Appendix C.
Statistical Methodology

THE SCREENING PHASE AND THE MAIL LIST MODEL

The 1997 Census of Agriculture featured a pre-census screening phase that surveyed selected records, by mail or telephone, for presence or absence of agricultural activity. Records selected for screening had a low probability of qualifying as farms. All records responding to the screener and reporting no agricultural activity were removed from the census mail list. Eliminating nonfarm records from the mail list reduced respondent burden and data collection costs.

The screening phase included nearly 500,000 records. Records were selected for screening using one of the following criteria:

1) Records on selected agriculture specialty lists that had no other list source,

2) Records identified by a mail list model as having a low probability of being a farm.

A mail list model predicted the probability that an addressee on the 1997 preliminary census mail list operated a farm. The model defined groups based on combinations of characteristics such as source(s) of the mail list record, expected value of agricultural production, and geographic location. Farm proportions were estimated for these groups by calculating the proportion of 1992 census respondent records that were farms which exhibited the characteristics defined by the group. This proportion, also called the in-scope rate, provided an estimate of the probability that an addressee in the group operated a farm.

Each address record on the 1997 preliminary census mail list was assigned to a model group by matching record characteristics to model group characteristics. Records belonging to the groups with the highest farm probability were those more likely to be farms. Records with a farm probability of approximately 30 percent or less were selected for screening, along with records included on selected agriculture specialty lists as noted above.

Before screening, the preliminary census mail list consisted of 3,314,790 records. There were 478,298 records selected for screening. Of these, 125,570 records were determined to be nonfarms as a result of the screening phase and were removed. These records were removed from the final census mail list. The remaining 3,189,220 records received census report forms.

CENSUS SAMPLE DESIGN

All name and address records on the final census mail list were designated to receive a 1997 Census of Agriculture report form. Two different types of census report forms, sample and nonsample, were used to collect data. Sections 1 through 20 and 28 through 32 of the sample form were identical to sections on the nonsample census form. Sample form sections 21 through 27 contained additional questions on usage of fertilizers and chemicals, farm production expenditures, value of machinery and equipment, value of land and buildings, farm-related income, and hired workers. There were 11 regional versions of the nonsample form and 13 regional versions of the sample form with listings of crops varying by region. These different forms were used to reduce the response burden of the census, while providing reliable information on a large number of data items.

The sample form was mailed to all mail list records in Alaska, Hawaii, and Rhode Island and to a sample of records in other States selected from the final mail list. Mail list records were selected into the sample with certainty if they (1) were expected to have large total value of agricultural products sold or large acreage, (2) were multi-unit operations (i.e., separate farms producing under one company organization), (3) were in a county with less than 100 farms in 1992, or (4) had other special characteristics. Farms with special characteristics were abnormal farms, such as institutional farms, experimental and research farms, and Indian reservations. Mail list records in counties containing 100 to 199 farms in 1992 were systematically sampled at a rate of 1 in 2; records in counties containing 200 to 299 farms in 1992 were systematically sampled at a rate of 1 in 4; and records in counties containing 300 or more farms in 1992 were systematically sampled at a rate of 1 in 6. The remaining mail list records not chosen to receive the sample form received the nonsample census form. This differential sampling scheme was used to provide reliable data for the sample sections of the report form for all counties.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

The census of agriculture complex edit and imputation system is an automated computerized system that performed the following functions:

- Ensured reasonable relationships between/among data items, values for various sizes of farms, combinations of commodities, and economic interactions.
- Ensured necessary consistencies were present (there were more than 70 distinct consistency requirements).
- Ensured climatic, geographic, legal, and physical constraints were met.

The system performed these and similar functions for more than 900 data key codes for sample records and approximately 850 data key codes for nonsample records.

For the 1997 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. The complex edit and imputation system provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data for that record from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known fixed price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships was assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several Standard Industrial Classifications and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices.

Each execution of the computer edit consisted of records from only one State sorted by reported State and county. For a given execution of the edit, the stored entries in the various matrices were retained in memory only until a succeeding record having acceptable characteristics for the same sections of the report form was processed by the computer. Then the acceptable responses of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions. An edit run usually consisted of 10,000 or more records.

After the initial computer edit, all keyed reports not meeting the census farm definition were reviewed to ensure that the data had been keyed correctly. Edit referrals were generated for 17 percent of the reports included as farms; they were reviewed for keying accuracy and to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record re-edited.

CENSUS ESTIMATION

The 1997 Census of Agriculture used two types of statistical estimation procedures to account for whole farm nonresponse and sample data collection. The procedures were necessary because some farm operators did not respond to the census despite numerous attempts to contact them, and estimates for certain data items were based on a sample of farm operators rather than a full enumeration.

Whole Farm Nonresponse Estimation

Whole farm nonresponse to the census occurred when a response was never received for a record. If the record was a large farm, as defined by value of production or acreage, or a unique farm operation, intensive telephone or personal followup was conducted during census processing to obtain a response. If these attempts failed, either the NASS survey database, the census historic database, or other more current sources were used to impute data for the record.

During mail list development, the State Statistical Offices (SSOs), in an effort to reduce respondent burden, identified records that participated in multiple NASS surveys and/or situations where there were special reporting relationships between an enumerator and a respondent. These records were referred to as tagged records. The SSOs had full responsibility for the data collection for these records, including imputation of data for the record if a response was not obtainable.

Whole farm nonresponse that occurred within the remaining universe of records was accounted for by a statistical weighting procedure. The weights of the responding farms were adjusted to account for farms that did not respond. The information needed for this process was obtained from the 1997 Nonresponse Survey. The SSOs conducted the nonresponse survey using computer-assisted telephone interviewing (Blaise-CATI) or personal enumeration when telephone contact was not possible. Alaska and Rhode

Island were not eligible for the survey because all nonrespondents were subject to extensive followup. In these cases, data were collected by telephone or other methods. The nonresponse survey collected information from a sample of census nonrespondents to determine farm status and estimate the proportion of farms in the nonresponse universe. The information was then used to estimate the number of nonresponding farm operations by State and county.

The 1997 Nonresponse Survey consisted of a stratified systematic sample of the nonresponse records within each State. The sample was selected near the end of the census follow-up operations. Five strata were defined to be homogeneous on probability of farm status and were based on screener status, total value produced, and list source(s) of the mail list record.

Based on survey results, estimates of the proportion of census nonrespondents operating farms were made for each stratum in the State. The estimates were applied to the total number of census nonrespondents in that stratum, providing a State estimate of the number of census nonrespondents that operated farms. The number of census nonrespondents that operated farms was then derived for each county by stratum. This estimation procedure assumed that the distribution of farms in a stratum by county was the same for census nonrespondents as for census respondents.

Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. Census respondent farms that were designated as large farms or tagged records or as farms that exhibited ''rare'' commodities were ineligible to represent nonrespondent farms and were excluded from the nonresponse weighting procedure. These records were assigned nonresponse weights of 1.0.

The noninteger nonresponse weight is the ratio of the sum of the estimated number of nonrespondent farms from the nonresponse survey and the number of eligible census respondent farms, divided by the number of eligible census respondent farms. Stratum controls were established to ensure that this weight never exceeded 2.0. For the published tabulations of the complete count items, the noninteger nonresponse weight was randomly rounded to an integer weight of either 1 or 2 for each record. For the sample count items, the noninteger nonresponse weight was used in the calculation of the final sample weight.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentages in this table are percents of the census values contributed by nonresponse estimation. These indicate the potential for bias in published figures resulting from nonresponse to the census. The estimates provided in this table do not reflect the effect of item nonresponse to individual census data items. The effect of this item nonresponse is discussed in the ''Census Nonsampling Error'' section.

Sample Estimation

Sample data estimation determined the population totals that would have resulted from a complete census for the items in sections 21 through 27 of the sample form. The estimates were obtained from a weighting procedure that assigned a weight to each respondent record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing over all sample records.

Each respondent sample farm was assigned a sample weight for use in producing estimates for all sample items. For example, if the weight given to a sample farm had the value 6, all sample data items reported by that farm were multiplied by 6.

The noninteger sample weight is calculated for each respondent sample farm by multiplying the noninteger nonrespondent weight by the sampling factor. For published tabulations of the sample count items, the noninteger sample weight was randomly rounded to an integer weight for each record. For certainty farms, the sampling factor equals 1 so the sample weight is just equal to the nonresponse weight. Sampling factor calculation for non-certainty farms is described below.

Within a county, the weighting procedure for non-certainty farms was performed in three steps using three variables. The first variable contained eight 1997 total value of agricultural production (TVP) groups. The second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The three sets of groups were:

TVP	SIC	Acres
$1 to $999	01, 08 All crops	1 to 69
$1,000 to $2,499	02 All livestock	70 or more
$2,500 to $4,999		
$5,000 to $9,999		
$10,000 to $24,999		
$25,000 to $49,999		
$50,000 to $99,999		
$100,000 or more		

The first step in the estimation procedure classified the sample records into 32 mutually exclusive initial strata formed by the three variable groups. The total and sample farm counts were expanded to account for nonresponse. Each cell containing sample farm records was assigned an initial sample factor equal to the ratio of the total farm count to the sample farm count. This factor was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure combined, when necessary, the 32 initial strata to increase the reliability of the weighting procedure. Any stratum that contained less than 10 sample farms or had a factor greater than twice the mail sample rate was collapsed with another stratum. The mail sample rate was either 2, 4, or 6,

depending on whether the county had a 1 in 2, 1 in 4, or 1 in 6 sample selection rate. The collapsing occurred within the 32 initial strata according to a specified collapsing pattern. After the collapsing process was completed, new total farm counts and sample farm counts were computed from each final strata and used to calculate final sample factors.

The final step calculated the noninteger sample weight as the product of the final sampling factor and the noninteger nonresponse weight. As described previously, the noninteger sample weight for each record is randomly rounded to an integer weight which is used in published tabulations. For example, if the final weight for a farm was 7.2, then the record would be rounded to either 7 or 8.

CENSUS SAMPLING ERROR

The sample for the 1997 Census of Agriculture was only one of a large number of possible samples of the same size that could have been selected using the same sample design. In this context, ''sample'' refers to the sample for both the nonresponse survey and the selection of farms to receive sample forms.

The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples. It is a measure of precision - that is, how well an estimate from a particular sample approximates the true population parameter. The percent relative standard error of an estimate is defined as the standard error of the estimate divided by the value of the estimate, then multiplied by 100. The true population parameter can be defined or conceptualized several different ways. One way is to think of the true population parameter as the average result of all possible samples (selected using a given sample design). A second way is to think of the true population parameter as the figure obtained from carrying out a complete enumeration of the population.

If all possible samples were selected, each of the samples surveyed under essentially the same conditions, and an estimate and its standard error calculated from each sample, then:

1. Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the true population parameter.
2. Approximately 95 percent of the intervals from 1.96 standard errors below the estimate to 1.96 standard errors above the estimate would include the true population parameter.

The following example illustrates the computations necessary to produce a confidence statement for an estimate. Assume that the estimate of number of farms for a State is 94,382 and the relative standard error of the estimate is 0.1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error; therefore, a 90-percent confidence interval is 94,227 to 94,537 (i.e., 94,382 plus or minus 1.65 x 94). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 90 percent of these intervals would contain the true population parameter. Similarly, a 95-percent confidence interval is 94,198 to 94,566 (i.e., 94,382 plus or minus 1.96 x 94).

Census items were classified as either complete count or sample count items. All farm operators were asked the complete count items. Examples of complete count items were: land in farms, harvested cropland, livestock inventory and sales, crop acreage, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics.

Only a sample of farm operators were asked the sample count items. These items appeared only in sections 21 through 27 of the sample form. Sample count items were included under the following section headings: commercial fertilizers, chemicals, production expenses, farm machinery and equipment, value of land and buildings, farm-related income, and hired workers.

Variability in the estimates of complete count items was due only to the nonresponse survey estimation procedure. With regard to the estimates of sample count items, variability was due to both the nonresponse survey estimation procedure and the census sample selection and estimation procedure. Therefore, variability in the sample count item estimates tends to be larger than the variability in the complete count item estimates. Percent relative standard error is a common measure of variability.

Table B provides the generalized reliability estimates of the estimated number of farms in a county that reported complete count and sample count items. The top half of the table shows the percent relative standard errors for estimated number of farms in a county that reported a complete count item, and the bottom half relates to sample count items. These reliability estimates are derived from regression equations. Separate regression equations were used to produce each section of table B. Each regression equation was fit with the estimated number of farms in a county reporting an item as the independent variable and the relative variance of that estimate as the dependent variable for the appropriate counties in the State. To illustrate the use of this table, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 15, is 89. Since hogs and pigs is a complete count data item, refer to the first part of table B and use the estimated percent relative standard error of the estimate from the row with farm count equal to or just less than the estimated number of farms, 89. For this example, the percent relative standard error of the estimate comes from the row for 75 farms reporting. For sample count items, follow the same procedure using the second part of table B. For counties with fewer than 100 farms in the 1992 Census of Agriculture, variability in sample count

item estimates came only from nonresponse survey estimation procedures. The estimated relative standard error for a sample count item in these counties may be obtained using the first part of table B.

Use caution when referring to the ''Sample Count Item'' section of table B to make inferences on counties. Some counties may have been sampled at the rate of 1 in 2 or 1 in 4, but the reliability estimates shown were computed using only data from counties sampled at the rate of 1 in 6. Therefore, the reliability estimates shown would likely be overstated (or conservative) if the county was actually sampled at a higher rate.

Table C presents the percent relative standard error of selected State data items for all farms, and table D presents the percent relative standard error of selected State data items for all farms with sales of $10,000 or more.

Table E presents the standard error for percent change in State totals from 1992 to 1997. The general purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1997 and the 1992 estimate for that characteristic to the 1992 estimate. This ratio is multiplied by 100 to obtain the percent change. The standard error of a percent change estimate is the standard error of the ratio multiplied by 100.

Table F presents the percent relative standard error for State and county totals for selected data items. The percent relative standard error of the estimate for the same item differs among counties in the State. Reasons for this are differences among counties in the (1) total number of farms, (2) number of large farms included with certainty, (3) size classifications of the farms sampled, (4) amount of nonresponse, (5) general agricultural characteristics, and (6) specific characteristic being measured.

The farm counts and related estimates displayed in tables A through F relate to unadjusted census totals. These totals are the same as the ''Census total'' displayed in the first column of table G (which will be discussed later in this appendix).

For most of the tables in this appendix, and also many of the tables throughout the publication, there is a footnote that reads ''Data are based on a sample of farms.'' The table entries that this footnote relate to are estimates of totals. To illustrate, suppose that the entry ''other farm-related income'' is shown with this footnote and has some number of farms given. This number given would represent an estimated total number of farms with ''other farm-related income,'' based on the farms that were in the sample. This number should not be interpreted as the number of farms in the sample that have ''other farm-related income.''

CENSUS NONSAMPLING ERROR

The accuracy of the census counts is affected jointly by sampling errors (described in the previous section) and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to design an understandable report form with instructions, and to minimize processing errors through the use of quality control measures. Nonsampling errors arise from many sources, including respondent or enumerator error or incorrect data keying, editing, or imputing for missing data. These nonsampling errors are further discussed in this section. Nonsampling error due to mail list incompleteness and duplication as well as misclassification of records on the mail list is called coverage error. The section titled ''Coverage Evaluation'' discusses the evaluation studies conducted to measure the extent of this error in the census.

Respondent and Enumerator Error

Incorrect or incomplete responses to the census report form or to the questions posed by an enumerator can introduce error into the census data. To reduce reporting error, detailed instructions for completing the report form were provided to each respondent. Questions were phrased as clearly as possible based on previous tests of the report form. In addition, each respondent's answers were checked for completeness and consistency by the complex edit and imputation system.

Item Nonresponse

As information flowed from data collection to tabulation, various types of item nonresponses were identified on the census report forms. Nonresponse to particular questions on the census report form that logically should have been present created a type of nonsampling error in both complete count and sample count data. In this case, information from a similar farm was used to impute for these missing data items. The resulting data may have been biased if the characteristics of the nonreporting respondents were different from those of reporting respondents for those items.

Processing Error

All phases of processing for each census report form were potential sources for the introduction of nonsampling error. An automated check-in recorded that the report had been returned and excluded from further followup mailings. Approximately one-third of the mail returns were reviewed to resolve questions dealing with multiple reports, respondent remarks, or no reported data. The remaining mail returns (about two-thirds) were batched and sent directly to data keying, along with some of the reviewed cases containing farm data. Keyed records were transmitted, formatted, and run through the complex edit and imputation system. About one-fifth of all forms edited were clerically reviewed for inconsistencies, omissions, or questionable values. While reviewing these forms, the edit review staff determined if the action taken by the computer edit and imputation system was correct. Edited records were tabulated to the county level. Each county was reviewed and, when necessary, individual records were corrected prior to publication.

Developing accurate processing methods is complicated by the complex structure of agriculture. Among the complexities are the many places to be included, the variety of arrangements under which farms are operated, the continuing changes in the relationship of operators to the farm operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete list of agriculture operations, the difficulty of contacting and identifying some types of contractor/contractee relationships, the operator's absence from the farm during the data collection period, and the operator's opinion that part or all of the operation does not qualify and should not be included in the census. During data collection and processing of the census, all operations underwent a number of quality control checks to ensure as accurate an application as possible.

COVERAGE EVALUATION

Coverage Overview

The primary objectives of the census of agriculture are to accurately count U.S. farms, measure commodity production and sales, and measure demographic characteristics of farm operators. Since 1945, an evaluation of census coverage has been conducted for each census of agriculture to provide estimates of the completeness of census farm counts. These results help to identify problems and focus improvements for future censuses.

According to coverage evaluation results, the past five censuses of agriculture included an average of 92 percent of U.S. farms and 98 percent of agriculture production. Complete enumeration of agricultural operations satisfying the farm definition of $1,000 or more in agricultural sales is complicated by the variety of arrangements under which farms are operated, the multiplicity of names used for an operation, the number of operations in which an operator participates, and the difficulty in classifying those operations just around the $1,000 sales range. In 1997, extensive efforts were made to compile as complete and accurate a mail list as possible, while reducing the duplication and number of nonfarm operations on the list.

The 1997 coverage evaluation program was designed to measure four components of error in the census farm counts. These components include:

1. Undercount due to farms Not on the Mail List (NML)
2. Overcount due to farms Duplicated or enumerated more than once (DUP)
3. Undercount due to farms Incorrectly Classified as nonfarms (ICU)
4. Overcount due to nonfarms Incorrectly Classified as farms (ICO).

The first component, mail list undercount, is by far the largest component of coverage error. Duplication, though occurring far less frequently, can involve larger farms and have a larger impact on acreage and sales estimates. The last two components involve the misclassification of either farms or nonfarms. Misclassification can arise from errors in either reporting or processing the data.

Table G - Coverage Estimates - illustrates the effect of coverage adjustments on census farm counts by demographic characteristics, land in farms, and total value of sales. The coverage total is defined as the net difference between undercounted and overcounted farms. The adjusted census total is the sum of the census total and the net coverage total. The relative standard error is shown for the final census coverage adjusted number. This number will be similar to the relative standard error for the census number, except when the coverage total is negative or close to zero. The coverage adjustment percentage shows the coverage total as a percentage of total census adjusted farms for that characteristic.

The 1997 Census of Agriculture is the first census to include all four components of coverage error in table G. Previous publications only included the coverage error component due to farms not on the mail list (NML). Because of this, caution should be taken when comparing coverage estimates from table G with previous years. In addition, the coverage total is a negative number for some characteristics. This means that the number of farms overcounted for this characteristic was greater than the number of farms undercounted.

Area Frame Surveys to Measure Mail List Undercoverage

Names and addresses collected in the 1997 June Agricultural Survey and 1997 Fall Area Survey were used to estimate the undercount due to farms not on the census mail list (NML). These names were matched to the census mail list, and those that did not match were contacted by telephone or person. The enumerator verified whether the operation had reported in the census, and if not, a census of agriculture report form was completed.

The percentage of farms missed in the census varies considerably by State. In general, farms not on the mail list tended to be small in acreage, production, and sales of agricultural products. Farm operations could be missed for various reasons, including the possibility that the operation started after the mail list was developed, the operation may be so small as not to appear in any agriculture-related source lists, or the operation may have been falsely classified as a nonfarm prior to mailout.

Classification Error Survey to Measure Three Types of Coverage Error

The remaining three types of coverage error were measured by the Classification Error Survey. This survey was used to estimate the number of farms counted more than once (DUP), the number of farms misclassified as nonfarms (ICU), and the number of nonfarms misclassified as farms (ICO). A sample of census of agriculture respondents was selected for reinterview to determine their farm/nonfarm status and collect information to identify

potential duplication. The farm classification from this interview was compared with the classification on the census of agriculture report form. Any differences between these two classifications were reconciled to determine the true farm status. Each operation was reviewed for duplication by matching the additional information received from the reinterview (landlords, tenants, other names, etc.) to the list of census respondents. Potential duplication was reviewed and discrepancies reconciled.

In general, the classification error rate is higher for small farms close to the $1,000 agricultural sales requirement. This rate is also higher for farms with small acreage (less than 49 acres), higher for tenant farms than for full- or part-owner farms, and higher for farms where farming is not the operator's principal occupation.

Coverage Estimation

The adjusted census total, T, is estimated as the census farm count, C, plus undercount and minus overcount adjustments. Undercount includes 1) farms not on the mail list (NML) and 2) farms incorrectly classified as nonfarms (ICU). Overcount includes 3) nonfarms incorrectly classified as farms (ICO) and 4) farms duplicated in the census (DUP). Altogether, the adjusted census total is:

$$T = C + (NML + ICU) - (ICO + DUP).$$

In some States, estimates of misclassification of farms owned by operators having rare demographic characteristics were based on particularly small sample sizes. Where such small sample sizes occurred, a form of small area estimation was used in which data from similar States contributed to that State's estimates. In these cases, the coverage totals are weighted totals of the direct State estimate and the direct estimate from the region. Direct estimates were used to the largest extent possible, based on the amount of survey cases available for the particular item being estimated.

Table A. Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1997

Item	Percent of total	Item	Percent of total
Farms ..... number	11.5	Corn for grain or seed ..... acres	4.8
Land in farms ..... acres	5.5	Wheat for grain ..... acres	4.7
Estimated market value of land and buildings[1] $1,000	5.5	Livestock and poultry inventory:	
Market value of agricultural products sold $1,000	1.4	Cattle and calves ..... number	4.9
Harvested cropland ..... acres	4.7	Hogs and pigs ..... number	1.7
		Layers 20 weeks old and older ..... number	2.0

[1]Data are based on a sample of farms.

Table B. Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item or Sample Count Item: 1997

Farms	Relative standard error of estimate (percent)	Farms	Relative standard error of estimate (percent)
COMPLETE COUNT ITEM		SAMPLE COUNT ITEM	
Number of farms reporting:		Number of farms reporting:	
25	5.6	25	39.5
50	3.7	50	27.4
75	2.9	75	22.0
100	2.3	100	18.7
150	1.6	150	14.6
200	1.1	200	12.1
300	.9	300	8.9
500	.7	500	5.0
750	.6	750	4.1
1,000	.5	1,000	3.5
1,500	.4	1,500	2.9
2,000	(X)	2,000	(X)

Table C. **Reliability Estimates of State Totals for All Farms: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS		
Farms ..... number..	2 460	.8
Land in farms ..... acres..	579 545	.5
Average size of farm ..... acres..	236	1.0
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD		
Total sales (see text) ..... farms..	2 460	.8
$1,000..	690 794	.1
Average per farm ..... dollars..	280 811	.8
Farms by value of sales:		
Less than $1,000 (see text) ..... farms..	166	2.9
$1,000..	38	4.8
$1,000 to $2,499 ..... farms..	209	2.7
$1,000..	337	2.8
$2,500 to $4,999 ..... farms..	173	3.1
$1,000..	655	3.1
$5,000 to $9,999 ..... farms..	195	2.8
$1,000..	1 396	2.9
$10,000 to $19,999 ..... farms..	193	2.7
$1,000..	2 734	2.7
$20,000 to $24,999 ..... farms..	69	3.9
$1,000..	1 533	3.9
$25,000 to $39,999 ..... farms..	142	2.9
$1,000..	4 489	3.0
$40,000 to $49,999 ..... farms..	58	4.0
$1,000..	2 579	4.0
$50,000 to $99,999 ..... farms..	177	2.5
$1,000..	12 395	2.5
$100,000 to $249,999 ..... farms..	275	1.7
$1,000..	47 052	1.5
$250,000 to $499,999 ..... farms..	348	–
$1,000..	132 457	–
$500,000 or more ..... farms..	455	–
$1,000..	485 130	–
Sales by commodity or commodity group:		
Crops, including nursery and greenhouse crops ..... farms..	1 661	1.0
$1,000..	174 845	.3
Grains ..... farms..	1 341	1.0
$1,000..	106 929	.4
Corn for grain ..... farms..	891	1.0
$1,000..	41 018	.5
Wheat ..... farms..	646	1.1
$1,000..	15 160	.5
Soybeans ..... farms..	1 121	1.0
$1,000..	44 801	.5
Sorghum for grain ..... farms..	82	2.4
$1,000..	783	1.3
Barley ..... farms..	215	1.4
$1,000..	4 613	.6
Oats ..... farms..	6	12.8
$1,000..	10	19.9
Other grains ..... farms..	30	3.3
$1,000..	544	.3
Cotton and cottonseed ..... farms..	–	–
$1,000..	–	–
Tobacco ..... farms..	–	–
$1,000..	–	–
Hay, silage, and field seeds ..... farms..	202	2.3
$1,000..	1 332	2.5
Vegetables, sweet corn, and melons ..... farms..	270	1.6
$1,000..	38 591	.3
Fruits, nuts, and berries ..... farms..	64	3.7
$1,000..	1 993	3.8
Nursery and greenhouse crops ..... farms..	176	2.5
$1,000..	16 806	.8
Other crops ..... farms..	27	3.3
$1,000..	9 193	.5
Livestock, poultry, and their products ..... farms..	1 309	.7
$1,000..	515 949	.1
Poultry and poultry products ..... farms..	879	.5
$1,000..	478 938	.1
Dairy products ..... farms..	116	2.1
$1,000..	19 260	.7
Cattle and calves ..... farms..	370	1.5
$1,000..	9 457	.3
Hogs and pigs ..... farms..	115	2.0
$1,000..	6 552	.3
Sheep, lambs, and wool ..... farms..	45	3.7
$1,000..	68	2.5
Other livestock and livestock products (see text) ..... farms..	170	2.6
$1,000..	1 675	4.0
Value of agricultural products sold directly to individuals for human consumption (see text) ..... farms..	154	2.7
$1,000..	1 864	2.0

Item	Total	Relative standard error of estimate (percent)
FARM PRODUCTION EXPENSES[1]		
Total farm production expenses ..... farms..	2 458	.8
$1,000..	620 297	.4
Average per farm ..... dollars..	252 358	.9
Livestock and poultry purchased ..... farms..	1 122	3.1
$1,000..	63 980	.5
Feed for livestock and poultry ..... farms..	1 405	3.5
$1,000..	363 258	.7
Commercially mixed formula feeds ..... farms..	1 201	3.5
$1,000..	359 239	.7
Seeds, bulbs, plants, and trees ..... farms..	1 444	3.4
$1,000..	11 554	1.7
Commercial fertilizer ..... farms..	1 424	3.4
$1,000..	20 537	2.3
Agricultural chemicals ..... farms..	1 426	2.9
$1,000..	16 274	2.1
Petroleum products ..... farms..	2 170	1.7
$1,000..	12 659	1.8
Electricity ..... farms..	1 825	2.6
$1,000..	7 080	1.1
Hired farm labor ..... farms..	938	4.0
$1,000..	30 207	1.6
Contract labor ..... farms..	277	8.0
$1,000..	4 083	.6
Repair and maintenance ..... farms..	2 135	1.9
$1,000..	19 338	1.8
Customwork, machine hire, and rental of machinery and equipment ..... farms..	980	4.6
$1,000..	3 395	3.0
Interest ..... farms..	1 273	3.7
$1,000..	17 866	1.4
Secured by real estate ..... farms..	1 011	4.0
$1,000..	14 787	1.7
Not secured by real estate ..... farms..	547	6.3
$1,000..	3 079	1.6
Cash rent ..... farms..	692	6.1
$1,000..	12 959	1.2
Property taxes ..... farms..	2 291	1.6
$1,000..	4 272	3.4
All other farm production expenses ..... farms..	2 277	1.5
$1,000..	32 835	1.0
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]		
All farms ..... number..	2 458	.8
$1,000..	68 563	2.0
Average per farm ..... dollars..	27 894	2.1
Farms with net gains[2] ..... number..	1 524	3.0
$1,000..	88 736	1.1
Average net gain ..... dollars..	58 226	3.2
Farms with net losses ..... number..	934	4.8
$1,000..	20 173	3.6
Average net loss ..... dollars..	21 599	6.0
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
Government payments ..... farms..	694	1.0
$1,000..	3 770	.6
Other farm-related income[1] ..... farms..	760	6.3
$1,000..	3 649	5.4
Customwork and other agricultural services ..... farms..	205	13.2
$1,000..	1 782	6.7
Gross cash rent or share payments ..... farms..	233	12.5
$1,000..	797	17.0
Forest products, excluding Christmas trees and maple products ..... farms..	31	32.6
$1,000..	411	21.0
Other farm-related income sources ..... farms..	471	8.1
$1,000..	659	4.9
COMMODITY CREDIT CORPORATION LOANS		
Total ..... farms..	45	3.2
$1,000..	1 599	1.1

See footnotes at end of table.

Table C. **Reliability Estimates of State Totals for All Farms: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			
Total cropland	farms	1 981	.9
	acres	486 981	.5
Harvested cropland	farms	1 810	1.0
	acres	466 555	.5
Farms by acres harvested:			
1 to 9 acres	farms	321	2.0
	acres	1 253	2.3
10 to 19 acres	farms	190	2.6
	acres	2 560	2.6
20 to 29 acres	farms	132	2.9
	acres	3 157	2.9
30 to 49 acres	farms	195	2.6
	acres	7 346	2.6
50 to 99 acres	farms	245	2.0
	acres	17 339	2.1
100 to 199 acres	farms	234	2.1
	acres	31 938	2.2
200 to 499 acres	farms	253	1.5
	acres	79 901	1.5
500 to 999 acres	farms	117	1.5
	acres	82 078	1.4
1,000 acres or more	farms	123	–
	acres	240 983	–
Cropland:			
Pasture or grazing only	farms	516	1.5
	acres	10 691	2.9
Other cropland	farms	345	1.6
	acres	9 735	2.1
Total woodland	farms	1 066	1.1
	acres	60 660	1.1
Pastureland and rangeland other than cropland and woodland pastured	farms	207	2.1
	acres	5 580	1.8
Land in house lots, ponds, roads, wasteland, etc.	farms	1 623	.8
	acres	26 324	1.6
Irrigated land	farms	415	1.3
	acres	72 635	.5
Acres irrigated:			
1 to 9 acres	farms	128	2.7
	acres	366	3.1
10 to 49 acres	farms	73	3.3
	acres	1 897	3.5
50 to 99 acres	farms	58	3.2
	acres	4 122	3.4
100 to 199 acres	farms	51	2.8
	acres	7 282	3.0
200 to 499 acres	farms	62	1.7
	acres	18 830	1.5
500 to 999 acres	farms	32	–
	acres	22 900	–
1,000 acres or more	farms	11	–
	acres	17 238	–
Harvested cropland irrigated	farms	408	1.3
	acres	72 375	.5
Pasture and other land irrigated	farms	14	8.2
	acres	260	4.4
Land under Conservation Reserve or Wetlands Reserve Programs	farms	58	3.9
	acres	2 225	8.8
VALUE OF LAND AND BUILDINGS[1]			
Estimated market value of land and buildings	farms	2 458	.8
	$1,000	1 499 316	2.9
Average per farm	dollars	609 974	3.0
Average per acre	dollars	2 660	3.4
VALUE OF MACHINERY AND EQUIPMENT[1]			
Estimated market value of all machinery and equipment	farms	2 458	.8
	$1,000	187 259	3.1
Average per farm	dollars	76 183	3.2
AGRICULTURAL CHEMICALS[1]			
Commercial fertilizer	farms	1 400	3.5
	acres on which used	370 567	2.4

Item		Total	Relative standard error of estimate (percent)
TENURE OF OPERATOR			
All operators	farms	2 460	.8
	acres	579 545	.5
Full owners	farms	1 519	1.0
	acres	120 874	1.3
Part owners	farms	705	1.0
	acres	395 262	.4
Tenants	farms	236	2.2
	acres	63 409	1.3
OWNED AND RENTED LAND			
Land owned	farms	2 232	.8
	acres	309 026	.7
Owned land in farms	farms	2 224	.8
	acres	285 220	.7
Land rented or leased from others	farms	948	1.0
	acres	296 675	.5
	landlords	4 008	.7
Rented or leased land in farms	farms	941	1.0
	acres	294 325	.5
Land rented or leased to others	farms	439	1.4
	acres	26 156	2.1
OPERATOR CHARACTERISTICS			
Operators by place of residence:			
On farm operated		1 777	.9
Not on farm operated		391	1.8
Not reported		292	1.3
Operators by principal occupation:			
Farming		1 497	.8
Other		963	1.4
Operators by days worked off farm:			
Any		1 097	1.2
200 days or more		744	1.4
Operators by sex:			
Male	farms	2 178	.9
	acres	553 441	.5
Female	farms	282	1.5
	acres	26 104	1.3
Average age of operator	years	54.0	1.2
FARMS BY TYPE OF ORGANIZATION			
Individual or family (sole proprietorship)	farms	1 995	.9
	acres	327 453	.6
Partnership	farms	207	2.1
	acres	72 887	1.4
Corporation:			
Family held	farms	222	1.4
	acres	169 874	.4
More than 10 stockholders	farms	5	8.4
10 or less stockholders	farms	217	1.4
Other than family held	farms	14	5.4
	acres	1 553	7.6
More than 10 stockholders	farms	3	14.2
10 or less stockholders	farms	11	5.6
Other—cooperative, estate or trust, institutional, etc.	farms	22	5.2
	acres	7 778	7.6
HIRED FARM LABOR[1]			
Hired workers by days worked:			
150 days or more	farms	438	4.9
	workers	1 445	2.6
Less than 150 days	farms	795	4.6
	workers	3 854	5.0
INJURIES AND DEATHS			
Farm-related injuries:			
Operator and family members	farms	23	5.6
	number	28	5.3
Hired workers	farms	22	4.0
	number	39	5.3
Farm-related deaths:			
Operator and family members	farms	–	–
	number	–	–
Hired workers	farms	–	–
	number	–	–

See footnotes at end of table.

Table C. **Reliability Estimates of State Totals for All Farms: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
FARMS BY SIZE			
1 to 9 acres	farms	399	1.3
	acres	1 902	1.4
10 to 49 acres	farms	772	1.3
	acres	18 736	1.5
50 to 69 acres	farms	139	2.7
	acres	8 033	2.7
70 to 99 acres	farms	199	2.3
	acres	16 058	2.3
100 to 139 acres	farms	195	2.3
	acres	22 647	2.3
140 to 179 acres	farms	105	2.8
	acres	16 494	2.8
180 to 219 acres	farms	92	3.1
	acres	18 279	3.1
220 to 259 acres	farms	59	2.8
	acres	14 311	2.8
260 to 499 acres	farms	208	1.8
	acres	74 110	1.8
500 to 999 acres	farms	155	1.5
	acres	106 966	1.4
1,000 to 1,999 acres	farms	91	–
	acres	120 898	–
2,000 acres or more	farms	46	–
	acres	161 111	–
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			
Oilseed and grain farming (1111)	farms	864	1.4
	acres	303 353	.8
Vegetable and melon farming (1112)	farms	117	2.9
	acres	65 201	.6
Fruit and tree nut farming (1113)	farms	21	7.9
	acres	1 786	5.7
Greenhouse, nursery, and floriculture production (1114)	farms	140	2.7
	acres	8 047	5.9
Other crop farming (1119)	farms	85	3.6
	acres	24 588	1.5
Beef cattle ranching and farming (112111)	farms	89	3.4
	acres	7 880	3.2
Cattle feedlots (112112)	farms	30	6.2
	acres	5 460	1.5
Dairy cattle and milk production (11212)	farms	91	2.4
	acres	32 731	.9
Hog and pig farming (1122)	farms	26	5.1
	acres	5 905	.8
Poultry and egg production (1123)	farms	822	.5
	acres	116 954	.1
Sheep and goat farming (1124)	farms	11	9.5
	acres	359	16.8
Animal aquaculture and other animal production (1125, 1129)	farms	164	2.9
	acres	7 281	5.4
LIVESTOCK			
Cattle and calves inventory	farms	434	1.4
	number	27 968	.7
Beef cows	farms	224	2.0
	number	3 685	2.2
Milk cows	farms	132	2.1
	number	9 241	.8
Cattle and calves sold	farms	370	1.5
	number	18 179	.4
	$1,000	9 457	.3
Hogs and pigs inventory	farms	132	2.0
	number	33 355	.5
Hogs and pigs sold	farms	115	2.0
	number	60 245	.3
	$1,000	6 552	.3
Sheep and lambs of all ages inventory	farms	50	3.5
	number	1 167	2.3
Sheep and lambs sold	farms	39	3.9
	number	940	2.3
Horses and ponies inventory	farms	394	1.8
	number	3 248	2.6
Horses and ponies sold	farms	125	3.0
	number	364	4.7
POULTRY			
Layers and pullets 13 weeks old and older inventory (see text)	farms	87	3.1
	number	(D)	(D)
Layers 20 weeks old and older	farms	86	3.1
	number	389 013	2.2
Broilers and other meat-type chickens sold	farms	805	.5
	number	223 298 115	.1
SELECTED CROPS HARVESTED			
Corn for grain or seed	farms	985	1.0
	acres	157 011	.5
	bushels	15 670 883	.5
Corn for silage or green chop	farms	124	2.1
	acres	9 132	1.1
	tons, green	112 724	1.0
Wheat for grain	farms	652	1.1
	acres	75 265	.6
	bushels	4 987 739	.5
Barley for grain	farms	242	1.3
	acres	32 311	.6
	bushels	2 700 574	.5
Soybeans for beans	farms	1 125	1.0
	acres	222 785	.6
	bushels	6 560 094	.5
Potatoes, excluding sweetpotatoes	farms	22	3.0
	acres	4 668	1.0
	cwt	903 943	.8
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms	467	1.5
	acres	15 918	1.5
	tons, dry	37 696	1.5
Alfalfa hay	farms	272	1.7
	acres	5 615	2.1
	tons, dry	19 017	2.0
Vegetables harvested for sale (see text)	farms	270	1.6
	acres	45 491	.3
Land in orchards	farms	31	6.0
	acres	1 200	1.6

[1]Data are based on a sample of farms.
[2]Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table D. Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS		
Farms ..... number..	1 717	.7
Land in farms ..... acres..	547 398	.4
Average size of farm ..... acres..	319	.8
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD		
Total sales (see text) ..... farms..	1 717	.7
$1,000..	688 368	.1
Average per farm ..... dollars..	400 913	.7
Farms by value of sales:		
$10,000 to $19,999 ..... farms..	193	2.4
$1,000..	2 734	2.5
$20,000 to $24,999 ..... farms..	69	3.8
$1,000..	1 533	3.8
$25,000 to $39,999 ..... farms..	142	2.8
$1,000..	4 489	2.9
$40,000 to $49,999 ..... farms..	58	3.9
$1,000..	2 579	3.8
$50,000 to $99,999 ..... farms..	177	2.4
$1,000..	12 395	2.4
$100,000 to $249,999 ..... farms..	275	1.6
$1,000..	47 052	1.4
$250,000 to $499,999 ..... farms..	348	–
$1,000..	132 457	–
$500,000 or more ..... farms..	455	–
$1,000..	485 130	–
Sales by commodity or commodity group:		
Crops, including nursery and greenhouse crops ..... farms..	1 151	.8
$1,000..	172 928	.3
Grains ..... farms..	1 018	.9
$1,000..	105 566	.4
Corn for grain ..... farms..	742	1.0
$1,000..	40 555	.5
Wheat ..... farms..	583	1.1
$1,000..	15 015	.5
Soybeans ..... farms..	909	.9
$1,000..	44 078	.4
Sorghum for grain ..... farms..	73	2.2
$1,000..	(D)	(D)
Barley ..... farms..	206	1.3
$1,000..	4 600	.5
Oats ..... farms..	5	10.8
$1,000..	(D)	(D)
Other grains ..... farms..	30	3.3
$1,000..	544	.3
Cotton and cottonseed ..... farms..	–	–
$1,000..	–	–
Tobacco ..... farms..	–	–
$1,000..	–	–
Hay, silage, and field seeds ..... farms..	124	2.2
$1,000..	1 160	2.7
Vegetables, sweet corn, and melons ..... farms..	207	1.4
$1,000..	38 430	.3
Fruits, nuts, and berries ..... farms..	34	3.7
$1,000..	(D)	(D)
Nursery and greenhouse crops ..... farms..	101	2.6
$1,000..	16 649	.8
Other crops ..... farms..	26	2.9
$1,000..	(D)	(D)
Livestock, poultry, and their products ..... farms..	1 093	.5
$1,000..	515 440	.1
Poultry and poultry products ..... farms..	850	.5
$1,000..	478 916	.1
Dairy products ..... farms..	112	2.0
$1,000..	19 259	.7
Cattle and calves ..... farms..	246	1.4
$1,000..	9 214	.3
Hogs and pigs ..... farms..	87	1.7
$1,000..	6 508	.3
Sheep, lambs, and wool ..... farms..	28	3.7
$1,000..	46	1.8
Other livestock and livestock products (see text) ..... farms..	81	2.9
$1,000..	1 497	4.1
Value of agricultural products sold directly to individuals for human consumption (see text) ..... farms..	75	2.9
$1,000..	1 741	2.1

Item	Total	Relative standard error of estimate (percent)
FARM PRODUCTION EXPENSES[1]		
Total farm production expenses ..... farms..	1 717	.7
$1,000..	615 929	.4
Average per farm ..... dollars..	358 724	.8
Livestock and poultry purchased ..... farms..	1 005	2.3
$1,000..	63 839	.4
Feed for livestock and poultry ..... farms..	1 116	2.7
$1,000..	362 993	.7
Commercially mixed formula feeds ..... farms..	1 053	2.8
$1,000..	359 122	.7
Seeds, bulbs, plants, and trees ..... farms..	1 083	2.7
$1,000..	11 357	1.7
Commercial fertilizer ..... farms..	1 028	2.8
$1,000..	20 193	2.3
Agricultural chemicals ..... farms..	1 109	2.4
$1,000..	16 019	2.1
Petroleum products ..... farms..	1 530	1.6
$1,000..	12 314	1.8
Electricity ..... farms..	1 512	2.2
$1,000..	7 019	1.1
Hired farm labor ..... farms..	818	3.5
$1,000..	30 146	1.6
Contract labor ..... farms..	249	8.2
$1,000..	4 069	.6
Repair and maintenance ..... farms..	1 582	1.4
$1,000..	18 706	1.8
Customwork, machine hire, and rental of machinery and equipment ..... farms..	771	4.2
$1,000..	3 279	2.9
Interest ..... farms..	1 036	3.3
$1,000..	17 063	1.2
Secured by real estate ..... farms..	841	3.1
$1,000..	14 073	1.4
Not secured by real estate ..... farms..	445	5.5
$1,000..	2 990	1.3
Cash rent ..... farms..	589	5.4
$1,000..	12 826	1.2
Property taxes ..... farms..	1 613	1.4
$1,000..	3 667	2.5
All other farm production expenses ..... farms..	1 717	.7
$1,000..	32 439	1.0
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]		
All farms ..... number..	1 717	.7
$1,000..	70 400	1.9
Average per farm ..... dollars..	41 001	2.0
Farms with net gains[2] ..... number..	1 320	2.2
$1,000..	88 385	1.1
Average net gain ..... dollars..	66 958	2.5
Farms with net losses ..... number..	397	7.1
$1,000..	17 986	3.7
Average net loss ..... dollars..	45 304	8.0
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
Government payments ..... farms..	602	.9
$1,000..	3 652	.5
Other farm-related income[1] ..... farms..	572	6.0
$1,000..	3 184	4.2
Customwork and other agricultural services ..... farms..	165	12.5
$1,000..	1 698	5.6
Gross cash rent or share payments ..... farms..	153	13.7
$1,000..	590	16.4
Forest products, excluding Christmas trees and maple products ..... farms..	19	27.6
$1,000..	265	1.6
Other farm-related income sources ..... farms..	393	7.6
$1,000..	631	4.2
COMMODITY CREDIT CORPORATION LOANS		
Total ..... farms..	41	3.1
$1,000..	1 575	1.1

See footnotes at end of table.

Table D. Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			
Total cropland	farms	1 310	.8
	acres	469 032	.4
Harvested cropland	farms	1 211	.8
	acres	453 984	.4
Cropland:			
Pasture or grazing only	farms	285	1.3
	acres	7 664	3.8
Total woodland	farms	747	1.0
	acres	51 748	1.0
Pastureland and rangeland other than cropland and woodland pastured	farms	119	1.9
	acres	4 372	1.7
Land in house lots, ponds, roads, wasteland, etc.	farms	1 166	.7
	acres	22 246	1.1
Irrigated land	farms	354	1.2
	acres	72 246	.5
Harvested cropland irrigated	farms	351	1.2
	acres	72 037	.5
Pasture and other land irrigated	farms	7	–
	acres	209	–
Land under Conservation Reserve or Wetlands Reserve Programs	farms	34	4.2
	acres	980	3.9
VALUE OF LAND AND BUILDINGS[1]			
Estimated market value of land and buildings	farms	1 717	.7
	$1,000	1 360 742	3.1
Average per farm	dollars	792 511	3.2
Average per acre	dollars	2 545	3.6
VALUE OF MACHINERY AND EQUIPMENT[1]			
Estimated market value of all machinery and equipment	farms	1 717	.7
	$1,000	169 257	3.2
Average per farm	dollars	98 577	3.3
AGRICULTURAL CHEMICALS[1]			
Commercial fertilizer	farms	1 005	3.0
	acres on which used	362 127	2.4
TENURE OF OPERATOR			
All operators	farms	1 717	.7
	acres	547 398	.4
Full owners	farms	953	.8
	acres	96 615	1.3
Part owners	farms	595	.9
	acres	389 072	.4
Tenants	farms	169	2.3
	acres	61 711	1.3
OWNED AND RENTED LAND			
Land owned	farms	1 553	.6
	acres	274 596	.6
Owned land in farms	farms	1 548	.6
	acres	257 669	.6
Land rented or leased from others	farms	767	.9
	acres	291 603	.5
	landlords	3 718	.6
Rented or leased land in farms	farms	764	.9
	acres	289 729	.5
Land rented or leased to others	farms	311	1.2
	acres	18 801	2.0
OPERATOR CHARACTERISTICS			
Operators by place of residence:			
On farm operated		1 248	.7
Not on farm operated		250	1.8
Not reported		219	1.1
Operators by principal occupation:			
Farming		1 268	.7
Other		449	1.3
Operators by days worked off farm:			
Any		622	1.1
200 days or more		388	1.4
Operators by sex:			
Male		1 520	.7
Female		197	1.2
Average age of operator	years	53.5	1.0

Item		Total	Relative standard error of estimate (percent)
FARMS BY TYPE OF ORGANIZATION			
Individual or family (sole proprietorship)	farms	1 335	.7
	acres	300 480	.6
Partnership	farms	155	1.9
	acres	69 840	1.4
Corporation:			
Family held	farms	199	1.2
	acres	168 726	.4
More than 10 stockholders	farms	5	8.4
10 or less stockholders	farms	194	1.2
Other than family held	farms	12	5.2
	acres	(D)	(D)
More than 10 stockholders	farms	3	14.1
10 or less stockholders	farms	9	5.2
Other—cooperative, estate or trust, institutional, etc.	farms	16	5.0
	acres	(D)	(D)
HIRED FARM LABOR[1]			
Hired workers by days worked:			
150 days or more	farms	426	4.7
	workers	1 433	2.6
Less than 150 days	farms	675	4.0
	workers	3 665	5.2
INJURIES AND DEATHS			
Farm-related injuries:			
Operator and family members	farms	15	5.1
	number	18	4.2
Hired workers	farms	21	3.6
	number	(D)	(D)
Farm-related deaths:			
Operator and family members	farms	–	–
	number	–	–
Hired workers	farms	–	–
	number	–	–
FARMS BY SIZE			
1 to 9 acres		262	1.1
10 to 49 acres		373	1.1
50 to 69 acres		71	2.8
70 to 99 acres		138	2.4
100 to 139 acres		152	2.3
140 to 179 acres		91	2.9
180 to 219 acres		80	3.2
220 to 259 acres		59	2.8
260 to 499 acres		201	1.8
500 to 999 acres		153	1.4
1,000 to 1,999 acres		91	–
2,000 acres or more		46	–
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			
Oilseed and grain farming (1111)		548	1.4
Vegetable and melon farming (1112)		73	3.1
Fruit and tree nut farming (1113)		4	14.7
Greenhouse, nursery, and floriculture production (1114)		75	2.9
Other crop farming (1119)		33	4.2
Beef cattle ranching and farming (112111)		22	4.8
Cattle feedlots (112112)		8	7.8
Dairy cattle and milk production (11212)		90	2.3
Hog and pig farming (1122)		13	4.6
Poultry and egg production (1123)		814	.5
Sheep and goat farming (1124)		2	17.5
Animal aquaculture and other animal production (1125, 1129)		35	5.4
LIVESTOCK			
Cattle and calves inventory	farms	274	1.3
	number	25 626	.6
Beef cows	farms	126	1.9
	number	2 486	2.1
Milk cows	farms	113	2.0
	number	9 200	.8
Cattle and calves sold	farms	246	1.4
	number	17 478	.3
	$1,000	9 214	.3
Hogs and pigs inventory	farms	97	1.7
	number	32 880	.5
Hogs and pigs sold	farms	87	1.7
	number	59 859	.3
	$1,000	6 508	.3
Sheep and lambs of all ages inventory	farms	29	3.6
	number	936	1.4
Sheep and lambs sold	farms	24	3.5
	number	699	2.0
Horses and ponies inventory	farms	187	2.0
	number	1 592	3.3
Horses and ponies sold	farms	64	3.6
	number	240	5.6

See footnotes at end of table.

Table D. Reliability Estimates of State Totals for Farms With Sales of $10,000 or More: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item		Total	Relative standard error of estimate (percent)
POULTRY			
Layers and pullets 13 weeks old and older inventory (see text)	farms	50	3.6
	number	(D)	(D)
Layers 20 weeks old and older	farms	49	3.6
	number	387 957	2.1
Broilers and other meat-type chickens sold	farms	805	.4
	number	223 298 115	.1
SELECTED CROPS HARVESTED			
Corn for grain or seed	farms	815	.9
	acres	154 131	.5
	bushels	15 470 680	.5
Corn for silage or green chop	farms	109	2.0
	acres	8 933	1.1
	tons, green	108 861	1.0
Wheat for grain	farms	586	1.1
	acres	74 186	.6
	bushels	4 939 484	.5
SELECTED CROPS HARVESTED—Con.			
Barley for grain	farms	230	1.2
	acres	32 183	.6
	bushels	2 693 758	.5
Soybeans for beans	farms	912	.9
	acres	217 276	.5
	bushels	6 451 724	.5
Potatoes, excluding sweetpotatoes	farms	22	3.1
	acres	4 668	1.0
	cwt	903 943	.8
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms	286	1.3
	acres	13 033	1.5
	tons, dry	32 163	1.3
Alfalfa hay	farms	189	1.6
	acres	4 507	1.5
	tons, dry	15 967	1.5
Vegetables harvested for sale (see text)	farms	207	1.4
	acres	45 310	.3
Land in orchards	farms	12	7.6
	acres	(D)	(D)

[1]Data are based on a sample of farms.
[2]Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table E. **Reliability Estimates of Percent Change in State Totals: 1992 to 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item	All farms		Farms with sales of $10,000 or more	
	Percent change from 1992 to 1997	Standard error of estimate	Percent change from 1992 to 1997	Standard error of estimate
Farms ..... number	–6.6	1.5	–3.3	1.3
Land in farms ..... acres	–1.6	.9	–.2	.8
Average size of farm ..... acres	5.4	2.0	3.2	1.7
Estimated market value of land and buildings[1]:				
Average per farm ..... dollars	18.6	4.4	18.3	4.2
Average per acre ..... dollars	18.4	4.8	18.2	4.6
Estimated market value of all machinery and equipment[1]:				
Average per farm ..... dollars	12.3	4.7	9.4	4.4
Farms by size:				
1 to 9 acres	–5.2	1.8	–14.1	1.2
10 to 49 acres	–3.1	2.0	13.0	1.6
50 to 179 acres	–12.0	1.9	–5.0	2.0
180 to 499 acres	–9.8	2.1	–9.3	2.1
500 to 999 acres	–3.7	1.8	–3.8	1.7
1,000 to 1,999 acres	2.2	–	2.2	–
2,000 acres or more	9.5	–	9.5	–
Total cropland ..... farms	–8.4	1.7	–4.3	1.6
acres	–1.7	.8	–.9	.8
Harvested cropland ..... farms	–7.5	1.7	–3.7	1.7
acres	–.8	.8	.1	.8
Irrigated land ..... farms	17.9	2.4	14.6	2.2
acres	17.6	.8	17.4	.8
Market value of agricultural products sold $1,000	23.4	.2	23.6	.2
Average per farm ..... dollars	32.1	2.1	27.9	1.8
Crops, including nursery and greenhouse crops $1,000	22.3	.6	23.0	.6
Livestock, poultry, and their products $1,000	23.8	.2	23.8	.2
Farms by value of sales:				
Less than $2,500	–4.3	3.1	(X)	(X)
$2,500 to $4,999	–18.8	3.6	(X)	(X)
$5,000 to $9,999	–22.6	3.3	(X)	(X)
$10,000 to $24,999	–13.0	3.4	–13.0	3.3
$25,000 to $49,999	–1.0	4.3	–1.0	4.2
$50,000 to $99,999	–2.7	4.0	–2.7	3.9
$100,000 to $249,999	–27.8	1.2	–27.8	1.2
$250,000 to $499,999	–20.4	–	–20.4	–
$500,000 or more	66.7	–	66.7	–
Total farm production expenses[1] $1,000	38.4	1.3	39.4	1.0
Average per farm ..... dollars	47.9	2.7	43.6	2.1
Net cash return from agricultural sales for the farm unit (see text)[1] ..... farms	–6.4	1.6	–2.9	1.3
$1,000	–37.1	1.4	–37.3	1.3
Average per farm ..... dollars	–32.8	1.9	–35.4	1.6
Operators by principal occupation:				
Farming	–5.1	1.4	–1.5	1.3
Other	–8.7	2.1	–8.2	2.0
Operators by days worked off farm:				
Any	–14.8	1.8	–15.1	1.6
200 days or more	–12.4	2.0	–7.8	1.9
Livestock and poultry:				
Cattle and calves inventory ..... farms	5.6	2.6	11.8	2.6
number	–3.0	1.0	–4.8	.9
Beef cows ..... farms	9.8	3.8	22.3	4.2
number	29.0	5.1	18.0	4.9
Milk cows ..... farms	–3.6	3.2	3.7	3.3
number	6.7	1.1	6.8	1.0
Cattle and calves sold ..... farms	9.8	2.8	7.4	2.6
number	–19.8	.4	–21.1	.4
Hogs and pigs inventory ..... farms	–35.6	2.0	–37.0	1.8
number	–43.4	.5	–43.1	.5
Hogs and pigs sold ..... farms	–41.0	1.8	–42.4	1.7
number	–49.0	.4	–48.8	.4
Sheep and lambs inventory ..... farms	–30.6	3.8	–21.6	4.7
number	–37.1	4.4	–32.7	5.3
Layers and pullets 13 weeks old and older inventory (see text) ..... farms	–25.6	3.4	–28.6	3.7
number	(D)	(D)	(D)	(D)
Broilers and other meat-type chickens sold ..... farms	–7.5	.5	–6.8	.5
number	–	.1	–	.1
Selected crops harvested:				
Corn for grain or seed ..... farms	–4.3	1.9	–1.5	1.8
acres	1.8	.9	2.1	.8
bushels	–13.6	.7	–13.3	.7
Wheat for grain ..... farms	8.8	2.2	12.5	2.1
acres	21.9	1.2	23.5	1.1
bushels	50.0	1.4	51.6	1.3
Barley for grain ..... farms	–25.1	1.7	–22.6	1.7
acres	–13.9	.7	–13.3	.7
bushels	3.6	.7	4.4	.7
Soybeans for beans ..... farms	–15.0	1.7	–6.1	1.7
acres	–3.9	1.0	–2.2	.9
bushels	–5.6	.9	–4.0	.8
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) ..... farms	9.1	2.8	15.3	3.0
acres	33.2	3.3	31.8	3.4
tons, dry	23.8	2.9	21.7	2.9
Vegetables harvested for sale (see text) ..... farms	–.4	2.5	–1.9	2.3
acres	7.3	.5	7.3	.5

[1]Data are based on a sample of farms.

Table F. **Reliability Estimates for the State and County Totals: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm[1]		Estimated market value of all machinery and equipment[1]	
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**2 460**	**.8**	**579 545**	**.5**	**236**	**1.0**	**609 974**	**3.0**	**187 259**	**3.1**
Kent	767	1.0	194 554	.7	254	1.2	646 978	3.3	56 974	3.3
New Castle	327	1.1	77 302	1.0	236	1.4	908 126	12.1	27 351	4.0
Sussex	1 366	.7	307 689	.5	225	.9	518 069	2.7	102 934	5.3

Geographic area	Average market value of all machinery and equipment per farm[1]		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses[1]			
							Total farm production expenses			
							Farms		Value	
	Value (dollars)	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**76 183**	**3.2**	**690 794**	**.1**	**280 811**	**.8**	**2 458**	**.8**	**620 297**	**.4**
Kent	74 379	3.5	153 691	.2	200 379	1.0	766	1.1	133 779	.9
New Castle	83 899	4.2	36 943	.4	112 976	1.2	326	1.1	29 852	1.4
Sussex	75 354	5.3	500 160	.1	366 149	.8	1 366	.8	456 666	.4

Geographic area	Farm production expenses[1]—Con.									
	Livestock and poultry purchased				Feed for livestock and poultry				Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**1 122**	**3.1**	**63 980**	**.5**	**1 405**	**3.5**	**363 258**	**.7**	**1 444**	**3.4**	**11 554**	**1.7**
Kent	282	7.6	10 221	1.4	383	7.1	59 201	2.0	493	5.3	3 913	3.0
New Castle	32	38.3	1 146	.8	114	21.8	4 578	.8	207	11.7	1 947	4.9
Sussex	808	3.1	52 613	.5	908	3.4	299 479	.7	744	4.5	5 693	2.3

Geographic area	Farm production expenses[1]—Con.									
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**1 424**	**3.4**	**20 537**	**2.3**	**1 426**	**2.9**	**16 274**	**2.1**	**2 170**	**1.7**	**12 659**	**1.8**
Kent	493	5.3	7 578	2.9	498	4.9	5 892	3.6	703	2.2	4 037	2.5
New Castle	201	11.2	3 268	5.9	171	9.7	2 035	3.8	313	4.0	1 347	2.1
Sussex	730	4.3	9 691	3.8	757	3.7	8 346	3.0	1 154	2.5	7 274	2.7

Geographic area	Farm production expenses[1]—Con.									
	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**1 825**	**2.6**	**7 080**	**1.1**	**938**	**4.0**	**30 207**	**1.6**	**277**	**8.0**	**4 083**	**.6**
Kent	538	4.8	1 684	1.7	284	6.8	11 434	1.1	106	12.0	1 275	1.0
New Castle	176	12.6	550	3.1	99	16.6	3 794	2.2	42	21.7	721	2.3
Sussex	1 111	2.8	4 846	1.5	555	5.0	14 979	3.1	129	12.1	2 087	.6

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses[1]—Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**2 135**	**1.9**	**19 338**	**1.8**	**980**	**4.6**	**3 395**	**3.0**	**1 273**	**3.7**	**17 866**	**1.4**
Kent	635	3.5	6 250	4.9	356	7.6	1 068	7.3	383	6.5	5 632	2.6
New Castle	283	6.7	2 223	3.7	75	24.7	408	4.6	125	19.6	1 963	4.1
Sussex	1 217	2.0	10 865	1.3	549	5.4	1 919	3.2	765	4.2	10 271	1.9

Geographic area	Farm production expenses[1]—Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)
Delaware	**692**	**6.1**	**12 959**	**1.2**	**2 291**	**1.6**	**4 272**	**3.4**	**2 277**	**1.5**	**32 835**	**1.0**
Kent	204	10.4	4 731	2.5	713	2.6	1 446	3.0	712	2.4	9 416	2.3
New Castle	104	21.8	2 253	3.9	285	5.7	623	18.4	267	7.0	2 994	1.3
Sussex	384	7.5	5 975	1.0	1 293	1.7	2 203	3.4	1 298	1.5	20 425	1.3

Geographic area	Net cash return from agricultural sales for the farm unit (see text)[1]				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total ($1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Delaware	**2 458**	**.8**	**68 563**	**2.0**	**1 981**	**.9**	**486 981**	**.5**	**1 810**	**1.0**	**466 555**	**.5**
Kent	766	1.1	17 798	5.1	677	1.1	167 846	.7	624	1.1	158 370	.7
New Castle	326	1.1	6 876	11.0	307	1.1	66 506	.8	279	1.2	62 436	.8
Sussex	1 366	.8	43 889	1.5	997	.9	252 629	.5	907	1.0	245 749	.5

Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
					Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Delaware	**415**	**1.3**	**72 635**	**.5**	**434**	**1.4**	**27 968**	**.7**	**224**	**2.0**	**3 685**	**2.2**
Kent	102	2.5	21 072	.8	227	1.8	16 887	.9	97	3.0	1 736	3.4
New Castle	52	3.4	2 857	4.3	68	3.3	2 698	2.3	39	4.6	(D)	(D)
Sussex	261	1.5	48 706	.7	139	2.1	8 383	.8	88	2.8	(D)	(D)

Geographic area	Livestock and poultry—Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Delaware	**132**	**2.1**	**9 241**	**.8**	**132**	**2.0**	**33 355**	**.5**	**50**	**3.5**	**1 167**	**2.3**
Kent	103	2.6	5 659	1.4	52	3.5	4 514	2.1	19	6.4	613	4.0
New Castle	10	1.7	(D)	(D)	11	8.5	51	6.7	14	6.2	222	4.3
Sussex	19	2.2	(D)	(D)	69	2.2	28 790	.4	17	4.9	332	1.9

See footnotes at end of table.

Table F. **Reliability Estimates for the State and County Totals: 1997**—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry—Con.							
	Layers 20 weeks old and older inventory				Broilers and other meat-type chickens sold			
	Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Delaware	**86**	**3.1**	**389 013**	**2.2**	**805**	**.5**	**223 298 115**	**.1**
Kent	57	3.8	84 905	8.4	133	1.2	(D)	(D)
New Castle	11	7.6	220 308	(L)	3	–	(D)	(D)
Sussex	18	6.8	83 800	5.2	669	.5	188 781 568	.1

Geographic area	Selected crops harvested											
	Corn for grain or seed						Wheat for grain					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Delaware	**985**	**1.0**	**157 011**	**.5**	**15 670 883**	**.5**	**652**	**1.1**	**75 265**	**.6**	**4 987 739**	**.5**
Kent	302	1.5	42 629	.8	3 833 911	.8	234	1.7	26 162	.9	1 747 383	.9
New Castle	123	1.9	24 481	.9	1 922 873	1.1	90	2.0	12 755	1.1	874 211	1.1
Sussex	560	1.1	89 901	.6	9 914 099	.6	328	1.4	36 348	.8	2 366 145	.7

Geographic area	Selected crops harvested—Con.											
	Barley for grain						Soybeans for beans					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Delaware	**242**	**1.3**	**32 311**	**.6**	**2 700 574**	**.5**	**1 125**	**1.0**	**222 785**	**.6**	**6 560 094**	**.5**
Kent	114	2.0	16 714	.9	1 420 004	.6	379	1.4	79 915	.9	2 555 454	.8
New Castle	17	4.4	1 208	5.0	94 962	5.7	117	1.8	27 320	1.0	754 445	1.0
Sussex	111	1.7	14 389	.6	1 185 608	.7	629	1.1	115 550	.7	3 250 195	.6

Geographic area	Selected crops harvested—Con.									
	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)						Vegetables harvested for sale (see text)			
	Farms		Acres		Quantity		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Delaware	**467**	**1.5**	**15 918**	**1.5**	**37 696**	**1.5**	**270**	**1.6**	**45 491**	**.3**
Kent	231	1.8	6 972	2.2	20 135	2.3	73	3.0	16 582	.5
New Castle	85	2.9	3 915	4.2	7 283	3.3	42	4.4	982	2.1
Sussex	151	2.2	5 031	1.0	10 278	1.0	155	1.8	27 927	.5

[1]Data are based on a sample of farms.

Table G. **Coverage Estimates: 1997**

[For meaning of abbreviations and symbols, see introductory text]

Item	Census total	Coverage total[1]	Adjusted census		Coverage adjustment (percent)
			Total	Relative standard error (percent)	
Farms ..... number	2 460	469	2 929	9.0	16.0
Land in farms ..... acres	579 545	20 186	599 731	1.8	3.4
Average size of farm ..... acres	236	43	205	(X)	(X)
Farms by size of farm:					
Less than 10 acres	399	121	520	14.6	23.3
10 to 49 acres	772	241	1 013	19.5	23.8
50 to 179 acres	638	80	718	13.6	11.1
180 acres or more	651	27	678	2.4	4.0
Farms by value of sales:					
Less than $2,500	375	277	652	18.6	42.5
$2,500 to $9,999	368	74	442	25.3	16.7
$10,000 or more	1 717	118	1 835	5.4	6.4
Market value of agricultural products sold $1,000	690 794	146	690 940	1.1	(Z)
Farms by type of organization:					
Individual or family	1 995	465	2 460	10.7	18.9
Partnership, corporation, or other	465	4	469	3.8	.9
Farms by tenure of operator:					
Full owners	1 519	338	1 857	12.3	18.2
Part owners	705	93	798	6.1	11.7
Tenants	236	38	274	16.1	13.9
Operators by place of residence:					
On farm operated	1 777	394	2 171	12.2	18.1
Not on farm operated	391	41	432	4.2	9.5
Not reported	292	34	326	3.7	10.4
Operators by principal occupation:					
Farming	1 497	86	1 583	2.0	5.4
Other	963	383	1 346	19.5	28.5
Operators by sex:					
Male	2 178	395	2 573	7.3	15.4
Female	282	74	356	27.2	20.8
Operators by race:					
White	2 419	459	2 878	9.2	15.9
Black and other races	41	10	51	111.8	19.6
Operators by years on present farm:					
4 years or less	240	81	321	3.7	25.2
5 years or more	1 718	300	2 018	11.1	14.9
Not reported	502	88	590	8.8	14.9

[1] See text in Appendix C regarding coverage estimates.