Volume 5

Special Reports

Part 1

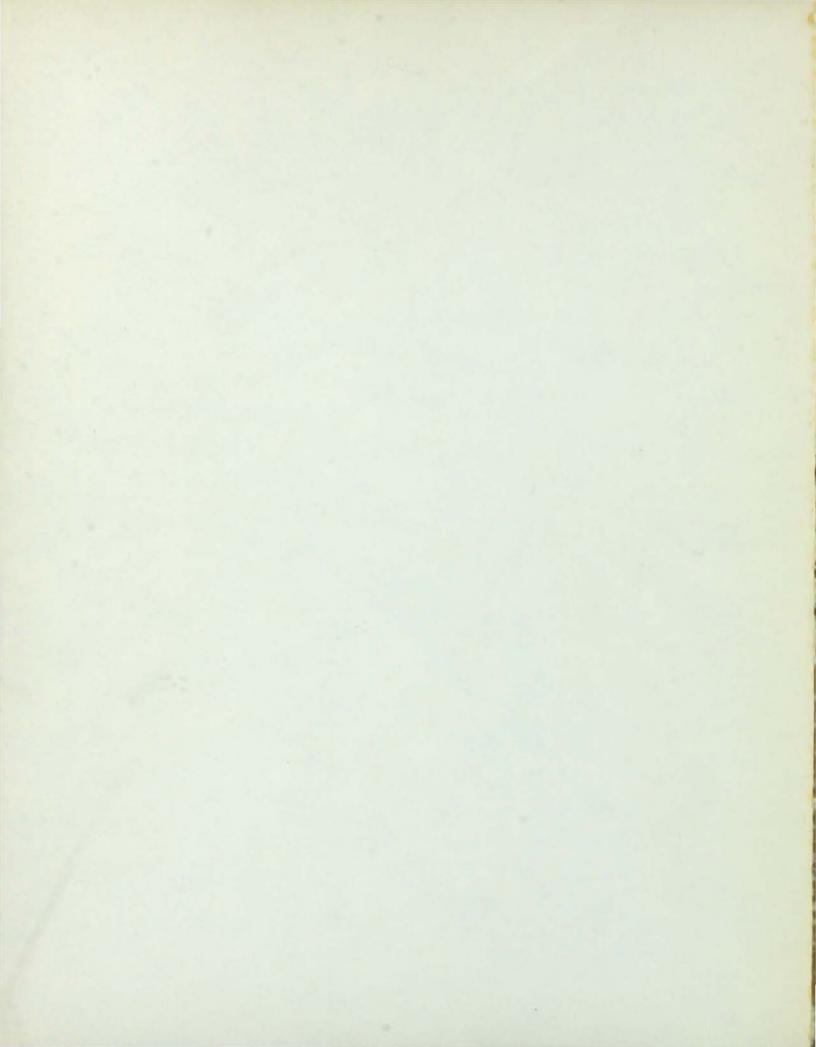
Graphic Summary

AC78-SR-1

1978
CENSUS OF
AGRICULTURE

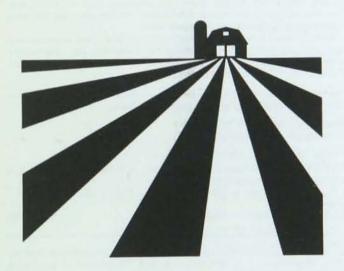
U.S. Department of Commerce BUREAU OF THE CENSUS





1978 CENSUS OF AGRICULTURE

Volume 5
Special Reports



Graphic Summary

AC78-SR-1

Issued January 1982



U.S. Department of Commerce
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BUREAU OF THE CENSUS

Bruce Chapman, Director
Shirley Kallek, Associate Director for
Economic Fields
Michael G. Farrell, Assistant Director for
Economic and Agriculture Censuses

AGRICULTURE DIVISION Arnold L. Bollenbacher, Chief

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This report was prepared in the Agriculture Division under the general supervision of Orvin L. Wilhite, Chief (to January 1980), his successor, Arnold L. Bollenbacher, and Joseph A. Horak, Assistant Division Chief (to May 1981). Douglas J. Miller was directly responsible for development of the subject matter content, review of the data displayed on the maps, and preparation of the text. Jay A. Johnson and Morris A. Murray under the direction of Billy E. Stark, Branch Chief, were responsible for the computer programming which extracted and formatted the county level statistics necessary in the computer preparation of the maps. Cecelia H. Peets, Regina E. Lindsey, and Karin G. Beach provided editorial services and liaison in the publication area.

The maps were prepared in the Geography Division under the direction of Stanley D. Matchett, Chief, and Joe J. Knott, Assistant Division Chief, and the Computer Graphics staff under the supervision of Frederick R. Broome, Chief, and Roy F. Borgstede. Outline and scan files were created by Roy F. Borgstede. Maps were designed and produced by Barbara A.R. Bonnette assisted by James R. Wood. Cartographic assistance was provided by the Cartographic Methods Branch under the supervision of Danny E. Jones.

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Members of various agencies of the U.S. Department of Agriculture provided advice and counsel during the planning, data collecting, and processing phases of the census and assisted farmers and ranchers who requested help in completing the report form.

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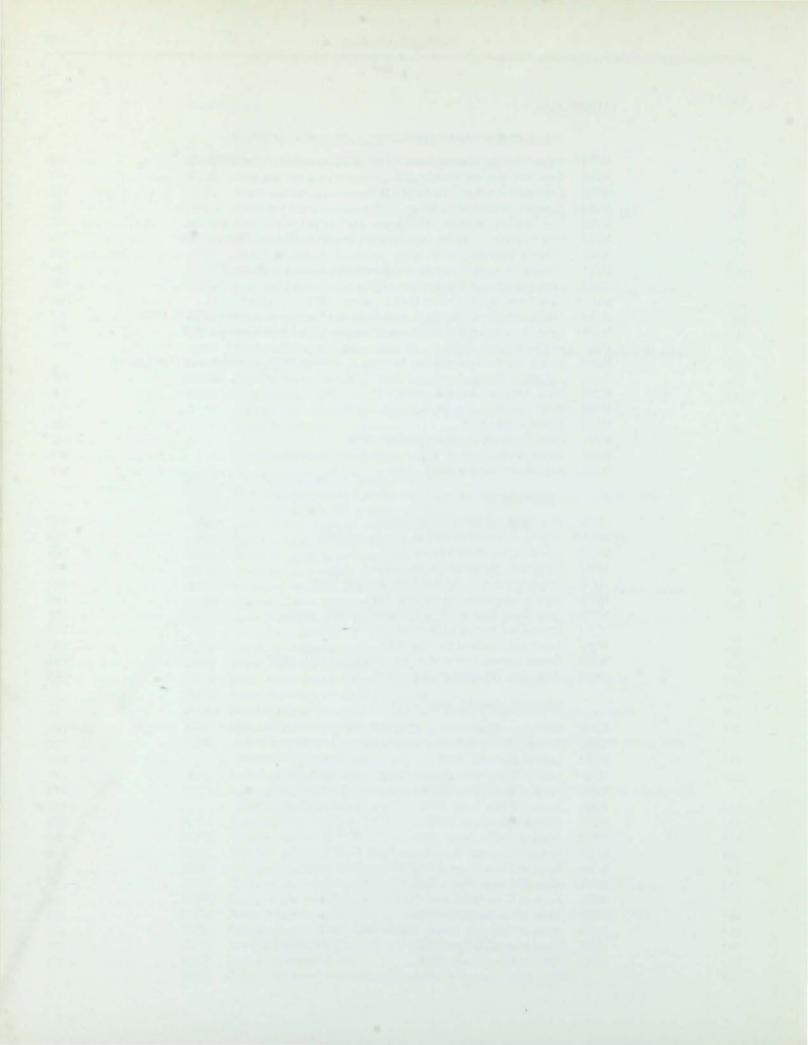
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AUTHORITY, AREA COVERED, AND HISTORY

The 1978 Census of Agriculture was taken in accordance with the provisions of title 13, United States Code (Public Law 93-86). Sections 142(a) and 191 of title 13 provide for a census of agriculture every 5 years in each State, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands. The 1978 census is the 21st nationwide census of agriculture and the third conducted primarily by mail.

SOURCES OF INFORMATION

The data used in preparing the charts and maps shown in this graphic summary were obtained from the 1978 Census of Agriculture. Detailed statistics for States and counties may be found in volume 1 of the 1978 census reports.

FARM DEFINITION

The current farm definition used for statistics was announced on August 12, 1975, and defines a farm as any place from which \$1,000 or more of agricultural products were sold or normally would have been sold during the census year. The previous definition counted a farm as any place with less than 10 acres from which \$250 or more of agricultural products were sold or normally would have been sold during the census year, or any place of 10 acres or more from which \$50 or more of agricultural products were sold or normally would have been sold during the census year.

METHOD OF ENUMERATION

The 1978 Census of Agriculture was conducted primarily by mail for maximum economy, supplemented by a personal canvass of a statistical area segment sample for maximum completeness of coverage. The area segment sample, which consists of selected geographic areas completely canvassed by direct enumeration, provides reliable estimates for States of the number and characteristics of any farms not represented in the mail portion of the census. Estimates for such farms are an integral part of the State totals published for the 1978 census, however, these estimates are statistically reliable only for State

totals and have not been allocated to counties. Therefore, the data collected from the area sample enumeration were not plotted. It should be noted that the statistical totals shown on the maps represent the U.S. total including the area sample data. Appendix A of Volume 1, State and County Data, provides a more detailed description of how the 1978 census was taken.

CENSUS COVERAGE

Although a complete and fully accurate count of farms, farmland, and farm production is the aim of each nationwide census of agriculture, the complex structure of America's agriculture makes this goal difficult to achieve. Among the complexities are the many places to be enumerated, the variety of arrangements under which farms are operated, the continuing changes in the relationship of farm operators to the land operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete listing of all agricultural operators, the difficulty of locating and identifying some farms, the operator's absence from his/her farm during mail efforts and followup procedures, and the operator's opinion that some or all of his/her agricultural operations should not be included in the census.

LIMITATIONS OF DATA

Every census or survey has some errors. These can arise from such sources as incorrect or incomplete reporting, incorrect processing, and the inability to obtain a response from all farmers.

Reported data may be incorrect because of misunderstanding of questions or the use of estimates in reporting. During processing, adjustments are made to data items which appear to be inconsistent with other items. Some respondents failed to provide all of the information requested. In some cases, the respondent may indicate the presence of an item but not the amount. Imputations were made for missing data on the quantities and sales values of crops and livestock, but not for such items as direct sales, foreign ownership, and the gross value of agricultural services provided others.

For a detailed description of coverage and data limitations, see volume 5, Part 3, Coverage Evaluation, of the 1978 Census of Agriculture.

USE OF SAMPLING

Two types of sampling were used for data collection for the 1978 census. In addition to the State estimates from the direct enumeration sample discussed previously, some data items of the census report form were collected from only a sample of farms. Data based on a sample are subject to sampling error. Detailed discussions of the census report forms, the use of sampling, and estimates of sampling error are included in appendix A, Volume-1, State and County Data.

LIMITATIONS OF MAPPED DATA

The series of increase and decrease maps included in this publication show the amount of change for various items for the United States.

Estimates from the area sample enumeration are included in the U.S. totals shown on the maps. However, the maps were plotted using county data which have not been adjusted to include estimates from the sample enumeration. Thus, the dots on these maps do not fully represent the total change that has taken place for the United States.

As most of the farms represented in the area sample estimates are small, the increase/decrease patterns for most items shown on the maps are not significantly affected. The impact of the area sample estimates can be seen in the statistical summary of mapped data. It should be noted that more complete mail lists for the 1978 census also affect comparability for some items between 1974 and 1978; although the patterns of change should not be affected significantly.

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SUMMARY OF MAPPED DATA

Except for those showing increase or decrease, the maps in this report show only data for 1978. The 1978 total for each item mapped is shown in the table with the comparable 1974 total.

Dramatic changes in rates of farm expenditures and unit prices of products sold between the 1974 and 1978 censuses affect the comparability of some data. During the period between the two censuses, prices paid by farmers greatly increased while prices received for the various commodities changed to a lesser extent.

FARMS

All farms—All places on which agricultural operations were conducted at any time in the census year under the day-to-day control of an individual management and from which \$1,000 or more of agricultural products were sold or would normally have been sold in 1978.

Farms with sales of \$2,500 or more—Farms with sales of agricultural products amounting to at least \$2,500, excluding abnormal farms such as prison farms, hospital farms, church farms, school farms, experimental farms, Indian reservations, and grazing associations.

VALUE OF LAND AND BUILDINGS

The value of land and buildings reported for the census was to represent market value, i.e., the price for which the land and buildings would sell at the time the census was taken. If the value of land and buildings was not reported or was incompletely reported, an estimate was supplied during office processing by

using the average value per acre of land and buildings for farms of approximately the same size having similar characteristics in the same area.

The total value of land and buildings for all farms in the United States was \$650 billion. The average value per farm was \$262,252 and the average value per acre was \$628.

For many groups of counties in the West, the maps exhibiting value of land and buildings per farm show reverse patterns as compared with maps showing value of land and buildings per acre; i.e., many counties in high value-per-farm categories appear in low value-per acre categories. This reverse relationship between the two pattern maps happens because a large proportion of land in farms is comprised of low value-per-acre rangeland, and the extremely large average size of the farms and ranches offsets the low average-per-acre value, resulting in high average-per-farm values. This item was asked on a sample basis. Further explanation and sample reliability can be found in appendix A in Volume I, State and County Data.

SIZE OF FARMS

Although the number of farms in the United States has dropped drastically in the last 35 years, the acreage of land in farms has changed only moderately; as a result, the average size of farm is now nearly two and one-half times what it was in 1945.

The trend since 1945 until this census has been a decrease in number of farms for each of the size groups under 500 acres and an increase in the number of farms in size groups over 500 acres. However, the results of better coverage for 1978 along with growth in part-time farms in many areas show an increase in farms of less than 100 acres in size. Part of this is because of the inflationary effect on prices and the result of more places being classified as farms. The other part is because of the census techniques used in determining the farms missing from the mail list which are included at the State, regional, and national levels.

Size of farm measured only by acres operated is often not a complete measure of the size of the farm business due to large variations in the productivity of land or in the intensity of activity. For example, average value of farm products sold per acre of farmland can vary from such extremes as \$1,488 per acre in Suffolk County, N.Y., to less than \$11 per acre in Elke County, Nev.

STANDARD INDUSTRIAL CLASSIFICATION OF FARMS

For the 1978 census, all agricultural establishments (farms, ranches, nurseries, greenhouses, etc.) were classified by type of principal activity or activities using the Standard Industrial Classification system. A similar classification system was used

for the 1974 census but only farms with sales of \$2,500 or more were classified. It should be noted that changes in commodity prices and production levels will affect comparability between censuses.

In order for a farm to be classified within a particular industry, the value of sales in 1978 from a product or group of products had to represent 50 percent or more of the total value of sales of agricultural products sold. The 1972 Standard Industrial Classification which was used for the 1974 and 1978 censuses is generally comparable for the major groupings to the type of farm classification used in 1969 and earlier censuses.

Cash Grain Farms

Cash grain farms (011)—These farms receive 50 percent of their total sales from wheat, rice, corn, sorghums, soybeans, other small grains, cowpeas, dry field and seed beans and peas, popcorn, lentils, and mustard and safflower seed.

Cash grain farms increased in number from 580,000 in 1974 to 594,000 in 1978. This increase was partly due to the significantly higher prices received for cash grain crops in relation to prices received for livestock and poultry products in 1978. Cash grain farms comprised 24.0 percent of all farms. They average 439 acres in size and \$41,419 in value of products sold. The greatest concentration of cash grain farms is in the corn belt, where corn and soybeans are the principal crops sold.

Wheat farms (0111)—Wheat farms are cash grain farms which receive 50 percent or more of the total sales of farm products from wheat. They account for 12.7 percent of the total cash grain farms and average 985 acres in size and \$33,555 in value of farm products sold. The largest concentration of wheat farms are in the Dakotas, Nebraska, Kansas, Oklahoma, Montana, Washington, and Oregon.

Rice farms (0112)—Rice farms are cash grain farms which receive 50 percent or more of the total value of farm products sold from rice. They are primarily located in Arkansas, Mississippi, Louisiana, California, and on the gulf coast of Texas.

Corn farms (0115)—Corn farms, which receive 50 percent or more of their total sales from corn, comprise 26.4 percent of the cash grain farms. These farms are most concentrated in the East North Central States.

Soybean farms (0116)—Soybean farms are cash grain farms which receive 50 percent or more of their total sales from soybeans. Soybean farms account for 32.8 percent of the cash grain farms and 7.9 percent of all farms. They are primarily located in the North Central States, east of the Mississippi River, and along the Mississippi River in Missouri, Arkansas, Tennessee, Mississippi, and Louisiana.

Field Crop Farms, Except Cash Grain (013)

Cotton Farms (0131)—Cotton farms are a part of the farms classified in the industry group field crops, except cash grains. About 1.3 percent of all farms were classified as cotton farms,

and average 719 acres in size and \$94,672 in value of farm products sold. They are located almost entirely in the South and in irrigated areas of the Southwest. About 76 percent of the bales of cotton harvested came from cotton farms.

Tobacco farms (0132)—Tobacco farms are a part of the farms classified as field crops, except cash grains. These farms comprise 5.8 percent of all farms. Tobacco farms are the smallest, both in terms of size of farm (99 acres) and value of sales from farm products sold (\$16,679). Nearly all tobacco farms are in six Southern States: North Carolina, South Carolina, Virginia, Kentucky, Tennessee, and Maryland. Nearly 79 percent of all tobacco harvested on farms comes from tobacco farms.

Sugar crop farms (0133)—Sugar crop farms are those which receive 50 percent or more of the total sales of farm products from the sale of sugar beets or sugarcane. These farms are located in the irrigated areas of the Western States (sugar beets) and in Florida, Louisiana, and Hawaii (sugarcane).

Irish potato farms (0134)—These farms receive 50 percent or more of their total sales from the sale of Irish potatoes. Most of them are located in Maine, Idaho, and North Dakota.

Vegetable and Melon Farms (016)

Farms were classified in this group if 50 percent of their total farm sales was from the sale of vegetables or melons. Vegetable and melon farms are widely scattered, with significant concentrations in California, Michigan, Wisconsin, New Jersey, New York, Florida, and Texas. The production of vegetables and melons is concentrated on a relatively small number of large and highly specialized farms.

Fruit and Tree Nut Farms (017)

Fruit and tree nut farms receive 50 percent or more of their total value of farm sales from berry crops, grapes, tree nuts, citrus fruits, deciduous tree fruits (apples, peaches, pears, etc.), and other fruits and nuts (pineapples, olives, dates, etc.). These farms are highly specialized in that they accounted for 94.0 percent of the value of all fruits, nuts, and berries sold and 85.5 percent of all land in orchards on all farms.

Horticultural Specialty Farms (018)

For a farm to be classified as a horticultural specialty farm, it must receive 50 percent or more of its total sales from the sale of ornamental plants, nursery products, and food crops grown under cover. This type of farm tends to be located close to large urban areas.

General Farms, Primarily Crop (019)

Any farm deriving 50 percent or more of its total value of sales of farm products from crops, but less than 50 percent from products of any other single crop group, is classified as a general farm, primarily crop.

Livestock Farms, Except Dairy, Poultry, and Animal Specialty (021)

These farms derive 50 percent or more of their total value of farm products from the sale of beef cattle, hogs, sheep, and goats.

Beef cattle feedlots (0211)—Beef cattle feedlots are farms which receive 50 percent or more of their total sales of farm products from the sale of beef cattle fattened for a period of at least 30 days. This group includes beef cattle which were fed on a contract or fee basis.

Beef cattle farms, except feedlots (0212)—Beef cattle farms, except feedlots, which derive 50 percent or more of their total value of farm products sold from the sale of nonfattened beef cattle. Feedlots are excluded from this group.

Hog farms (0213)—Hog farms derive 50 percent or more of their total value of farm products sold from the sale of hogs and pigs. These farms are most concentrated in the corn belt States.

Sheep and goat farms (0214)—Sheep and goat farms receive 50 percent or more of their total value of farm products sold from the sale of sheep, goats, goat's milk, wool, and mohair. These farms are primarily located in Texas, California, and other Western States.

Dairy Farms (024)

Dairy farms receive 50 percent or more of their total value of farm products sold from the sale of milk and cream. Dairy farms average 294 acres in size and \$74,492 in value of farm products sold. Dairy farms account for 91.8 percent of the value of all dairy products sold. Dairy farms are concentrated in the North Central and Middle Atlantic States. Wisconsin, Minnesota, New York, Pennsylvania, Ohio, and Michigan account for 62 percent of all dairy farms. California does not rank amoung the top States in number of dairy farms even though it ranks second in value of dairy products sold. This is a result of the large size dairy operations in California.

Poultry and Egg Farms (025)

Poultry farms are those which receive 50 percent or more of their value of sales of farm products from chickens, chicken eggs, broilers, turkeys, turkey eggs, hatched chicks, and other poultry and their products. Poultry farms account for 97.7 percent of the value of sales of all poultry and poultry products, 98.9 percent of broilers sold, and 98.0 percent of turkeys sold. Although poultry farms are found throughout the country, their greatest concentration is in the broiler producing areas of Georgia, Alabama, Mississippi, Arkansas, Delaware, and Maryland.

Animal Specialty Farms (027)

Animal specialty farms are those which derive 50 percent or more of their total value of farm sales from the sale of furbearing animals, rabbits, horses, mules, donkeys, ponies, honey, fish, worms, and other animal specialties.

General Farms, Primarily Livestock (029)

These are farms deriving 50 percent or more of their value of farm products sold from the sale of livestock and livestock products, including animal specialties, but less than 50 percent from any single livestock or livestock product group.

VALUE OF SALES CLASSIFICATION OF FARMS

The value of sales represents the gross market value before taxes and production expenditures of all agricultural products sold or removed from the place in 1978 regardless of who received or shared in the payment. It includes receipts by the operator as well as the value of any shares received by partners, landlords, contractors, and others associated with the place.

This report shows number of farms for the following value of sales classifications:

\$200,000 or more, \$100,000 to \$199,999, \$40,000 to \$99,999, \$20,000 to \$39,999, \$10,000 to \$19,999, \$5,000 to \$9,999, \$2,500 to \$4,999, \$1,000 to \$2,499.

Places having less than the minimum \$1,000 sales in the census year were counted as farms if they could normally be expected to produce agricultural products in sufficient quantity to meet the requirements of the definition.

TENURE AND CHARACTERISTICS OF FARM OPERATORS

Tenure

Tenure classifications used are:

Full owners— Operators who operate only the land they own.

Part owners— Operators who operate land they own and also land they rent from others.

Tenants— Operators who operate only the land they rent from others (or work on shares) for others.

Foreign Ownership of Agricultural Land

An inquiry measuring the importance of foreign ownership of agricultural land was asked for the first time in 1978. All farm operators were asked to report the number of acres owned by individuals who are not U.S. citizens; or owned by foreignheld corporations, unincorporated associations, or foreign governments. Corporations with 50 percent or more of the stock held by foreign investors were considered foreign owned. Any land owned or operated by such corporations was included as land held under foreign ownership.

In some cases, operators using land owned by others did not know the beneficiary owner of the land or, if the owner was known, they did not know the citizenship of the landlord. Therefore, a "don't know" category was included on the report form. Summary table 37, in Volume 1, State and County Data, provides operators response to the foreign ownership inquiry. Counts are provided for those responding "yes," "no," "don't know," and "no response." Only those farms responding "yes" are represented on the map.

Occupation of Farm Operator

The 1978 census is the second in which information was collected on the operator's principal occupation. Each farm operator to whom the inquiry applied was asked to classify his or her principal occupation as "Farming" or "Other" according to which occupation accounted for the majority (50 percent or more) of the operator's work time in 1978. For partnerships, the work time of all of the members of the partnership together was considered in determining principal occupation.

TYPE OF FARM ORGANIZATION

The 1978 census is the third in which farm operators were asked to indicate the type of organization under which their farm was operated. The four classifications used for type of organization are:

- Individual or family operation (sole proprietorship), excluding partnership and corporation.
- 2. Partnership operation, including family partnerships.
- 3. Corporation, including family corporations.
- Other, including farms operated as cooperatives, estates and trusts, and abnormal farms such as institutional farms, Indian reservations, grazing associations, and experimental farms.

LAND IN FARMS AND LAND USES

Land in farms—Each farm operator determined acres of land in farm by adding any acreage owned to any acreage rented from others then subtracting any acreage rented to others. Land in farms consists primarily of agricultural land, i.e., land used for crops and pasture or grazing. It also includes areas of woodland and wasteland and some cropland not actually under cultivation nor used for pasture or grazing. In general, all grazing lands were to be included as land in farms except lands used for grazing livestock under permit or special license on a per head or animal unit basis.

Total cropland—This includes the sum of acreage for cropland harvested, cropland used for pasture or grazing, cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow, and idle cropland.

Harvested cropland—This includes all land from which crops were harvested, including hay cut, and all land in orchards, citrus groves, and nursery and greenhouse products.

Pastureland—This is the sum of all types of pastureland. It includes cropland used only for pasture or grazing, woodland pastured, and other pastureland and rangeland.

Irrigated land—This consists of land in farms watered for agricultural purposes by artificial means.

Drained land—This consists of land in farms benefited to some extent by artificial drainage facilities including ditches, underground drains, grading or leveling for drainage, dikes, and pumping to remove water. These data were collected by the Soil Conservation Service of the U.S. Department of Agriculture.

MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD

Farm operators were asked to report market value of all agricultural products sold from the place in 1978. All sales of agricultural products during the year were to be reported regardless of when the crop was harvested or when livestock or their products were raised or produced.

Data for the sales of farm products represent total sales for the entire farm regardless of who shared the receipts. For tenantoperated farms, the landlord's share of the agricultural products was considered as sold provided the products were moved off the tenant farm. Contract producers were to report estimates of the market value of the commodities produced rather than the amount received from the contractor.

DIRECT SALES OF AGRICULTURAL PRODUCTS

Operators were asked to report the value of agricultural products produced and sold directly to individuals for human consumption. This value includes the sales of any crops, such as vegetables and fruit, cattle, hogs, sheep, chickens, turkeys, milk, cream, eggs, etc. Sales from roadside stands, farmers' markets, pick your own activities, etc., were to be included.

CUSTOMWORK AND OTHER AGRICULTURAL SERVICES

Includes any customwork such as plowing, planting, spraying, harvesting, preparing products for market, etc., for which the farm operator was paid. Instructions were to report gross amounts received before taxes and expenses.

FARM PRODUCTION EXPENSES

Farm production expenses include expenses paid by anyone for the production on the farm of crops, poultry, livestock, and other agricultural products. Tenant farmers were instructed to report expenditures by landlords for agricultural operations on the farm as well as their own expenditures. Farm operators who rent part of their land to others were to report only those expenses applicable to the land they actually operated. Contract producers who produced crops, poultry, or livestock for others under contract were to report the estimated cost of all items furnished by the contractor. These items were asked on a sample basis. Further explanation and sample reliability can be found in appendix A in Volume 1, State and County Data.

HIRED FARM LABOR

The number of hired farm workers includes all persons hired to do farm or ranch labor for cash payments. This labor may include everything from regular farm work to the keeping of records necessary to the agricultural operation. Members of the farm operators' families were included if they received cash payments. Workers working for contractors under contract to the farm operator, salaried corporation officers, unpaid family members, and persons employed by a labor contractor were excluded. Operators of hired machines were excluded if their pay was included in the cost of the customwork.

Considerable duplication exists in the count of hired workers reported working 149 days or less. Many are seasonal workers in vegetable and fruit producing areas. In the census statistics, the same workers may be counted several times as they move from farm to farm. These items were asked on a sample basis. Further explanation and sample reliability can be found in appendix A in Volume 1, State and County Data.

MACHINERY AND EQUIPMENT ON PLACE

Farm operators were asked to estimate the market value of all machinery and equipment usually kept on the farm and used for the farm business. The reported value represents an estimate of how much the machinery and equipment would sell for in its present condition, not the replacement cost or the depreciated value.

For the inventory of selected items of farm equipment, the operator was to report only the equipment owned, leased, or rented or temporarily borrowed from others that was on any part of the farm on December 31, 1978, and that was used for the farm business in 1977 or 1978. These items were asked on a sample basis. Further explanation and sample reliability can be found in appendix A in Volume 1, State and County Data.

AGRICULTURAL CHEMICALS USED

Fertilizer—Data on acreage fertilized were collected for harvested cropland, cropland used for pasture, and other pastureland. When the same crop was fertilized two or more times, the acreage was to be reported only once. If two different crops or two different plantings of the same crop were harvested in 1978 from the same acreage, the acreage of each crop or planting fertilized was to be reported only once.

Lime—Acreage limed and tonnage of lime and liming materials applied to the soil in 1978 were to be reported. Gypsum, land-plaster, and lime used for spraying or sanitation purposes were not to be reported.

Other agricultural chemicals—The cost of insecticides, herbicides, fungicides, and other pesticides and chemicals used on the farm in 1978 was to include the cost of the materials only, not the cost of application.

When reporting number of acres on which chemicals were used, the farm operator was instructed to report only once the acres treated more than one time with the same chemical. However, the cost of all the materials applied was to be reported.

When multipurpose chemicals were used, the acreage treated for each purpose was to be reported.

These items were asked on a sample basis. Further explanation can be found in appendix A in Volume 1, State and County Data.

ENERGY EXPENSES

The cost of energy and petroleum products was asked for by the major types used for the farm business. This was the first census where electricity expenses were obtained as a separate item. These items were asked on a sample basis. Further explanation and sample reliability can be found in appendix A in Volume 1, State and County Data.

LIVESTOCK AND POULTRY

Inventory—Farm operators were instructed to report livestock and poultry inventories as of December 31, 1978. All animals kept on the place were to be reported regardless of ownership, including livestock or poultry being custom fed or fed on contract for others.

Sales—Livestock and poultry sold include all animals sold or removed from the place during the year regardless of ownership. Those sold for a landlord or given to others in trade or in payment for goods and services as well as those custom fed for others were to be included. Animals bought and sold within a 30-day period were to be excluded.

The value of livestock and poultry sold represents the gross sales value before deducting any marketing or production costs. For livestock or poultry fed under contract for others, the farm operator was asked to estimate the market value at the time they were taken from the place.

CROPS

In 1978 sales of crops including nursery products and hay amounted to \$48.6 billion which accounted for 45 percent of the value of all farm products sold in 1978.

Crops harvested—Nearly all of the acres reported for individual crops in 1978 represent area harvested, except for a small part of the acreage of corn, sorghum, peanuts, soybeans, and cowpeas counted as harvested but hogged or grazed when the crop was mature or almost mature. Since more than one crop may have been harvested from the same land during the same crop year, the sum of acres of all crops harvested exceeds the acreage of land from which crops were harvested.

Acreages of corn, soybeans, and hay increased significantly between 1974 and 1978. This increased acreage is reflected in decreases in other crops, especially wheat and other small grains.

Vegetables harvested for sale—The individual acres of each kind of vegetable harvested were reported as well as the acreage of land from which vegetables were harvested.

Berries, fruits, and nuts-In 1978, data for individual berries, fruits, and nuts were collected. The total land in bearing and

nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees also was reported.

HOW THE MAPS WERE MADE

Computer graphics techniques and technology were used in producing the maps in this report. The resultant mapping system was developed to meet an increasing demand for the rapid and economic production of maps of publication quality.

Both the multicolor choropleth maps and the dot maps are products of the automated statistical mapping system developed at the Bureau of the Census. This mapping system generates a computer tape of commands directing a plotting device to draw maps on 310mm film at publication size. The plotting device is an extremely fast Computer Output on Microfilm (COM) unit capable of plotting a map in a few minutes. The production of maps on film at publication size reduces much effort and costs.

The text on the maps were entirely computer generated. The interactive map design programs, acting as a computerized cartographer's templet, was used to move the text into positions for each map. The text positions were transmitted on a computer tape also containing the commands used to plot the maps. The COM unit used these text commands to plot the text onto the map. The text fonts, sizes, and placement were all under program control. This was a significant advancement over the previous manual methods for placing text on the maps.

Choropleth Maps

The choropleth maps showing county classifications were prepared by a computer mapping program which automatically creates color separation map images on film. The frames of map imagery correspond to the counties of the United States. Each frame shows one of the class intervals designated for the map, except for the frame for the State boundary outline, and the text frame. Thus a map showing data in five classes will have seven frames of map imagery. This procedure is directly analogous to manual procedures employed by cartographers when preparing color choropleth maps. The maps produced by this system have the quality of hand-crafted choropleth maps at the low cost and rapid production time typical of automated cartography.

The choropleth map subsystem required two input computer files. One file (provided by the Bureau's Agriculture Division) contained the agricultural data by county. This file contains a State and county identification code for each of the data items. The second input file was the Bureau's DIMECO file containing the latitude-longitude and Alber's Equal-area (in inches) coordinates describing the boundaries for all counties in the United States. This boundary file was used to produce a third file containing a set of contiguous horizontal lines corresponding to

lines which the COM unit must plot to cover completely a county's area on the final map. These lines are known as "scan" lines and make up this intermediate file called the SCAN file. The sets of scan lines for the counties were also associated with their particular State and county identification codes.

The boundary-coordinate file and the SCAN file were processed in conjunction with the agricultural data file. By matching the State and county identification codes in the files, the class intervals for data were associated correctly with the appropriate set of scan lines for a county. Then all the counties for each class interval are transferred to a plot tape which was used to direct the movements of the COM's electron beam in the Census Bureau's COM unit. The COM unit then outputs the class separations on 310mm film at publication size.

The class separations were screened, and composited into the final films. The printer was given the three final publication negatives for each map corresponding to the red, yellow, and black ink which are used in the printing of the maps.

Dot Maps

The dot maps in this report were prepared directly on film by a COM unit from the output of the Bureau's new dot mapping program. The program controlled the placement of dots within the counties in the United States as determined by a 15-level land-use filter. The computer program is based upon a totally new approach to dot placement. The new program took advantage of the scan-line technique developed by the Bureau for color choropleth maps.

The Census dot mapping program utilized two features of a previous dot mapping program developed for the Bureau by the Cartographic Laboratory at the University of Wisconsin in Madison: A land-use filter and the distribution of dots by a weighting factor. The land-use filter is a file of approximately one-half million cells covering the entire United States. To this file, the Bureau added land use for Alaska and Hawaii. The land-use file was prepared from the land-use map which appeared in the 1970 National Atlas on pages 158 and 159. Each of the land-use categories shown in the land-use map was converted into numeric values by digitizing. The placement of dots within specific land-use categories in a county was controlled by probabilities based on a weighting algorithm using the data as input.

The Bureau's new dot mapping program converted the landuse filter into a scan-line land-use file by county. The program for dot placement rapidly computed the number of dots to be placed in a county, selected the land use, and then placed the dots. The algorithms ensure that all the dots fall within the county. The output of the program was a plot tape which directed the COM unit in plotting dot maps on 310mm film at publication size. These dot maps required minimal cartographic touch up.

1978 Summary of Mapped Data With 1974 Comparative Data

				1978		
All farms	Farms with sales of \$2,500 or more	Title	Unit of measure	To tal	Not on mail list	19741
		FARMS				
M1 M2P M5	M3 M4P	Number of farms	Number Percent. Number Percent. Number	2,478,642 7.1 1,864,687 75.2 611,653	220,867 (X) 69,749 31.6 151,118	2,314,013 (X) 1,695,047 73.3 616,728
M6P		Farms with sales of less than \$2,500 as a percent of all farms	Percent.	24.7	68.4	26.7
47 48P	T\$4.3	Agricultural operations excluded by current farm definition but not by 1959 farm definition	Number	468,973	250,846	152,110
-ior		definition as a percent of all farms	Percent.	18.9	113.6	6.6
19P		VALUE OF LAND AND BUILDINGS Average value of land and buildings per farm	Dollars.	262,252	84,177	147,838
M1 OP		Average value of land and buildings per acre of land in farms	Dollars.	628	1,246	336
		SIZE OF FARMS	40.000	415	69	440
M11P M13 M14 M15 M16 M17 M18 M19	M12P	Average size of farm. Average size of farm with sales of \$2,500 or more. Farms with less than 50 acres. Farms with 50 to 179 acres. Farms with 180 to 259 acres. Farms with 260 to 499 acres. Farms with 500 to 999 acres. Farms with 1,000 acres or more. Farms with 2,000 acres or more.	Acres Acres Number Number Number Number Number Number Number	415 497 690,329 814,689 241,929 354,427 215,112 162,156 63,635	68 122 147,542 55,642 8,075 6,650 1,903 1,055 334	534 507,797 827,884 253,232 362,866 207,297 154,937 62,225
		FARMS BY STANDARD INDUSTRIAL CLASSIFICATION				
M20 M21 M22 M23 M24 M25 M26 M27 M28 M29 M30 M31 M31 M32		Cash grain farmsIndustry Group 011. Wheat farmsIndustry 0111. Rice farmsIndustry 0112. Corn farmsIndustry 0115. Soybean farmsIndustry 0116. Field crop farms, except cash grainsIndustry Group 013. Cotton farmsIndustry 0131. Tobacco farmsIndustry 0132. Sugar crop farmsIndustry 0133. Irish potato farmsIndustry 0134. Vegetable and melon farmsIndustry Group 016. Fruit and tree nut farmsIndustry Group 017. Horticultural specialty farmsIndustry Group 018. General farms, primarily cropIndustry Group 019.	Number	593,558 75,582 6,568 156,387 194,508 312,542 32,115 142,606 4,289 6,893 35,382 90,027 32,810 71,848	19,760 1,800 77 7,692 7,453 27,180 670 12,720 17 857 4,518 9,837 3,903 9,020	580,254 105,167 6,787 134,551 122,454 207,633 30,725 95,493 7,380 6,940 19,548 51,270 19,678 44,659
M34 M35 M36 M37 M38 M39 M40 M41 M42 M43 M44		Livestock farms, except dairy, poultry, and animal specialty-Industry Group 021	Number	1,037,320 86,901 662,327 193,252 22,851 168,666 51,246 21,981 24,120 49,576 35,667	117,588 7,848 69,311 35,797 2,163 3,100 6,894 1,066 5,473 874 5,095	493,816 53,321 263,222 108,190 9,372 196,057 42,690 21,935 15,410 11,167 14,995
		FARMS BY VALUE OF SALES				
M45 M46 M47 M48 M49 M50 M51 M52 M53P	*	Farms with sales of \$200,000 or more. Farms with sales of \$100,000 to \$199,999. Farms with sales of \$40,000 to \$39,999. Farms with sales of \$20,000 to \$39,999. Farms with sales of \$10,000 to \$19,999. Farms with sales of \$5,000 to \$9,999. Farms with sales of \$2,500 to \$4,999. Farms with sales of \$1,000 to \$2,499. Farms with sales of \$20,000 or more as a percent of all farms.	Number Number Number Number Number Number Number Percent.	80,756 141,926 363,383 306,112 309,594 331,042 331,874 611,653 35.0	138 876 3,290 6,937 10,379 16,954 31,175 151,118 5.1	51,446 101,153 324,310 321,771 310,011 296,373 257,263 649,448 34.5
		TENURE AND CHARACTERISTICS OF OPERATORS				
M54 M55P M56 M57P M58 M59P M60P M61P M62 M62 M63P		Farms operated by full owners Percent of farms operated by full owners. Farms operated by part owners. Percent of farms operated by part owners. Farms operated by tenants. Percent of farms operated by tenants. Rented or leased land in farms by county. Rented or leased land in farms as a percent of land in farms. Farms operated by black and other races. Average age of farm operators.	Number Percent. Number Percent. Number Number Number Number Years	1,451,446 58.6 713,548 28.8 313,648 12.6 406,248,824 39.4 79,916 50.1	153,544 69.5 32,436 14.7 34,887 15.8 4,844,723 32.5 21,928 47.6	1,423,953 61.5 628,224 27.2 261,836 11.3 379,126,290 37.3 59,371 51.7

1978 Summary of Mapped Data With 1974 Comparative Data-Con.

		1978			Map number		
1974	Not on mail list	Total	Unit of measure	Title	Farms with sales of \$2,500 or 11 farms more		
				TEMURE AND CHARACTERISTICS OF OPERATORSCon.			
18.5 1,011,476	16.8 161,549	16.4 1,364,835	Percent. Number	Percent of farm operators 65 years old and over	64P 65 66P		
35.2 16.3 (NA (NA (NA	67.9 9.0 15,371 7.0 632	44.4 17.8 128,170 5.2 4,983	Percent. Number Percent. Number	100 days or more. Percent of farm operators not residing on farm operated Farm operators who are female Percent of farm operators who are female Farms reporting land held under foreign ownership	67P 68 69P 70		
				OCCUPATION OF OPERATOR			
1,235,852	57,480	1,326,785	Number	Farm operators reporting principal occupation as farming Percent of farm operators reporting principal occupation	771 172P		
74.3	26.0	53.5	Percent.	as farming	173		
426,690	163,387 74.0	1,151,857	Number	other than farming Percent of farm operators reporting principal occupation other than farming	174P		
25,7	74.0	40.5	rercenti	FARMS BY TYPE OF ORGANIZATION			
1,517,573 74.9 144,969 13.7 28,656	209,577 89,7 8,752 8,2 1,039 0.6	2,175,437 66.7 241,290 15.5 51,270 11.7	Number Percent. Number Percent. Number Percent.	Farms operated by individuals or families Percent of land in farms operated by individuals or families Farms operated by partnerships Percent of land in farms operated by partnerships Farms operated by corporations Percent of land in farms operated by corporations	175 176P 177 177 178P 179 180P		
				LAND IN FARMS AND LAND USE			
1,017,030,357 44.9 440,039,087 (X) 19,4 43.3 303,001,943 (X) 29,8 (NA)	14,917,301 0.7 7,466,409 (X) 0.3 50.1 3,520,267 (X) 23.6 51.5	1,029,694,535 45.4 461,340,542 *21,301,455 20.4 44.8 320,666,222 *17,664,279 31.1 54.5	Acres Percent. Acres Percent. Percent. Acres Percent. Percent. Percent.	Land in farms Land in farms as a percent of land area Cropland Cropland as a percent of land area Cropland as a percent of land area Cropland as a percent of land in farms Harvested cropland Harvested cropland-increase and decrease in acreage Harvested cropland as a percent of land in farms Pastureland as a percent of land in farms	181 182P 184 185 186P 187P 188 189 190P		
				IRRIGATION AND DRAINAGE			
41,243,023 (X) 4.1	488,034 (X) 3.3	50,837,940 *9,594,917 4.9	Acres Acres Percent.	Irrigated land in farms	192 193 194P 195P		
12.1 3,978,236 6,674,082 2,649,862 3,698,569 3,235,662 5,103,963 42,784,305	9.9 112,861 50,519 8,647 14,026 9,857 114,462 (NA)	13.7 5,728,989 10,099,239 2,168,039 4,690,681 3,012,181 5,986,725 105,278,488	Percent. Acres Acres Acres Acres Acres Acres Acres	cropland. Irrigated pastureland and rangeland. Irrigated field corn for all purposes by county. Irrigated sorghum for all purposes by county. Irrigated cotton by county. Irrigated wheat by county. Irrigated alfalfa hay by county. Artificially drained agricultural land Artificially drained agricultural land as a percent	196 197P 198P 199P 1100P 1101P 1102		
1.9	(NA)	4.6	Percent.	of land area	duse		
81,526,126,000 81,526,126,000 35,231	1,040,061,000 1,040,061,000 4,709	108,113,519,000 108,113,519,000 43,618	Dollars. Dollars. Dollars.	MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD Value of agricultural products sold	41.04 41.05P 41.06P		
80	70	105	Dollars.	Average value of agricultural products sold per acre of land in farms	1107P		
20.9	9.9	14.8	Percent.	of land and buildings and market value of machinery and equipment			
51.3	39.8	45.0	Dollars. Percent.	Value of crops sold	(109 (110P		
138	117	152	Dollars.	Average value of crops sold per acre of harvested cropland Value of grains sold as a percent of agricultural	(111P (112P		
30.6	0.8	24.9	Percent.	products sold	1113P		
2.1	7.5	2.2	Percent.	agricultural products sold	1114P		
39,503,850,000	625,861,000	59,496,118,000	Dollars.	products sold	1115 1116P		
7.6	8.5	7.9	Percent.	of agricultural products sold	1117P		

1978 Summary of Mapped Data With 1974 Comparative Data-Con.

Map number Farms with				1978		
All farms	Farms with sales of \$2,500 or more	Title	Unit of measure	To tal	Not on mail list	1974
		MARKET VALUE OF AGRICULTURAL PRODUCTS SOLDCon.		17571		
M118P		Value of cattle and calves sold as a percent of	Domont	27.6	26.7	22.7
M119P		agricultural products sold	Percent.	7.6	9.0	6.7
M120P		agricultural products sold	Percent.	0.6	0.5	0.6
	7.14	DIRECT SALES OF AGRICULTURAL PRODUCTS				
M121		Value of agricultural products sold directly	0-11	392,322,000	11,495,000	(NA.)
M122P		to consumers for human consumption	Dollars.	392,322,000	11,495,000	(NA)
		FARM-RELATED INCOME				
M123		Income from machine work, customwork, and other agricultural services	Dollars.	653,513,000	15,847,000	628,023,000
		SELECTED FARM PRODUCTION EXPENSES				
M124 M125P		Expenditures for livestock and poultry purchased Expenditures for livestock and poultry purchased by county	Dollars. Dollars.	16,232,159,000	192,915,000 192,915,000	9,954,580,000
M126 M127P M128P		Expenditures for feed for livestock and poultry Expenditures for feed for livestock and poultry by county Expenditures for commercially mixed formula feeds as a	Dollars. Dollars.	16,035,645,000 16,035,645,000	249,649,000 249,649,000	13,651,116,000 13,651,116,000
M129		percent of all feed purchased for livestock and poultry Expenditures for seeds, bulbs, plants, and trees	Percent. Dollars.	55.9 2,638,166,000	68.4 31.048.000	1,798,643,000
M130P		Expenditures for seeds, bulbs, plants, and trees by county	Dollars.	2,638,166,000	31,048,000 58,416,000	1,798,643,000
M131 M132P		Expenditures for commercial fertilizer Expenditures for commercial fertilizer by county	Dollars.	6,388,998,000 6,388,998,000	58,416,000	5,137,361,000
M133 M134P		Expenditures for agricultural chemicals, excluding fertilizer	Dollars.	2,914,958,000	25,455,000	1,757,779,000
M135P		fertilizer by county	Dollars.	2,914,958,000	25,455,000	1,757,779,000
И136		chemicals, excluding fertilizer	Dollars.	1,928	348	1,684
M137P		farm business	Dollars.	6,123,760,000	98,056,000	(NA)
M138 M139P		farm business by county. Expenditures for gasoline for farm business	Dollars. Dollars.	6,123,760,000 2,100,977,000	98,056,000 46,159,000	(NA) 1,538,042,000
M140 M141P		for energy and petroleum products for farm business Expenditures for diesel fuel for farm business Expenditures for diesel fuel as a percent of all expenditures for energy and petroleum products	Percent. Dollars.	34.3 1,483,802,000	14,410,000	806,506,000
M142 M143P		for farm business. Expenditures for LP, butane, or propane gas for farm business. Expenditures for LP, butane, or propane gas as a percent of all expenditures for energy and petroleum products	Percent. Dollars.	478,369,000	5,923,000	(NA) 285,830,000
M144 M145P		for farm business. Expenditures for electricity for farm business Expenditures for electricity as a percent of all expenditures for energy and petroleum products for	Percent. Dollars.	7.8 1,328,005,000	19,714,000	(NA)
M146 M147P		farm business Expenditures for hired farm labor, excluding contract labor Expenditures for hired farm labor, excluding contract	Percent. Dollars.	6,849,036,000	34,608,000	4,652,075,000
M148 M149P		labor, by county. Expenditures for contract labor. Expenditures for contract labor by county.	Dollars. Dollars. Dollars.	6,849,036,000 908,084,000 908,084,000	34,608,000 9,126,000 9,126,000	4,652,075,000 511,633,000 511,633,000
M150		Expenditures for machine hire, customwork, and rental of machinery	Dollars.	1,776,142,000	25,267,000	1,342,702,000
M151P		Expenditures for machine hire, customwork, and rental of machinery, by county	Dollars.	1,776,142,000	25,267,000	1,342,702,000
	1711	HIRED FARM LABOR				
M152 M153 M154P		Hired farm workers working 150 days or more	Number	957,918 4,657,601	4,224 112,101	712,715 4,502,517
M155P M156P		less than 150 days Percent of farms reporting any hired labor	Percent.	26.8 39.7	13.1 14.4	(NA.) 35.9
20271		to farm operators	Number	.39	.02	.42
		MACHINERY AND EQUIPMENT ON PLACE				
M157		Estimated market value of all machinery and equipment on place	Dollars.	79,482,285,000	1,881,596,000	48,402,624,000
M158P		Estimated market value of all machinery and equipment on place by county		79,482,285,000	1,881,596,000	48,402,624,000

1978 Summary of Mapped Data With 1974 Comparative Data-Con.

	1978					Map number	
	Not on mail list	To tal	Unit of measure	Title	Farms with sales of \$2,500 or more	All farms	
				MACHINERY AND EQUIPMENT ON PLACECon.			
				Average estimated market value per farm reporting of		4159P	
	8,577 197,173	32,172 3,555,002	Dollars. Number	all machinery and equipment on place		M160 M161	
	(X)	*516,540	Number	in number		M1 62	
	213,095 (X) 9,416	4,839,323 *527,501 664,111	Number Number	Wheel tractors. Wheel tractorsincrease and decrease in number		M163 M164 M165	
	(x)	*140,016	Number	Grain and bean combines, self-propelledincrease and decrease in number			
6	24,886 15,203 390	768,884 694,251 41,435	Number Number	Pickup balers Cornpickers, corn heads, and picker-shellers Cottonpickers, excluding cotton strippers		M166 M167 M168	
				AGRICULTURAL CHEMICALS USED			
184,6	2,270,741	228,618,251	Acres	Acres on which commercial fertilizer was used Acres of cropland, excluding cropland pasture, on which commercial fertilizer was used as a percent of harvested		M169 M170P	
	359,493	65.8 16,853,085	Percent. Acres	cropland		M171	
	1.4	1.7	Tons	Average tons of lime applied per acre		M172P M173	
56,6	686,228	76,554,288	Acres	Acres of crops including hay treated for insect control Acres of crops including hay treated for insect control		M174P	
	19.5 73,435	8,877,956	Percent. Acres	as a percent of harvested cropland		M175	
	155,003	11,569,863	Acres	Acres of crops and orchards treated for disease control Acres of crops and orchards treated for disease control		M176 M177P	
	1,299,530	3.6 165,916,644	Percent. Acres	as a percent of harvested cropland		M178	
	69,348	9,336,833	Acres	Acres treated with chemicals for defoliation or for growth control		M179	
				LIVESTOCK AND POULTRY			
113,1	1,850,290	105,715,399	Number	Cattle and calvesinventory		M180 M181	
	1,850,290	**7,459,301 105,715,399	Number	in number	- 1		
200	495	91,470	Number	Cattle and calvesinventory by county		M182P M183	
51,9	993,706	45,541,672	Number	Cows and heifers that had calvedinventory		M184 M185P	
10,6	53.7 133,287	10,354,979	Percent. Number	percent of all cattle and calves		M186	
	(X)	**299,537	Number	Milk cowsinventoryincrease and decrease in number		M187	
	133,287	10,354,979 16,339	Number	Milk cowsinventory by county		M188P M189	
	13.4	22.7	Percent.	Milk cows as a percent of all cows and heifers that had calved		M1 90P	
	860,419 (X)	35,186,693 **6,071,205	Number	Beef cowsinventory		M191	
			Number	Beef cowsinventoryincrease and decrease in number Heifers, heifer calves, steers, steer calves, bulls,		M192 M193P	
70,0	1,054,040	79,074,391	Percent. Number	and bull calves as a percent of all cattle and calves Cattle and calves sold		M194	
26,0	79,056	29,801,099	Number	Cattle fattened on grain and concentrates and sold for slaughter		M195	
3	(X)	*3,574,780	Number	Fattened cattle soldincrease and decrease in number	M196		
	79,056	29,801,099	Number Percent.	Fattened cattle sold by county Fattened cattle sold as a percent of all cattle sold		M197P M198P	
	0	5,302	Number	Farms with 500 fattened cattle or more sold		M199P	
	1,112,673 (X)	58,809,991 *13,306,387	Number	Hogs and pigsinventory		M200	
	383	82,652	Number	Farms with 200 hogs and pigs or moreinventory		M201 M202	
6,1	256,291 (X)	8,772,422 *2,290,537	Number	Hogs and pigs for breeding	100.00	M203	
1000	TANK MASS		NO STATE OF THE PARTY OF THE PA	Hogs and pigs for breedingincrease and decrease in number Litters of pigs farrowed between December 1, 1977,	M204	M205	
	221,756	11,221,252 92,140,548	Number	and November 30, 1978			
79,8	1,383,405	92,140,548	Number	Hogs and pigs sold		M206 M207P	
	530,090	20,021,188	Number	Feeder nigs sold		M208	
	853,315	72,119,360	Percent. Number	Feeder pigs sold as a percent of all hogs and pigs sold Hogs and pigs sold other than feeder pigs		M209P M210	
15,3	128,310	12,371,786	Number	Sheep and lambsinventory		M211	
8,6	95,561	**3,007,818 7,903,782	Number	Sheep and lambsinventoryincrease and decrease in number Ewes 1 year old or older		M212	
13,4	89,023	10,349,562	Number	Sheep and lambs sold		4213 4214	
	252,110 4,706,696	2,209,138 359,064,123	Number	Horses and poniesinventory		1215	
	1000			Chickens 3 months old or olderinventoryincrease		M216 M217	
	4,706,696	*23,323,878 359,064,123	Number	and decrease in number		M218P	
2,518,5	73,464,446	3,135,618,936	Number	Broilers, fryers, and other meat type chickens sold		M218P	

1978 Summary of Mapped Data With 1974 Comparative Data-Con.

Map number		f r	_	1978		
Farms with sales of \$2,500 or NII farms more	Unit of measure		To tal	Not on mail list	1974	
	HT-12	LIVESTOCK AND POULTRYCon.				
M220		Broilers, fryers, and other meat type chickens soldincrease and decrease in number.	Number	*617,105,904	(x)	(X)
M221P		Broilers, fryers, and other meat type chickens sold, by county	Number	3,135,618,936	73,464,446	2,518,513,032
M222	M223	Turkeys sold Turkeys soldincrease and decrease in number	Number Number	141,302,966 *17,321,833	26,790 (X)	123,838,212 (X)
	1	FIELD CROPS HARVESTED				
M224 M225		Corn harvested for all purposes	Acres	79,114,740 *6,784,297	764,373 (X)	72,330,443 (X)
M226P M227P		in acreage	Acres	79,114,740	764,373	72,330,443
M228 M229		Corn harvested for grain	Acres	70,734,094 8,343,904	690,614 72,087	61,653,842 10,111,824
M230 M231		Sorghums harvested for all purposes, excent syrup	Acres	14,063,788	69,366	14,791,032
M232P M233P		decrease in acreage	Acres	**727,244 14,063,788	69,366	14,791,032
M234		syrup, as a percent of harvested cropland	Acres	12,961,799	61,970	12,929,130
M235 M236 M237P		Wheat harvested for grain	Acres	54,457,876 **8,499,339 54,457,876	302,708 (X) 302,708	62,957,215 (X) 62,957,215
M238P		Acres of wheat harvested for grain as a percent of harvested cropland		17.0	8.6	20.8
M239 M241	M240	Oats harvested for grain. Oats harvested for grain.—increase and decrease in acreage Barley harvested for grain.	Acres Acres	10,240,993 **1,159,641 8,975,538	119,090 (X) 31,726	11,142,686 (X) 7,286,041
	M242	Barley harvested for grainincrease and decrease in acreage	Acres	*1,623,225	(x)	(x)
M243 M244 M245 M246		Rye harvested for grain	Acres Acres	438,403 430,416 3,003,344	5,729 4,880 1,673	636,881 1,452,127 2,547,262
M247		Soybeans harvested for beans	Acres	61,832,897 *13,714,048	493,048 (X)	48,118,849 (X)
M248P M249P		Soybeans harvested for beans by county Acres of soybeans harvested for beans as a percent of harvested cropland	Acres Percent.	61,832,897	493,048	48,118,849
M250 M251		Peanuts harvested for nuts		1,434,353 1,317,141	8,878 17,991	1,368,990
M252 M253 M254P		Cotton harvested	Acres	12,737,497 *513,997	43,725 (X)	12,223,500 (X)
M255		cropland	Percent. Acres	4.0 2,481,657	1.2 3.649	4.0 535,345
M256 M257		Sugar beets harvested for sugar	Acres	1,248,823 766,071	5,352	1,169,990
M258 M259		Irish potatoes harvested	Acres	1,395,150	9,264	1,345,121
M260		acreage	Acres	*50,029 1,004,697	(X) 41,473	877,113
M261 M262		Tobacco harvestedincrease and decrease in acreage Land from which hay was cut	Acres	*127,584 61,757,610	1,516,219	56,236,381
M263P M264		Land from which hay was cut by county	Acres	61,757,610	1,516,219	56,236,381
M265P		in acreage Land from which hay was cut as a percent of harvested	Acres	*5,521,229	(X)	(x)
M266	W267	cropland	Acres	19.3 26,385,353	43.1	23,246,694
M268	M267	Alfalfa hay cutincrease and decrease in acreage Other tame dry hay cut	Acres	*2,049,114 19,475,849	822,373	16,410,490
M269 M270		Small grain hay cut	Acres	2,908,076 8,448,080	52,407 183,978	1,589,968 7,322,415
M271 M272 M273		Grass silage and haylage harvested	Acres Acres	3,644,961 389,639 131,815	8,791 660 924	2,697,143 400,169 270,840
		VEGETABLES				
M274 M275P M276 M277 M278 M279 M280 M281		Vegetables harvested for sale Vegetables harvested for sale by county. Tomatoes harvested for sale. Sweet corn harvested for sale Cucumbers and pickles harvested for sale. Watermelons harvested for sale. Snap beans, bush and pole, harvested for sale. Lettuce and romaine harvested for sale.	Acres Acres Acres Acres Acres Acres Acres	3,569,304 3,569,304 425,317 674,128 125,892 181,436 341,374 253,020	35,162 35,162 3,357 6,450 3,211 4,838 1,596	3,124,257 3,124,257 421,386 640,740 101,141 135,876 320,158 235,424

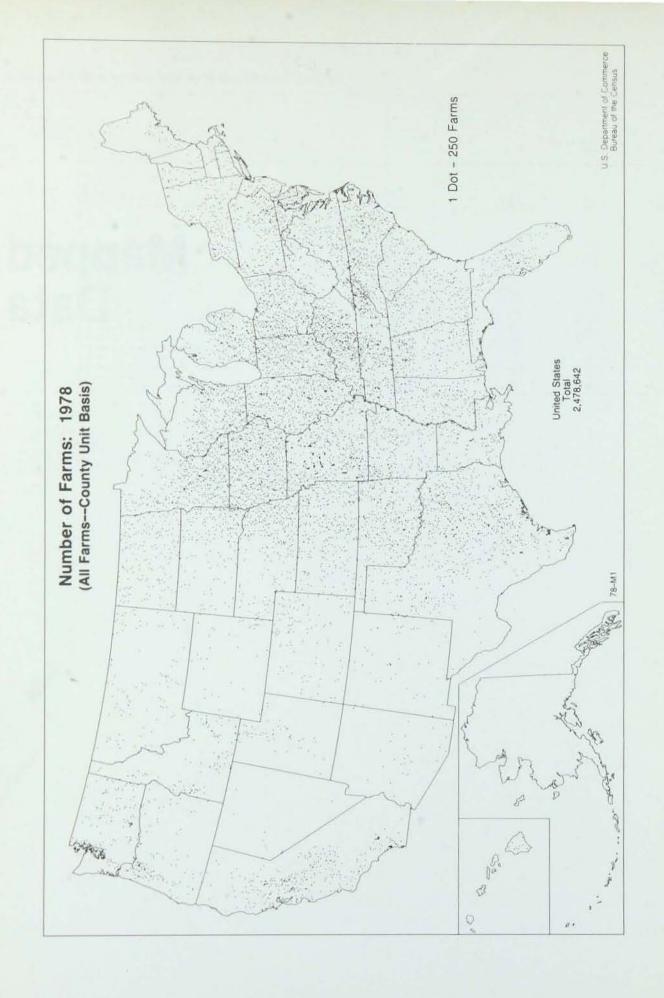
1978 Summary of Mapped Data With 1974 Comparative Date-Con.

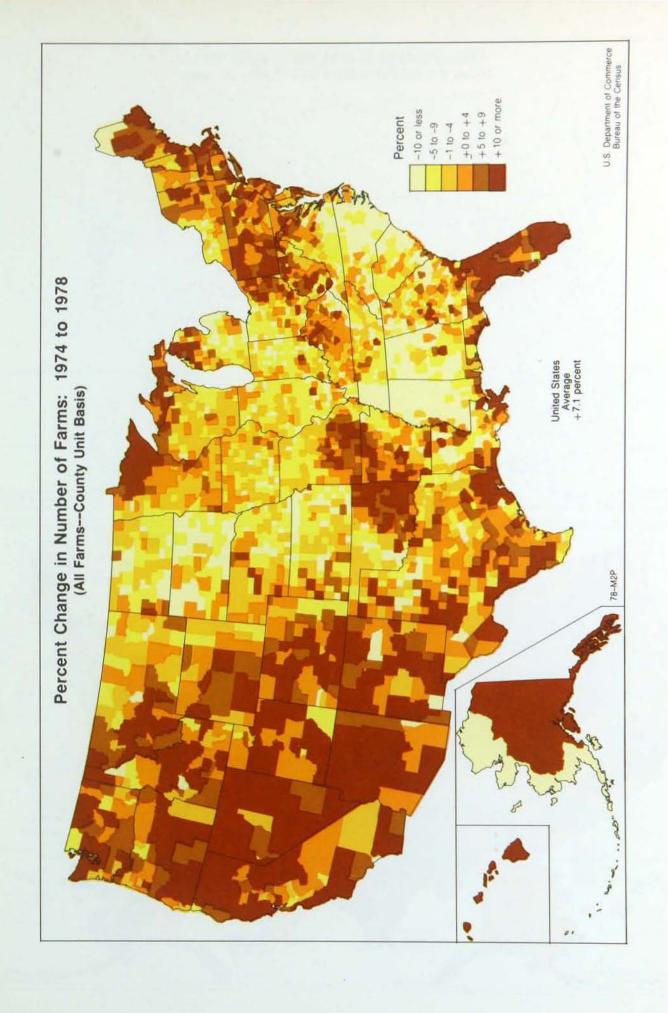
Map Number			1978		
Farms with sales of \$2,500 or 11 farms more	Title	Unit of measure	Total	Not on mail list	1974 ¹
	VEGETABLESCon.				
M283 M284	Cantaloupe and Persian melons harvested for sale Green peas harvested for sale	Acres	110,572 363,952	940 1,997	70,621 398,817
M285 M286 M287 M288P M290 M290 M291 M292 M293 M294 M295 M296 M297 M297 M298 M299	Berries harvested for sale Strawberries harvested for sale Land in orchards Land in orchards by county. Acres of apple trees. Acres of peach trees. Acres of pear trees. Acres of cherry trees. Acres of plum and prune trees. Acres of grape vines Acres of orange trees. Acres of grapefruit trees. Acres of lemon trees. Acres of lemon trees. Acres of almond trees. Acres of pecan trees. Acres of pecan trees.	Acres	131,023 45,567 4,546,138 4,546,138 577,967 262,587 95,425 129,563 141,489 762,536 914,250 245,463 81,709 200,608 347,244 456,615	4,878 1,985 82,511 82,511 22,573 5,453 2,746 2,489 5,582 8,691 4,331 737 110 6,888 4,799 11,880	121,127 36,151 4,190,340 507,348 249,819 94,122 119,112 132,663 712,804 915,217 226,373 79,635 166,943 275,908 328,608

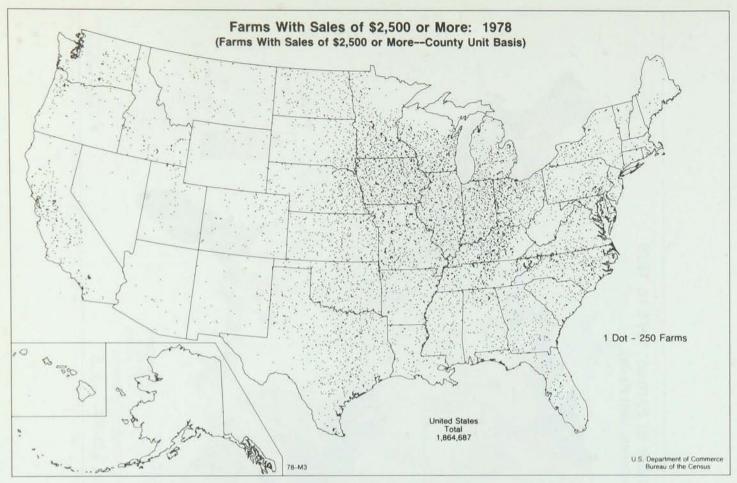
^{*} Net increase for U.S. total. ** Net decrease for U.S. total.

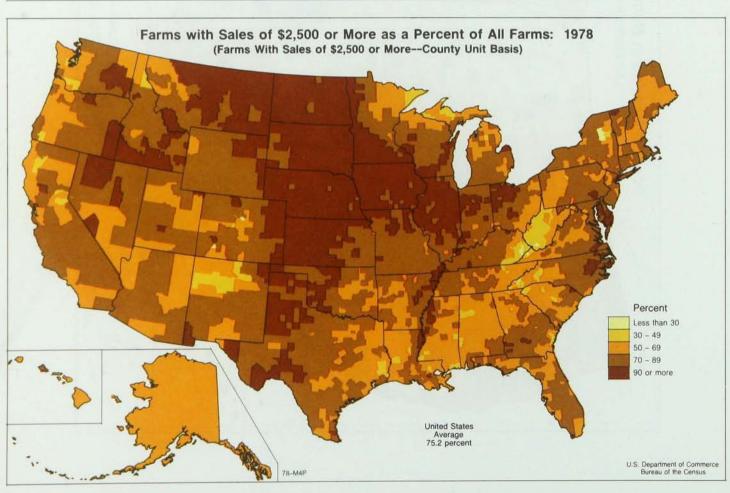
Not fully comparable hecause of direct enumeration sample in 1978 totals; see text.
 Data are based on a sample of farms; see text.
 Data are only for farms with sales of \$2,500 or more.
 Excludes abnormal farms; see text.
 Data apply only to individuals or family operations and partnership operations.

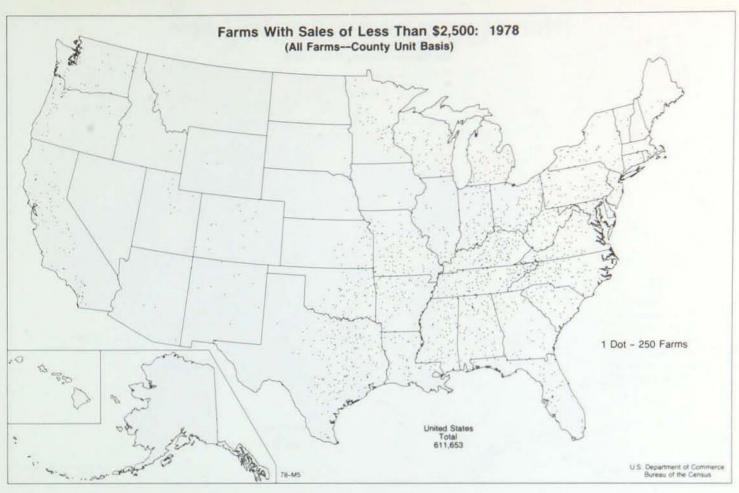
Mapped Data

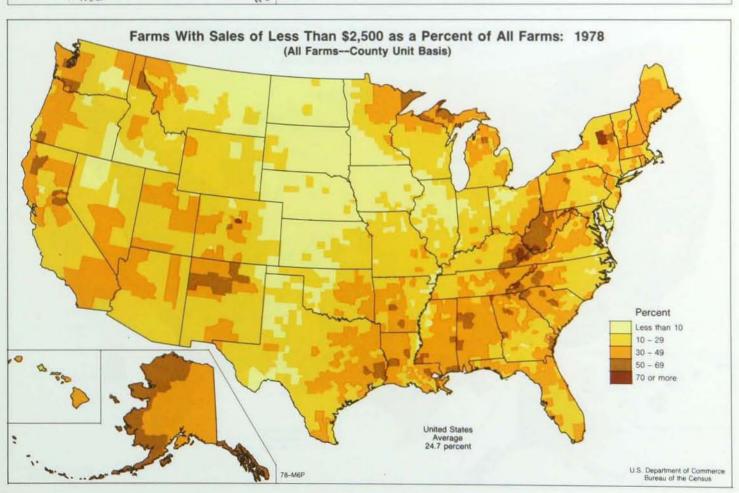


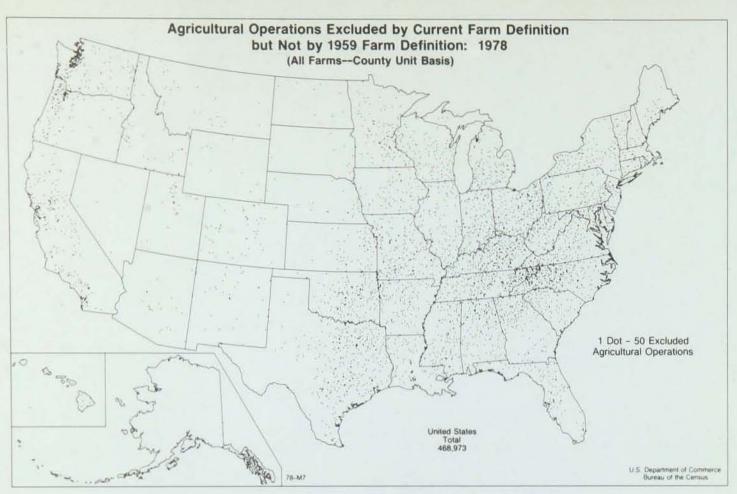


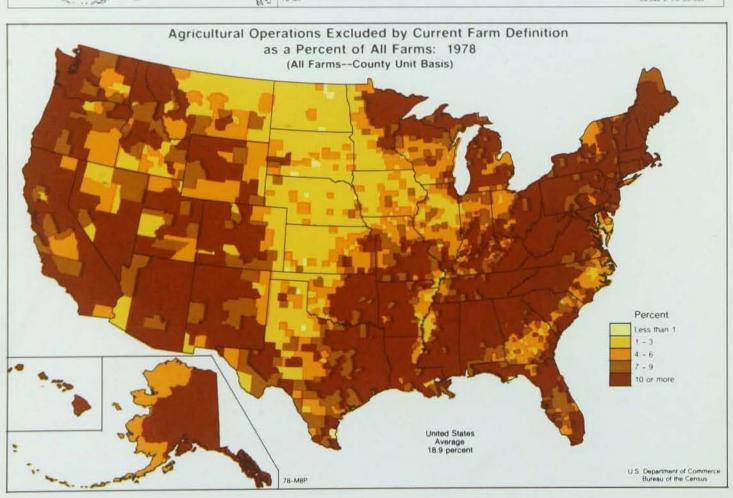


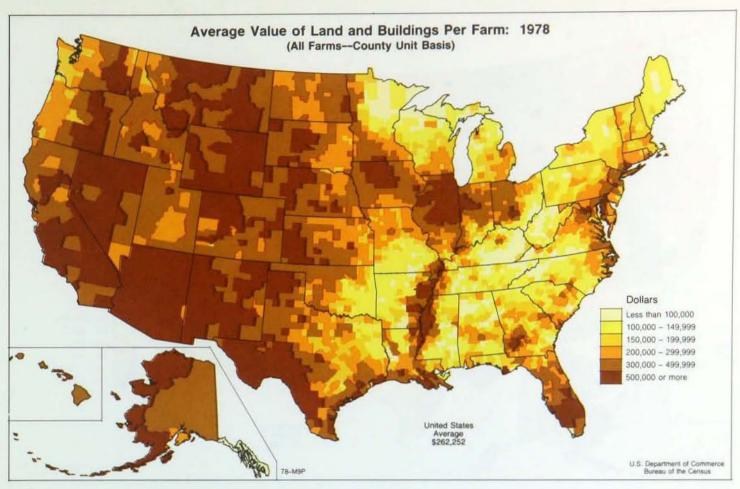


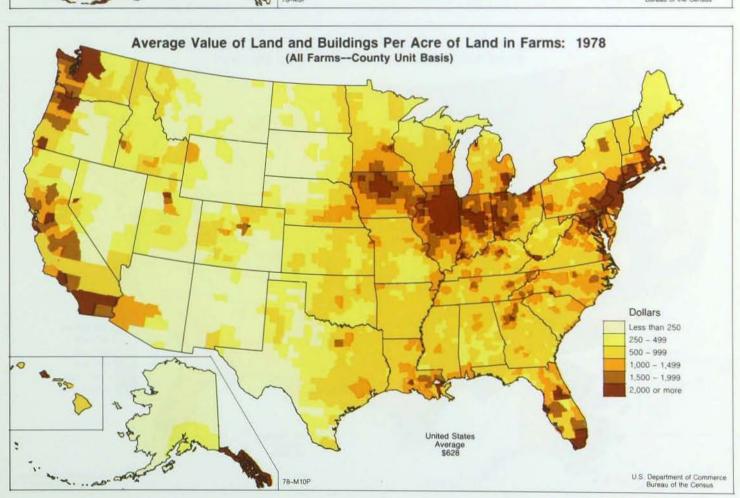


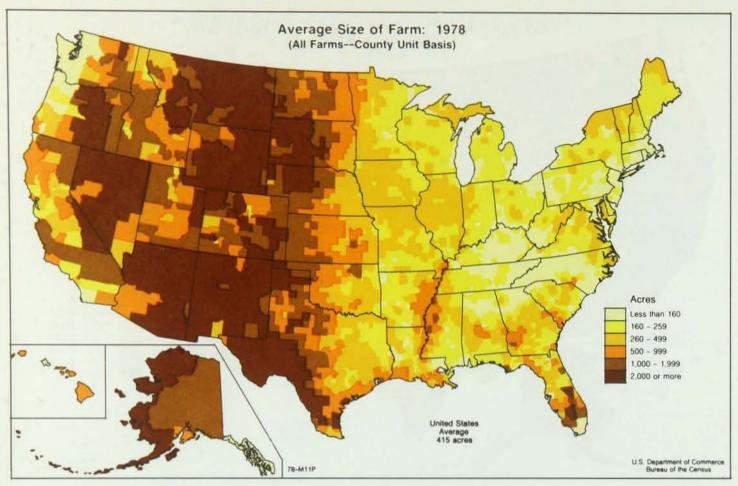


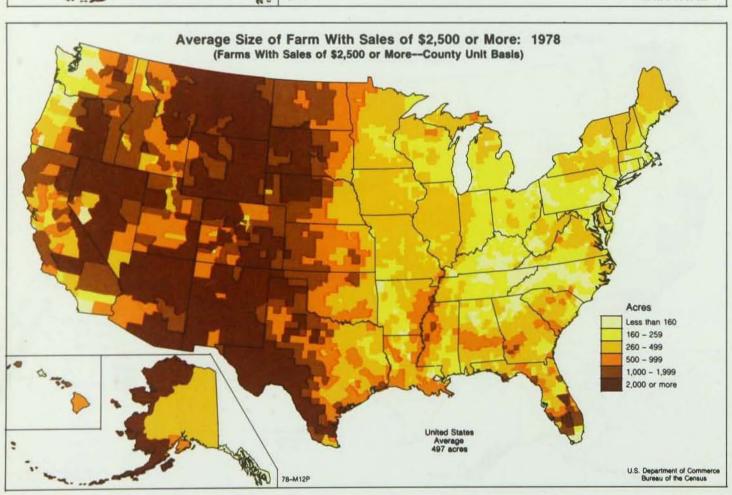


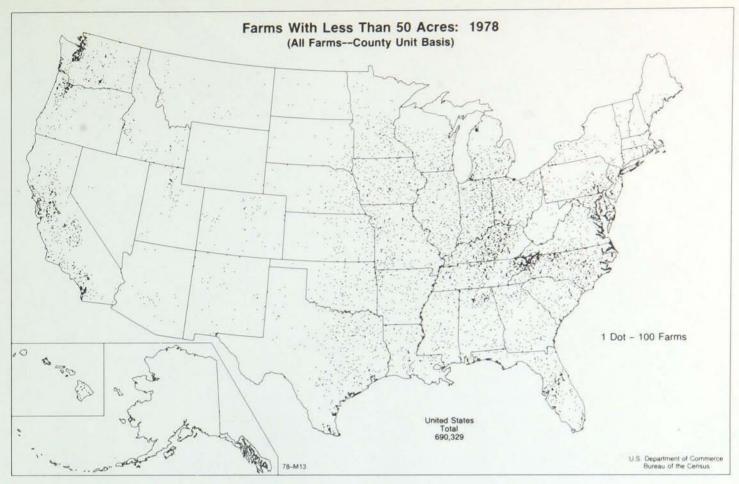


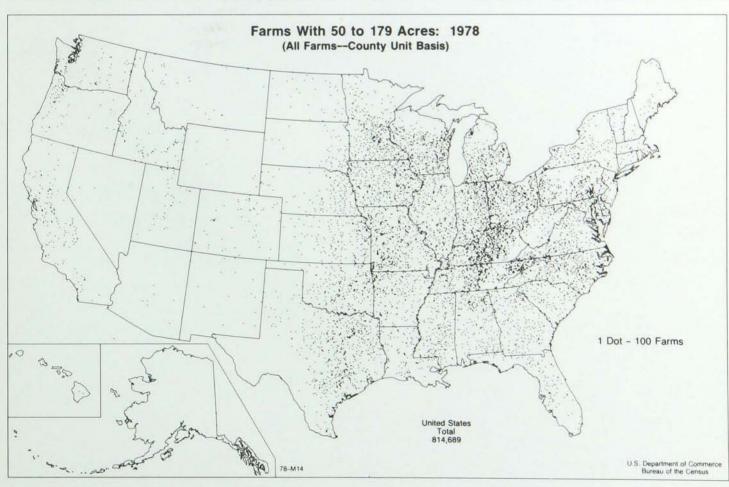


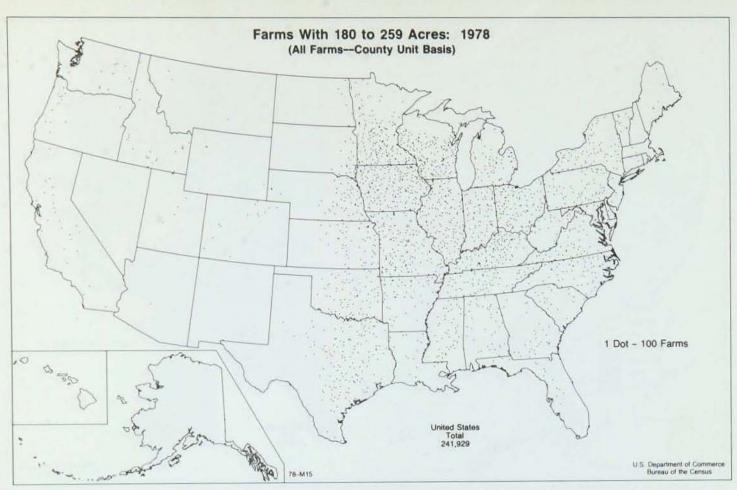


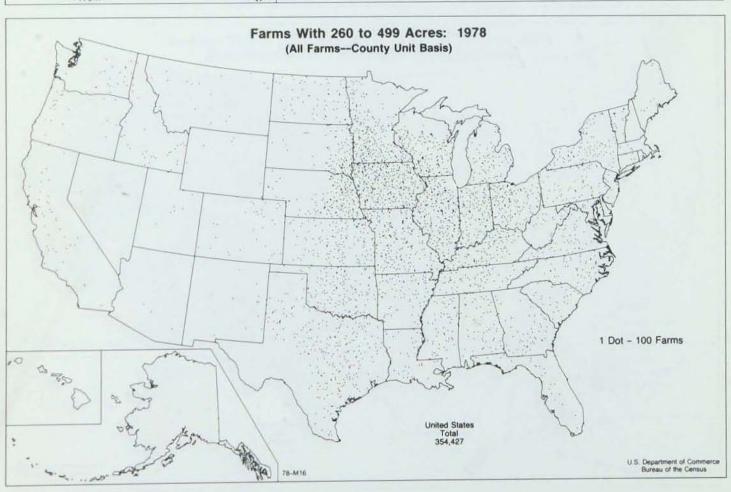


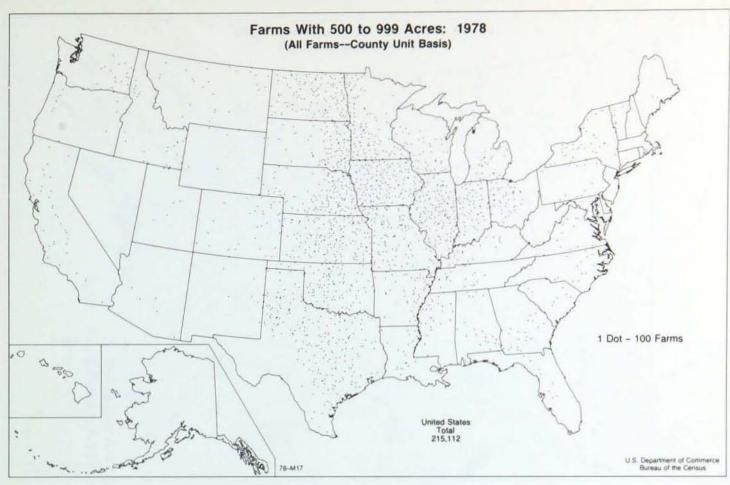


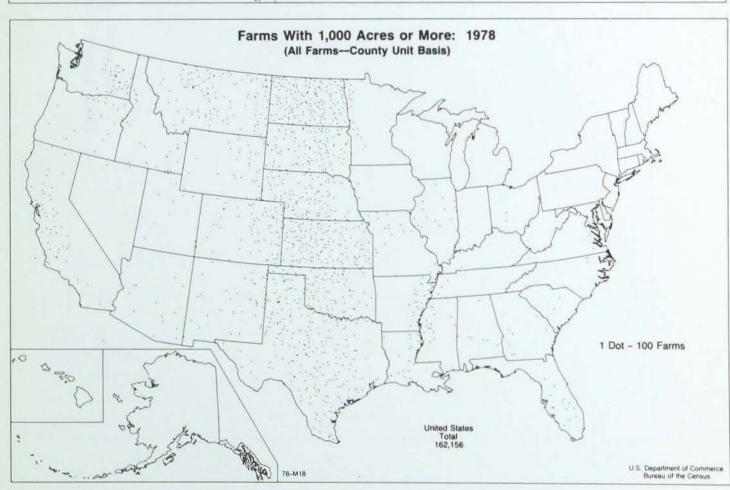


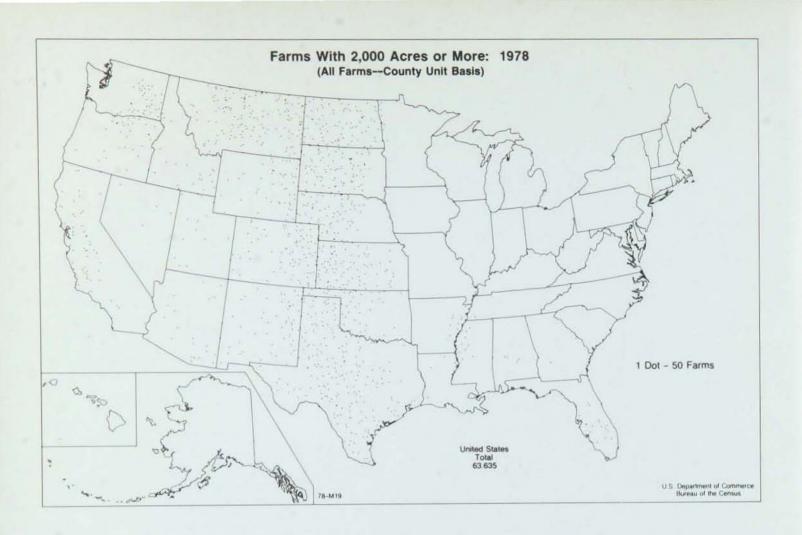


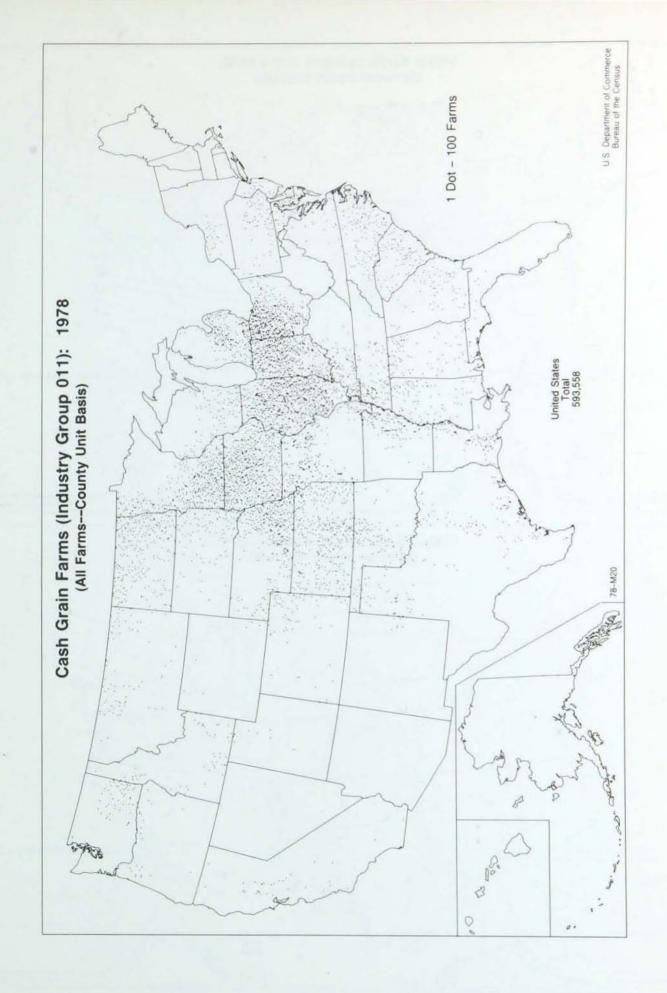


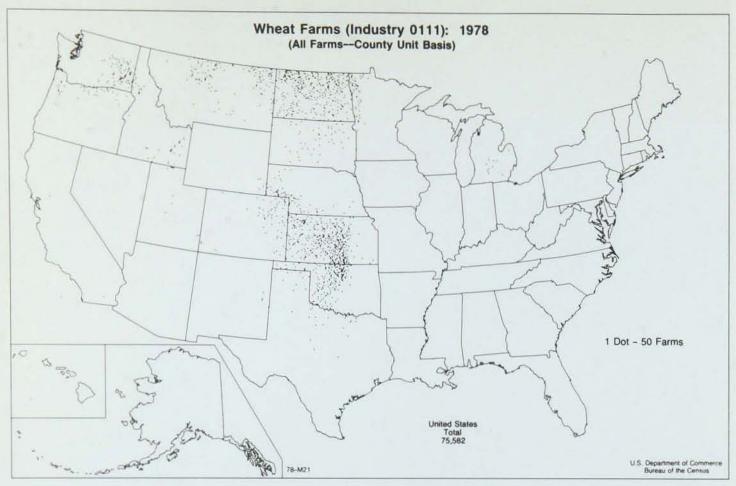


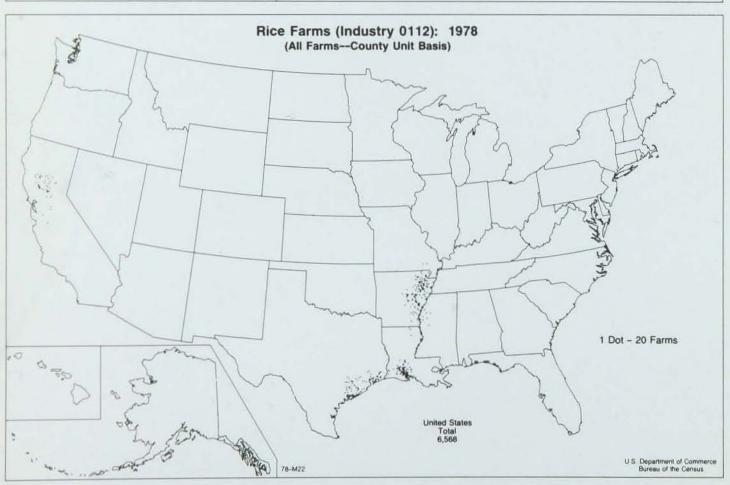


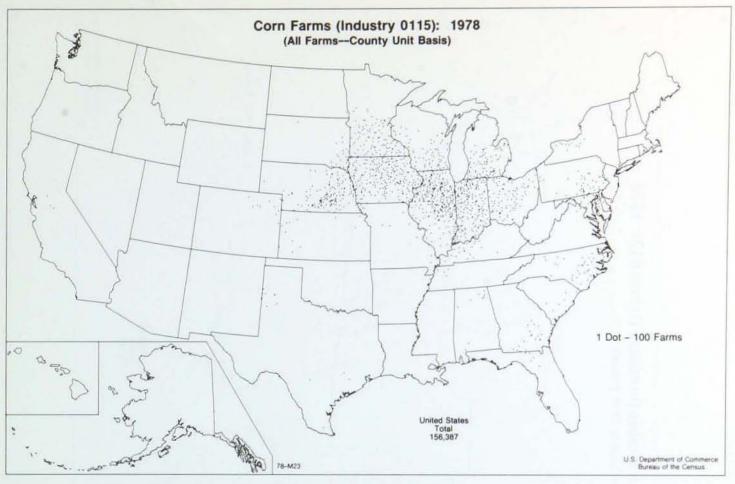


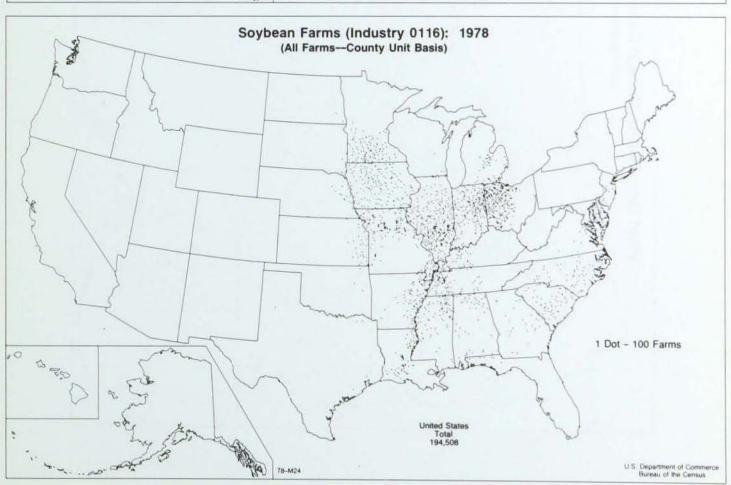


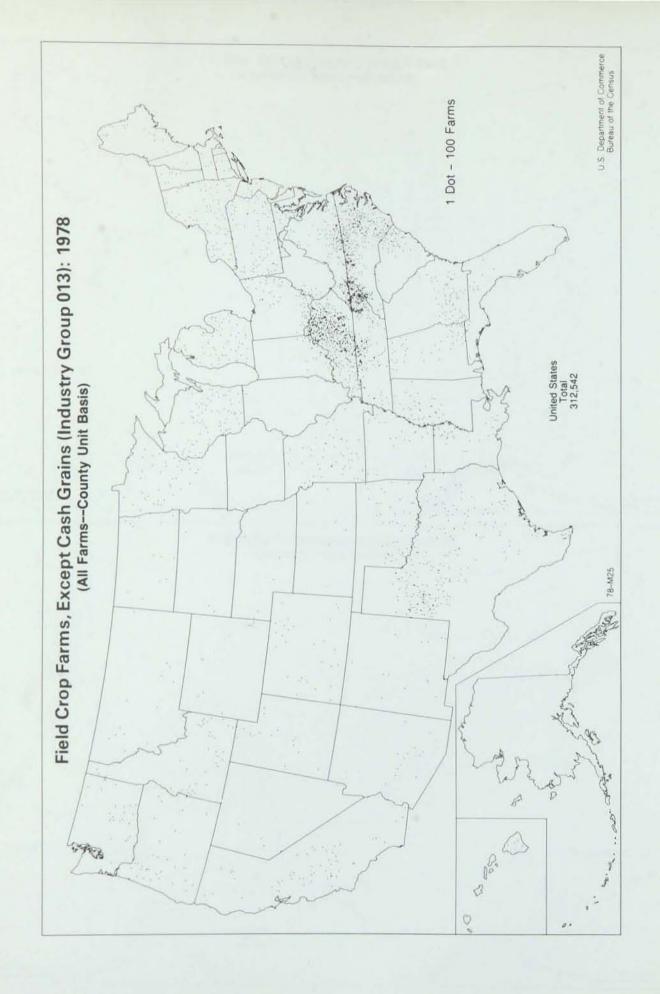


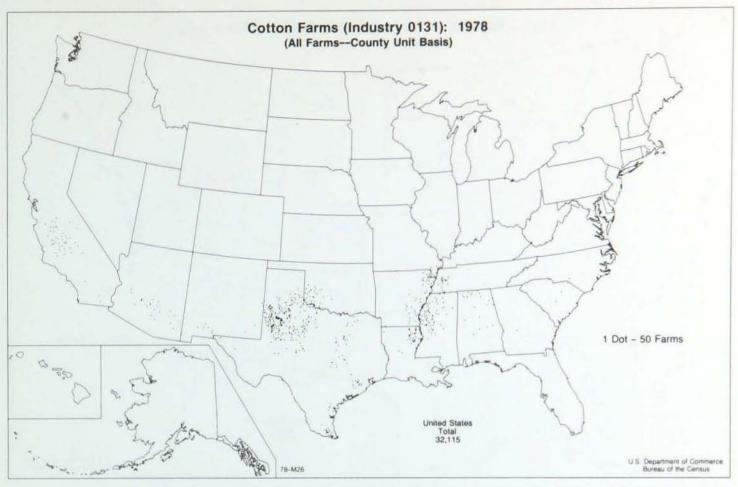


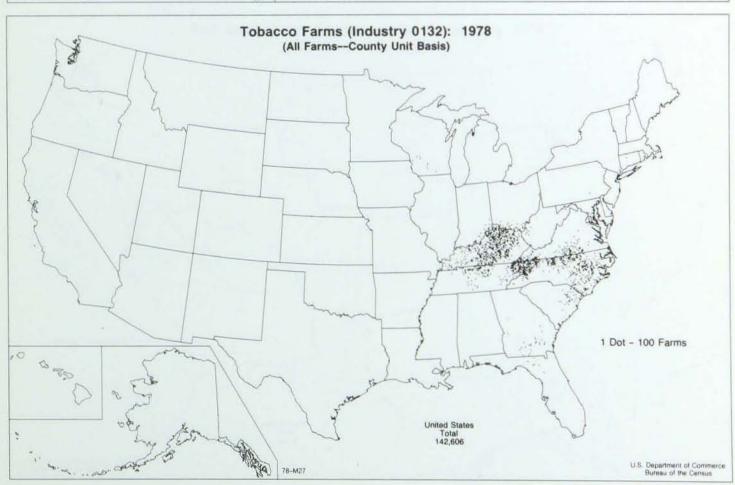


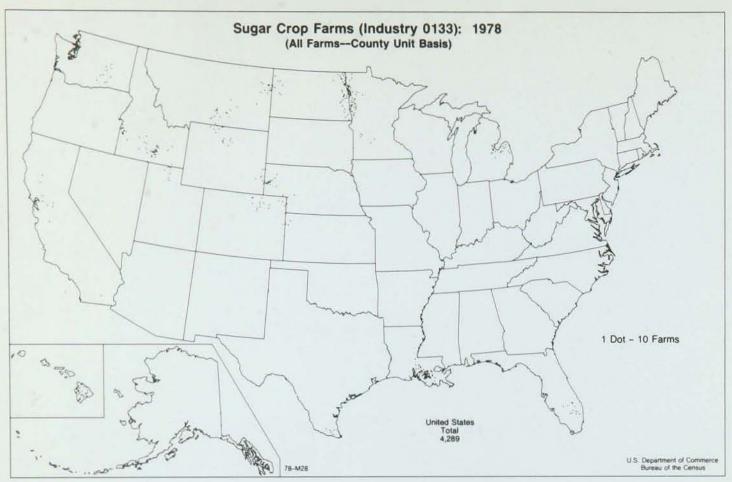


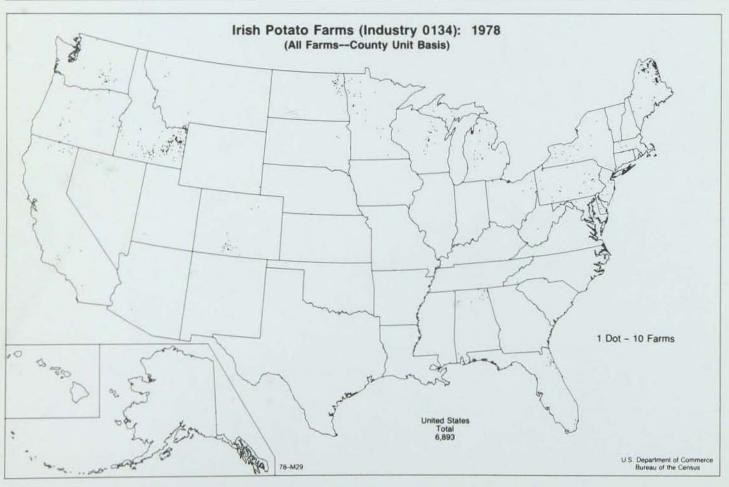


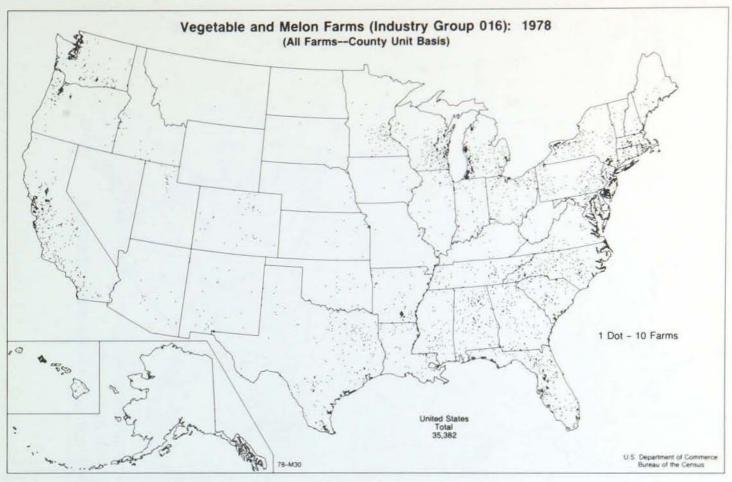


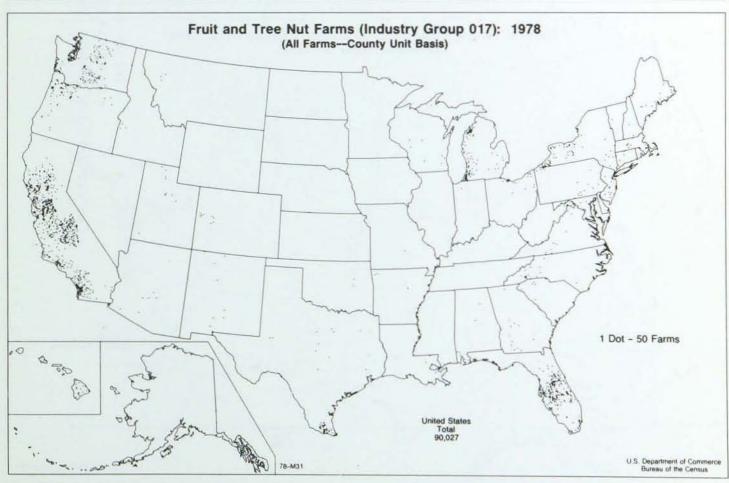


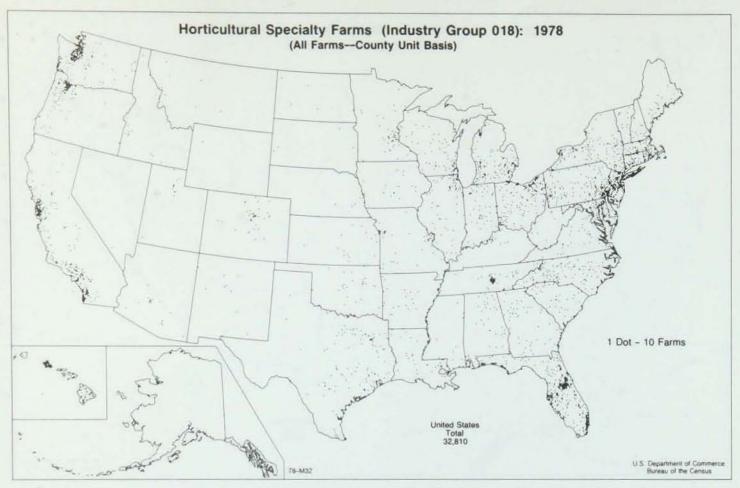


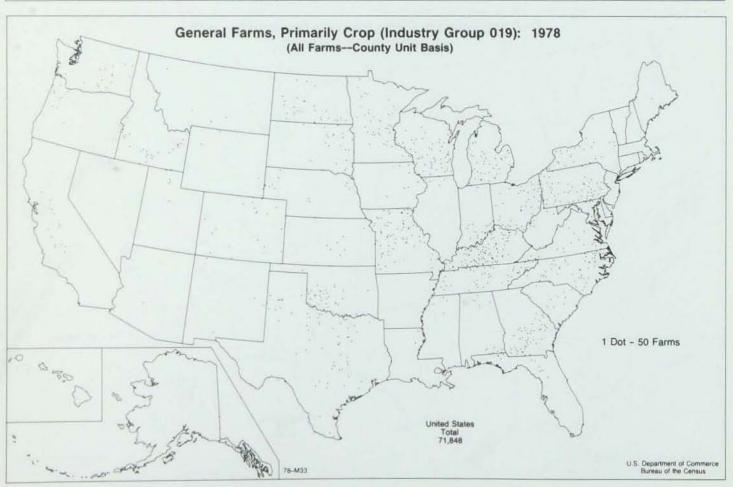


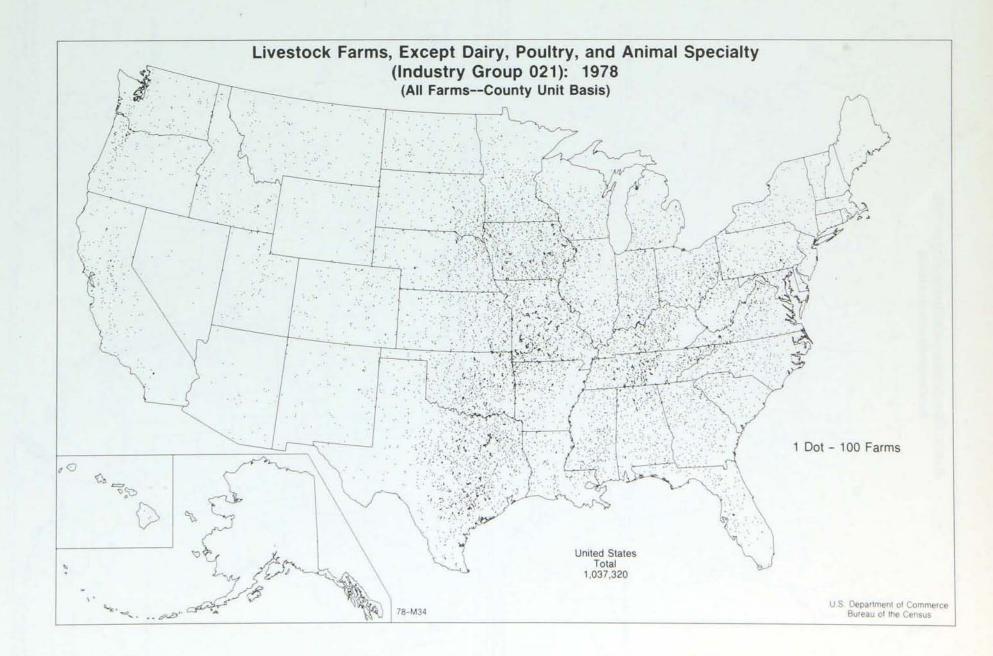


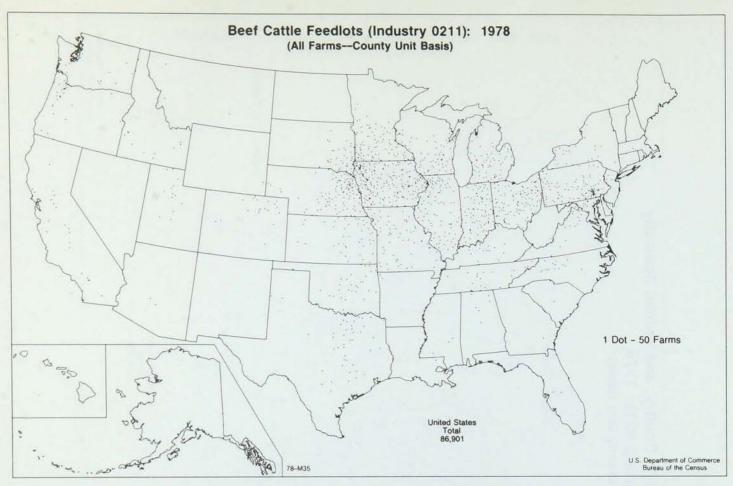


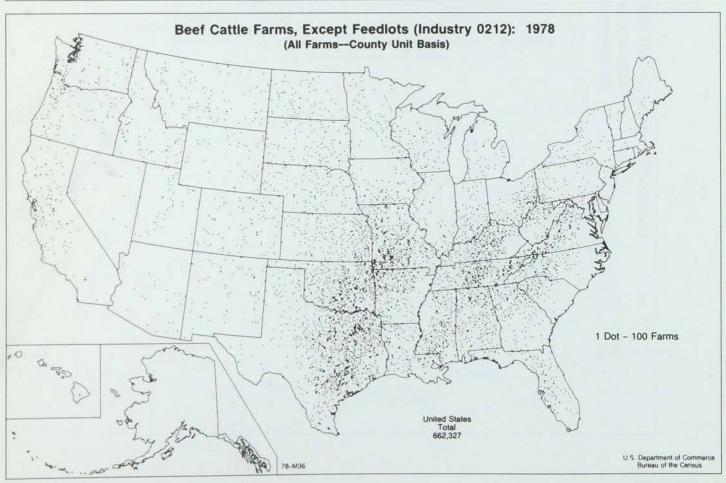


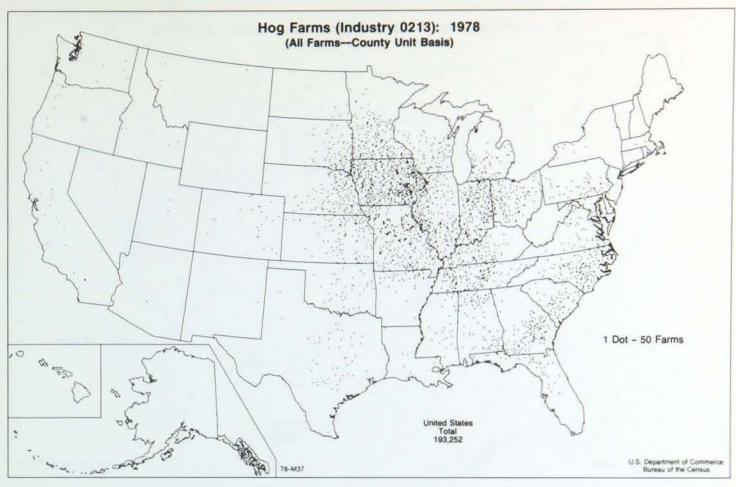


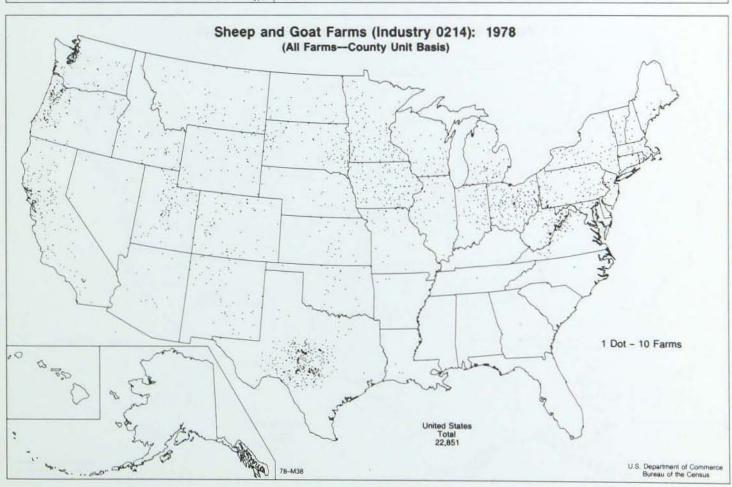


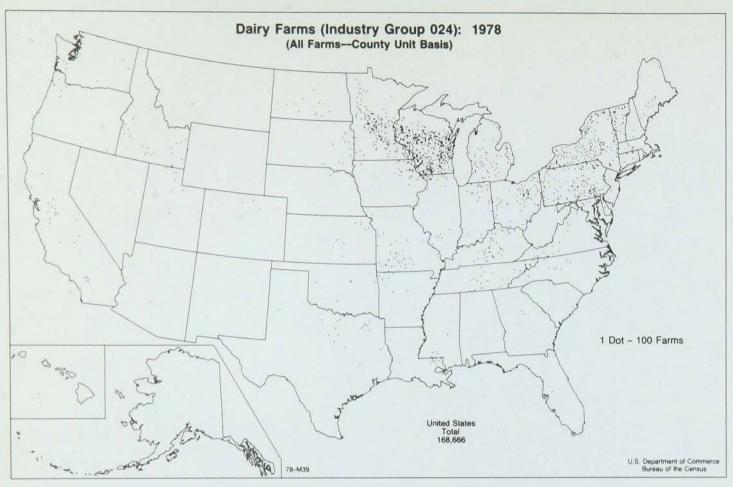


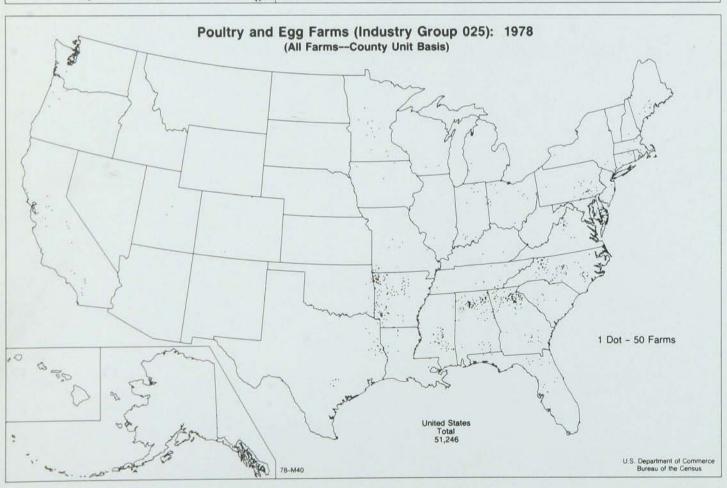


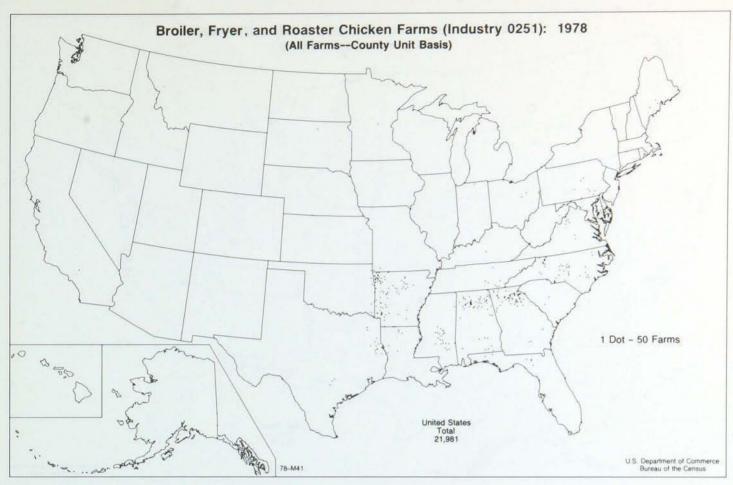


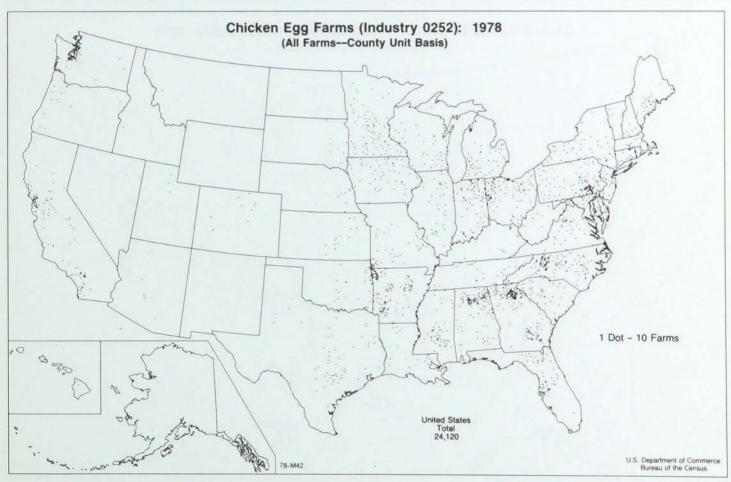


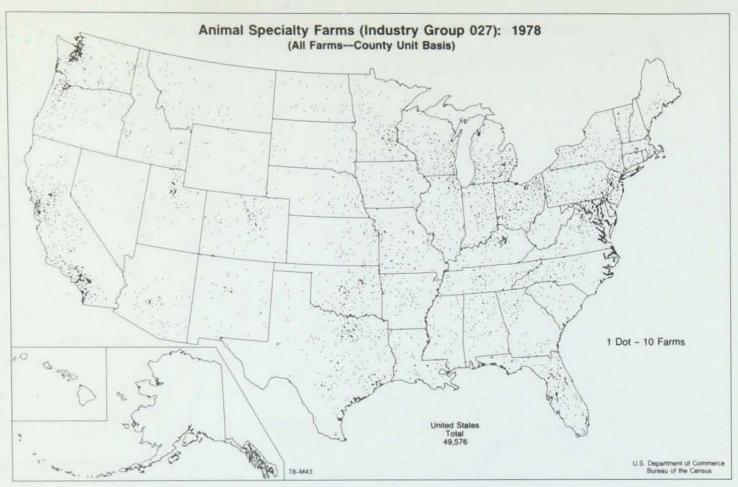


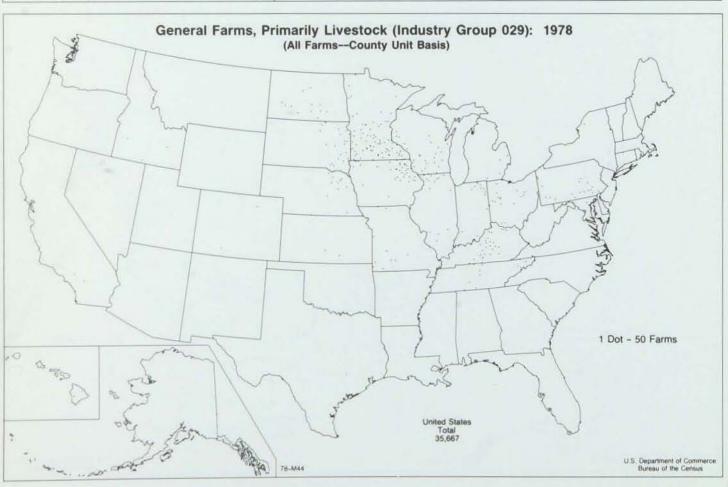


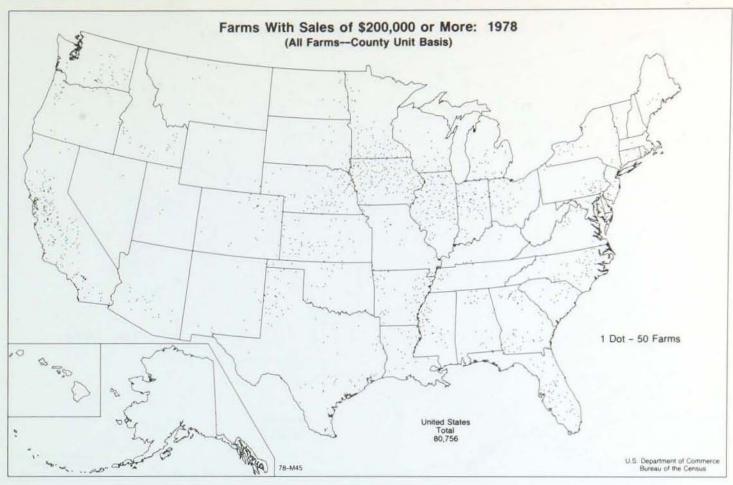


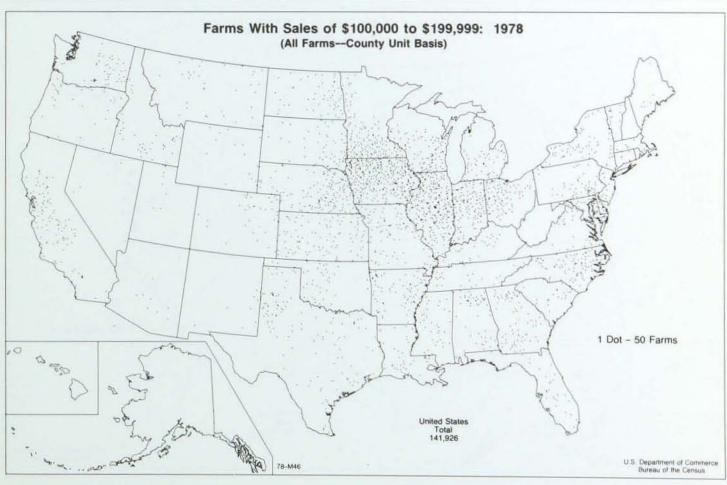


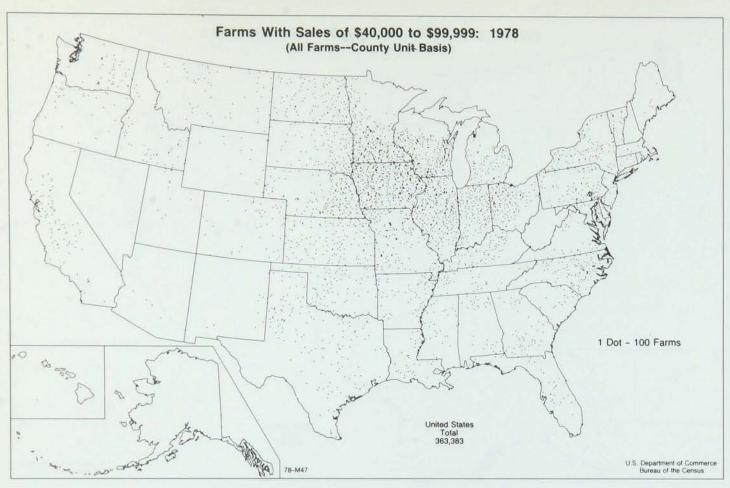


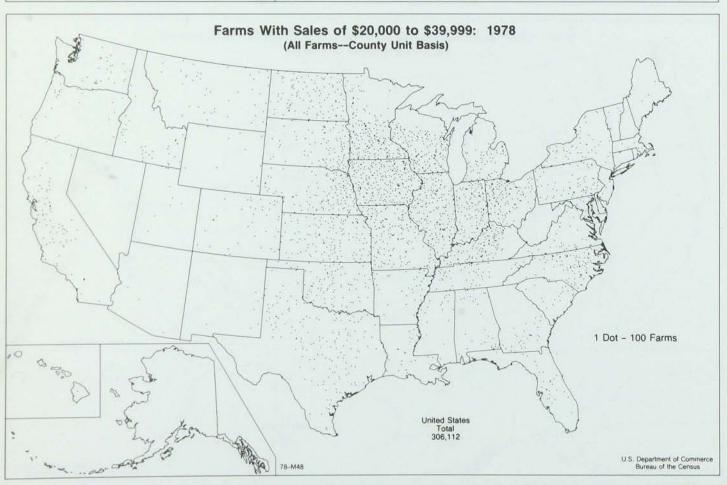


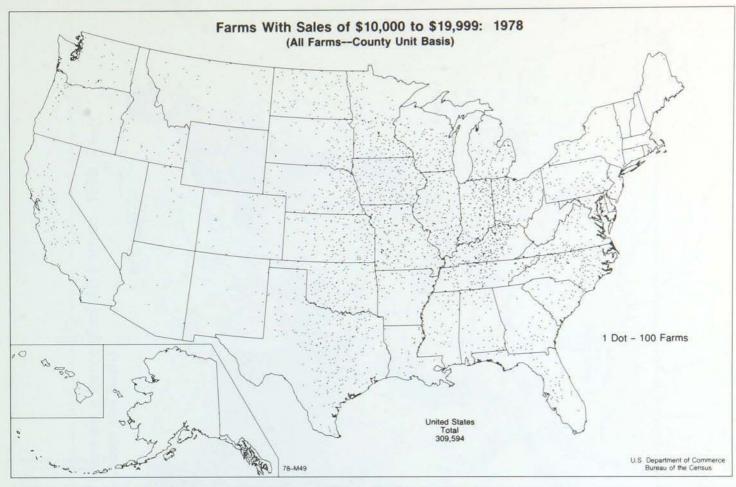


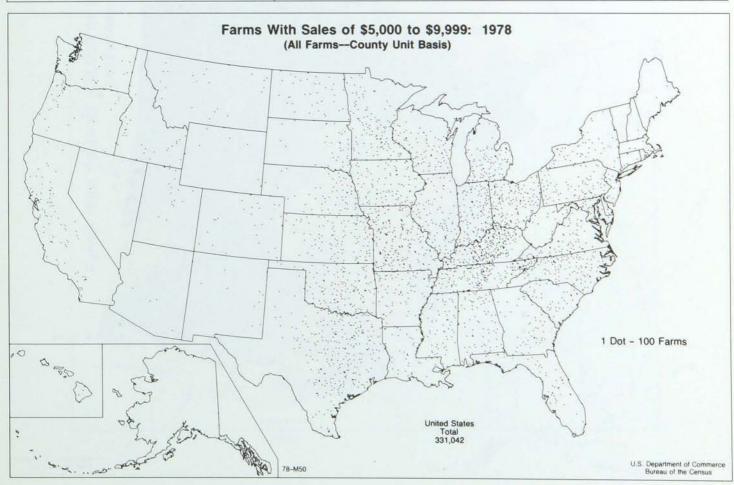


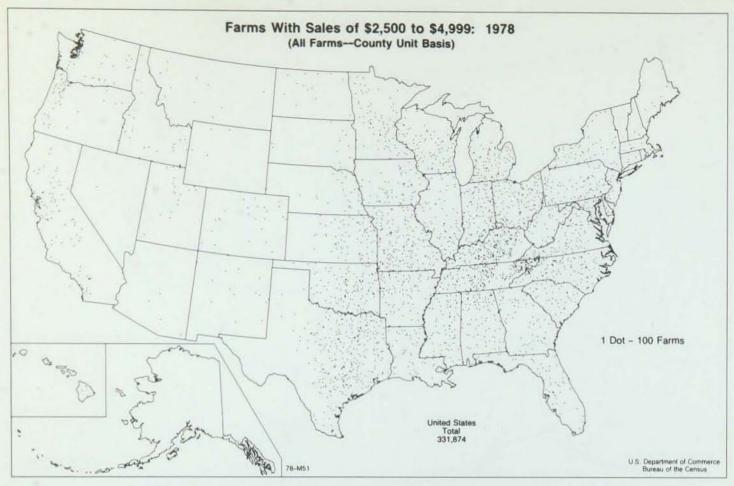


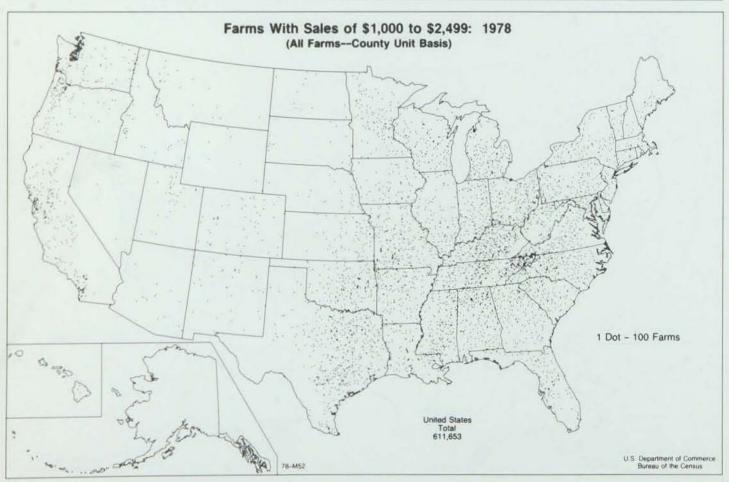


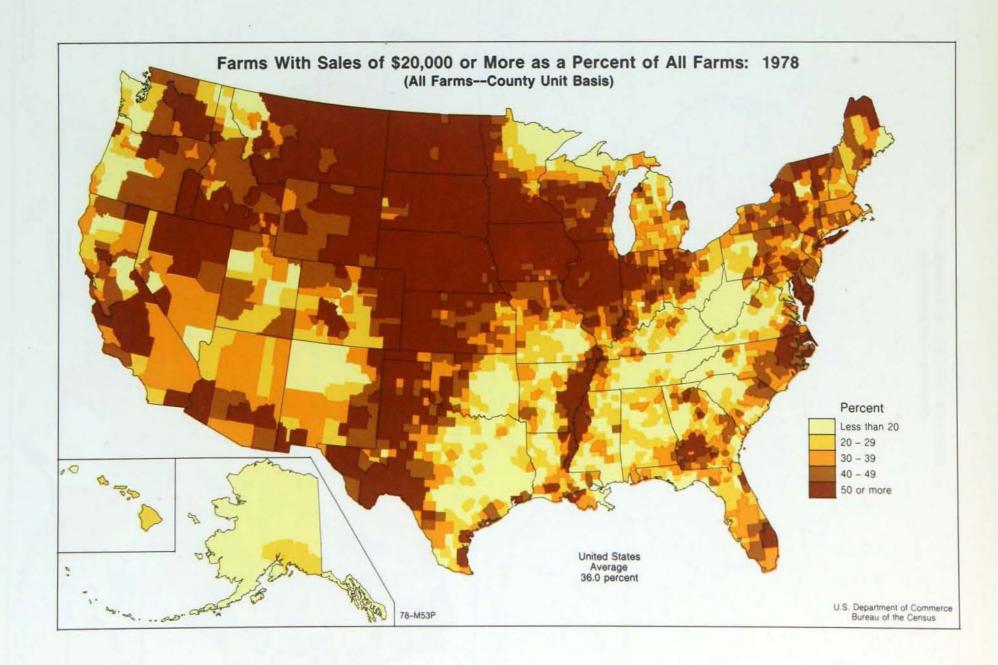


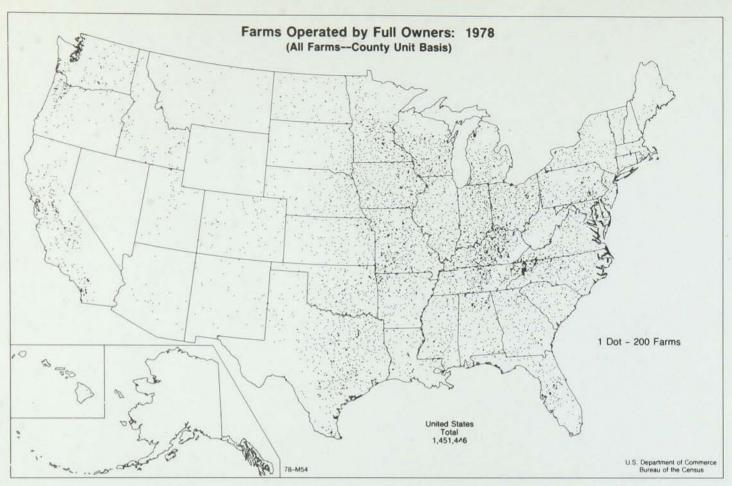


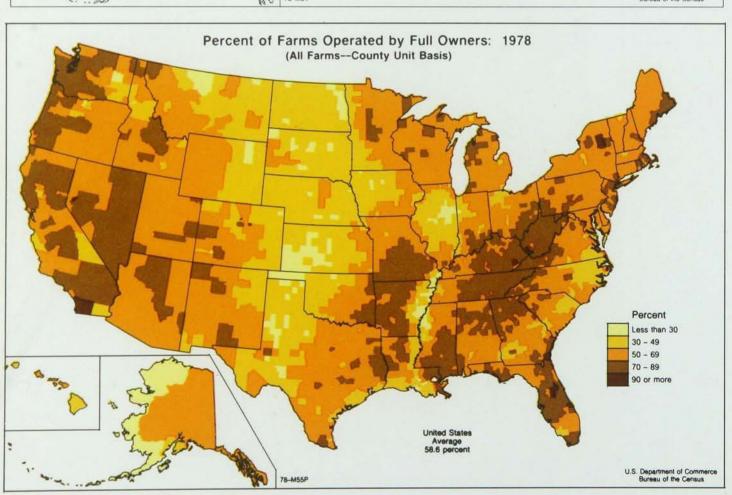


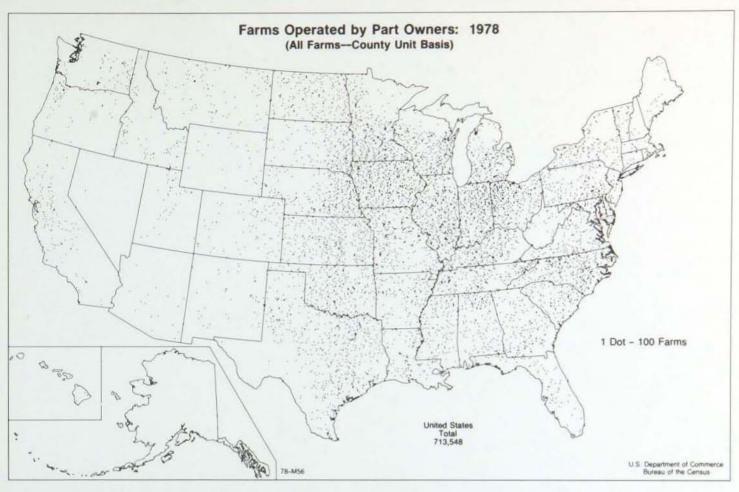


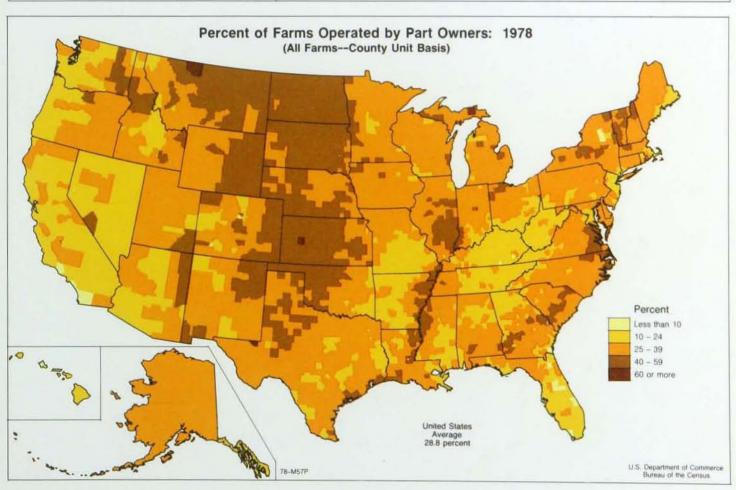


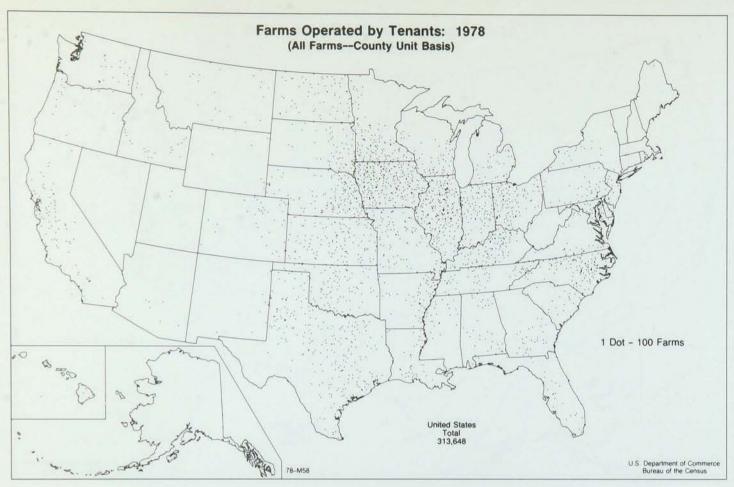


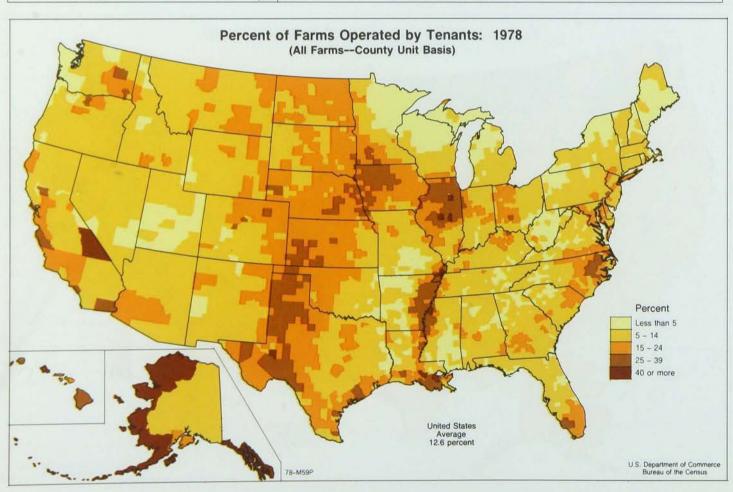


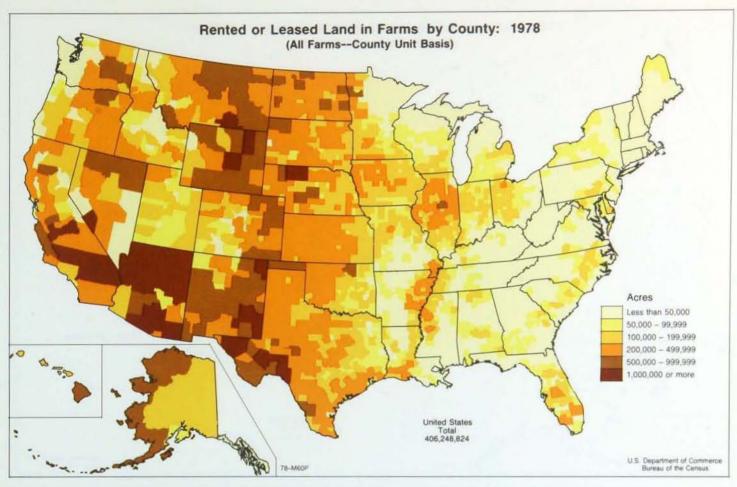


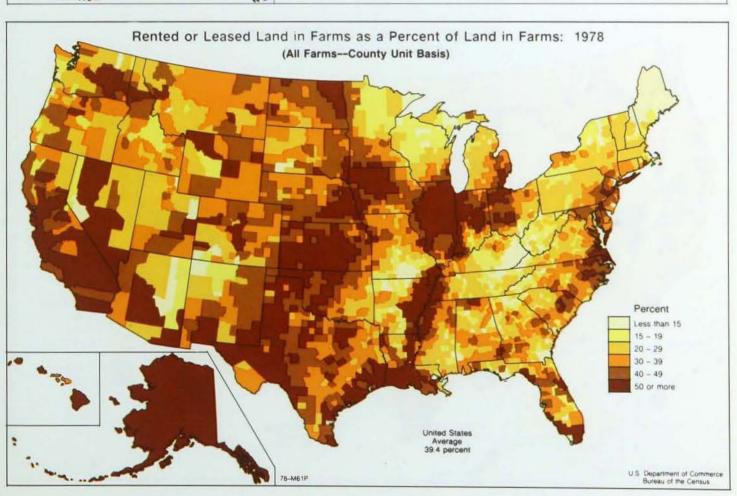


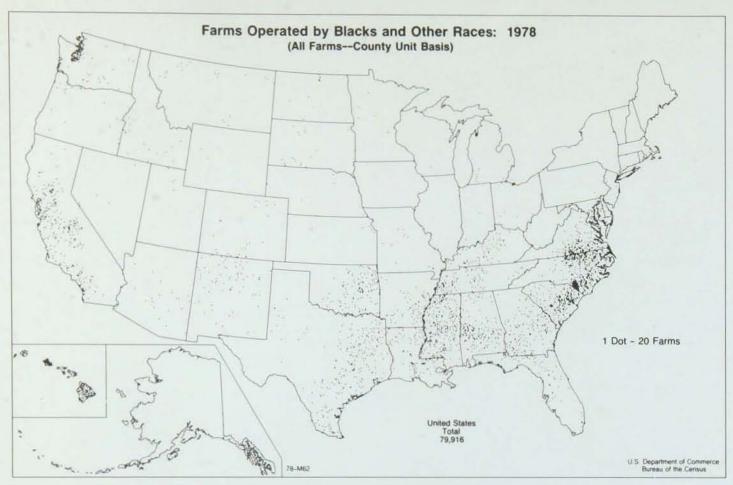


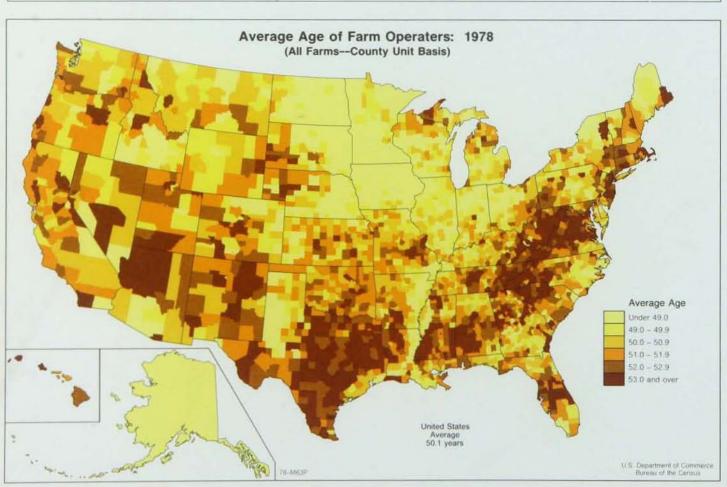


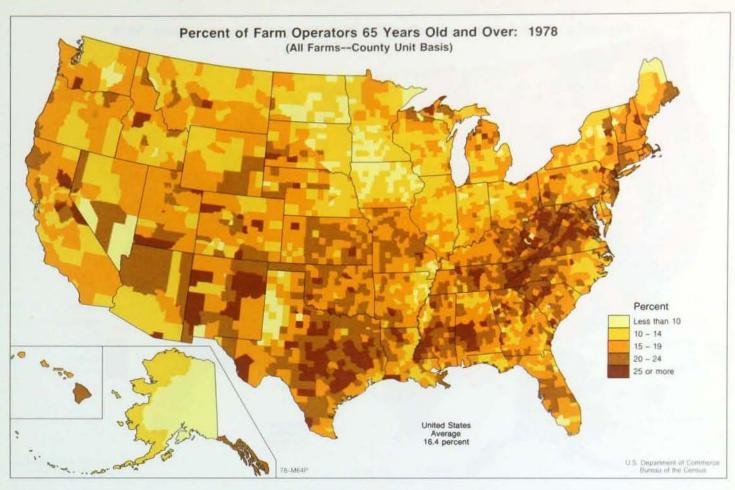


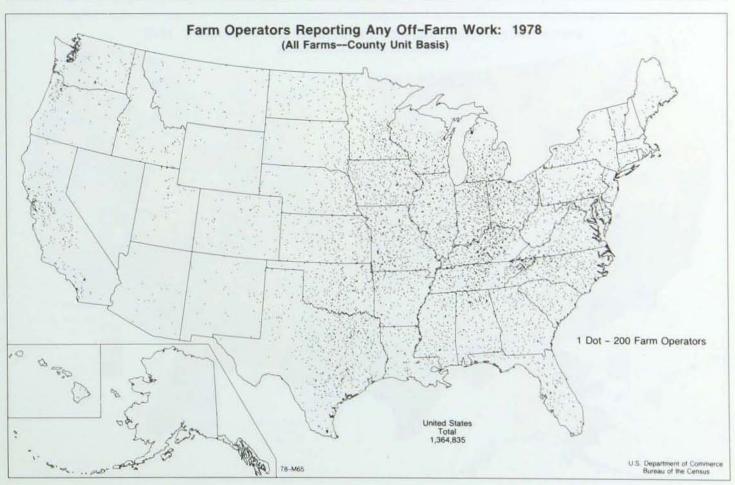


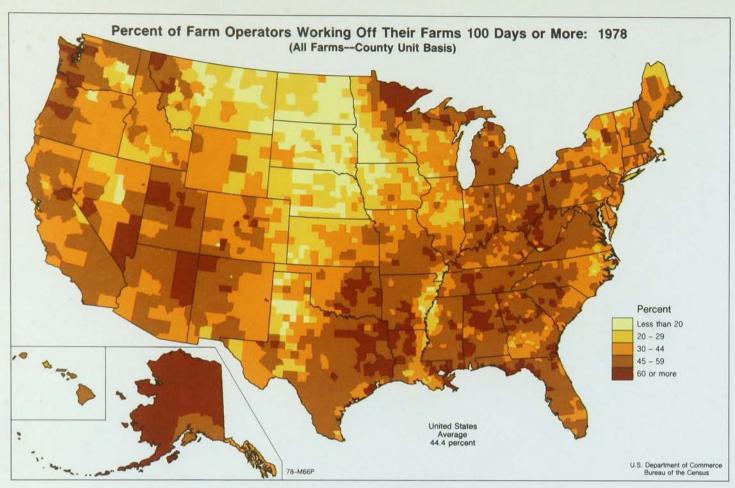


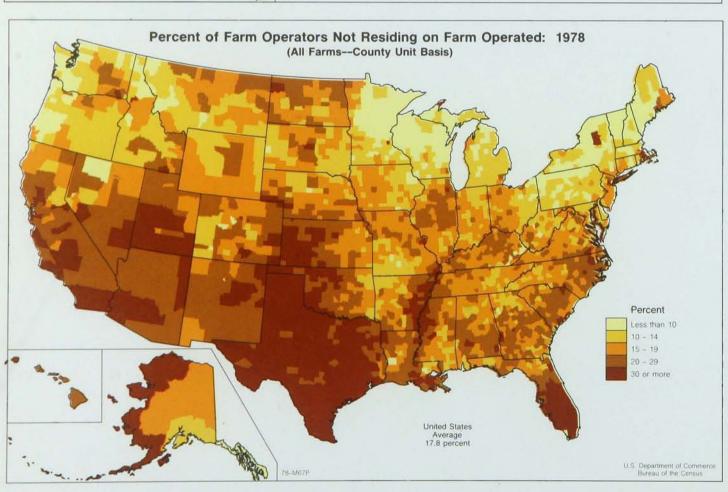


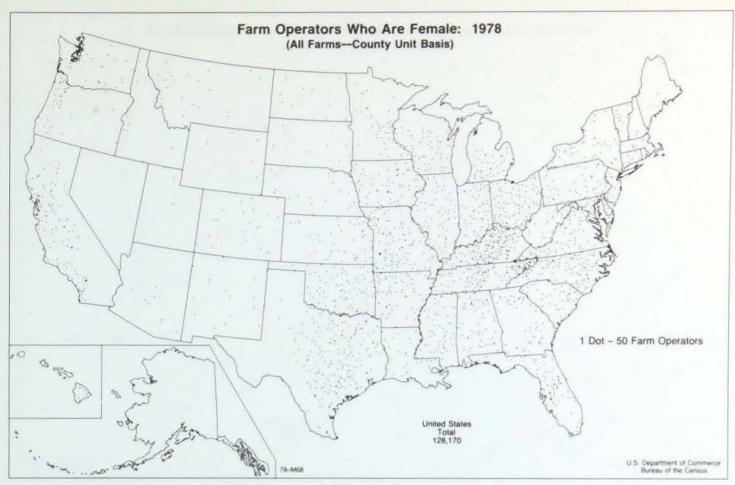


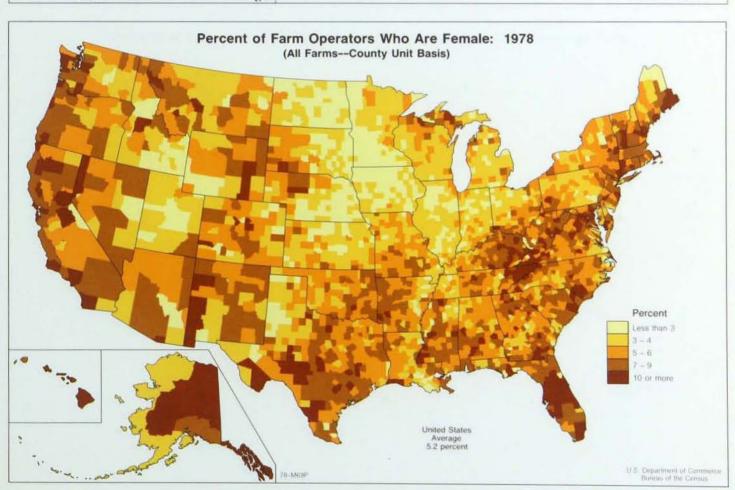


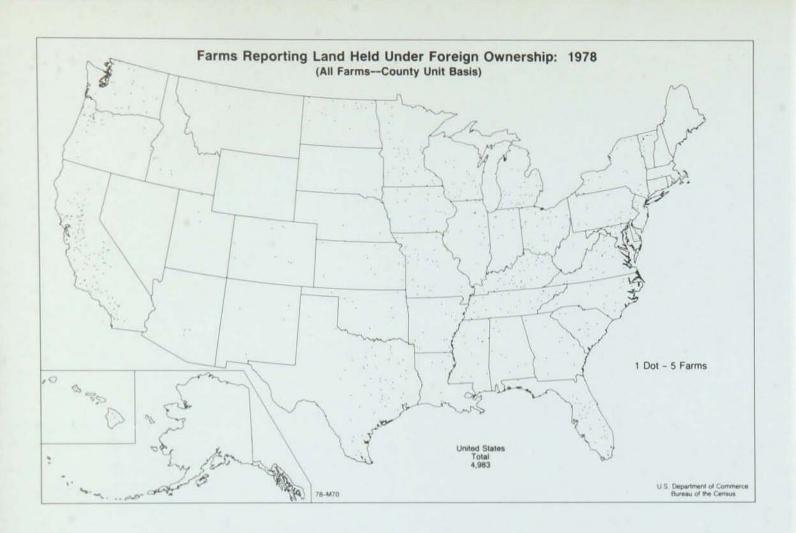




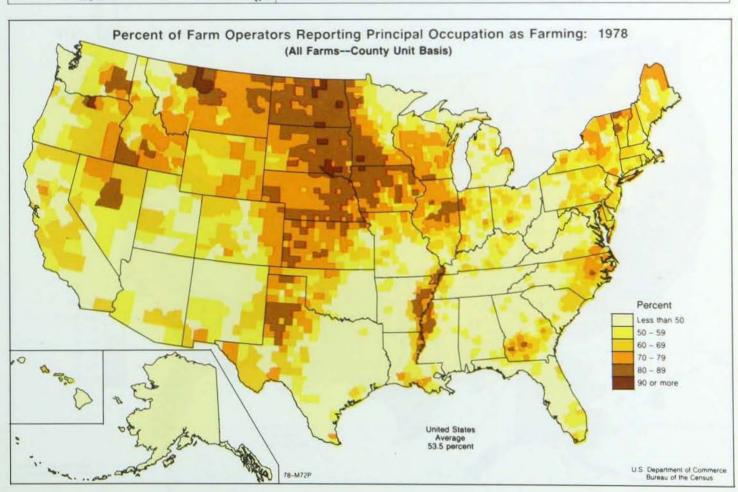


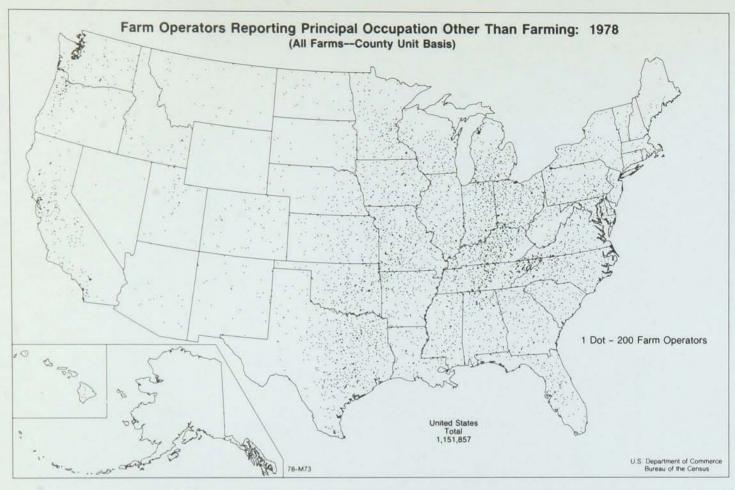


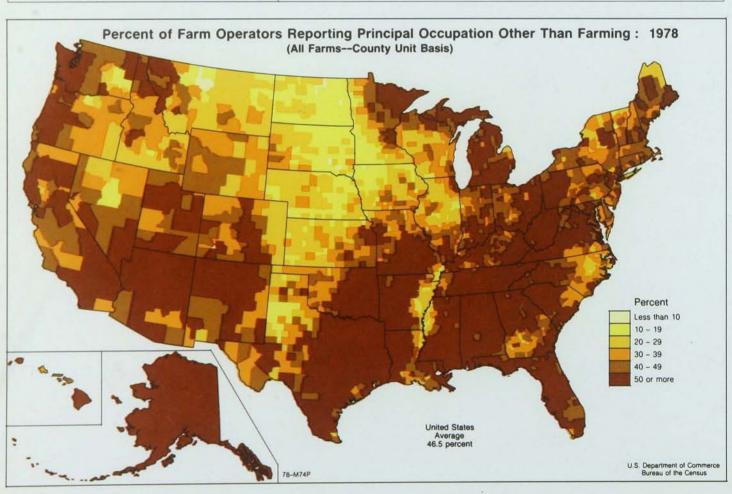


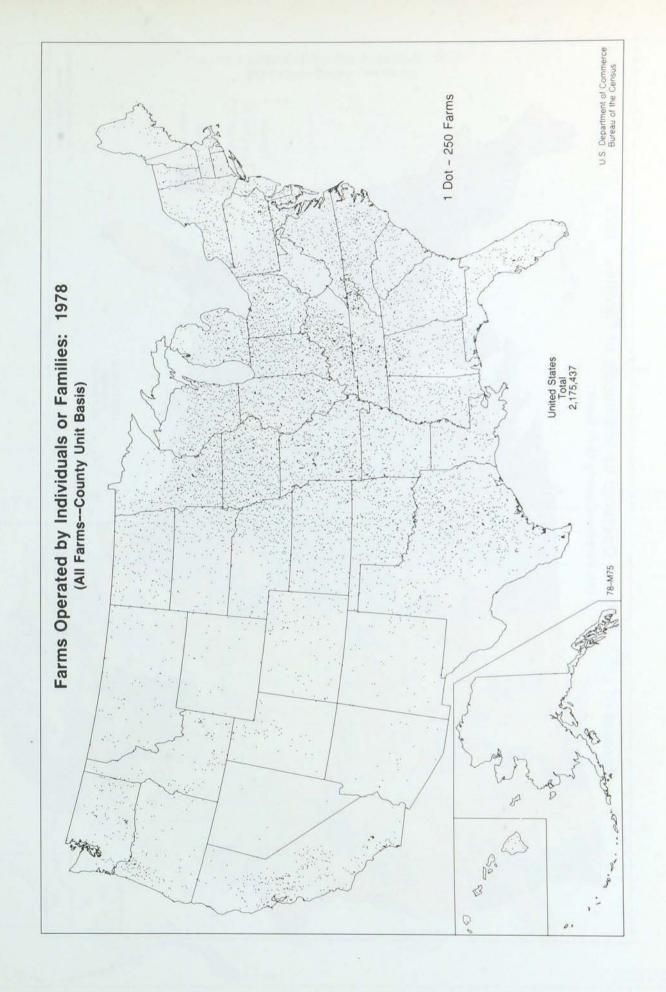


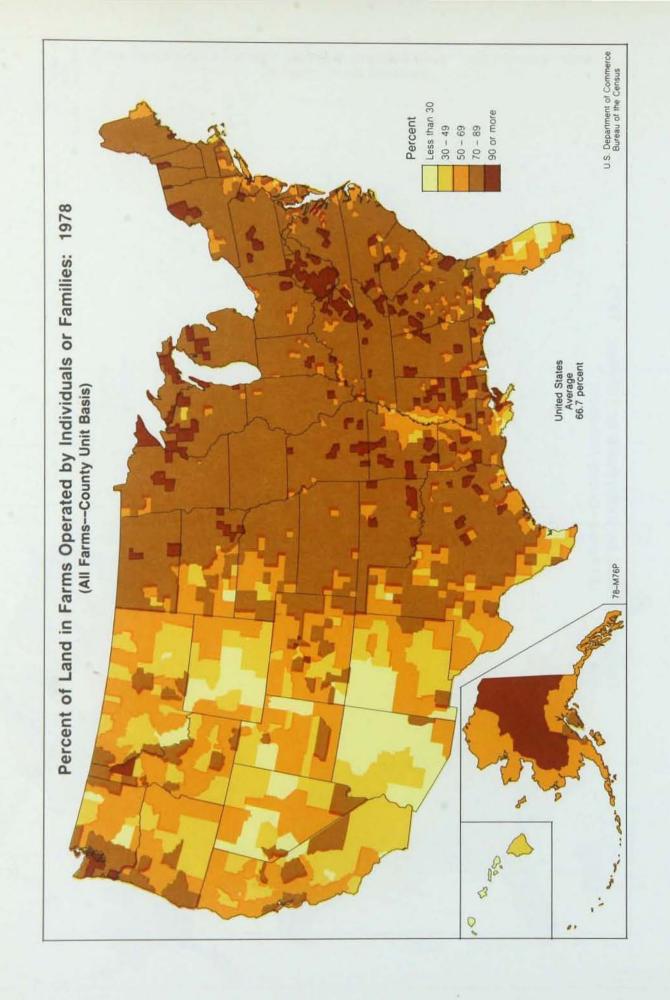


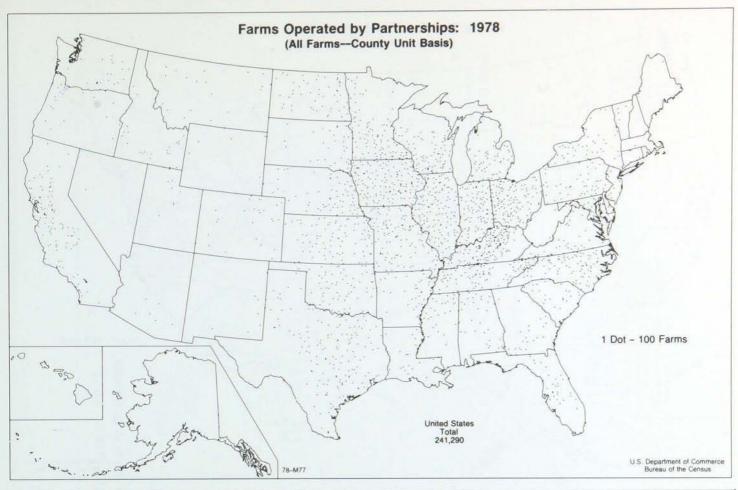


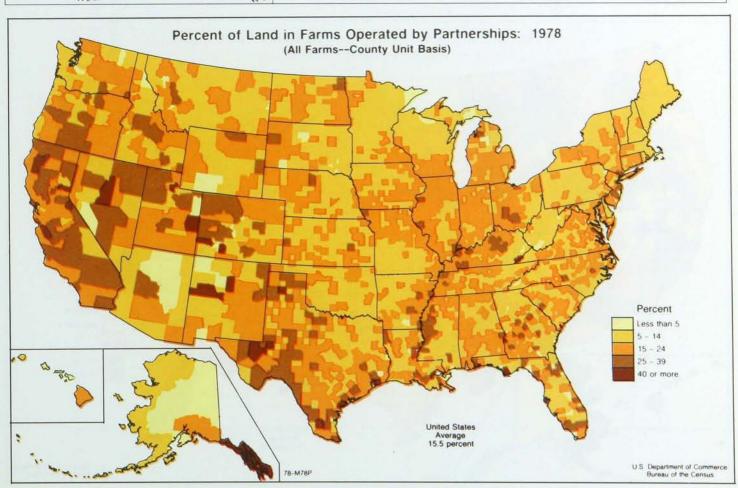


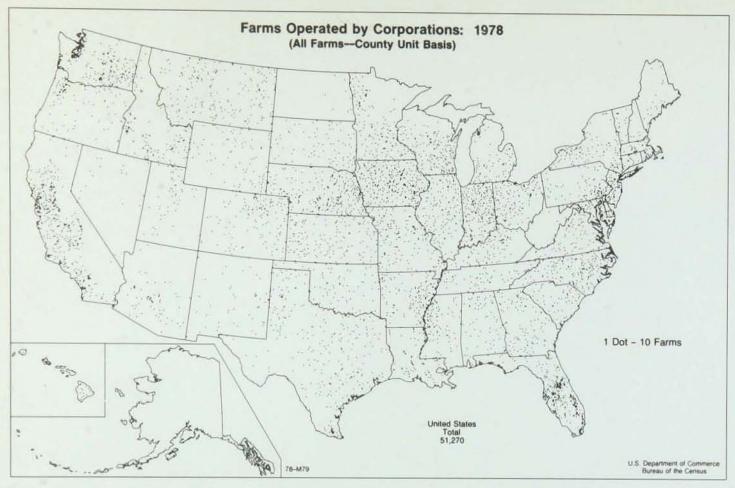


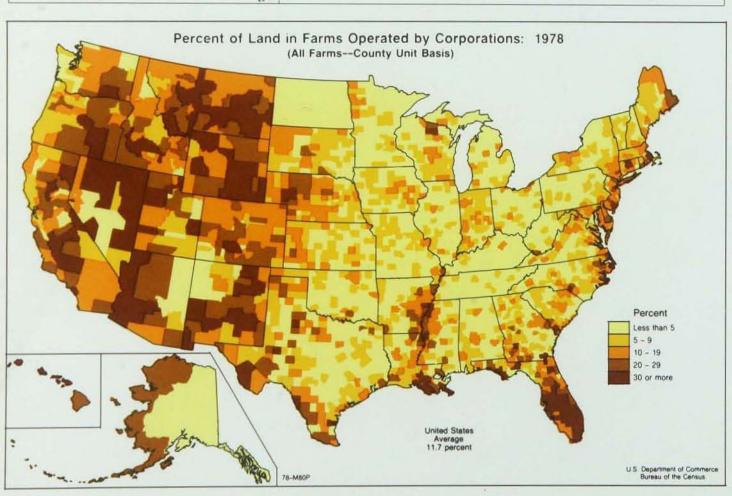


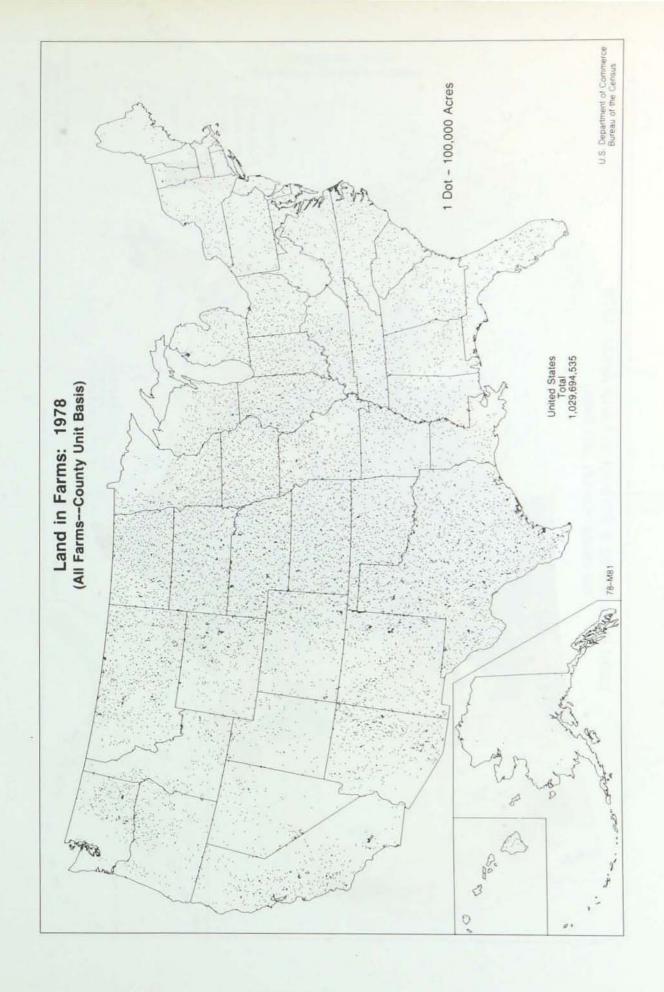


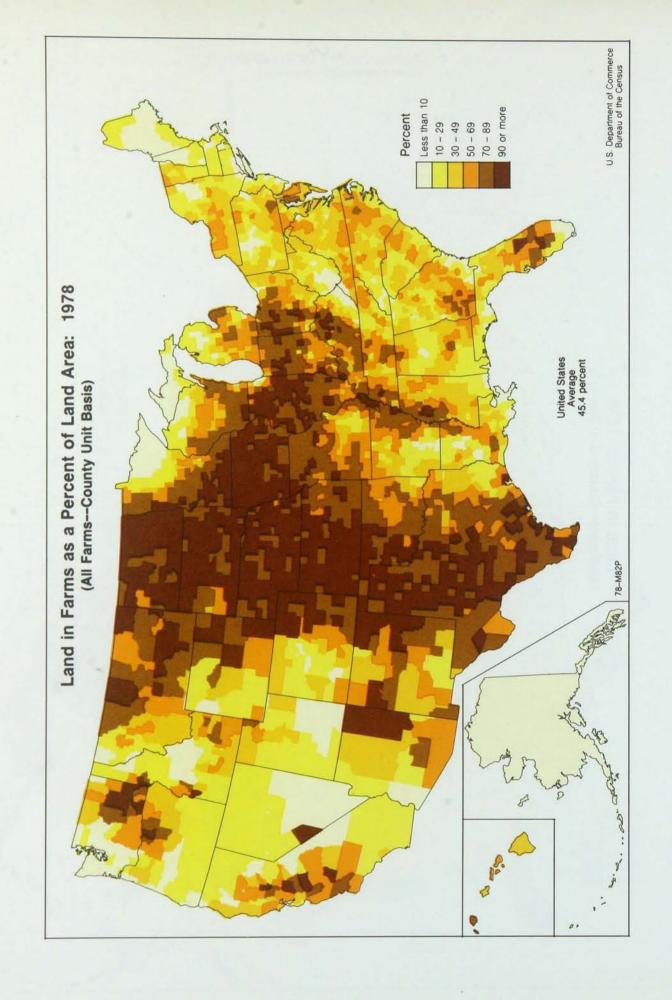


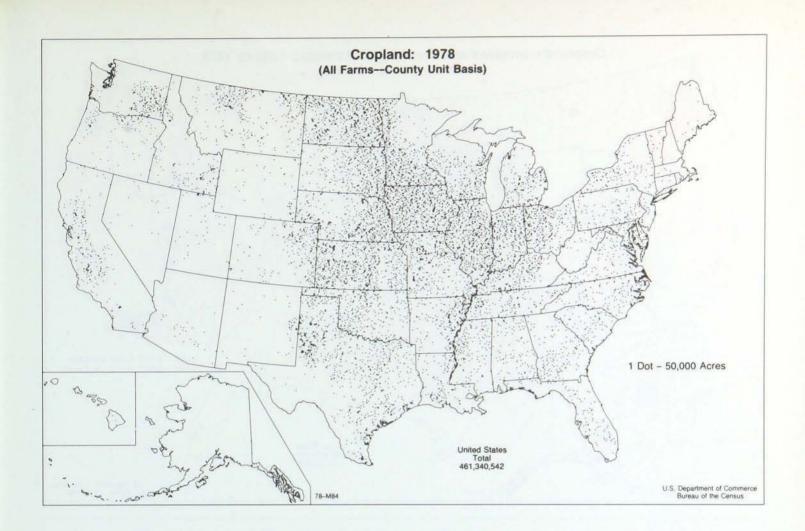


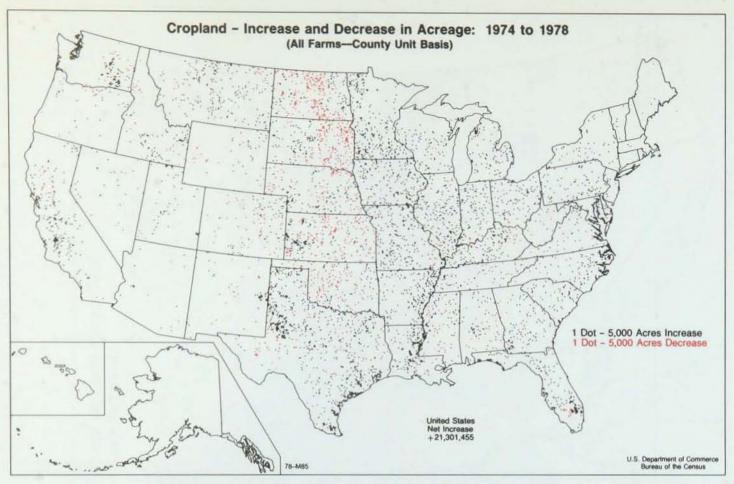


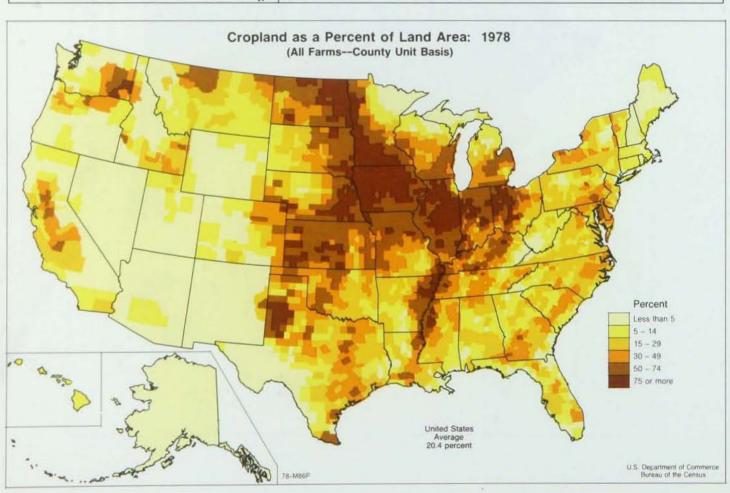


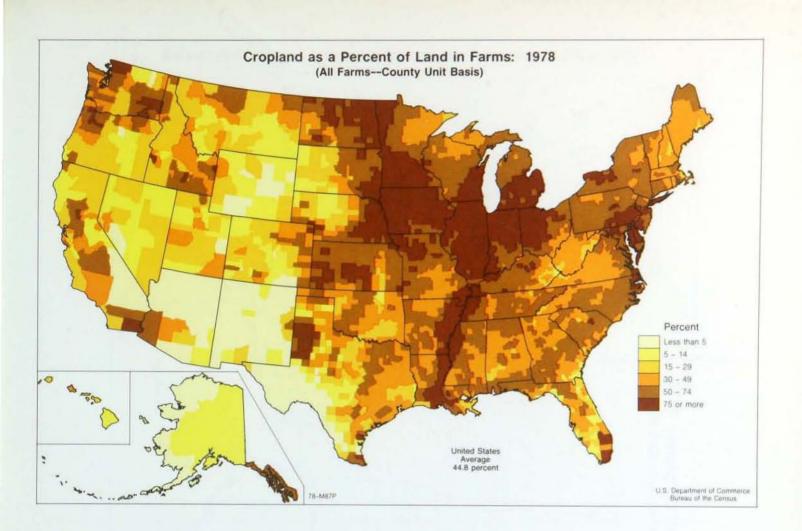


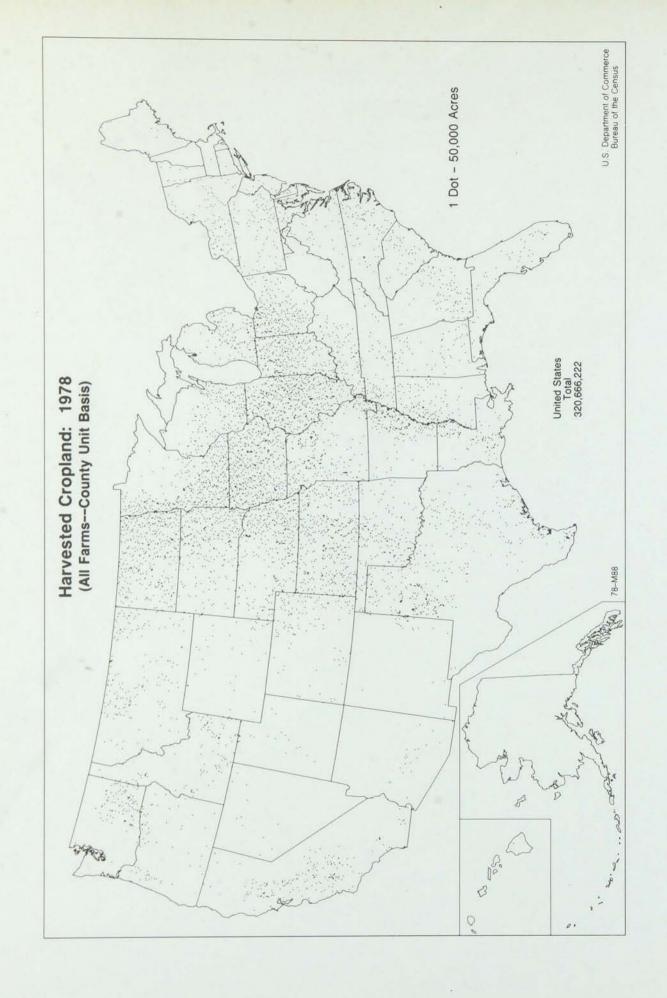


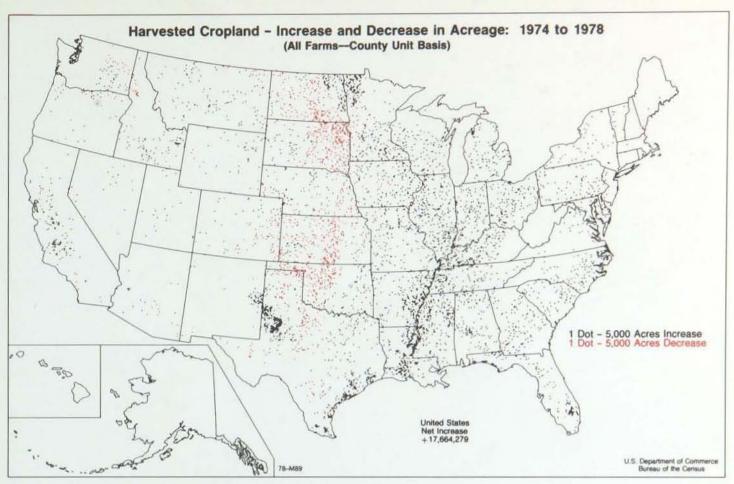


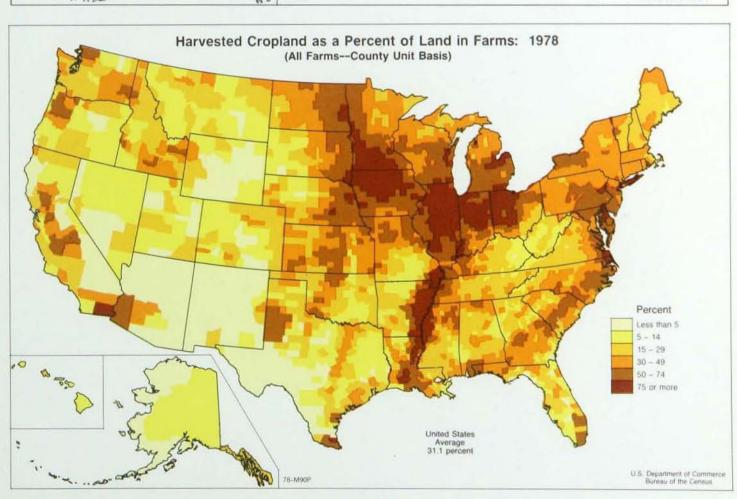


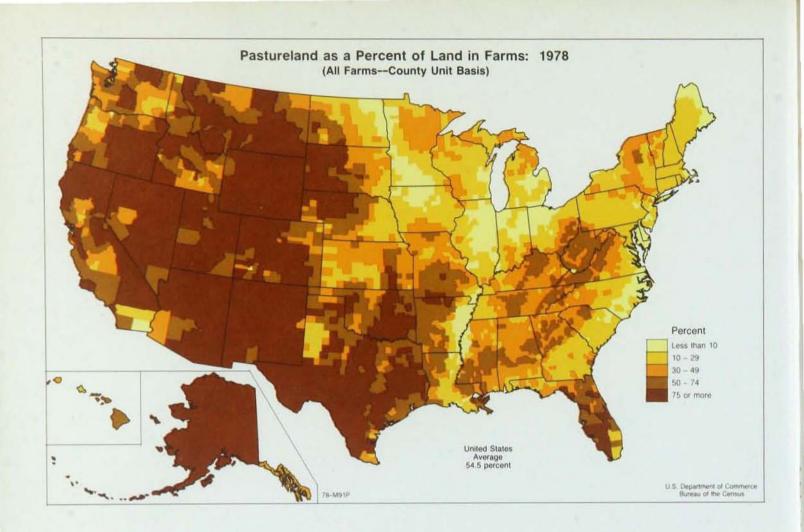


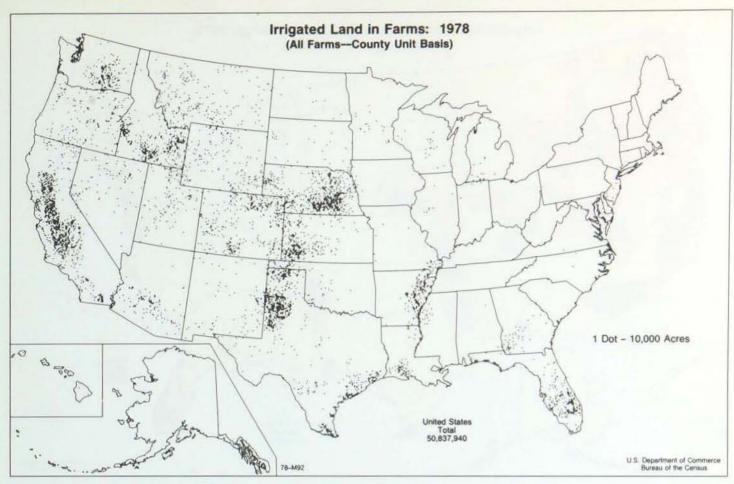


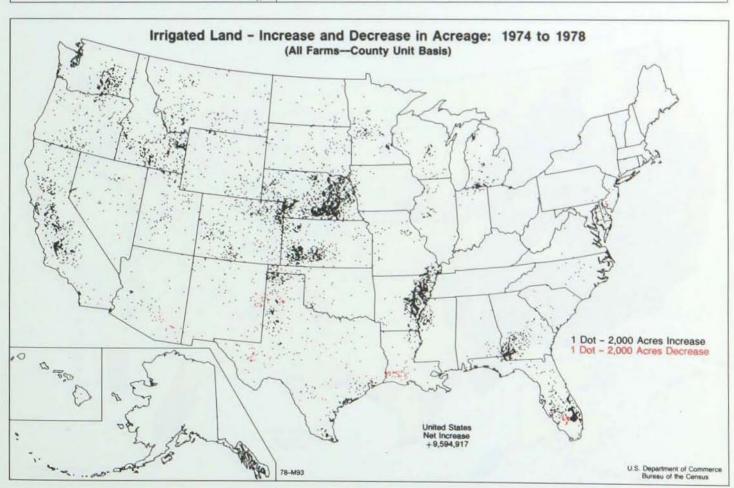


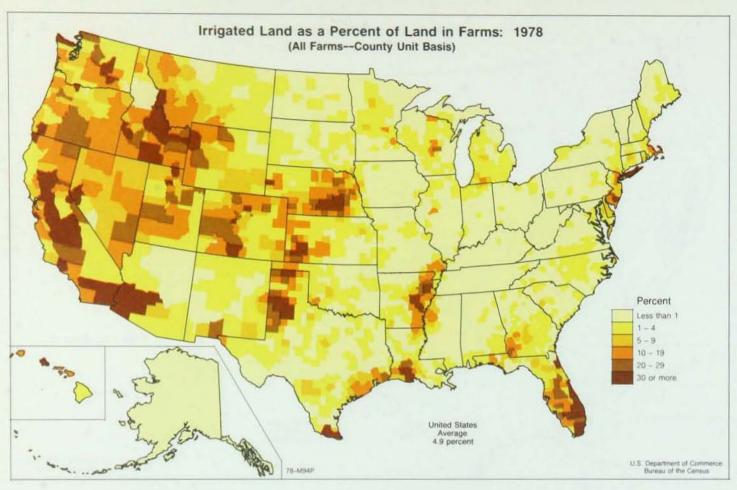


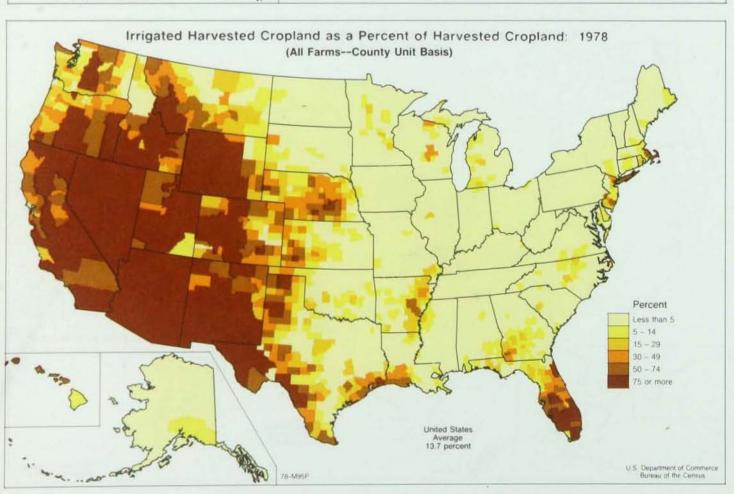


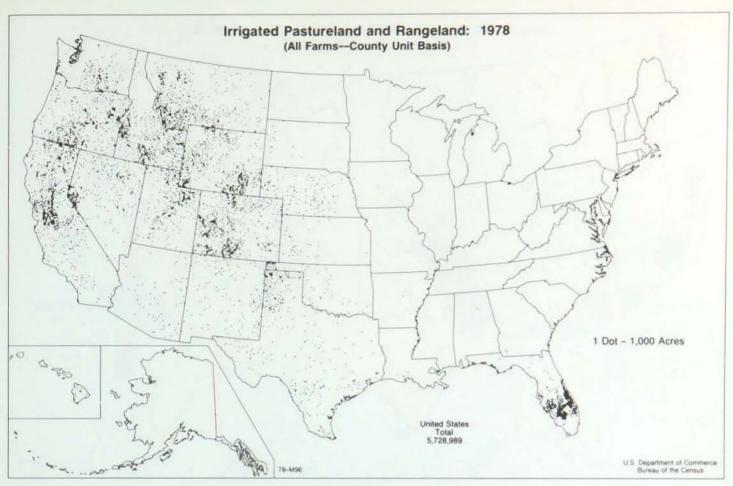


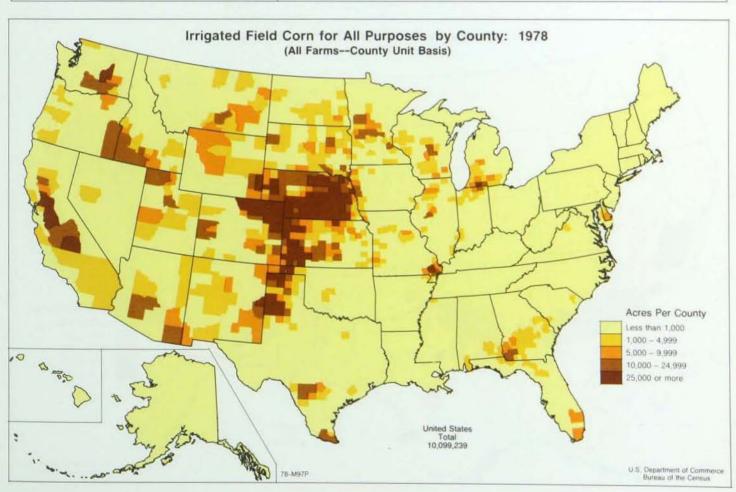


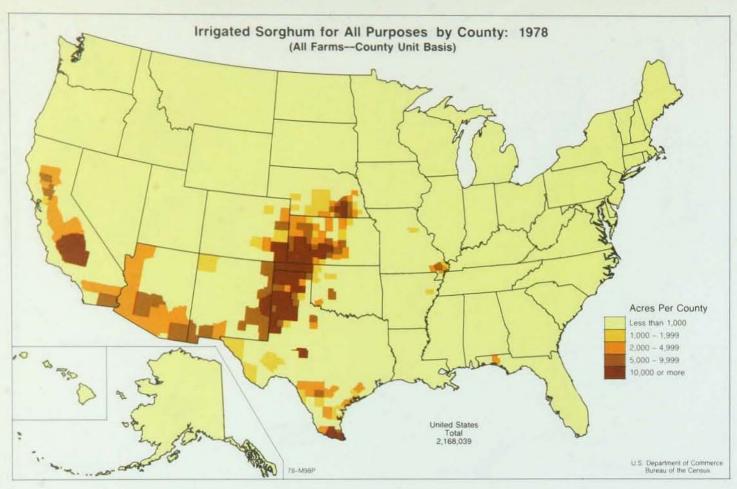


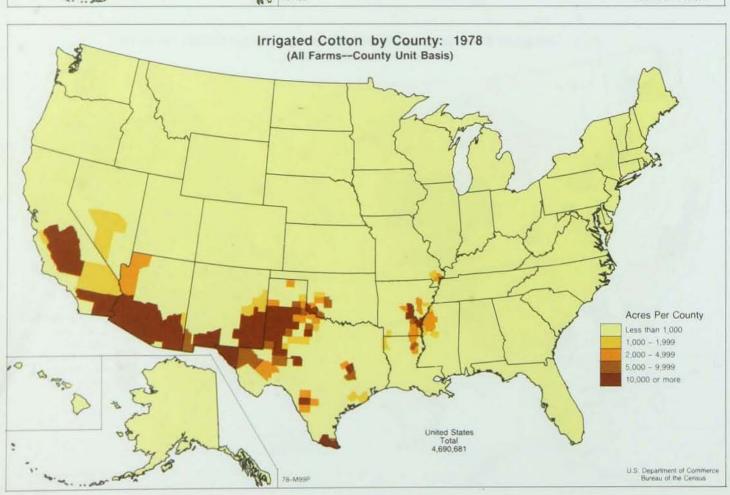


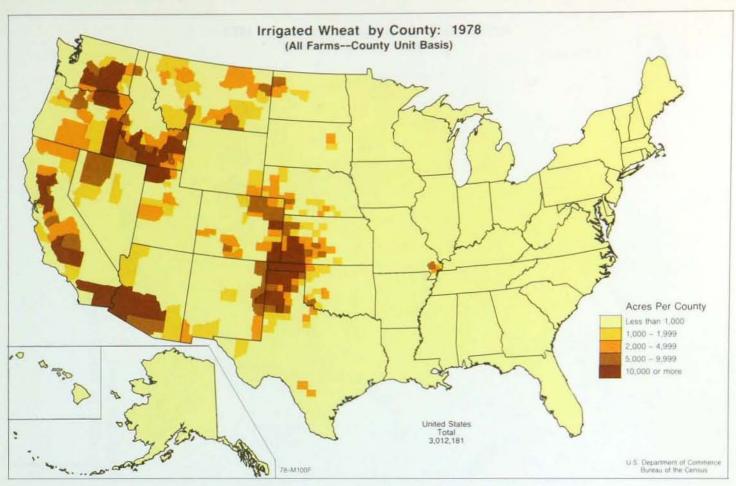


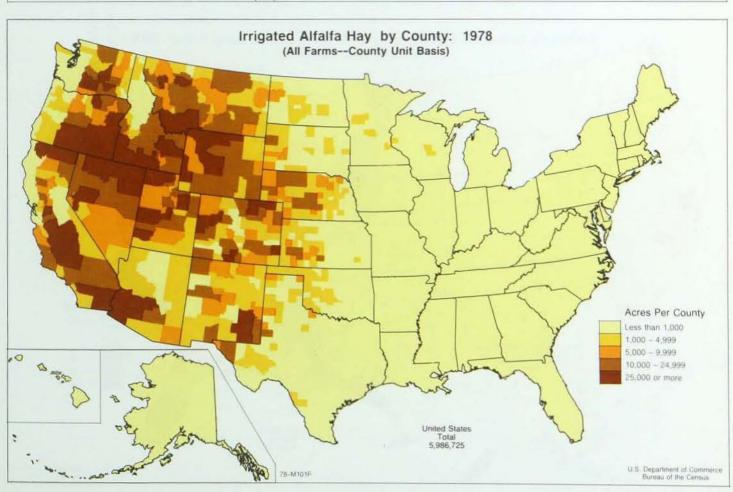


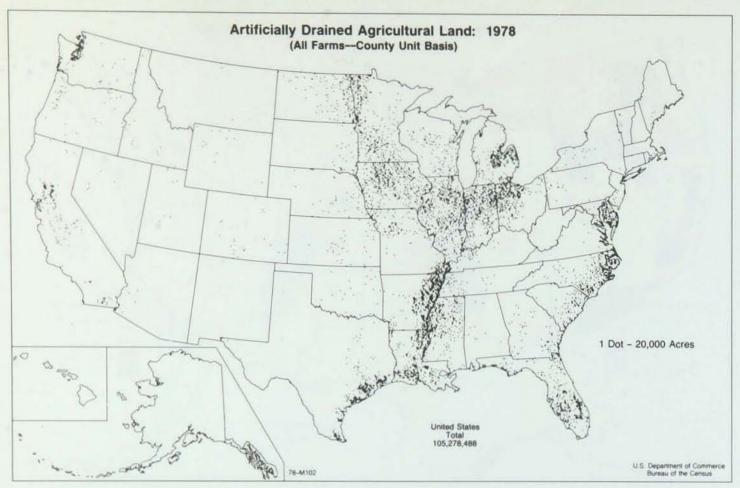


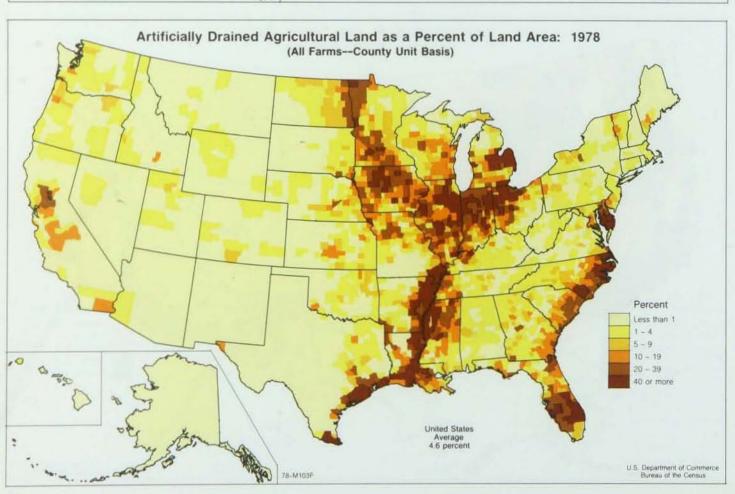


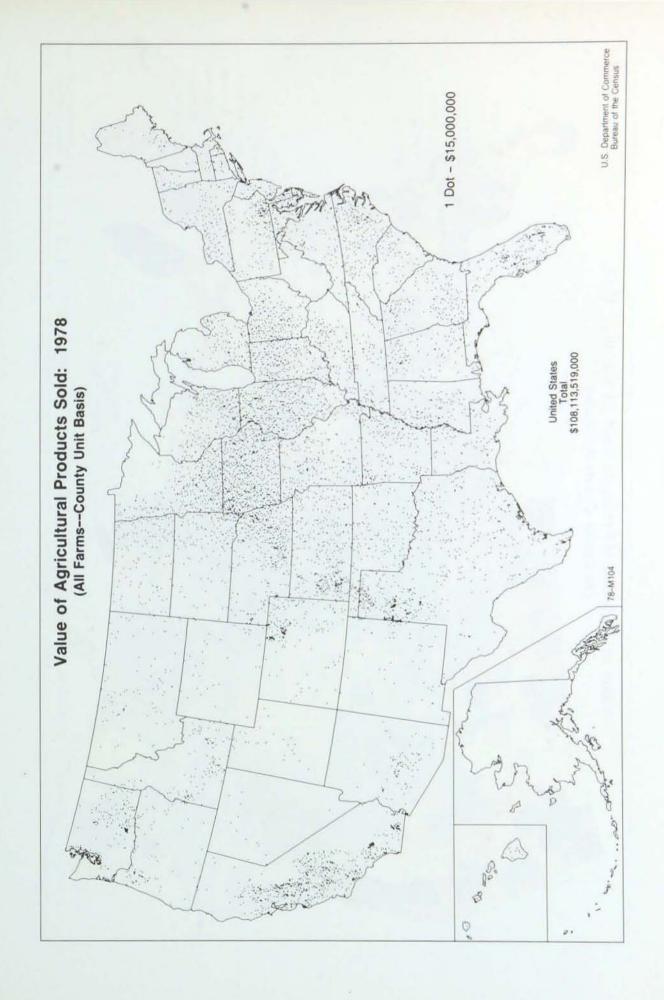


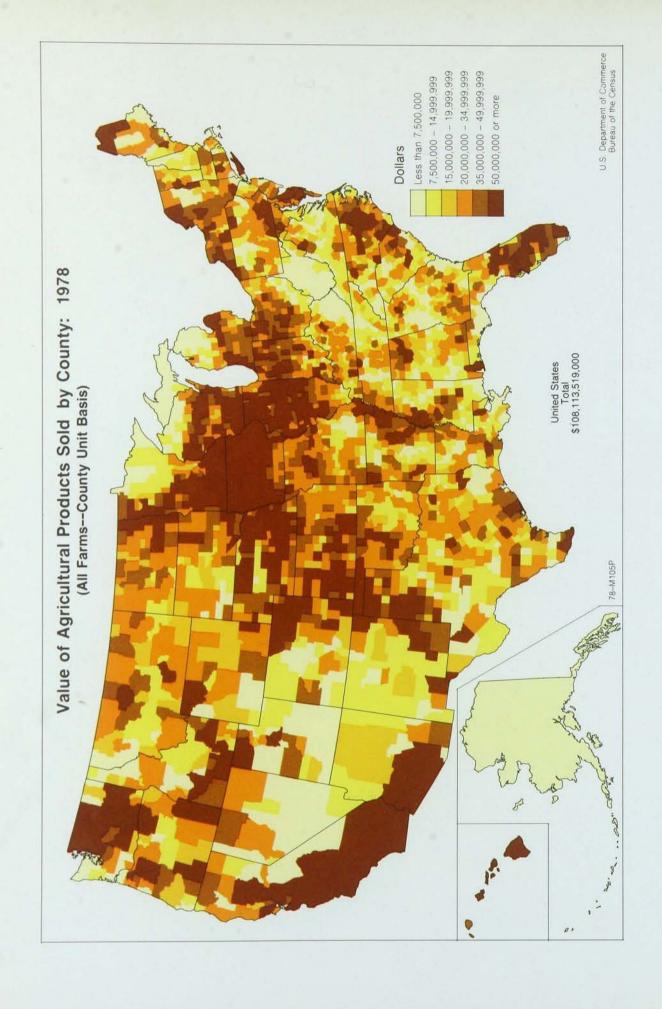


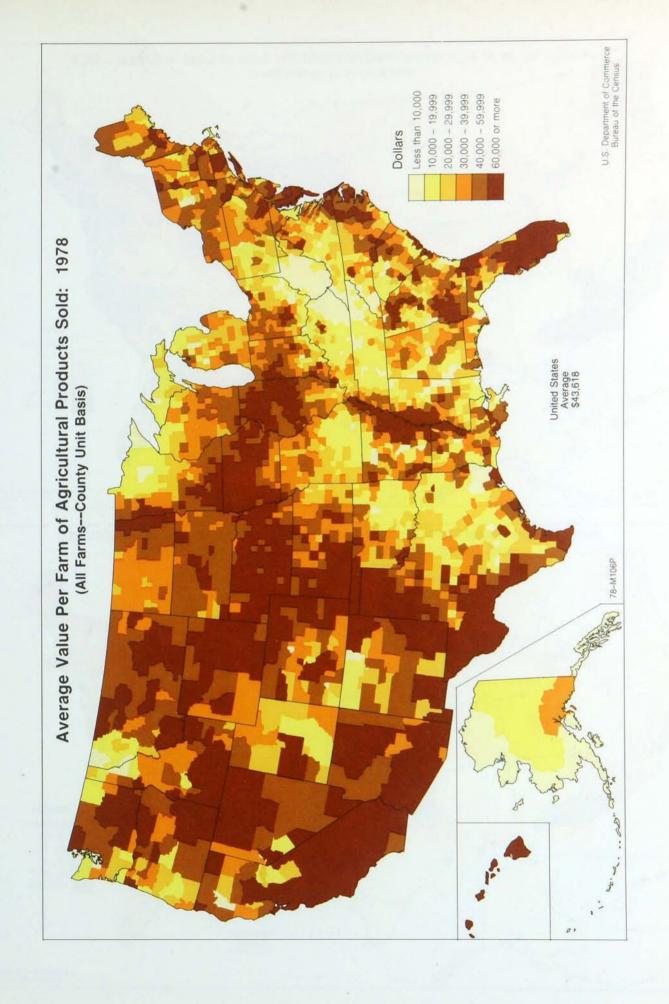


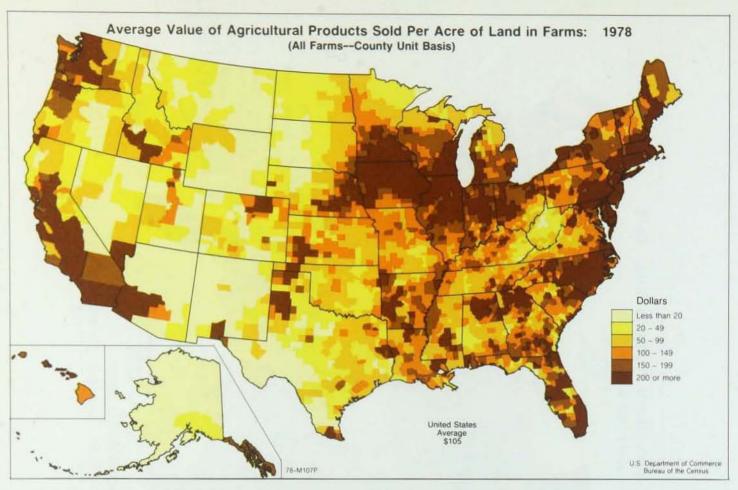


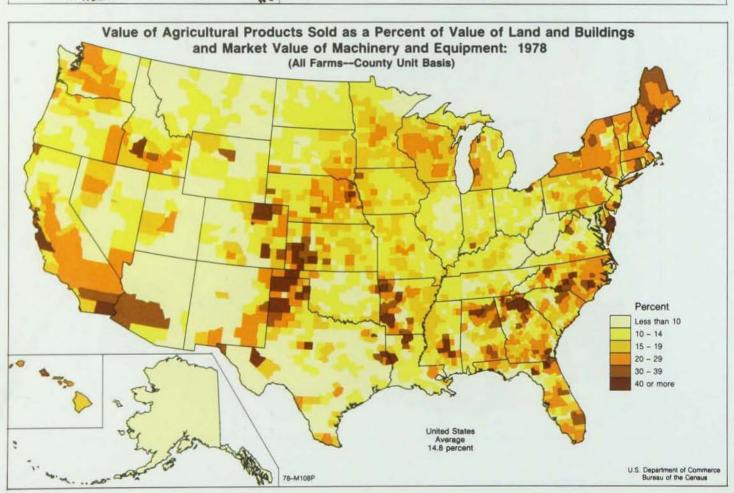


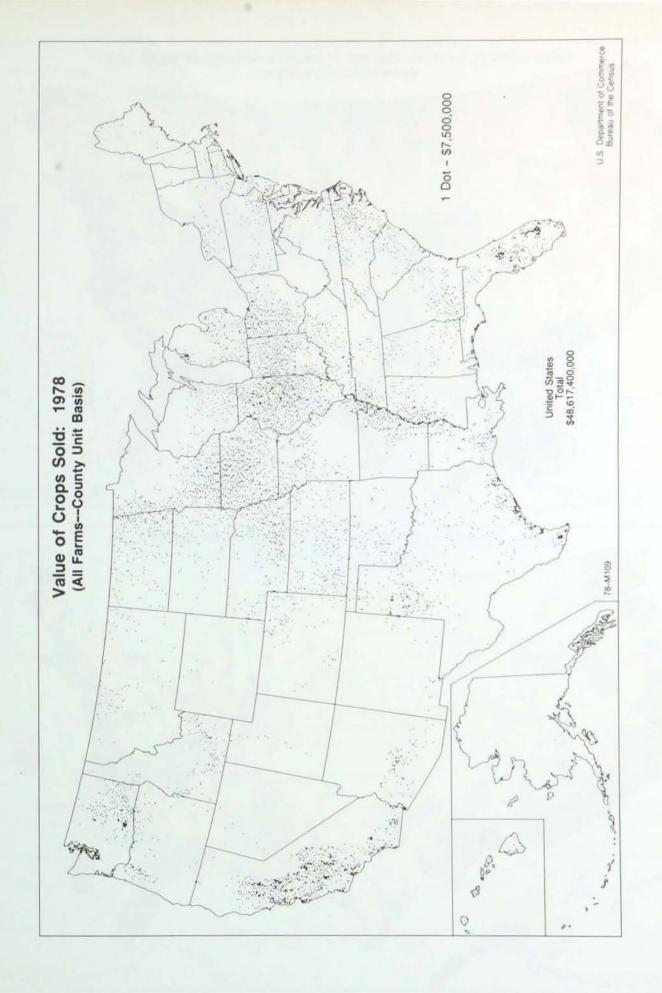


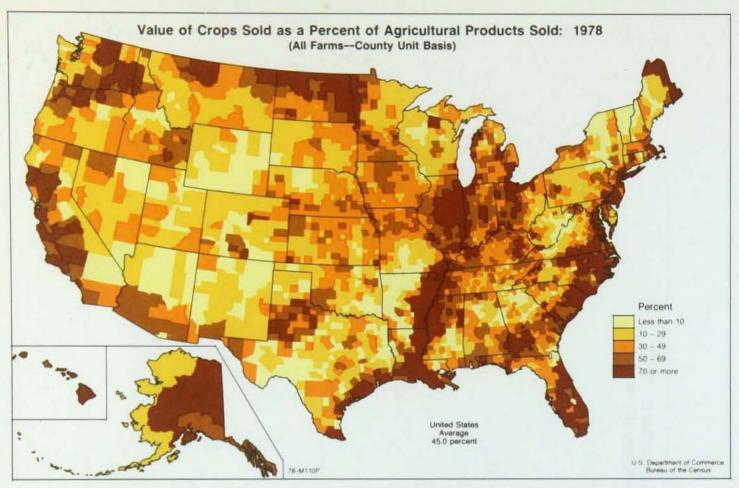


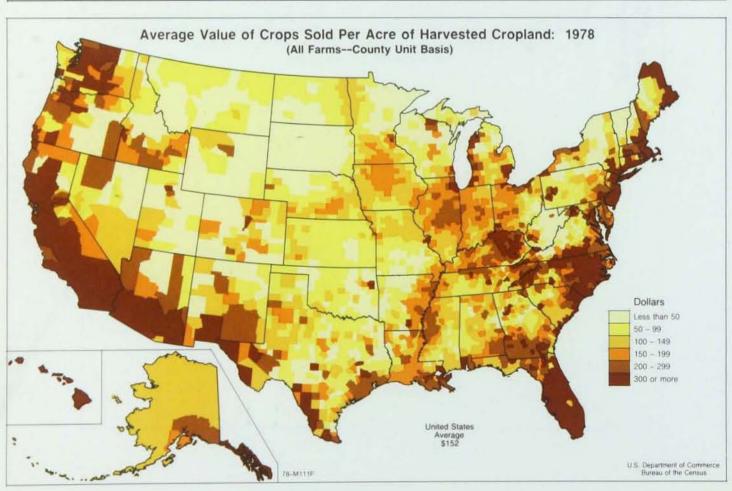


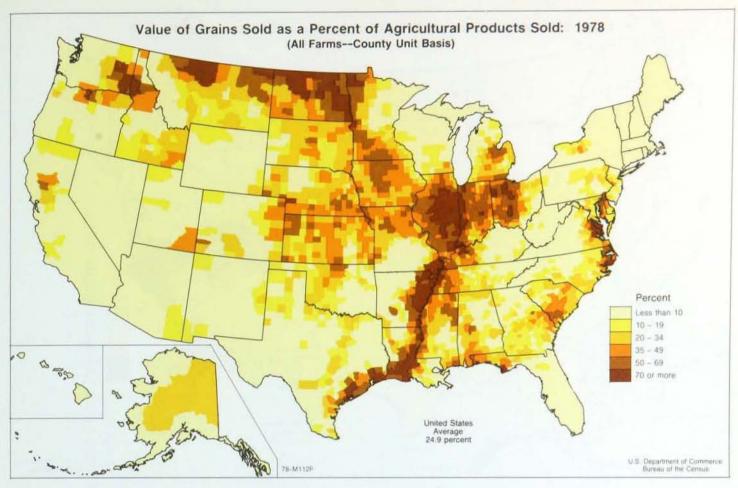


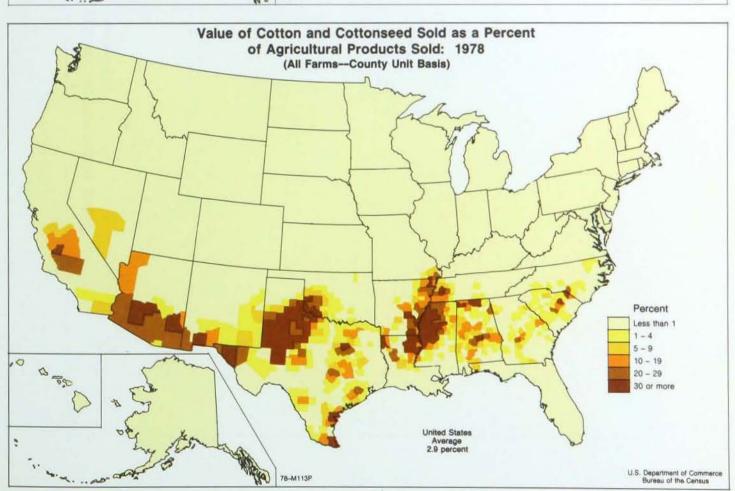


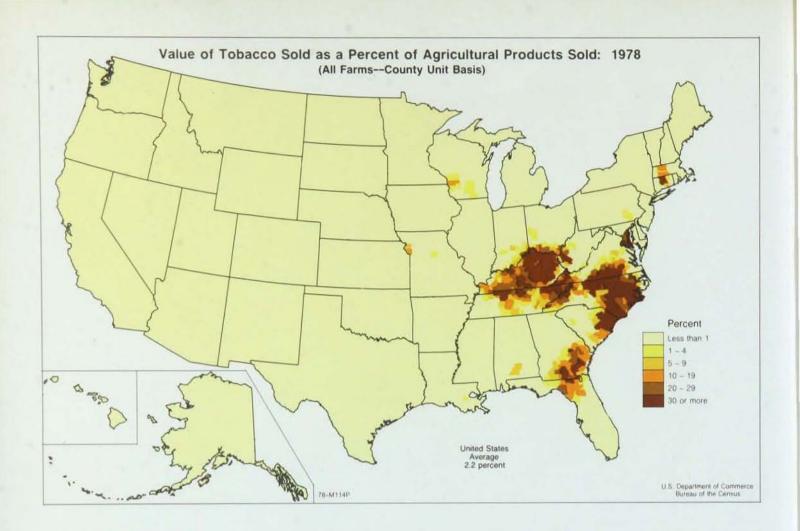


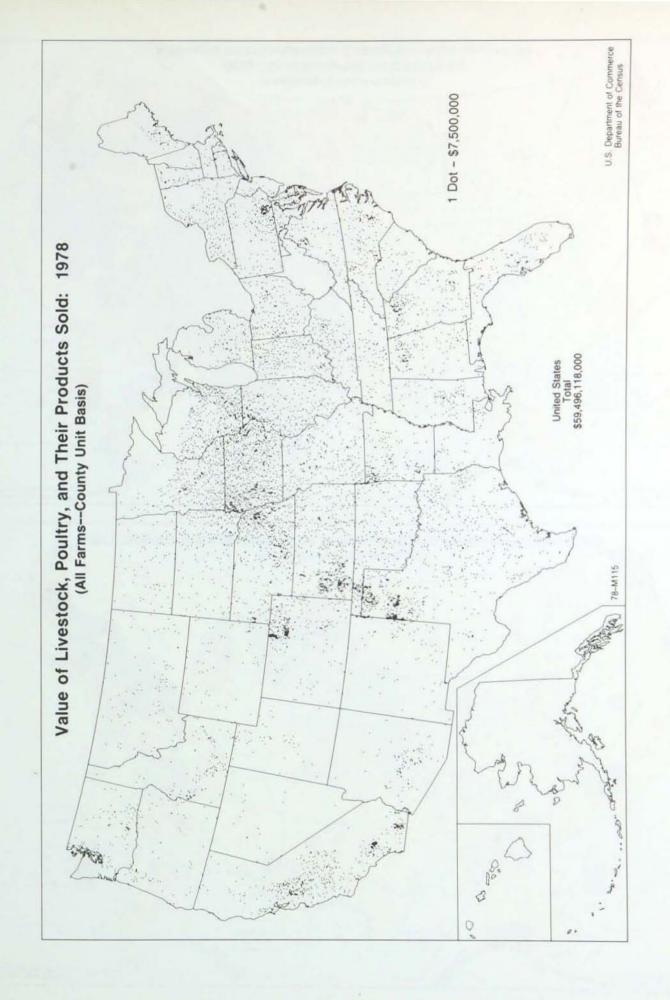


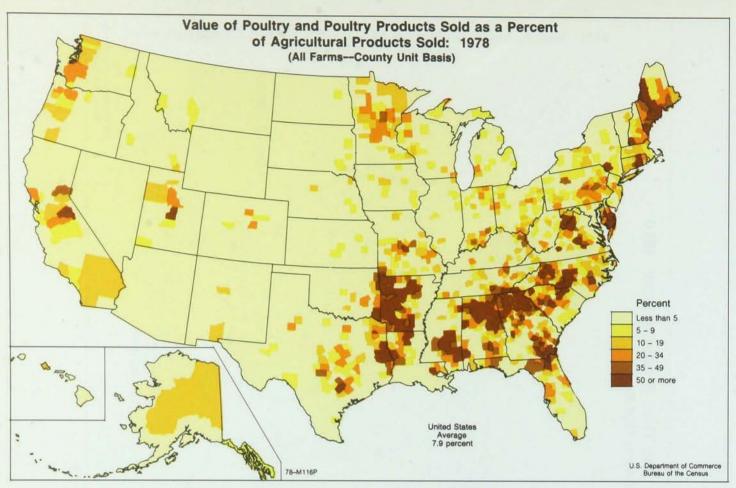


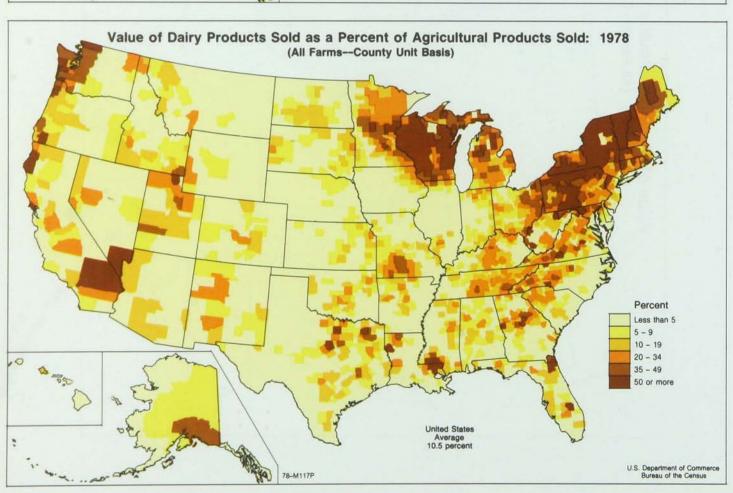


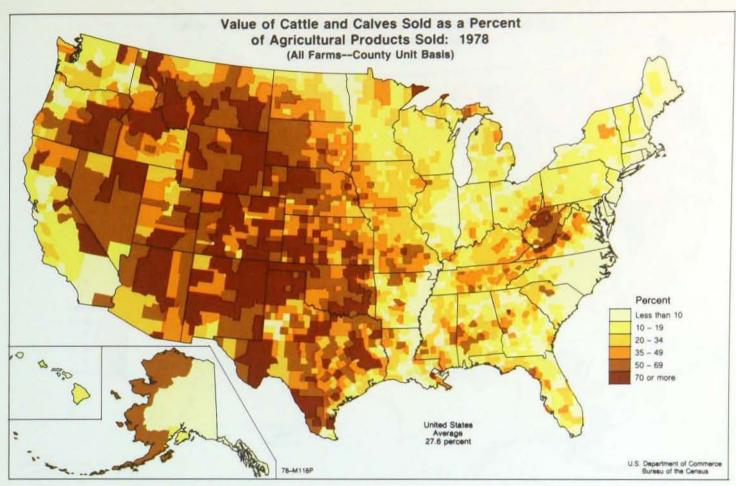


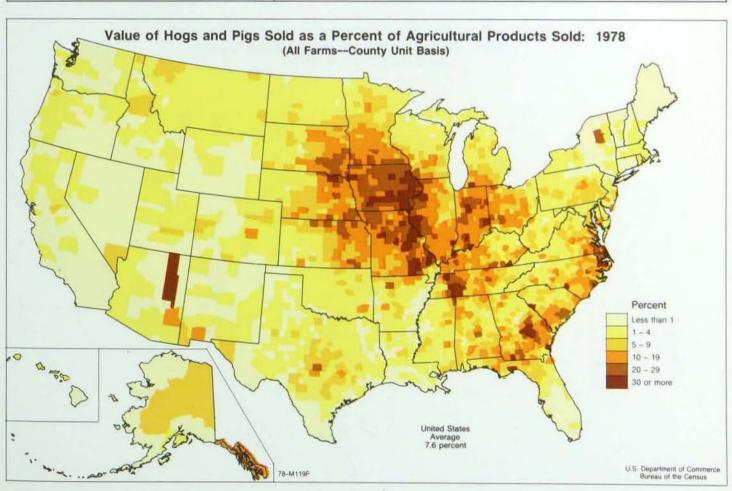


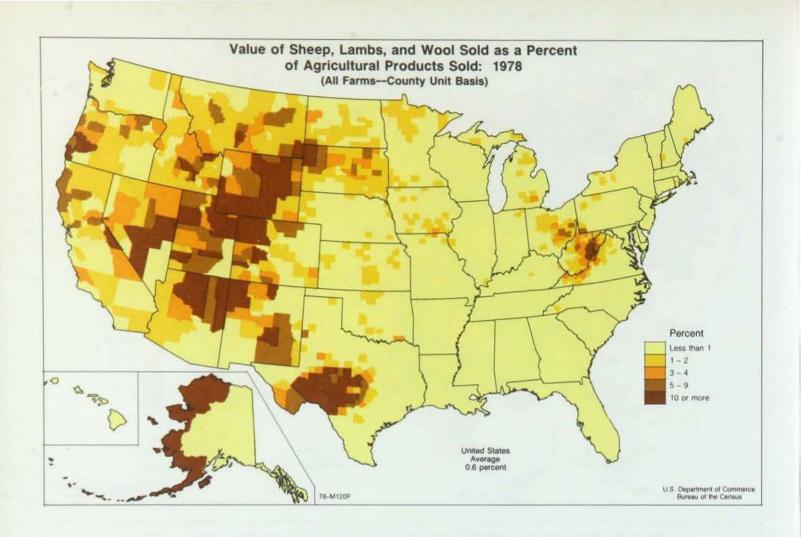


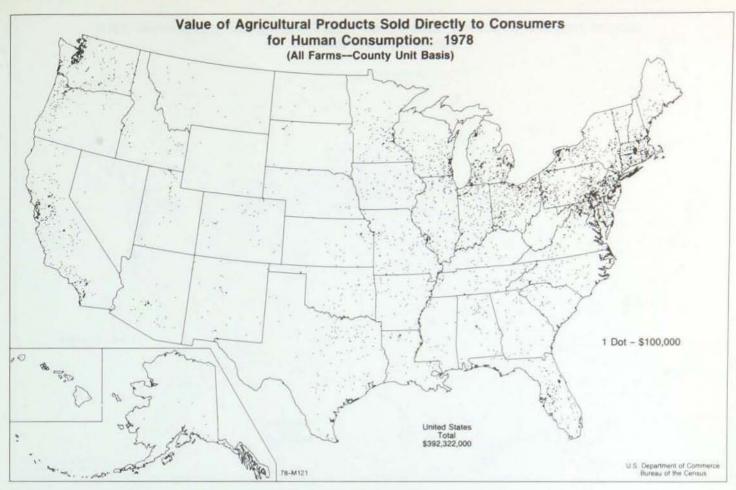


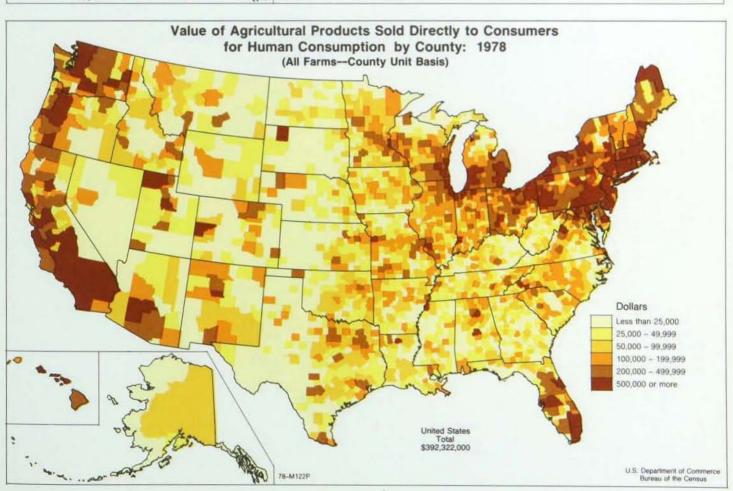


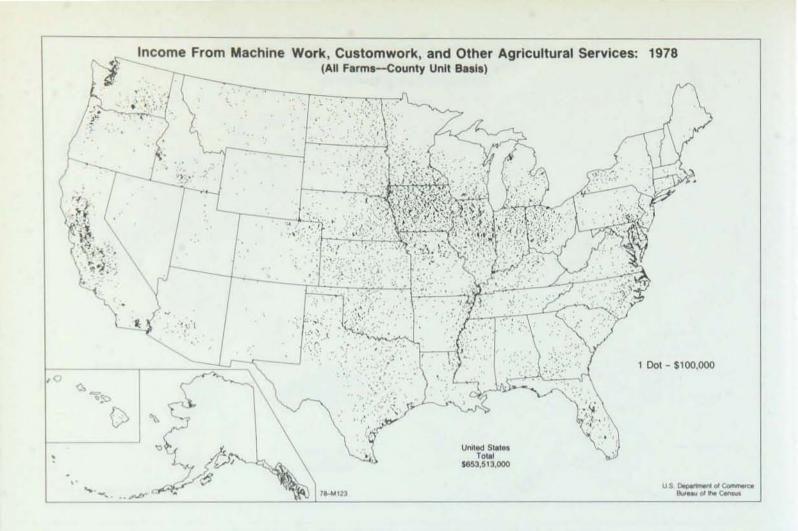


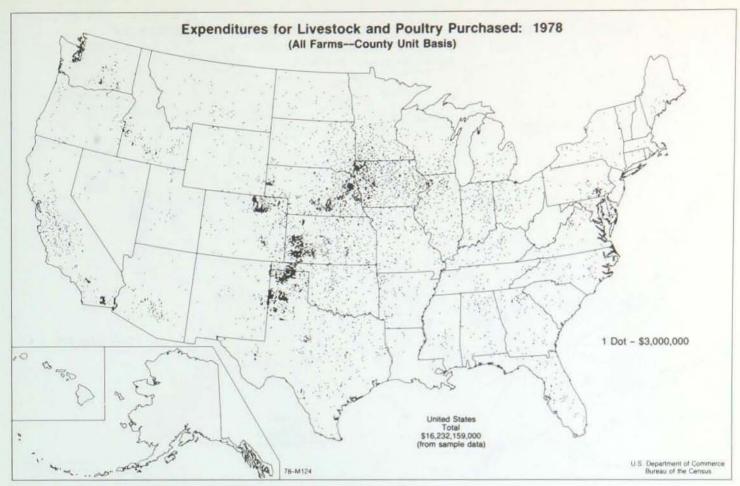


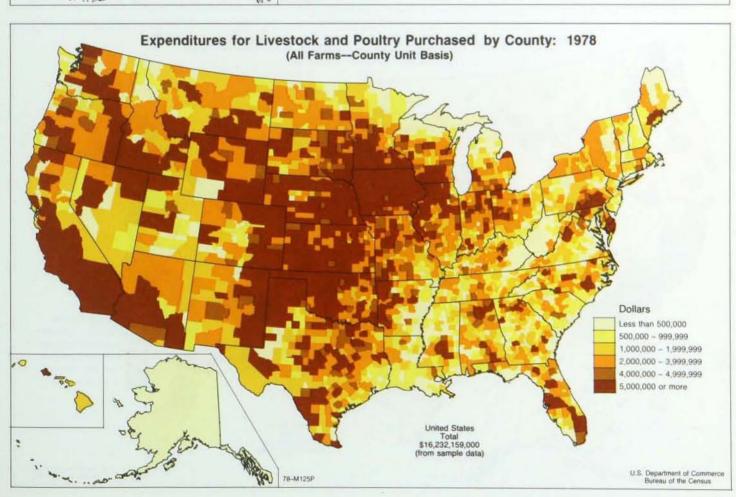


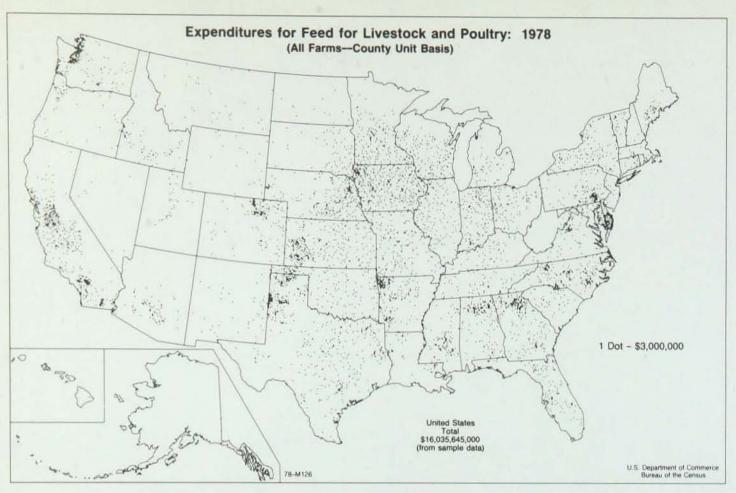


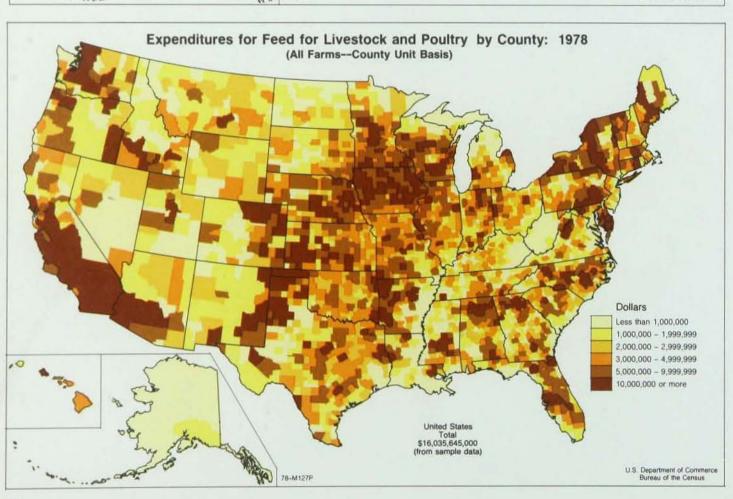


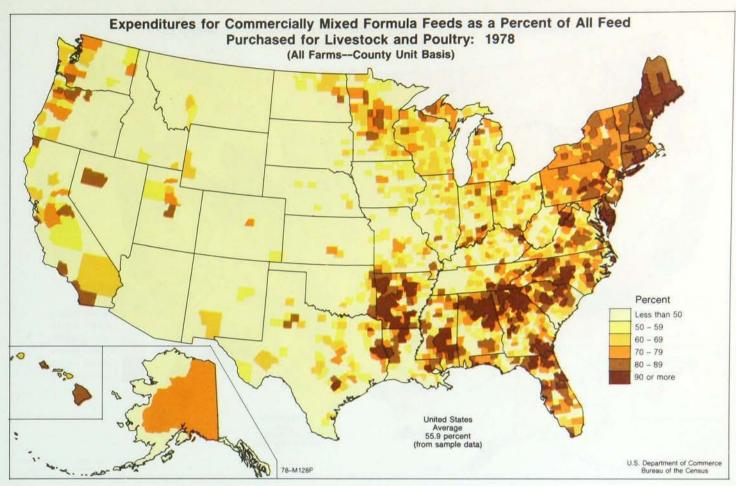


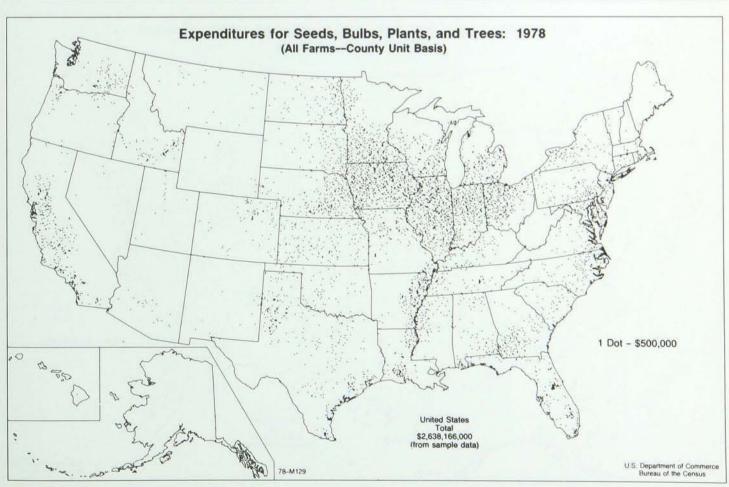


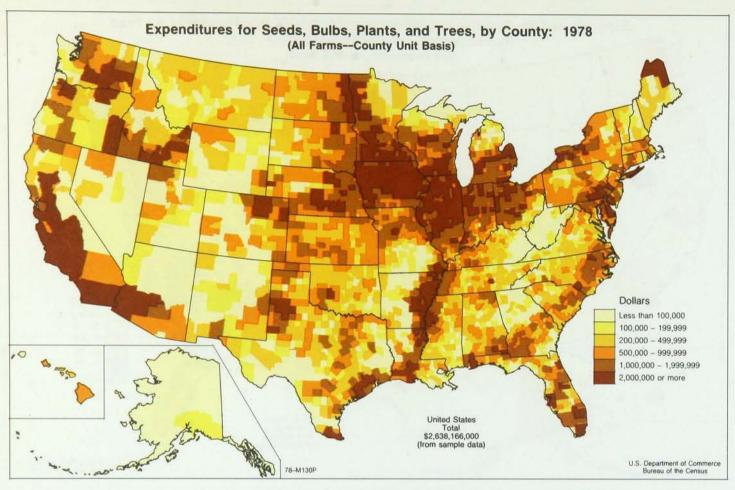


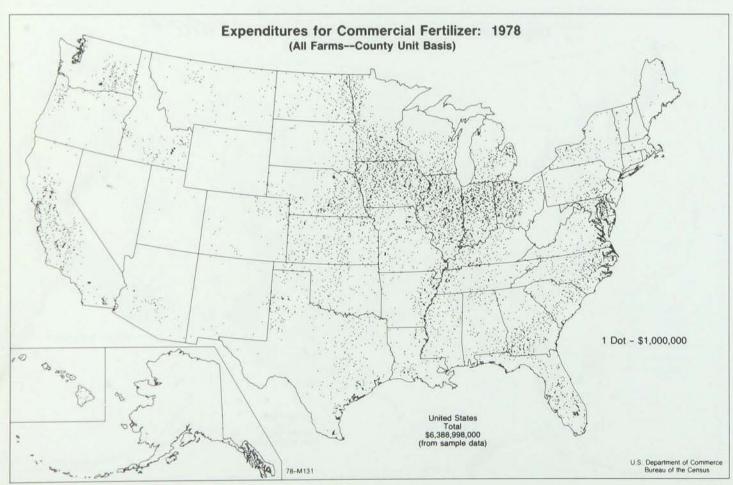


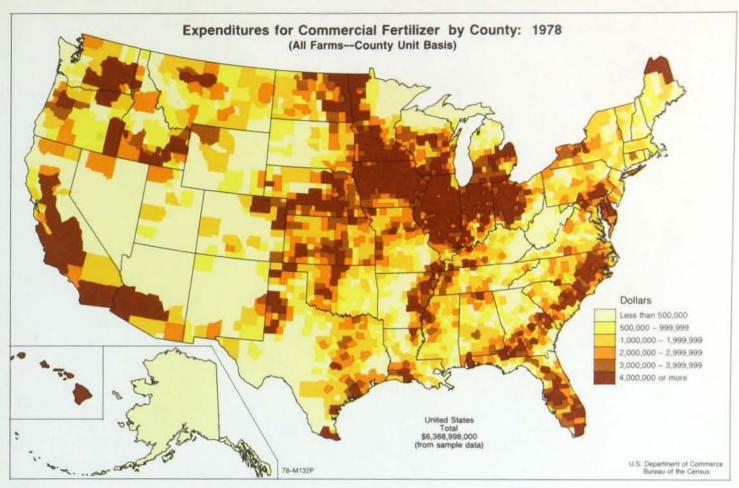


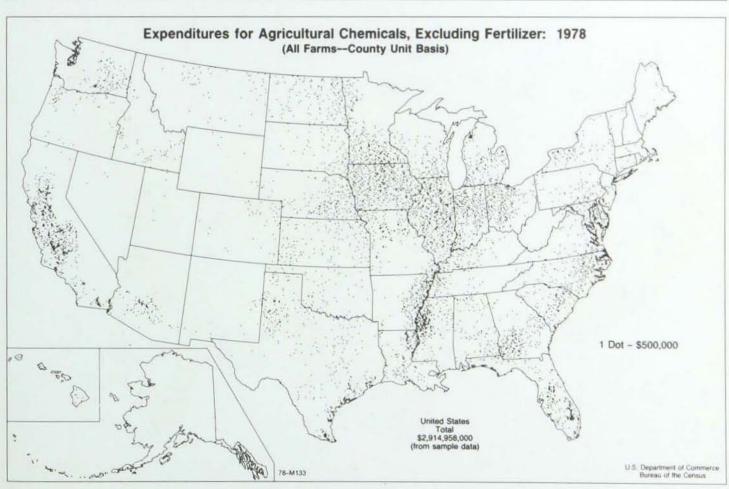


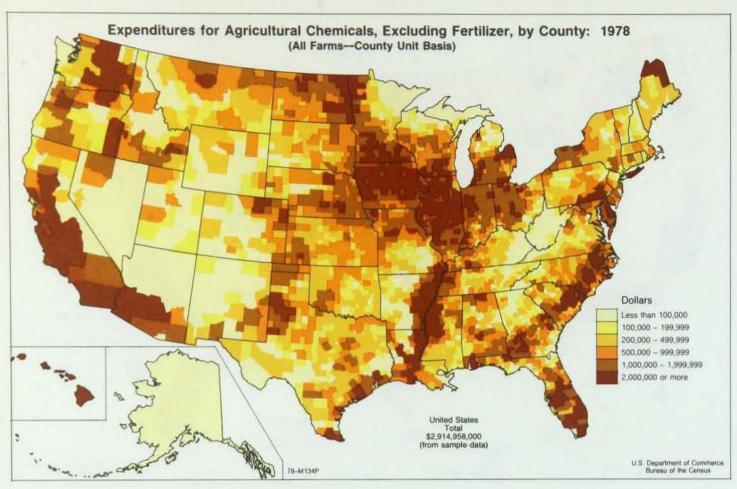


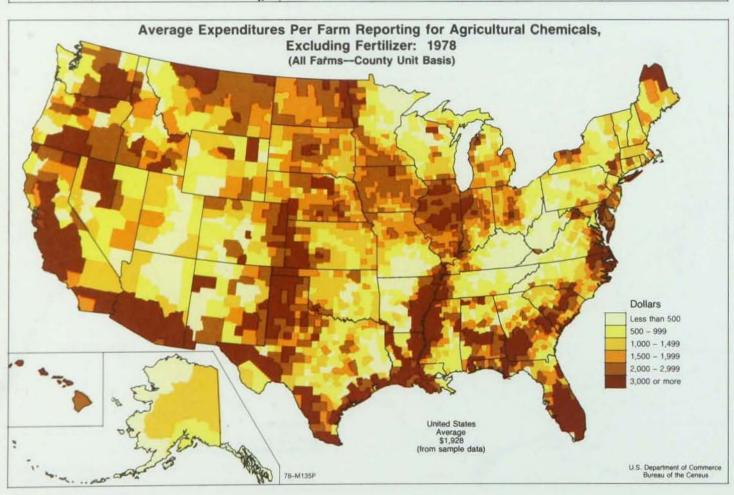


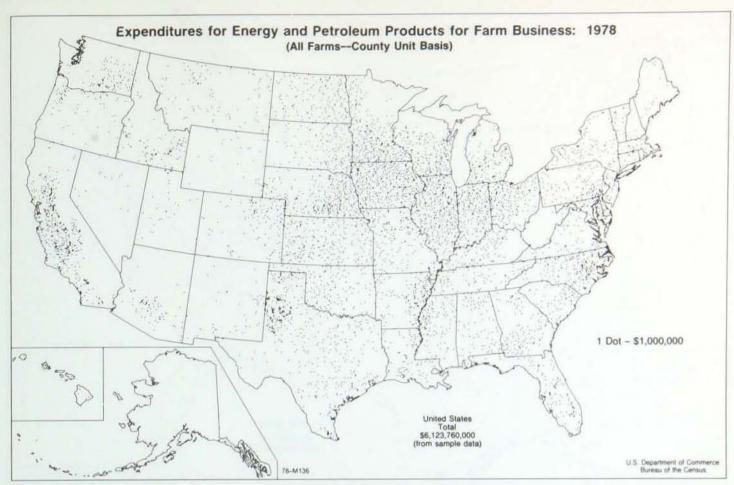


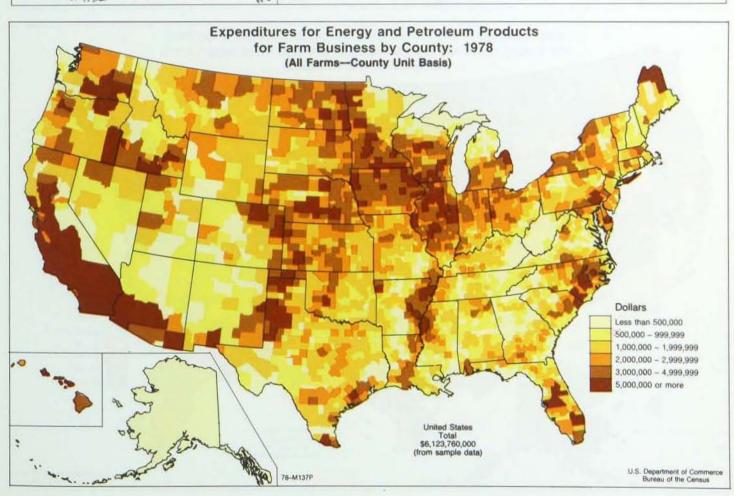


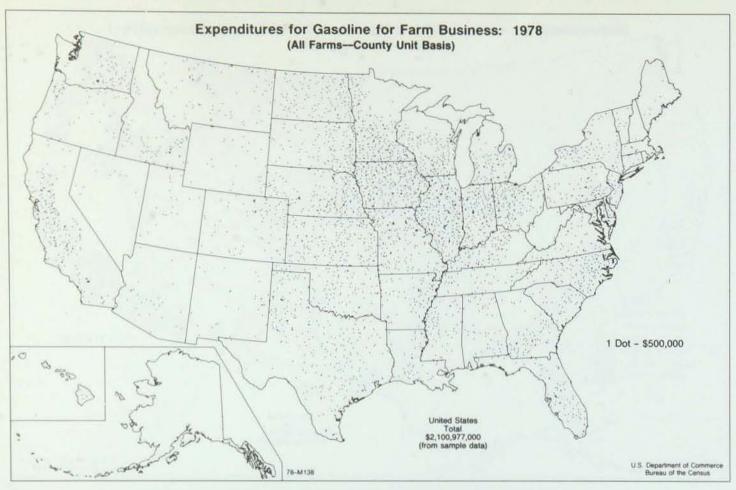


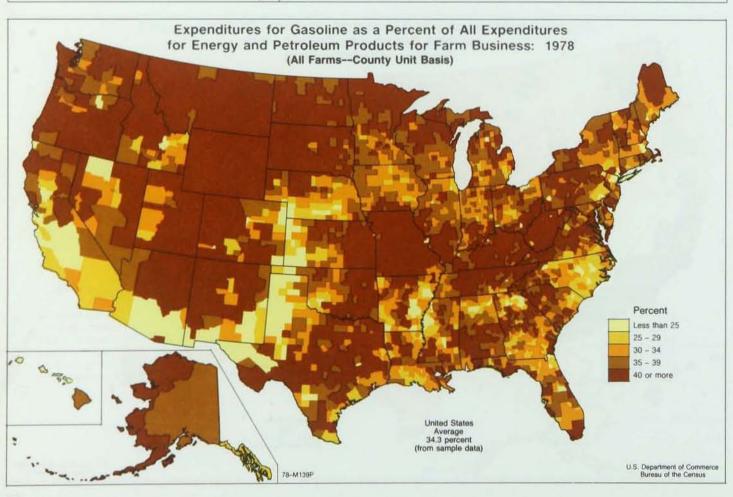


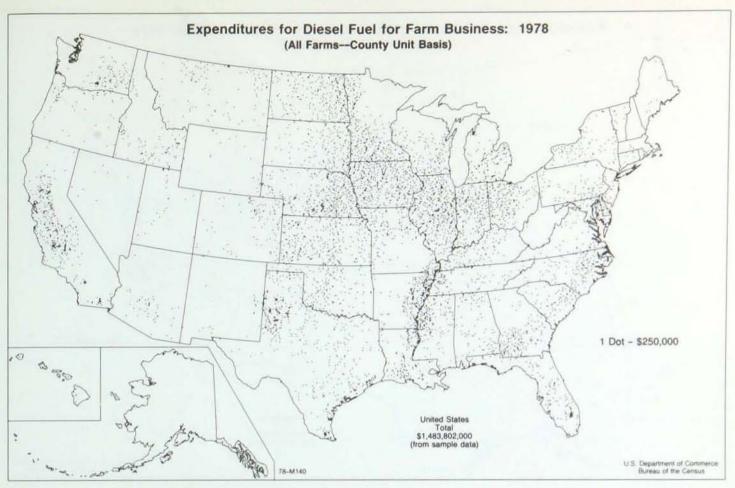


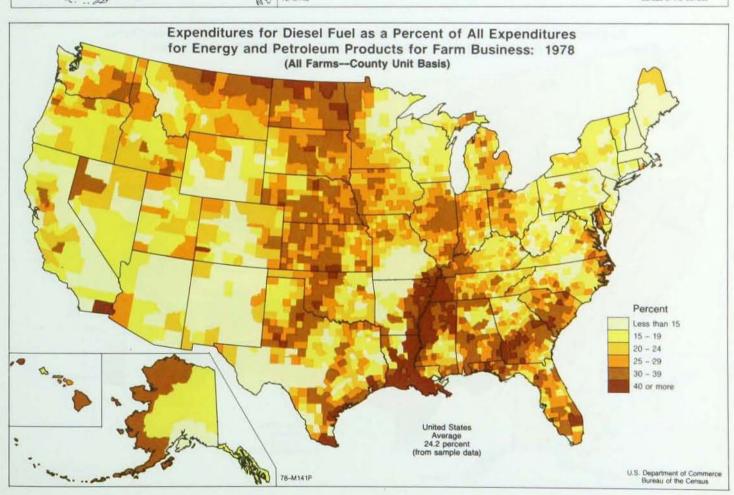


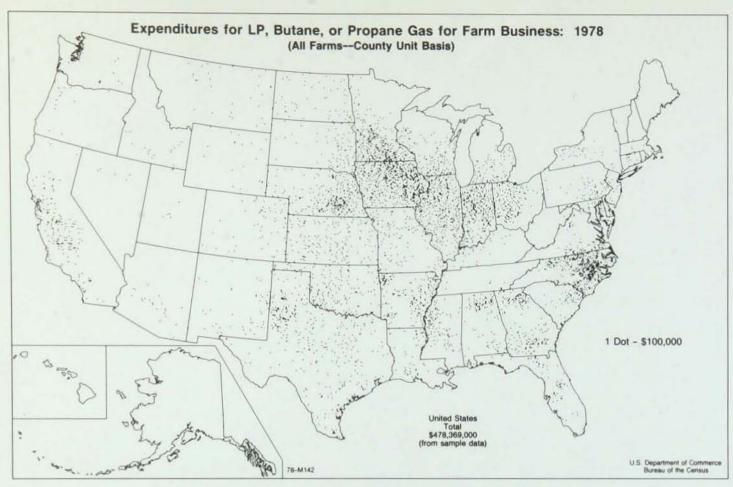


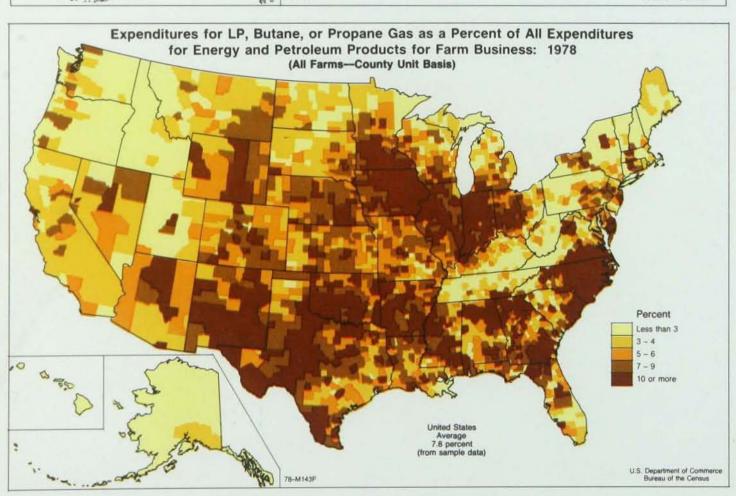


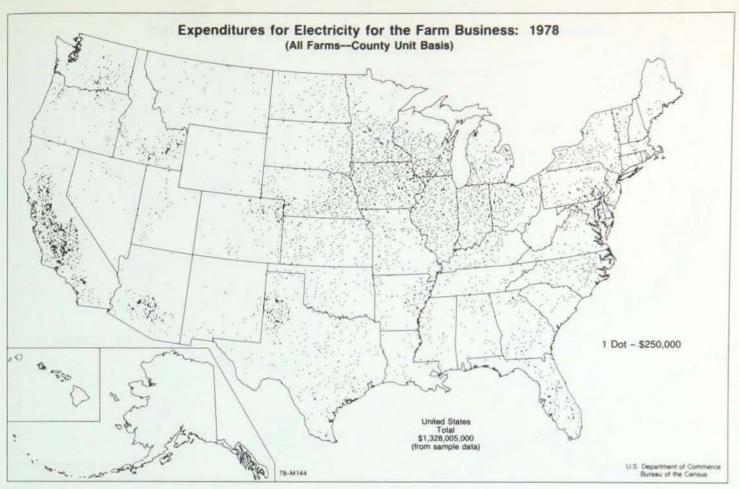


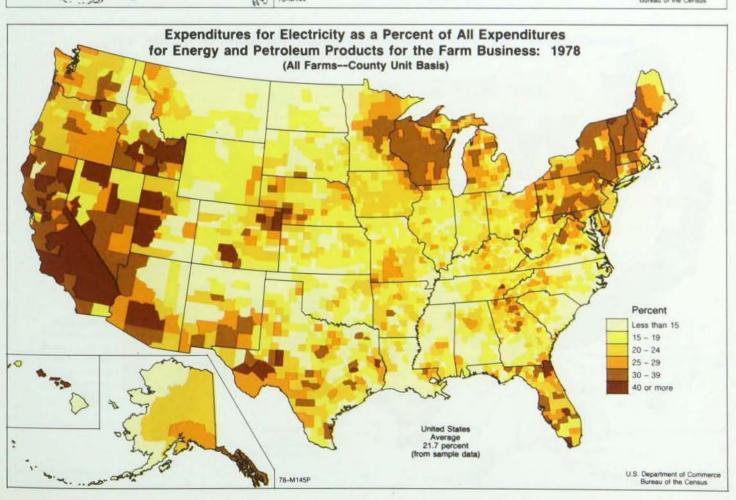




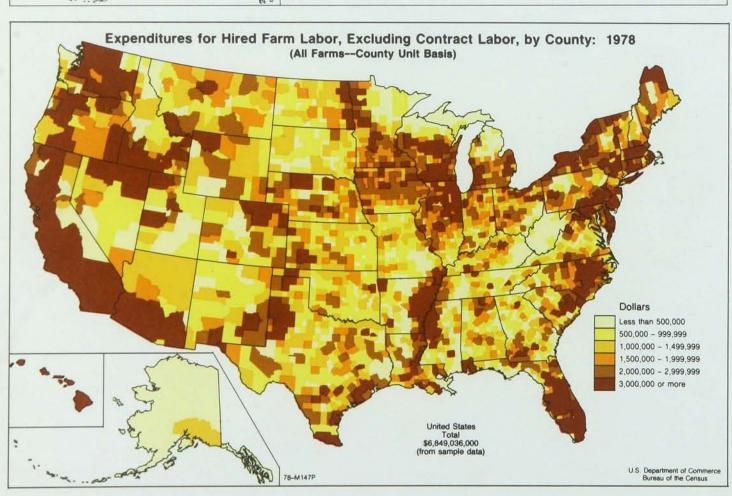


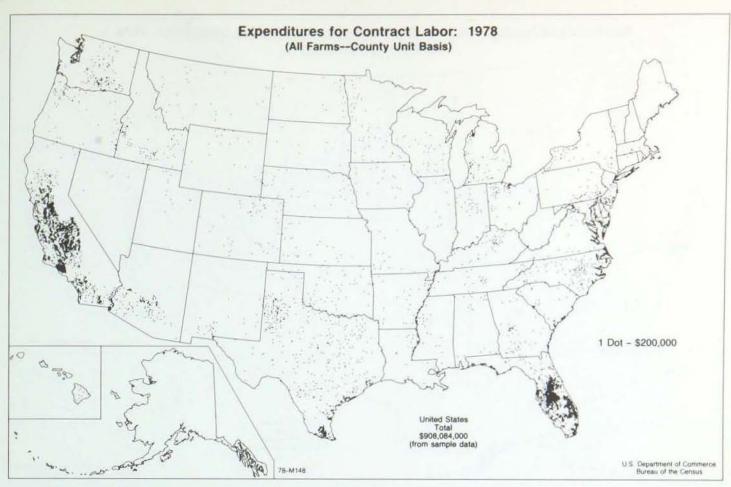


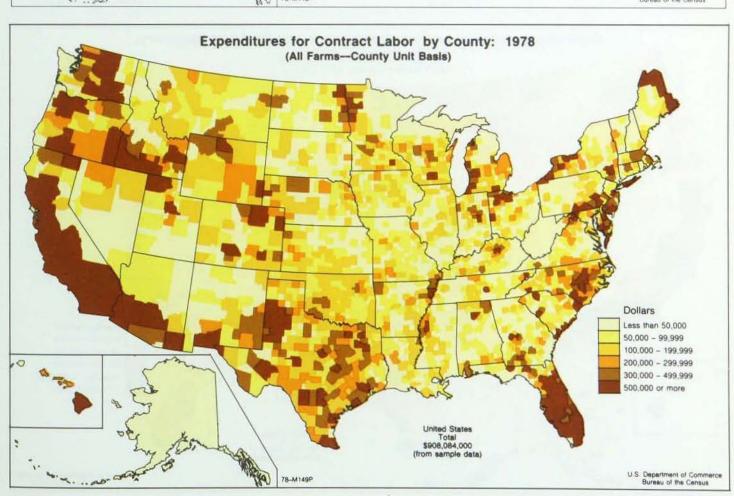


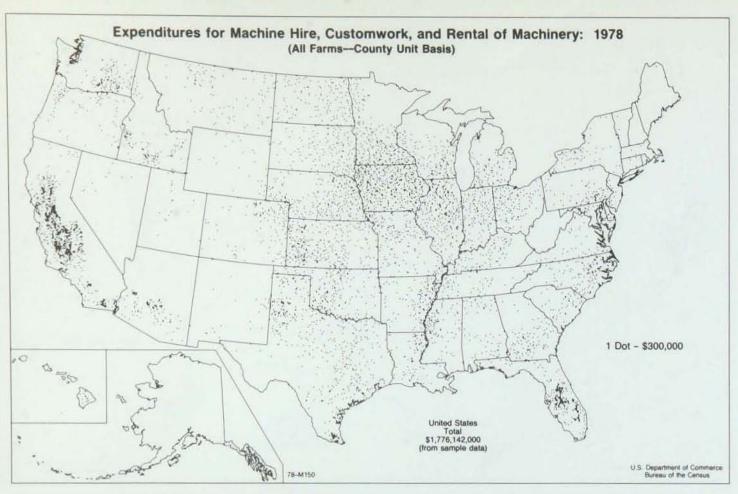


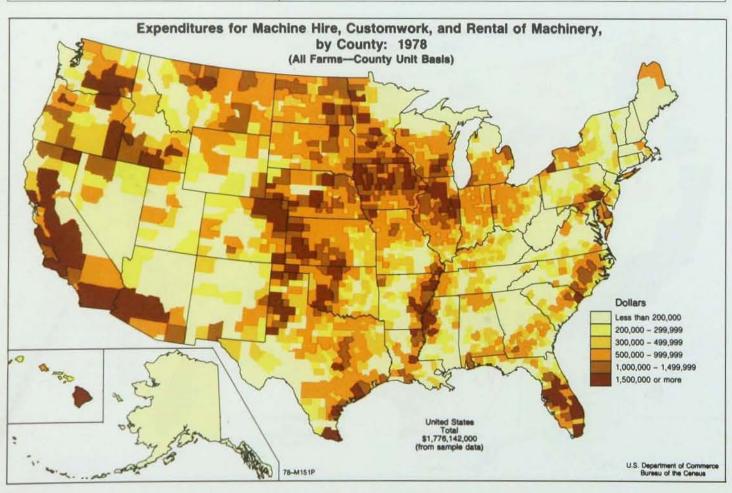


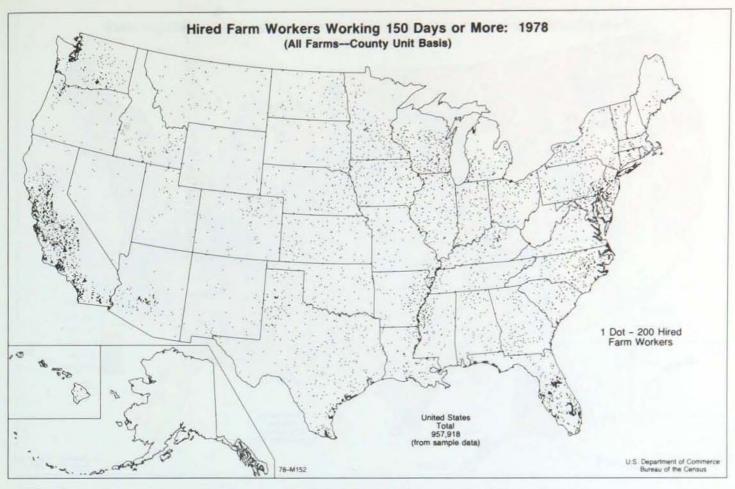


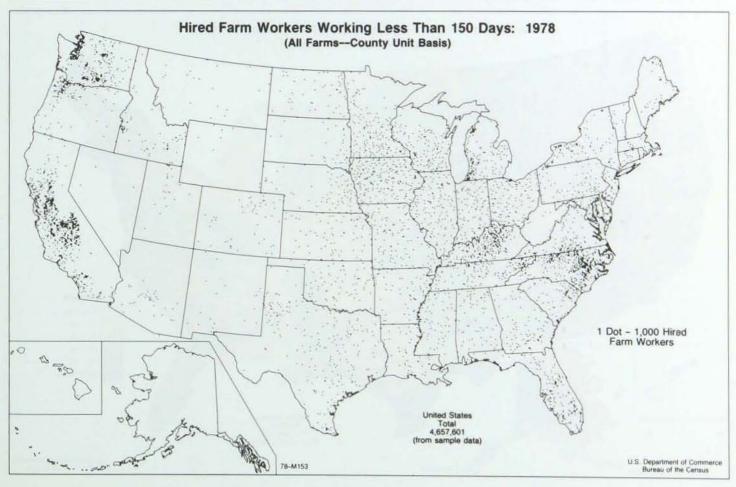


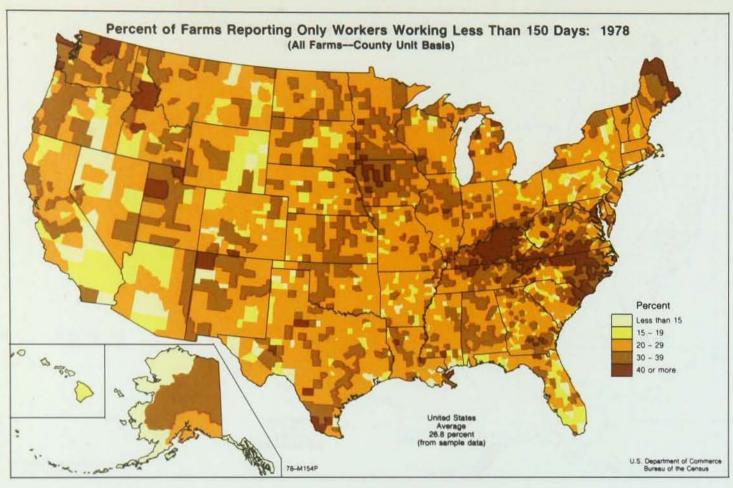


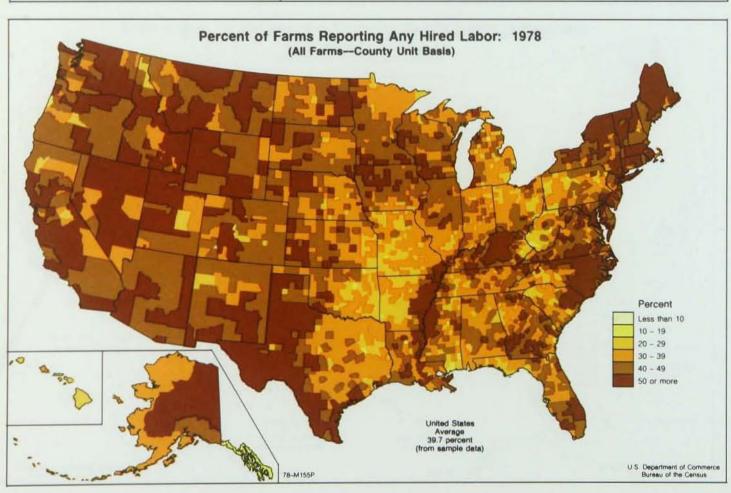


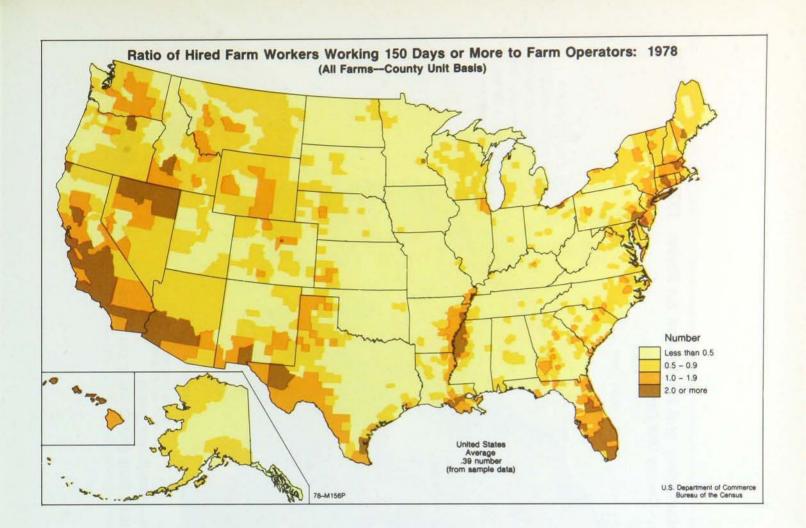


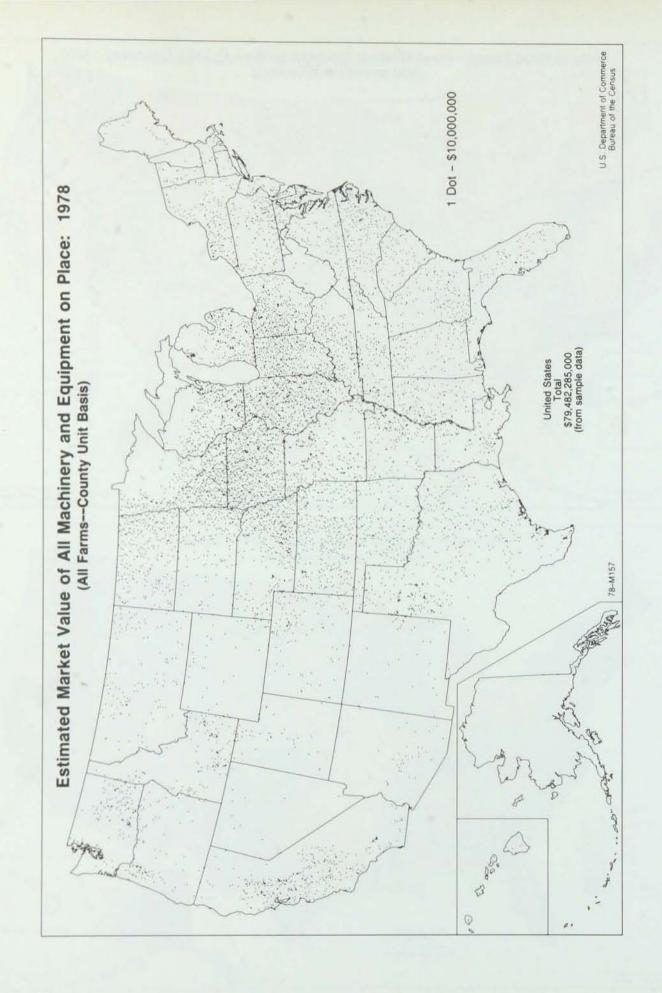


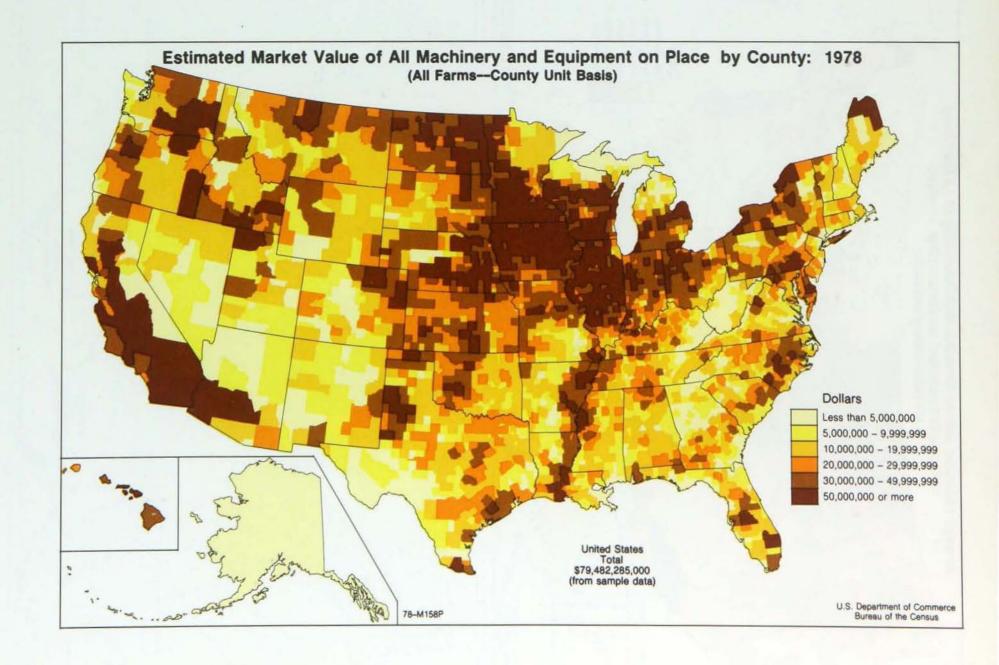


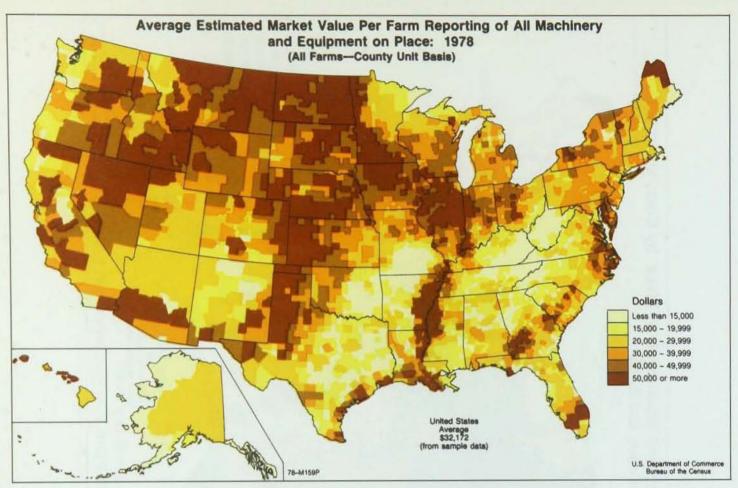


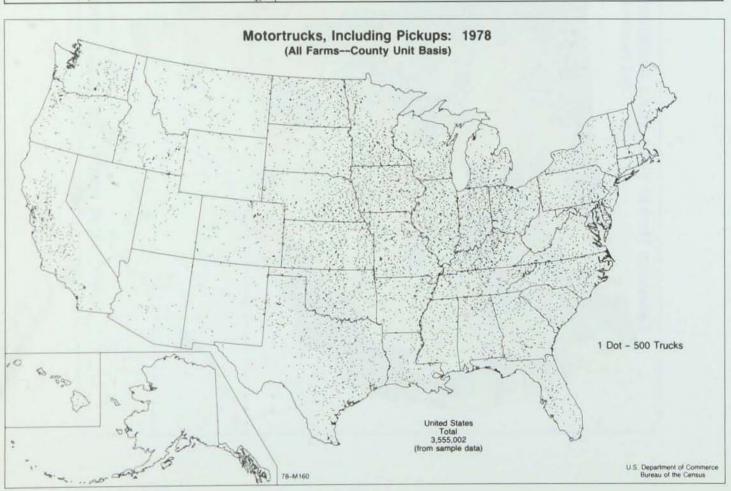


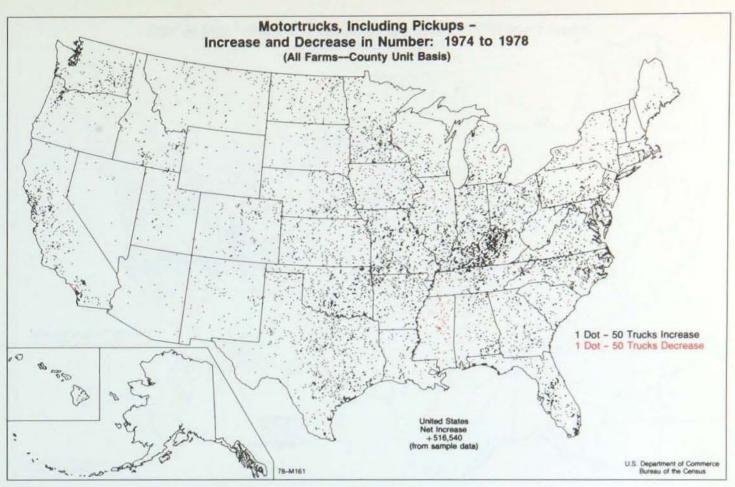


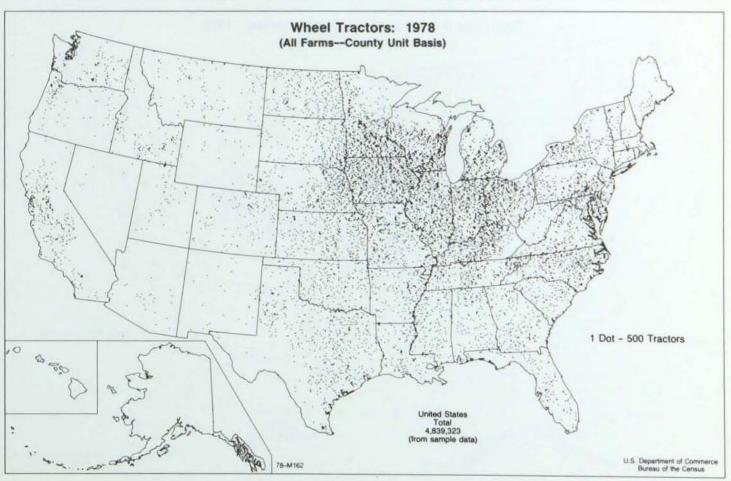


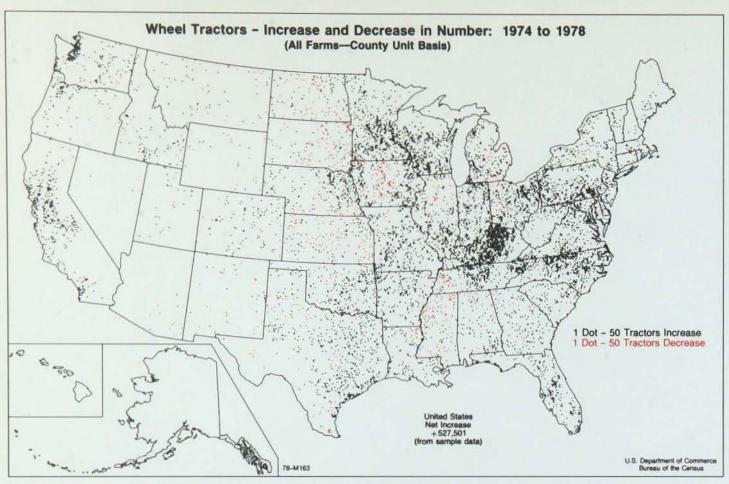


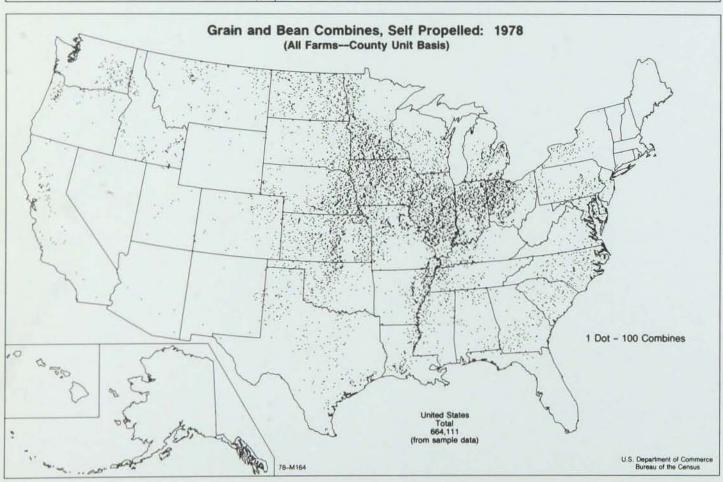


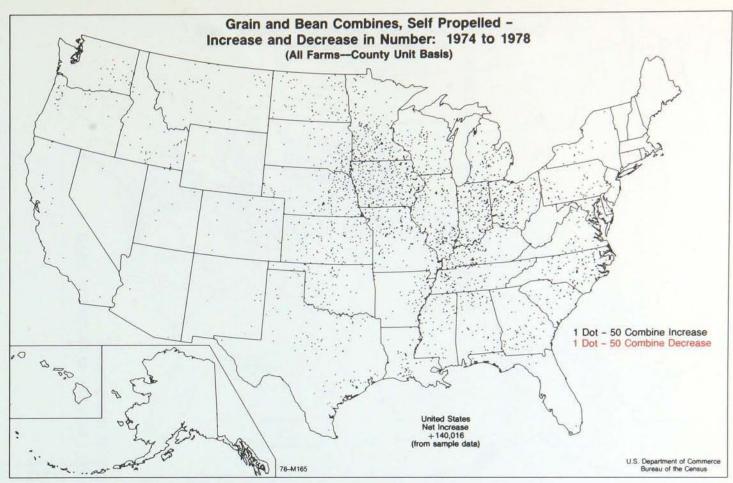


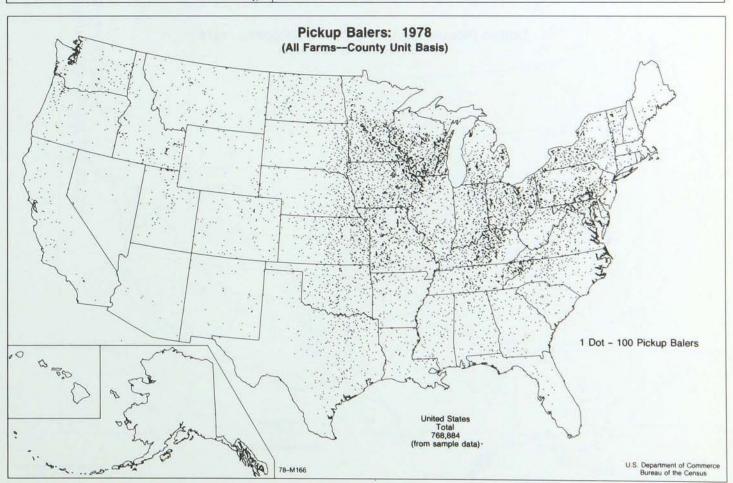


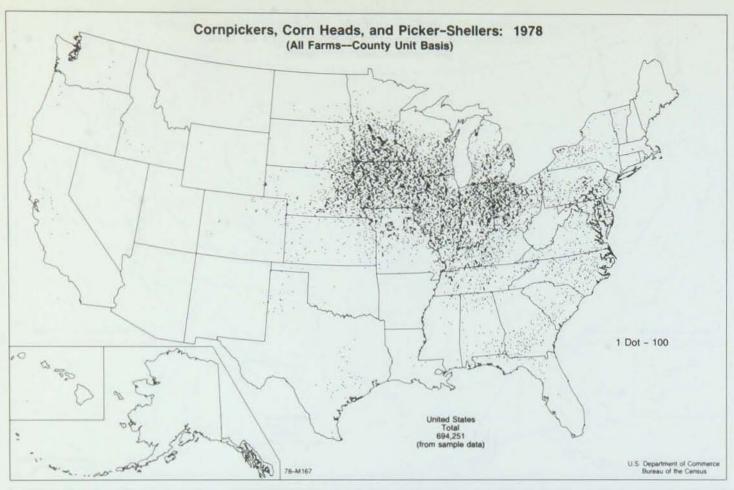


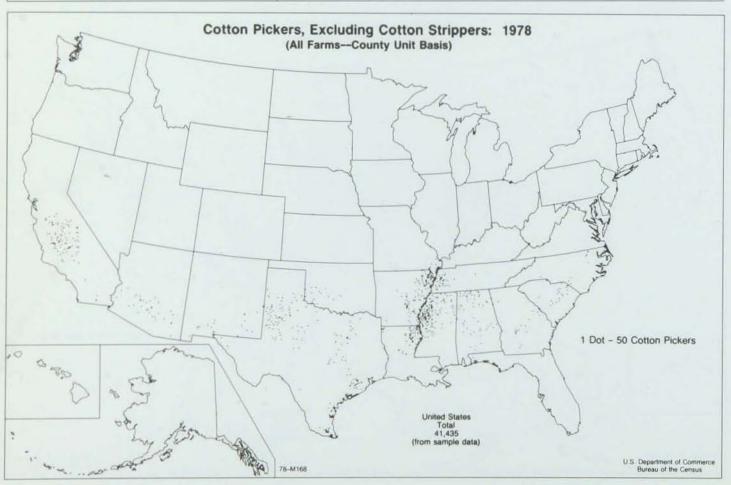


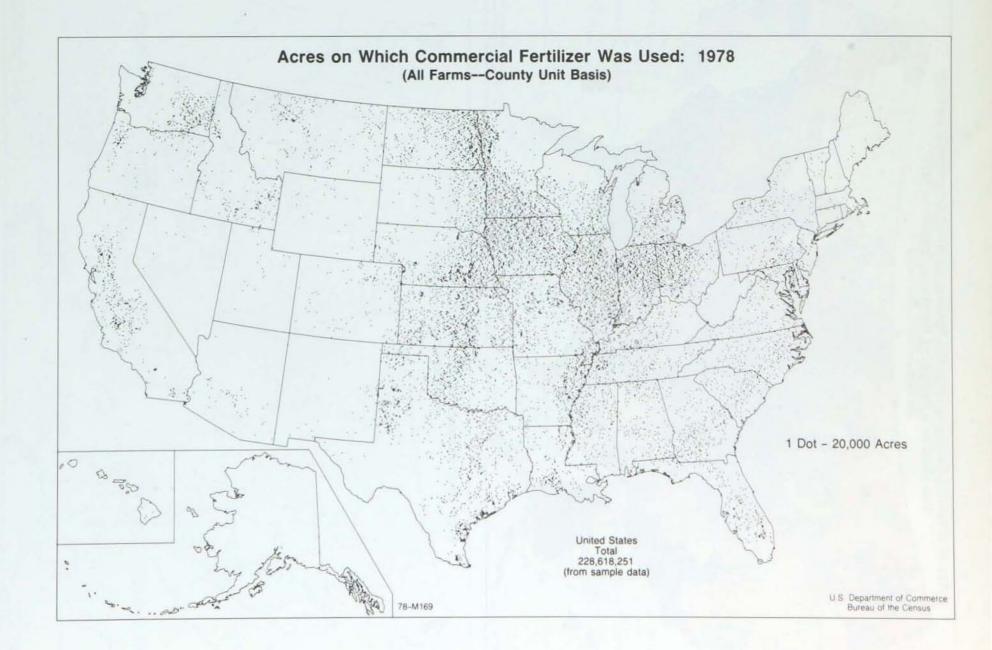


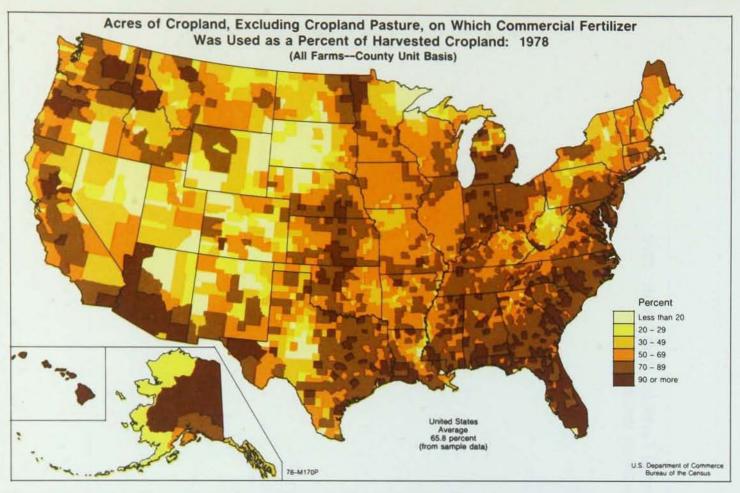


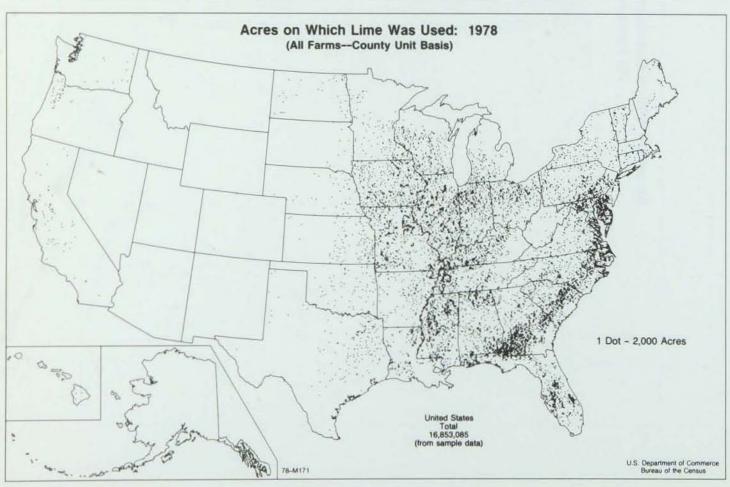


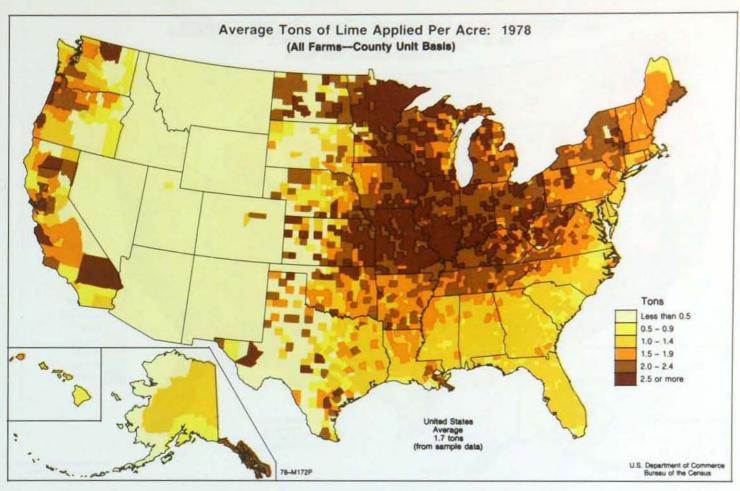


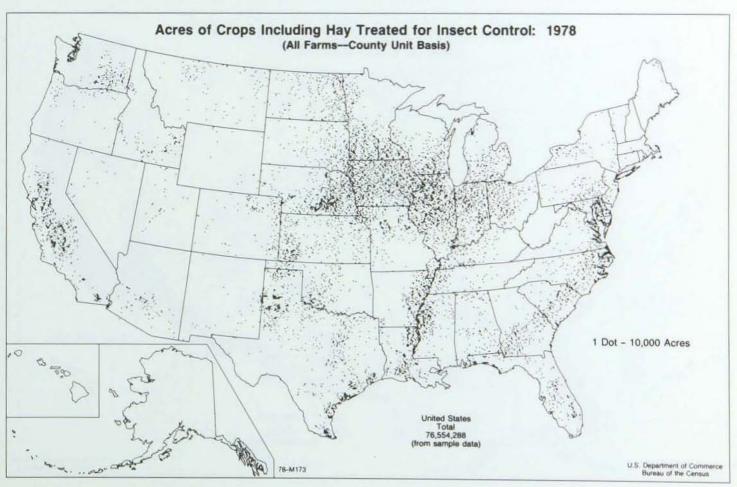


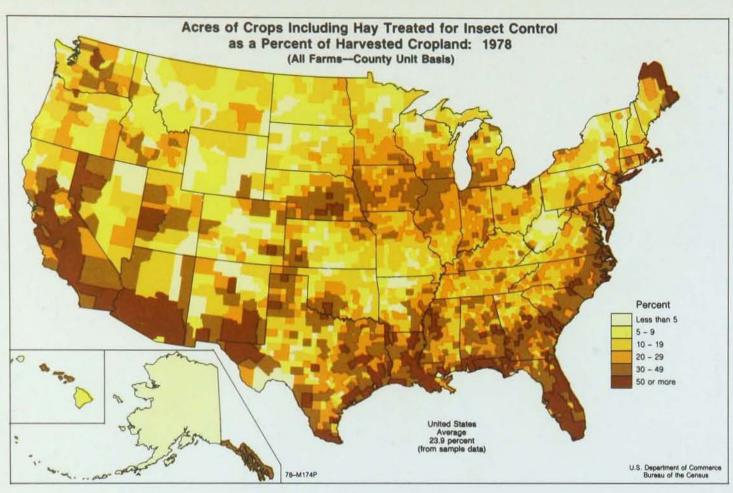


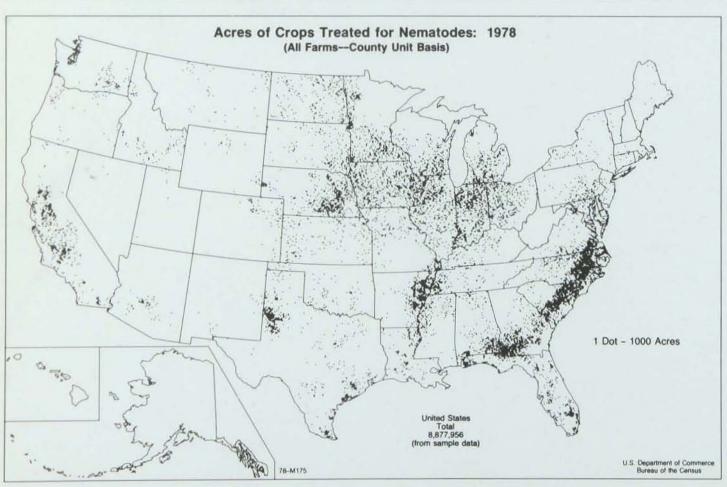


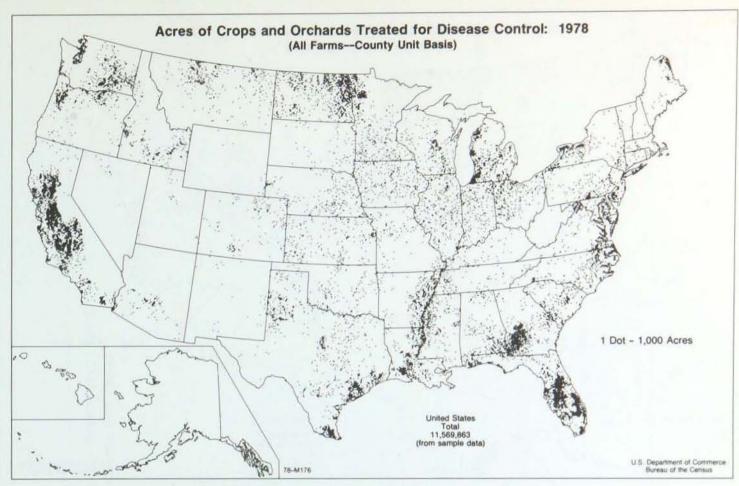


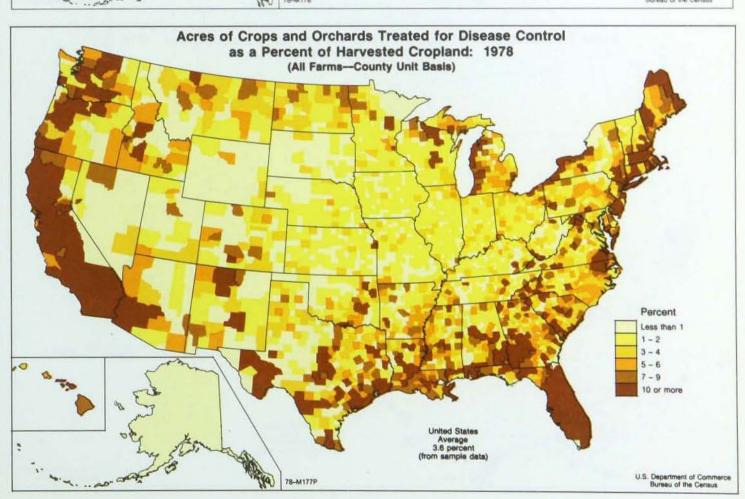


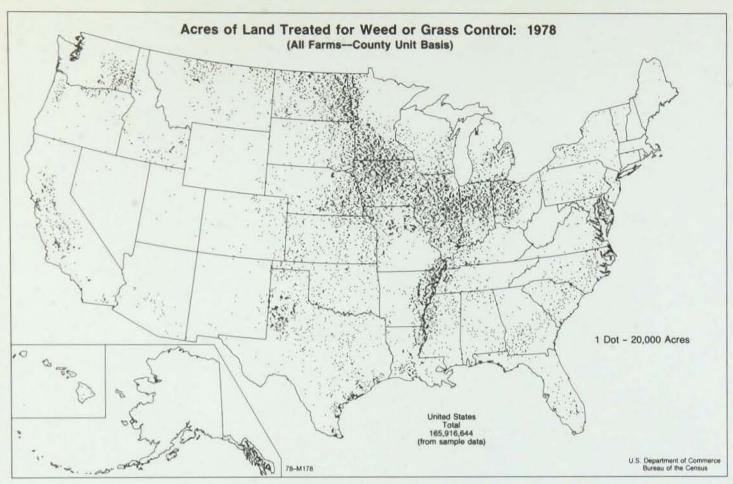


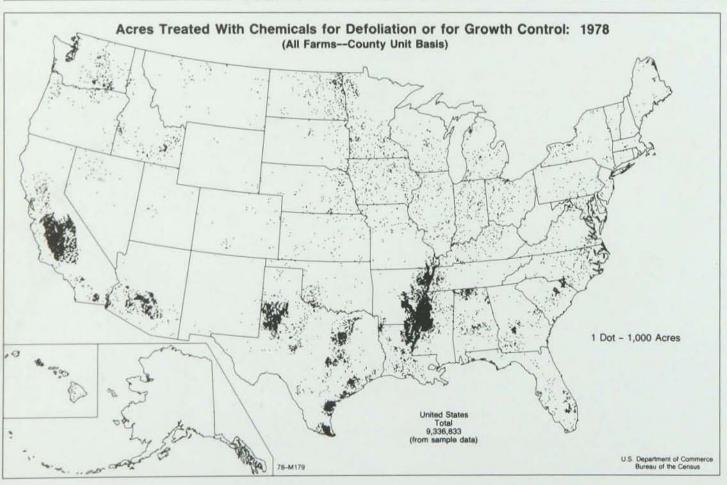


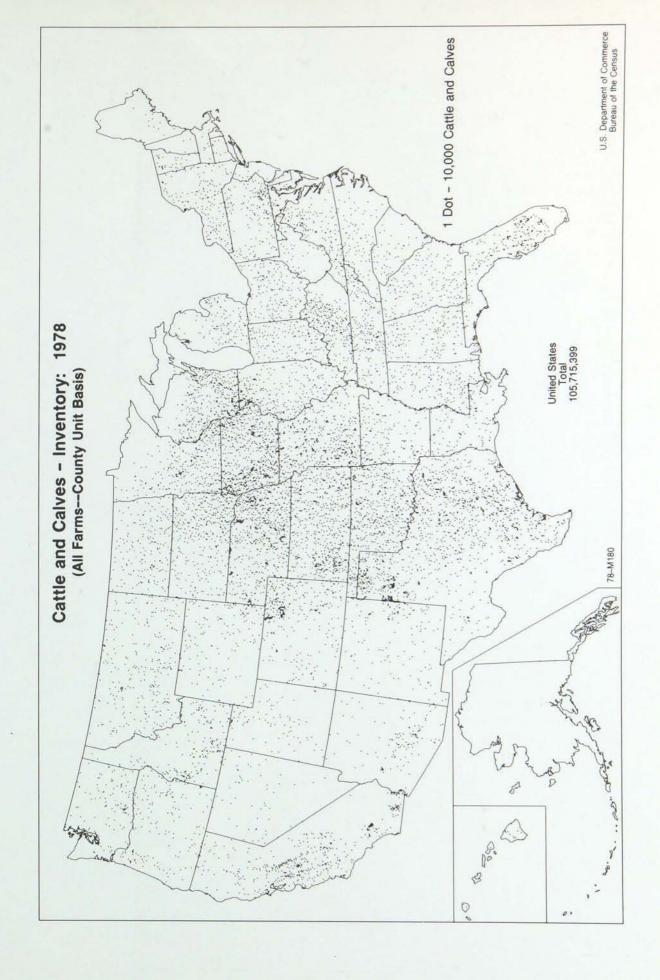


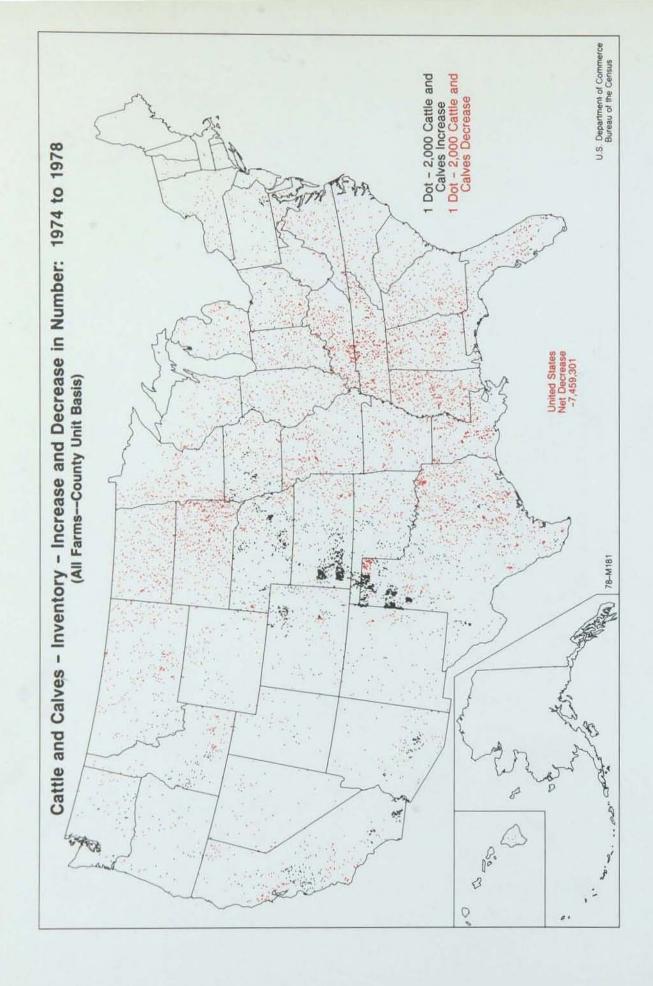


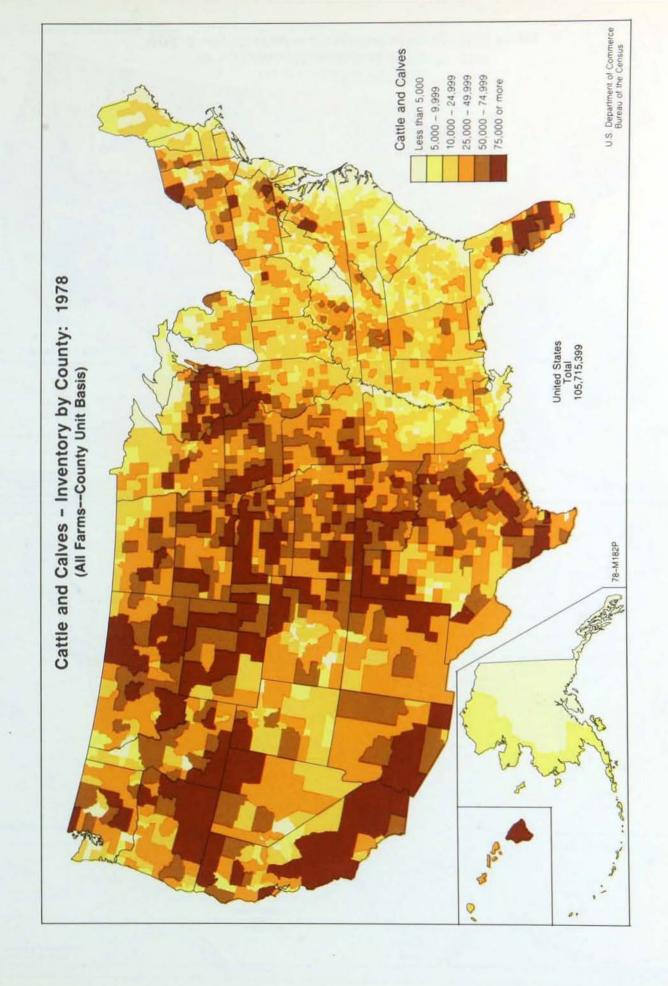


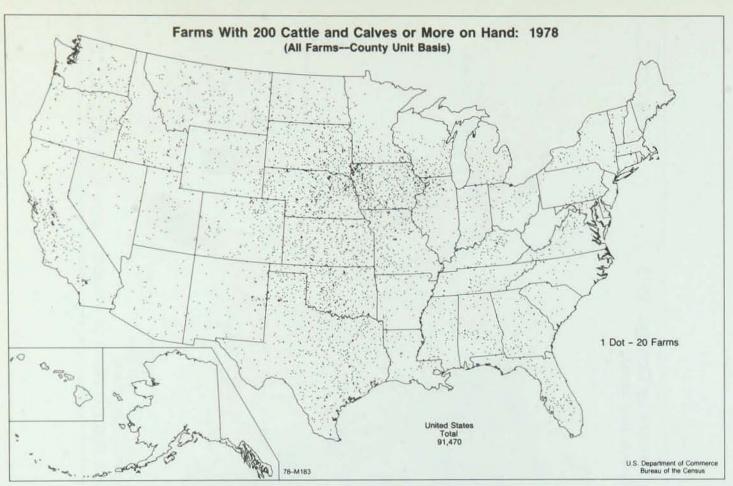


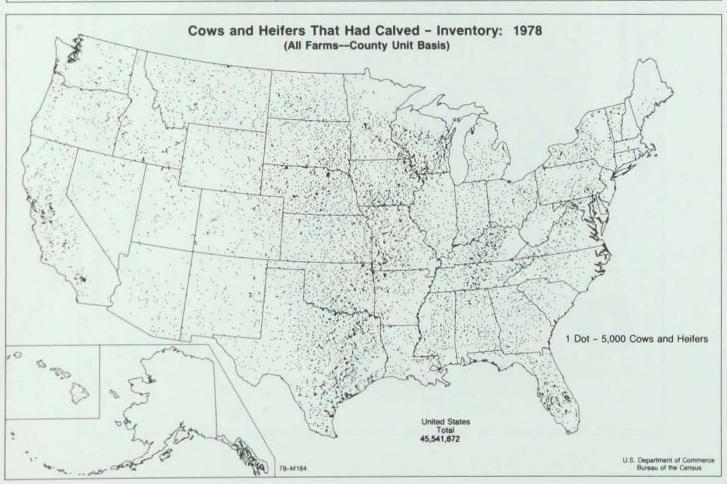


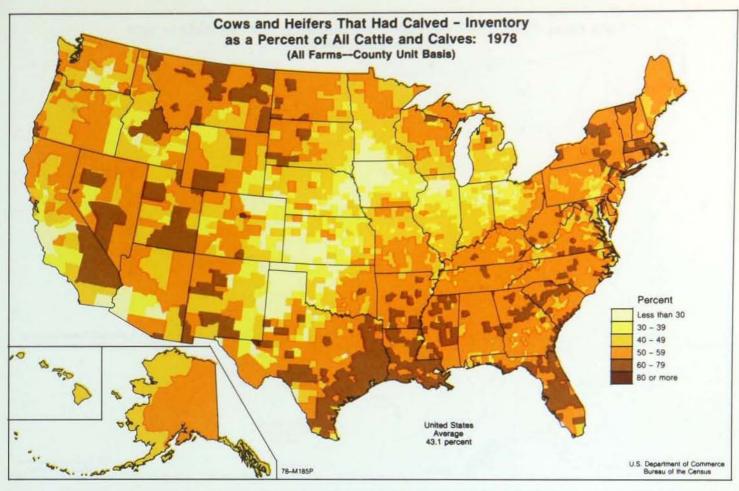


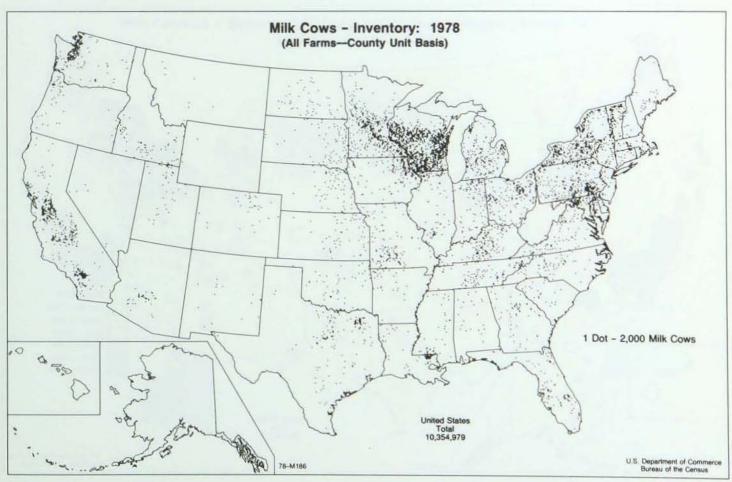


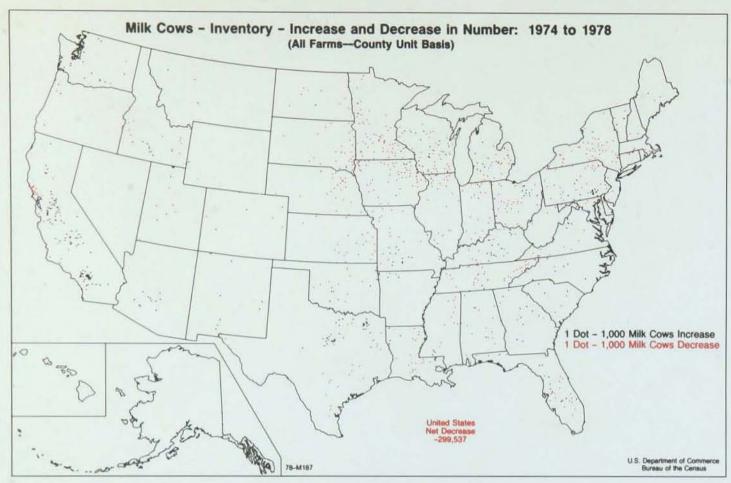


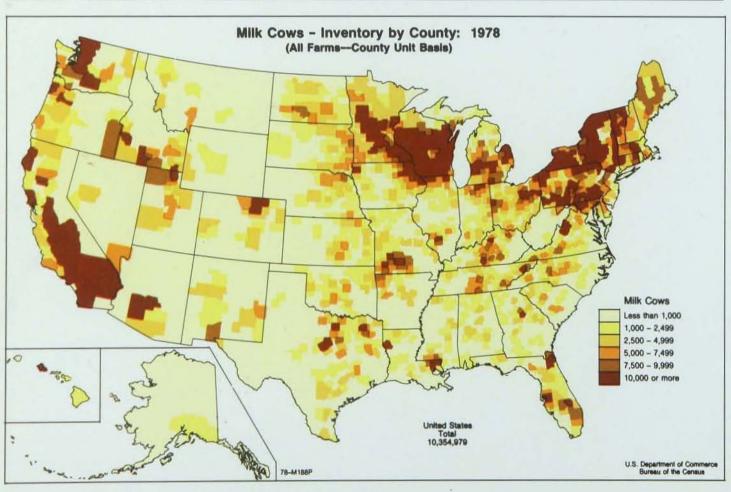


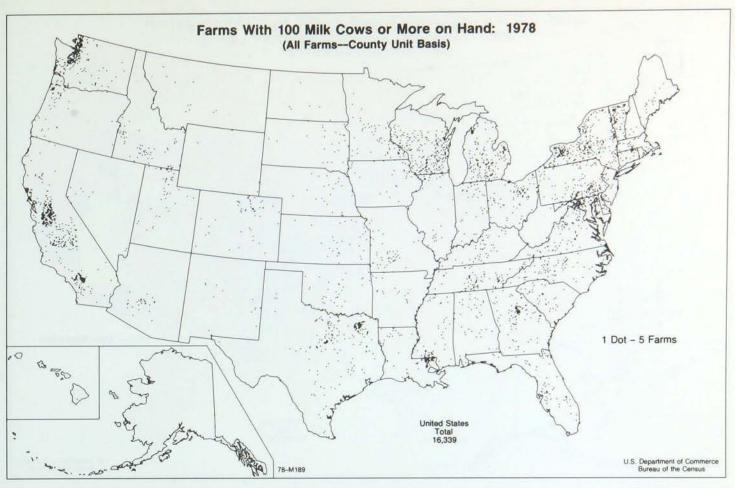


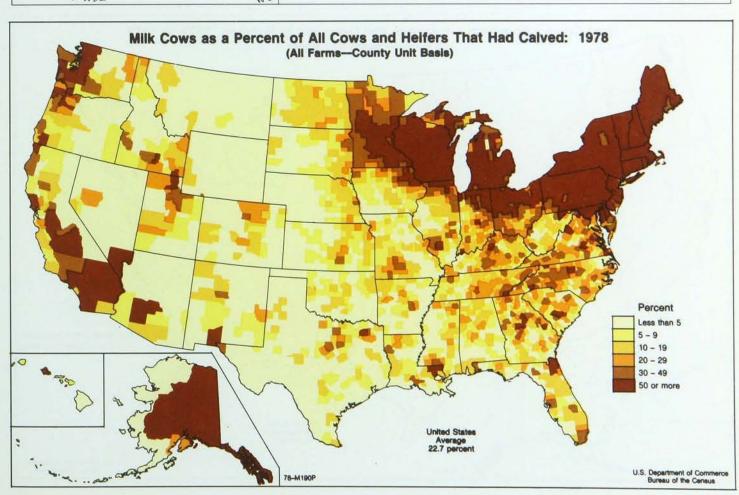


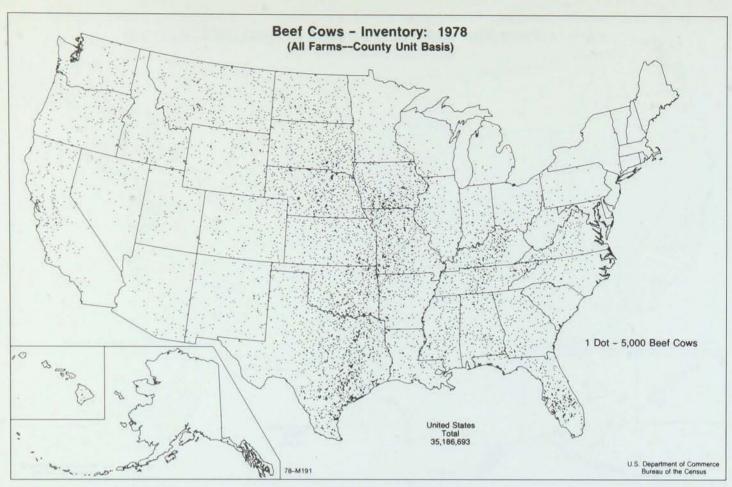


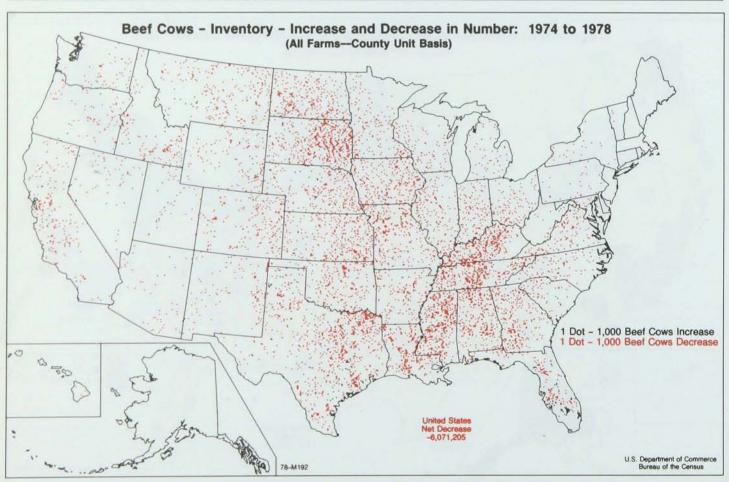


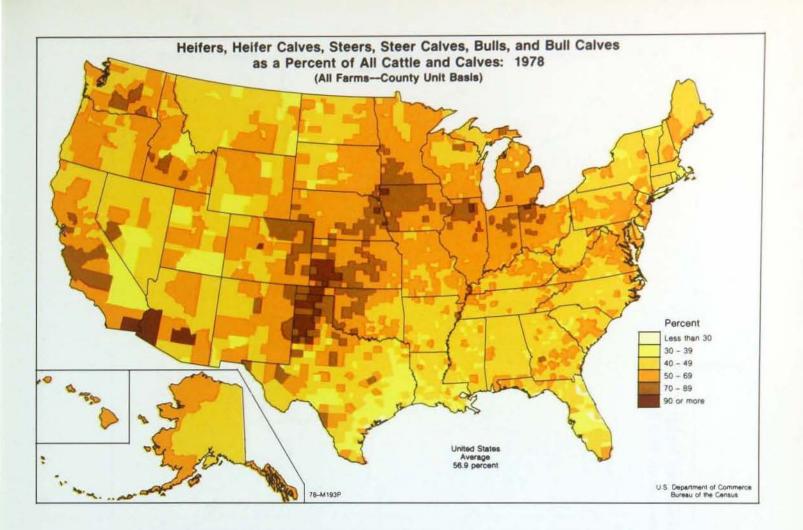


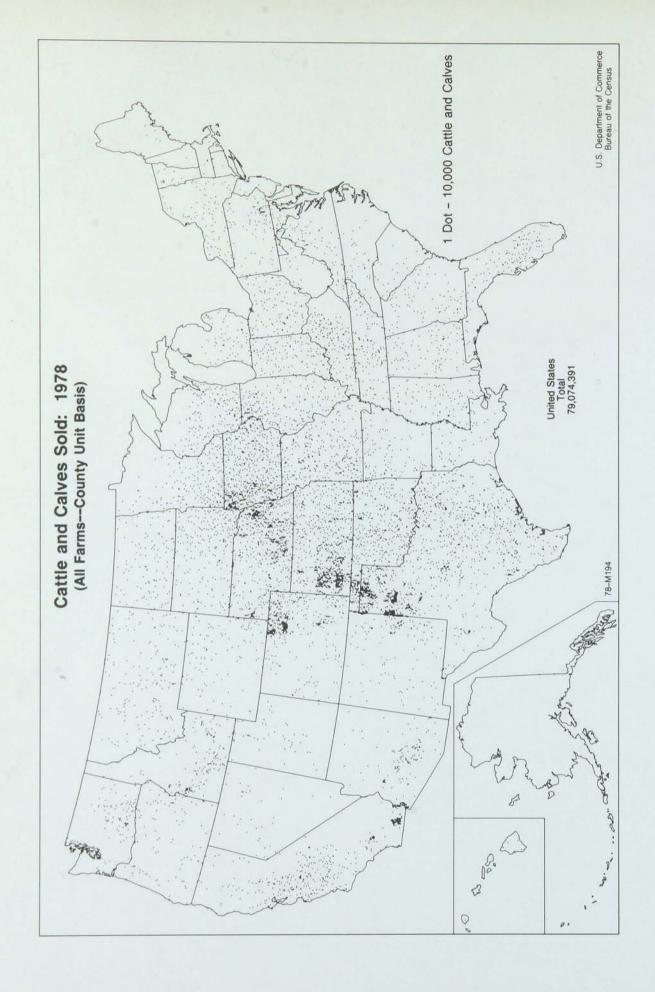


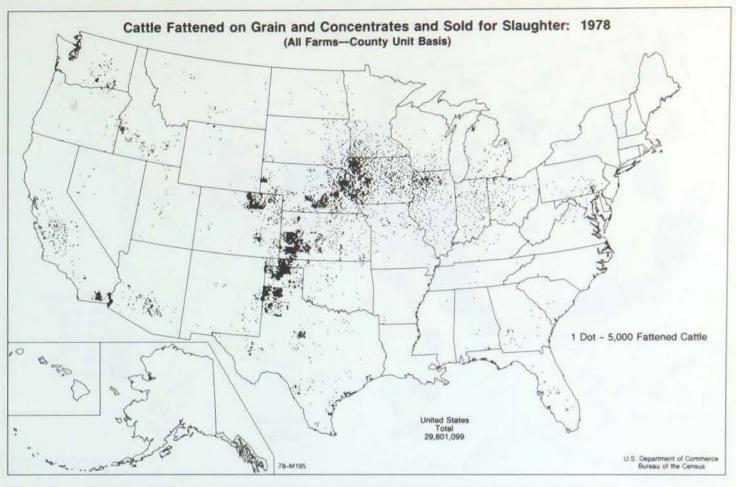


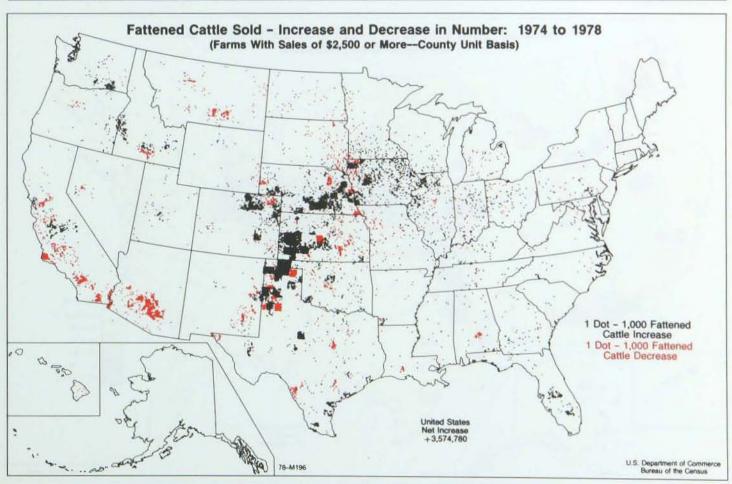


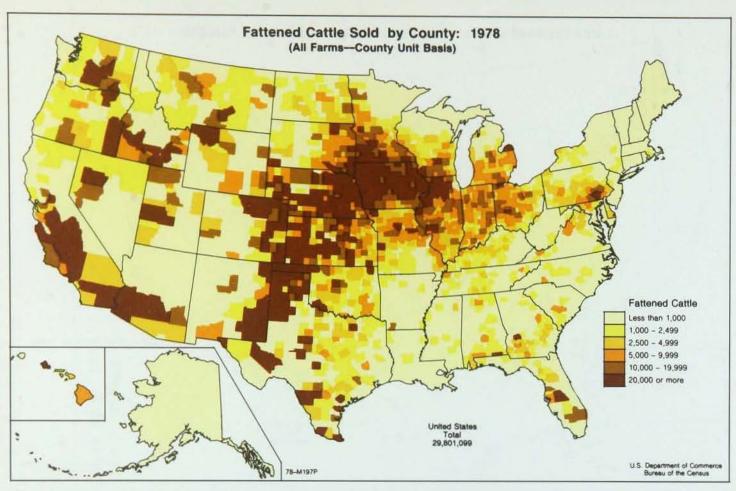


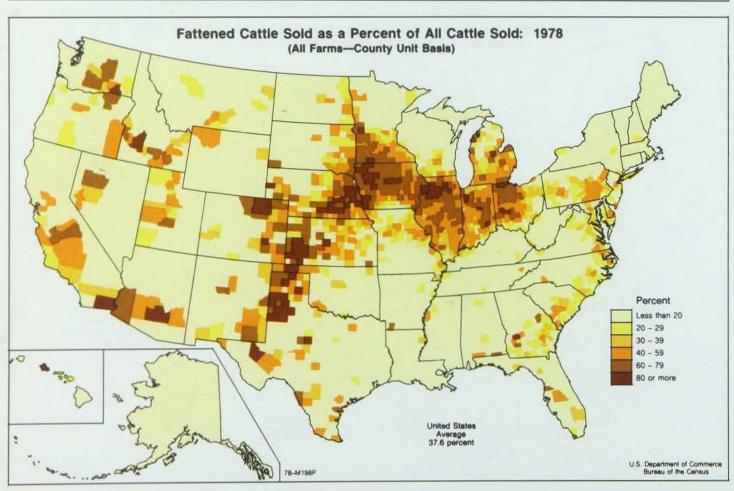


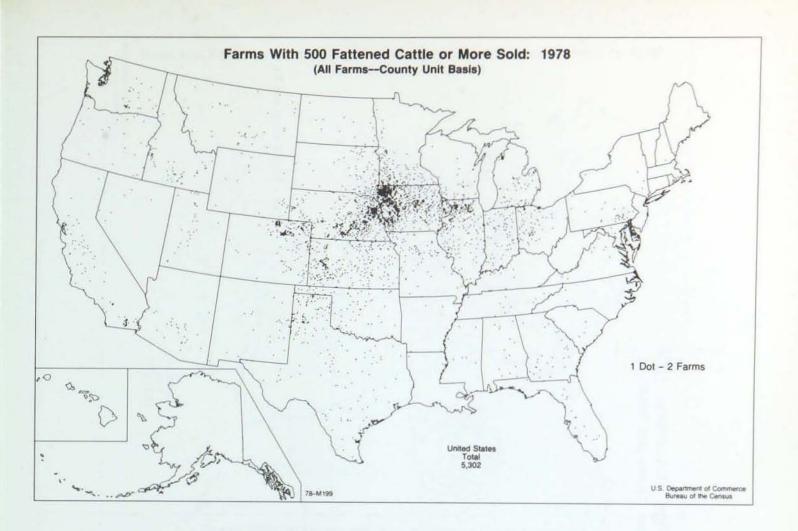


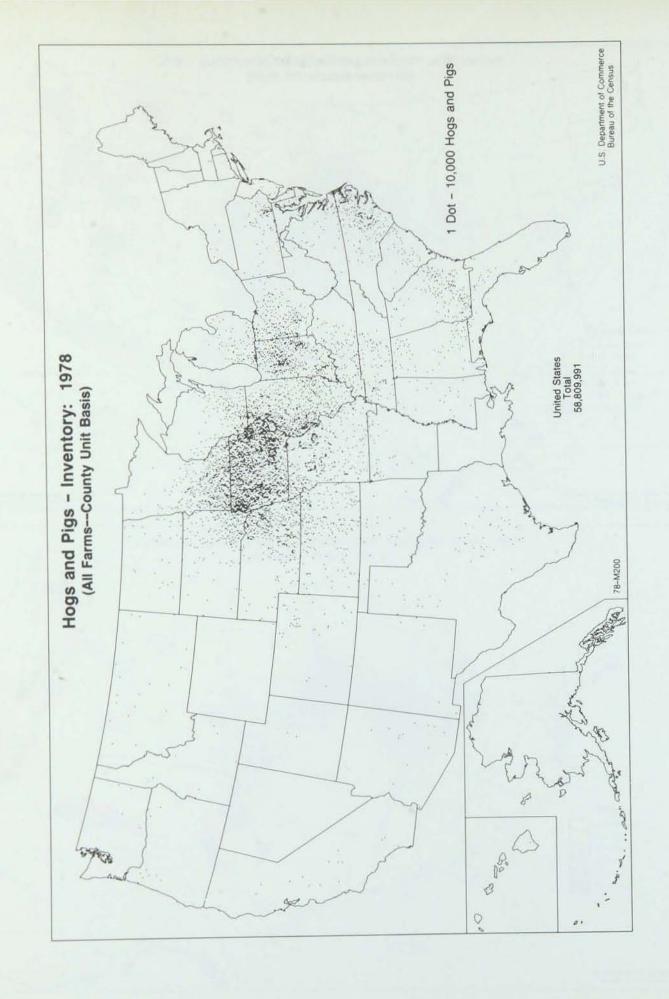


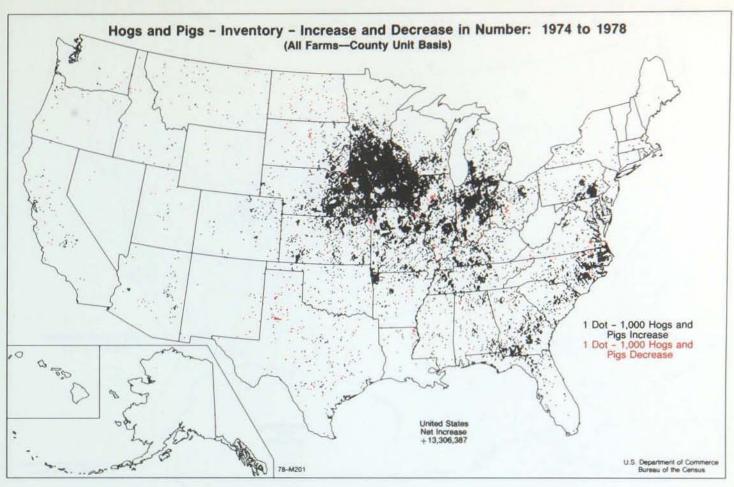


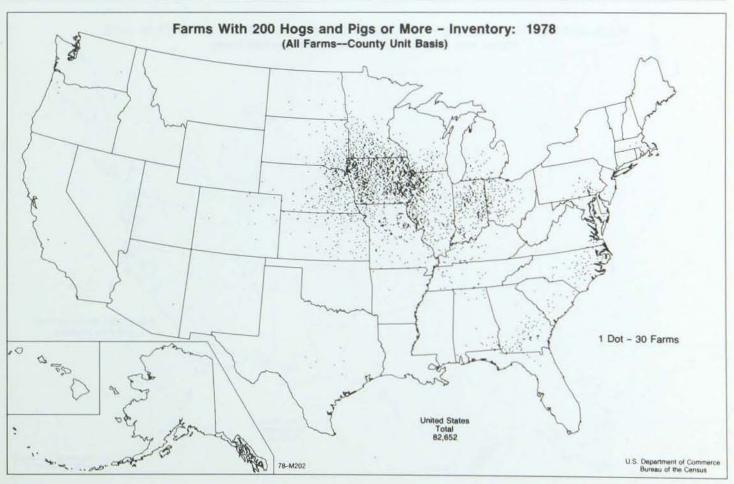


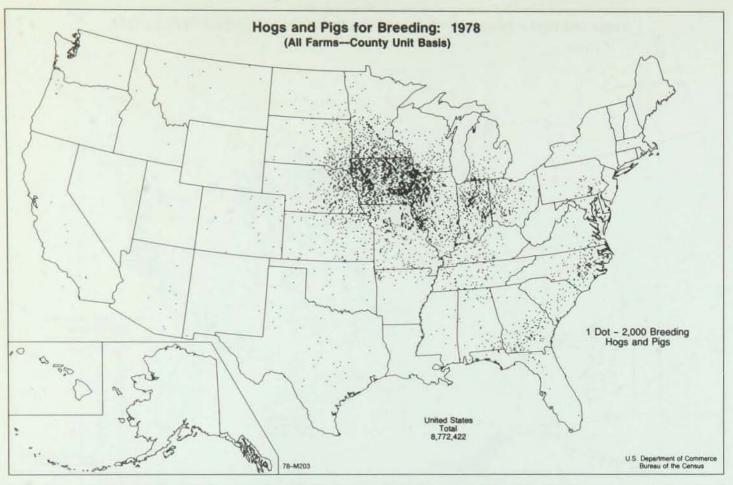


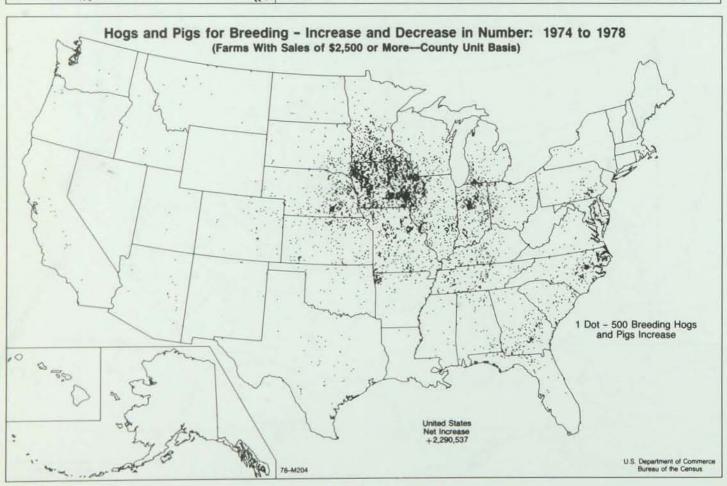


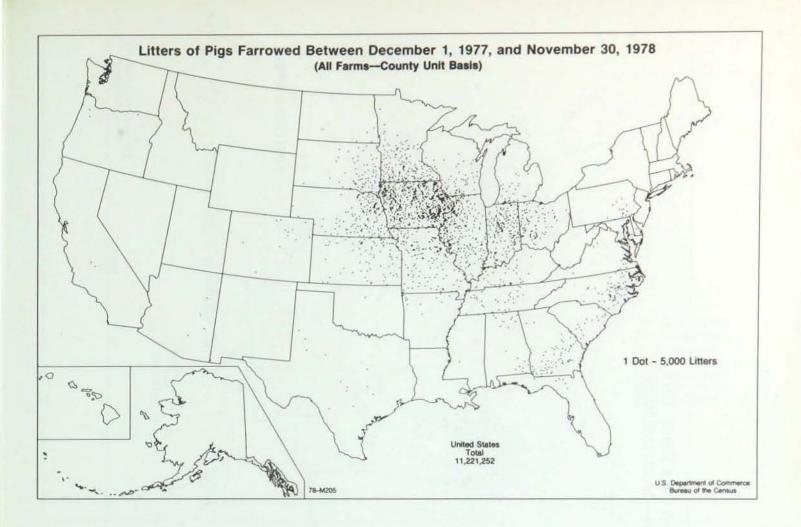


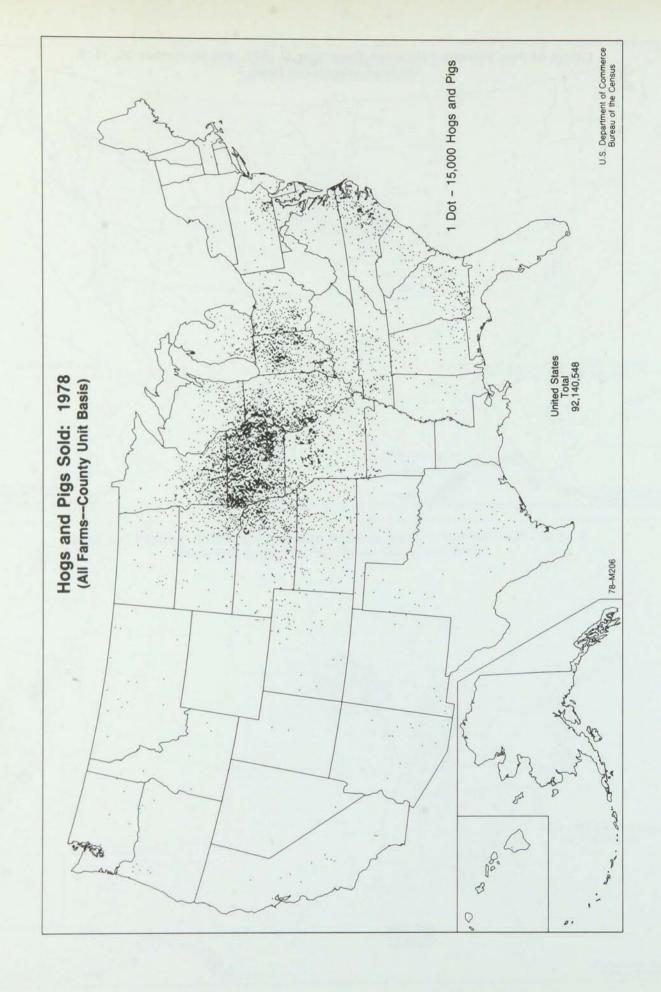


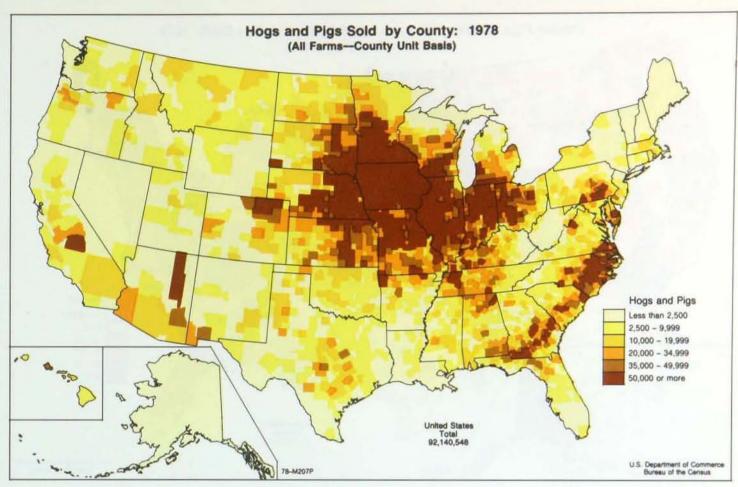


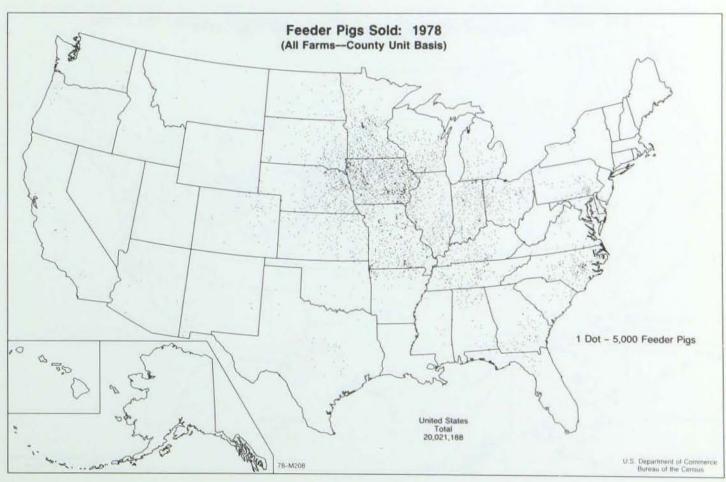


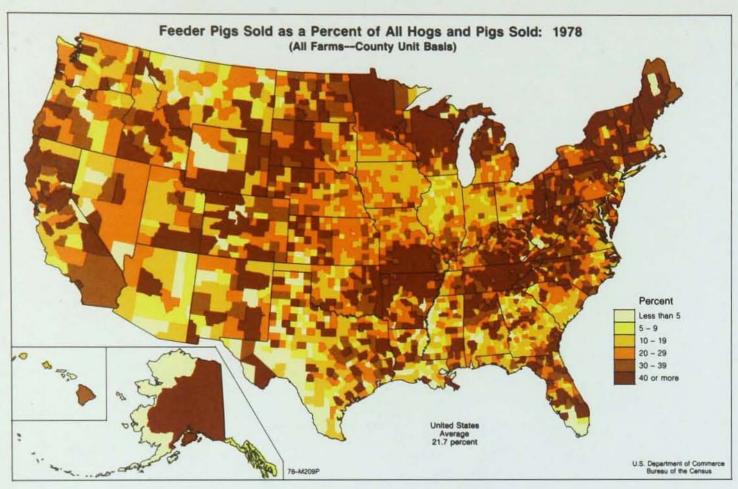


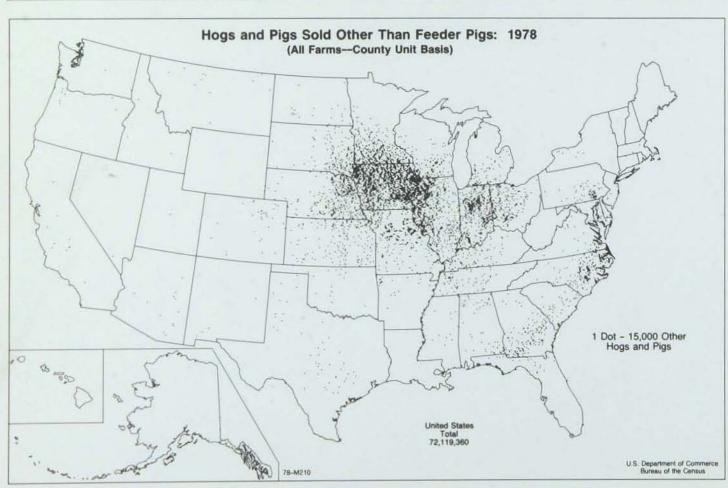


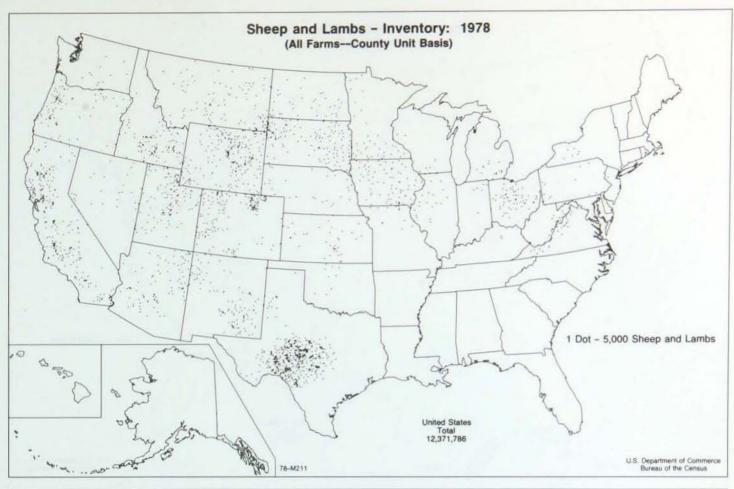


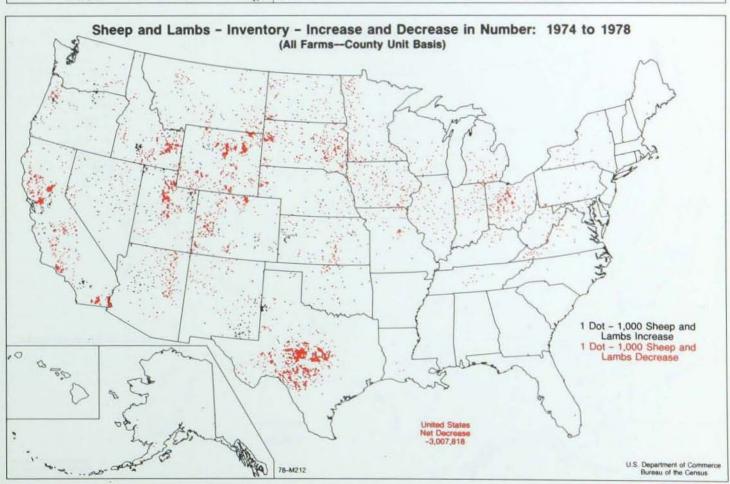


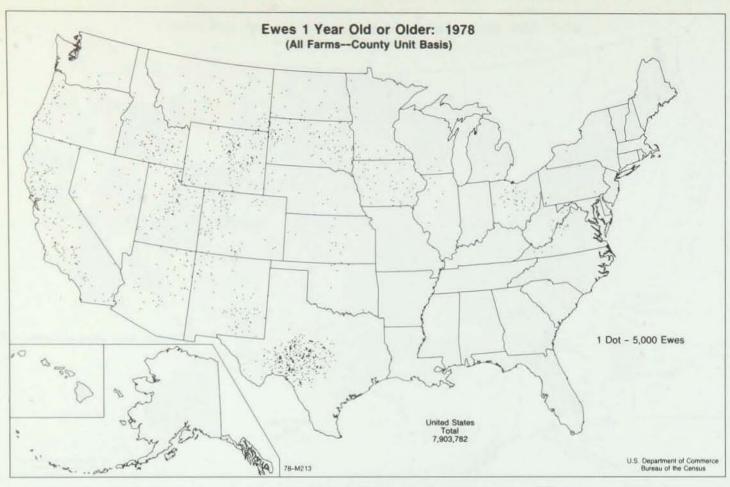


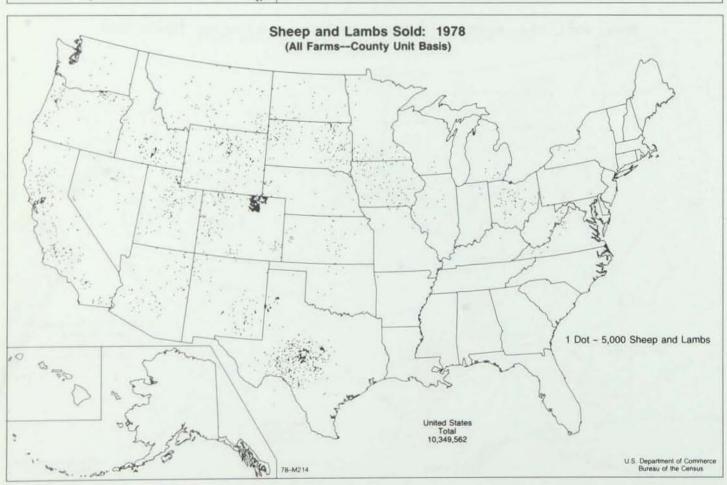


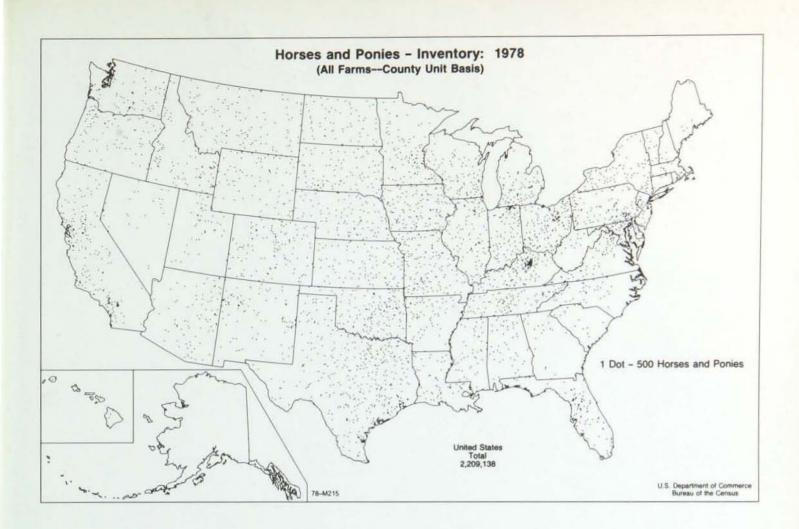


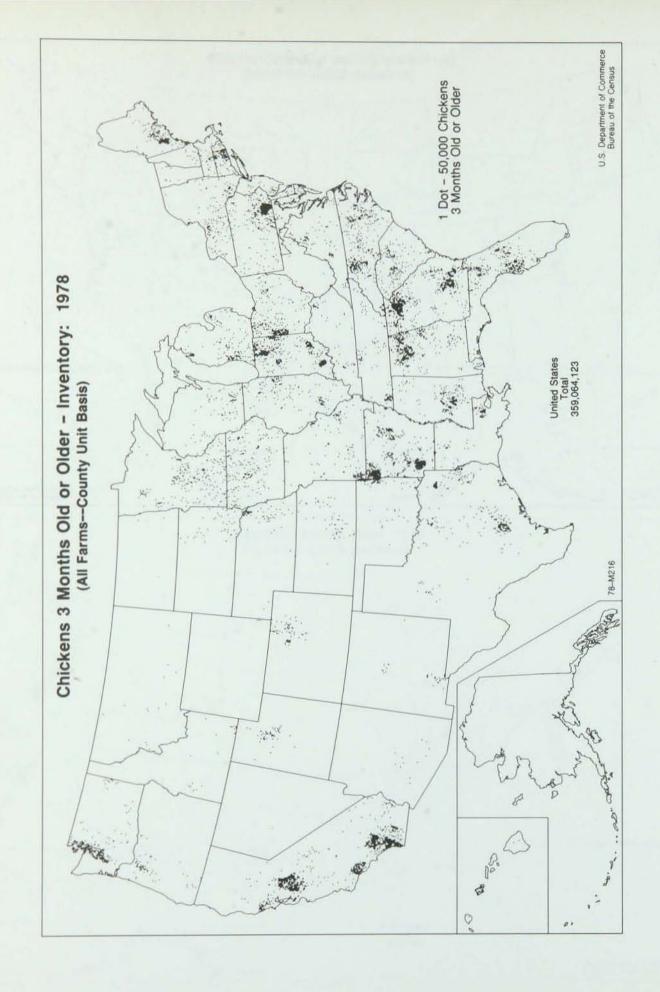


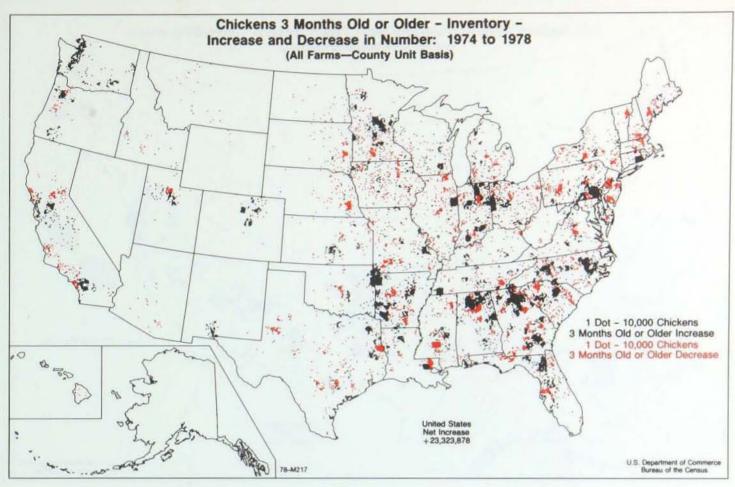


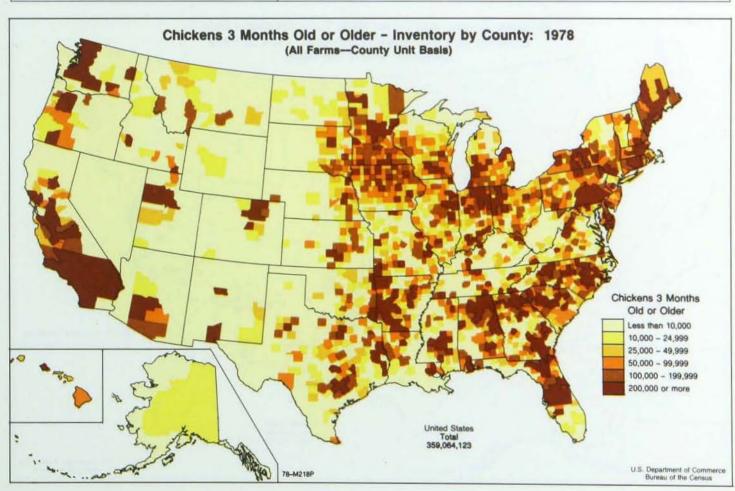


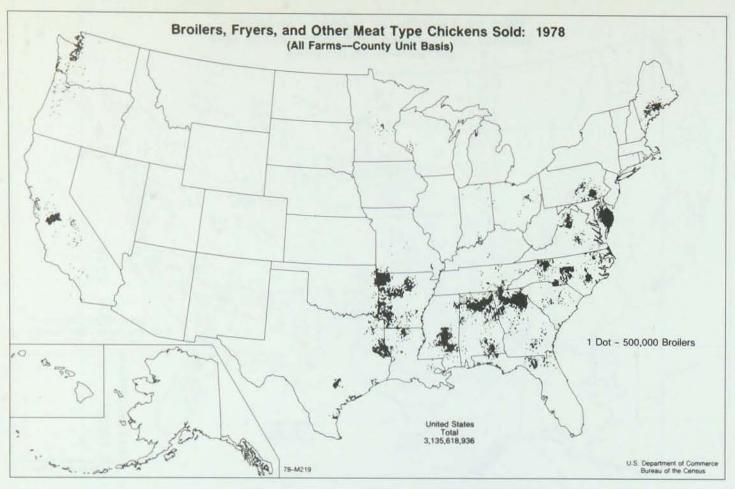


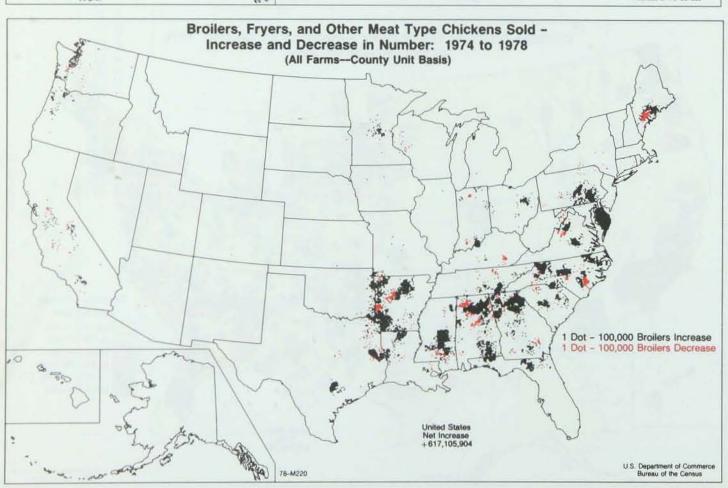


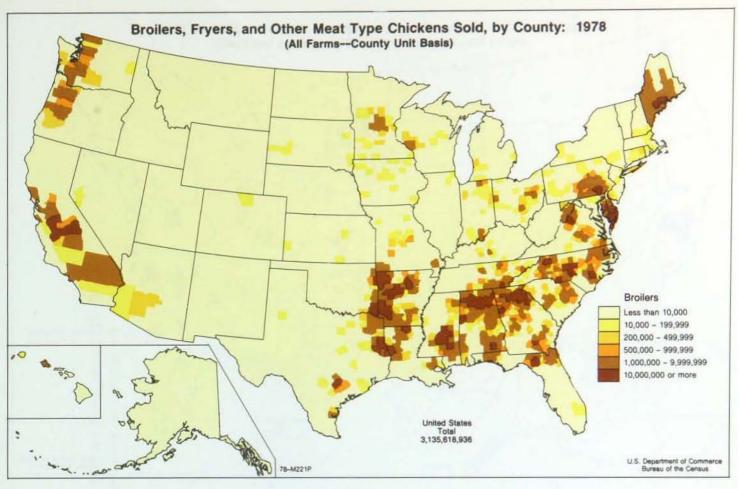


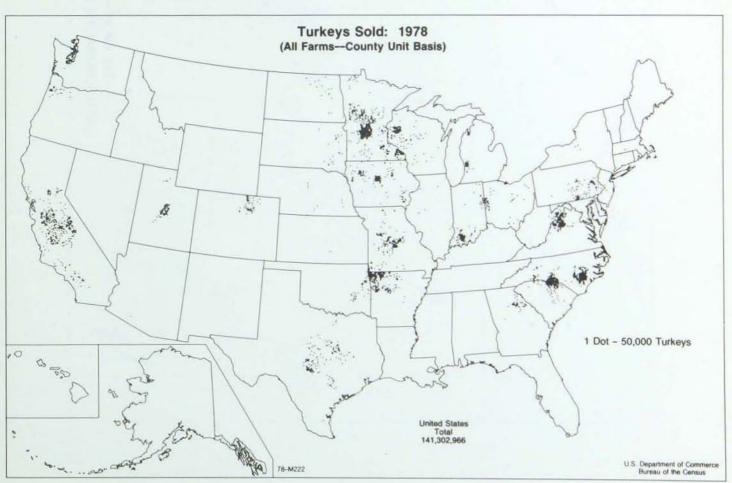


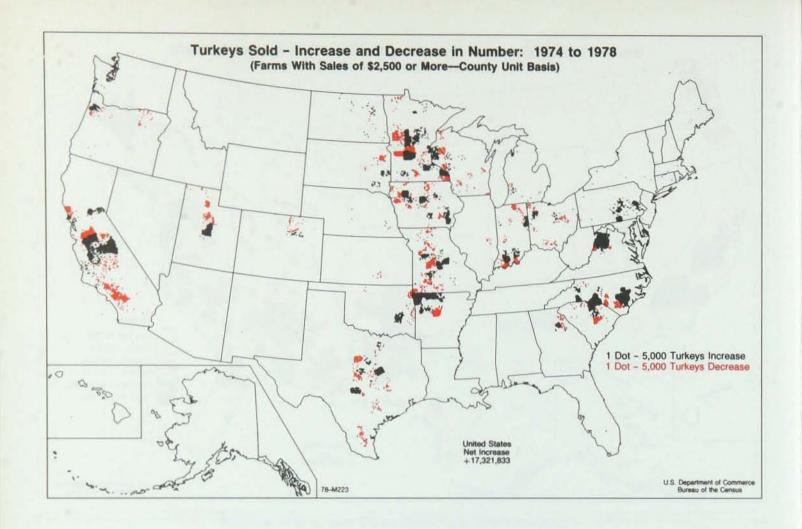


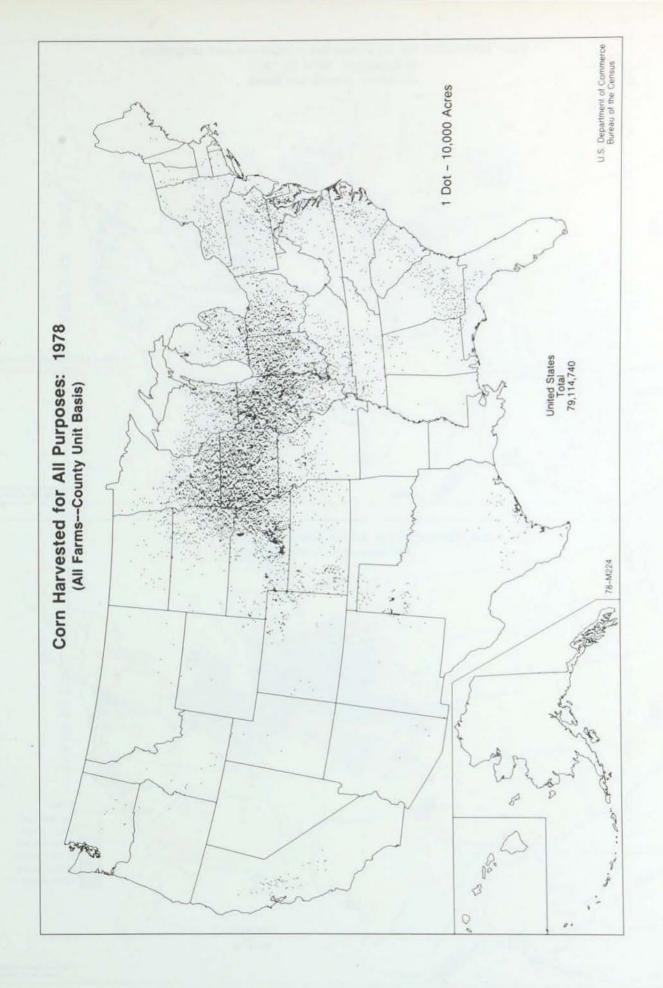


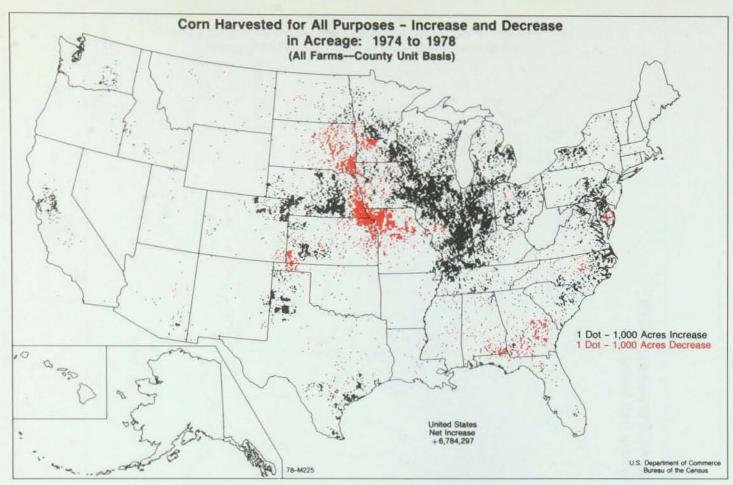


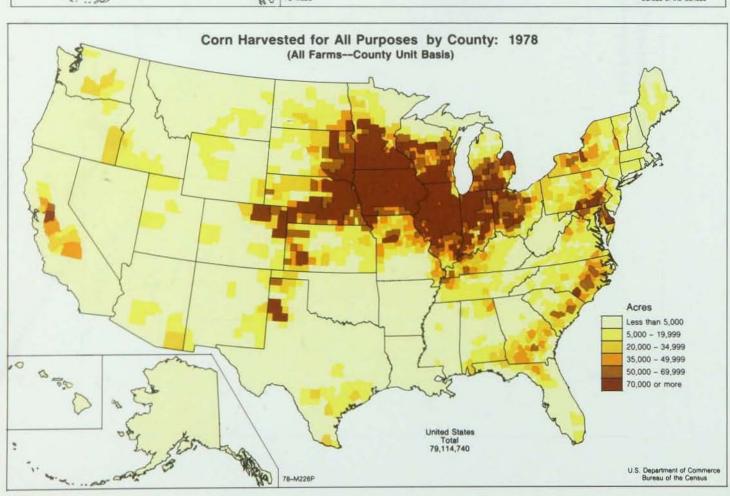


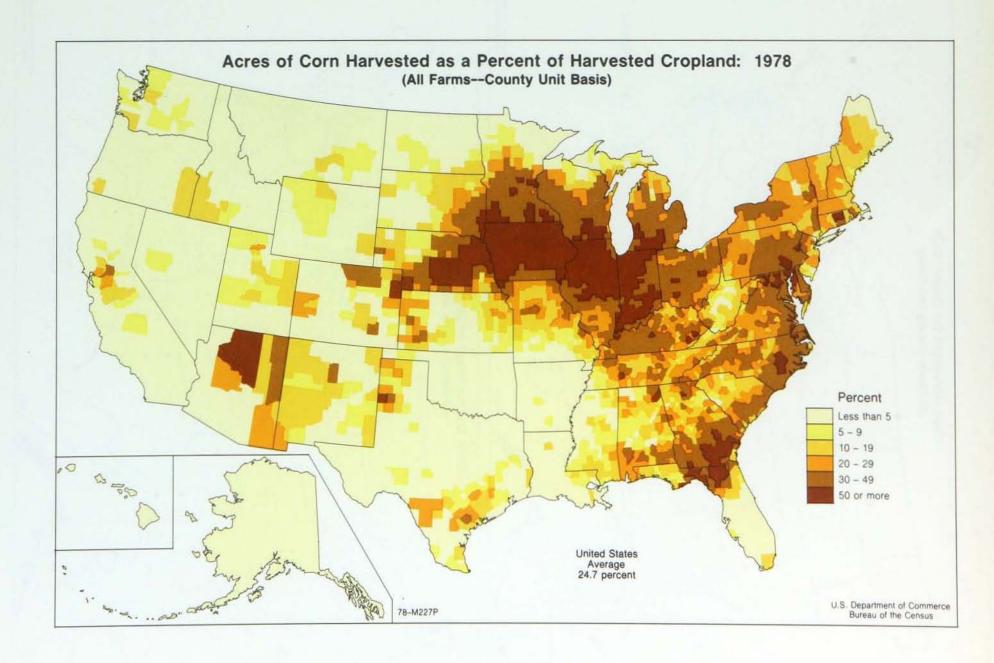


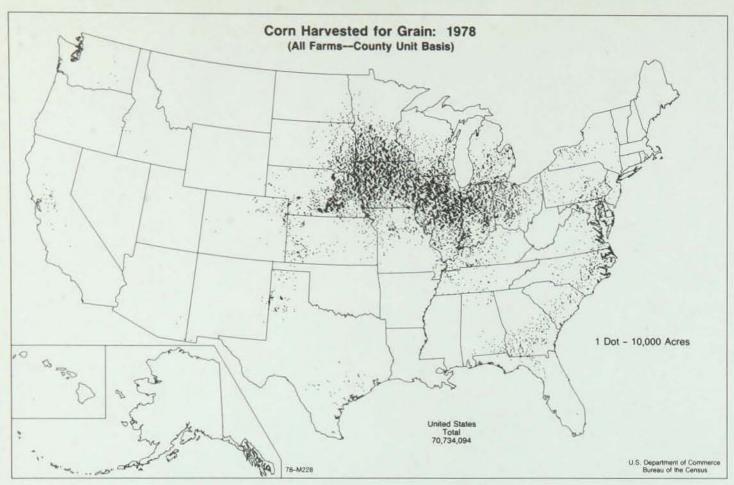




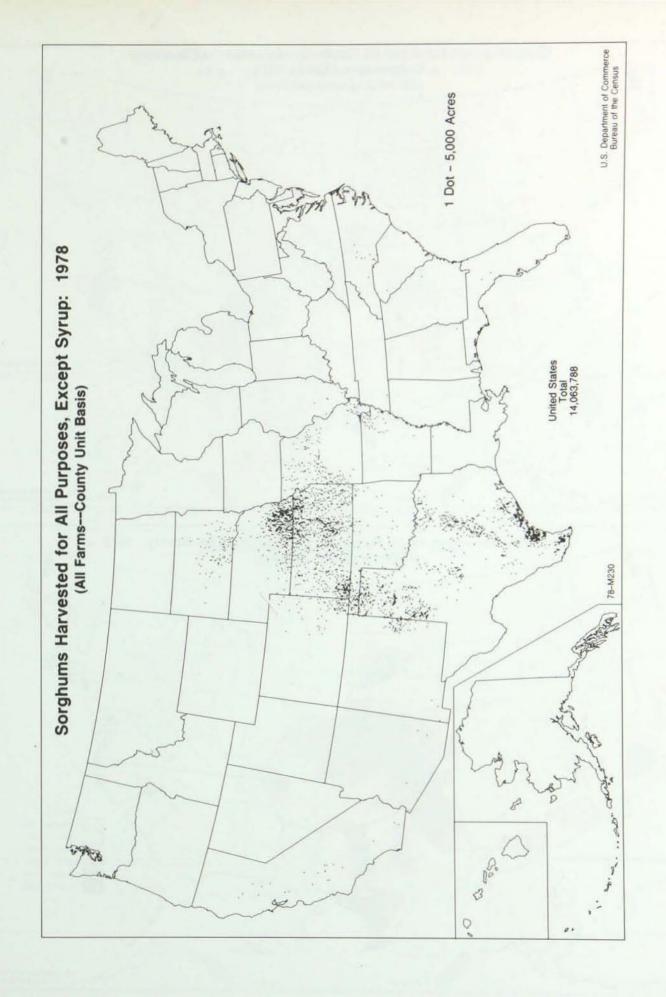


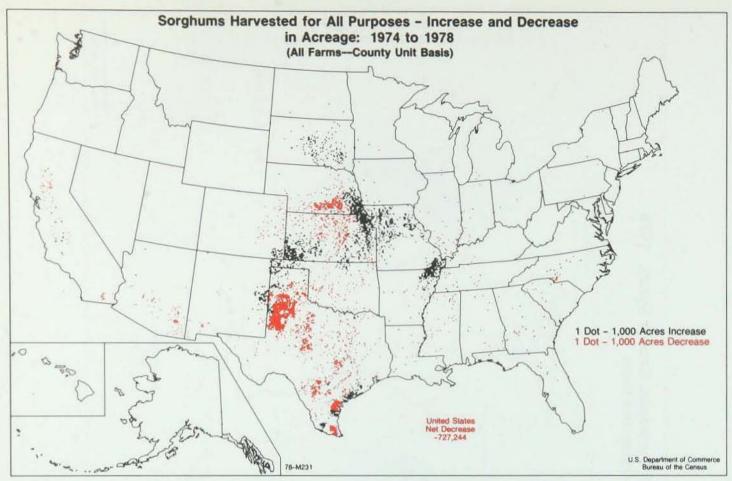


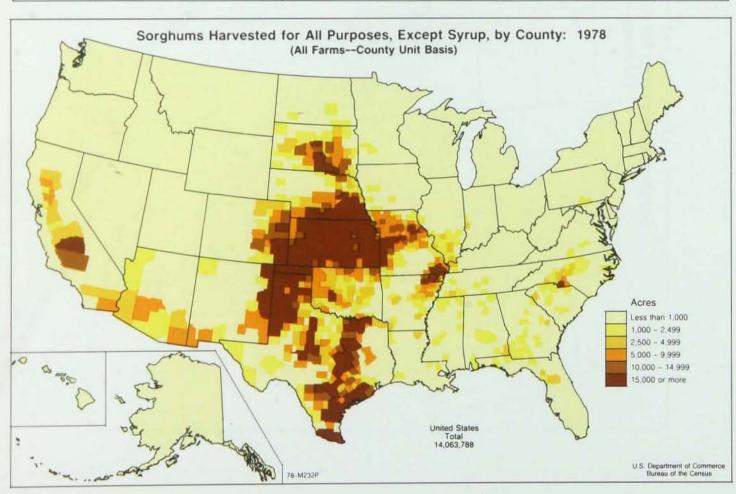


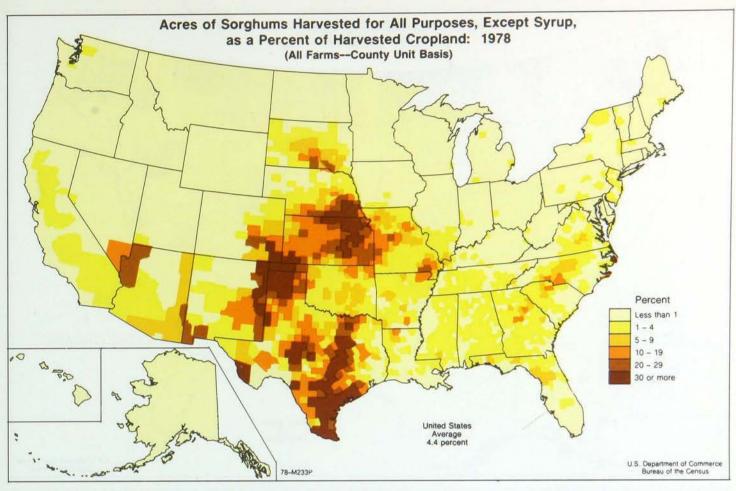


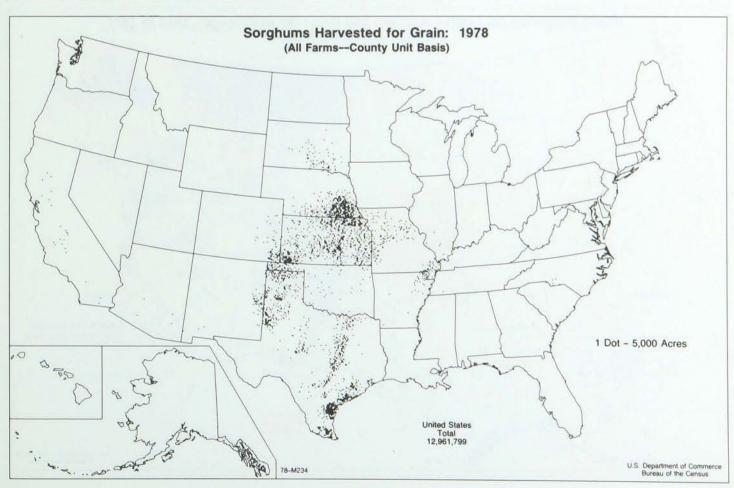


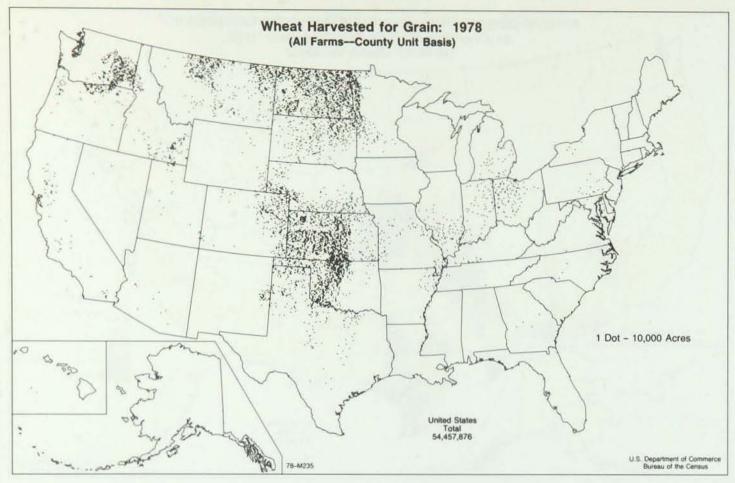


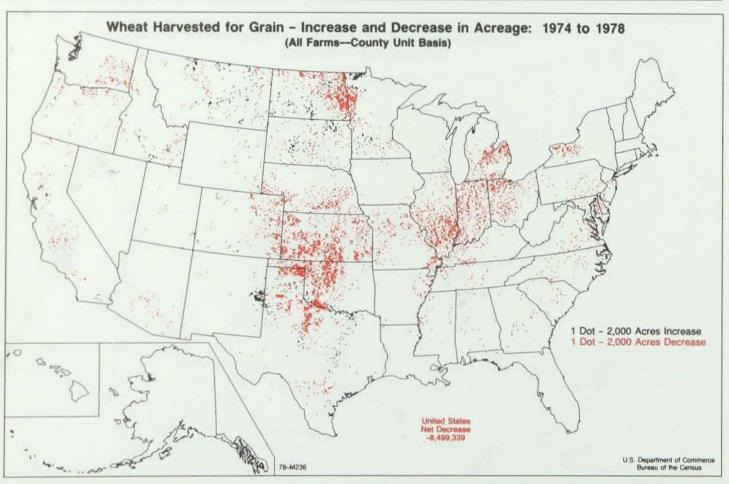


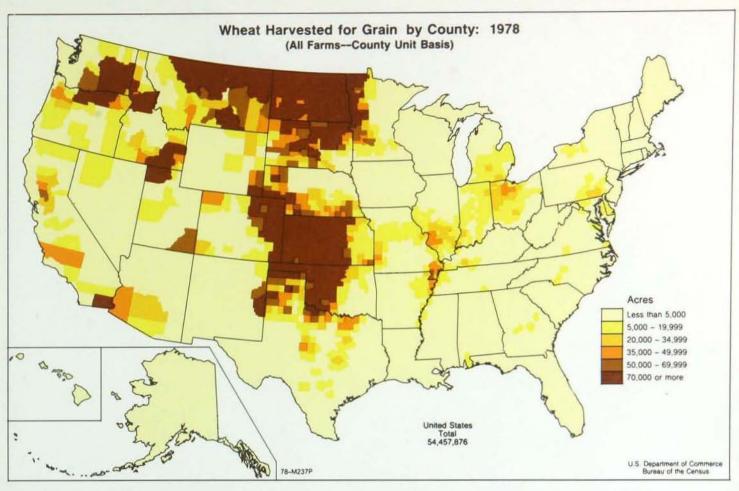


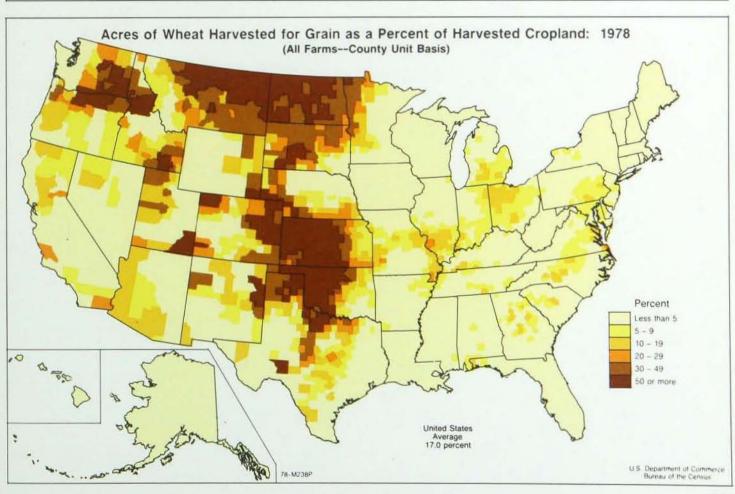


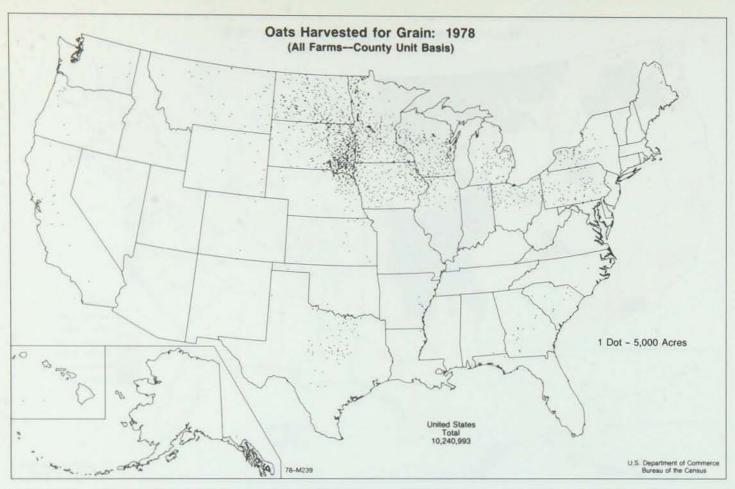


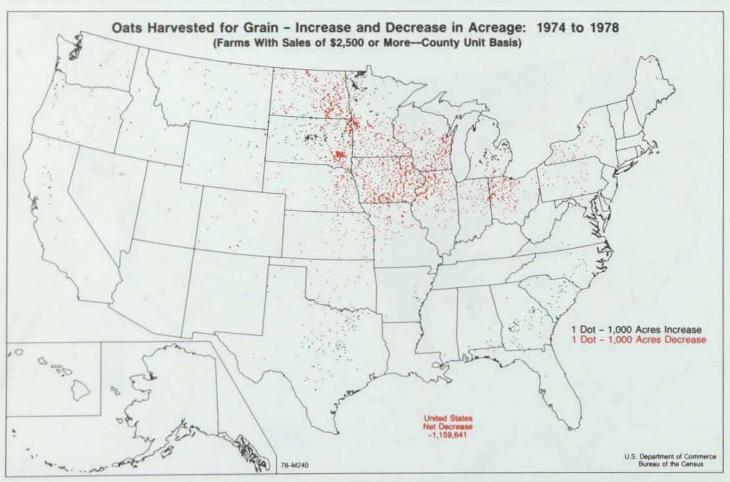


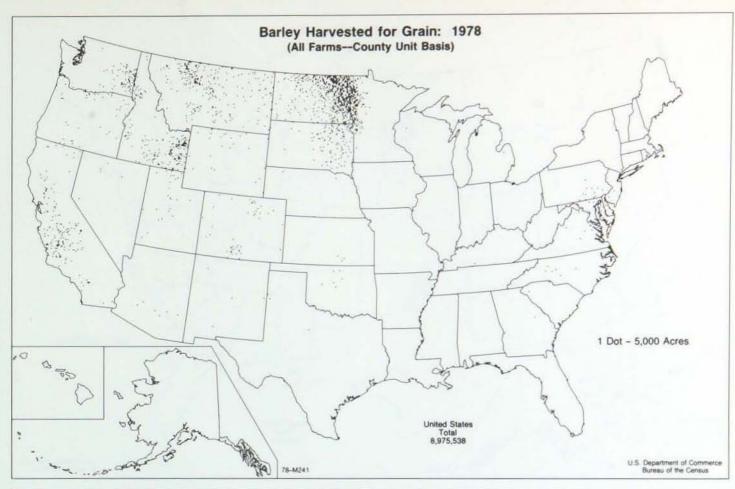


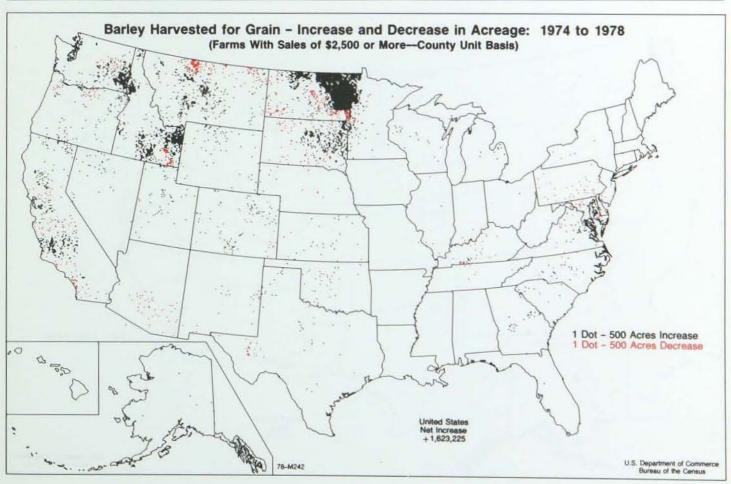


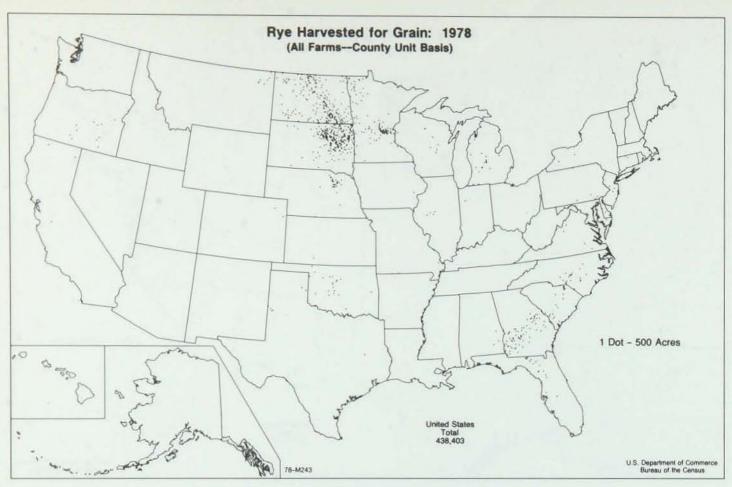


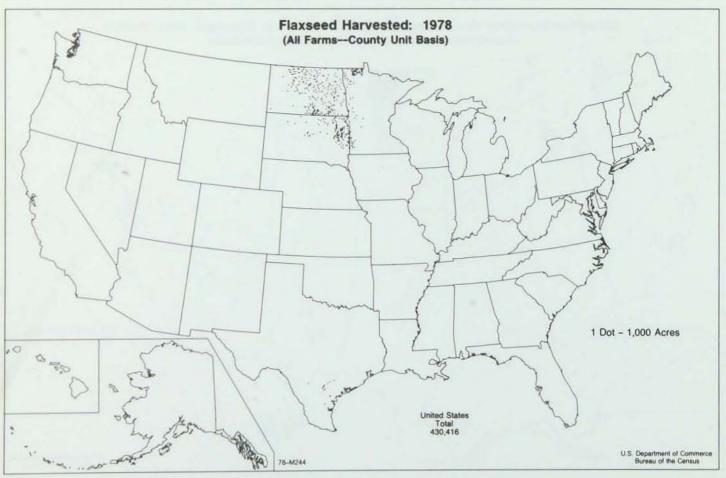


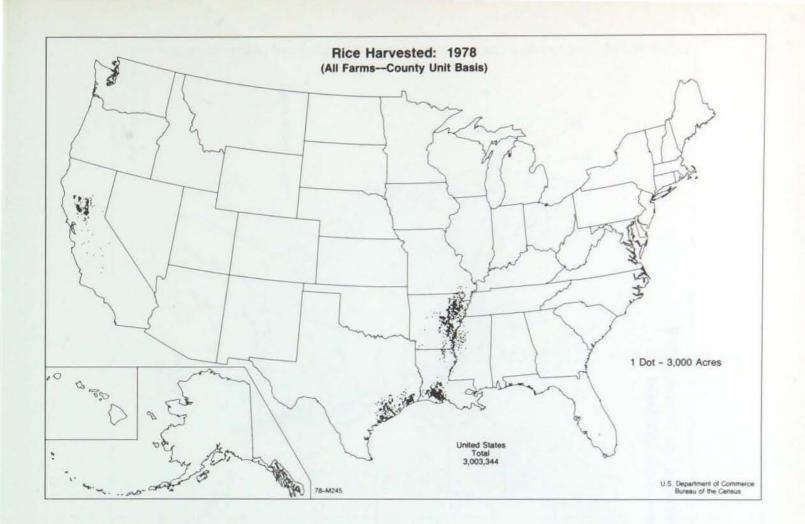


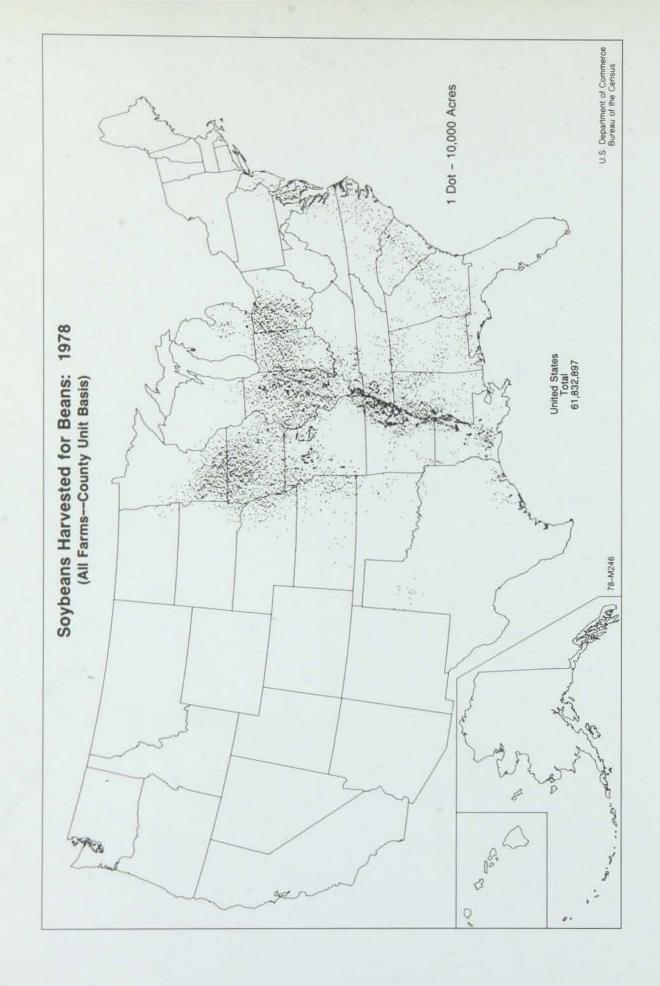


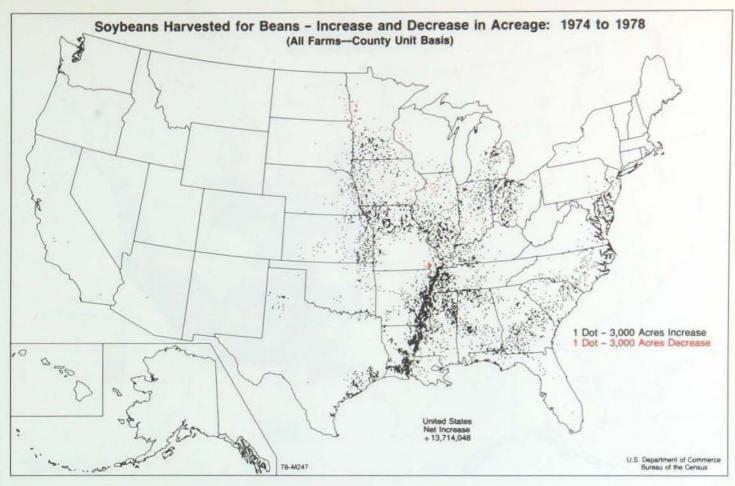


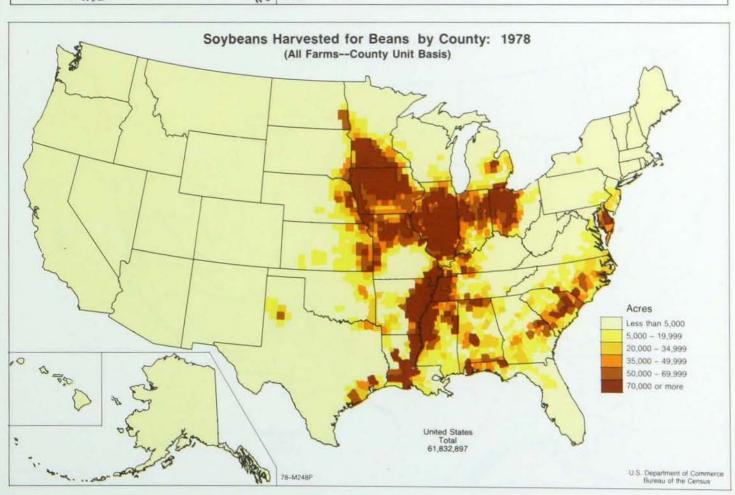


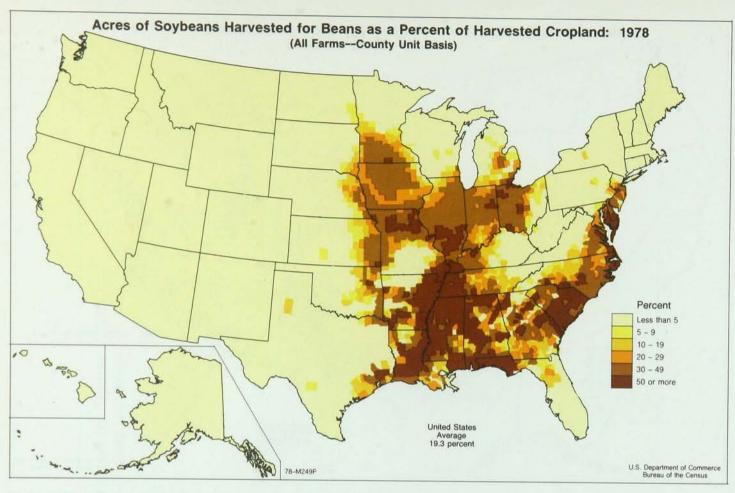


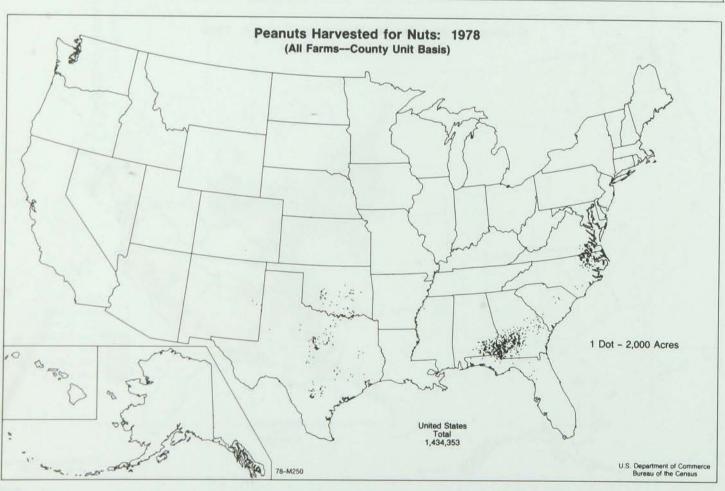


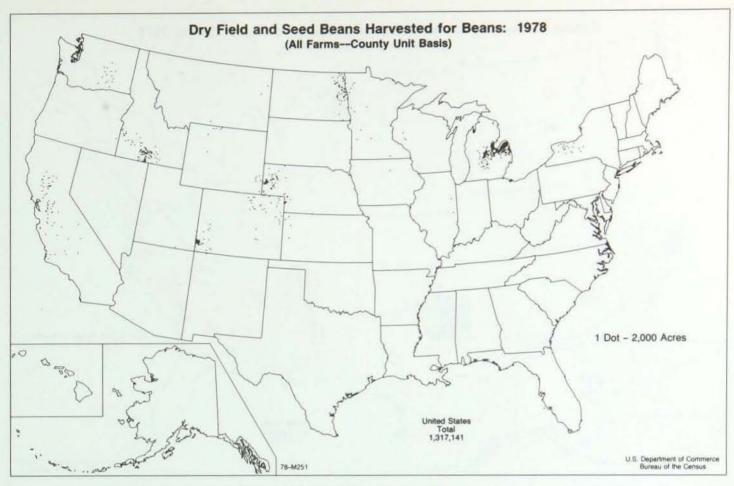


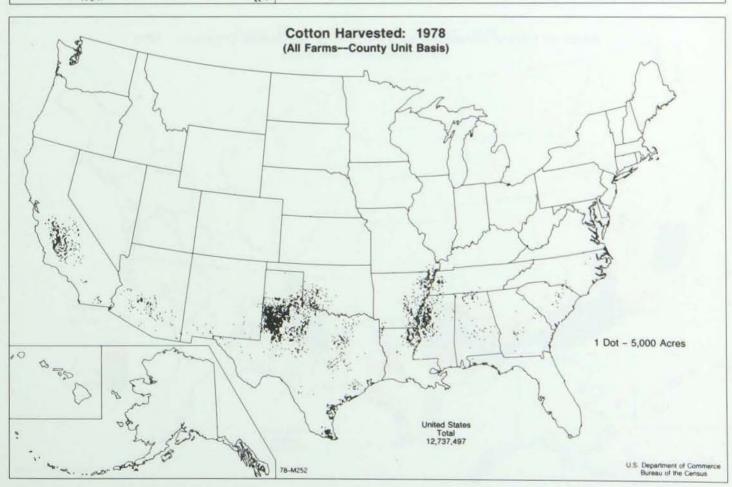


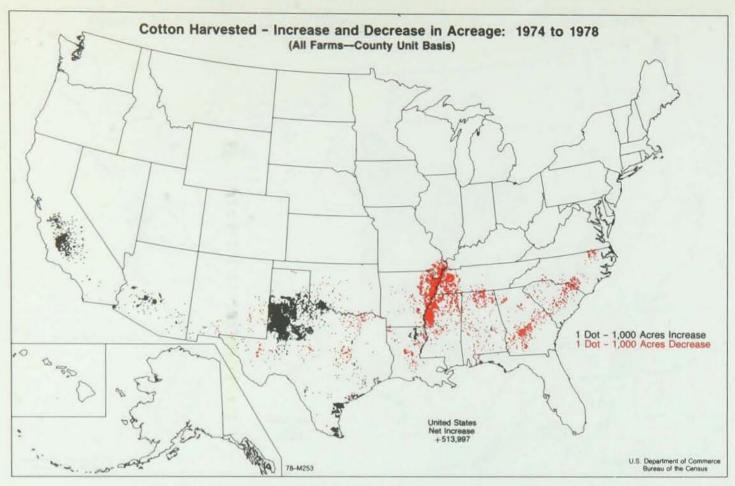


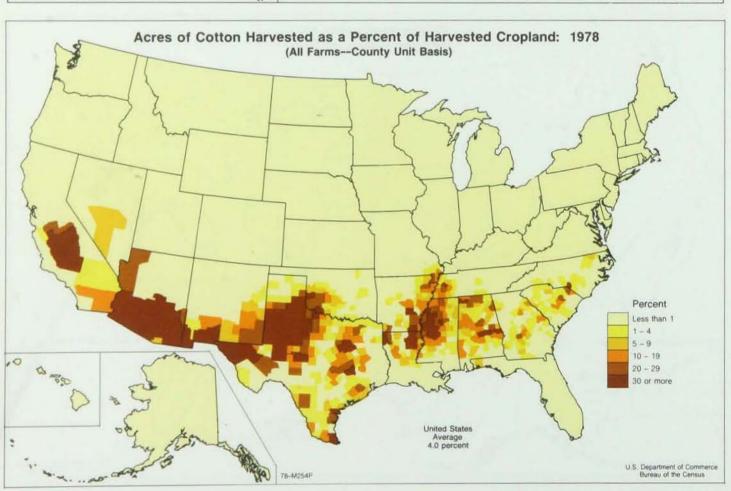


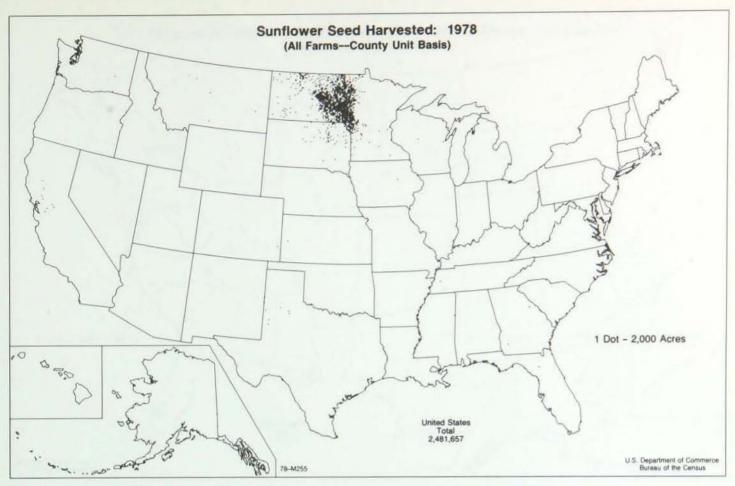


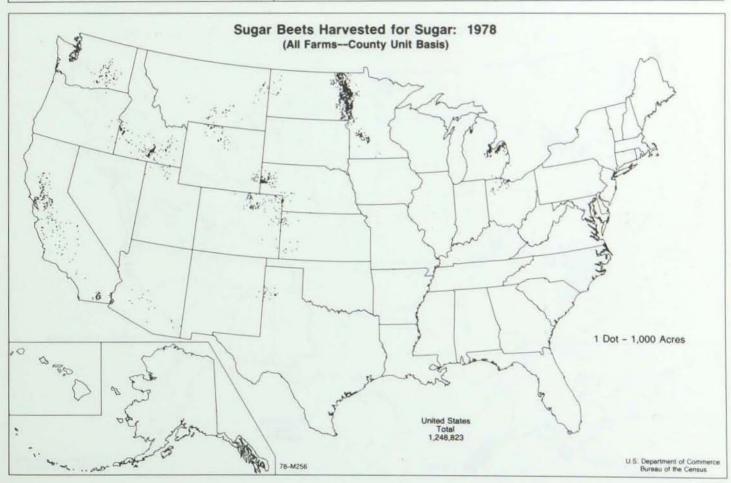


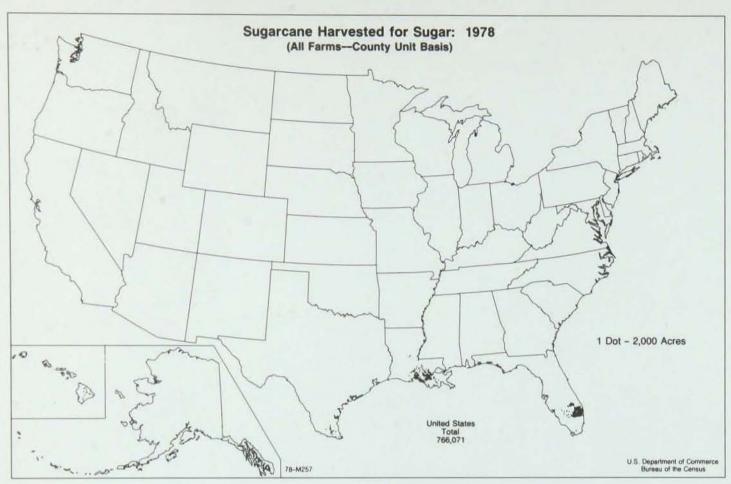


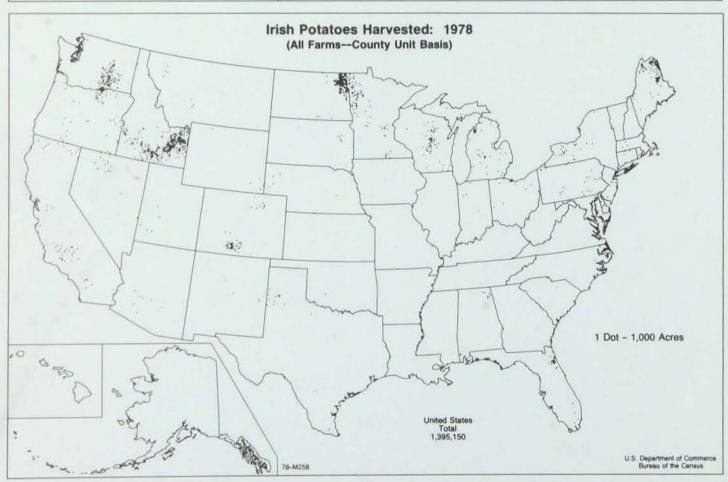


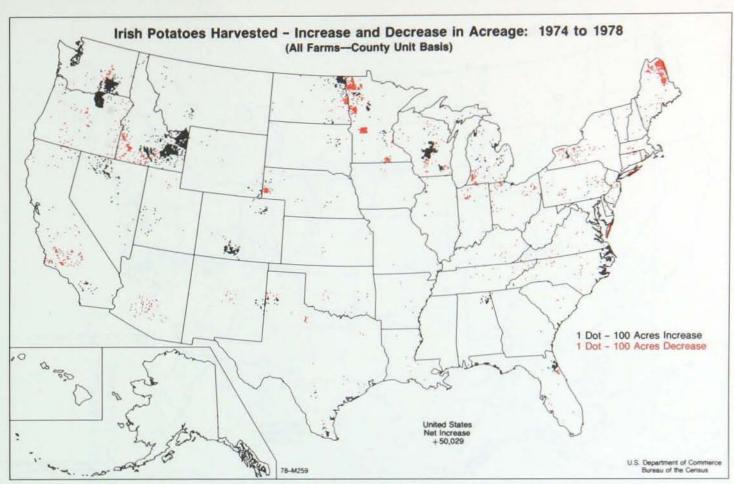


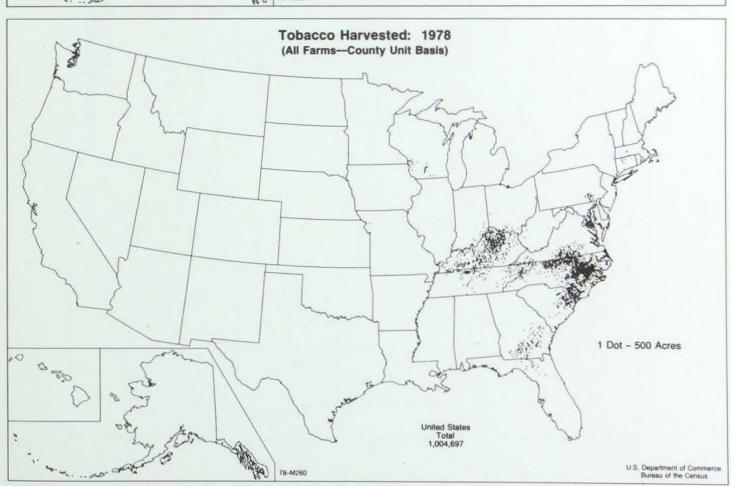


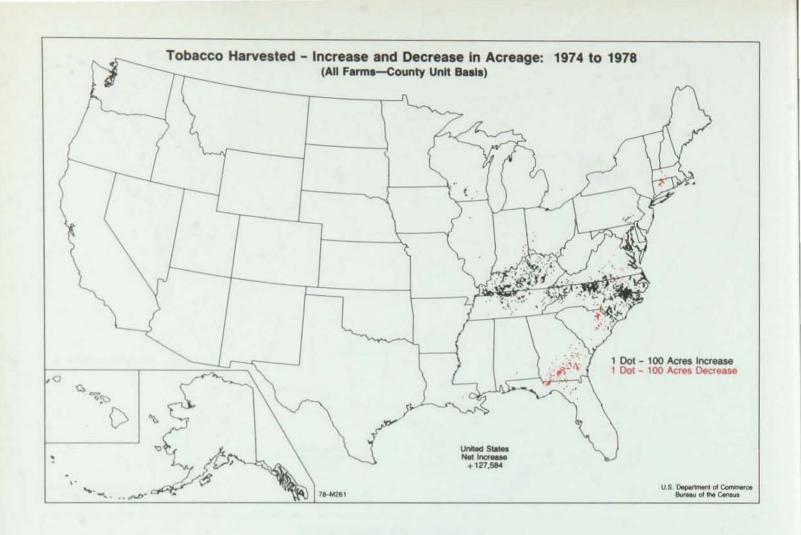


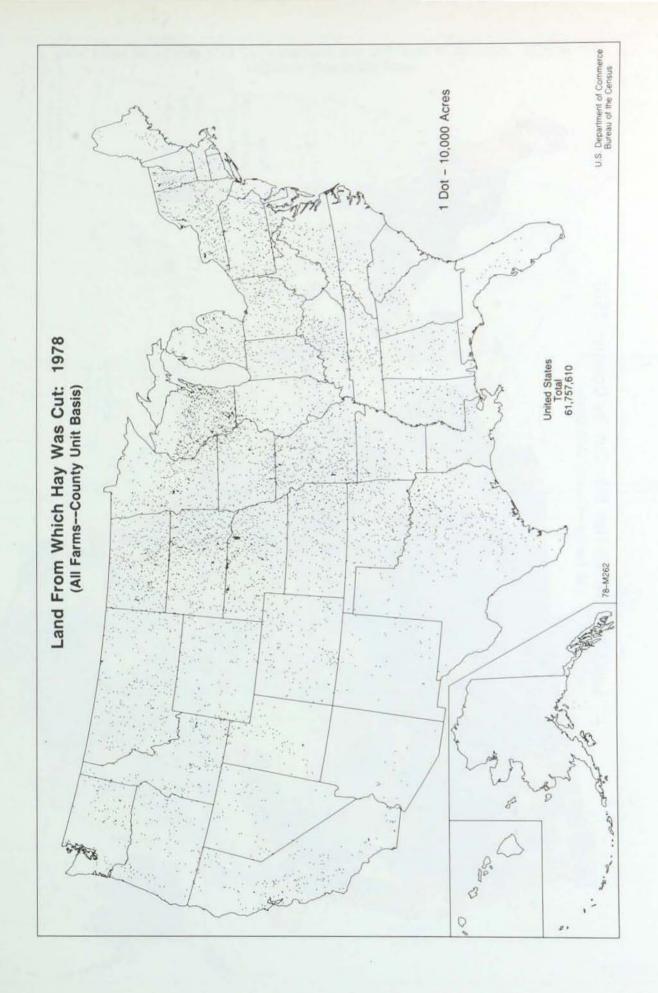


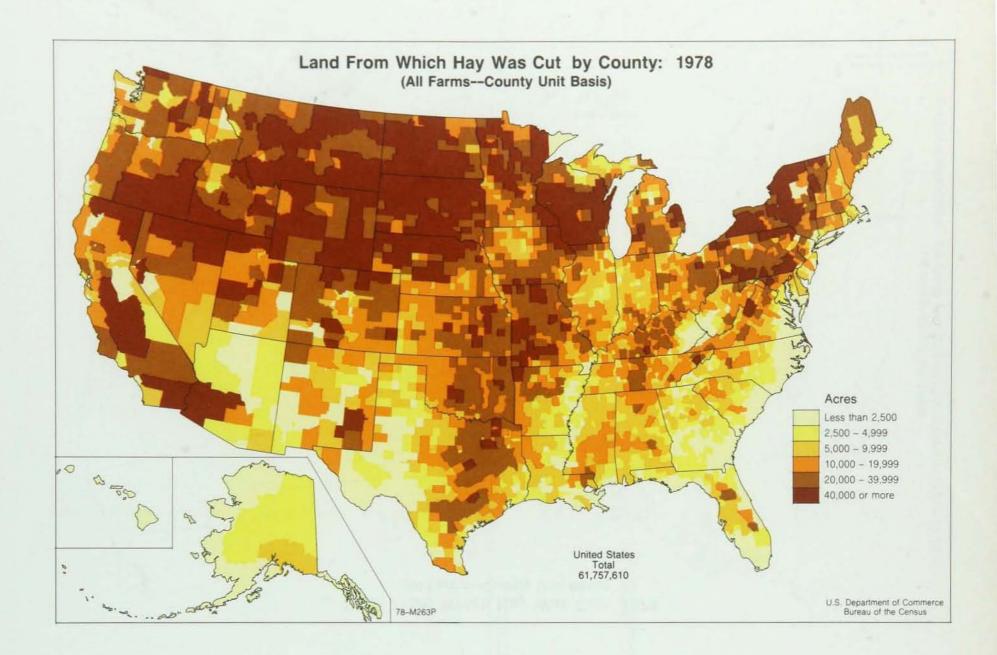


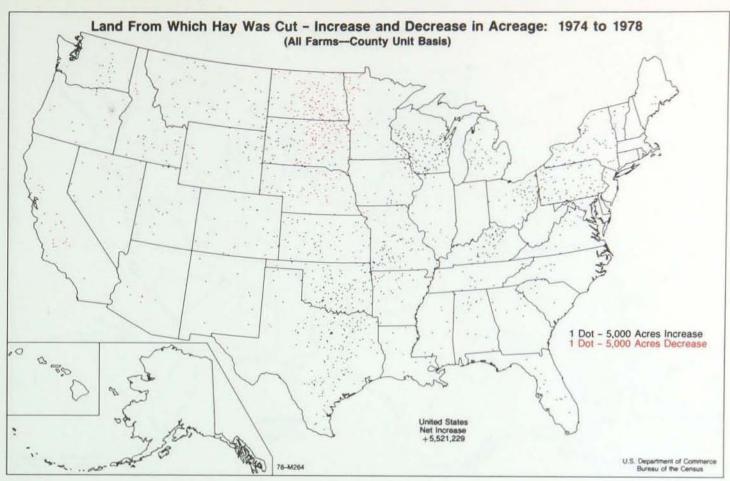


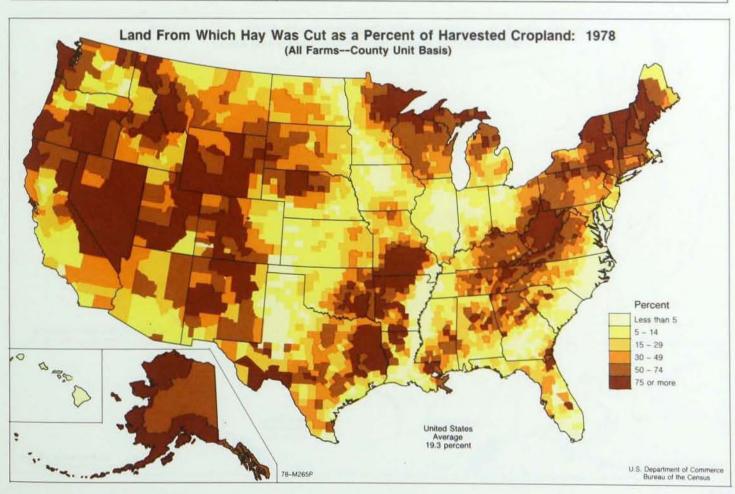


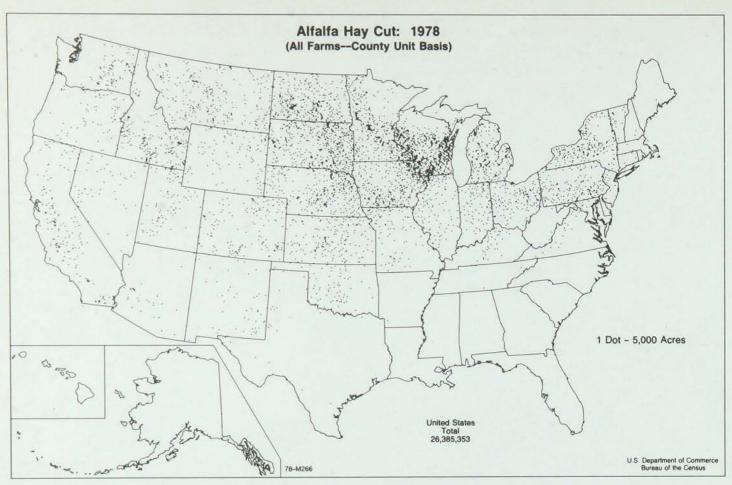


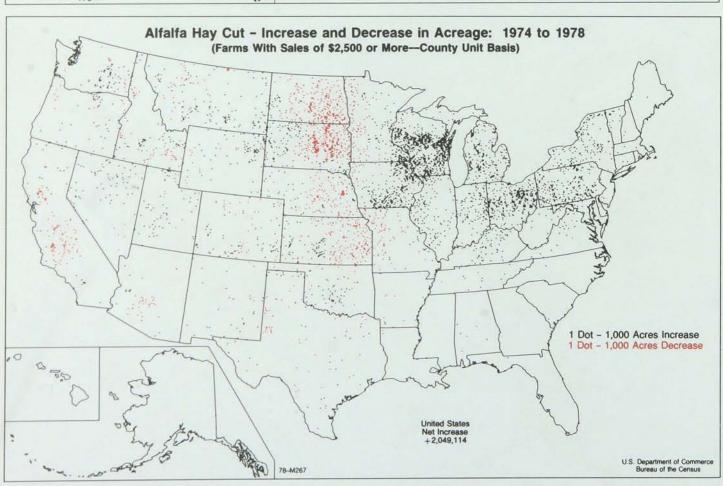


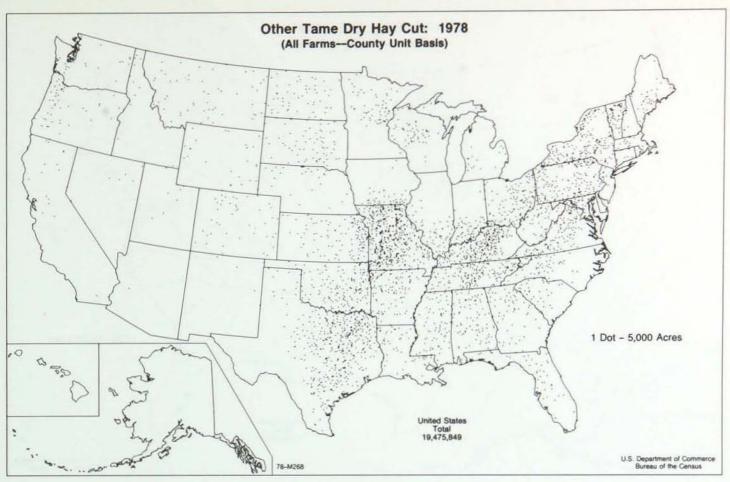


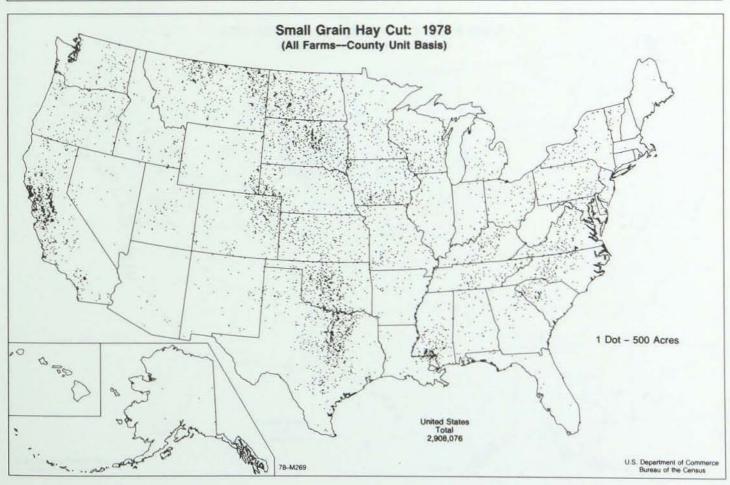


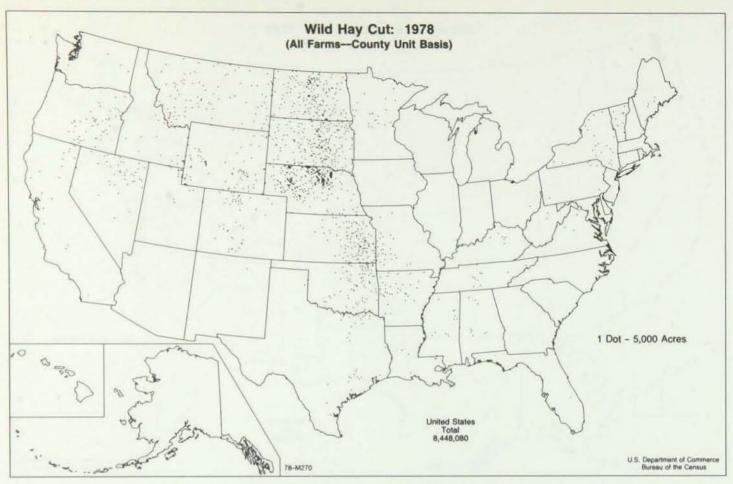


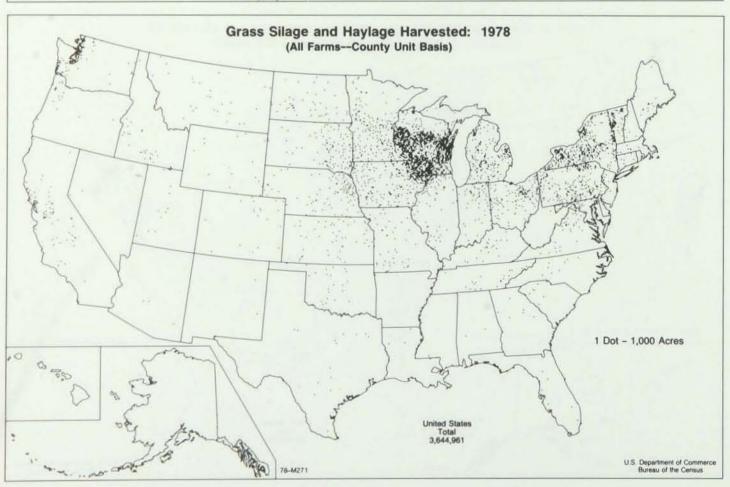


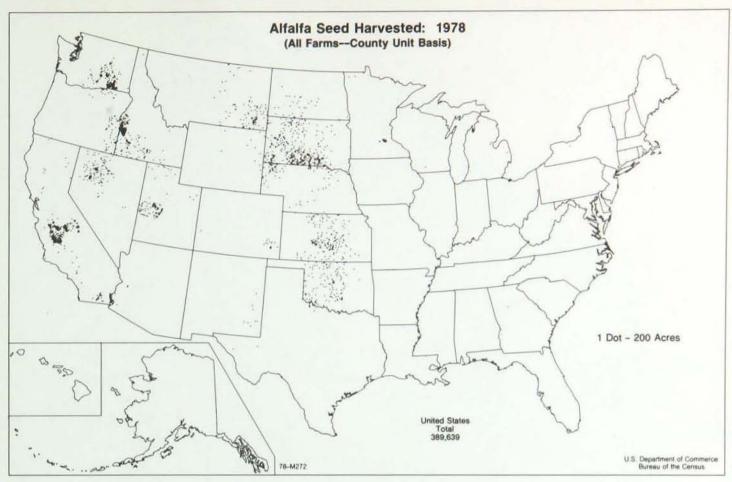


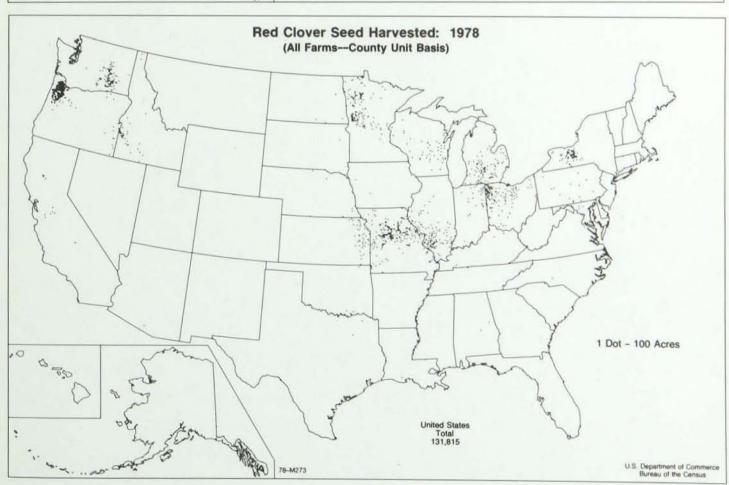


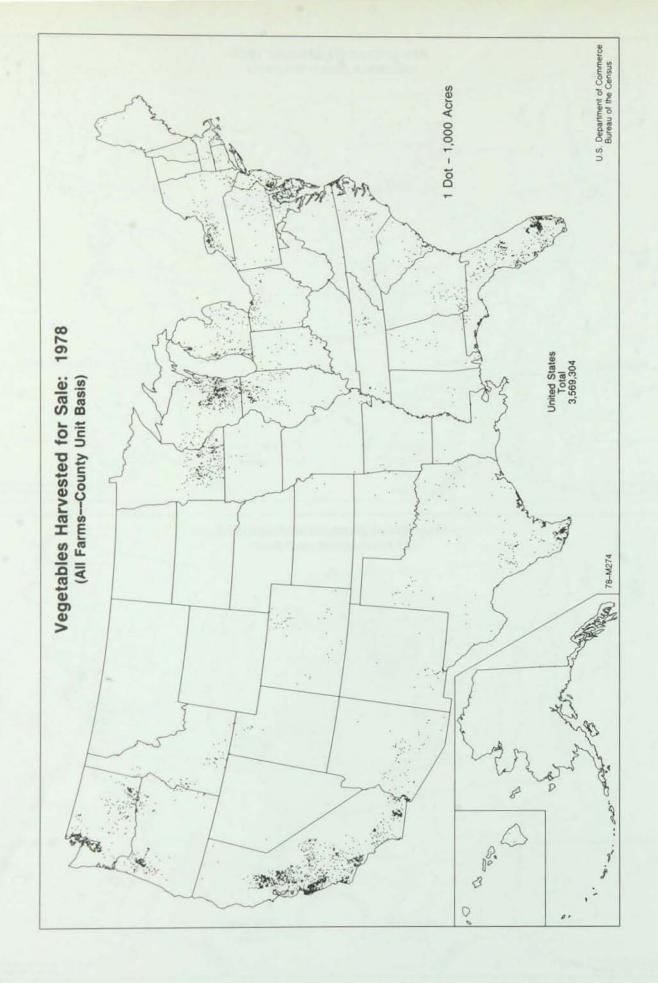


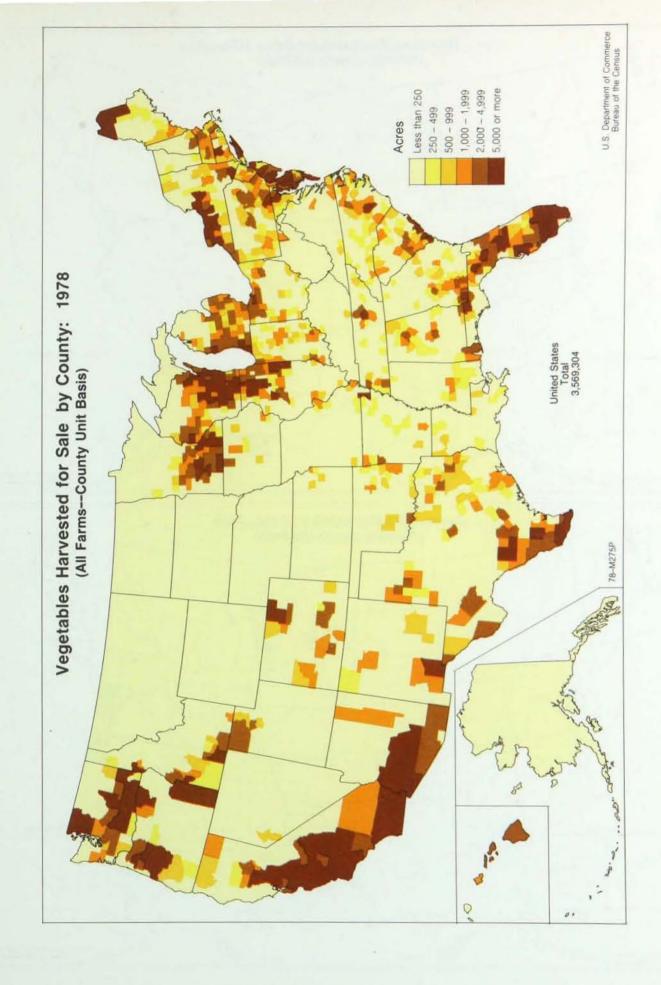


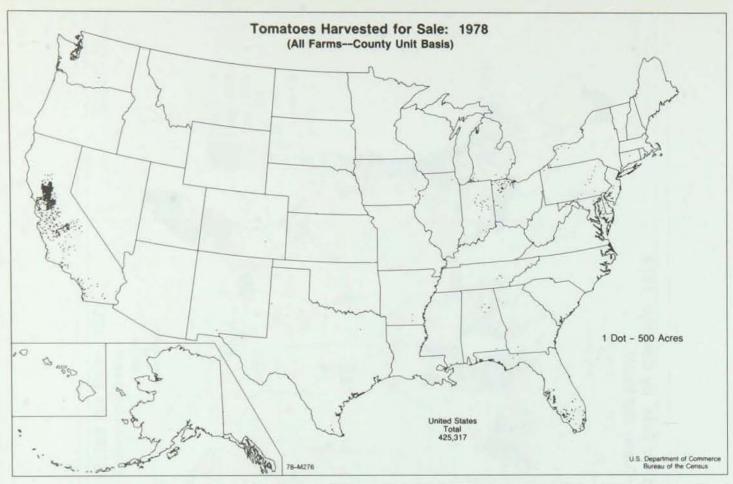


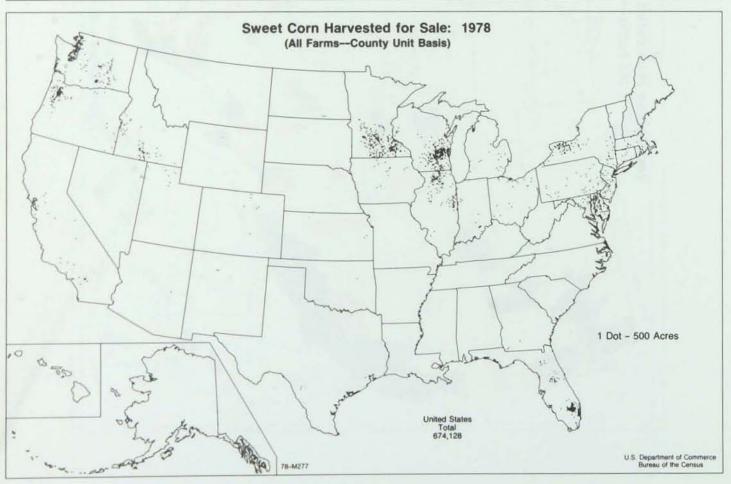


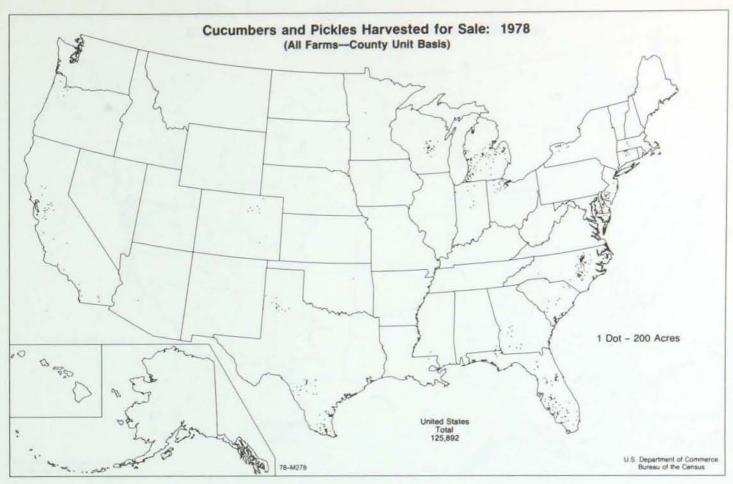


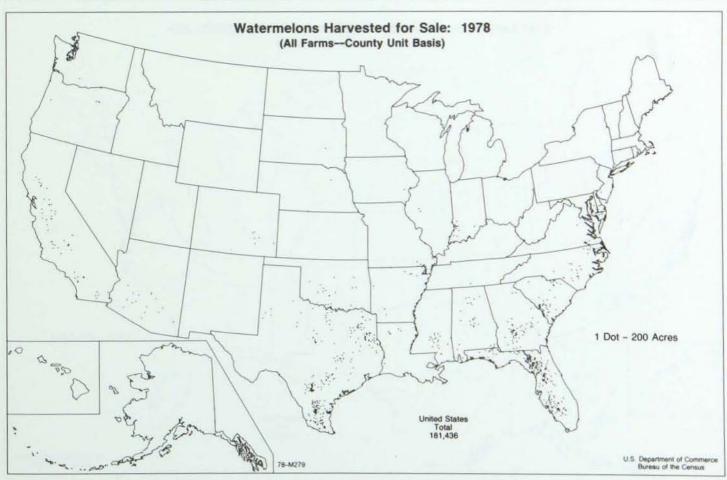


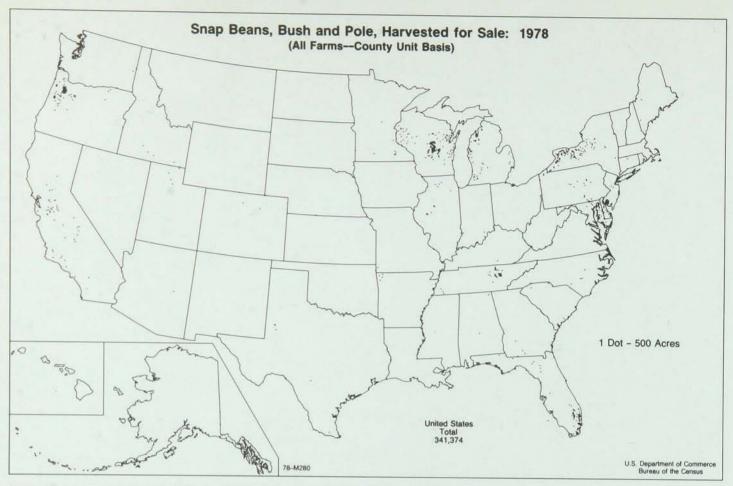


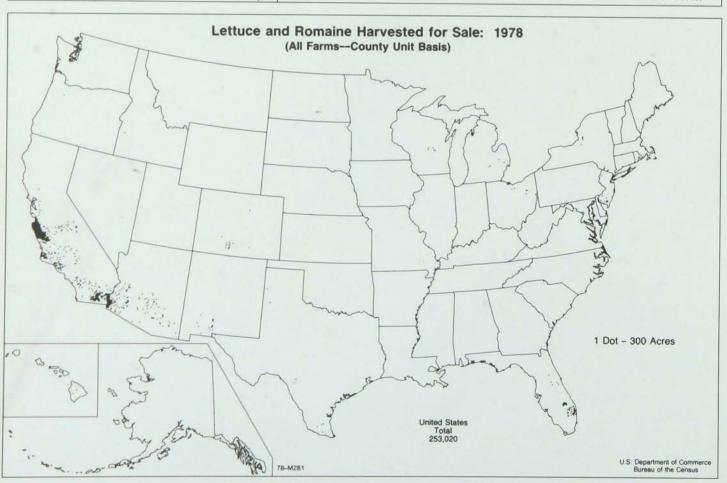


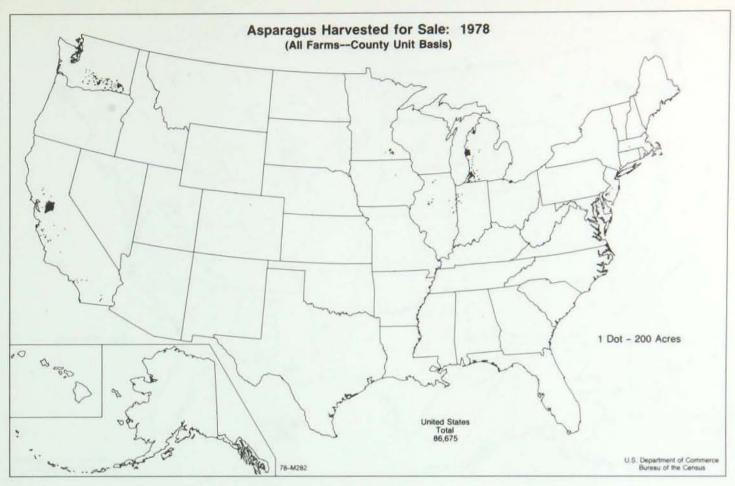


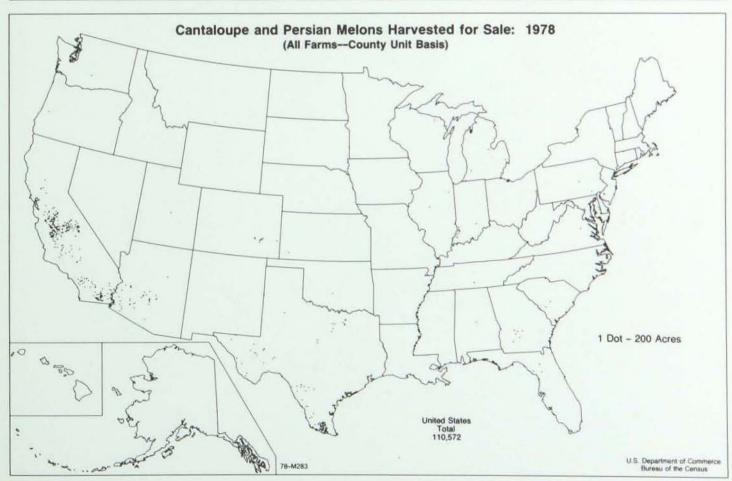


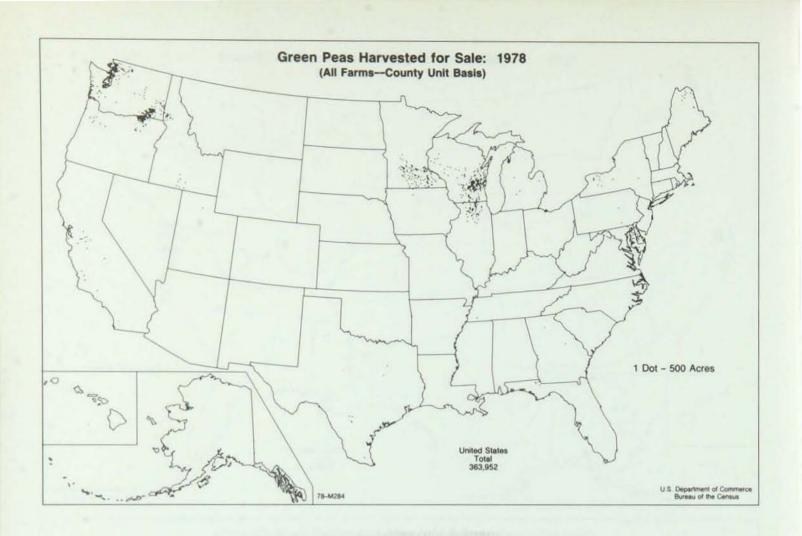


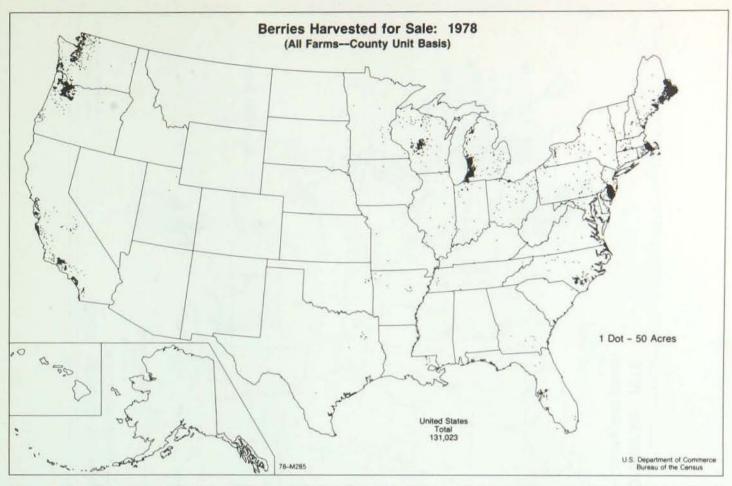


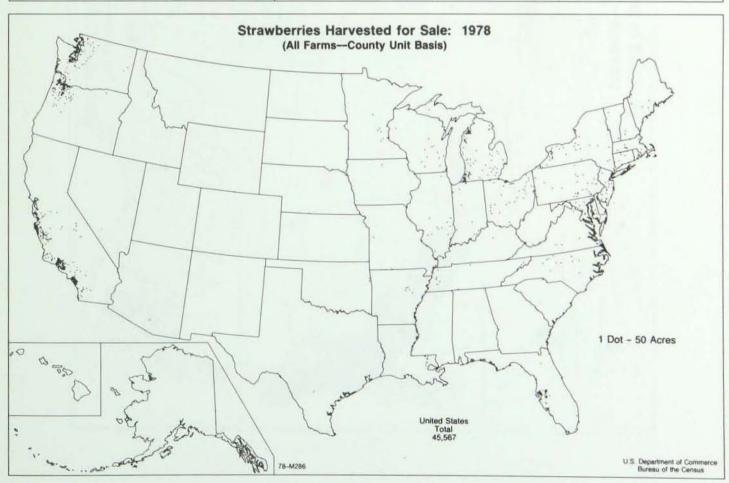


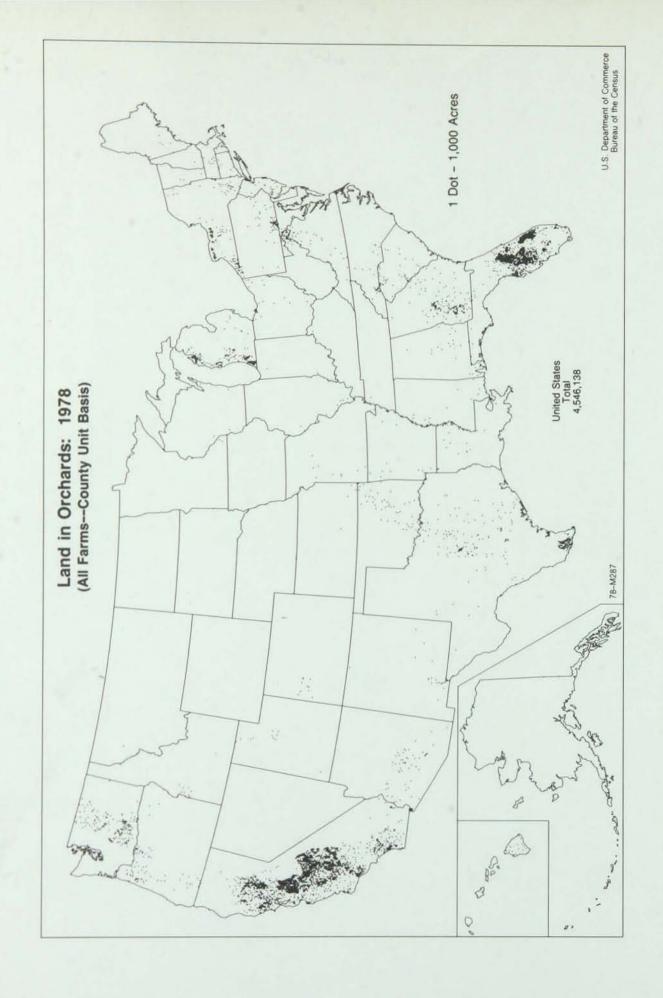


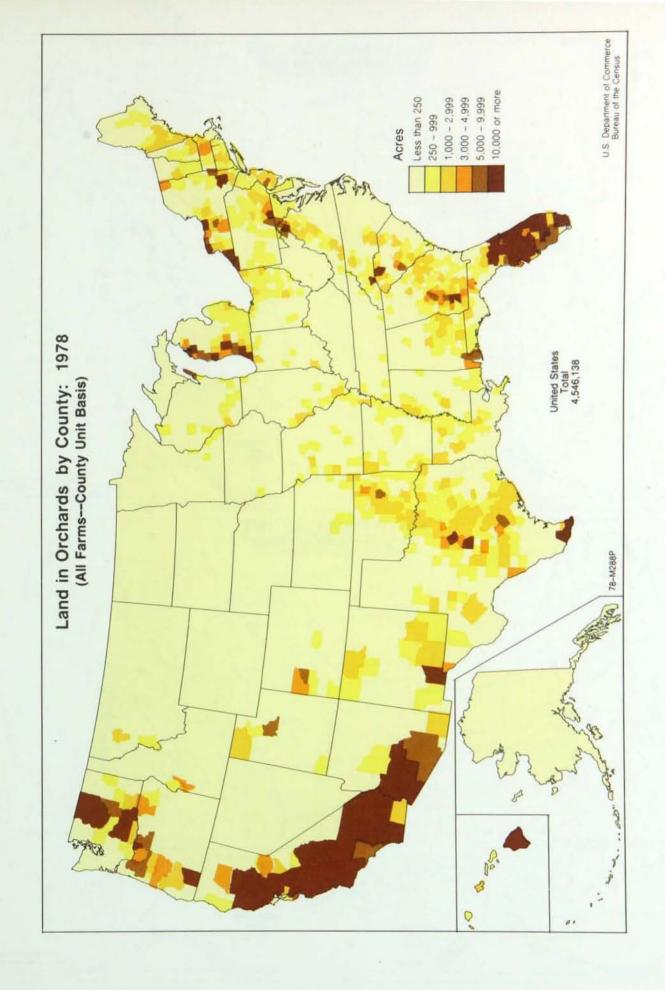


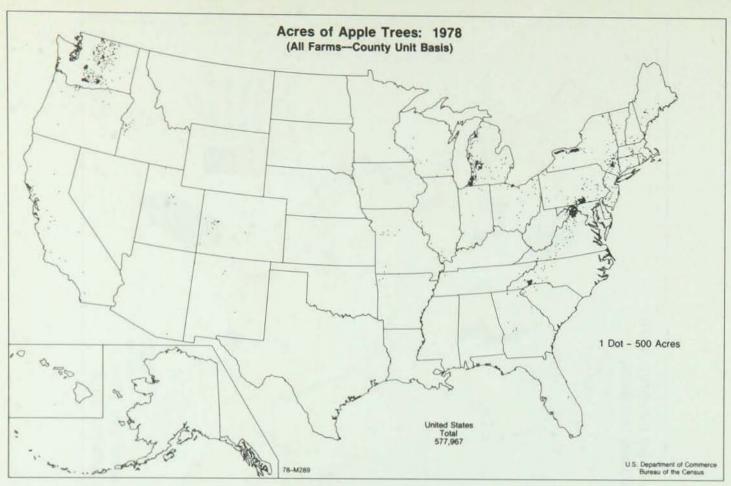


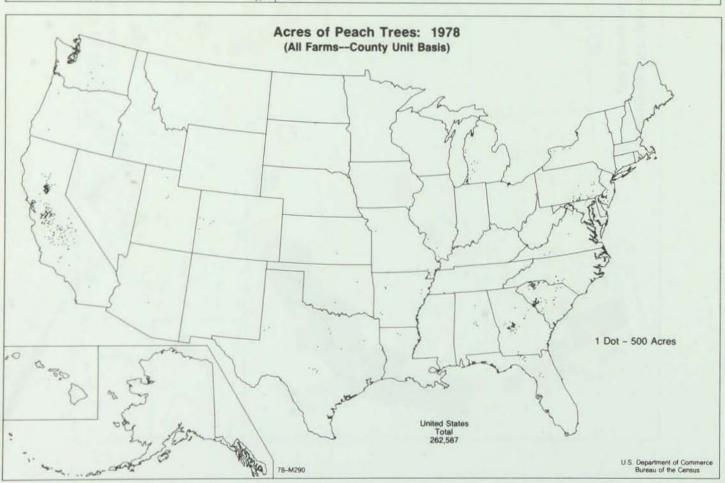


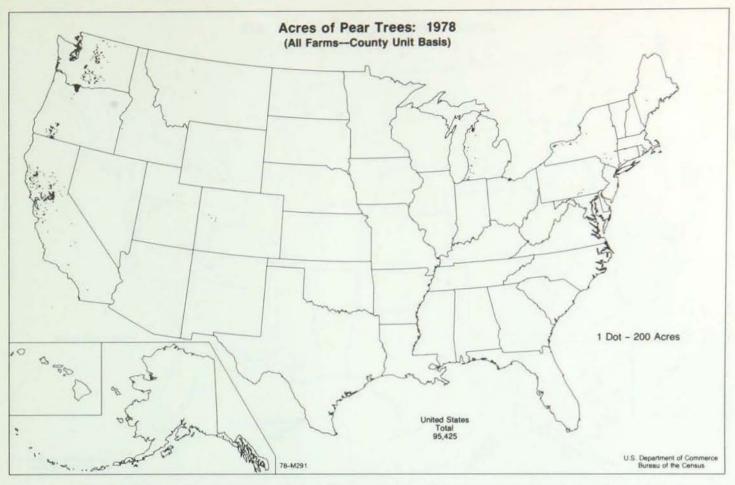


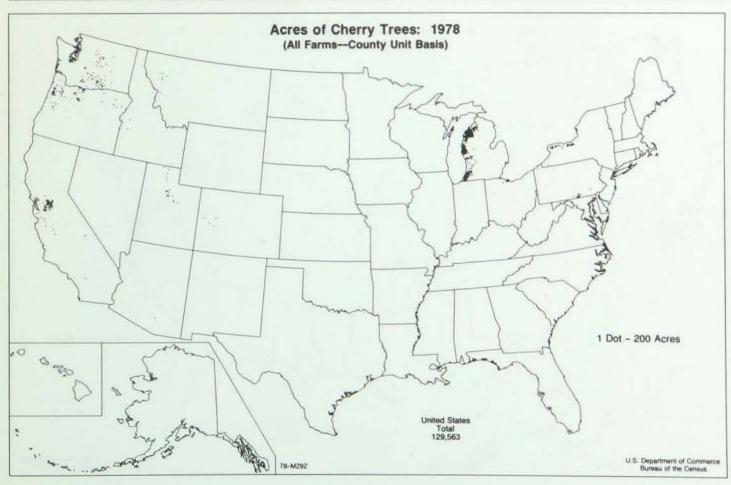


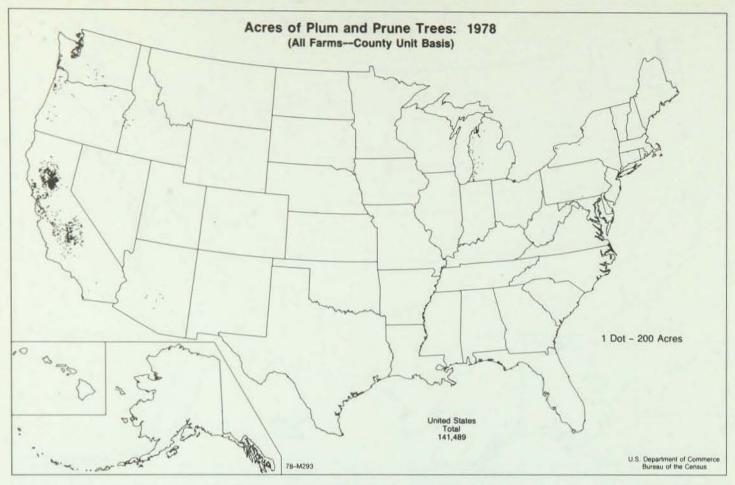


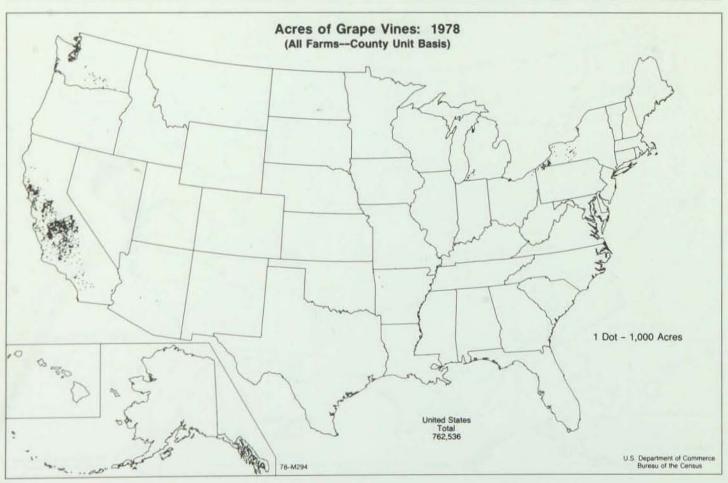


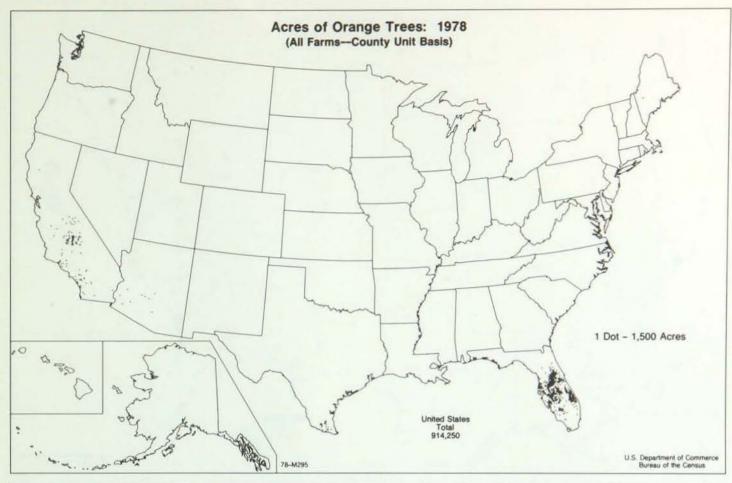


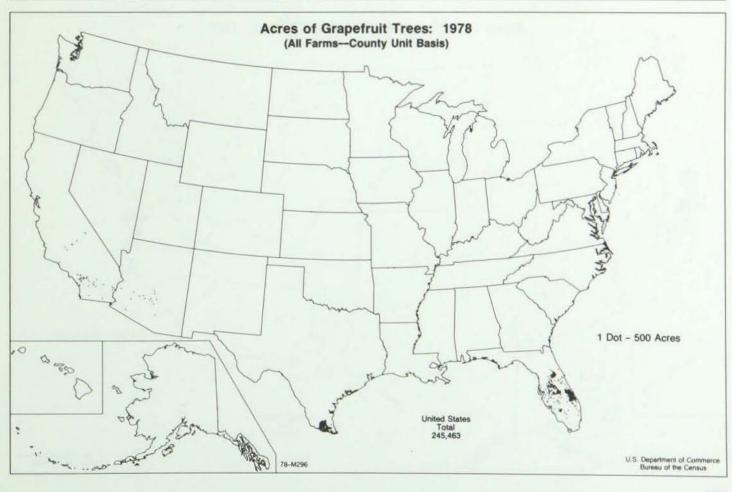


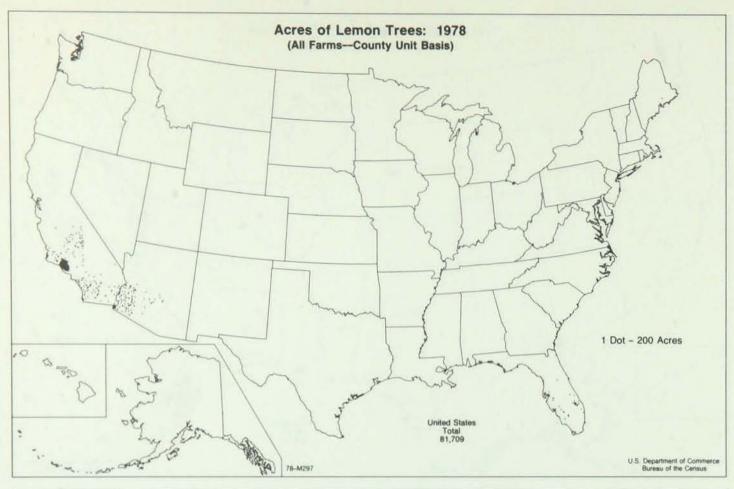


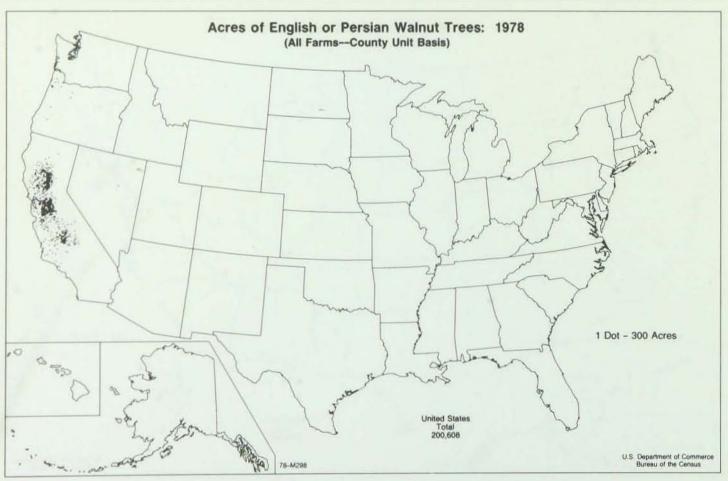


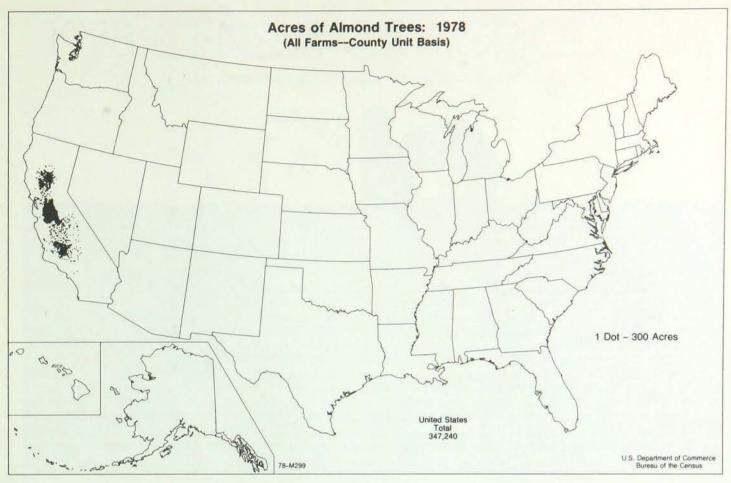


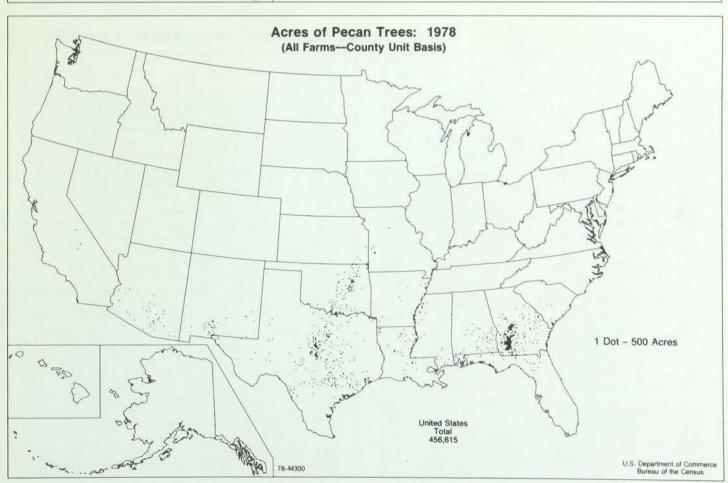


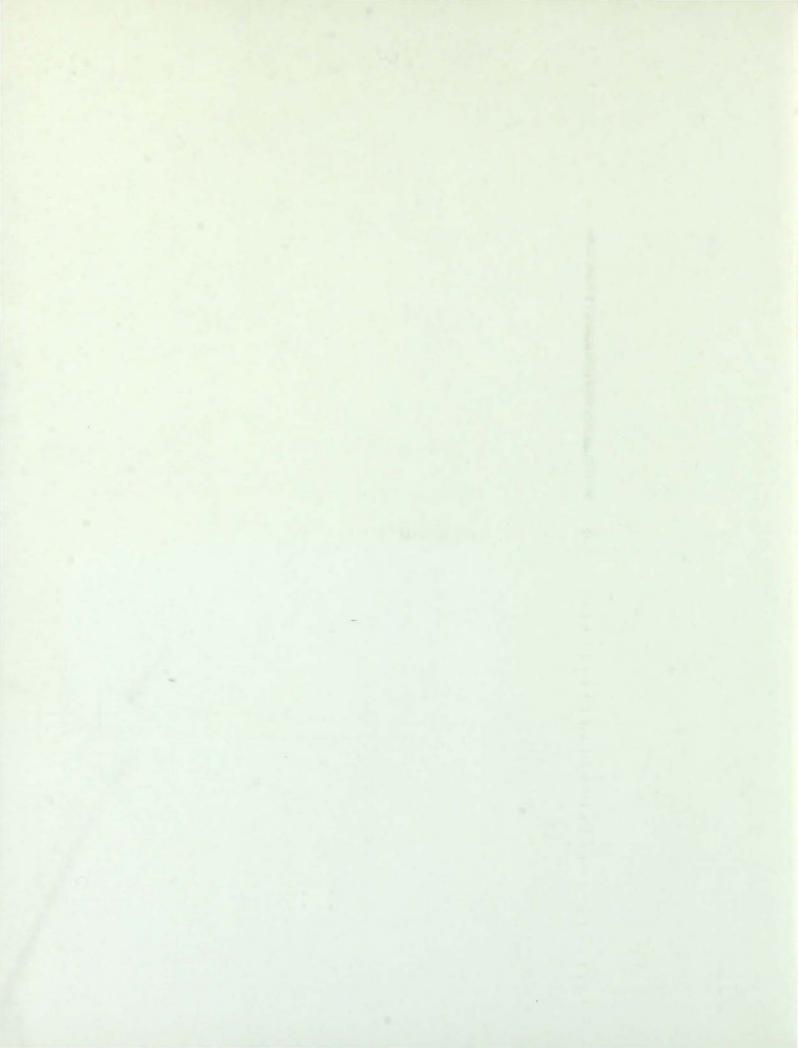












1978 CENSUS OF AGRICULTU

U.S. Department of Commerce BUREAU OF THE CENSUS



Farms

Land in Farms

Foreign Ownership

Energy-Expenditures

Value of Land and Buildings

Land Use - Crops Harvested

Value of Sales by Commodity Group

Livestock and Poultry-Inventory and Sales

Farm Operators—Race, Age, Sex, Principal Occupation

Volume 1 State and County Data

Part No.	States	Stock Number	Price
1	ALABAMA	003-024-02323-7	\$12
2	ALASKA	003-024-02324-5	\$7
3	ARIZONA	003-024-02325-3	\$8
4	ARKANSAS	003-024-02326-1	\$12
5	CALIFORNIA	003-024-02327-0	\$12
6	COLORADO	003-024-02328-8	\$12
7	CONNECTICUT	003-024-02329-6	\$7.50
8	DELAWARE	003-024-02330-0	\$7.50
9	FLORIDA	003-024-02331-8	\$12
10	GEORGIA	003-024-02332-6	\$19
11	HAWAII	003-024-02333-4	\$7
12	IDAHO	003-024-02334-2	\$10
13	ILLINOIS	003-024-02335-1	\$12
14	INDIANA	003-024-02336-9	\$13
15	IOWA	003-024-02337-7	\$12
16	KANSAS	003-024-02338-5	\$14
17	KENTUCKY	003-024-02339-3	\$14
18	LOUISIANA	003-024-02340-7	\$12
19	MAINE	003-024-02341-5	\$8
20	MARYLAND	003-024-02342-3	\$10
21	MASSACHUSETTS	003-024-02343-9	\$7.50
22	MICHIGAN	003-024-02344-0	\$12
23	MINNESOTA	003-024-02345-8	\$13
24	MISSISSIPPI	003-024-02346-6	\$12
25	MISSOURI	003-024-02347-4	\$14
26	MONTANA	003-024-02348-2	\$11
27	NEBRASKA	003-024-02349-1	\$13
28	NEVADA	003-024-02350-4	\$8
29	NEW HAMPSHIRE	003-024-02351-2	\$7.50

Part No.	States	Stock Number	Price
30	NEW JERSEY	003-024-02352-1	\$9.50
31	NEW MEXICO	003-024-02353-9	\$9
32	NEW YORK	003-024-02354-7	\$11
33	NORTH CAROLINA	003-024-02355-5	\$13
34	NORTH DAKOTA	003-024-02356-3	\$10
35	оню	003-024-02357-7	\$13
36	OKLAHOMA	003-024-02358-6	\$12
37	OREGON	003-024-02359-8	\$9.50
38	PENNSYLVANIA	003-024-02360-1	\$11
39	RHODE ISLAND	003-024-02361-0	\$7.50
40	SOUTH CAROLINA	003-024-02362-8	\$10
41	SOUTH DAKOTA	003-024-02363-6	\$12
42	TENNESSEE	003-024-02364-4	\$13
43	TEXAS	003-024-02365-2	\$23
44	UTAH	003-024-02366-5	\$9
45	VERMONT	003-024-02367-9	\$8
46	VIRGINIA	003-024-02368-7	\$13
47	WASHINGTON	003-024-02369-5	\$9.50
48	WEST VIRGINIA	003-024-02370-9	\$11
49	WISCONSIN	003-024-02371-7	\$12
50	WYOMING	003-024-02372-5	\$9
51	UNITED STATES	003-024-02322-9	\$11
52	PUERTO RICO	003-024-02373-3	\$7.50
53	GUAM	003-024-02374-1	\$4
54	VIRGIN ISLANDS	003-024-02375-0	\$2.50

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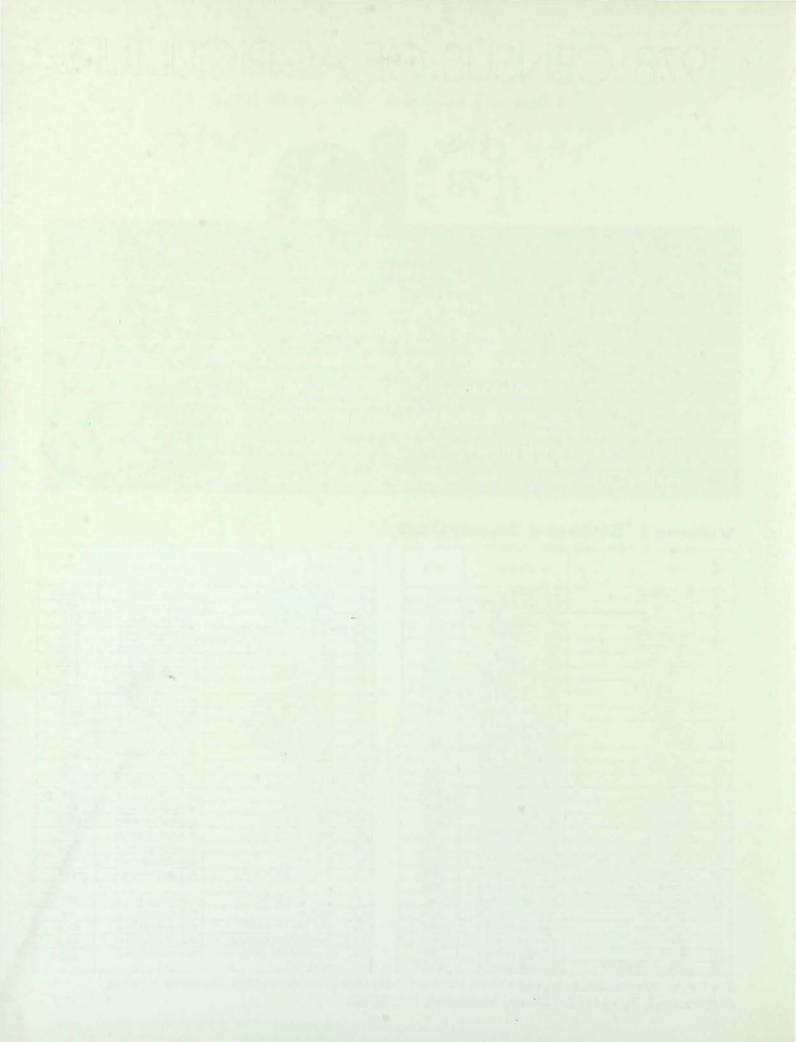
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