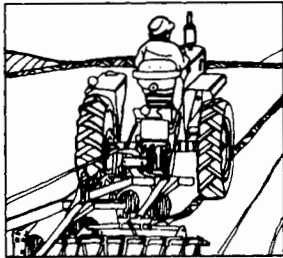
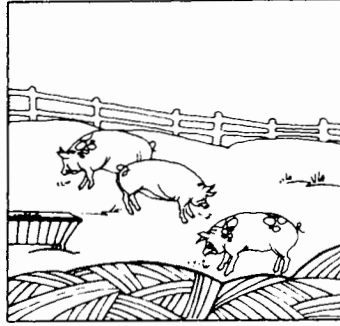
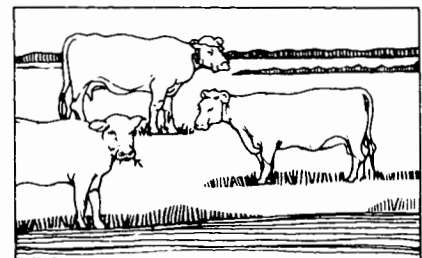
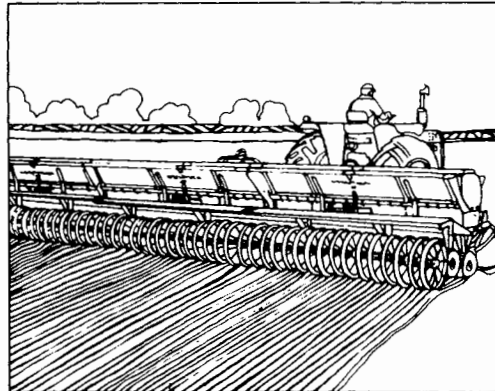
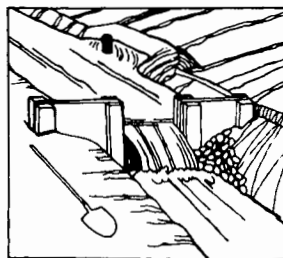
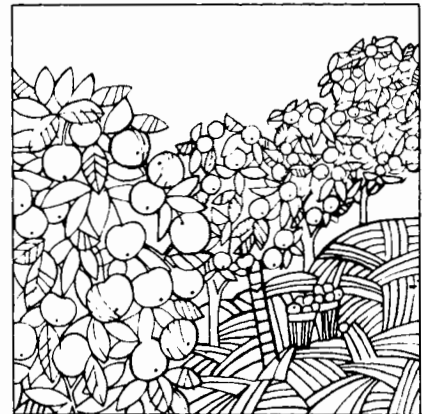


part 10
**HORTICULTURAL
SPECIALTIES**

**VOLUME V
SPECIAL REPORTS**



**1969
CENSUS OF
AGRICULTURE**



Issued October 1973



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REPORTS OF THE 1969 CENSUS OF AGRICULTURE

Individual County Reports

Eight-page reports have been issued for each county and State.

Volume I. Area Reports

A separate report has been published for each State, American Samoa, Guam, Puerto Rico, Trust Territory, and the Virgin Islands. The report consists of two sections. Section 1 contains State summary data, county summary of selected data, and miscellaneous items by counties; Section 2 contains the detailed county reports.

Volume II. General Report

Statistics by subject are presented in separate chapters with totals for the United States, regions, geographic divisions, and States. The nine chapters are being issued as individual reports as follows:

- Chapter 1 General Information; Procedures for Collection, Processing, Classification*
- Chapter 2 Farms: Number, Use of Land, Size of Farm*
- Chapter 3 Farm Management, Farm Operators*
- Chapter 4 Equipment, Labor, Expenditures, Chemicals*
- Chapter 5 Livestock, Poultry, Livestock and Poultry Products*
- Chapter 6 Crops, Nursery and Greenhouse Products, Forest Products*
- Chapter 7 Value of Products, Economic Class, Contracts*
- Chapter 8 Type of Farm*
- Chapter 9 Irrigation and Drainage on Farms*

Volume III. Agricultural Services

This new report contains data relating to agricultural services for the United States by State and county.

Volume IV. Irrigation

Data will be included on drainage basins, land irrigated, crop production on irrigated land, water conveyed, users, and types of organizations.

Volume V. Special Reports

Reports may contain data obtained from supplemental surveys, such as type of farm, horticulture, and farm finance; in addition to information obtained in the census.

- Parts 1 to 9. Type-of-Farm Operations.*—One for each of nine major type-of-farm classifications.
- Part 10. Horticultural Specialties.*
- Part 11. Farm Finance.*
- Part 12. Ranking Agricultural Counties.*
- Part 13. Forms and Procedures.*
- Part 14. Procedural History.*
- Part 15. Graphic Summary.*
- Part 16. Coverage Evaluation.*

Volume VI. Drainage of Agricultural Lands

This report will include agricultural drainage statistics collected from individual farms and from publicly organized drainage projects.

ACKNOWLEDGMENTS—Many persons have contributed to the success of the 1970 Census of Horticultural Specialties. Various universities throughout the country, associations of florists, horticulturists, nurserymen, and greenhouse operators have been most generous with their assistance and pertinent comments.

The U.S. Department of Agriculture cooperated with the Bureau of the Census at all levels. In particular, the State office personnel of the Statistical Reporting Service (SRS) aided by coordinating their foliage and flower grower survey with this Survey of Specialized Agriculture. Considerable duplication of effort was avoided through this coordination, and unit costs were reduced.

John Witzig and **Glenn E. Fisher** of SRS, assisted in ensuring that processing of the reports met the standards required by both agencies and that contacts with respondents were not duplicated by either agency in resolving problems.

Members of the Census Advisory Committee on Agriculture Statistics and other representatives of public and private associations and firms gave generously of their time and effort in establishing data requirements and priorities for collection and publication of the information.

Truman Fossum, consultant to marketing and florists associations, was especially helpful with recommendations regarding coverage requirements and suggestions for tabular presentations which would conform with industry usage and needs.

Charles Merzel, **Jack Margolis**, **Ralph Graham**, and **Charles King** of the Agriculture Division, collaborated in developing edit specifications, data-keying instructions, and in preparing both clerical processing procedures and computer programs.

Most clerical and data-keying operations were performed in the Data Preparation, Jeffersonville, Ind., **Hobert A. Yerkey**, Chief, under the supervision of **Rex Pullin**, **Don L. Adams**, and **William Harlan** and **John Blackledge**, Agriculture Division, provided review and implementation of processing procedures.

Field followup data-collection activities were administered by the Field Division under **Paul R. Squires**, Associate Director for Data Collection and Statistical Procedures, and **Richard C. Burt**, Acting Chief, Field Division, with assistance from **James Johnson** and the Directors of the Bureau's Data Collection Centers.

Joseph A. Correll, Chief, Crops Branch, and **Edward J. James**, under the supervision of **Orvin L. Wilhite**, Assistant Chief for Agricultural Censuses, participated in the overall planning and supervised the development of specifications, tabulations, table designing, and report preparation.

Helen M. Davenport was responsible for historical data and **Helen D. Turner** for table formatting and publication implementation and liaison.

Primary direction of the program was performed by **J. Thomas Breen**, Chief, Agriculture Division.

SUGGESTED CITATION

U.S. Bureau of the Census, Census of Agriculture, 1969
Volume V. Special Reports
Part 10. Horticultural Specialties

U.S. Government Printing Office, Washington, D.C. 1973

LIBRARY OF CONGRESS CARD NO. 72-601370

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Introduction

History of the Census

Special censuses of horticultural specialty production have been taken in conjunction with the agriculture censuses of 1890, 1930, 1950, 1959, and 1969. The 1970 Census of Greenhouse Products, Nursery Products, Mushrooms, and Sod was taken in conjunction with the 1969 Census of Agriculture. As in the previous special censuses, the 1970 horticultural census included producers of cut flowers, flowering and foliage plants, bedding plants, or cultivated florist greens; nursery products; bulb crops; flower seeds; vegetables grown under glass, cultivated mushrooms, and vegetable plants. Data on the production and sales of sod and vegetable seeds were collected for the first time.

Farms and establishments producing flowers, bulbs, nursery products, and vegetable and flower seeds have been included in the periodic censuses of agriculture. However, the number of questions that can be included in the regular census is limited. Therefore, data published on horticulture in those periods is restricted in scope (nine questions in 1969, see page 2.) The results of the special censuses prior to 1970 appear in the following census reports:

1890—Volume IV Statistics of Agriculture in the U.S. Eleventh Census 1890

1930—Fifteenth Census of the U.S.; 1930 Horticulture Statistics for the United States and for States, 1929 and 1930

1950—Volume V, Special Reports, Part I, Horticultural Specialties

1959—Volume V, U.S. Census of Agriculture; 1959, Part I, Horticultural Specialties

Legal Basis for the Census

This special census of horticultural specialty production is conducted under the provisions of Title 13, United States Code. Section 142 of Title 13 provides for the census of agriculture; Section 193 provides for such supplementary statistics related to the main topic of the census as are necessary to the completion thereof.

Period Covered by the Survey

The 1970 census of horticultural specialties covers operations of the calendar year 1970 except for the small portion of establishments that maintain their records on a fiscal-year basis. These were permitted to report for their fiscal year that included at least half of the 1970 calendar year. Data on employment and structures and equipment were to be reported for the period specified on the questionnaire.

Elimination of Duplicate Reporting

A survey of cut flowers and foliage plants is conducted annually in 23 States by the Statistical Reporting Service (SRS) of the U.S. Department of Agriculture and, in Hawaii, by the State government. Arrangements were made for the use of a single data collection effort to serve the needs of both agencies, and each agency proceeded with data collection under its own legislative authority. The reporting form used by SRS carried in its heading the names of both agencies. Census accepted the data collected by SRS for all addresses found on the SRS list and deleted those addresses from its mailing list.

Report Forms Used for the 1970 Survey

Four report forms were used to conduct this survey. Form A19.1 was used by the Bureau of the Census in all States except Hawaii. Form A19.2 was identical to Form A19.1, except for two elements in the title block (inclusion of both U.S. Department of Agriculture (USDA) and the U.S. Department of Commerce as sponsors and omission of the Title 13 mandatory requirement). Form A19.2 was used by USDA Statistical Reporting Service in the following 23 States:

Massachusetts	Indiana	Missouri	Texas
Connecticut	Illinois	Delaware	Colorado
New York	Michigan	Maryland	Washington
New Jersey	Wisconsin	North Carolina	Oregon
Pennsylvania	Minnesota	Florida	California
Ohio	Iowa	Tennessee	

Since Hawaii also conducts an annual floriculture survey, the Census Bureau made similar arrangements to eliminate the duplicate reporting burden. Form A19.3 differed from forms

A19.1 and A19.2 by including specific items for flowers and plants of economic importance in Hawaii.

Form A19.4 is a shortened version, limited to a small list of the flowers most frequently grown in Hawaii. It was mailed to those growers whose operations were believed to be confined to the items included on the form. Supplemental information was obtained by telephone or correspondence if the answers in section 3 indicated operations beyond the scope of the shortened form.

The 1970 report form was more specific and encompassed a much broader area of horticulture than those used in prior censuses. Flowering and foliage plants, bedding plants, cut flowers, and cultivated florists' greens required more than 100 questions. Carnations, roses, chrysanthemums, gladioli, and foliage plants, nursery products, bulbs, flower seeds, vegetables grown under glass, vegetable seeds, and sod were among the more important product questions. In addition, questions were included on structures, equipment, expenses, sales, and labor costs. In total, the report form included over 200 inquiries.

Section 22 of the 1969 Census of Agriculture report form provided the principal basis for preparation of the list of respondents for the 1970 Survey of Greenhouse Products, Nursery Products, Mushrooms, and Sod.

Growers Included in the Census

A list of growers was compiled from the 1969 Census of Agriculture reports of establishments growing and selling \$2,000 or more of horticultural products. This list was supplemented by lists from the State Departments of Agriculture for the 23 States in which the horticultural census was a cooperative effort.

In order to avoid duplicating the respondent burden, the listing of about 5,000 respondents enumerated by the Statistical Reporting Service of the U.S. Department of Agriculture was provided to the Census Bureau so that those addresses could be deleted from the Census Bureau list. For processing control purposes, addresses obtained from the 1969 Census of Agriculture reports retained the same Census File Number initially assigned. Nonduplicate addresses obtained from USDA were assigned unique Census File Numbers. When the records had been processed through the clerical operation, they were placed in State and county filing order pending data keying.

The 1970 horticultural census, like the agriculture census, was conducted by mail, with telephone and some direct-interview followup to complete delinquent cases. The Statistical Reporting Service of USDA conducted all data collection and most of the followup actions for the respondents on their list.

Facsimile of Section 22, Form 69-A1

Section 22 - Were any NURSERY or GREENHOUSE PRODUCTS grown for sale on this place in 1969? (See Leaflet, section 22.)

Yes - Complete this section

No - Go to Section 23

	Area used in 1969			Value of sales, 1969 Report approximate amount CENTS NOT REQUIRED	
	Square feet under glass or other protection	Acres in the open Report tenths of acres	Tenths	Dollars	Cents
1. Nursery products—trees, shrubs, vines, etc.)	370		10	\$	
2. Sod	372		10	\$	
3. Bulbs	375		10	\$	
4. Cut flowers, florist greens, and potted, bedding, or other florist plants	377	378	10	\$	
5. Flower seeds, vegetable seeds, and vegetable plants	400	401	10	\$	
6. Mushrooms	403			\$	
7. Vegetables grown under glass or other protection:	405			\$	
a. Tomatoes	407			\$	
b. Cucumbers	409			\$	
c. Lettuce	411			\$	
d. Other vegetables	413	414		\$	
8. Area irrigated - Include items 1 through 7			10		

Area fertilized			Fertilizer used			
Square feet	Acres	Tenths	Dry		Liquid or gas	
			Whole tons	Tenths	Whole tons	Tenths
415	416	10	417	10	418	10

9. Commercial fertilizer used on nursery or greenhouse products

The Statistical Reporting Service conducted its part of this survey under voluntary compliance legislation. Its respondents received the same form but the title showed SRS as well as Census in the title block, and a transmittal letter stated that the report would be used by both agencies. It did not cite provisions of the law.

The Census Bureau collected data for this survey under the mandatory provisions of the Census Act (Title 13, United States Code). Thus, information could flow from SRS to Census but under the confidentiality provisions of the Census legislation, addresses and individual records obtained by the Census Bureau could not be made available to SRS. In part, the differences in information published by the two agencies may be attributed to this limitation.

After unduplicating the State lists of addresses supplied through the Department of Agriculture, the Census Bureau mailed specialized horticulture report forms in March 1971 to about 10,000 potentially in-scope respondents. Two subsequent followup mailings were made to nonrespondent establishments. Estimates were made for the few establishments from which reports were not obtained. The completed returns, together with the 5,000 report forms collected by the Department of Agriculture, were reviewed and those establishments not growing and selling \$2,000 or more of horticultural products in 1970 were not included in the tabulations. Likewise, nongrowers such as retail florists, landscape contractors, garden center operations, etc., were not considered within the scope of the survey.

Reporting of Firms Having More Than One Growing Location

If a grower had production in several counties in the same State, his report was tabulated and published for the county having the greatest production. If a grower was operating in two or more counties and each had the same amount of production, the data published were for the county in which the sales office was located. A grower operating in more than one State was asked to complete a separate report form for each State where horticultural specialty crops were produced even though all products were marketed from a central location.

Comparability of Data From Previous Censuses

Farms or establishments producing flowers, bulbs, nursery products, and vegetables and flower seeds, traditionally, have been included in the general census of agriculture. As previously stated, detailed data on these types of agricultural production have been obtained in special horticultural censuses in connection with 1890, 1930, 1950, 1959, and 1969 censuses of agriculture.

Comparative data are given in this volume only for 1959. There were differences in the amount of data collected, the scope of the census, and the methods of arriving at value of sales for the earlier censuses. In 1970, total sales and wholesale sales are shown separately. Retail sales may be obtained by subtraction.

In 1959, with the exception of one table, all prices were adjusted to a wholesale basis. In 1930, all establishments having sales of horticultural specialty items were included in the survey if the place met the classification requirements defining a farm.

The 1959 census data on employment relate to the pay period nearest November 15, 1959. The 1970 survey data relate to the pay period including January 12, 1971.

Reliability of Data

Completed forms received from the individual growers were reviewed clerically, keyed to magnetic tape, and then checked for internal consistency by computer. Significant omissions and statistical inconsistencies were resolved by telephone or correspondence or by comparison with similar reports in the same area, and on occasion, by personal visit where the situation warranted the additional expense. Most larger growers, specialized or diversified, provided detailed information with apparently little difficulty. Small- and medium-sized growers in 1970, as in 1959, sometimes found it difficult to specify quantities and dollar value of sales of a good many individual products.

One new problem area is finished potted plants, foliage, or green plants. A standard practice appears to be to "mix" these plants in a single container. This has achieved a very high sales volume that cannot be compared to previous census data. It was difficult for these growers to determine just how many plants by type are included in these miniature "gardens" that are currently a popular sales item. The only thing possible at this juncture was to report these sales under "other" potted plants.

Landscape dealers and garden-center operators whose reported sales are solely of items purchased for resale—not produced on the place and sold—are not included in this census of greenhouse products, nursery products, mushrooms, and sod. Where establishments of this type qualified for inclusion, in consequence of their production operations, every effort was made to delete from their reports any information not directly related to the production operations.

Abbreviations and Symbols

The following abbreviations and symbols are used throughout the published tables:

- X Not applicable.
- NA Not available
- Z Less than half of the unit reported
- D Data withheld to avoid disclosure of information for individual operations

General Description of Detailed Tables

There are 10 county tables where the 1970 data are presented with applicable 1959 data, where available. The 1970 and 1959 census reports collected both wholesale and retail figures, but

the 1959 census converted all retail sales to a wholesale basis. The comparisons are not for identically reported figures. The 1970 figures show a total sales figure and a total wholesale figure; retail figures may be obtained by subtracting wholesale sales from total sales.

Reported data that would disclose individual operations are deleted from county totals and combined in State totals in a fashion to prevent obtaining data on the individual establishments. Data are not shown for any county with fewer than three establishments. It usually was unnecessary to delete the number of operators, just sales. Also, flower totals for fewer than three operators generally have not been published because specialized operators often account for a preponderance of sales of a particular flower.

Disclosure analysis was performed by technical experts specializing in particular subject-matter areas. For example, a nurseryman from Florida having \$50,000 sales of leatherleaf would be less likely to be a disclosure than a nurseryman in Missouri with \$50,000 sales of leatherleaf. The size entry may not amount to a disclosure in one State where adjacent frequencies had similar items; in another State, it quite possibly might be a disclosure.

All large totals for one or two operators were carefully reviewed. After required adjustments had been made on the county tables, the 21 State summary tables were adjusted. Generally, disclosures were of little difficulty at the State level. To avoid the possibility of multiple disclosures, data for three States having a limited number of horticultural establishments are not shown in the county tables. However, the data are included in the State and the U.S. Summary Tables, where Alaska is combined with Washington, and Nevada and Wyoming are combined with Colorado.

The small differences between the computer-calculated percentages in the county tables and the hand-calculated percentages in the summary tables are the result of differences in the rounding procedures used.

As sales volume reached new highs, the number of qualifying establishments reporting declined from 17,999 in 1959 to 12,962 in 1970; a drop of 5,037 or 28 percent. The national average sales per establishment in 1959 was in the \$30,000 to \$35,000 range; by 1970, the national average had more than doubled to a range of \$70,000 to \$75,000.

Establishments with less than \$2,000 in annual sales were not included in the census in either 1959 or 1970. The volume of total sales increased nearly 65 percent over the 1959 sales of \$585 million.

Number of Establishments Reporting

Of the 12,962 establishments, the nationwide reduction in number of firms reporting was fairly even, State by State. The top ranking States in total numbers remained the same in 1970 as they were in 1959. Hawaii, ranking 14th, and Alaska, ranking 48th, were included in 1970 for the first time. The 19 lowest

ranking States accounted for only 5 percent of the total number of establishments, less than 650 in all.

Only two States—Colorado and Idaho—showed increases in the total number of establishments; the other 46 showed declines from 1959. Colorado, with an increase of 129 establishments, moved from 23d to 13th rank; Idaho, with an increase of 25 establishments, from 41st to 30th.

Sales of Florist Crops Reported in 1970

In terms of number of flowers, roughly four times the 1959 total sales were reported by the 1970 survey. Value of sales are unavailable for individual items for 1959; the top 22 florist items ranked by value of sales for 1970, are shown in the following table.

Rank of Florist Crops by Total Sales Value

1. Chrysanthemum	\$119,630,995
2. Rose	60,800,568
3. Carnation	55,512,579
4. Cultivated foliage	50,817,378
5. Geranium	24,795,246
6. Gladiolus	20,918,107
7. Poinsettia	20,483,032
8. Azalea	19,544,640
9. Orchid	12,773,754
10. Lily	10,541,011
11. Petunia	10,345,699
12. Tulip	4,831,395
13. Hydrangea	4,274,029
14. Begonia	3,409,501
15. Snapdragon	3,205,634
16. Marigold	3,201,258
17. Pansy	2,688,148
18. Gardenia	2,389,191
19. Saintpaulia	2,310,454
20. Daisy	2,241,077
21. Salvia	2,211,391
22. Hyacinth	2,058,626

Note: Includes rooted cuttings, pot and cut flowers and foliage greens.

The total sales of \$439 million for the top 22 florist crops amounted to just over 45 percent of the total sales of all horticulture specialty crops in 1970 and amounted to approximately 74 percent of the total 1959 sales.

Chrysanthemums accounted for the greatest sales volume. Roses (second), and carnations (third), were far ahead of all other flower items sold, although cultivated foliage came in a close fourth.

Flower Seeds and Bulbs by Value of Sales

The three most recent horticulture census periods reveal some interesting trends on this important segment of the industry. Flower-seed total sales peaked in 1959 at nearly \$5 million and declined to \$1.6 million in 1970. Every seed item showed a decline from 1959 except stock, which showed a modest increase over 1959 sales.

Bulbs, on the other hand, show an unusually constant rate of increase in the census periods reviewed. Although 1970 gladiolus bulb sales were substantially larger than 1959, the total sales still are almost \$1 million less than in 1949. Sales volume on iris (ranked third) for 1970 was more than twice the sales in either 1959 or 1949. Daffodils have steadily declined in sales since 1949, reaching a low of just over \$600 thousand in 1970.

Flower Seeds and Bulbs Ranked by Value of Sales: 1970, 1959, and 1949

	Rank	1970 (dollars)	Rank	1959 ¹ (dollars)	Rank	1949 ¹ (dollars)
Flower seeds, total.....		1,654,130		2,592,824		1,826,226
Zinnia.....	1	305,431	6	191,502	2	177,211
Marigold.....	2	183,391	4	217,560	7	67,343
Sweet Pea.....	3	157,065	1	353,077	3	152,784
Stock.....	4	98,677	7	82,284	4	137,904
Petunia.....	5	85,923	3	226,480	1	232,371
Aster.....	6	37,574	5	207,974	6	113,484
Snapdragon.....	7	26,954	2	254,672	5	120,681
All other.....		750,115		1,059,275		824,448
Bulbs, total.....		10,375,341		9,963,663		9,236,989
Gladiolus.....	1	2,984,113	1	2,715,677	1	3,820,578
Lily, Easter.....	2	1,642,215	2	1,822,106	3	1,007,541
Iris, bulbous.....	3	1,013,511	8	435,992	4	459,227
Iris, rhizomatous.....	4	688,243	5	758,788	7	407,970
Lily, other than Easter.....	5	644,230	6	494,369	9	187,946
Daffodil.....	6	613,336	4	767,907	2	1,369,737
Caladium.....	7	570,928	3	776,784	10	151,691
Peony.....	8	350,381	9	411,328	8	243,392
Dahlia.....	9	313,201	7	445,670	5	430,355
Tulip.....	10	271,703	10	237,542	6	420,609
All other.....		1,283,480		1,097,500		737,943

¹In 1959 and 1949, sales were converted to wholesale basis.

Nursery Products by Value of Sales

Total sales show a continuing increase over the years. While 1970 showed an increase of more than 80 percent, sales in 1959 were more than twice the 1949 total sales. Ornamentals, as in past censuses, were by far the leading nursery item.

Lining out stock sales have nearly doubled in the years between each census reviewed, reaching a 1970 high of nearly \$13 million, about four times the 1949 sales volume.

Ornamental plants' total sales for 1970 also reached a volume nearly four times as great as 1949, and just a bit less than double the 1959 figure. Every item reviewed exceeded \$3 million in sales for 1970.

Deciduous fruit and nut sales exceeded 1959 by more than double and were over four times the 1949 volume of sales. Sales

of apple trees outstripped all other items in this category, exceeding \$7 million for 1970. All items reviewed in this category exceeded \$1 million in sales.

Citrus and subtropical fruit-tree sales dipped by almost \$1 million from the 1959 high of over \$7 million. Much of this drop was due to reduction of plantings of orange trees after an unusually high demand from 1959 through 1965.

Factors of weather in the citrus States, expansion and establishment of new orange groves stimulated by good prices, together with the normal need for replacement planting, augmented by the necessity to replace damaged trees, created an abnormal market and made 1959 a banner year for sales of orange trees. Nurseries grown by the citrus growers themselves were not sufficient to satisfy the demand.

Avocado sales for 1970 were four times the 1959 sales; lemon trees reached a volume of about three times the 1959 total. Every item reviewed, for the first time in 1970, exceeded \$1 million total sales.

Small-fruit-plant sales volume registered large gains exceeding \$6 million in 1970. Over \$5 million of those sales were in strawberry plants. Raspberries and blueberries each nearly doubled their 1959 sales volume.

Nursery Products Ranked by Value of Sales: 1970, 1959, and 1949

	Rank	1970 (dollars)	Rank	1959 ¹ (dollars)	Rank	1949 ¹ (dollars)
Lining out stock, total.....		12,959,870		7,559,271		3,323,068
Evergreens, ornamental.....	1	5,709,300	1	5,050,972	1	2,112,508
Deciduous fruit and nut stock.....	2	2,870,179	3	512,442	3	383,858
Deciduous ornamentals.....	3	1,764,834	2	1,716,128	2	472,640
Evergreen fruit and nut.....	4	1,464,013	4	177,057	5	18,582
Rose stock.....	5	1,151,544	5	102,672	4	335,480
Ornamental plants, total.....		232,582,511		125,124,417		57,297,435
Narrowleaf evergreens.....	1	60,939,461	1	36,367,644	1	18,695,944
Broadleaf evergreens.....	2	57,888,796	2	33,591,541	3	10,561,384
Deciduous trees.....	3	45,960,366	3	16,879,143	5	4,739,344
Roses.....	4	26,000,853	4	15,815,103	2	11,328,071
Deciduous shrubs.....	5	22,102,283	5	9,082,820	4	5,631,501
Herbaceous plants.....	6	6,045,661	6	3,481,647	6	2,614,703
Vines.....	7	3,925,716	8	1,039,254	8	724,549
Forest tree seedlings.....	8	3,359,523	7	3,276,830	7	1,456,595
All other.....		6,359,852		5,590,435		1,545,344
Deciduous fruit and nut, total.....		25,631,263		11,373,265		6,120,648
Apple.....	1	7,141,645	2	2,384,422	2	1,243,560
Nut.....	2	4,827,181	3	1,989,686	3	805,899
Peach.....	3	4,115,892	1	2,687,547	1	1,326,902
Grape.....	4	1,967,134	6	710,185	8	353,806
Pear.....	5	1,868,861	4	1,052,733	6	471,765
Plum.....	6	1,723,982	5	887,923	5	484,096
Sweet cherry.....	7	1,462,562	8	576,332	7	441,336
Tart cherry.....	8	1,006,484	7	600,210	4	735,462
All other.....		1,517,522		484,227		257,822
Citrus and subtropical fruit, total.....		6,319,922		7,409,449		1,795,404
Orange.....	1	1,660,523	1	5,557,678	1	712,969
Avocado.....	2	1,306,549	4	280,558	3	278,908
Lemon.....	3	1,234,450	3	433,408	4	189,264
Grapefruit.....	4	1,044,083	2	575,131	2	314,452
All other.....		1,074,317		562,674		299,811
Small fruit plants, total.....		6,142,663		4,039,555		2,516,164
Strawberry.....	1	5,018,268	1	3,514,671	1	1,579,959
Blueberry.....	2	489,610	3	196,534	3	216,793
Raspberry.....	3	452,502	2	233,020	2	442,338
Other.....		182,283		95,330		277,074

¹In 1959 and 1949 sales were converted to wholesale basis.

Description of Charts

The following charts show rankings by States or counties for various items and provide highlights on the Survey of Specialized Agriculture 1970, for establishments growing and selling greenhouse and nursery products, mushrooms, and sod.

Figure A shows States ranked by number of establishments in 1970 and the comparative 1959 ranking.

Figure B shows States ranked by total sales of all horticultural specialty crops for 1970 and comparative 1959 rankings. Significant differences exist between the comparative rankings of States by number of establishments and by dollar amount of sales. Colorado (ranked 10th) and Connecticut (ranked 12th) show sales in figure B considerably higher than Massachusetts and Washington, the two States outranking them in figure A. Connecticut (moving from 13th in 1959) nearly doubled its sales in 1970. Massachusetts, though showing significant increase in sales, did not retain the ninth ranking of 1959. Twenty-four States reported sales of more than \$10 million in 1970, whereas only 15 States did so in 1959.

Figure C shows States ranked by sales of nursery products with comparative 1959 rank. Some significant changes are apparent. Connecticut (ranked 12th in 1970) had just under three times the 1959 reported sales. Illinois, with just over twice its reported 1959 sales, moved from 10th place in 1959 to fourth place in 1970. Iowa, reporting more than three times its 1959 sales, moved from 16th place in 1959 to 11th place in 1970. Eight States reported sales of nursery products over \$10 million in 1970.

Figure D shows the ranking of States by sales of cut flowers in 1970, compared with 1959. Sales in this category were remarkably uniform from 1959 to 1970. The ranking 12 States of 1959 were the same in 1970 with only minor internal shifting of position. However, five States reported 1970 sales in excess of \$10 million where only four States in 1959 reported sales exceeding \$10 million. California (ranked first) and Colorado (ranked fourth) each more than doubled their annual sales between 1959 and 1970.

Figure E shows States ranked by sales of bulb crops in 1970. Only total sales were shown in 1959; data by States were not

presented. The 1970 sales exceeded the 1959 sales total by only \$411,678. California (ranked first) reported sales only slightly higher than second-place Oregon. Four States reported sales of more than \$1 million in bulbs while 35 States reported sales of bulb crops.

Figure F shows the ranking of counties by total sales of all horticultural specialty products, 1970 compared with 1959 rankings. Fifteen counties reported 1970 sales in excess of \$10 million. The largest increase in these 15 counties occurred in Kern County, Calif. From less than \$500 thousand in 1959, Kern County moved solidly into fifth place in 1970 with over \$20 million in reported sales. Ventura County, Calif., moved up from 64th into 12th place for 1970. Palm Beach County, Fla., moved from 37th place in 1959 into ninth place for 1970. Orange County, Calif., showed very significant growth, moving into 13th place from 39th in 1959. Chester County, Pa., also showed a significant increase, moving into first from second in 1959 with about 41 percent higher sales than second place Los Angeles County, Calif., which dropped from first into second place for 1970 while still showing a sizeable increase in sales.

Figure G shows the rank of the leading 100 counties by total sales of nursery products. The 1970 data are comprised of both wholesale and retail sales as reported. The 1959 data were converted to a wholesale price basis. The total 1970 sales of nursery products reached \$284 million which is slightly more than 29 percent of the total horticultural specialty sales. Since most nursery products are sold on the wholesale market, the 1970 and 1959 data are reasonably comparable despite the differences in reporting. Counties were not ranked by value of nursery products for 1959. Los Angeles County, Calif., reported sales of more than \$10 million, with Kern County, Calif., in first place, being the only other county to do so.

Figure H shows the rank of counties by sales of flowers and foliage for 1970. Although the comparative data for 1959 are shown, the counties were not ranked in this fashion in 1959. Of the six counties reporting 1970 sales over \$10 million, five were California counties; Orange County, Fla., ranked fourth in the nation. Los Angeles County, Calif., (ranked sixth) reported a slight decline from its 1959 sales volume. The other five counties showed increases in 1970 sales over 1959.