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 noncertainty 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..	11.3	Corn for grain or seed .... acres..	.1
Land in farms .... acres..	6.8	Wheat for grain .... acres..	5.1
Estimated market value of land and buildings[1] .... $1,000..	7.8	Livestock and poultry inventory:	
Market value of agricultural products sold .... $1,000..	1.7	Cattle and calves .... number..	4.4
Harvested cropland... acres..	4.4	Hogs and pigs .... number..	8.4
		Layers 20 weeks old and older .... number..	−

[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	5.7	25	37.5
50	3.7	50	25.6
75	2.8	75	20.2
100	2.1	100	16.8
150	1.2	150	12.5
200	1.0	200	9.7
300	.9	300	5.7
500	.7	500	4.4
750	.5	750	3.6
1,000..	.5	1,000..	3.1
1,500..	(X)	1,500..	(X)
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)	Item	Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS			**FARM PRODUCTION EXPENSES[1]**		
Farms ....number..	5 810	.5	Total farm production expenses .....farms..	5 801	.6
Land in farms ....acres..	1 211 648	.5	$1,000..	347 611	.4
Average size of farm .....acres..	209	.7	Average per farm ....dollars..	59 923	.7
			Livestock and poultry purchased ....farms..	1 234	4.9
			$1,000..	11 988	2.9
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			Feed for livestock and poultry .....farms..	2 201	3.2
			$1,000..	79 605	.4
			Commercially mixed formula feeds ...farms..	1 553	3.9
Total sales (see text) ......farms..	5 810	.5	$1,000..	51 161	.6
$1,000..	438 673	.1	Seeds, bulbs, plants, and trees ....farms..	2 076	3.1
Average per farm ....dollars..	75 503	.6	$1,000..	13 757	1.6
Farms by value of sales:			Commercial fertilizer ....farms..	3 031	2.4
Less than $1,000 (see text) ...farms..	1 020	1.1	$1,000..	16 537	1.2
$1,000..	250	1.7	Agricultural chemicals ....farms..	2 346	2.8
$1,000 to $2,499 ....farms..	903	1.2	$1,000..	17 435	1.1
$1,000..	1 477	1.2	Petroleum products ....farms..	5 494	.8
$2,500 to $4,999 ....farms..	743	1.3	$1,000..	14 829	1.1
$1,000..	2 618	1.3	Electricity ....farms..	3 815	1.9
$5,000 to $9,999 ....farms..	751	1.3	$1,000..	10 613	.7
$1,000..	5 297	1.3	Hired farm labor ....farms..	2 472	2.8
$10,000 to $19,999 ....farms..	621	1.5	$1,000..	64 285	.8
$1,000..	8 790	1.5	Contract labor ....farms..	645	6.4
$20,000 to $24,999 ....farms..	177	2.4	$1,000..	4 161	4.2
$1,000..	3 892	2.4	Repair and maintenance ....farms..	4 827	1.3
$25,000 to $39,999 ....farms..	309	1.8	$1,000..	23 988	1.4
$1,000..	9 743	1.9	Customwork, machine hire, and rental of machinery and equipment ...farms..	1 145	4.7
$40,000 to $49,999 ....farms..	129	2.9	$1,000..	4 595	1.2
$1,000..	5 680	2.9	Interest ....farms..	1 820	3.3
$50,000 to $99,999 ....farms..	390	1.4	$1,000..	15 954	1.9
$1,000..	28 364	1.4	Secured by real estate ....farms..	1 359	4.0
$100,000 to $249,999 ......farms..	414	−	$1,000..	10 753	2.7
$1,000..	64 969	−	Not secured by real estate ....farms..	973	4.9
$250,000 to $499,999 ......farms..	212	−	$1,000..	5 201	1.6
$1,000..	70 566	−	Cash rent ....farms..	941	4.1
$500,000 or more..........farms..	141	−	$1,000..	5 044	1.3
$1,000..	237 027	−	Property taxes.............farms..	5 550	.7
Sales by commodity or commodity group:			$1,000..	16 006	1.4
Crops, including nursery and greenhouse crops...farms..	3 899	.6	All other farm production expenses ...farms..	5 107	1.1
$1,000..	212 229	.2	$1,000..	48 814	.6
Grains...............farms..	407	1.0			
$1,000..	6 793	.5			
Corn for grain ....farms..	17	5.0	**NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]**		
$1,000..	785	1.3			
Wheat...............farms..	11	6.5			
$1,000..	124	1.9	All farms...............number..	5 801	.6
Soybeans.............farms..	16	3.3	$1,000..	78 187	1.7
$1,000..	113	1.6	Average per farm ....dollars..	13 478	1.8
Sorghum for grain ....farms..	−	−	Farms with net gains[2] ......number..	2 469	2.4
$1,000..	−	−	$1,000..	108 332	.9
Barley...............farms..	164	1.0	Average net gain ....dollars..	43 877	2.6
$1,000..	3 162	.3	Farms with net losses ....number..	3 332	1.9
Oats................farms..	209	1.3	$1,000..	30 145	2.3
$1,000..	1 882	.4	Average net loss...........dollars..	9 047	3.0
Other grains ....farms..	63	3.6			
$1,000..	727	4.0			
Cotton and cottonseed ......farms..	−	−	**GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME**		
$1,000..	−	−			
Tobacco..............farms..	−	−			
$1,000..	−	−	Government payments ....farms..	934	.8
Hay, silage, and field seeds ...farms..	1 574	.9	$1,000..	2 977	.9
$1,000..	9 747	1.2	Other farm-related income[1] .....farms..	1 689	4.0
Vegetables, sweet corn, and melons ...farms..	611	1.2	$1,000..	10 907	5.6
$1,000..	16 974	.6	Customwork and other agricultural services ...farms..	546	8.1
Fruits, nuts, and berries ......farms..	963	1.0	$1,000..	3 643	10.5
$1,000..	47 118	.4	Gross cash rent or share payments ...farms..	237	12.4
Nursery and greenhouse crops ...farms..	926	1.0	$1,000..	753	12.4
$1,000..	29 852	.6	Forest products, excluding Christmas trees and maple products ....farms..	903	5.9
Other crops ....farms..	813	.9	$1,000..	5 754	8.0
$1,000..	101 745	.2	Other farm-related income sources ...farms..	472	7.5
Livestock, poultry, and their products ...farms..	2 425	.7	$1,000..	757	9.4
$1,000..	226 444	.1			
Poultry and poultry products...farms..	396	1.6			
$1,000..	73 299	.1	**COMMODITY CREDIT CORPORATION LOANS**		
Dairy products...........farms..	565	.8			
$1,000..	95 420	.2			
Cattle and calves ....farms..	1 631	.8	Total ....farms..	12	4.2
$1,000..	10 222	.8	$1,000..	24	.1
Hogs and pigs...........farms..	261	1.9			
$1,000..	1 360	1.5			
Sheep, lambs, and wool ......farms..	407	1.6			
$1,000..	578	2.1			
Other livestock and livestock products (see text)...farms..	452	1.5			
$1,000..	45 563	.2			
Value of agricultural products sold directly to individuals for human consumption (see text) ...farms..	1 177	1.0			
$1,000..	8 314	1.2			

See footnotes at end of table.

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

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			**TENURE OF OPERATOR**		
Total cropland .... farms..	5 372	.6	All operators .... farms..	5 810	.5
acres..	539 966	.4	acres..	1 211 648	.5
Harvested cropland .... farms..	4 875	.6	Full owners .... farms..	3 829	.6
acres..	403 014	.4	acres..	584 716	.7
Farms by acres harvested:			Part owners .... farms..	1 654	.7
1 to 9 acres .... farms..	1 316	.9	acres..	586 987	.5
acres..	4 377	1.2	Tenants .... farms..	327	1.6
10 to 19 acres .... farms..	725	1.3	acres..	39 945	2.1
acres..	9 398	1.3			
20 to 29 acres .... farms..	493	1.5	**OWNED AND RENTED LAND**		
acres..	11 193	1.5			
30 to 49 acres .... farms..	646	1.3	Land owned.. farms..	5 485	.6
acres..	23 834	1.3	acres..	1 008 270	.5
50 to 99 acres .... farms..	628	1.3	Owned land in farms .... farms..	5 483	.6
acres..	42 053	1.3	acres..	985 902	.5
100 to 199 acres................................ farms..	502	1.2	Land rented or leased from others .... farms..	1 990	.7
acres..	66 569	1.1	acres..	227 375	.7
200 to 499 acres .... farms..	444	.7	landlords..	6 122	.7
acres..	131 355	.7	Rented or leased land in farms .... farms..	1 981	.7
500 to 999 acres .... farms..	89	–	acres..	225 746	.7
acres..	59 942	–	Land rented or leased to others .... farms..	435	1.5
1,000 acres or more......................... farms..	32	–	acres..	23 997	1.8
acres..	54 293	–			
Cropland:			**OPERATOR CHARACTERISTICS**		
Pasture or grazing only .... farms..	2 156	.8			
acres..	65 066	.9	Operators by place of residence:		
Other cropland .... farms..	1 657	.8	On farm operated	4 727	.6
acres..	71 886	.8	Not on farm operated	717	1.2
Total woodland .... farms..	4 189	.6	Not reported	366	1.4
acres..	566 603	.6	Operators by principal occupation:		
Pastureland and rangeland other than cropland and			Farming	2 872	.6
woodland pastured................................. farms..	844	1.1	Other	2 938	.7
acres..	27 952	1.4	Operators by days worked off farm:		
Land in house lots, ponds, roads, wasteland, etc. .... farms..	3 659	.6	Any	3 263	.7
acres..	77 127	.8	200 days or more	1 958	.8
Irrigated land .... farms..	671	1.1	Operators by sex:		
acres..	21 791	.3	Male .... farms..	4 991	.6
Acres irrigated:			acres..	1 128 669	.5
1 to 9 acres .... farms..	516	1.3	Female .... farms..	819	1.2
acres..	(D)	(D)	acres..	82 979	1.7
10 to 49 acres .... farms..	90	2.6	Average age of operator ....years..	54.4	.8
acres..	1 924	2.5			
50 to 99 acres .... farms..	20	1.8	**FARMS BY TYPE OF ORGANIZATION**		
acres..	1 342	1.3			
100 to 199 acres .... farms..	20	–	Individual or family (sole proprietorship)................ farms..	5 064	.6
acres..	2 623	–	acres..	896 406	.6
200 to 499 acres.............................. farms..	17	–	Partnership .... farms..	306	1.5
acres..	5 179	–	acres..	106 220	1.1
500 to 999 acres .... farms..	5	–	Corporation:		
acres..	2 750	–	Family held .... farms..	362	1.1
1,000 acres or more........................... farms..	3	–	acres..	179 965	.5
acres..	(D)	(D)	More than 10 stockholders .... farms..	4	–
Harvested cropland irrigated .... farms..	660	1.1	10 or less stockholders .... farms..	358	1.1
acres..	21 608	.3	Other than family held .... farms..	41	4.2
Pasture and other land irrigated .... farms..	24	5.5	acres..	10 749	2.1
acres..	183	3.2	More than 10 stockholders .... farms..	5	8.4
Land under Conservation Reserve or Wetlands			10 or less stockholders .... farms..	36	4.6
Reserve Programs .... farms..	352	1.4	Other—cooperative, estate or trust, institutional, etc. .... farms..	37	4.3
acres..	22 217	1.9	acres..	18 308	2.2
VALUE OF LAND AND BUILDINGS[1]			**HIRED FARM LABOR**[1]		
Estimated market value of land and buildings .... farms..	5 801	.6	Hired workers by days worked:		
$1,000..	1 456 482	1.5	150 days or more .... farms..	942	3.6
Average per farm .... dollars..	251 074	1.6	workers..	4 746	1.0
Average per acre .... dollars..	1 190	2.2	Less than 150 days .... farms..	2 306	3.0
			workers..	17 263	3.2
VALUE OF MACHINERY AND EQUIPMENT[1]					
			INJURIES AND DEATHS		
Estimated market value of all machinery and					
equipment .... farms..	5 794	.6	Farm-related injuries:		
$1,000..	282 151	2.2	Operator and family members .... farms..	52	3.9
Average per farm .... dollars..	48 697	2.2	number..	57	3.8
			Hired workers .... farms..	72	1.8
			number..	177	.9
AGRICULTURAL CHEMICALS[1]			Farm-related deaths:		
			Operator and family members .... farms..	1	
Commercial fertilizer .... farms..	2 921	2.4	number..	(D)	(D)
acres on which used..	234 911	1.6	Hired workers .... farms..	–	–
			number..	–	–

See footnotes at end of table.

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

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
FARMS BY SIZE			**LIVESTOCK**		
1 to 9 acres .... farms..	533	1.4	Cattle and calves inventory........................... farms..	1 921	.7
acres..	2 149	1.6	number..	101 695	.5
10 to 49 acres .... farms..	1 184	1.0	Beef cows .... farms..	1 035	1.1
acres..	31 263	1.1	number..	11 782	1.7
50 to 69 acres .... farms..	458	1.6	Milk cows .... farms..	685	.9
acres..	26 351	1.6	number..	40 749	.4
70 to 99 acres .... farms..	546	1.4	Cattle and calves sold .... farms..	1 631	.8
acres..	44 916	1.5	number..	37 889	.5
100 to 139 acres................................... farms..	689	1.3	$1,000..	10 222	.8
acres..	79 247	1.3	Hogs and pigs inventory .... farms..	341	1.7
			number..	5 977	3.4
140 to 179 acres................................... farms..	417	1.6	Hogs and pigs sold................................. farms..	261	1.9
acres..	65 082	1.6	number..	9 226	2.0
180 to 219 acres................................... farms..	328	1.7	$1,000..	1 360	1.5
acres..	64 655	1.6			
220 to 259 acres................................... farms..	267	1.8	Sheep and lambs of all ages inventory .... farms..	426	1.6
acres..	63 683	1.8	number..	10 603	2.1
260 to 499 acres................................... farms..	846	1.0	Sheep and lambs sold............................... farms..	355	1.7
acres..	300 546	1.0	number..	7 970	2.4
500 to 999 acres................................... farms..	398	1.0	Horses and ponies inventory .... farms..	1 014	1.1
acres..	267 420	1.0	number..	5 750	1.5
1,000 to 1,999 acres .... farms..	113	–	Horses and ponies sold............................. farms..	214	2.2
acres..	151 002	–	number..	810	4.4
2,000 acres or more................................ farms..	31	–			
acres..	115 334	–	**POULTRY**		
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			Layers and pullets 13 weeks old and older inventory (see text) .... farms..	554	1.4
			number..	6 134 383	.2
			Layers 20 weeks old and older .... farms..	532	1.4
Oilseed and grain farming (1111) .... farms..	179	2.3	number..	5 019 263	(L)
acres..	42 931	2.8	Broilers and other meat-type chickens sold .... farms..	73	3.8
Vegetable and melon farming (1112) .... farms..	733	.9	number..	199 416	.6
acres..	282 154	.4			
Fruit and tree nut farming (1113) .... farms..	805	1.1	**SELECTED CROPS HARVESTED**		
acres..	158 482	.9			
Greenhouse, nursery, and floriculture production (1114)... farms..	704	1.1	Corn for silage or green chop......................... farms..	332	.9
acres..	55 773	1.8	acres..	27 537	.3
Other crop farming (1119) .... farms..	1 224	1.0	tons, green..	447 405	.3
acres..	223 923	1.2	Oats for grain .... farms..	272	1.3
Beef cattle ranching and farming (112111) .... farms..	699	1.3	acres..	22 364	.5
acres..	124 110	1.6	bushels..	1 643 127	.4
Cattle feedlots (112112) .... farms..	95	3.2	Potatoes, excluding sweetpotatoes.................... farms..	586	.9
acres..	21 349	3.2	acres..	73 085	.2
Dairy cattle and milk production (11212) .... farms..	535	.9	cwt..	19 490 474	.2
acres..	226 746	.6	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) .... farms..	2 810	.7
Hog and pig farming (1122) .... farms..	71	3.4	acres..	214 005	.7
acres..	6 718	2.9	tons, dry..	332 039	.6
Poultry and egg production (1123) .... farms..	104	2.5	Vegetables harvested for sale (see text) .... farms..	611	1.2
acres..	11 625	1.9	acres..	11 745	.6
Sheep and goat farming (1124) .... farms..	193	2.4	Land in orchards..................................... farms..	334	1.7
acres..	20 822	2.7	acres..	5 170	.9
Animal aquaculture and other animal production (1125, 1129) .... farms..	468	1.5			
acres..	37 015	2.3			

[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)	Item	Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS			**FARM PRODUCTION EXPENSES[1]**		
Farms . . . . number..	2 393	.5	Total farm production expenses . . . . . . farms..	2 304	.6
Land in farms . . . . acres..	806 800	.4	$1,000..	326 270	.4
Average size of farm . . . . acres..	337	.6	Average per farm . . . . . . dollars..	141 610	.8
			Livestock and poultry purchased . . . . . . farms..	522	6.5
			$1,000..	10 855	2.1
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			Feed for livestock and poultry . . . . . . farms..	875	4.3
			$1,000..	78 092	.4
			Commercially mixed formula feeds . . . . . . farms..	736	4.5
			$1,000..	50 430	.7
Total sales (see text) . . . . . . farms..	2 393	.5	Seeds, bulbs, plants, and trees . . . . . . farms..	1 305	3.7
$1,000..	429 031	.1	$1,000..	13 469	1.6
Average per farm . . . . . . dollars..	179 286	.5	Commercial fertilizer . . . . . . farms..	1 703	2.6
Farms by value of sales:			$1,000..	15 864	1.2
$10,000 to $19,999 . . . . . . farms..	621	1.2	Agricultural chemicals . . . . . . farms..	1 492	3.0
$1,000..	8 790	1.2	$1,000..	17 021	1.1
$20,000 to $24,999 . . . . . . farms..	177	2.2	Petroleum products . . . . . . farms..	2 262	.8
$1,000..	3 892	2.2	$1,000..	13 079	1.2
$25,000 to $39,999 . . . . . . farms..	309	1.7	Electricity . . . . . . farms..	1 966	1.7
$1,000..	9 743	1.7	$1,000..	9 966	.6
$40,000 to $49,999 . . . . . . farms..	129	2.8	Hired farm labor . . . . . . farms..	1 563	2.9
$1,000..	5 680	2.8	$1,000..	63 273	.8
$50,000 to $99,999 . . . . . . farms..	390	1.3	Contract labor . . . . . . farms..	392	7.0
$1,000..	28 364	1.3	$1,000..	3 910	4.2
$100,000 to $249,999 . . . . . . farms..	414	–	Repair and maintenance . . . . . . farms..	2 162	1.2
$1,000..	64 969	–	$1,000..	20 560	1.5
$250,000 to $499,999 . . . . . . farms..	212	–	Customwork, machine hire, and rental of machinery and equipment . . . . . . farms..	726	4.9
$1,000..	70 566	–	$1,000..	4 349	.9
$500,000 or more . . . . . . farms..	141	–	Interest . . . . . . farms..	1 245	3.6
$1,000..	237 027	–	$1,000..	14 627	1.9
Sales by commodity or commodity group:			Secured by real estate . . . . . . farms..	921	4.4
Crops, including nursery and greenhouse crops . . . . . . farms..	1 808	.6	$1,000..	9 657	2.8
$1,000..	205 736	.2	Not secured by real estate . . . . . . farms..	722	5.4
Grains . . . . . . farms..	344	.8	$1,000..	4 969	1.5
$1,000..	6 693	.5	Cash rent . . . . . . farms..	788	4.7
Corn for grain . . . . . . farms..	13	2.9	$1,000..	4 930	1.2
$1,000..	(D)	(D)	Property taxes . . . . . . farms..	2 177	1.1
Wheat . . . . . . farms..	10	6.7	$1,000..	9 960	1.7
$1,000..	(D)	(D)	All other farm production expenses . . . . . . farms..	2 298	.6
Soybeans . . . . . . farms..	15	2.6	$1,000..	46 315	.6
$1,000..	(D)	(D)			
Sorghum for grain . . . . . . farms..	–	–	**NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]**		
$1,000..	–	–			
Barley . . . . . . farms..	159	.9	All farms . . . . . . number..	2 304	.6
$1,000..	3 150	.3	$1,000..	89 186	1.3
Oats . . . . . . farms..	179	1.1	Average per farm . . . . . . dollars..	38 709	1.5
$1,000..	1 836	.4	Farms with net gains[2] . . . . . . number..	1 683	2.5
Other grains . . . . . . farms..	36	4.1	$1,000..	106 659	.9
$1,000..	689	4.3	Average net gain . . . . . . dollars..	63 374	2.6
Cotton and cottonseed . . . . . . farms..	–	–	Farms with net losses . . . . . . number..	621	6.5
$1,000..	–	–	$1,000..	17 473	2.5
Tobacco . . . . . . farms..	–	–	Average net loss . . . . . . dollars..	28 136	7.0
$1,000..	–	–			
Hay, silage, and field seeds . . . . . . farms..	541	1.2			
$1,000..	7 077	1.5			
Vegetables, sweet corn, and melons . . . . . . farms..	350	1.4	**GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME**		
$1,000..	16 337	.6			
Fruits, nuts, and berries . . . . . . farms..	457	1.2			
$1,000..	45 521	.3	Government payments . . . . . . farms..	620	.7
Nursery and greenhouse crops . . . . . . farms..	465	1.2	$1,000..	2 172	.6
$1,000..	28 778	.6	Other farm-related income[1] . . . . . . farms..	772	5.2
Other crops . . . . . . farms..	585	.8	$1,000..	7 415	6.6
$1,000..	101 330	.2	Customwork and other agricultural services . . . . . . farms..	252	12.5
Livestock, poultry, and their products . . . . . . farms..	1 064	.7	$1,000..	2 883	12.1
$1,000..	223 295	.1	Gross cash rent or share payments . . . . . . farms..	93	18.7
Poultry and poultry products . . . . . . farms..	137	2.0	$1,000..	457	16.1
$1,000..	73 156	.1	Forest products, excluding Christmas trees and maple products . . . . . . farms..	397	8.1
Dairy products . . . . . . farms..	544	.7	$1,000..	3 504	10.4
$1,000..	95 394	.2	Other farm-related income sources . . . . . . farms..	321	7.7
Cattle and calves . . . . . . farms..	841	.8	$1,000..	571	3.7
$1,000..	8 469	.8			
Hogs and pigs . . . . . . farms..	79	2.9	**COMMODITY CREDIT CORPORATION LOANS**		
$1,000..	1 115	1.8			
Sheep, lambs, and wool . . . . . . farms..	84	3.0			
$1,000..	232	2.8			
Other livestock and livestock products (see text) . . . . . . farms..	132	2.3			
$1,000..	44 929	.2			
Value of agricultural products sold directly to individuals for human consumption (see text) . . . . . . farms..	484	1.2	Total . . . . . . farms..	12	4.3
$1,000..	7 159	1.3	$1,000..	24	.1

See footnotes at end of table.

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

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			**FARMS BY TYPE OF ORGANIZATION**		
			Individual or family (sole proprietorship) .... farms..	1 857	.6
Total cropland .... farms..	2 272	.5	acres..	527 985	.5
acres..	419 746	.3	Partnership .... farms..	181	1.5
Harvested cropland .... farms..	2 205	.5	acres..	85 546	.8
acres..	334 764	.3	Corporation:		
Cropland:			Family held .... farms..	301	1.0
Pasture or grazing only .... farms..	804	.8	acres..	169 015	.4
acres..	36 477	.9	More than 10 stockholders .... farms..	4	–
Total woodland .... farms..	1 733	.6	10 or less stockholders .... farms..	297	1.0
acres..	325 207	.6	Other than family held .... farms..	30	4.7
Pastureland and rangeland other than cropland and			acres..	8 960	.7
woodland pastured.............................. farms..	305	1.2	More than 10 stockholders .... farms..	4	10.6
acres..	15 582	1.5	10 or less stockholders .... farms..	26	5.2
Land in house lots, ponds, roads, wasteland, etc. .... farms..	1 483	.6	Other—cooperative, estate or trust, institutional, etc. .... farms..	24	4.6
acres..	46 265	.7	acres..	15 294	1.6
Irrigated land .... farms..	438	1.1			
acres..	21 052	.2	**HIRED FARM LABOR[1]**		
Harvested cropland irrigated .... farms..	436	1.1	Hired workers by days worked:		
acres..	20 975	.2	150 days or more .... farms..	821	2.9
Pasture and other land irrigated .... farms..	11	7.2	workers..	4 620	.9
acres..	77	3.2	Less than 150 days .... farms..	1 398	3.3
Land under Conservation Reserve or Wetlands			workers..	14 484	3.4
Reserve Programs .... farms..	164	1.4			
acres..	10 590	1.4	**INJURIES AND DEATHS**		
			Farm-related injuries:		
VALUE OF LAND AND BUILDINGS[1]			Operator and family members .... farms..	28	4.2
			number..	30	4.2
Estimated market value of land and buildings .... farms..	2 304	.6	Hired workers .... farms..	66	1.7
$1,000..	862 210	1.8	number..	170	.7
Average per farm .... dollars..	374 223	1.9	Farm-related deaths:		
Average per acre .... dollars..	1 079	2.6	Operator and family members .... farms..	1	–
			number..	(D)	(D)
VALUE OF MACHINERY AND EQUIPMENT[1]			Hired workers .... farms..	–	–
			number..	–	–
Estimated market value of all machinery and					
equipment .... farms..	2 304	.6	**FARMS BY SIZE**		
$1,000..	199 650	2.6	1 to 9 acres	168	2.0
Average per farm .... dollars..	86 654	2.7	10 to 49 acres	307	1.6
			50 to 69 acres	109	2.8
AGRICULTURAL CHEMICALS[1]			70 to 99 acres	133	2.6
			100 to 139 acres	220	1.9
Commercial fertilizer .... farms..	1 640	2.6	140 to 179 acres	148	2.5
acres on which used..	216 047	1.6	180 to 219 acres	150	2.0
			220 to 259 acres	153	2.0
TENURE OF OPERATOR			260 to 499 acres	555	1.0
			500 to 999 acres	315	.8
All operators .... farms..	2 393	.5	1,000 to 1,999 acres	105	–
acres..	806 800	.4	2,000 acres or more..............................	30	–
Full owners .... farms..	1 119	.8			
acres..	267 745	.8	**FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM**		
Part owners .... farms..	1 074	.7			
acres..	504 659	.4	Oilseed and grain farming (1111)	23	5.5
Tenants .... farms..	200	1.7	Vegetable and melon farming (1112)	564	.8
acres..	34 396	2.2	Fruit and tree nut farming (1113)	358	1.3
			Greenhouse, nursery, and floriculture production		
OWNED AND RENTED LAND			(1114)	349	1.4
			Other crop farming (1119)	273	1.7
Land owned....................................... farms..	2 193	.5	Beef cattle ranching and farming (112111)	110	2.8
acres..	625 360	.4	Cattle feedlots (112112)	23	5.6
Owned land in farms .... farms..	2 193	.5	Dairy cattle and milk production (11212)	528	.8
acres..	615 905	.4	Hog and pig farming (1122)	15	5.8
Land rented or leased from others .... farms..	1 278	.6	Poultry and egg production (1123)	59	2.1
acres..	192 388	.6	Sheep and goat farming (1124)	13	7.2
landlords..	4 374	.7	Animal aquaculture and other animal production (1125,		
Rented or leased land in farms .... farms..	1 274	.6	1129)	78	2.9
acres..	190 895	.6			
Land rented or leased to others..................... farms..	176	1.9	**LIVESTOCK**		
acres..	10 948	1.8			
			Cattle and calves inventory.......................... farms..	863	.8
OPERATOR CHARACTERISTICS			number..	86 950	.4
			Beef cows .... farms..	298	1.6
Operators by place of residence:			number..	6 082	2.5
On farm operated	1 882	.6	Milk cows .... farms..	555	.8
Not on farm operated................................	337	1.4	number..	40 431	.3
Not reported	174	1.6	Cattle and calves sold .... farms..	841	.8
Operators by principal occupation:			number..	32 822	.5
Farming	1 750	.6	$1,000..	8 469	.8
Other	643	1.1	Hogs and pigs inventory .... farms..	99	2.5
Operators by days worked off farm:			number..	3 969	4.6
Any	988	.9	Hogs and pigs sold................................. farms..	79	2.9
200 days or more	475	1.3	number..	7 006	2.4
Operators by sex:			$1,000..	1 115	1.8
Male	2 153	.5	Sheep and lambs of all ages inventory .... farms..	88	2.9
Female	240	1.8	number..	3 294	2.4
Average age of operator .... years..	53.0	.7	Sheep and lambs sold .... farms..	70	3.3
			number..	2 713	3.4
			Horses and ponies inventory .... farms..	243	1.7
			number..	1 532	2.7
			Horses and ponies sold............................. farms..	48	4.2
			number..	478	7.5

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)	Item	Total	Relative standard error of estimate (percent)
POULTRY			**SELECTED CROPS HARVESTED**—Con.		
Layers and pullets 13 weeks old and older inventory			Oats for grain .... farms..	214	1.1
(see text) .... farms..	150	1.9	acres..	21 462	.4
number..	6 123 050	.1	bushels..	1 592 924	.4
Layers 20 weeks old and older .... farms..	138	2.1	Potatoes, excluding sweetpotatoes.................... farms..	504	.8
number..	5 009 234	(L)	acres..	72 865	.2
Broilers and other meat-type chickens sold .... farms..	21	6.8	cwt..	19 460 548	.2
number..	196 685	.7	Hay—alfalfa, other tame, small grain, wild, grass		
			silage, green chop, etc. (see text) .... farms..	1 082	.7
SELECTED CROPS HARVESTED			acres..	152 662	.7
			tons, dry..	258 290	.6
Corn for silage or green chop........................ farms..	307	.8	Vegetables harvested for sale (see text) .... farms..	350	1.4
acres..	27 303	.3	acres..	11 196	.6
tons, green..	443 703	.2	Land in orchards.................................... farms..	128	2.1
			acres..	4 486	.9

[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	1.0	−5.2	.8
Land in farms .... acres..	−3.7	.7	−6.1	.5
Average size of farm .... acres..	−4.1	1.1	−.9	1.0
Estimated market value of land and buildings[1]:				
Average per farm .... dollars..	3.8	2.8	11.6	3.5
Average per acre .... dollars..	5.3	3.5	7.9	4.0
Estimated market value of all machinery and equipment[1]:				
Average per farm .... dollars..	6.4	2.9	4.0	3.3
Farms by size:				
1 to 9 acres	14.6	2.5	18.3	3.7
10 to 49 acres	15.6	2.0	17.2	3.0
50 to 179 acres	−2.9	1.1	−10.8	1.4
180 to 499 acres	−4.8	1.1	−7.0	1.0
500 to 999 acres	−11.2	1.2	−15.8	.9
1,000 to 1,999 acres	−5.8	−	−2.8	−
2,000 acres or more	−3.1	−	−6.3	−
Total cropland.. farms..	−2.2	.9	−7.6	.8
acres..	−3.5	.6	−5.0	.5
Harvested cropland .... farms..	−5.2	.9	−7.9	.8
acres..	.8	.6	1.7	.5
Irrigated land .... farms..	28.3	2.2	40.8	2.5
acres..	112.8	.9	117.1	.9
Market value of agricultural products sold .... $1,000..	1.9	.2	2.0	.2
Average per farm .... dollars..	1.3	1.0	7.7	.9
Crops, including nursery and greenhouse crops .... $1,000..	−1.7	.3	−1.8	.3
Livestock, poultry, and their products .... $1,000..	5.7	.2	5.8	.2
Farms by value of sales:				
Less than $2,500	13.8	1.6	(X)	(X)
$2,500 to $4,999	−4.1	1.9	(X)	(X)
$5,000 to $9,999	−4.5	1.8	(X)	(X)
$10,000 to $24,999	9.0	2.0	9.0	1.8
$25,000 to $49,999	−.7	2.2	−.7	2.1
$50,000 to $99,999	−13.1	1.7	−13.1	1.6
$100,000 to $249,999	−25.9	−	−25.9	−
$250,000 to $499,999	−9.8	−	−9.8	−
$500,000 or more	29.4	−	29.4	−
Total farm production expenses[1] .... $1,000..	−1.0	.7	−2.0	.7
Average per farm .... dollars..	−1.5	1.2	6.8	1.6
Net cash return from agricultural sales for the farm unit (see text)[1] .... farms..	.5	1.1	−8.2	1.3
$1,000..	7.4	3.0	10.4	2.5
Average per farm .... dollars..	6.9	3.2	20.3	3.2
Operators by principal occupation:				
Farming	−3.7	.9	−8.0	.8
Other	5.1	1.4	3.4	1.8
Operators by days worked off farm:				
Any	3.8	1.3	3.5	1.4
200 days or more	5.4	1.5	12.6	2.2
Livestock and poultry:				
Cattle and calves inventory .... farms..	−9.0	1.0	−14.0	.9
number..	−2.7	.6	−3.2	.6
Beef cows .... farms..	−5.7	1.5	−4.2	2.1
number..	3.2	2.4	15.7	4.1
Milk cows... farms..	−18.1	1.0	−18.3	.9
number..	−4.7	.5	−4.6	.5
Cattle and calves sold.. farms..	−10.9	1.0	−13.6	.9
number..	−7.3	.7	−7.8	.6
Hogs and pigs inventory .... farms..	−9.5	2.2	−20.8	2.7
number..	25.4	6.4	42.0	9.7
Hogs and pigs sold .... farms..	1.2	2.9	−20.2	3.2
number..	−.9	3.7	−4.9	4.3
Sheep and lambs inventory .... farms..	−6.8	2.2	−21.4	3.0
number..	−15.5	2.8	−19.4	3.8
Layers and pullets 13 weeks old and older inventory (see text) .... farms..	−1.4	2.0	−17.1	2.2
number..	17.9	.4	18.0	.3
Broilers and other meat-type chickens sold .... farms..	−1.4	5.2	−32.3	5.5
number..	−68.8	.8	−68.9	.8
Selected crops harvested:				
Corn for silage or green chop .... farms..	−24.2	1.0	−21.1	.8
acres..	−2.5	.4	−1.8	.4
tons, green..	−1.5	.4	−1.1	.3
Oats for grain .... farms..	−15.0	1.4	−20.1	1.2
acres..	−7.9	.6	−9.1	.5
bushels..	−18.5	.5	−19.1	.4
Potatoes, excluding sweetpotatoes .... farms..	−23.9	.9	−23.9	.8
acres..	−16.6	.3	−16.6	.3
cwt..	−22.1	.2	−22.0	.2
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.				
(see text) .... farms..	−9.9	1.0	−11.2	.9
acres..	−.1	.9	2.7	.9
tons, dry..	−	.9	1.5	.9
Vegetables harvested for sale (see text) .... farms..	5.0	1.9	12.2	2.3
acres..	14.6	1.1	17.1	1.1
Land in orchards .... farms..	−15.7	2.0	−4.5	2.9
acres..	−20.0	1.1	−17.7	1.1

[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 Total (number)	Farms Relative standard error of estimate (percent)	Land in farms Total (acres)	Land in farms Relative standard error of estimate (percent)	Average size of farm Total (acres)	Average size of farm Relative standard error of estimate (percent)	Average market value of land and buildings per farm[1] Value (dollars)	Average market value of land and buildings per farm[1] Relative standard error of estimate (percent)	Estimated market value of all machinery and equipment[1] Total ($1,000)	Estimated market value of all machinery and equipment[1] Relative standard error of estimate (percent)
Maine	**5 810**	**.5**	**1 211 648**	**.5**	**209**	**.7**	**251 074**	**1.6**	**282 151**	**2.2**
Androscoggin	288	.5	55 905	1.1	194	1.2	303 880	4.0	20 350	4.3
Aroostook	889	.5	324 887	.5	365	.7	277 684	1.9	80 412	4.4
Cumberland	455	.5	49 829	1.7	110	1.7	322 033	6.3	15 709	7.8
Franklin	223	.6	40 091	1.4	180	1.5	193 875	6.9	6 402	11.3
Hancock	310	.7	42 607	1.7	137	1.8	265 598	7.0	7 412	6.2
Kennebec	455	.6	88 134	1.0	194	1.2	258 170	5.8	23 765	8.0
Knox	194	.6	25 183	1.8	130	1.9	216 952	7.6	7 757	10.8
Lincoln	210	.6	25 920	2.0	123	2.1	205 766	7.1	6 836	7.0
Oxford	358	.6	63 959	1.6	179	1.7	293 384	7.1	16 162	10.7
Penobscot	525	.6	116 593	1.0	222	1.2	226 336	7.0	22 789	7.3
Piscataquis	141	.5	34 171	1.5	242	1.6	213 977	3.1	5 836	4.8
Sagadahoc	118	.6	17 853	2.0	151	2.0	288 119	11.8	4 067	8.6
Somerset	431	.6	101 270	1.0	235	1.2	219 241	3.1	24 332	9.8
Waldo	315	.5	68 569	1.1	218	1.2	222 268	4.7	10 853	7.0
Washington	399	.7	98 336	.9	246	1.2	215 070	5.5	14 004	5.9
York	499	.6	58 341	1.6	117	1.7	222 768	4.6	15 466	11.2

Geographic area	Average market value of all machinery and equipment per farm[1] Value (dollars)	Average market value of all machinery and equipment per farm[1] Relative standard error of estimate (percent)	Market value of agricultural products sold Total ($1,000)	Market value of agricultural products sold Relative standard error of estimate (percent)	Average market value of agricultural products sold per farm Value (dollars)	Average market value of agricultural products sold per farm Relative standard error of estimate (percent)	Total farm production expenses — Farms Number	Total farm production expenses — Farms Relative standard error of estimate (percent)	Total farm production expenses — Value Total ($1,000)	Total farm production expenses — Value Relative standard error of estimate (percent)
Maine	**48 697**	**2.2**	**438 673**	**.1**	**75 503**	**.6**	**5 801**	**.6**	**347 611**	**.4**
Androscoggin	71 152	4.4	62 377	.1	216 587	.5	286	.8	57 058	.4
Aroostook	90 555	4.5	109 619	.2	123 306	.5	888	.6	88 177	1.0
Cumberland	34 525	7.8	17 318	.5	38 061	.8	455	.9	16 556	3.0
Franklin	29 637	11.6	5 570	1.5	24 976	1.6	223	1.1	5 535	7.5
Hancock	23 909	6.3	30 448	.3	98 219	.7	310	1.2	17 312	2.3
Kennebec	52 231	8.0	45 181	.2	99 299	.6	455	.8	33 272	1.5
Knox	39 984	10.9	5 603	1.0	28 883	1.1	194	1.1	4 783	4.0
Lincoln	32 551	7.1	6 329	.9	30 140	1.1	210	1.2	5 123	1.9
Oxford	45 147	10.8	19 549	.4	54 607	.8	358	1.1	16 542	1.8
Penobscot	43 491	7.3	29 978	.4	57 101	.7	524	.9	24 388	1.0
Piscataquis	41 987	5.1	5 561	1.0	39 440	1.1	139	1.8	4 883	1.9
Sagadahoc	34 761	8.9	3 067	1.5	25 993	1.6	117	2.2	2 752	4.8
Somerset	56 717	9.9	24 727	.5	57 371	.8	429	1.0	19 123	1.4
Waldo	34 455	7.0	14 768	.5	46 884	.7	315	.8	13 212	1.7
Washington	35 097	6.0	43 074	.2	107 956	.7	399	.9	27 798	.7
York	30 994	11.2	15 503	.7	31 068	.9	499	.9	11 097	2.8

Farm production expenses[1]—Con.

Geographic area	Livestock and poultry purchased — Farms Number	Livestock and poultry purchased — Farms Relative standard error of estimate (percent)	Livestock and poultry purchased — Value Total ($1,000)	Livestock and poultry purchased — Value Relative standard error of estimate (percent)	Feed for livestock and poultry — Farms Number	Feed for livestock and poultry — Farms Relative standard error of estimate (percent)	Feed for livestock and poultry — Value Total ($1,000)	Feed for livestock and poultry — Value Relative standard error of estimate (percent)	Seeds, bulbs, plants, and trees — Farms Number	Seeds, bulbs, plants, and trees — Farms Relative standard error of estimate (percent)	Seeds, bulbs, plants, and trees — Value Total ($1,000)	Seeds, bulbs, plants, and trees — Value Relative standard error of estimate (percent)
Maine	**1 234**	**4.9**	**11 988**	**2.9**	**2 201**	**3.2**	**79 605**	**.4**	**2 076**	**3.1**	**13 757**	**1.6**
Androscoggin	107	11.8	1 447	5.0	159	11.0	25 316	.3	115	14.5	265	3.2
Aroostook	111	19.8	778	11.1	175	14.7	969	3.5	496	5.0	8 459	2.0
Cumberland	121	16.2	299	21.7	191	10.4	1 466	6.7	145	13.7	1 161	2.3
Franklin	75	16.7	647	38.3	99	13.1	1 413	11.5	71	16.5	53	18.9
Hancock	50	21.4	1 019	9.5	89	16.1	(D)	(D)	79	15.1	124	38.0
Kennebec	116	13.5	1 968	2.0	217	7.1	12 966	1.6	198	7.2	381	3.6
Knox	40	22.1	255	4.9	53	16.5	1 201	4.3	41	21.0	117	32.7
Lincoln	55	18.4	145	9.9	133	7.9	1 355	1.7	50	13.7	51	5.6
Oxford	98	20.7	897	6.2	171	13.9	4 682	1.0	98	14.9	634	1.5
Penobscot	93	20.3	662	21.2	168	12.7	5 720	1.0	193	12.9	1 045	7.4
Piscataquis	22	19.0	47	7.6	52	11.5	1 231	2.1	48	9.5	149	5.8
Sagadahoc	40	12.8	135	7.0	62	9.5	(D)	(D)	29	14.1	47	6.7
Somerset	90	18.0	773	4.4	207	9.8	6 345	2.1	107	15.3	251	17.7
Waldo	66	21.0	948	4.2	151	11.5	4 601	.9	112	13.6	293	21.8
Washington	55	32.0	1 461	.5	80	25.1	4 702	.4	110	20.8	112	7.8
York	95	19.7	509	12.8	194	10.7	1 587	5.9	184	11.0	615	2.6

See footnotes at end of table.

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

Farm production expenses[1]—Con.

Geographic area	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)
Maine	**3 031**	**2.4**	**16 537**	**1.2**	**2 346**	**2.8**	**17 435**	**1.1**	**5 494**	**.8**	**14 829**	**1.1**
Androscoggin	122	13.6	411	1.7	99	14.1	589	1.1	244	5.4	948	2.3
Aroostook	604	3.7	10 602	1.6	514	4.7	11 823	1.5	825	2.0	5 115	1.3
Cumberland	250	7.7	447	8.0	156	11.3	204	7.7	439	2.1	859	6.4
Franklin	130	9.6	179	7.9	56	15.6	92	15.1	212	3.1	343	14.2
Hancock	169	7.8	136	7.4	163	8.4	260	20.2	286	2.8	751	6.4
Kennebec	233	8.2	536	3.7	170	11.9	416	1.9	450	.8	1 187	5.3
Knox	100	12.3	113	11.1	95	11.3	136	11.7	182	3.7	317	18.5
Lincoln	79	12.4	126	10.1	43	11.7	50	18.2	196	3.6	236	6.9
Oxford	156	13.7	766	4.2	105	17.4	729	1.5	343	3.0	642	6.2
Penobscot	278	9.6	1 202	2.0	204	11.5	1 034	3.7	478	3.4	1 102	4.0
Piscataquis	85	7.8	277	4.7	65	9.5	160	7.1	133	3.0	274	2.5
Sagadahoc	40	11.2	79	8.0	23	13.5	21	9.0	108	3.7	131	4.3
Somerset	199	10.3	641	8.8	153	12.9	202	3.3	401	2.3	793	4.3
Waldo	148	11.2	200	8.1	128	11.3	133	14.0	306	2.1	704	3.1
Washington	219	10.1	466	4.1	224	10.0	1 289	3.0	399	.9	836	4.0
York	219	9.2	356	8.4	148	10.9	299	11.0	492	1.1	590	5.4

Farm production expenses[1]—Con.

Geographic area	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)
Maine	**3 815**	**1.9**	**10 613**	**.7**	**2 472**	**2.8**	**64 285**	**.8**	**645**	**6.4**	**4 161**	**4.2**
Androscoggin	194	7.7	2 361	.3	96	11.4	9 689	.4	17	–	120	–
Aroostook	637	4.0	2 636	.7	476	5.8	16 492	2.2	97	17.4	431	7.1
Cumberland	346	5.2	442	3.3	185	11.0	4 898	4.4	25	21.7	113	4.4
Franklin	139	9.1	214	9.6	81	13.5	499	6.7	29	26.1	69	14.2
Hancock	151	9.8	748	3.1	142	8.7	4 039	5.7	72	17.8	(D)	(D)
Kennebec	336	5.9	961	3.4	193	9.9	4 418	1.2	39	22.1	703	.3
Knox	105	10.8	106	11.6	85	12.3	555	4.1	38	26.4	267	22.6
Lincoln	154	6.6	165	4.7	92	11.6	986	3.7	32	21.8	70	22.6
Oxford	231	9.3	361	4.6	167	14.6	2 263	3.2	23	29.6	134	1.6
Penobscot	350	6.7	715	2.3	214	11.0	3 533	2.5	42	29.8	188	3.5
Piscataquis	81	7.8	113	4.7	49	9.0	821	4.9	13	11.2	48	5.5
Sagadahoc	80	6.2	79	5.6	25	13.2	411	7.1	6	5.5	(D)	(D)
Somerset	358	3.7	742	3.1	185	7.2	2 411	5.2	17	2.5	81	1.9
Waldo	201	8.5	503	3.9	159	10.8	1 609	3.5	54	22.7	98	18.6
Washington	181	14.6	172	4.4	196	11.1	9 579	1.1	96	22.6	1 061	6.5
York	271	8.0	294	8.3	127	13.4	2 082	3.1	45	24.6	196	2.9

Farm production expenses[1]—Con.

Geographic area	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)
Maine	**4 827**	**1.3**	**23 988**	**1.4**	**1 145**	**4.7**	**4 595**	**1.2**	**1 820**	**3.3**	**15 954**	**1.9**
Androscoggin	247	4.7	2 025	1.7	49	19.8	295	.3	105	13.4	1 161	1.9
Aroostook	781	2.5	7 899	2.0	283	7.5	1 375	1.9	414	5.9	5 306	2.0
Cumberland	401	3.7	1 352	5.4	49	24.3	94	6.2	107	13.6	650	13.9
Franklin	173	6.8	463	12.6	33	19.0	80	15.8	88	14.1	279	16.0
Hancock	249	5.0	863	6.1	75	16.7	95	9.2	78	17.1	769	11.0
Kennebec	396	4.2	1 994	6.8	77	19.6	398	5.4	126	13.2	1 305	4.1
Knox	154	6.2	403	11.1	31	22.3	51	23.3	53	18.8	244	19.9
Lincoln	198	2.6	419	5.2	24	29.4	24	41.7	59	14.2	308	12.3
Oxford	294	6.5	1 164	10.9	57	25.2	546	1.1	89	15.8	644	17.7
Penobscot	447	4.3	1 709	3.7	120	17.8	630	2.2	143	11.6	1 285	5.8
Piscataquis	125	3.7	410	6.7	20	15.7	94	2.4	53	9.0	275	10.8
Sagadahoc	105	3.8	235	5.2	13	21.4	17	19.4	30	14.5	217	48.3
Somerset	343	3.9	1 305	8.0	47	15.0	178	3.7	171	10.7	1 231	7.7
Waldo	224	7.0	991	10.6	69	17.0	161	8.1	100	15.5	535	12.9
Washington	302	8.2	1 732	2.1	98	22.2	443	4.4	88	22.5	1 175	2.0
York	388	4.9	1 024	6.7	100	19.2	115	21.7	116	15.4	570	17.8

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]

Farm production expenses[1]—Con.

Geographic area	Cash rent — Farms Number	Relative standard error of estimate (percent)	Cash rent — Value Total ($1,000)	Relative standard error of estimate (percent)	Property taxes paid — Farms Number	Relative standard error of estimate (percent)	Property taxes paid — Value Total ($1,000)	Relative standard error of estimate (percent)	All other farm production expenses — Farms Number	Relative standard error of estimate (percent)	All other farm production expenses — Value Total ($1,000)	Relative standard error of estimate (percent)
Maine	**941**	**4.1**	**5 044**	**1.3**	**5 550**	**.7**	**16 006**	**1.4**	**5 107**	**1.1**	**48 814**	**.6**
Androscoggin	79	16.0	146	5.5	262	4.2	1 316	4.5	244	5.5	10 969	.4
Aroostook	315	6.9	2 729	1.6	866	.9	3 165	2.3	780	2.4	10 397	.9
Cumberland	47	24.4	213	18.7	426	2.7	1 565	5.7	418	3.0	2 792	4.1
Franklin	28	18.0	59	15.6	211	3.2	364	5.6	201	4.6	782	5.8
Hancock	7	3.1	69	(L)	308	1.2	1 012	4.1	269	3.9	1 479	9.8
Kennebec	78	17.2	164	4.8	445	1.6	1 352	3.6	420	2.4	4 523	1.8
Knox	11	36.6	76	13.8	183	3.2	396	10.8	160	5.5	547	5.9
Lincoln	26	19.1	81	25.7	193	3.5	361	6.7	198	2.9	745	5.3
Oxford	54	20.7	281	3.9	345	2.0	884	9.2	314	4.5	1 916	2.7
Penobscot	55	1.1	465	.3	500	2.3	1 268	5.0	460	3.9	3 829	3.0
Piscataquis	16	12.2	21	3.4	136	2.1	261	3.9	125	3.6	703	1.6
Sagadahoc	10	15.7	20	18.2	113	2.9	298	5.6	99	4.8	378	7.2
Somerset	111	12.9	247	4.5	386	1.0	877	4.9	391	2.6	3 046	2.5
Waldo	43	15.6	120	6.6	314	.8	651	7.4	259	5.5	1 665	3.1
Washington	9	3.2	203	(L)	388	1.8	1 074	5.3	322	6.1	3 494	1.3
York	52	21.1	150	3.2	474	2.1	1 163	7.3	447	3.5	1 547	3.9

Geographic area	Net cash return from agricultural sales for the farm unit (see text)[1] — Farms Number	Relative standard error of estimate (percent)	Value Total ($1,000)	Relative standard error of estimate (percent)	Total cropland — Farms Number	Relative standard error of estimate (percent)	Total cropland — Acres Number	Relative standard error of estimate (percent)	Harvested cropland — Farms Number	Relative standard error of estimate (percent)	Harvested cropland — Acres Number	Relative standard error of estimate (percent)
Maine	**5 801**	**.6**	**78 187**	**1.7**	**5 372**	**.6**	**539 966**	**.4**	**4 875**	**.6**	**403 014**	**.4**
Androscoggin	286	.8	3 906	7.4	253	.8	23 368	1.1	243	.9	17 842	.9
Aroostook	888	.6	17 663	3.3	848	.5	187 599	.4	735	.6	143 507	.3
Cumberland	455	.9	−2	(H)	420	.7	25 543	1.9	389	.8	18 484	2.2
Franklin	223	1.1	138	(H)	201	.9	14 723	1.8	180	1.2	10 604	1.9
Hancock	310	1.2	12 935	2.1	293	.8	11 121	2.1	275	.9	6 459	2.5
Kennebec	455	.8	11 142	2.7	422	.7	44 591	1.1	380	.9	34 425	1.3
Knox	194	1.1	146	(H)	184	.8	10 306	2.4	171	1.0	7 173	2.9
Lincoln	210	1.2	555	16.2	196	.8	11 010	2.7	169	1.2	7 541	3.1
Oxford	358	1.1	2 046	14.7	328	.8	20 673	1.4	279	1.1	15 794	1.4
Penobscot	524	.9	4 596	11.5	498	.6	49 019	.9	458	.8	40 029	.8
Piscataquis	139	1.8	338	25.3	127	.8	10 434	1.5	115	1.2	8 179	1.9
Sagadahoc	117	2.2	−168	90.2	106	1.1	7 074	2.3	96	1.4	5 530	2.7
Somerset	429	1.0	5 766	5.4	358	.9	35 971	1.1	327	1.0	27 191	1.2
Waldo	315	.8	1 627	19.0	298	.6	28 338	1.1	278	.7	21 460	1.0
Washington	399	.9	14 927	2.8	386	.7	36 313	.6	369	.8	20 235	.7
York	499	.9	2 572	9.5	454	.7	23 883	1.7	411	.9	18 561	1.8

Livestock and poultry

Geographic area	Irrigated land — Farms Number	Relative standard error of estimate (percent)	Irrigated land — Acres Number	Relative standard error of estimate (percent)	Cattle and calves inventory — Farms Number	Relative standard error of estimate (percent)	Cattle and calves inventory — Total Number	Relative standard error of estimate (percent)	Beef cows inventory — Farms Number	Relative standard error of estimate (percent)	Beef cows inventory — Total Number	Relative standard error of estimate (percent)
Maine	**671**	**1.1**	**21 791**	**.3**	**1 921**	**.7**	**101 695**	**.5**	**1 035**	**1.1**	**11 782**	**1.7**
Androscoggin	36	4.0	784	.7	142	1.7	10 026	.9	58	3.6	511	5.2
Aroostook	76	2.0	11 058	.2	210	1.8	9 755	1.7	147	2.2	2 895	2.9
Cumberland	107	2.4	906	2.4	151	2.1	5 906	2.5	100	2.9	1 432	8.3
Franklin	6	13.4	20	22.0	114	2.1	5 134	1.9	52	4.0	448	7.5
Hancock	40	4.2	195	9.0	40	4.8	353	7.0	34	5.2	(D)	(D)
Kennebec	42	4.6	365	2.1	208	1.6	15 699	.7	103	2.7	1 104	3.3
Knox	24	5.1	102	5.8	44	4.1	1 499	4.3	31	5.5	424	8.2
Lincoln	26	5.4	92	10.5	77	2.8	2 642	1.7	39	4.7	364	4.0
Oxford	43	3.9	1 086	.5	133	2.2	4 176	1.6	90	2.9	713	3.5
Penobscot	65	3.6	1 592	1.1	175	1.7	14 741	.9	73	3.4	697	6.5
Piscataquis	11	7.4	166	8.9	51	2.8	3 396	1.3	24	4.8	385	4.0
Sagadahoc	13	7.5	66	11.8	43	3.5	1 876	4.5	27	4.8	425	9.0
Somerset	22	5.8	73	10.4	182	1.8	12 502	.9	73	3.5	838	4.5
Waldo	26	4.7	60	8.4	142	1.7	9 303	1.1	52	3.8	492	5.3
Washington	39	4.1	3 771	.4	31	5.7	390	5.8	22	7.2	(D)	(D)
York	95	2.6	1 455	1.7	178	2.0	4 297	2.4	110	2.8	768	4.0

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]

Livestock and poultry—Con.

Geographic area	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)
Maine	**685**	**.9**	**40 749**	**.4**	**341**	**1.7**	**5 977**	**3.4**	**426**	**1.6**	**10 603**	**2.1**
Androscoggin	67	2.1	4 089	.7	29	5.1	291	7.6	22	6.2	365	11.5
Aroostook	47	3.5	1 465	2.1	39	4.9	1 499	4.8	33	5.3	727	12.5
Cumberland	42	3.6	1 733	1.4	27	6.0	1 243	1.1	46	4.7	1 141	7.1
Franklin	44	3.6	1 769	2.4	6	13.4	12	14.0	25	6.0	656	10.0
Hancock	2	24.2	(D)	(D)	15	8.2	156	4.7	30	6.0	500	6.7
Kennebec	84	2.1	7 850	.5	26	5.9	393	14.3	31	5.7	740	7.8
Knox	12	5.9	351	1.4	7	12.1	19	14.4	17	7.2	667	11.4
Lincoln	21	4.8	850	1.1	14	8.9	87	13.4	29	5.7	1 425	4.2
Oxford	37	3.4	1 375	1.8	31	4.9	700	23.6	29	5.8	409	9.5
Penobscot	91	1.9	7 581	.8	27	5.6	389	4.4	30	5.5	431	7.7
Piscataquis	31	3.8	1 507	1.3	6	11.2	28	13.5	14	6.5	651	5.5
Sagadahoc	15	6.1	541	3.2	14	7.2	106	4.9	12	8.7	333	5.7
Somerset	81	2.3	5 729	.9	21	6.0	351	8.0	28	5.7	778	7.2
Waldo	76	2.1	4 600	1.0	20	6.3	170	10.4	21	6.1	527	6.0
Washington	4	15.7	(D)	(D)	14	8.7	40	10.1	22	6.9	472	7.7
York	31	4.9	1 229	3.7	45	4.8	493	10.3	37	5.2	781	7.4

Livestock and poultry—Con.

Geographic area	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)
Maine	**532**	**1.4**	**5 019 263**	**(L)**	**73**	**3.8**	**199 416**	**.6**
Androscoggin	28	5.5	(D)	(D)	3	20.6	(D)	(D)
Aroostook	33	5.2	879	6.6	4	11.6	(D)	(D)
Cumberland	47	4.6	1 320	8.6	4	18.4	(D)	(D)
Franklin	18	7.4	(D)	(D)	4	17.9	272	21.9
Hancock	42	4.6	1 373	4.9	11	8.9	(D)	(D)
Kennebec	46	4.5	515 874	.3	7	13.6	171	17.0
Knox	16	6.8	67 742	.3	2	–	(D)	(D)
Lincoln	33	5.0	(D)	(D)	8	12.2	1 660	17.1
Oxford	49	4.4	(D)	(D)	2	17.7	(D)	(D)
Penobscot	38	4.7	1 162	7.2	4	15.3	186	19.9
Piscataquis	15	5.8	393	6.7	–	–	–	–
Sagadahoc	21	6.4	698	9.9	1	39.4	(D)	(D)
Somerset	22	6.0	96 098	(L)	2	27.1	(D)	(D)
Waldo	28	4.9	(D)	(D)	4	16.4	(D)	(D)
Washington	35	5.4	832	7.9	6	14.3	216	14.3
York	61	3.9	(D)	(D)	11	9.3	(D)	(D)

Selected crops harvested

Geographic area	Corn for silage or green chop						Oats for grain					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, green	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)
Maine	**332**	**.9**	**27 537**	**.3**	**447 405**	**.3**	**272**	**1.3**	**22 364**	**.5**	**1 643 127**	**.4**
Androscoggin	41	2.2	3 333	.7	62 692	.6	3	17.2	(D)	(D)	(D)	(D)
Aroostook	17	4.3	827	1.8	12 068	2.0	220	1.3	20 644	.5	1 538 268	.5
Cumberland	13	4.6	820	4.5	11 735	2.7	3	12.4	26	11.4	1 192	9.2
Franklin	19	4.7	938	1.7	15 426	1.4	3	20.3	(D)	(D)	624	26.6
Hancock	6	15.6	(D)	(D)	(D)	(D)	6	13.3	16	16.5	425	14.5
Kennebec	47	2.4	4 238	.6	66 926	.5	6	10.7	140	6.7	6 282	5.8
Knox	5	9.3	136	8.3	1 990	11.4	1	–	(D)	(D)	(D)	(D)
Lincoln	7	8.2	180	.9	3 324	.8	1	48.7	(D)	(D)	(D)	(D)
Oxford	13	2.6	744	.8	12 322	.5	3	11.8	(D)	(D)	(D)	(D)
Penobscot	55	1.6	7 206	.3	110 923	.3	11	6.8	1 057	1.1	67 494	.3
Piscataquis	11	–	1 315	–	26 021	–	4	9.1	(D)	(D)	(D)	(D)
Sagadahoc	4	–	167	–	3 550	–	2	19.7	(D)	(D)	(D)	(D)
Somerset	47	2.2	4 173	.5	68 372	.3	4	12.8	52	7.5	1 970	5.7
Waldo	30	2.9	2 641	.7	41 361	.5	2	16.2	(D)	(D)	(D)	(D)
Washington	1	43.6	(D)	(D)	(D)	(D)	–	–	–	–	–	–
York	16	7.0	654	4.0	8 757	4.2	3	19.5	13	24.9	(D)	(D)

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]

Selected crops harvested—Con.

Geographic area	Potatoes, excluding sweetpotatoes						Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Hundredweight	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
Maine	**586**	**.9**	**73 085**	**.2**	**19 490 474**	**.2**	**2 810**	**.7**	**214 005**	**.7**	**332 039**	**.6**
Androscoggin	12	5.3	196	4.1	50 070	1.6	172	1.4	13 759	1.2	24 589	1.1
Aroostook	416	.8	65 454	.3	17 468 682	.2	270	1.5	21 795	1.7	32 927	1.7
Cumberland	9	8.4	(D)	(D)	(D)	(D)	248	1.4	17 075	2.5	24 976	2.5
Franklin	5	16.3	22	20.3	(D)	(D)	141	1.7	9 882	2.2	16 326	2.0
Hancock	12	9.6	11	13.7	1 590	14.8	76	3.4	2 122	6.2	2 530	6.7
Kennebec	14	9.1	9	10.4	1 406	13.8	282	1.2	30 484	1.5	43 024	1.3
Knox	4	12.5	(D)	(D)	(D)	(D)	87	2.5	5 150	4.5	5 848	3.8
Lincoln	8	10.5	7	11.9	1 425	17.3	103	2.2	6 409	3.6	10 672	2.3
Oxford	18	5.5	1 919	1.9	545 626	1.9	193	1.7	9 964	2.3	15 204	2.7
Penobscot	34	4.4	4 007	.2	1 035 188	.3	293	1.3	25 283	1.4	41 288	1.6
Piscataquis	12	7.1	444	1.7	99 574	1.5	69	2.3	5 681	2.9	9 576	3.4
Sagadahoc	3	16.1	(D)	(D)	(D)	(D)	69	2.4	5 526	3.1	10 236	3.6
Somerset	4	16.5	(D)	(D)	(D)	(D)	275	1.3	24 018	1.3	37 808	1.3
Waldo	9	9.3	16	19.7	3 304	20.1	197	1.3	18 784	1.1	30 336	1.2
Washington	11	10.0	28	15.9	6 998	15.9	69	3.7	2 899	4.5	3 184	6.2
York	15	6.5	(D)	(D)	(D)	(D)	266	1.4	15 174	2.4	23 515	2.2

Selected crops harvested—Con.

Geographic area	Vegetables harvested for sale (see text)				Land in orchards			
	Farms		Acres		Farms		Acres	
	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)
Maine	**611**	**1.2**	**11 745**	**.6**	**334**	**1.7**	**5 170**	**.9**
Androscoggin	37	4.1	465	1.9	34	4.4	1 492	1.3
Aroostook	79	2.4	7 360	.4	19	6.3	62	5.6
Cumberland	63	3.6	578	2.4	19	6.7	292	2.9
Franklin	14	8.2	52	7.0	16	7.4	222	4.1
Hancock	32	5.3	99	7.3	22	7.4	101	14.9
Kennebec	59	3.9	339	5.2	18	6.9	665	1.2
Knox	21	6.4	208	4.4	23	5.4	145	4.0
Lincoln	28	5.4	318	2.5	14	7.0	117	5.9
Oxford	37	4.7	315	3.6	36	5.0	690	2.6
Penobscot	61	3.7	530	3.5	36	5.1	296	5.4
Piscataquis	12	7.6	68	21.7	6	12.1	9	13.1
Sagadahoc	15	6.8	76	12.4	10	10.2	42	13.2
Somerset	28	5.9	201	11.2	18	7.2	152	3.7
Waldo	28	4.9	128	6.1	14	8.2	102	14.1
Washington	26	6.5	87	9.2	13	7.9	54	8.9
York	71	3.4	922	3.9	36	4.7	728	2.9

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

Table G. New England Coverage Estimates: 1997

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

Item	Census total	Coverage total[1]	Adjusted census Total	Relative standard error (percent)	Coverage adjustment (percent)
Farms .... number..	24 571	7 008	31 579	3.8	22.2
Land in farms .... acres..	3 821 702	410 022	4 231 724	2.9	9.7
Average size of farm .... acres..	156	59	134	(X)	(X)
Farms by size of farm:					
Less than 10 acres	3 491	1 022	4 513	14.3	22.6
10 to 49 acres	6 466	3 508	9 974	9.5	35.2
50 to 179 acres	8 080	1 933	10 013	7.1	19.3
180 acres or more	6 534	545	7 079	4.7	7.7
Farms by value of sales:					
Less than $2,500	7 539	4 642	12 181	8.2	38.1
$2,500 to $9,999	6 309	1 271	7 580	8.0	16.8
$10,000 or more	10 723	1 095	11 818	4.0	9.3
Market value of agricultural products sold ....$1,000..	1 988 736	16 872	2 005 608	.9	.8
Farms by type of organization:					
Individual or family....................................	20 591	6 833	27 424	4.2	24.9
Partnership, corporation, or other	3 980	175	4 155	4.8	4.2
Farms by tenure of operator:					
Full owners	15 759	4 971	20 730	4.8	24.0
Part owners	6 961	1 693	8 654	7.0	19.6
Tenants	1 851	344	2 195	17.6	15.7
Operators by place of residence:					
On farm operated	19 638	6 375	26 013	4.2	24.5
Not on farm operated	3 488	704	4 192	7.8	16.8
Not reported	1 445	–71	1 374	20.6	–5.2
Operators by principal occupation:					
Farming	12 553	1 229	13 782	4.1	8.9
Other	12 018	5 779	17 797	6.8	32.5
Operators by sex:					
Male	20 859	5 776	26 635	4.1	21.7
Female..	3 712	1 232	4 944	9.6	24.9
Operators by race:					
White	24 464	6 987	31 451	3.8	22.2
Black and other races	107	21	128	58.6	16.4
Operators by years on present farm:					
4 years or less	2 279	1 065	3 344	16.8	31.8
5 years or more	18 854	5 403	24 257	4.1	22.3
Not reported	3 438	540	3 978	11.3	13.6

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