR GRAIN

About 88 percent of the total U.S. corn crop was harvested for grain in 1959. Almost half of this acreage was in the Corn Belt. The acreage of corn cut for silage was located principally in the northern parts of the corn-producing areas, where it is often not possible to mature corn for grain. In addition to the 6.8 million acres of corn cut for silage, some corn is "hogged off" of the fields where it is grown. Of course, most of the total corn crop is fed to livestock in one way or another. In contrast to the direct use of corn in the human diet in several parts of Latin America, very little corn is consumed directly in the United States. As compared with the Soviet Union, the United States has been able to produce far more corn and hence has had a consistently reliable feed crop as a basis for its livestock production.



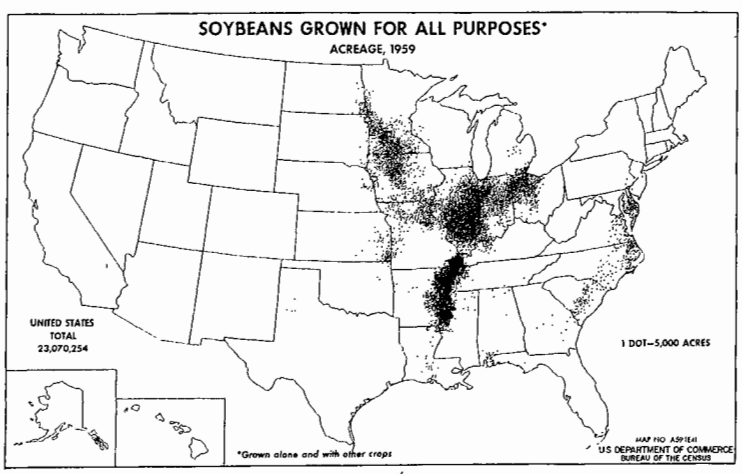
SORGHUMS FOR ALL PURPOSES

In 1959, sorghums grown for all purposes totaled 17.9 million acres, compared with 8.7 million acres reported in the 1919 Census of Agriculture. Thus in 40 years the acreage of this crop has approximately doubled. It has proved to be a particularly valuable feed grain in the southern Great Plains where most of the acreage is concentrated. As yet, varieties of sorghums suitable for the Northern Plains have not been developed. Of the total acreage grown in 1959, approximately half was located in Oklahoma and Texas. Kansas and southern Nebraska had about 6.3 million acres. About 84 percent of the total sorghum crop was produced in these four States. Particularly heavy concentrations of sorghum production are found in the High Plains of West Texas, in southwestern and south-central Kansas, in south-central Nebraska, and in the Corpus Christi-Blacklands area of southern and eastern Texas.



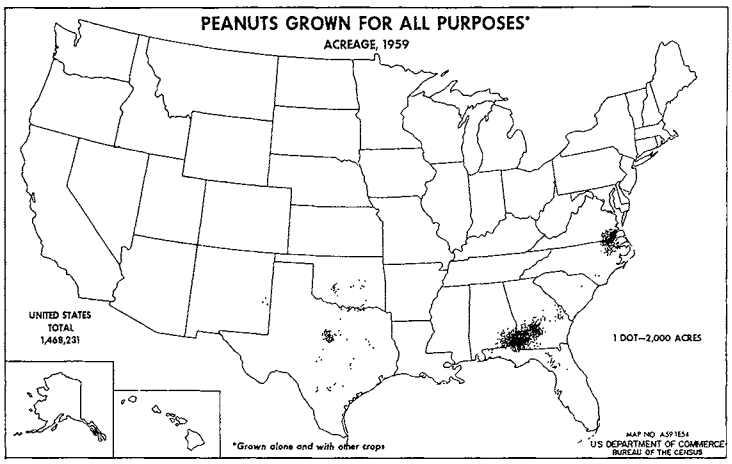
FLAX HARVESTED

Most of the flax grown in the United States is located in three States—North Dakota, South Dakota, and Minnesota. Small acreages are found in Texas, California, and Montana. The total acreage harvested in 1959 was 2.8 million acres, of which three-fifths was located in North Dakota. Flax in this country and in adjacent parts of Canada is grown primarily for the seed, which yields linseed oil used in the manufacture of paints and other industrial products. Yields per acre declined slightly between the 1900–1909 period and the period from 1950 to 1959. The yields averaged 8.3 bushels per harvested acre during the latter period compared with 9.2 bushels during the first decade of the century.



SOYBEANS GROWN FOR ALL PURPOSES

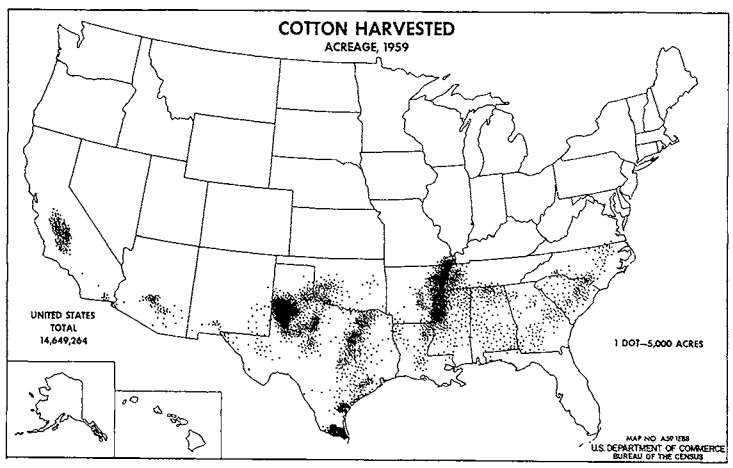
In 1929 the census of agriculture reported 2.9 million acres of soybeans grown for all purposes. By 1939 the total had reached 11.5 million acres, and in 1949 it stood at 12.3 million acres. During the period from 1949 to 1959 an increase of more than 10 million acres occurred; in the latter year 23.1 million acres of soybeans grown for all purposes were reported. Of this acreage, 22.1 million acres were harvested for beans. This phenomenal rise in acreage used for soybeans has been one of the major changes in the composition of crops in recent years in American agriculture. About 56 percent of the soybean acreage is found in the Corn Belt States. The lower Mississippi Valley is another important producing area, followed in the Southeastern Coastal Plain, with an appreciable production.



PEANUTS GROWN FOR ALL PURPOSES

With the increase in acreage of soybeans, the acreage used for the production of peanuts has declined—from 2.4 million acres in 1929 to 1.5 million acres in 1959. In 1939 the Census of Agriculture reported 3.6 million acres grown for all purposes.

Three major areas of production can be noted on the accompanying map. The largest producing area is in southeastern Alabama and southwestern Georgia. Together, these two States account for about half the total acreage. Adjacent parts of north Florida account for about 85,000 acres. Georgia is the leading producing State in the country, with nearly a half million acres. Another major peanut area is located in southeastern Virginia and in northeastern North Carolina, where the acreage totals about 268,000 acres. Texas and Oklahoma, the third area, where acreage is more scattered than in the other two, account for 353,195 acres.

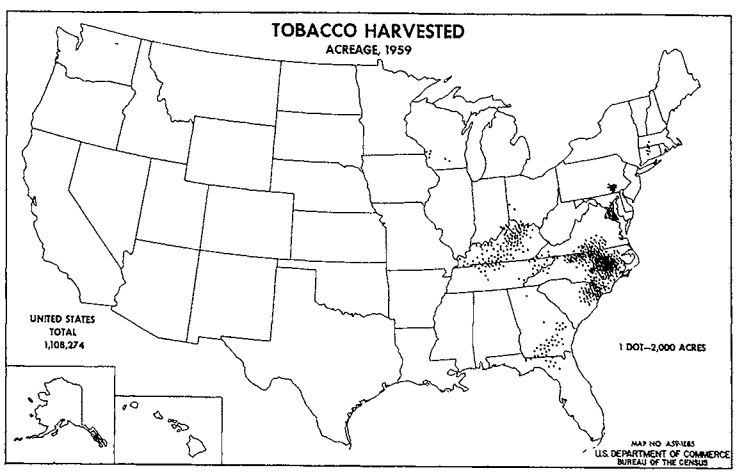


COTTON HARVESTED

The following brief table tells a significant story about cotton production in the United States during the past 100 years:

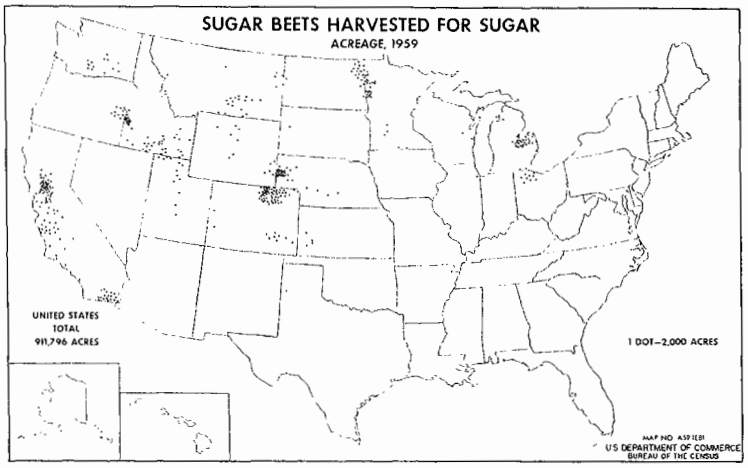
	Acreage harvested, million acres	*Yield per harvested acre, pounds*
1866	7.7	122
1900	24.9	195
1925	44.4	174
1950	17.8	269
1959	14.6	461

The peak year for acreage of cotton was 1926, when 44.6 million acres were harvested. Not only has this remarkable historical change in the total acreage of cotton occurred, but also of major significance is the fact that a strong westward migration of cotton production has taken place. In 1959 the Mississippi Delta and Southern Plains States along with California, Arizona, and New Mexico accounted for 76 percent of the total acreage of cotton harvested. In 1900 these States accounted for only 57 percent of the total.



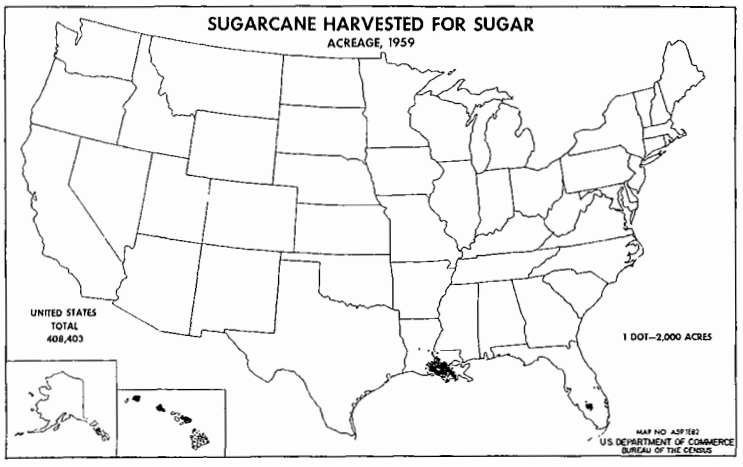
TOBACCO HARVESTED

The acreage of tobbaco harvested has ranged between 1 and 2 million acres since 1900 except for the year 1930, when a peak acreage of 2.1 million acres was reported. During the first decade of the century, yields averaged 825 pounds per harvested acre. In the decade of the 1950's the average yield was 1,418 pounds. North Carolina and Kentucky are leading producing States and together account for three-fifths of the total acreage. Virginia, South Carolina, Tennessee, and Georgia in that order are the next four ranking States. Maryland and Pennsylvania also have sizable acreages. Tobacco production is highly specialized, and each of the major areas has its special type of tobacco, which generally has a rather specific use in the manufacturing of tobacco products.



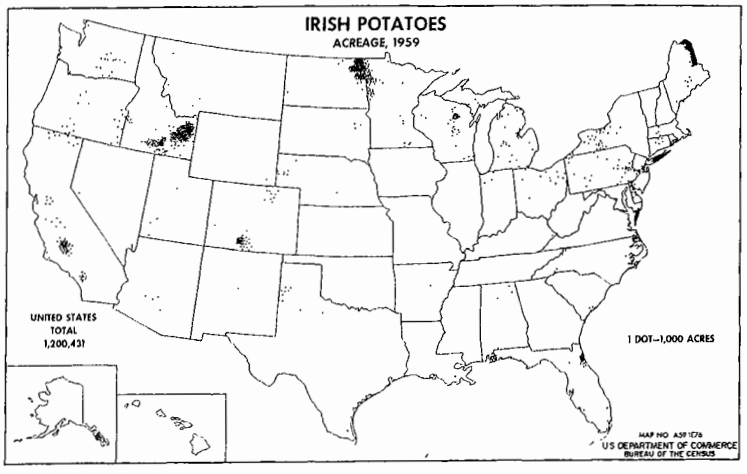
SUGAR BEETS HARVESTED FOR SUGAR

Sugar beets are produced in several of the irrigated areas of the West. In the Saginaw Bay area of Michigan and in other areas of production in the Eastern States, sugar beets are generally produced without irrigation. The leading producing State is California, which has about 23 percent of the total U.S. acreage. Both the Central and Imperial Valleys now grow sugar beets, with the heaviest concentration located in the lower Sacramento Valley. Colorado is the second State in acreage harvested. About 16 percent of the total U.S. crop is grown in Colorado, particularly in Weld County in the northeastern part of the State. The Snake River Valley and its tributary areas and the Red River Valley of North Dakota and Minnesota are other major producing areas. Idaho has about 10 percent of the U.S. crop and the Red River Valley produces about 15 percent of all sugar beets harvested in the U.S.



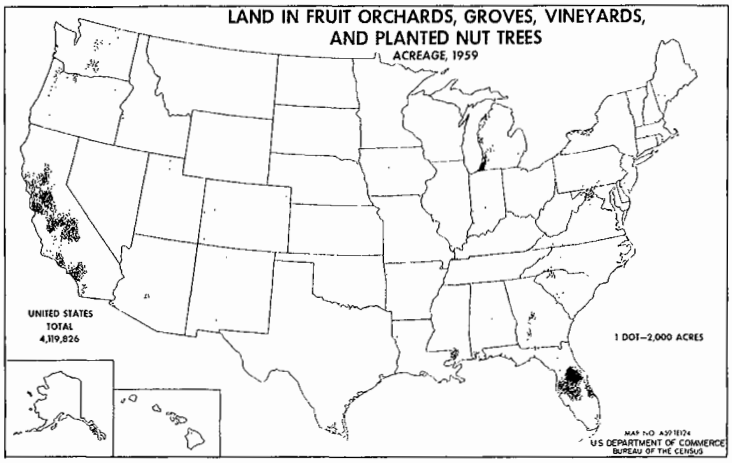
SUGARCANE HARVESTED FOR SUGAR

Sugarcane is harvested for sugar in only three States—Hawaii, Louisiana, and Florida. These are all tropical or subtropical areas, since sugarcane does best in a moist tropical climate. In acreage, Louisiana is the leading State with about three-fifths (61 percent) of the total acreage. Hawaii has 27 percent and Florida 12 percent of the total acreage. Although Hawaii has less than half as much acreage as Louisiana it produces nearly twice as much sugarcane. In Hawaii the yield in 1959 was 85 tons per acre, which is one of the highest yields reported anywhere in the world. In Florida the 1959 yield was 37 tons per acre and in Louisiana it was 22 tons per acre. Fertile volcanic soils in Hawaii, alluvial soils in Louisiana, and muck and peat soils in south Florida are used for sugarcane.



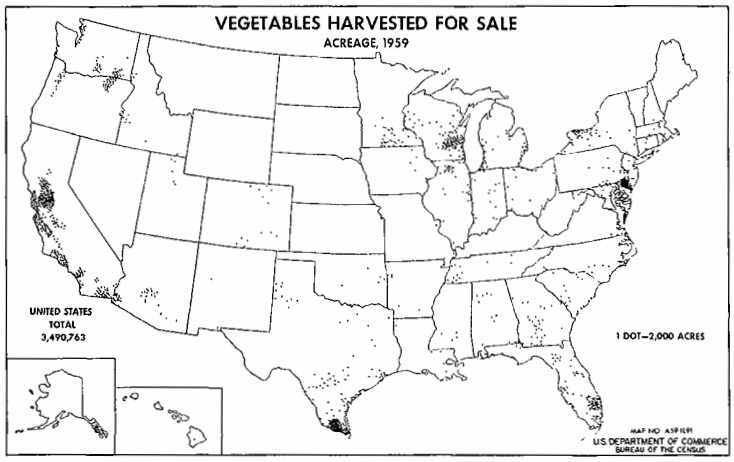
IRISH POTATOES

The acreage of Irish potatoes shown on the accompanying map is primarily for the commercial crop. Not included are the small acreages grown on many farms throughout the Northern States in particular. Idaho and Maine are leading States in the commercial production of potatoes; Idaho accounted for about one-sixth of the 1959 crop and Maine for about a tenth (11 percent) of the total. North Dakota and Minnesota are the next ranking States with 8 and 7 percent of the total crop respectively. California and New York also have nearly 7 percent each of the total crop. Colorado, Wisconsin, and Michigan are other important producers. Scattered areas of production are found in Pennsylvania, and a very concentrated area of production may be noted on the Eastern Shore of Virginia. In Florida, early potatoes are produced in the Hastings locality to be shipped north in advance of maturing of the crops in the leading commercial areas.



LAND IN FRUIT ORCHARDS, GROVES, VINEYARDS, AND PLANTED NUT TREES

The acreage of land in fruit orchards, groves, vineyards, and planted nut trees is heavily concentrated in two States—California and Florida, which together account for more than half the total acreage used for these crops in 1959. California alone had a third of all acreage in fruits and nuts. In California a wide variety of fruits and nuts are grown including citrus fruits, deciduous fruits, grapes, walnuts, and almonds. Florida is principally important for its citrus production. Michigan is the third ranking State in acreage in orchard land, and is particularly known for its cherries, apples, and peaches. It is closely followed by Georgia with its peaches and pecans, Texas with its citrus and some pecans, and New York with its vineyards and its several other deciduous fruits. Washington and Oregon are important producers of apples and some of the other deciduous fruits such as pears. Pennsylvania has a less concentrated but significant fruit production, particularly apples.

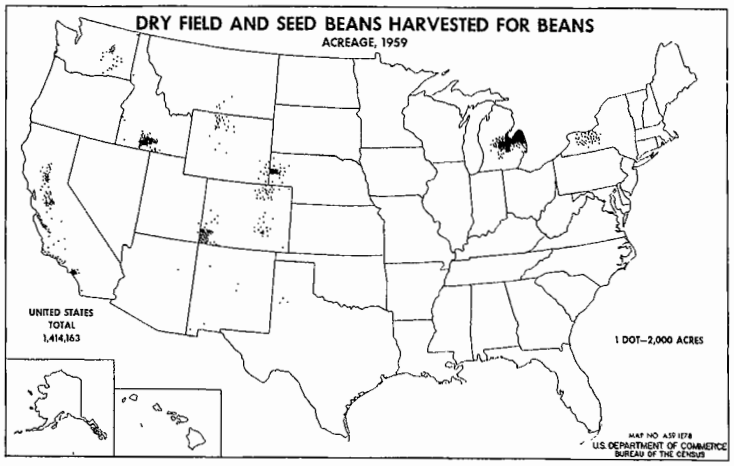


VEGETABLES HARVESTED FOR SALE

About 43 percent of the total acreage of vegetables harvested for sale is found in four leading States: California, 657,000 acres; Texas, 326,000 acres; Florida, 274,000 acres; and Wisconsin, 243,000 acres. Other States having more than 100,000 acres each are, in order of rank, New York, Minnesota, New Jersey, Illinois, Washington, Michigan, and Oregon. The major vegetables harvested for sale in 1959 in the Nation as a whole were as follows:

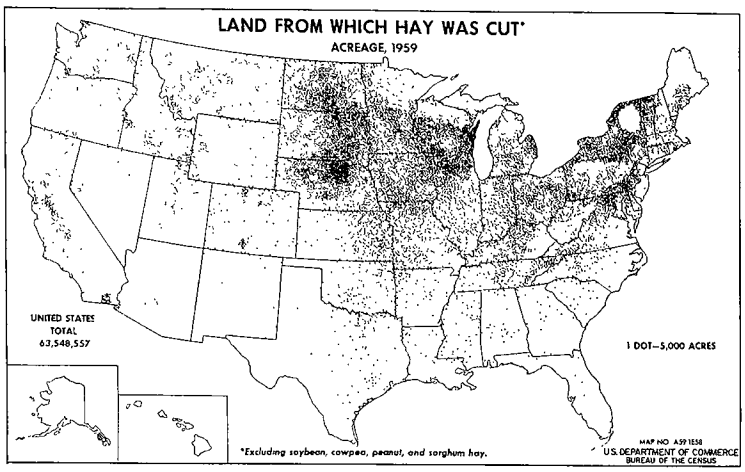
	1,000 acres
Sweet corn	618
Tomatoes	445
Snap beans	244
Cabbage	112
Cucumbers and pickles	104

A considerable variety of other vegetables grown for fresh market and processing were widely distributed among the major vegetable producing areas.



DRY FIELD AND SEED BEANS HARVESTED FOR BEANS

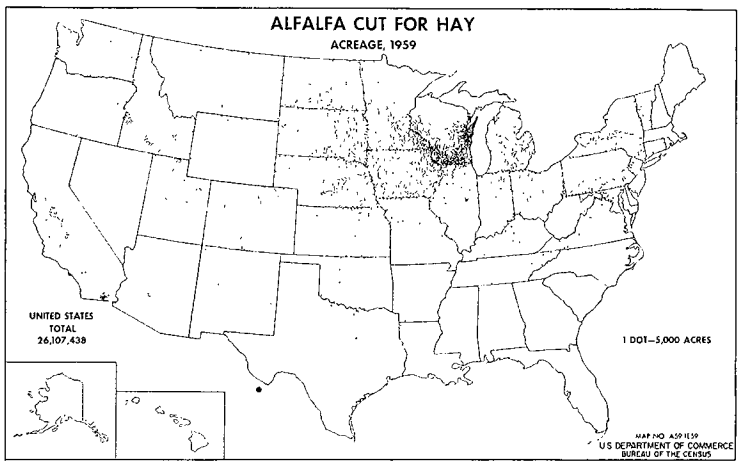
Several areas produce dry field and seed beans, and most of these are concentrated in extent. In the Eastern States, the acreage is heavily concentrated in the Saginaw Bay region of Michigan and in the western part of New York. Michigan alone has nearly a half million acres of dry beans. Together these two States account for 41 percent of the total U.S. crop. Colorado, California, and Idaho are leading States in acreage harvested in the West. These three States have 41 percent of the total acreage produced. In the Western States, dry field beans are produced both with and without irrigation. Most of the dry beans are produced where the mean August temperature does not exceed 70° F.



LAND FROM WHICH HAY WAS CUT

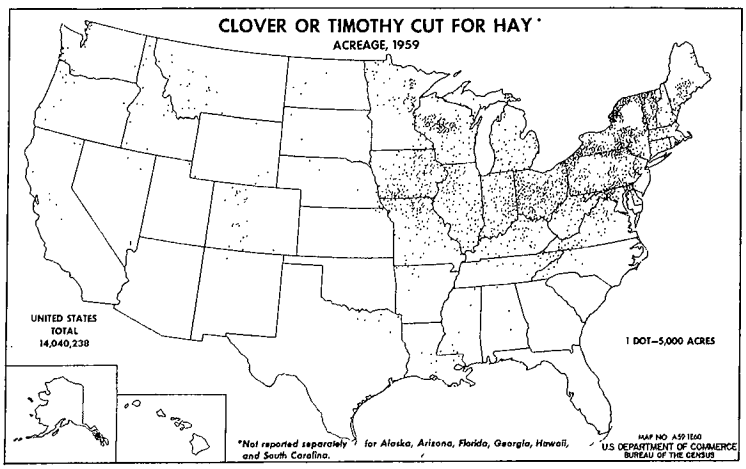
The land from which hay was cut amounted to 63.5 million acres in 1959. This was the lowest acreage reported by the Census of Agriculture since 1939, when 58.8 million acres were cut for hay. In 1954 the peak acreage since 1924 was reported—69.9 million acres. Generally, however, the acreage of hay cut has fluctuated between 60 and 70 million acres since 1900. Some of the variation is probably due to slightly different ways of reporting the acreage cut.

The Northern Plains reported the most hay cut—15 million acres, or nearly a fourth of the total U.S. acreage. About half of the hay acreage cut in this region was wild hay. The next most important hay-producing region was the Corn Belt with 11.5 million acres, followed by the Lakes States with 9.1 million acres and the Northeast with 7.5 million acres. It is significant to note that hay is a major crop in the dairy areas of the Northeast and the Lake States.



ALFALFA CUT FOR HAY

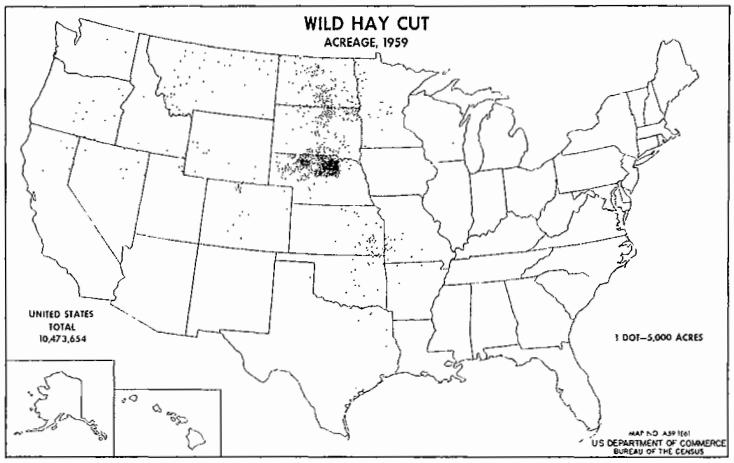
About 41 percent of the total acreage in hay crops is in alfalfa hay, which includes alfalfa and alfalfa mixtures used for hay and for dehydrating. Of all the major hay crops, alfalfa is the most widely grown. Only in the Southeast, where a humid climate and sandy soils are not favorable for its production, is it completely absent from the hay crops grown. Soils with adequate lime are the most favorable for growing alfalfa. In the West it is a major irrigated crop. Annual yields are particularly high in the Southwest, where several cuttings each year are possible because of the long growing season and the use of irrigation water. California in 1959 reported average yields of 5 tons per acre and Arizona had 4.8 tons per acre. In Wisconsin 2.7 tons per acre were reported. Four States each reported more than 2 million acres of alfalfa hay in 1959—Wisconsin, Iowa, Minnesota, and South Dakota. Six other States each reported more than a million acres cut—Nebraska, Michigan, North Dakota, Illinois, Kansas, and California.



CLOVER OR TIMOTHY CUT FOR HAY

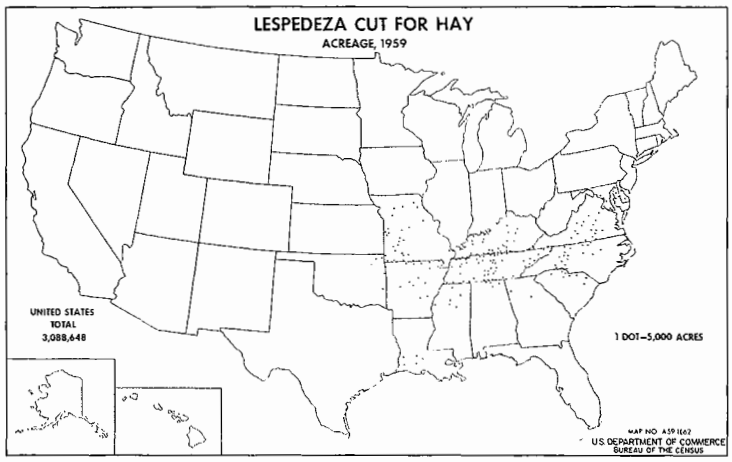
Clover and timothy was formerly a much more important hay crop than it is today. In 1909, nearly 37 million acres of clover and timothy were cut compared to 4.7 million acres of alfalfa hay. Fifty years later only 14 million acres of clover and timothy hay were cut compared with 26.1 million acres of alfalfa hay which was cut. Less emphasis on timothy as a hay crop is definitely noticeable. Part of the decline in the acreage of timothy is associated with the decrease in number of horses used as draft animals.

The major producing areas for clover and timothy hay have always been in the north central and northeastern States. In 1959 the Corn Belt had 4.7 million acres, the Northeast reported 4.1 million acres, and the Lake States 2.1 million acres. Seventy-eight percent of the total acreage of clover and timothy was located in these three farm production regions.



WILD HAY CUT

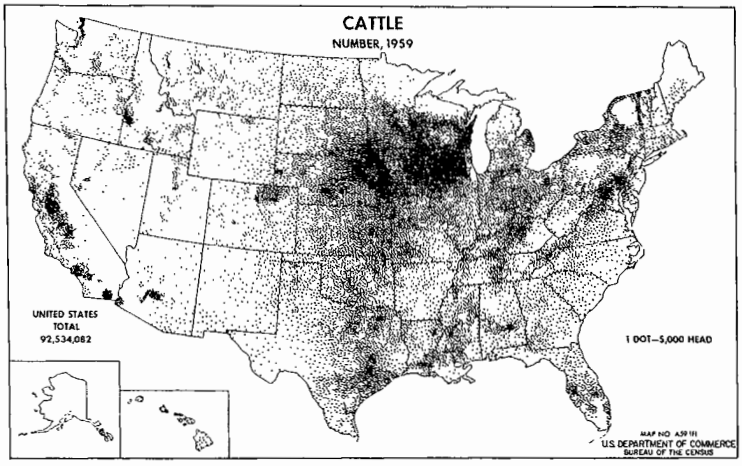
The Northern Plains is the major region in which wild hay is cut. In 1959 wild hay was cut from 10.5 million acres in the United States. Of this total 7.2 million acres, or about 70 percent of all wild hay was cut in the Northern Plains. Nebraska was the leading State with 2.7 million acres cut. It is a particularly important source of roughage feed in the Sand Hills of Nebraska, where ranchers place considerable emphasis on it as a source of winter feed. Often, selected areas of pasture or range are cut for hay wherever the grass yields are best. Generally, however, many of these wild hay producing areas are associated with depressions where moisture accumulates or along streams. In the Western States wild hay is often irrigated, sometimes merely by spreading water over the rangeland adjacent to an available water source.



LESPEDEZA CUT FOR HAY

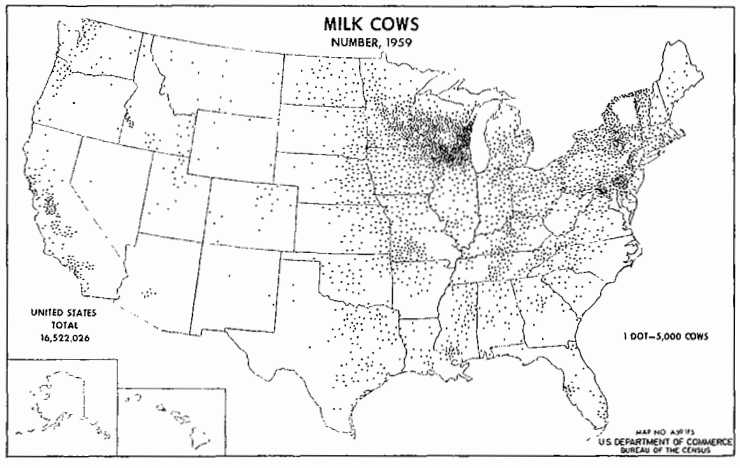
Lespedeza is a comparatively new crop among the hay and forage crops in widespread use in the United States. As a legume it has found ready acceptance in the mid-South where soils are not too favorable for the production of alfalfa. In 1939 the Census of Agriculture reported 4.7 million acres of lespedeza cut for hay. The peak acreage of 6.9 million acres was reported in the 1949 census. Less than half as much was reported 10 years later in 1959—only 3.1 million acres. Tennessee and Kentucky each reported a half million acres cut in 1959. North Carolina, Arkansas, and Virginia each had about a quarter of a million acres cut in 1959.

Compared with alfalfa, yields of lespedeza are not spectacular. Most States reported from 1 to 1.5 tons per acre as average yields. Yet this yield compares favorably with the yields of clover and timothy, which generally average between 1 and 2 tons per acre.



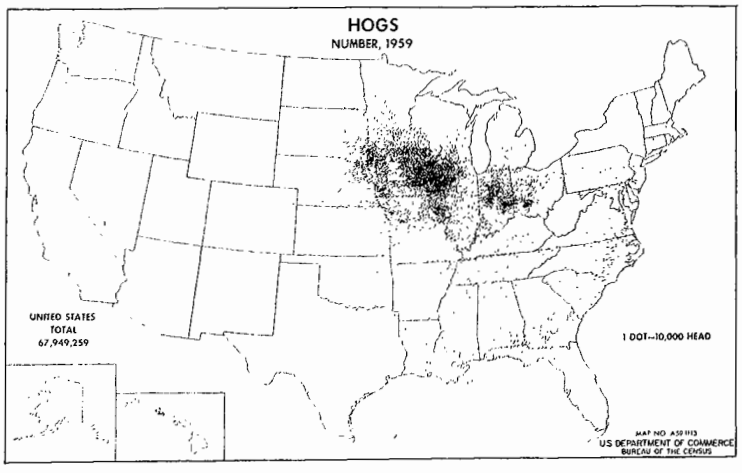
CATTLE

Cattle are more widely raised than any of the other livestock produced in the United States. In 1959 the Census of Agriculture reported the cattle population as 92.5 million. The heaviest concentration comprises southern Wisconsin, northern Illinois, Iowa, eastern Nebraska, and southern Minnesota. This area of heavy concentration includes both the concentration of dairy cattle in the Dairy Belt and the concentration of large numbers of beef cattle in the western part of the Corn Belt. In the Western States, where cattle are grazed on the extensive rangelands, the highest densities coincide with areas of irrigated agriculture where cattle are fattened for market, or near the main centers of population where dairying is important. In terms of total numbers, Texas was the leading cattle producing State in 1959 with 8.5 million cattle. Iowa had 6.5 million.



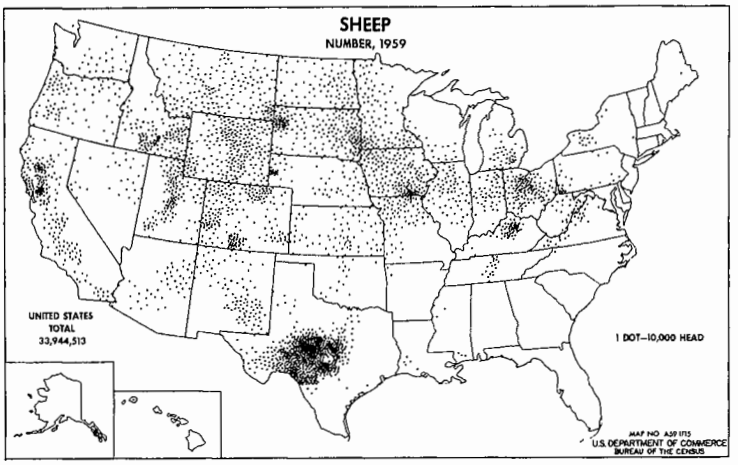
MILK COWS

About one-sixth, or 18 percent, of the total cattle population could be classified as primarily used for dairy purposes in 1959. In the distribution of milk cows, the dairy belt centered in Wisconsin and Minnesota in the Lake States and in New York in the Northeast stands out prominently. In California the influence of large urban centers on dairying is readily apparent. Elsewhere, the leading concentrations are associated with the distribution of urban population or with physical conditions favorable for dairy production. Wisconsin reported 2.1 million milk cows in 1959. Minnesota and New York each reported 1.2 million head. Iowa, Pennsylvania, and California in that order were the next most important States in the number of milk cows reported. In 1959, milk cows numbered about 3.7 million fewer than in 1954.



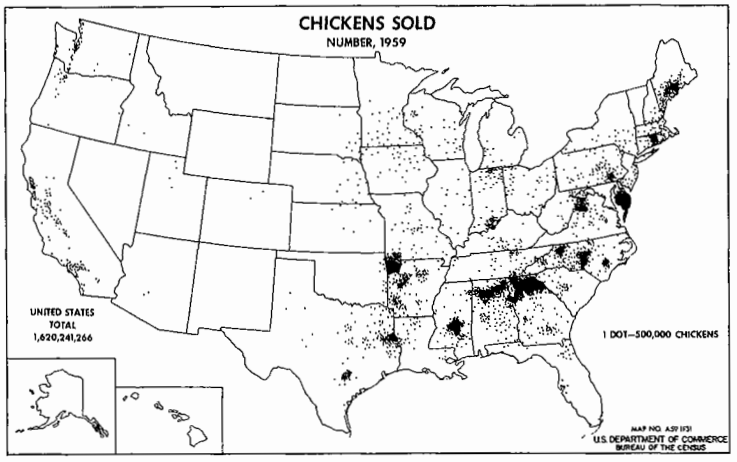
HOGS

The hog population in 1959 was about 10.8 million more than reported by the census of agriculture in 1954. The heavy concentration of hog production in the Corn Belt and Lake States is shown on the accompanying map. This concentration also spills over into the eastern part of the Northern Plains States. The Corn Belt alone had 53 percent of the total number of hogs reported on farms in 1959. The Corn Belt, Lake States, and Northern Plains regions combined accounted for 76 percent of all hogs reported. Although production of hogs is not as widespread as that of cattle, a considerable number are grown throughout most of the Southern States in addition to the farm production regions mentioned above. Relatively few hogs are raised in the Northeast or in the West, largely because these areas do not produce large quantities of corn.



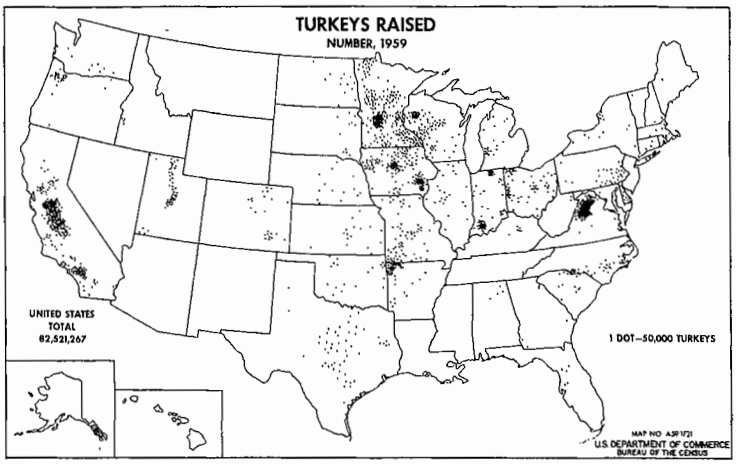
SHEEP

In contrast to the distribution of hog production, most sheep are found in the Western and Great Plains States. The Corn Belt has an appreciable concentration and interesting concentrations are found in the Bluegrass region of Kentucky and in the Nashville Basin of Tennessee. Parts of West Virginia and southern Ohio formerly were major areas of sheep production. Today these areas are of little importance. In 1959, Texas reported 6.1 million head of sheep. Wyoming had 2.4 million, and California and Colorado each had 2.1 million. South Dakota was the next leading producer with 1.9 million followed closely by Montana with about the same number. Iowa had 1.8 million followed by Utah with 1.3 million, Ohio and Idaho with 1.2 million, and Minnesota with 1.1 million.



CHICKENS SOLD

The distribution of chickens sold is characterized by a high degree of very heavy concentration within rather localized parts of several States in the South and the Northeast. The increase in mass production of broilers as a highly specialized enterprise is one of the striking changes that has been taking place in the supply of poultry meat. In 1954 the Census of Agriculture reported slightly less than 1 billion chickens sold. By 1959, this had risen to 1.6 billion chickens sold. Georgia is now the leading broiler-producing State with 237 million chickens sold in 1959. Arkansas is the second most important broiler State, selling 153 million chickens in 1959, followed by Alabama with 143 million, and North Carolina with 114 million. In Delaware and eastern Maryland and the Eastern Shore of Virginia there is a very striking concentration of broiler production. This area, known as the Delmarva Peninsula, produced about 154 million broilers in 1959 in an area considerably smaller than the north Georgia broiler area.

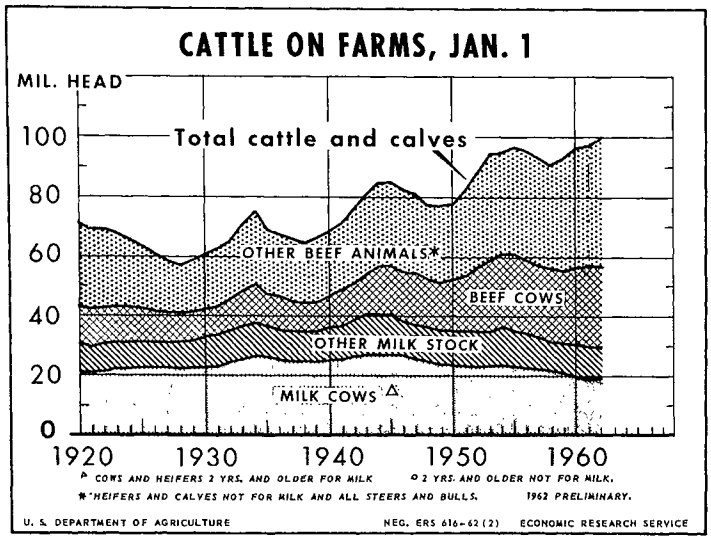


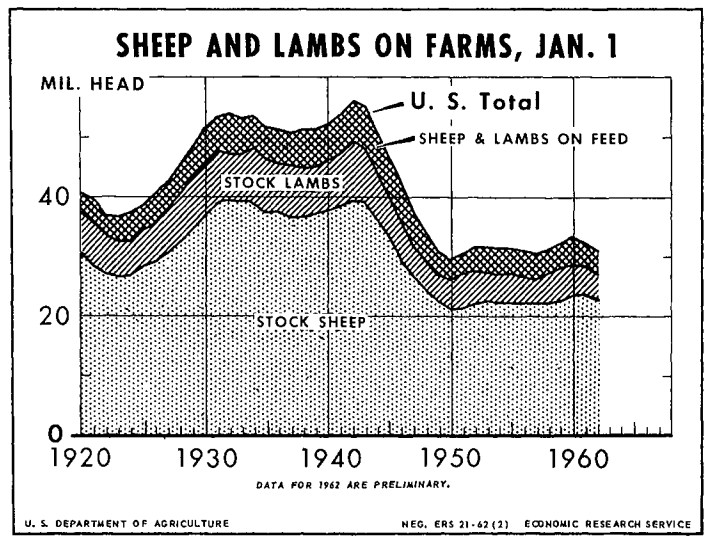
TURKEYS RAISED

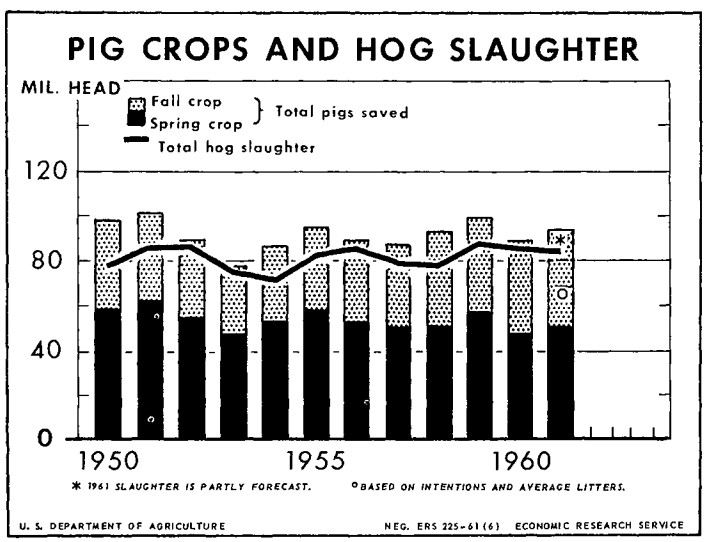
As in the case of chickens sold, a very localized pattern of production for turkeys raised is shown by the accompanying map. Whereas the South and Northeast were the major producers of broilers in 1959, turkeys were more heavily grown in the Lake States and the Corn Belt, and in California and Virginia. The heavy concentration of turkeys in the northwestern part of Virginia is the single major exception in which turkey production is concentrated in an area where broiler production is important.

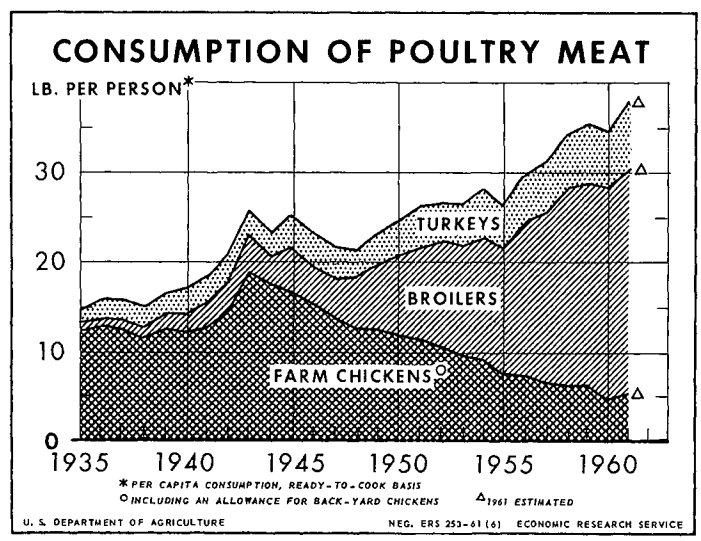
The leading State in the raising of turkeys is California (12.9 million) followed closely by Minnesota with 12.5 million. Iowa raised 8.2 million turkeys in 1959 and Virginia 6.6 million.

Like broiler production, turkey production has expanded greatly in the past decade. In 1949 the Census of Agriculture reported only 36 million turkeys raised. By 1954 this had increased to 63 million and by 1959 to 83 million.









CATTLE ON FARMS

Year	Cattle and calves on farms January 1	Beef production	Per capita consumption of beef
	1,000 head	*Million pounds*	*Pounds*
1950	77,963	9,534	63.4
1951	82,083	8,837	56.1
1952	88,072	9,650	62.2
1953	94,241	12,407	77.6
1954	95,679	12,963	80.1
1955	96,592	13,569	82.0
1956	95,900	14,462	85.4
1957	92,860	14,202	84.6
1958	91,176	13,330	80.5
1959	93,322	13,580	81.4
1960	96,236	14,725	85.2

PIG CROPS AND HOG SLAUGHTER

Year	Pigs saved			Hog slaughter	Pork production	Per capita consumption of pork
	Spring	Fall	Total			
	1,000 head	*1,000 head*	*1,000 head*	*1,000 head*	*Million pounds*	*Pounds*
1950	57,958	39,423	97,381	79,263	10,714	69.2
1951	61,298	39,288	100,586	85,540	11,481	71.9
1952	55,135	33,694	88,829	86,572	11,527	72.4
1953	47,940	29,974	77,914	74,368	10,006	63.5
1954	52,852	33,978	86,830	71,495	9,870	60.0
1955	57,610	38,119	95,729	81,051	10,990	66.8
1956	53,124	36,302	89,426	85,064	11,200	67.3
1957	51,263	36,099	87,362	78,636	10,424	61.1
1958	51,354	42,179	93,533	76,822	10,454	60.2
1959	56,620	42,775	99,395	87,606	11,993	67.6
1960	47,191	41,301	88,492	84,375	11,630	65.3

SHEEP AND LAMBS ON FARMS

Year	Sheep and lambs on farms January 1	Lamb and mutton production	Per capita consumption of lamb and mutton
	1,000 head	*Million pounds*	*Pounds*
1950	29,826	597	4.0
1951	30,633	521	3.4
1952	31,982	648	4.2
1953	31,900	729	4.7
1954	31,356	734	4.6
1955	31,582	758	4.6
1956	31,157	741	4.5
1957	30,654	707	4.2
1958	31,217	688	4.2
1959	32,606	738	4.8
1960	33,170	768	4.8

CONSUMPTION OF POULTRY MEAT

Year	Per capita consumption				
	Broilers	Farm and non-farm chickens	Total chickens	Turkeys	Total poultry
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1950	8.7	11.9	20.6	4.1	24.7
1951	10.4	11.3	21.7	4.4	26.1
1952	11.7	10.4	22.1	4.7	26.8
1953	12.3	9.6	21.9	4.8	26.7
1954	13.7	9.1	22.8	5.3	28.1
1955	13.8	7.5	21.3	5.0	26.3
1956	17.3	7.1	24.4	5.2	29.6
1957	19.1	6.4	25.5	5.9	31.4
1958	22.0	6.2	28.2	5.9	34.1
1959	22.8	6.1	28.9	6.3	35.2
1960	23.5	4.8	28.3	6.3	34.6

* U.S. GOVERNMENT PRINTING OFFICE : 1962 O—648534