ACKNOWLEDGMENTS—Many persons participated in the various activities of the 1978 Census of Agriculture. Primary direction was by Shirley Kallek, Associate Director for Economic Fields, and Richard B. Quanrud, Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Agriculture Division under the general supervision of Orvin L. Wilhit, Chief (to January 1980) and Arnold L. Bollenbacher, his successor, Arnold L. Bollenbacher, assisted by Thomas D. Monroe, Donald R. Jahnke, and John A. Blackledge, was directly responsible for data content of the tables, analysis of the data, and clerical and computer editing, and tabulation specifications. William A. Harlan, Arlon M. Scott, and James C. Vogelsang, directed the resolution of problems with individual census reports.

John E. Adkins, assisted by Stephen M. Schobel, Loyd C. Brown, Billy E. Stark, Lowell Wrucke, Sharon C. Spivey, Martin S. Harahush, Ralph A. Graham, Avon B. Floyd, Kent C. Hoover, and Lee Smallwood, was directly responsible for the systems and processing procedures, including preparation of control systems, clerical procedures, and computer programs. Dana E. Moore and Jay A. Johnson were responsible for the photocomposition system. Bobbie E. Catlin and Paulette M. Bonchak were directly responsible for table preparation and publication standards used. Mittie Buchanan, Industry Division (to May 1980), and Helen R. Pugh, her successor, were responsible for coding the Linotron table formats for publication. Carl N. McAllister coordinated the final disposition of the tables. Virginia Crockett, Regina E. Lindsey, and Karin G. Bauer provided editorial services.

Charles E. Rogers, assisted by D. Dean Prochaska, and David D. Chapman, with the additional assistance of Jane Y. Dea and Tommy W. Gaulden, was directly responsible for mailing list acquisition and unduplication, design of sampling procedures for the direct enumeration sample and the sample from the mail list, sampling variability estimates, statistical adjustment for nonresponse, monitoring of processing, and evaluation of coverage. Albert W. Graybill was responsible for the preparation of the operational procedures for the collection and processing of the direct enumeration sample data.

George E. Pearce, assisted by Patricia A. Clark and Richard R. Storm, was directly responsible for overall census planning, the Farm and Ranch Identification Survey, and development of the data collection forms and followup letters. J. Thomas Miller, Consultant, assisted in the design and content of the data collection forms and followup letters, specifications for publication tables, and preparation of text.

Don L. Adams, Chief, Data Preparation Division, Jeffersonville, Ind., assisted by Patricia M. Clark, Rebecca Lamon, George Wilson, William L. Pangburn, Les Brown, Darrell L. Farabee, and Keith Lacey, was directly responsible for clerical and data-keying operations, and labeling, sorting, and distribution of the mail and direct enumeration census forms.

The direct enumeration activities were administered by the Field Division, under Forrest P. Cawley, Chief, with the assistance of Darren F. Althouse and Thomas J. Manning and the 12 directors of the Bureau's Regional Offices.

The computer processing facilities used were under the general supervision of C. Thomas DiNenna, Chief, Computer Operations Division.

Forms design was performed under the general supervision of Henry J. Husmann, Chief, Administrative Services Division, assisted by Albert W. Cosner, Cathern B. Kline, and Irene A. Gray.

Within the Publications Services Division, many individuals made significant contributions in the areas of publication planning and design, editorial review, composition, and printing procurement.

Important contributions were made by the members of the Census Advisory Committee on Agriculture Statistics in establishing data needs and priorities for collection and publication of the information. Other representatives of both public and private organizations also made significant recommendations and suggestions.

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.

The press, farm magazines, and radio and television stations were most helpful in publicizing the census and encouraging cooperation of farm and ranch operators. John W. Ternus and Douglas J. Miller, Agriculture Division, and Richard D. Ritter, Public Information Office, were primarily responsible for developing and coordinating the public relations program.

Special tribute is paid to the millions of farm and ranch operators and other agriculture-associated people who furnished the information requested in the census. Only through their cooperation was it possible to collect and publish the data in this report.

Library of Congress Cataloging in Publication Data
1978 census of agriculture.
Supt. of Docs. no.: L 3.31/
CONTENTS: v. 1. State and county data.—v. 2. Statistics by subject.—
v. 3. Agricultural services, [etc.]
1. Agriculture—United States—Statistics. I. Title. II. Title: Census of agriculture.

CONTENTS

Introduction............................................. VII
Highlights of the State’s Agriculture: 1978 and 1974............. IX
State Map ................................................ X

CHARTS
2. Profile of State’s Agriculture: 1978 ........................ XII
3. Land in Farms by Type of Organization: 1978 .............. XIII
5. Value of Products Sold by Size of Sales: 1978 .............. XIV

PATTERN MAPS
1. Land in Farms by County: 1978 .......................... XV
2. Average Size of Farm by County: 1978 ...................... XV
4. Value of Agricultural Products Sold by County: 1978 ......... XVI
5. Cattle and Calves Inventory by County: 1978 .............. XVII
6. Milk Cows Inventory by County: 1978 ...................... XVII
7. Corn Harvested for Grain by County: 1978 ................. XVIII
8. Wheat Harvested for Grain by County: 1978 ................. XVIII

TABLES
CHAPTER 1. State Data
1. Farms, Land in Farms, and Land Use: 1945 to 1978........... 1
2. Farms, Land in Farms, and Land Use, for Farms With Sales of $2,500 or More: 1978, 1974, and 1969 .............. 1
17. Selected Characteristics of Irrigated and Nonirrigated Farms: 1978 ........................................     9
TABLES—Con.

CHAPTER 1—Con.

23. Other Livestock and Livestock Products—Inventory and Sales: 1978 and 1974 ............... 16
24. Fish Sales: 1978 ............................................. 16
26. Specified Crops Harvested—Yield Per Acre Irrigated and Nonirrigated: 1978 ............. 18
27. Crops Harvested and Value of Production: 1978 and 1974 .............................................. 18
30. Summary by Type of Organization: 1978 .......................................................... 30
31. Summary by Age and Principal Occupation of Operator: 1978 ........................................ 38
32. Summary by Age and Principal Occupation of Operators for Farms With Sales of Less Than $20,000: 1978 .......................................................... 54
33. Summary by Size of Farm: 1978 .......................................................... 70
34. Summary by Value of Agricultural Products Sold: 1978 ........................................... 86
35. Summary by Standard Industrial Classification of Farm: 1978 ....................................... 102

CHAPTER 2. County Summary Data

1. Number, Land, and Value of Farms: 1978 and 1974 .......................................................... 118
2. Land Use: 1978 .......................................................... 119
3. Irrigation: 1978 .......................................................... 121
5. Farms and Land in Farms by Type of Organization: 1978 ................................................. 123
7. Farms by Value of Sales and Occupation: 1978 .......................................................... 124
11. Market Value of Agricultural Products Sold for Farms With Sales of $2,500 or More: 1978 ........ 129
12. Selected Farm Production Expenses: 1978 .......................................................... 130
14. Hired Farm Labor—Expenses and Number of Workers: 1978 ........................................ 134
15. Estimated Market Value of All Machinery and Equipment: 1978 ................................... 135
17. Hogs and Pigs—Inventory and Sales: 1978 .......................................................... 144
18. Poultry—Inventory and Sales: 1978 .......................................................... 147
20. Sheep and Lambs—Inventory and Sales: 1978 .......................................................... 149
21. Milk Goats—Inventory and Sales: 1978 .......................................................... 151
22. Angora Goats—Inventory and Sales: 1978 .......................................................... 152
23. Mink and Their Pelts—Inventory and Sales: 1978 ......................................................... 152
24. Colonies of Bees and Honey—Inventory and Sales: 1978 ............................................ 152
25. Fish Sales: 1978 .......................................................... 153
26. Miscellaneous Poultry—Inventory and Sales: 1978 .......................................................... 153
27. Miscellaneous Livestock and Animal Specialties—Inventory and Sales: 1978 ................. 156
32. Fruits and Nuts: 1978 .......................................................... 170
33. Berries: 1978 .......................................................... 176
34. Nursery and Greenhouse Products, Mushrooms, and Sod: 1978 ................................ .... 177
35. Other Crops: 1978 .......................................................... 179
37. Income From Machine Work, Customwork and Other Agricultural Services: 1978 .............. 180
TABLES—Con.

CHAPTER 2—Con.

39. Farms Operated by Black and Other Races: 1978 .................................................. 181
40. Farms Operated by Black and Other Races by Tenure: 1978 ...................................... 182
41. Operators by Selected Racial Groups: 1978 ............................................................... 182
42. Operators of Spanish Origin: 1978 ............................................................................. 182
43. Female Operators: 1978 ............................................................................................. 183

CHAPTER 3. Individual County Data  [The following tables are common to the State and each county]

1. Farms, Land in Farms, and Land Use: 1978 and 1974
3. Farms, Land in Farms, Land Use, and Irrigation, by Size of Farm: 1978 and 1974
5. Selected Farm Production Expenses: 1978 and 1974

Pennsylvania. ........................................ 184 Huntingdon ........................................ 344
Farms not on Mail List ................................ 189 Indiana ............................................. 349
Adams ........................................ 194 Jefferson ........................................... 354
Allegheny ........................................ 199 Juniata ............................................ 359
Armstrong ...................................... 204 Lackawanna .................................... 364
Beaver .......................................... 209 Lancaster ......................................... 369
Bedford ........................................ 214 Lawrence ........................................ 374
Bucks .......................................... 219 Lebanon .......................................... 379
Blair ........................................... 224 Lehigh ................................................ 384
Bradford ...................................... 229 Luzerne ............................................ 389
Butler .......................................... 234 Lycoming ........................................ 394
Cambria ...................................... 244 McKean .......................................... 399
Cameron ...................................... 249 Mercer ............................................ 404
Carbon ........................................ 254 Mifflin ............................................. 409
Centre ......................................... 259 Monroe ........................................... 414
Chester ........................................ 264 Montgomery .................................. 419
Clarion ......................................... 269 Montour .......................................... 424
Clearfield ...................................... 274 Northampton .................................. 429
Clinton ......................................... 279 Northumberland ................................. 434
Columbia ...................................... 284 Perry ............................................... 439
Crawford ...................................... 289 Philadelphia ..................................... 444
Cumberland .................................. 294 Pike ................................................ 444
Dauphin ........................................ 298 Potter ............................................. 449
Delaware ....................................... 304 Schuylkill ........................................ 454
Erie ............................................ 314 Snyder ............................................. 459
Elk ............................................. 309 Somerset .......................................... 464
Fayette ........................................ 319 Sullivan .......................................... 469
Forest .......................................... 324 Susquehanna .................................... 474
Franklin ........................................ 329 Tioga ............................................... 479
Fulton ........................................... 334 Union ............................................. 484
Greene ........................................ 339 Venango ...................................... 489

See footnotes at end of contents.
TABLES—Con.

CHAPTER 3—Con.

Washington ........................................... 499  Wyoming ............................................ 514
Wayne .................................................. 504  York ................................................... 519
Westmoreland ......................................... 509

APPENDIXES

A. General Explanation ................................................. A-1
C. Comparison of 1974 Farm Counts With 1978 Farm Counts .......................................................... C-1
D. Report Forms ...................................................... D-1

Index .............................................................................. Index-1
Publication Program .................................................. Inside back cover

1 Not shown separately to avoid disclosing data for individual farms. However, the data for the county are included in the State totals.
INTRODUCTION

HISTORY

The census of agriculture provides a periodic statistical picture of the Nation's farming, ranching, and related activities. The 1978 Census of Agriculture is the 21st taken by the U.S. Department of Commerce, Bureau of the Census.

The first agriculture census was taken in 1840 as part of the sixth decennial census. From 1840 to 1950, an agriculture census was taken as part of the decennial census of population. A mid-decade census of agriculture was conducted in 1925, 1935, and 1945. From 1954 to 1974 a census of agriculture was taken for the years ending in 4 and 9. In 1976, Congress authorized the census of agriculture to be taken for 1978 and 1982 to adjust the data reference year to coincide with the 1980 Census of Population and Housing.

Agriculture, Department of Commerce, Bureau of the Census, published the 1980 Census of Population and Housing.

METHOD OF ENUMERATION

Evaluation studies of the 1969 and 1974 censuses, which were conducted primarily by mail, indicated that the administrative lists used to create the census mailing list were not adequate to assure complete coverage in the census. Also, censuses prior to 1969, conducted by direct enumeration, had been found by evaluation studies (conducted since 1950) to be progressively less and less complete, as increased mobility of farm operators led to increases in the numbers of nonresident operators, operators farming on a part-time basis, and operators farming two or more separate tracts.

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. The direct enumeration sample estimates are statistically reliable for State totals and have not been allocated to counties. Appendix A provides a more detailed description of how the 1978 census was taken and includes a discussion of census coverage.

COMPARABILITY OF DATA

State totals for 1978 are not directly comparable with totals for 1974 or earlier censuses as they include data for farm operations represented on the mail list plus estimates from the direct enumeration sample for farms not represented on the mail list. The 1974 State level data include only operations represented on the mail list.

Coverage evaluation studies for the 1974 census indicated that 10.7 percent of all farms were not included in the census. Farms missed in the census were usually small and accounted for less than 3 percent of the total value of agricultural products sold and less than 6 percent of the land in farms. The proportion of farms missed in the 1974 census was generally higher in cultural products were sold or normally would have been sold during the census year. The previous definition (used for the 1959, 1964, and 1969 censuses, and for the 1974 preliminary county reports) counted as a farm 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.
States having a large proportion of small farms and urbanized areas having a sizable number of part-time farms. Farm counts for 1974, adjusted for the net undercount, are shown in appendix C.

County level data on acreages and inventories for 1978 and 1974 are generally comparable; however, improvements in the coverage of the 1978 census, especially of smaller farms, should be taken into consideration when comparing farm counts.

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, data for items in sections 22 through 27 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.

GRAPHICS

Several charts and maps presented on the following pages show selected agricultural statistics for this State. The items in the charts and the first four maps are presented for all States. The last four maps present data of particular importance to this State.

TABULAR PRESENTATION

State data—In chapter 1, State tables 1 through 28 show detailed State level data usually accompanied by historical data for one or more censuses. Tables 29 through 35 provide 1978 State data cross-tabulated by various farm classifications.

County summary data—Selected data items are presented by county in chapter 2. Tables 1 through 15 include general data such as land in farms, size of farms, land use, operator characteristics, expenses, and machinery and equipment. Inventory and sales data for livestock, poultry, and animal specialties are contained in tables 16 through 27 and detailed crop data in tables 28 through 35. Tables 36 through 43 present data on foreign ownership, income from customwork, direct sales to consumers, operators by racial group, and female operators.

Individual county data—Five pages of tables are presented in chapter 3 for each county with 10 farms or more in 1978. The tables include final data for each county and are more comprehensive than those in the preliminary reports. Data are provided for all farms and for farms with sales of $2,500 or more for both 1978 and 1974.

This chapter also includes a set of similar tables for the State as a whole and for those farms in the State not on the mailing list and not included in county tables.

PRELIMINARY REPORTS

Preliminary reports have been published separately for all counties in the United States with 10 farms or more in 1978, each State, the four geographic regions, and the United States. This series provided, at the earliest possible date, information on major data items, with comparable final data from the 1974 census. The data items were standard for each State and county except in table 3 where the selected crops varied by State according to their relative importance in the State. The State preliminary report also included a full set of tables providing data derived from the direct enumeration sample on the estimated number and characteristics of farms not included in county totals because they were not represented on the mailing list.

For major data items at the county level differences between the preliminary and final figures are in general less than 5 percent. At the State level, differences are significantly less.

CENSUS DISCLOSURE RULES

In keeping with the provisions of title 13, United States Code, data that would disclose the operations of an individual farm are not published. However, the number of farms in a given size category or other classification is not considered a disclosure. Appendix A presents additional information on disclosure rules.

DEFINITIONS AND EXPLANATIONS

Appendix A includes definitions and explanations of selected terms used in the tables.

“SEE TEXT” REFERENCE

Items in the tables which are followed by the reference “See text” are explained or defined in appendix A.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used throughout the tables:

- (D) Data withheld to avoid disclosing information for individual farms.
- (X) Not applicable.
- (Z) Less than half of the unit reported.
- (NA) Not available.
- * Independent city.
### Highlights of the State’s Agriculture: 1978 and 1974

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td>number</td>
<td>number</td>
<td>total</td>
<td>total</td>
</tr>
<tr>
<td>Total</td>
<td>59,942</td>
<td>3,740</td>
<td>53,171</td>
<td>4,418</td>
</tr>
<tr>
<td>Not on mail list</td>
<td>3,740</td>
<td>53,171</td>
<td>4,418</td>
<td>59,942</td>
</tr>
<tr>
<td><strong>Land in forms</strong></td>
<td>number</td>
<td>8,747</td>
<td>203,618</td>
<td>8,16,378</td>
</tr>
<tr>
<td>Acres</td>
<td>2,03,618</td>
<td>8,16,378</td>
<td>203,618</td>
<td>8,16,378</td>
</tr>
<tr>
<td><strong>Average size of form</strong></td>
<td>acres</td>
<td>146</td>
<td>54</td>
<td>154</td>
</tr>
<tr>
<td><strong>Average per form</strong></td>
<td>acres</td>
<td>72</td>
<td>79</td>
<td>72</td>
</tr>
<tr>
<td><strong>Forms by size</strong></td>
<td>number</td>
<td>15,331</td>
<td>2,226</td>
<td>10,999</td>
</tr>
<tr>
<td>1 to 49 acres</td>
<td>2,226</td>
<td>10,999</td>
<td>7,912</td>
<td>531</td>
</tr>
<tr>
<td>50 to 499 acres</td>
<td>1,514</td>
<td>40,435</td>
<td>34,098</td>
<td>784</td>
</tr>
<tr>
<td>500 to 999 acres</td>
<td>1,874</td>
<td>1,562</td>
<td>1,819</td>
<td>1,499</td>
</tr>
<tr>
<td>1,000 acres or more</td>
<td>305</td>
<td>275</td>
<td>289</td>
<td>252</td>
</tr>
<tr>
<td><strong>Value of land and buildings</strong></td>
<td>dollars</td>
<td>187,406</td>
<td>94,962</td>
<td>112,992</td>
</tr>
<tr>
<td>Average per form</td>
<td>dollars</td>
<td>94,962</td>
<td>112,992</td>
<td>223,326</td>
</tr>
<tr>
<td><strong>Value of machinery and equipment on farm</strong></td>
<td>$1,000</td>
<td>1,768,054</td>
<td>37,142</td>
<td>1,145,766</td>
</tr>
<tr>
<td>Average per form</td>
<td>$1,000</td>
<td>37,142</td>
<td>1,145,766</td>
<td>623,632</td>
</tr>
<tr>
<td><strong>Value of agricultural products sold</strong></td>
<td>$1,000</td>
<td>2,189,594</td>
<td>22,957</td>
<td>1,503,295</td>
</tr>
<tr>
<td>Average per farm</td>
<td>$1,000</td>
<td>22,957</td>
<td>1,503,295</td>
<td>2,163,060</td>
</tr>
<tr>
<td><strong>Value of commercial fertilizer</strong></td>
<td>$1,000</td>
<td>357,530</td>
<td>1,219,912</td>
<td>1,219,912</td>
</tr>
<tr>
<td>Average per farm</td>
<td>$1,000</td>
<td>1,219,912</td>
<td>1,219,912</td>
<td>1,171,737</td>
</tr>
<tr>
<td><strong>Value of farm products sold</strong></td>
<td>$1,000</td>
<td>59,583</td>
<td>112</td>
<td>219,977</td>
</tr>
<tr>
<td>Average per farm</td>
<td>$1,000</td>
<td>112</td>
<td>219,977</td>
<td>334,009</td>
</tr>
<tr>
<td><strong>Farm production expenses for selected items</strong></td>
<td>$1,000</td>
<td>2,123,970</td>
<td>2,270</td>
<td>19,254</td>
</tr>
<tr>
<td>Feed for livestock and poultry</td>
<td>$1,000</td>
<td>2,270</td>
<td>19,254</td>
<td>0</td>
</tr>
<tr>
<td>Seeds, bulks, plants, and trees</td>
<td>$1,000</td>
<td>16,463</td>
<td>1,069</td>
<td>11,749</td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td>$1,000</td>
<td>13,056</td>
<td>216</td>
<td>14,934</td>
</tr>
<tr>
<td>Other agricultural chemicals</td>
<td>$1,000</td>
<td>10,291</td>
<td>34</td>
<td>10,023</td>
</tr>
<tr>
<td>Petroleum products – gasoline, diesel etc.</td>
<td>$1,000</td>
<td>2,862</td>
<td>46</td>
<td>2,862</td>
</tr>
<tr>
<td>Hired labor</td>
<td>$1,000</td>
<td>1,446</td>
<td>795</td>
<td>1,446</td>
</tr>
<tr>
<td><strong>Livestock and poultry inventory</strong></td>
<td>number</td>
<td>17,707</td>
<td>94</td>
<td>112,822</td>
</tr>
<tr>
<td>Cattle and calves</td>
<td>number</td>
<td>1,728,471</td>
<td>37,546</td>
<td>1,762,471</td>
</tr>
<tr>
<td>Hogs and pigs</td>
<td>number</td>
<td>811,916</td>
<td>28,994</td>
<td>492,745</td>
</tr>
<tr>
<td>Sheep and lambs</td>
<td>number</td>
<td>102,126</td>
<td>1,506</td>
<td>115,015</td>
</tr>
<tr>
<td>Chicks 3 months old or older</td>
<td>number</td>
<td>18,025,129</td>
<td>28,729</td>
<td>14,277,186</td>
</tr>
<tr>
<td><strong>Crops harvested</strong></td>
<td>number</td>
<td>1,630,542</td>
<td>24,719</td>
<td>1,396,392</td>
</tr>
<tr>
<td>Corn for all purposes</td>
<td>acres</td>
<td>1,630,542</td>
<td>24,719</td>
<td>1,396,392</td>
</tr>
<tr>
<td>Wheat for grain</td>
<td>buhels</td>
<td>195,634</td>
<td>4,680</td>
<td>267,810</td>
</tr>
<tr>
<td>Oats for grain</td>
<td>acres</td>
<td>6,351,417</td>
<td>41,050</td>
<td>9,587,480</td>
</tr>
<tr>
<td>Hay crops</td>
<td>acres</td>
<td>15,912,041</td>
<td>242,355</td>
<td>(NA)</td>
</tr>
<tr>
<td>Hays, dry</td>
<td>tons</td>
<td>2,008,404</td>
<td>46,824</td>
<td>1,613,280</td>
</tr>
</tbody>
</table>

**Notes:**
- Not fully comparable because of direct enumeration sample in 1974, see text.
- 1978 data are based on a sample of farms; see text.
U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS