Volume 1
State and County Data
Part 8
Delaware

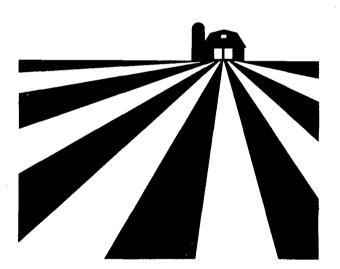
1978 CENSUS OF AGRICULTURE

U.S. Department of Commerce BUREAU OF THE CENSUS



1978 CENSUS OF AGRICULTURE

Volume 1 **State and County Data**



Part 8 **Delaware**

Issued November 1980



U.S. Department of Commerce Philip M. Klutznick, Secretary Courtenay M. Slater, Chief Economist

BUREAU OF THE CENSUS Vincent P. Barabba, Director



BUREAU OF THE CENSUS

Vincent P. Barabba, Director Daniel B. Leyine, Deputy Director Shirley Kallek, Associate Director for Economic Fields

Richard B. Quanrud, Assistant Director for Economic and Agriculture Censuses

AGRICULTURE DIVISION
Arnold L. Bollenbacher, Chief

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. Quantud, Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Agriculture Division under the general supervision of Orvin L. Wilhite, 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 computeredit, 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 preparation 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. Pierce, 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 S. Kline, and Irene A. Grey.

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

United States. Bureau of the Census. 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.

HD1753 1978.B87 7 1980 338.1'0973

79-600215

For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or any U.S. Department of Commerce district office. Postage stamps not acceptable; currency submitted at sender's risk. Remittances from foreign countries must be by international money order or by draft on a U.S. bank.

CONTENTS

High	oduction	Page VI IX X
CH.	ARTS	
1. 2. 3. 4. 5.	Changes in State's Agriculture: 1978 From 1974. Profile of State's Agriculture: 1978. Land in Farms by Types of Organizations: 1978. Farms by Value of Sales: 1978. Value of Products Sold by Size of Sales: 1978.	XI XIII XIV XIV
PA	TTERN MAPS	
1. 2. 3. 4. 5. 6. 7.		XV XVI XVII XVIII XVIII
TAE	BLES	
СНА	NPTER 1. State Data	
1. 2.	Farms, Land in Farms, and Land Use: 1945 to 1978	1
	and 1969	1
3. 4. 5.	Farms, Land in Farms, and Land Use, by Size of Farm: 1978 and 1974	2
•	and 1969	3
6. 7.	Selected Farm Production Expenses: 1978, 1974, and 1969	4
7. 8.	Expenses for Energy and Petroleum Products: 1978, 1974, and 1969	5
9.	Farm Payroll, Employment, and Contract Expenses: 1978, 1974, and 1969	5
10.	Market Value of Agricultural Products Sold: 1978, 1974, and 1969	5 6
11. 12.	Value of Agricultural Products Sold Directly to Consumers for Human Consumption: 1978 Income From Machine Work, Customwork, and Other Agricultural Services: 1978, 1974,	6
13.	and 1969	7
14.	Selected Characteristics of Farms by Standard Industrial Classification of Farms: 1978 Machinery and Equipment on Place: 1978 and 1974	7
15.	Agricultural Chemicals Used, Including Fertilizer and Lime: 1978 and 1974	8
16.	Irrigation: 1978, 1974, and 1969	8
17.	Selected Characteristics of Irrigated and Nonirrigated Farms: 1978.	9
18.	Livestock and Poultry-Inventory and Sales: 1978, 1974, and 1969	10
19.	Poultry—Inventory and Sales: 1978 and 1974	10
20.	Cattle and Calves—Inventory and Sales: 1978 and 1974	12
21.	Hogs and Pigs—Inventory and Sales: 1978 and 1974	14
22.	Sheep and Lambs—Inventory and Sales: 1978 and 1974	15

TAB	LES-Con.	Page
CHA	PTER 1-Con.	
23.	Other Livestock and Livestock Products—Inventory and Sales: 1978 and 1974	16
24.	Fish Sales: 1978	16
25.	Crops Harvested: 1978 and 1974	17
26.	Specified Crops Harvested—Yield Per Acre Irrigated and Nonirrigated: 1978	18
27.	Crops Harvested and Value of Production: 1978 and 1974	18
28.	Crops by Acres Harvested: 1978	19
29.	Summary by Tenure of Operator: 1978	22
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	- 4
	\$20,000: 1978	54
33.	Summary by Size of Farm: 1978	70
34.	Summary by Value of Agricultural Products Sold: 1978	86
3 5.	Summary by Standard Industrial Classification of Farm: 1978	102
Chap	oter 2. County Summary Data	
1.	Number, Land, and Value of Farms: 1978 and 1974	118
2.	Land Use: 1978	118
3.	Irrigation: 1978	118
4.	Farms by Tenure of Operator: 1978	118
5.	Farms and Land in Farms by Type of Organization: 1978	119
6.	Characteristics of Operators: 1978	119
7.	Farms by Value of Sales and Occupation: 1978	119
8.	Farms by Standard Industrial Classification: 1978	119 120
9.	Farms by Market Value of Agricultural Products Sold: 1978	120
10.	Market Value of Agricultural Products Sold for All Farms: 1978	120
11.	Market Value of Agricultural Products Sold for Farms With Sales of \$2,500 or More: 1978	120
12.	Selected Farm Production Expenses: 1978	121
13.	Energy Expenses and Fuel Storage Capacity for Farm Business: 1978	121
14.	Hired Farm Labor—Expenses and Number of Workers: 1978 Estimated Market Value of All Machinery and Equipment: 1978	121
15.	Cattle and Calves—Inventory and Sales: 1978	122
16.	Hogs and Pigs—Inventory and Sales: 1978	124
17.	Poultry—Inventory and Sales: 1978	124
18. 19.	Broilers Sold by Number Per Farm: 1978	125
20.	Sheep and Lambs—Inventory and Sales: 1978	125
21.	Milk Goats—Inventory and Sales: 1978	125
22.	Angora Goats—Inventory and Sales: 1978 Not	shown
23.	Mink and Their Pelts—Inventory and Sales: 1978 Not	shown
24.	Colonies of Bees and Honey—Inventory and Sales: 1978	125
25.	Fish Sales: 1978 Not	shown
26.	Miscellaneous Poultry—Inventory and Sales: 1978	126
27.	Miscellaneous Livestock and Animal Specialties—Inventory and Sales: 1978	126
28.	Grains-Corn, Sorghums, Wheat, and Other Small Grains: 1978	127
29.	Cotton, Tobacco, Soybeans, Dry Beans and Peas, Potatoes, Sugar Crops, and Peanuts: 1978	127
30.	Field Seeds, Grass Seeds, Hay, Forage, and Silage: 1978	127
31.	Vegetables, Sweet Corn, and Melons, Harvested for Sale: 1978	128
32.	Fruits and Nuts: 1978	129
33.	Berries: 1978	130
34.	Nursery and Greenhouse Products, Mushrooms, and Sod: 1978	130
35.	Other Crops: 1978	130
36.	Operator Response to Land Held Under Foreign Ownership: 1978	131
37	Income From Machine Work, Customwork and Other Agricultural Services: 1978	131

TABLES-Con.

CHAPTER 2-Con.

1. 2.	Farms, Land in Farms, and Land Use: 1978 and 1974 Market Value of Agricultural Products Sold: 1978 and 1974										
3. 4.	4. Operators—Tenure, Type of Organization, and Characteristics: 1978 and 1974										
	Selected Farm Production Expenses: 1978 and 1974 Agricultural Chemicals Used, Including Fertilizer and Lime: 1978 and 1974 Machinery and Equipment on Place: 1978 and 1974 Hired Farm Workers: 1978 and 1974 Livestock and Poultry—Inventory and Sales: 1978 and 1974 Crops: 1978 and 1974										
Ken	aware	148 153									

INTRODUCTION

HISTORY	 				
AUTHORITY AND AREA COVERED	 				
FARM DEFINITION	 				
METHOD OF ENUMERATION	 				
COMPARABILITY OF DATA	 				
USE OF SAMPLING	 				
GRAPHICS	 				
TABULAR PRESENTATION	 				
PRELIMINARY REPORTS	 				
CENSUS DISCLOSURE RULES	 				
DEFINITIONS AND EXPLANATIONS	 				
"SEE TEXT" REFERENCE	 				
ABBREVIATIONS AND SYMBOLS	 			_	

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 1982 Economic Censuses covering manufacturing, mining, construction, retail trade, wholesale trade, service industries, and selected transportation activities. Thereafter, the agriculture census will revert to a 5-year cycle.

AUTHORITY AND AREA COVERED

The census of agriculture is authorized under the provisions of title 13, United States Code. Section 142(a) provides for the census to be taken in 1979, in 1983, and in every fifth year after 1983. Section 191 provides that the census shall include each State, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands. A census of agriculture will be conducted in American Samoa and the Northern Mariana Islands in conjunction with the 1980 Census of Population and Housing.

FARM DEFINITION

Since 1850, when minimum criteria defining a farm for census purposes were first established, the farm definition has been changed nine times, as the Nation has grown and changed. The current definition was announced on August 12, 1975, in accordance with a joint agreement between the U.S. Department of Agriculture, the Office of Management and Budget, and the Bureau of the Census. It defines a farm, for statistical purposes, as any place from which \$1,000 or more of agri-

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.

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 only 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

States having a large proportion of small farms and urbanized areas having a sizable number of part-time farms.

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

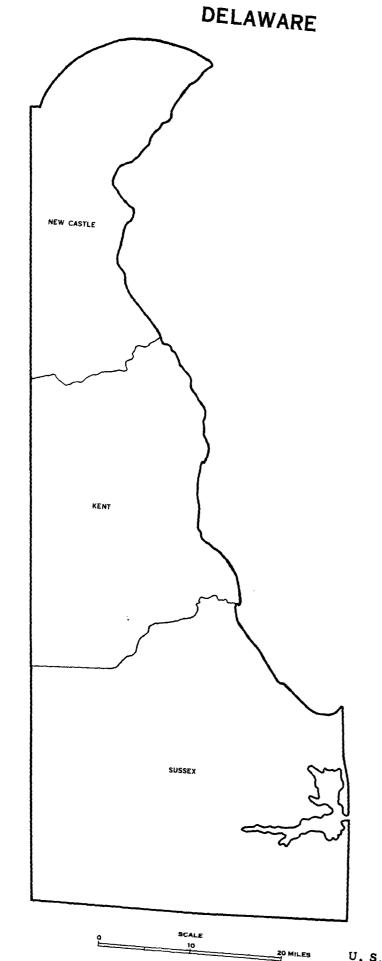
The following abbreviations and symbols are used throughout the tables:

- Zero.
- (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

	All farms Farms with sales of \$2,500 or more				ore	
	1978		19741	19741 1978		19741
	Total	Not on mail fist	Total	Total	Not on mail list	Total
Farms number_	3 632	234	3 400	3 185	158 7 527	2 988 613 573
Land in forms acres Average size of form acres	679 045 187	9 399	630 605 185	662 647 208	48	205
Harvested cropland	500 417	3 661	451 752	495 466	3 133	447 489 150
Average per farm acres	138	16	133	156	20	150
Farms by size: 1 to 49 acres number	1 476	184	1 295	1 125	113	999
50 to 499 acres number	1 824	50	1 794	1 728	45	1 678
500 to 999 acres number	227	-	225	227	-	225
1,000 acres or more number_	105	=	86	105	-	86
Value of land and buildings:2	270 381	78 456	180 023	299 858	87 174	197 850
Average per farm dollars	1 500	78 436 28	901	1 487	1 829	963
Average per acre dollars			86 213	138 941	2 917	82 781
Value of machinery and equipment on farms? \$1,000 Average per farm dollars	143 141 39 411	3 290 14 059	25 357	43 623	18 463	27 704
Value of agricultural products sold\$1,000	326 003	4 756	250 902	325 180 102 097	4 691 29 689	250 158 83 721
Average per farm dollars	89 759	20 323 459	73 795 93 526	102 097	427	93 106
Crops sold \$1,000_ Average per form dollars_	103 396 28 468	1 961	27 508	32 331	2 700	31 160
Livestock and livestock products sold\$1,000	28 216	1 331	18 395	27 858	1 298	18 156
Average per farm dollars	7 769	5 686	5 410	8 747	8 216	6 076 138 337
Poultry and poultry products sold\$1,000	194 391	2 966	138 421	194 347 61 019	2 966 18 773	46 298
Average per farm dollars	53 522	12 676	40 712	61 019	18 7/3	40 270
Farms by value of agricultural products sold:		7.	437		_	28
Less than \$2,500 number_ \$2,500 to \$9,999 number_	444 783	76 68	683 683	783	68	683
\$10,000 to \$39,999 number	835	42	864	835	42	864
\$40,000 to \$99,999 number	621	39	734	621	39	734
\$100,000 to \$199,999 number	557	9	446	557	9	446 233
\$200,000 or more number_ Abnormal farms number_	389 3	(X)	233 3	389 (X)	(X)	(X)
Value of agricultural products sold by farms having sales of—					i	
Less than \$2,500\$1,000	562	65	528	_	- 1	31
\$2,500 to \$9,999 \$1,000_	4 235	369	3 959	4 235	369	3 959
\$10,000 to \$39,999\$1,000_	17 740	725	18 973	17 740	725	18 973
\$40,000 to \$99,999\$1,000	40 976	2 195	48 556 61 928	40 976 78 388	2 195 1 403	48 556 61 928
\$100,000 to \$199,999\$1,000 \$200,000 or more\$1,000	78 388 183 940	1 403	116 709	183 840	1 403	116 709
Abnormal farms\$1,000_	262	(X)	247	(X)	(X)	(X)
Farm production expenses for selected items:2					į	
Feed for livestock and poultry\$1,000	121 055	2 789	94 366	120 736	2 670	94 180
Seeds, bulbs, plants, and trees\$1,000	5 625	26	4 735	5 579 14 127	23	4 707 14 393
Commercial fertilizer\$1,000	14 246 6 920	80 63	14 488 5 020	6 865	59	4 993
Other agricultural chemicals\$1,000 Petroleum products—gasoline, diesel, etc\$1,000	8 159	167	5 705	8 016	151	5 630
Hired form labor\$1,000	15 194	63	11 802	14 986	38	11 676
Livestack and poultry inventory:						
Cattle and calves number	29 325	1 222	30 615	28 458	1 194	29 445
Hogs and pigs number	63 465 590	2 160	42 955 1 443	61 155 526	1 483	42 076 1 225
Sheep and tambs number Chickens 3 months old or older number_	729 789	1 994	701 871	727 376	1 397	696 991
Crops harvested:						
Corn for grain or seed acres	157 834	1 317	150 931	156 876	1 256	149 893
bushels	15 100 658	120 285	10 805 497	15 029 165	115 970	10 756 060
Wheat for grain acres	16 423 576 890	217	41 216 1 447 484	16 375	217	40 963
bushels	264 053	4 860 1 690	209 977	575 483 262 181	4 860 1 499	1 441 619 208 408
bushels	7 546 419	45 157	5 386 399	7 502 475	39 964	5 354 568
Hay crops acres	21 845	672	17 851	20 179	456	16 872
tons, dry	47 035	596	41 620	44 276	240	39 957

^{*}Not fully comparable because of direct enumeration sample in 1978 totals; see text. *1978 data are based on a sample of farms; see text.



U. S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS