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..	14.5	Corn for grain or seed .... acres..	2.7
Land in farms .... acres..	7.9	Wheat for grain .... acres..	5.5
Estimated market value of land and buildings[1] .... $1,000..	6.7	Livestock and poultry inventory:	
Market value of agricultural products sold .... $1,000..	5.1	Cattle and calves .... number..	10.5
Harvested cropland.. acres..	5.7	Hogs and pigs .... number..	5.5
		Layers 20 weeks old and older .... number..	1.7

[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	6.5	25	42.3
50	4.3	50	29.2
75	3.2	75	23.3
100	2.5	100	19.6
150	1.6	150	15.1
200	.7	200	12.3
300	.6	300	8.5
500	.5	500	3.2
750	.4	750	2.6
1,000..	.3	1,000..	2.3
1,500..	.3	1,500..	1.9
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..	30 504	.9
Land in farms ....acres..	39 359 346	.6
Average size of farm ....acres..	1 290	1.1
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD		
Total sales (see text) ....farms..	30 504	.9
$1,000..	2 869 322	.4
Average per farm ....dollars..	94 064	1.0
Farms by value of sales:		
Less than $1,000 (see text) ....farms..	3 218	1.2
$1,000..	232	2.2
$1,000 to $2,499 ....farms..	946	1.4
$1,000..	1 602	1.4
$2,500 to $4,999 ....farms..	1 313	1.3
$1,000..	4 826	1.3
$5,000 to $9,999 ....farms..	2 104	1.2
$1,000..	15 540	1.2
$10,000 to $19,999 ....farms..	3 144	1.4
$1,000..	45 656	1.4
$20,000 to $24,999 ....farms..	1 221	1.8
$1,000..	27 260	1.8
$25,000 to $39,999 ....farms..	3 008	1.6
$1,000..	95 775	1.6
$40,000 to $49,999 ....farms..	1 550	1.7
$1,000..	68 952	1.7
$50,000 to $99,999 ....farms..	5 341	1.3
$1,000..	386 860	1.3
$100,000 to $249,999 ....farms..	6 011	.5
$1,000..	940 790	.4
$250,000 to $499,999 ....farms..	1 950	–
$1,000..	661 367	–
$500,000 or more ....farms..	698	–
$1,000..	620 462	–
Sales by commodity or commodity group:		
Crops, including nursery and greenhouse crops ....farms..	22 329	.9
$1,000..	2 193 672	.3
Grains ....farms..	20 606	.9
$1,000..	1 848 448	.4
Corn for grain ....farms..	2 328	.7
$1,000..	111 176	.3
Wheat ....farms..	19 479	.9
$1,000..	982 012	.4
Soybeans ....farms..	3 404	.6
$1,000..	185 215	.3
Sorghum for grain ....farms..	11	9.0
$1,000..	98	14.8
Barley ....farms..	8 465	.8
$1,000..	183 407	.4
Oats ....farms..	2 240	1.2
$1,000..	12 332	.9
Other grains ....farms..	8 443	.7
$1,000..	374 208	.3
Cotton and cottonseed ....farms..	–	–
$1,000..	–	–
Tobacco ....farms..	–	–
$1,000..	–	–
Hay, silage, and field seeds ....farms..	5 051	1.0
$1,000..	42 364	.9
Vegetables, sweet corn, and melons ....farms..	123	3.2
$1,000..	1 291	4.9
Fruits, nuts, and berries ....farms..	36	5.4
$1,000..	86	7.4
Nursery and greenhouse crops ....farms..	123	3.2
$1,000..	8 673	2.3
Other crops ....farms..	1 261	.6
$1,000..	292 811	.2
Livestock, poultry, and their products ....farms..	15 828	1.0
$1,000..	675 649	.7
Poultry and poultry products ....farms..	310	2.2
$1,000..	27 356	.3
Dairy products ....farms..	1 051	1.6
$1,000..	80 588	1.2
Cattle and calves ....farms..	14 426	1.0
$1,000..	497 884	.8
Hogs and pigs ....farms..	814	1.5
$1,000..	34 271	.9
Sheep, lambs, and wool ....farms..	1 133	1.3
$1,000..	9 544	1.4
Other livestock and livestock products (see text) ....farms..	1 273	1.3
$1,000..	26 007	1.5
Value of agricultural products sold directly to individuals for human consumption (see text) ....farms..	470	1.9
$1,000..	1 453	3.4

Item	Total	Relative standard error of estimate (percent)
FARM PRODUCTION EXPENSES[1]		
Total farm production expenses ....farms..	30 494	.9
$1,000..	2 453 342	.6
Average per farm ....dollars..	80 453	1.0
Livestock and poultry purchased ....farms..	8 030	2.2
$1,000..	106 412	2.6
Feed for livestock and poultry ....farms..	12 996	1.7
$1,000..	125 867	1.5
Commercially mixed formula feeds ....farms..	7 024	2.4
$1,000..	55 082	1.5
Seeds, bulbs, plants, and trees ....farms..	18 246	1.2
$1,000..	150 703	.9
Commercial fertilizer ....farms..	19 438	1.2
$1,000..	306 933	.7
Agricultural chemicals ....farms..	18 376	1.3
$1,000..	217 605	.8
Petroleum products ....farms..	28 177	1.0
$1,000..	186 278	.8
Electricity ....farms..	23 774	1.1
$1,000..	37 336	1.0
Hired farm labor ....farms..	11 758	1.6
$1,000..	122 283	1.1
Contract labor ....farms..	2 904	3.7
$1,000..	13 477	4.6
Repair and maintenance ....farms..	26 382	1.0
$1,000..	207 276	1.0
Customwork, machine hire, and rental of machinery and equipment ....farms..	13 278	1.6
$1,000..	77 589	1.7
Interest ....farms..	20 104	1.2
$1,000..	234 100	1.1
Secured by real estate ....farms..	13 205	1.6
$1,000..	114 135	1.6
Not secured by real estate ....farms..	14 480	1.5
$1,000..	119 965	1.3
Cash rent ....farms..	15 782	1.3
$1,000..	335 526	.9
Property taxes ....farms..	27 026	1.0
$1,000..	70 097	1.3
All other farm production expenses ....farms..	28 714	.9
$1,000..	261 859	.9
NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]		
All farms ....number..	30 494	.9
$1,000..	399 832	2.3
Average per farm ....dollars..	13 112	2.5
Farms with net gains[2] ....number..	16 653	1.4
$1,000..	618 552	1.2
Average net gain ....dollars..	37 144	1.8
Farms with net losses ....number..	13 841	1.6
$1,000..	218 720	2.1
Average net loss ....dollars..	15 802	2.6
GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
Government payments ....farms..	24 185	.9
$1,000..	265 533	.6
Other farm-related income[1] ....farms..	16 130	1.5
$1,000..	82 048	2.9
Customwork and other agricultural services ....farms..	3 082	3.9
$1,000..	21 297	5.6
Gross cash rent or share payments ....farms..	4 834	3.2
$1,000..	41 766	4.7
Forest products, excluding Christmas trees and maple products ....farms..	10	63.6
$1,000..	4	73.9
Other farm-related income sources ....farms..	13 335	1.7
$1,000..	18 981	2.6
COMMODITY CREDIT CORPORATION LOANS		
Total ....farms..	3 875	.9
$1,000..	120 795	.4

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)	Item	Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			**TENURE OF OPERATOR**		
Total cropland .... farms..	27 994	.9	All operators .... farms..	30 504	.9
acres..	27 024 895	.6	acres..	39 359 346	.6
Harvested cropland .... farms..	25 153	.9	Full owners .... farms..	10 760	1.0
acres..	20 438 149	.5	acres..	6 450 549	1.0
Farms by acres harvested:			Part owners .... farms..	15 064	.8
1 to 9 acres .... farms..	347	2.1	acres..	28 253 537	.5
acres..	1 600	2.4	Tenants .... farms..	4 680	1.0
10 to 19 acres .... farms..	415	1.9	acres..	4 655 260	.7
acres..	5 518	2.0			
20 to 29 acres .... farms..	471	1.9	**OWNED AND RENTED LAND**		
acres..	10 800	1.9			
30 to 49 acres .... farms..	688	1.6	Land owned....................................... farms..	26 241	.9
acres..	25 686	1.7	acres..	22 349 594	.8
50 to 99 acres .... farms..	1 557	1.3	Owned land in farms .... farms..	25 824	.9
acres..	110 734	1.4	acres..	19 296 970	.7
100 to 199 acres.............................. farms..	2 718	1.4	Land rented or leased from others .... farms..	19 944	.9
acres..	387 316	1.4	landlords..	20 354 890	.5
200 to 499 acres.............................. farms..	5 822	1.5		61 710	.6
acres..	1 935 716	1.5	Rented or leased land in farms .... farms..	19 744	.8
500 to 999 acres.............................. farms..	5 958	1.5	acres..	20 062 376	.5
acres..	4 287 702	1.4	Land rented or leased to others .... farms..	7 227	1.0
1,000 acres or more.......................... farms..	7 177	–	acres..	3 345 138	1.2
acres..	13 673 077	–			
Cropland:			**OPERATOR CHARACTERISTICS**		
Pasture or grazing only .... farms..	6 398	1.1			
acres..	1 433 612	1.2	Operators by place of residence:		
Other cropland .... farms..	18 101	.9	On farm operated	20 071	1.0
acres..	5 153 134	.8	Not on farm operated	7 238	1.0
Total woodland .... farms..	2 641	1.0	Not reported	3 195	.7
acres..	275 512	1.2	Operators by principal occupation:		
Pastureland and rangeland other than cropland and			Farming	22 677	.9
woodland pastured............................... farms..	14 541	1.0	Other	7 827	1.0
acres..	10 375 089	.7	Operators by days worked off farm:		
Land in house lots, ponds, roads, wasteland, etc. .... farms..	18 443	.9	Any	12 837	.9
acres..	1 683 850	.8	200 days or more	6 135	1.0
Irrigated land .... farms..	710	1.2	Operators by sex:		
acres..	180 362	.8	Male .... farms..	29 168	.9
Acres irrigated:			acres..	38 318 211	.6
1 to 9 acres .... farms..	77	4.0	Female .... farms..	1 336	1.3
acres..	223	5.0	acres..	1 041 135	1.1
10 to 49 acres .... farms..	107	3.4	Average age of operator ....years..	51.4	1.3
acres..	2 956	3.6			
50 to 99 acres .... farms..	85	3.6	**FARMS BY TYPE OF ORGANIZATION**		
acres..	5 894	3.7			
100 to 199 acres .... farms..	153	2.3	Individual or family (sole proprietorship)................ farms..	26 660	.9
acres..	20 534	2.3	acres..	31 485 262	.7
200 to 499 acres.............................. farms..	195	1.8	Partnership .... farms..	3 075	.8
acres..	60 371	1.8	acres..	5 298 054	.5
500 to 999 acres.............................. farms..	70	1.2	Corporation:		
acres..	47 207	1.2	Family held .... farms..	522	1.0
1,000 acres or more........................... farms..	23	–	acres..	1 103 448	.5
acres..	43 177	–	More than 10 stockholders .... farms..	2	20.4
			10 or less stockholders .... farms..	520	1.0
Harvested cropland irrigated .... farms..	688	1.2	Other than family held .... farms..	29	5.8
acres..	176 259	.8	acres..	26 902	3.6
Pasture and other land irrigated .... farms..	44	5.0	More than 10 stockholders .... farms..	3	17.2
acres..	4 103	6.1	10 or less stockholders .... farms..	26	6.2
Land under Conservation Reserve or Wetlands			Other—cooperative, estate or trust, institutional, etc. .... farms..	218	2.4
Reserve Programs .... farms..	10 079	.9	acres..	1 445 680	.4
acres..	2 538 335	1.0			
			HIRED FARM LABOR[1]		
VALUE OF LAND AND BUILDINGS[1]					
			Hired workers by days worked:		
Estimated market value of land and buildings .... farms..	30 494	.9	150 days or more .... farms..	4 802	2.3
$1,000..	15 635 319	.8	workers..	8 266	2.1
Average per farm .... dollars..	512 734	1.2	Less than 150 days .... farms..	10 450	1.7
Average per acre .... dollars..	401	1.1	workers..	27 457	1.8
VALUE OF MACHINERY AND EQUIPMENT[1]			**INJURIES AND DEATHS**		
Estimated market value of all machinery and			Farm-related injuries:		
equipment .... farms..	30 494	.9	Operator and family members .... farms..	485	1.7
$1,000..	3 415 776	1.0	number..	547	1.7
Average per farm .... dollars..	112 015	1.3	Hired workers .... farms..	86	1.9
			number..	110	2.5
AGRICULTURAL CHEMICALS[1]			Farm-related deaths:		
			Operator and family members .... farms..	14	–
Commercial fertilizer .... farms..	19 428	1.2	number..	15	–
acres on which used..	16 139 260	.7	Hired workers .... farms..	3	–
			number..	3	–

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)	Item	Total	Relative standard error of estimate (percent)
FARMS BY SIZE			**LIVESTOCK**		
			Cattle and calves inventory .... farms..	14 232	1.0
			number..	1 810 409	.8
			Beef cows .... farms..	12 744	1.0
			number..	920 559	.9
1 to 9 acres .... farms..	545	1.7	Milk cows .... farms..	1 170	1.6
acres..	1 431	2.2	number..	54 024	1.3
10 to 49 acres .... farms..	1 420	1.2	Cattle and calves sold .... farms..	14 426	1.0
acres..	39 502	1.2	number..	1 055 343	.8
50 to 69 acres .... farms..	434	1.9	$1,000..	497 884	.8
acres..	25 155	1.9	Hogs and pigs inventory .... farms..	797	1.4
70 to 99 acres .... farms..	785	1.5	number..	197 372	1.0
acres..	64 582	1.5	Hogs and pigs sold.............. farms..	814	1.5
100 to 139 acres..................... farms..	758	1.6	number..	374 733	1.0
acres..	87 674	1.6	$1,000..	34 271	.9
			Sheep and lambs of all ages inventory .... farms..	1 101	1.3
			number..	130 892	1.5
			Sheep and lambs sold .... farms..	1 121	1.3
140 to 179 acres..................... farms..	1 596	1.3	number..	111 149	1.4
acres..	251 869	1.3	Horses and ponies inventory .... farms..	4 699	1.0
180 to 219 acres..................... farms..	654	1.7	number..	35 103	1.4
acres..	129 605	1.7	Horses and ponies sold........... farms..	919	1.5
220 to 259 acres..................... farms..	668	1.8	number..	6 009	2.7
acres..	158 696	1.8			
260 to 499 acres..................... farms..	4 137	1.3	**POULTRY**		
acres..	1 542 627	1.3			
500 to 999 acres..................... farms..	5 867	1.4	Layers and pullets 13 weeks old and older inventory (see text) .... farms..	549	1.8
acres..	4 339 595	1.4	number..	201 684	.4
			Layers 20 weeks old and older .... farms..	537	1.9
			number..	199 319	.4
1,000 to 1,999 acres .... farms..	7 499	1.0	Broilers and other meat-type chickens sold .... farms..	83	4.0
acres..	10 710 512	1.0	number..	193 401	25.6
2,000 acres or more.................. farms..	6 141	.4			
acres..	22 008 098	.3	**SELECTED CROPS HARVESTED**		
			Corn for grain or seed .... farms..	2 812	.7
			acres..	578 953	.3
			bushels..	54 996 430	.3
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			Corn for silage or green chop........ farms..	2 024	1.1
			acres..	164 276	.9
			tons, green..	1 162 005	.8
			Wheat for grain .... farms..	19 488	.9
			acres..	10 874 126	.5
			bushels..	260 522 260	.4
			Barley for grain .... farms..	9 565	.8
Oilseed and grain farming (1111) ..... farms..	17 999	.8	acres..	2 178 700	.4
acres..	24 578 360	.5	bushels..	98 641 946	.4
Vegetable and melon farming (1112) ...... farms..	191	1.7	Oats for grain .... farms..	4 937	1.2
acres..	266 324	.3	acres..	423 877	.9
Fruit and tree nut farming (1113) .... farms..	11	9.3	bushels..	18 616 546	.8
acres..	(D)	(D)	Sunflower seed .... farms..	5 069	.7
Greenhouse, nursery, and floriculture production (1114)............ farms..	82	3.9	acres..	1 347 376	.3
acres..	(D)	(D)	pounds..	1 678 505 673	.3
Other crop farming (1119) .... farms..	2 093	1.0	Soybeans for beans .... farms..	3 405	.6
acres..	2 048 856	.8	acres..	1 062 624	.3
Beef cattle ranching and farming (112111) ..... farms..	7 600	1.1	bushels..	31 069 124	.3
acres..	10 765 977	.8	Dry edible beans, excluding dry limas .... farms..	2 043	.6
Cattle feedlots (112112) .... farms..	378	2.0	acres..	565 407	.3
acres..	465 279	1.6	cwt..	7 105 599	.3
Dairy cattle and milk production (11212) ...... farms..	662	1.9	Potatoes, excluding sweetpotatoes.......... farms..	280	1.1
acres..	708 791	1.7	acres..	109 777	.2
Hog and pig farming (1122) .... farms..	207	2.5	cwt..	22 057 457	.1
acres..	98 901	2.9	Sugar beets for sugar .... farms..	873	.7
Poultry and egg production (1123) ...... farms..	72	4.0	acres..	235 121	.4
acres..	21 507	3.4	tons..	4 191 298	.3
Sheep and goat farming (1124) ...... farms..	338	2.1	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) .... farms..	14 707	1.0
acres..	106 125	3.4	acres..	2 702 807	.9
Animal aquaculture and other animal production (1125, 1129) .... farms..	871	1.4	tons, dry..	3 765 662	.9
acres..	293 542	1.9	Alfalfa hay .... farms..	11 212	1.0
			acres..	1 305 211	.9
			tons, dry..	2 031 875	.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 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]**		
			Total farm production expenses ... farms..	22 965	.9
Farms ... number..	22 923	.9	$1,000..	2 407 217	.6
Land in farms ... acres..	36 438 118	.6	Average per farm ... dollars..	104 821	1.1
Average size of farm ... acres..	1 590	1.1			
			Livestock and poultry purchased ... farms..	7 070	2.2
			$1,000..	104 314	2.6
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			Feed for livestock and poultry ... farms..	10 968	1.7
			$1,000..	123 566	1.6
			Commercially mixed formula feeds ... farms..	6 121	2.5
Total sales (see text) ... farms..	22 923	.9	$1,000..	54 583	1.5
$1,000..	2 847 121	.4			
Average per farm ... dollars..	124 204	1.0	Seeds, bulbs, plants, and trees ... farms..	16 729	1.2
			$1,000..	149 707	.9
Farms by value of sales:			Commercial fertilizer ... farms..	17 889	1.1
$10,000 to $19,999 ... farms..	3 144	1.3	$1,000..	304 830	.7
$1,000..	45 656	1.4	Agricultural chemicals ... farms..	16 402	1.2
$20,000 to $24,999 ... farms..	1 221	1.8	$1,000..	215 869	.8
$1,000..	27 260	1.8	Petroleum products ... farms..	22 816	.9
$25,000 to $39,999 ... farms..	3 008	1.6	$1,000..	181 473	.8
$1,000..	95 775	1.6			
$40,000 to $49,999 ... farms..	1 550	1.7	Electricity ... farms..	19 810	1.1
$1,000..	68 952	1.7	$1,000..	35 463	1.0
			Hired farm labor ... farms..	11 058	1.6
$50,000 to $99,999 ... farms..	5 341	1.3	$1,000..	121 849	1.1
$1,000..	386 860	1.3	Contract labor ... farms..	2 567	3.7
$100,000 to $249,999 ... farms..	6 011	.5	$1,000..	13 270	4.6
$1,000..	940 790	.4	Repair and maintenance ... farms..	21 660	1.0
$250,000 to $499,999 ... farms..	1 950	–	$1,000..	200 073	1.0
$1,000..	661 367	–	Customwork, machine hire, and rental of machinery and equipment ... farms..	12 093	1.6
$500,000 or more ... farms..	698	–	$1,000..	76 688	1.7
$1,000..	620 462	–	Interest ... farms..	17 505	1.2
Sales by commodity or commodity group:			$1,000..	227 921	1.1
Crops, including nursery and greenhouse crops ... farms..	19 962	.9	Secured by real estate ... farms..	11 486	1.6
$1,000..	2 183 725	.3	$1,000..	109 513	1.7
Grains ... farms..	19 108	.9	Not secured by real estate ... farms..	13 104	1.5
$1,000..	1 841 477	.4	$1,000..	118 408	1.3
Corn for grain ... farms..	2 300	.7			
$1,000..	111 093	.3	Cash rent ... farms..	14 591	1.3
Wheat ... farms..	18 238	.9	$1,000..	333 269	.9
$1,000..	976 862	.4	Property taxes ... farms..	20 235	1.1
Soybeans ... farms..	3 331	.6	$1,000..	61 966	1.3
$1,000..	184 923	.3	All other farm production expenses ... farms..	22 965	.9
			$1,000..	256 958	.9
Sorghum for grain ... farms..	11	9.1			
$1,000..	98	14.6			
Barley ... farms..	8 216	.7	**NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)[1]**		
$1,000..	182 737	.4			
Oats ... farms..	2 090	1.2			
$1,000..	12 056	.9	All farms ... number..	22 965	.9
Other grains ... farms..	8 280	.7	$1,000..	424 059	2.2
$1,000..	373 709	.3	Average per farm ... dollars..	18 465	2.3
			Farms with net gains[2] ... number..	15 031	1.3
Cotton and cottonseed ... farms..	–	–	$1,000..	614 800	1.2
$1,000..	–	–	Average net gain ... dollars..	40 902	1.8
Tobacco ... farms..	–	–	Farms with net losses ... number..	7 934	2.1
$1,000..	–	–	$1,000..	190 740	2.3
Hay, silage, and field seeds ... farms..	4 036	1.1	Average net loss ... dollars..	24 041	3.1
$1,000..	39 686	1.0			
Vegetables, sweet corn, and melons ... farms..	83	3.8	**GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME**		
$1,000..	1 152	5.4			
Fruits, nuts, and berries ... farms..	21	6.8			
$1,000..	71	8.7	Government payments ... farms..	19 375	.9
			$1,000..	226 997	.6
Nursery and greenhouse crops ... farms..	93	3.5	Other farm-related income[1] ... farms..	13 602	1.5
$1,000..	8 595	2.2	$1,000..	68 279	3.1
Other crops ... farms..	1 242	.6	Customwork and other agricultural services ... farms..	2 815	3.9
$1,000..	292 745	.2	$1,000..	20 110	5.7
			Gross cash rent or share payments ... farms..	3 322	3.8
Livestock, poultry, and their products ... farms..	12 855	1.1	$1,000..	29 495	5.6
$1,000..	663 396	.7	Forest products, excluding Christmas trees and maple products ... farms..	2	–
Poultry and poultry products ... farms..	196	2.7	$1,000..	(D)	(D)
$1,000..	27 254	.4	Other farm-related income sources ... farms..	11 971	1.7
Dairy products ... farms..	1 039	1.6	$1,000..	(D)	(D)
$1,000..	80 547	1.2			
Cattle and calves ... farms..	12 107	1.1			
$1,000..	488 028	.8	**COMMODITY CREDIT CORPORATION LOANS**		
Hogs and pigs ... farms..	710	1.5			
$1,000..	34 064	.9			
Sheep, lambs, and wool ... farms..	772	1.6			
$1,000..	8 682	1.5			
Other livestock and livestock products (see text) ... farms..	803	1.5			
$1,000..	24 821	1.5			
Value of agricultural products sold directly to individuals for human consumption (see text) ... farms..	311	2.2	Total ... farms..	3 793	.9
$1,000..	1 249	3.9	$1,000..	120 612	.4

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..	22 137	.9
acres..	25 724 799	.5
Harvested cropland .... farms..	21 746	.9
acres..	20 161 728	.5
Cropland:		
Pasture or grazing only .... farms..	5 159	1.2
acres..	1 273 075	1.3
Total woodland .... farms..	1 888	1.2
acres..	222 931	1.2
Pastureland and rangeland other than cropland and woodland pastured................................... farms..	11 270	1.1
acres..	9 041 403	.7
Land in house lots, ponds, roads, wasteland, etc. .... farms..	14 222	1.0
acres..	1 448 985	.8
Irrigated land .... farms..	662	1.2
acres..	178 893	.8
Harvested cropland irrigated .... farms..	650	1.2
acres..	175 452	.8
Pasture and other land irrigated .... farms..	33	5.4
acres..	3 441	5.6
Land under Conservation Reserve or Wetlands Reserve Programs .... farms..	6 604	.9
acres..	1 652 718	.9
VALUE OF LAND AND BUILDINGS[1]		
Estimated market value of land and buildings .... farms..	22 965	.9
$1,000..	14 344 868	.8
Average per farm ....dollars..	624 640	1.2
Average per acre ....dollars..	397	1.1
VALUE OF MACHINERY AND EQUIPMENT[1]		
Estimated market value of all machinery and equipment .... farms..	22 965	.9
$1,000..	3 153 528	1.0
Average per farm ....dollars..	137 319	1.4
AGRICULTURAL CHEMICALS[1]		
Commercial fertilizer .... farms..	17 880	1.1
acres on which used..	16 008 009	.7
TENURE OF OPERATOR		
All operators .... farms..	22 923	.9
acres..	36 438 118	.6
Full owners .... farms..	5 335	1.3
acres..	4 884 581	1.0
Part owners .... farms..	13 960	.8
acres..	27 687 496	.5
Tenants .... farms..	3 628	1.1
acres..	3 866 041	.8
OWNED AND RENTED LAND		
Land owned.. farms..	19 614	.9
acres..	19 175 254	.8
Owned land in farms .... farms..	19 295	.9
acres..	17 424 196	.7
Land rented or leased from others .... farms..	17 717	.9
acres..	19 265 919	.5
landlords..	58 097	.6
Rented or leased land in farms .... farms..	17 588	.9
acres..	19 013 922	.5
Land rented or leased to others..................... farms..	4 372	1.2
acres..	2 003 055	1.3
OPERATOR CHARACTERISTICS		
Operators by place of residence:		
On farm operated	16 185	1.0
Not on farm operated..................................	4 459	1.1
Not reported	2 279	.5
Operators by principal occupation:		
Farming	19 658	.9
Other	3 265	1.3
Operators by days worked off farm:		
Any	8 463	1.1
200 days or more	3 062	1.3
Operators by sex:		
Male	22 361	.9
Female	562	1.7
Average age of operator ....years..	50.2	1.4

See footnotes at end of table.

Item	Total	Relative standard error of estimate (percent)
FARMS BY TYPE OF ORGANIZATION		
Individual or family (sole proprietorship) .... farms..	19 777	1.0
acres..	29 449 664	.7
Partnership .... farms..	2 520	.8
acres..	5 112 516	.4
Corporation:		
Family held .... farms..	486	.9
acres..	1 083 818	.5
More than 10 stockholders .... farms..	1	–
10 or less stockholders .... farms..	485	.9
Other than family held .... farms..	21	6.3
acres..	25 282	3.8
More than 10 stockholders .... farms..	1	–
10 or less stockholders .... farms..	20	6.6
Other—cooperative, estate or trust, institutional, etc. .... farms..	119	3.0
acres..	766 838	.6
HIRED FARM LABOR[1]		
Hired workers by days worked:		
150 days or more .... farms..	4 607	2.3
workers..	8 071	2.1
Less than 150 days .... farms..	9 756	1.7
workers..	26 460	1.9
INJURIES AND DEATHS		
Farm-related injuries:		
Operator and family members .... farms..	416	1.8
number..	471	1.8
Hired workers .... farms..	81	1.7
number..	102	2.1
Farm-related deaths:		
Operator and family members .... farms..	13	–
number..	(D)	(D)
Hired workers .... farms..	3	–
number..	(D)	(D)
FARMS BY SIZE		
1 to 9 acres	222	2.6
10 to 49 acres	236	2.3
50 to 69 acres	92	3.8
70 to 99 acres	146	3.0
100 to 139 acres	222	2.6
140 to 179 acres	545	1.8
180 to 219 acres	287	2.4
220 to 259 acres	334	2.4
260 to 499 acres	2 610	1.5
500 to 999 acres	4 971	1.5
1,000 to 1,999 acres	7 192	1.0
2,000 acres or more.....................................	6 066	.4
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM		
Oilseed and grain farming (1111)	14 349	.8
Vegetable and melon farming (1112)	156	1.4
Fruit and tree nut farming (1113)	3	16.6
Greenhouse, nursery, and floriculture production (1114)	60	4.2
Other crop farming (1119)	1 311	1.1
Beef cattle ranching and farming (112111)	5 559	1.3
Cattle feedlots (112112)	281	2.2
Dairy cattle and milk production (11212)	654	1.9
Hog and pig farming (1122)	152	2.8
Poultry and egg production (1123)	25	4.3
Sheep and goat farming (1124)	94	3.7
Animal aquaculture and other animal production (1125, 1129)	279	2.2
LIVESTOCK		
Cattle and calves inventory........................... farms..	11 859	1.1
number..	1 740 699	.8
Beef cows .... farms..	10 711	1.1
number..	882 852	.9
Milk cows .... farms..	1 118	1.6
number..	53 869	1.3
Cattle and calves sold .... farms..	12 107	1.1
number..	1 027 983	.8
$1,000..	488 028	.8
Hogs and pigs inventory .... farms..	680	1.5
number..	195 227	1.0
Hogs and pigs sold................................... farms..	710	1.5
number..	372 363	.9
$1,000..	34 064	.9
Sheep and lambs of all ages inventory................. farms..	753	1.6
number..	116 479	1.5
Sheep and lambs sold .... farms..	767	1.6
number..	99 965	1.5
Horses and ponies inventory .... farms..	3 324	1.1
number..	24 241	1.6
Horses and ponies sold............................... farms..	552	1.7
number..	4 711	3.3

USDA, National Agricultural Statistics Service

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.		
			Barley for grain .... farms..	9 279	.8
			acres..	2 164 515	.4
Layers and pullets 13 weeks old and older inventory			bushels..	98 240 743	.4
(see text) .... farms..	366	2.2	Oats for grain .... farms..	4 713	1.2
number..	195 022	.3	acres..	415 491	.9
Layers 20 weeks old and older .... farms..	358	2.3	bushels..	18 327 039	.8
number..	193 390	.3	Sunflower seed .... farms..	5 008	.7
			acres..	1 344 928	.3
			pounds..	1 676 791 146	.3
Broilers and other meat-type chickens sold .... farms..	52	5.0	Soybeans for beans .... farms..	3 332	.6
number..	187 402	26.6	acres..	1 060 214	.3
			bushels..	31 012 766	.3
			Dry edible beans, excluding dry limas .... farms..	2 017	.6
SELECTED CROPS HARVESTED			acres..	564 608	.3
			cwt..	7 096 956	.3
			Potatoes, excluding sweetpotatoes.................... farms..	267	1.0
Corn for grain or seed .... farms..	2 772	.7	acres..	109 747	.1
acres..	578 044	.3	cwt..	22 052 666	.1
bushels..	54 951 530	.3	Sugar beets for sugar .... farms..	866	.7
Corn for silage or green chop......................... farms..	1 997	1.1	acres..	235 031	.3
acres..	163 343	.9	tons..	4 189 986	.3
tons, green..	1 157 243	.8	Hay—alfalfa, other tame, small grain, wild, grass		
Wheat for grain .... farms..	18 241	.9	silage, green chop, etc. (see text) .... farms..	12 387	1.1
acres..	10 771 801	.5	acres..	2 555 239	.9
bushels..	258 769 091	.4	tons, dry..	3 601 881	.9
			Alfalfa hay .... farms..	9 720	1.1
			acres..	1 238 585	.9
			tons, dry..	1 951 333	.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..	−2.0	1.9	−9.9	1.8
Land in farms ....acres..	−.2	1.3	−1.1	1.2
Average size of farm ....acres..	1.8	2.3	9.7	2.5
Estimated market value of land and buildings[1]:				
Average per farm ....dollars..	21.2	2.9	31.1	3.2
Average per acre ....dollars..	19.7	2.4	19.6	2.4
Estimated market value of all machinery and equipment[1]:				
Average per farm ....dollars..	28.3	3.2	34.7	3.4
Farms by size:				
1 to 9 acres..	−30.6	1.9	−36.4	2.4
10 to 49 acres	12.3	2.6	−11.6	3.4
50 to 179 acres	21.3	2.0	−7.6	2.2
180 to 499 acres	9.5	2.6	−9.0	2.3
500 to 999 acres	−12.6	2.5	−17.7	2.4
1,000 to 1,999 acres	−14.2	1.7	−15.4	1.7
2,000 acres or more	7.9	.7	7.7	.7
Total cropland...farms..	−3.4	1.9	−10.2	1.7
acres..	−1.6	1.2	−3.1	1.1
Harvested cropland ....farms..	−9.5	1.8	−10.3	1.7
acres..	6.4	1.1	6.5	1.1
Irrigated land ....farms..	−13.0	1.7	−13.1	1.7
acres..	−3.7	1.1	−3.8	1.1
Market value of agricultural products sold..................$1,000..	4.5	.9	4.6	.9
Average per farm ....dollars..	6.6	2.3	16.0	2.5
Crops, including nursery and greenhouse crops ....$1,000..	8.0	.8	8.1	.8
Livestock, poultry, and their products...................$1,000..	−5.5	1.3	−5.7	1.3
Farms by value of sales:				
Less than $2,500	94.7	3.6	(X)	(X)
$2,500 to $4,999	−3.7	2.4	(X)	(X)
$5,000 to $9,999	−4.0	2.4	(X)	(X)
$10,000 to $24,999	−10.0	2.2	−10.0	2.2
$25,000 to $49,999	−15.6	2.1	−15.6	2.1
$50,000 to $99,999	−17.9	2.0	−17.9	2.0
$100,000 to $249,999	−7.9	.7	−7.9	.7
$250,000 to $499,999	18.9	−	18.9	−
$500,000 or more	36.1	−	36.1	−
Total farm production expenses[1] ....$1,000..	17.3	1.4	17.2	1.5
Average per farm ....dollars..	19.8	2.6	30.6	2.9
Net cash return from agricultural sales for the farm unit (see text)[1] ....farms..	−2.0	1.9	−10.2	1.8
$1,000..	−38.7	1.6	−36.3	1.6
Average per farm ....dollars..	−37.4	2.0	−29.1	2.2
Operators by principal occupation:				
Farming	−10.0	1.7	−12.6	1.6
Other	31.9	2.9	11.4	3.0
Operators by days worked off farm:				
Any..	8.5	2.3	−.8	2.2
200 days or more.......................................	24.8	2.8	11.0	3.0
Livestock and poultry:				
Cattle and calves inventory ....farms..	−6.3	2.0	−8.9	2.0
number..	5.0	1.7	4.0	1.7
Beef cows ....farms..	−3.6	2.1	−5.5	2.1
number..	9.9	1.9	9.0	1.9
Milk cows...farms..	−39.2	1.6	−39.0	1.6
number..	−27.9	1.4	−27.8	1.4
Cattle and calves sold................................farms..	−5.4	2.0	−8.1	2.0
number..	7.8	1.7	7.3	1.7
Hogs and pigs inventory ....farms..	−58.7	1.0	−58.7	1.0
number..	−43.0	.9	−42.2	.9
Hogs and pigs sold ....farms..	−60.0	.9	−59.1	1.0
number..	−37.9	.9	−37.1	1.0
Sheep and lambs inventory ....farms..	−32.2	1.6	−35.5	1.7
number..	−39.7	1.3	−39.7	1.4
Layers and pullets 13 weeks old and older inventory (see text) ....farms..	−34.5	2.0	−38.9	2.1
number..	−27.5	.4	(D)	(D)
Broilers and other meat-type chickens sold ....farms..	−48.1	2.6	−43.5	3.6
number..	401.4	(H)	511.6	(H)
Selected crops harvested:				
Corn for grain or seed................................farms..	−16.1	1.0	−15.8	1.0
acres..	−2.8	.7	−2.5	.7
bushels..	46.7	1.0	46.9	.9
Corn for silage or green chop ....farms..	−41.2	1.1	−40.9	1.1
acres..	−40.9	.9	−40.8	.8
tons, green..	−32.2	.9	−32.0	.9
Wheat for grain ....farms..	−15.0	1.6	−14.4	1.6
acres..	2.3	1.1	2.5	1.0
bushels..	−36.4	.6	−36.4	.6
Barley for grain......................................farms..	−31.6	1.1	−31.6	1.1
acres..	−8.8	.8	−8.9	.8
bushels..	−30.9	.5	−30.9	.5
Oats for grain ....farms..	−37.1	1.5	−35.7	1.5
acres..	−24.0	1.4	−23.4	1.4
bushels..	−44.3	1.0	−44.0	1.0
Sunflower seed ....farms..	−4.1	1.2	−4.0	1.2
acres..	19.2	.8	19.3	.8
pounds..	33.2	.9	33.3	.9
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) ....farms..	−6.3	2.0	−7.9	2.1
acres..	9.5	2.1	9.2	2.0
tons, dry..	15.3	2.1	14.8	2.0

[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)
North Dakota .	**30 504**	**.9**	**39 359 346**	**.6**	**1 290**	**1.1**	**512 734**	**1.2**	**3 415 776**	**1.0**
Adams................	367	.9	629 677	.9	1 716	1.3	398 637	6.1	37 215	6.2
Barnes...............	772	.9	869 888	.6	1 127	1.1	537 377	2.1	105 729	4.6
Benson	604	1.0	758 199	.8	1 255	1.3	412 178	3.3	70 123	6.0
Billings..............	237	.9	793 839	.5	3 350	1.0	797 443	2.7	19 197	9.0
Bottineau	808	.7	959 734	.6	1 188	1.0	459 602	3.8	84 275	6.2
Bowman	358	1.1	715 177	1.1	1 998	1.5	421 535	5.1	27 855	4.4
Burke	479	1.0	615 294	1.1	1 285	1.4	390 494	4.5	50 746	9.0
Burleigh.............	867	1.1	895 539	1.3	1 033	1.6	322 398	3.8	46 742	7.2
Cass	919	.6	1 067 667	.3	1 162	.7	941 885	1.7	151 091	2.4
Cavalier..............	682	.6	875 394	.4	1 284	.8	636 125	3.4	111 297	5.1
Dickey...............	517	.9	580 205	.7	1 122	1.2	510 692	5.3	72 259	8.5
Divide	535	.8	733 305	1.0	1 371	1.2	404 424	6.0	59 537	6.4
Dunn	618	1.0	1 335 601	.8	2 161	1.3	516 633	3.5	45 387	7.3
Eddy	288	.3	344 036	.6	1 195	.7	465 872	9.4	27 077	7.3
Emmons	744	1.2	823 946	1.3	1 107	1.8	293 472	6.0	63 451	8.1
Foster	282	.4	370 231	.5	1 313	.6	603 454	3.4	36 461	3.8
Golden Valley	244	.5	578 700	.6	2 372	.8	564 949	7.4	23 530	7.8
Grand Forks..........	768	.5	774 747	.4	1 009	.7	777 125	1.9	119 411	3.3
Grant	596	1.0	969 501	1.1	1 627	1.5	400 081	9.8	44 014	6.9
Griggs	357	.6	389 873	.8	1 092	1.0	421 572	6.4	38 819	7.5
Hettinger.............	436	.8	707 231	.6	1 622	1.0	520 244	4.6	50 230	10.0
Kidder	513	1.0	724 896	1.2	1 413	1.6	307 447	5.3	38 655	5.3
La Moure	616	1.1	670 681	.8	1 089	1.3	456 713	2.6	81 963	6.2
Logan	401	1.2	531 220	1.1	1 325	1.6	348 557	5.6	44 229	8.8
McHenry	905	1.1	1 067 049	1.0	1 179	1.5	382 045	3.9	59 475	4.0
McIntosh.............	505	1.2	508 154	1.2	1 006	1.7	315 034	15.6	37 029	6.9
McKenzie	668	.9	1 169 652	.9	1 751	1.2	464 110	4.2	59 795	5.7
McLean	969	.9	1 142 518	.8	1 179	1.2	449 977	2.8	94 742	3.3
Mercer..............	473	1.3	551 195	1.4	1 165	1.9	322 458	7.1	31 557	4.9
Morton..............	907	1.4	1 228 774	1.3	1 355	1.9	451 668	6.9	68 377	4.8
Mountrail............	755	1.0	997 139	1.1	1 321	1.5	404 218	4.4	79 060	6.7
Nelson..............	471	.8	535 053	.7	1 136	1.1	505 631	10.1	50 913	6.6
Oliver...............	327	1.1	400 248	1.5	1 224	1.9	271 498	7.6	20 262	8.1
Pembina	615	.6	633 216	.5	1 030	.7	1 005 903	4.2	124 779	5.5
Pierce	491	.9	567 042	.9	1 155	1.3	427 227	4.8	50 128	5.1
Ramsey..............	525	.8	658 108	.7	1 254	1.1	503 726	3.2	98 522	8.0
Ransom	485	1.0	515 104	.8	1 062	1.2	585 707	11.9	59 561	4.8
Renville	390	.7	515 600	.6	1 322	1.0	604 773	3.9	56 831	5.1
Richland	874	.6	809 410	.5	926	.8	836 316	2.1	141 654	4.2
Rolette..............	511	.7	493 200	.8	965	1.1	318 064	4.6	43 328	6.3
Sargent	449	.7	476 735	.7	1 062	.9	588 727	4.4	54 141	4.8
Sheridan	380	.7	491 998	.8	1 295	1.0	456 464	8.2	34 412	6.5
Sioux	193	.8	704 872	.6	3 652	1.0	812 609	7.9	15 348	8.1
Slope	263	.9	757 051	.6	2 879	1.1	558 579	4.0	24 478	6.8
Stark	802	1.3	805 909	1.3	1 005	1.9	320 237	4.3	51 031	6.4
Steele	290	.6	412 763	.5	1 423	.8	685 223	3.3	58 402	4.8
Stutsman	979	.9	1 264 518	.7	1 292	1.1	471 038	2.8	112 674	5.1
Towner	428	.6	570 058	.6	1 332	.9	524 111	5.9	52 923	6.5
Traill................	471	.5	494 484	.4	1 050	.6	846 664	2.8	90 840	2.9
Walsh	755	.7	717 525	.6	950	.9	733 953	4.0	113 985	3.5
Ward	1 172	1.0	1 207 702	.9	1 030	1.4	555 383	5.6	113 036	5.4
Wells	593	.8	744 442	.6	1 255	1.0	508 542	3.3	86 814	6.2
Williams	850	1.0	1 205 246	1.0	1 418	1.4	425 882	4.5	82 386	6.3

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)	Farm production expenses[1] — Total farm production expenses — Farms — Number	Farm production expenses[1] — Total farm production expenses — Farms — Relative standard error of estimate (percent)	Farm production expenses[1] — Total farm production expenses — Value — Total ($1,000)	Farm production expenses[1] — Total farm production expenses — Value — Relative standard error of estimate (percent)
North Dakota .	**112 015**	**1.3**	**2 869 322**	**.4**	**94 064**	**1.0**	**30 494**	**.9**	**2 453 342**	**.6**
Adams................	101 403	6.3	27 845	1.0	75 871	1.3	367	1.2	25 409	7.7
Barnes...............	136 955	4.7	79 968	.5	103 586	1.0	772	.9	74 464	2.1
Benson	116 097	6.1	49 972	.6	82 735	1.2	604	1.0	46 331	2.5
Billings..............	81 001	9.0	12 190	1.3	51 435	1.6	237	1.2	9 792	6.1
Bottineau	104 301	6.2	60 921	.5	75 398	.9	808	.8	51 620	3.3
Bowman	77 809	4.6	26 207	1.0	73 205	1.5	358	1.3	20 403	3.2
Burke	105 942	9.1	28 788	.9	60 100	1.3	479	1.2	23 606	5.2
Burleigh.............	53 913	7.2	36 039	1.2	41 567	1.6	867	1.0	29 699	3.6
Cass	164 408	2.5	169 041	.3	183 941	.6	919	.7	139 894	1.0
Cavalier..............	163 192	5.2	72 240	.4	105 924	.8	682	.8	73 341	1.9
Dickey...............	139 766	8.5	63 602	.5	123 022	1.0	517	1.0	53 767	2.0
Divide	111 493	6.5	35 014	1.0	65 446	1.2	534	1.0	25 486	4.0
Dunn	73 442	7.4	39 412	1.0	63 774	1.5	618	1.2	33 560	3.2
Eddy	94 016	7.3	22 522	.6	78 200	.7	288	.8	18 882	5.0

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]

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)	Farm production expenses[1] — Total farm production expenses — Farms Number	Farm production expenses[1] — Total farm production expenses — Farms Relative standard error of estimate (percent)	Farm production expenses[1] — Total farm production expenses — Value Total ($1,000)	Farm production expenses[1] — Total farm production expenses — Value Relative standard error of estimate (percent)
Emmons	85 283	8.2	51 263	1.1	68 902	1.6	744	1.3	38 703	3.4
Foster	129 293	3.9	35 956	.4	127 502	.6	282	1.0	31 530	2.2
Golden Valley	96 433	7.9	18 266	.7	74 860	.9	244	1.1	15 116	4.2
Grand Forks	155 483	3.3	129 611	.3	168 764	.6	768	.6	119 772	1.2
Grant	73 849	7.0	34 897	1.0	58 553	1.4	596	1.1	30 942	3.4
Griggs	108 737	7.6	28 120	.7	78 767	.9	357	.9	24 634	5.0
Hettinger	115 206	10.0	44 440	.6	101 926	1.0	436	1.0	32 716	2.6
Kidder	75 351	5.4	33 940	1.1	66 159	1.5	513	1.2	25 998	3.7
La Moure	133 057	6.3	72 829	.7	118 228	1.3	616	1.0	61 163	1.8
Logan	110 297	8.9	32 325	1.0	80 612	1.5	401	1.3	28 093	3.7
McHenry	65 791	4.1	56 541	.9	62 476	1.4	904	1.1	45 337	2.2
McIntosh	73 325	7.0	35 286	1.0	69 873	1.6	505	1.2	31 136	4.5
McKenzie	89 648	5.8	46 500	.9	69 610	1.3	667	1.0	36 479	5.5
McLean	97 873	3.5	74 274	.6	76 650	1.1	968	1.0	56 967	2.6
Mercer...............	66 717	5.1	23 039	1.2	48 708	1.8	473	1.3	22 003	5.3
Morton...............	75 389	5.1	60 312	1.2	66 496	1.8	907	1.6	53 498	2.8
Mountrail.............	104 854	6.8	49 173	.9	65 130	1.3	754	1.0	37 616	2.9
Nelson	108 095	6.7	36 662	.8	77 838	1.1	471	1.0	36 885	3.4
Oliver	61 962	8.2	19 086	1.4	58 368	1.8	327	1.3	14 992	6.8
Pembina	202 893	5.5	127 506	.3	207 327	.6	615	.7	100 964	2.1
Pierce	102 302	5.2	36 083	.8	73 489	1.2	490	1.0	31 139	3.0
Ramsey..............	187 661	8.1	44 935	.6	85 590	1.0	525	1.0	45 112	2.7
Ransom	122 806	4.9	61 387	.6	126 570	1.1	485	1.0	53 063	2.2
Renville	145 721	5.2	37 791	.5	96 901	.9	390	1.1	29 354	3.9
Richland	162 261	4.2	165 985	.3	189 914	.7	873	.7	137 229	1.2
Rolette..............	84 791	6.4	29 604	.7	57 933	1.0	511	.9	25 620	3.6
Sargent	120 581	4.9	64 534	.5	143 729	.8	449	.9	55 302	2.5
Sheridan	90 557	6.6	27 388	.7	72 075	1.0	380	.9	22 914	3.4
Sioux	79 940	8.2	14 528	1.0	75 273	1.3	192	1.1	11 987	3.9
Slope	93 072	6.9	21 432	.9	81 490	1.3	263	1.3	16 297	4.1
Stark	63 630	6.6	45 785	1.3	57 088	1.8	802	1.4	38 535	3.5
Steele	201 385	4.9	46 718	.4	161 097	.7	290	.9	41 125	2.3
Stutsman	115 209	5.2	92 543	.6	94 528	1.1	978	1.0	86 783	1.6
Towner	123 651	6.6	42 394	.5	99 052	.8	428	.9	40 076	3.5
Traill.................	192 866	3.0	84 519	.4	179 445	.6	471	.8	73 001	1.6
Walsh	150 974	3.6	122 394	.4	162 111	.8	755	.8	110 844	1.4
Ward	96 447	5.5	82 909	.8	70 742	1.3	1 172	1.0	69 505	2.1
Wells	146 398	6.3	61 586	.5	103 856	.9	593	1.0	54 649	3.9
Williams	97 039	6.4	53 022	.9	62 379	1.4	849	1.2	40 006	3.0

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)
North Dakota .	**8 030**	**2.2**	**106 412**	**2.6**	**12 996**	**1.7**	**125 867**	**1.5**	**18 246**	**1.2**	**150 703**	**.9**
Adams................	151	14.2	3 392	20.4	227	8.2	2 374	8.2	207	8.4	920	16.3
Barnes...............	171	13.8	987	12.8	304	10.0	1 266	10.5	526	4.6	5 649	4.3
Benson	126	17.2	1 519	13.7	236	11.8	1 302	14.5	434	6.1	3 006	6.2
Billings...............	111	9.6	1 272	21.5	169	6.3	1 413	9.0	74	16.0	357	4.0
Bottineau	116	19.6	967	48.9	229	11.8	493	14.2	478	6.4	3 200	7.7
Bowman	119	14.9	1 520	9.5	203	9.5	1 816	8.6	151	12.6	809	7.4
Burke	64	26.3	426	53.0	140	16.9	547	28.2	321	4.9	1 320	8.1
Burleigh..............	301	9.7	2 183	16.6	490	6.7	3 173	11.0	324	9.5	937	8.5
Cass	158	15.0	3 259	2.5	254	11.0	3 864	2.3	733	3.1	10 296	2.5
Cavalier...............	49	32.1	(D)	(D)	97	21.4	483	21.4	522	3.9	5 370	4.0
Dickey	196	13.2	3 837	13.6	295	8.3	3 280	2.5	400	5.4	3 516	3.7
Divide	89	19.2	274	23.3	184	13.6	588	19.3	201	11.8	806	11.4
Dunn	256	11.6	3 085	10.8	426	5.6	3 670	8.6	346	7.3	792	9.0
Eddy	85	15.5	672	19.9	128	14.1	892	11.6	202	8.2	1 039	10.3
Emmons	261	10.3	3 456	11.7	346	8.4	2 730	8.5	385	8.0	1 745	5.9
Foster	105	13.2	2 113	7.5	142	8.2	2 366	3.8	183	5.8	2 020	4.7
Golden Valley	72	15.7	818	12.6	144	8.2	1 353	21.5	107	11.4	591	8.6
Grand Forks	56	28.3	(D)	(D)	138	17.0	1 643	10.6	497	3.6	10 689	2.7
Grant	265	9.6	2 566	17.0	392	5.8	3 680	11.4	320	7.5	797	6.5
Griggs	79	24.5	403	39.9	173	12.7	386	14.1	228	7.1	1 826	7.1
Hettinger	127	17.6	788	21.9	182	13.5	1 467	22.7	257	8.8	1 187	6.6
Kidder	207	12.0	1 361	15.9	314	7.2	2 162	10.4	251	10.3	1 148	5.3
La Moure	206	12.2	2 811	10.8	291	8.5	5 262	4.8	438	3.9	3 815	4.0
Logan	197	10.0	5 145	11.2	237	5.8	2 994	5.3	241	10.2	972	10.9
McHenry	258	10.6	1 648	6.6	438	7.0	2 792	6.5	478	6.5	2 395	7.4
McIntosh	199	11.1	6 817	16.8	232	9.7	2 453	12.8	247	10.2	1 230	11.0
McKenzie	275	9.8	3 265	22.6	379	6.0	3 678	19.2	303	9.4	1 092	8.0
McLean...............	238	13.2	2 008	22.4	374	9.5	2 022	14.7	488	7.1	2 455	5.9
Mercer...............	221	11.6	2 588	17.4	249	12.0	2 085	9.4	231	8.5	597	9.4

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	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)
Morton	375	8.5	5 440	16.5	591	5.5	7 817	6.1	480	7.9	1 100	7.2
Mountrail	121	18.3	920	15.8	242	12.2	1 530	11.7	353	8.4	1 460	8.8
Nelson	48	27.3	992	19.2	104	17.8	1 724	26.7	269	6.8	2 599	4.5
Oliver	128	16.3	2 457	7.5	181	11.9	1 346	17.7	194	10.1	462	6.8
Pembina	47	36.2	924	14.7	132	21.3	801	16.5	455	5.4	7 818	3.1
Pierce	156	14.4	935	9.8	230	10.2	1 707	8.7	330	6.0	1 954	5.7
Ramsey	66	27.6	636	42.2	119	18.1	459	22.9	363	6.3	3 184	7.4
Ransom	132	18.0	1 648	6.7	206	13.8	3 411	3.5	366	5.7	4 122	7.7
Renville	31	29.6	176	4.4	83	21.7	271	11.9	297	6.1	1 867	6.3
Richland	182	13.5	4 671	5.5	286	10.2	18 284	1.9	660	3.3	8 766	3.3
Rolette	158	16.1	970	13.5	239	10.6	1 486	12.3	240	10.6	1 775	5.3
Sargent	123	13.3	2 051	10.8	198	11.8	4 843	7.5	351	4.8	4 231	3.6
Sheridan	132	14.7	1 421	12.0	183	11.0	1 185	20.4	227	6.0	985	5.6
Sioux	94	11.8	1 225	16.1	121	8.6	1 844	10.3	117	9.1	225	8.0
Slope	122	12.5	1 227	11.1	154	9.9	1 556	7.5	154	9.3	693	11.1
Stark	337	10.6	5 747	16.7	570	5.3	3 391	13.3	332	10.6	1 054	14.9
Steele	38	31.0	217	38.4	88	18.4	282	24.1	248	2.9	4 005	5.2
Stutsman	295	10.8	4 602	11.5	498	6.3	3 864	6.6	525	5.6	5 294	3.0
Towner	39	30.1	629	3.9	102	18.5	571	4.0	277	6.6	3 455	7.1
Traill	41	29.3	582	17.7	66	20.8	373	16.6	415	4.0	6 569	3.0
Walsh	60	25.7	939	36.3	185	13.7	759	11.5	535	3.9	9 551	1.9
Ward	261	12.5	1 478	9.7	449	8.3	1 881	9.1	630	6.4	3 504	9.4
Wells	114	17.5	1 908	10.3	193	12.9	2 763	17.0	429	4.5	3 809	9.0
Williams	172	14.3	974	19.6	363	8.7	1 487	9.2	426	7.7	1 647	9.1

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)
North Dakota	**19 438**	**1.2**	**306 933**	**.7**	**18 376**	**1.3**	**217 605**	**.8**	**28 177**	**1.0**	**186 278**	**.8**
Adams	156	13.0	2 245	11.6	143	16.7	932	15.9	330	1.9	2 018	8.8
Barnes	549	4.2	10 553	2.6	575	4.2	7 998	3.1	728	2.4	5 865	2.5
Benson	441	4.8	7 219	4.6	379	6.5	4 504	6.5	580	2.2	4 048	3.5
Billings	79	13.6	612	4.3	43	19.7	210	14.1	217	3.7	887	5.3
Bottineau	557	4.4	9 110	4.3	521	5.6	5 743	6.6	759	2.0	4 242	4.6
Bowman	232	8.3	2 132	4.2	150	12.1	1 074	14.6	299	4.8	1 809	4.7
Burke	327	5.6	3 744	6.2	344	5.5	2 203	6.4	431	3.3	2 110	5.0
Burleigh	288	10.7	2 673	9.6	287	10.1	943	16.5	756	3.2	2 692	6.1
Cass	741	2.9	17 772	2.2	738	3.4	15 715	2.6	876	1.4	8 537	1.5
Cavalier	572	2.8	12 263	2.7	560	3.6	9 804	3.1	666	1.7	5 640	3.0
Dickey	352	6.4	5 894	3.9	341	5.3	3 938	3.2	495	2.8	3 985	5.7
Divide	350	5.0	4 790	7.7	360	5.1	2 598	8.6	494	2.2	2 472	5.4
Dunn	387	7.2	2 910	6.7	241	12.3	967	19.4	598	2.2	2 804	4.7
Eddy	186	9.8	2 320	9.0	174	10.8	1 337	15.4	257	4.6	1 714	3.9
Emmons	378	7.8	4 375	5.8	268	11.1	2 117	6.7	672	2.8	3 453	7.6
Foster	180	5.4	4 344	4.5	194	6.1	2 380	3.6	271	2.1	2 084	3.3
Golden Valley	154	7.6	2 017	6.7	151	7.4	1 164	5.6	215	3.0	1 222	5.6
Grand Forks	531	3.7	14 081	2.4	486	5.4	14 228	1.8	641	2.2	7 234	2.1
Grant	337	7.4	2 705	4.8	254	10.1	959	6.6	533	3.6	2 718	4.3
Griggs	214	7.1	3 423	6.5	221	8.6	2 408	8.5	320	5.0	2 070	5.2
Hettinger	249	9.1	5 632	5.0	192	10.3	2 461	7.3	373	3.0	2 362	4.5
Kidder	179	13.0	1 577	9.7	202	12.5	771	9.0	482	2.7	2 660	5.7
La Moure	416	4.4	7 017	3.6	388	5.0	4 504	4.4	553	3.7	4 857	2.4
Logan	268	7.6	2 116	7.1	252	8.2	1 302	9.3	381	2.9	2 051	7.1
McHenry	461	6.3	5 633	5.0	541	6.1	2 954	6.7	834	2.2	3 973	3.2
McIntosh	220	9.6	2 448	8.6	208	10.6	1 588	11.4	444	3.8	1 979	4.5
McKenzie	367	7.3	3 587	12.8	298	8.8	1 609	8.9	614	3.2	3 131	4.2
McLean	598	5.4	7 719	4.7	639	4.9	5 398	5.6	908	2.4	5 084	3.9
Mercer	240	7.9	1 605	7.4	190	14.0	755	22.5	460	2.5	1 696	3.8
Morton	492	7.1	3 764	4.5	376	8.9	1 253	8.2	837	3.2	4 064	3.8
Mountrail	466	5.4	6 124	4.4	418	6.7	3 092	5.8	670	2.1	3 366	4.5
Nelson	335	5.3	5 436	5.4	330	5.8	3 580	7.3	409	3.7	3 240	4.9
Oliver	165	11.6	1 103	6.9	180	11.4	474	8.3	304	3.9	1 134	6.1
Pembina	478	4.9	11 371	3.7	499	4.5	12 704	2.8	596	1.5	6 066	3.5
Pierce	356	6.1	4 328	5.7	363	6.1	2 404	6.1	479	2.1	3 044	4.5
Ramsey	394	5.4	7 295	4.3	415	4.9	5 297	4.6	457	4.0	3 935	3.8
Ransom	332	7.0	6 159	4.4	348	6.9	4 903	3.8	468	2.6	3 691	4.7
Renville	346	3.9	5 944	5.9	304	5.7	2 842	6.4	383	2.0	2 723	4.7
Richland	652	3.1	13 788	2.8	642	3.2	13 008	2.5	820	1.4	9 144	2.1
Rolette	281	8.3	3 712	8.7	278	8.4	1 916	7.5	471	3.1	2 258	5.2
Sargent	365	4.0	5 931	3.9	326	5.5	5 848	4.2	441	1.6	3 393	3.2
Sheridan	252	6.4	3 131	8.5	205	10.1	1 516	7.6	335	3.1	2 150	7.1
Sioux	99	9.2	682	10.2	81	13.4	421	19.8	176	4.5	914	5.8
Slope	181	7.4	1 936	6.5	155	8.7	956	9.4	237	4.0	1 207	6.2

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)
Stark	429	7.0	3 867	5.6	405	9.1	1 673	9.3	771	3.0	2 939	4.5
Steele	236	4.8	6 056	3.4	236	5.5	4 937	4.2	275	3.6	3 014	4.8
Stutsman	484	5.3	9 711	3.4	536	5.8	7 427	3.1	872	2.5	6 077	3.1
Towner	329	4.6	6 578	4.6	303	5.3	4 720	5.2	405	2.4	3 064	2.8
Traill	421	3.2	9 450	3.3	394	4.0	9 429	3.1	464	1.7	4 578	2.8
Walsh	557	4.5	13 300	2.4	529	4.7	11 227	3.1	657	3.3	7 267	2.2
Ward	848	3.2	11 995	4.5	789	4.0	7 048	6.8	1 150	1.4	6 050	4.6
Wells	444	4.6	8 007	3.4	398	4.7	5 414	5.9	530	2.9	3 728	4.8
Williams	487	6.0	4 752	5.7	526	5.6	2 947	6.5	783	2.1	3 834	3.7

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)
North Dakota	**23 774**	**1.1**	**37 336**	**1.0**	**11 758**	**1.6**	**122 283**	**1.1**	**2 904**	**3.7**	**13 477**	**4.6**
Adams	309	4.4	495	10.1	176	14.6	1 437	22.8	23	21.7	173	1.2
Barnes	636	4.1	922	4.4	335	7.8	3 217	6.4	81	21.7	297	30.7
Benson	491	4.9	904	6.1	253	10.3	2 156	9.9	38	32.9	126	30.6
Billings	182	7.8	183	7.8	74	16.3	430	16.2	10	49.1	16	24.7
Bottineau	558	5.6	657	5.6	342	9.1	2 439	7.5	69	29.0	330	28.9
Bowman	263	4.0	477	7.2	104	16.2	1 134	7.5	49	28.8	256	55.3
Burke	381	4.8	395	9.4	216	9.4	1 174	11.9	48	36.4	92	67.8
Burleigh	640	4.7	679	6.8	239	12.6	2 050	12.1	39	35.7	232	51.3
Cass	717	3.9	1 279	3.0	495	6.0	7 920	2.6	97	18.1	661	32.0
Cavalier	591	3.2	854	4.1	277	7.0	2 289	3.9	79	19.0	(D)	(D)
Dickey	405	5.7	794	5.4	211	11.6	2 476	8.1	101	19.5	653	37.2
Divide	397	5.7	371	10.1	213	9.9	936	10.1	30	38.2	254	78.4
Dunn	526	4.4	667	6.8	218	13.2	1 194	9.6	82	25.8	110	14.3
Eddy	238	5.7	386	9.6	93	13.2	653	15.2	16	–	221	–
Emmons	495	6.3	823	6.2	224	12.5	1 089	2.9	41	32.2	148	14.5
Foster	232	4.7	455	6.4	105	10.3	1 433	3.4	25	17.5	159	18.7
Golden Valley	171	6.9	227	8.4	114	10.7	582	13.5	30	30.4	116	22.1
Grand Forks	536	4.2	1 267	4.2	390	5.7	9 398	2.2	79	20.3	(D)	(D)
Grant	466	4.9	606	6.1	176	10.8	949	12.3	48	27.1	140	27.0
Griggs	312	5.5	437	10.0	121	13.3	1 098	13.2	55	30.6	152	27.4
Hettinger	275	8.0	537	9.6	150	9.3	1 174	13.2	63	20.8	425	25.9
Kidder	418	5.1	785	6.8	185	12.6	1 514	13.1	28	41.4	173	10.3
La Moure	518	4.6	1 259	4.6	272	9.0	2 541	4.9	44	22.6	198	17.7
Logan	288	6.9	498	7.0	155	9.8	754	16.6	63	26.5	125	35.1
McHenry	694	4.4	918	5.6	260	10.3	1 449	8.1	81	23.7	241	15.3
McIntosh	333	5.8	468	6.8	118	17.8	1 060	11.1	35	34.4	93	17.0
McKenzie	544	4.6	645	6.1	252	9.7	1 616	8.7	38	20.9	97	5.3
McLean	813	3.6	985	6.1	326	10.0	1 491	9.3	100	23.9	261	18.2
Mercer	387	6.2	530	6.5	130	16.1	933	7.8	45	28.6	250	2.3
Morton	711	3.7	1 266	4.4	292	9.5	2 961	6.4	104	20.2	290	17.5
Mountrail	581	4.3	622	7.6	290	10.4	1 112	18.4	103	21.2	601	23.1
Nelson	354	5.9	496	7.2	147	13.0	1 702	14.9	35	36.3	43	19.9
Oliver	298	4.4	283	7.3	109	17.0	814	30.8	49	26.4	58	43.7
Pembina	497	5.3	1 243	4.9	385	7.2	8 476	3.7	37	–	622	–
Pierce	404	4.8	656	5.7	171	9.9	975	10.6	50	28.4	80	32.6
Ramsey	404	5.6	646	7.5	220	10.4	1 573	8.9	36	32.2	206	41.2
Ransom	403	5.2	934	4.3	202	11.8	3 505	5.7	39	36.1	106	7.4
Renville	306	5.7	374	6.8	166	9.6	1 365	22.9	47	26.4	114	22.4
Richland	706	3.3	1 723	3.7	392	7.3	6 542	1.7	82	20.2	319	10.3
Rolette	402	4.5	514	6.1	180	14.4	786	6.6	49	33.1	215	80.0
Sargent	391	4.5	750	3.2	196	10.9	3 301	1.6	17	–	116	–
Sheridan	297	5.6	414	6.6	128	14.1	815	24.2	27	32.9	169	4.5
Sioux	141	7.6	236	9.3	64	12.4	564	12.1	43	24.9	55	23.9
Slope	190	6.5	256	6.2	118	13.2	991	12.3	26	37.0	40	30.4
Stark	584	6.4	615	7.0	258	11.6	1 711	21.1	46	33.3	168	22.8
Steele	243	5.8	497	3.5	132	10.1	2 008	2.7	45	29.0	118	21.8
Stutsman	791	3.4	1 468	4.7	349	8.7	3 684	5.3	88	12.1	367	12.3
Towner	317	5.4	481	6.7	186	10.2	1 392	4.5	46	29.9	197	26.0
Traill	400	4.1	694	5.4	325	5.5	5 085	2.7	47	24.6	241	17.5
Walsh	608	4.0	1 506	3.0	345	5.6	9 735	2.5	89	20.2	581	7.6
Ward	830	5.3	769	5.6	344	10.0	2 761	14.8	111	20.5	354	22.1
Wells	434	5.5	708	8.9	211	11.8	2 147	11.8	63	26.8	660	40.1
Williams	666	4.4	686	9.6	324	9.9	1 694	6.4	88	24.5	263	16.8

See footnotes at end of table.

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

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)
North Dakota .	**26 382**	**1.0**	**207 276**	**1.0**	**13 278**	**1.6**	**77 589**	**1.7**	**20 104**	**1.2**	**234 100**	**1.1**
Adams	300	6.0	2 042	8.9	166	13.4	780	15.2	250	8.7	2 306	12.7
Barnes	657	3.2	7 139	4.0	348	8.1	2 427	6.2	551	5.1	7 209	5.9
Benson	536	3.6	4 119	6.6	261	11.2	1 520	12.4	399	6.4	3 915	5.7
Billings	219	4.1	955	10.3	93	13.9	234	10.8	120	11.0	1 118	13.7
Bottineau	729	2.8	5 048	6.1	320	10.7	1 455	14.5	486	6.7	5 166	7.8
Bowman	313	4.9	1 946	6.1	95	11.0	498	8.3	218	8.6	2 339	11.7
Burke	401	4.7	2 036	7.2	250	10.0	930	14.1	315	8.0	2 441	17.1
Burleigh	720	3.2	3 017	5.1	266	11.0	717	11.2	476	7.5	2 716	8.9
Cass	807	2.9	10 601	3.0	507	5.4	3 297	3.9	692	4.2	12 605	4.1
Cavalier	621	3.0	5 395	4.8	394	7.0	3 045	7.9	504	4.5	5 595	5.2
Dickey	452	4.7	4 060	6.4	260	9.9	2 811	11.9	405	4.9	5 105	4.4
Divide	450	3.4	2 321	8.7	187	12.5	425	19.3	339	7.0	2 476	10.7
Dunn	571	3.2	3 032	7.0	256	11.6	824	18.9	430	6.0	4 055	8.8
Eddy	249	5.0	1 874	8.3	127	13.2	572	16.1	211	8.7	2 207	10.7
Emmons	615	4.2	3 868	7.0	307	9.3	1 518	6.1	434	7.0	3 379	9.6
Foster	267	2.5	2 047	3.9	132	7.7	1 404	4.8	212	5.6	3 043	3.7
Golden Valley	203	4.9	1 158	8.1	93	12.3	433	8.6	145	9.0	1 538	8.3
Grand Forks	624	3.3	8 440	3.2	329	6.2	3 251	7.8	467	6.5	10 054	4.4
Grant	482	4.3	3 038	6.8	193	10.8	712	12.1	443	5.1	4 534	7.3
Griggs	293	5.7	2 297	7.2	140	14.3	1 196	18.9	249	8.0	2 476	9.7
Hettinger	374	3.0	2 672	6.4	187	12.2	1 502	10.9	296	6.1	3 439	7.0
Kidder	427	4.8	2 829	9.0	251	9.5	1 308	6.9	352	6.0	2 718	8.9
La Moure	554	4.2	5 401	4.0	332	6.7	2 259	6.2	427	6.6	5 223	5.5
Logan	328	5.2	2 205	8.3	231	8.1	865	19.9	273	7.9	2 463	10.0
McHenry	764	2.9	4 554	5.4	319	9.6	2 067	9.2	514	6.6	5 142	7.8
McIntosh	413	5.4	2 570	7.0	182	13.5	710	15.2	299	8.2	3 077	9.5
McKenzie	599	3.6	3 480	6.5	265	10.3	1 327	28.0	439	7.0	4 444	12.1
McLean	813	3.0	5 720	5.0	439	7.7	1 947	11.5	557	5.8	5 823	6.7
Mercer	442	3.8	1 825	6.0	169	16.2	650	17.3	276	7.7	2 134	9.9
Morton	760	2.9	5 458	4.7	365	8.9	996	7.3	597	5.5	5 139	6.4
Mountrail	645	3.5	3 172	8.1	304	9.6	1 337	13.8	488	5.8	4 213	7.3
Nelson	402	3.6	2 811	5.4	228	10.6	1 250	11.9	366	5.9	3 794	9.4
Oliver	321	2.1	1 567	10.1	144	15.1	504	20.6	172	12.5	1 125	13.3
Pembina	530	3.3	8 149	9.3	369	8.1	3 854	5.6	420	7.4	8 967	3.5
Pierce	406	4.7	3 098	4.8	285	8.4	786	12.9	299	6.6	3 348	7.3
Ramsey	468	4.0	3 587	5.1	189	13.5	1 237	12.3	330	6.7	4 108	9.1
Ransom	453	3.8	4 124	4.0	187	14.5	1 400	7.8	344	7.8	4 322	6.8
Renville	375	2.7	2 964	6.0	193	11.0	861	14.9	244	8.5	2 382	8.5
Richland	766	2.4	10 039	2.7	391	7.5	2 988	11.4	656	3.7	12 090	5.1
Rolette	427	4.4	2 300	6.8	178	13.1	958	14.4	309	8.3	2 744	8.3
Sargent	396	4.4	3 538	3.5	209	9.6	1 538	11.5	317	6.0	4 655	6.5
Sheridan	320	3.3	2 152	9.8	112	13.7	515	7.8	250	6.5	2 028	9.2
Sioux	163	6.5	1 062	6.7	95	13.4	260	12.8	143	8.7	1 068	6.3
Slope	234	4.4	1 474	8.0	118	12.3	656	15.6	146	8.2	1 424	10.0
Stark	728	3.9	3 605	6.9	289	11.1	975	13.8	493	7.2	4 583	7.6
Steele	262	4.9	2 787	5.6	170	9.4	1 465	18.0	227	6.7	4 229	5.7
Stutsman	779	4.1	7 453	3.8	482	6.8	4 450	8.0	655	5.2	8 536	5.0
Towner	377	3.0	2 872	7.1	240	8.4	1 183	12.0	302	6.1	4 360	9.1
Traill	408	3.6	4 959	2.5	218	8.4	1 804	6.1	361	5.6	6 345	3.8
Walsh	641	3.6	8 858	2.5	383	7.1	2 970	4.8	552	5.2	9 347	3.2
Ward	1 068	2.8	7 047	6.8	495	8.3	2 148	12.7	738	5.1	7 166	7.7
Wells	478	4.1	4 506	6.5	212	11.2	1 563	12.4	404	5.7	5 073	6.2
Williams	752	3.0	4 004	6.8	323	10.1	1 204	13.1	512	6.5	4 313	7.6

Farm production expenses[1]—Con.

Geographic area	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)
North Dakota .	**15 782**	**1.3**	**335 526**	**.9**	**27 026**	**1.0**	**70 097**	**1.3**	**28 714**	**.9**	**261 859**	**.9**
Adams	186	11.8	2 258	10.0	348	3.6	1 128	9.8	348	2.5	2 908	10.9
Barnes	427	6.5	11 096	4.5	643	3.9	2 074	5.6	736	2.0	7 764	3.8
Benson	291	9.0	5 520	6.9	553	3.0	1 758	5.4	559	3.1	4 714	5.4
Billings	70	16.8	502	9.8	214	4.6	284	9.2	231	2.6	1 317	5.7
Bottineau	360	8.8	5 906	9.1	734	3.1	1 770	5.7	745	2.5	5 094	6.2
Bowman	137	13.4	1 625	9.2	341	3.2	794	9.6	325	3.6	2 172	4.7
Burke	228	9.7	3 152	11.7	435	3.7	882	12.8	470	1.9	2 155	11.5
Burleigh	324	9.3	3 058	10.7	786	2.7	1 262	8.7	787	2.6	3 367	5.9
Cass	645	4.0	28 236	2.4	756	3.3	2 329	3.9	912	1.0	13 522	3.3
Cavalier	475	4.6	12 519	3.7	580	3.3	1 635	4.5	682	.8	8 041	3.8
Dickey	277	9.1	6 274	5.9	474	3.9	1 565	7.3	505	2.1	5 581	4.6
Divide	187	12.5	2 130	15.3	475	3.2	1 146	10.8	474	2.8	3 897	10.4
Dunn	346	6.3	4 380	7.3	597	1.9	1 046	7.1	597	2.1	4 023	7.8
Eddy	164	10.4	2 077	20.1	285	.8	829	7.3	263	3.9	2 089	7.9

See footnotes at end of table.

USDA, National Agricultural Statistics Service

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

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

	Farm production expenses[1]—Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
Geographic area	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)
Emmons	362	8.7	3 999	8.2	664	3.4	1 258	6.2	701	2.8	4 744	6.6
Foster	151	5.3	3 886	5.9	242	4.3	718	5.9	282	1.0	3 078	3.0
Golden Valley	101	11.5	1 386	10.4	237	1.5	657	6.3	225	2.9	1 857	10.1
Grand Forks	435	5.2	21 903	2.3	684	2.9	1 932	5.6	704	2.6	10 111	2.1
Grant	316	8.1	3 102	7.9	546	2.5	1 127	4.9	580	2.1	3 309	7.0
Griggs	167	11.5	2 691	10.3	333	3.8	957	8.4	329	4.2	2 815	10.9
Hettinger	266	8.8	4 326	8.4	372	5.7	1 073	9.2	384	2.9	3 669	4.1
Kidder	275	9.2	2 645	9.1	431	5.0	1 011	7.6	456	3.4	3 336	5.2
La Moure	376	5.5	7 220	4.7	572	2.6	1 662	5.8	590	2.8	7 134	4.6
Logan	194	10.4	2 755	18.5	357	4.7	905	12.4	378	3.1	2 943	6.1
McHenry	418	7.5	4 536	6.4	829	2.2	1 412	5.4	863	2.1	5 623	3.6
McIntosh	272	9.7	2 970	9.7	436	4.3	864	9.1	449	3.3	2 809	6.4
McKenzie	241	11.2	2 728	11.0	628	2.7	1 367	5.6	628	2.7	4 412	6.3
McLean	466	5.6	7 700	7.2	907	2.3	1 703	6.8	892	2.4	6 653	4.5
Mercer................	303	8.2	3 245	10.0	390	6.3	544	7.1	461	2.6	2 564	12.4
Morton...............	431	7.7	4 866	7.6	757	4.3	1 547	5.9	812	3.2	7 537	6.5
Mountrail..............	394	7.5	4 031	5.3	702	2.6	1 551	7.1	712	2.2	4 487	5.7
Nelson................	211	9.6	4 040	8.1	416	3.8	1 225	6.1	424	3.3	3 955	6.7
Oliver................	137	14.7	1 481	9.6	327	1.3	435	8.5	319	2.6	1 746	7.4
Pembina	422	6.6	16 755	4.7	506	5.0	2 240	5.8	564	2.1	10 974	4.7
Pierce	223	8.8	3 116	8.4	438	3.8	1 027	6.7	480	2.1	3 682	6.4
Ramsey...............	243	9.5	5 503	4.6	464	4.1	1 762	5.1	516	1.8	5 682	4.9
Ransom	308	9.0	7 775	7.2	394	5.7	1 330	8.9	458	3.3	5 634	5.8
Renville	205	10.1	3 112	6.4	312	5.5	712	6.3	383	2.0	3 648	6.2
Richland	569	3.7	21 334	2.3	775	2.5	2 940	4.9	833	1.9	11 594	3.4
Rolette................	225	11.2	2 301	8.9	413	5.5	1 003	8.4	455	3.1	2 683	6.1
Sargent	305	5.6	8 182	4.6	381	5.3	1 268	7.3	436	1.9	5 656	4.1
Sheridan	161	11.3	3 062	9.1	308	5.2	990	31.9	341	3.0	2 381	8.2
Sioux	110	11.9	1 262	9.4	175	3.8	465	11.6	179	4.6	1 704	9.5
Slope	122	11.2	1 145	9.9	232	5.1	546	8.5	251	2.1	2 188	8.8
Stark	281	9.9	2 899	8.3	779	2.1	1 332	5.3	746	2.8	3 975	5.7
Steele	185	9.0	6 796	5.8	261	4.1	971	5.6	275	3.0	3 745	4.6
Stutsman	456	5.9	12 338	3.0	846	3.3	2 426	5.8	928	2.0	9 085	3.9
Towner	223	8.5	5 543	7.6	352	5.1	944	7.9	406	2.4	4 088	7.9
Traill.................	406	4.2	15 116	3.2	397	4.5	1 385	5.5	456	1.9	6 392	3.9
Walsh	451	5.2	20 625	3.1	715	2.1	2 702	4.9	696	2.9	11 477	2.9
Ward	478	8.1	7 818	10.5	926	3.9	2 066	8.2	1 110	1.9	7 420	5.5
Wells	335	7.4	7 593	7.4	509	4.2	1 494	5.9	559	1.9	5 275	7.4
Williams	441	7.1	5 008	7.2	792	2.5	2 041	8.9	819	1.8	5 152	4.3

	Net cash return from agricultural sales for the farm unit (see text)[1]				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
Geographic area	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)
North Dakota .	**30 494**	**.9**	**399 832**	**2.3**	**27 994**	**.9**	**27 024 895**	**.6**	**25 153**	**.9**	**20 438 149**	**.5**
Adams.................	367	1.2	2 061	54.9	331	1.1	375 136	1.0	290	1.2	234 866	.8
Barnes.................	772	.9	5 611	24.2	727	.9	767 114	.5	675	1.0	663 923	.5
Benson................	604	1.0	3 933	27.9	557	1.1	610 095	.8	515	1.2	478 033	.7
Billings................	237	1.2	2 027	35.2	213	1.1	123 873	1.7	186	1.4	75 955	1.5
Bottineau	808	.8	7 813	24.9	758	.8	810 878	.6	694	.9	632 745	.5
Bowman	358	1.3	5 704	13.1	317	1.3	334 765	1.3	275	1.5	199 055	1.0
Burke.................	479	1.2	5 739	22.1	448	1.1	454 543	1.0	397	1.2	300 089	.9
Burleigh...............	867	1.0	4 924	22.1	739	1.2	480 126	1.2	634	1.4	303 358	1.1
Cass	919	.7	27 652	5.1	851	.7	1 012 975	.3	807	.7	951 210	.3
Cavalier...............	682	.8	341	(H)	663	.7	811 726	.4	637	.7	721 768	.4
Dickey	517	1.0	13 058	5.0	476	1.0	454 492	.7	421	1.2	347 351	.6
Divide	534	1.0	8 798	9.1	507	.9	554 616	1.0	451	1.0	309 460	.8
Dunn	618	1.2	4 530	33.4	547	1.2	429 179	1.2	504	1.3	286 974	1.1
Eddy	288	.8	4 659	27.4	276	.5	257 944	.6	236	.8	187 282	.5
Emmons	744	1.3	11 619	9.8	677	1.4	508 903	1.2	605	1.5	379 805	1.1
Foster	282	1.0	4 274	14.2	261	.7	311 713	.5	234	.8	247 847	.4
Golden Valley	244	1.1	2 933	23.0	215	.9	221 203	.9	186	1.1	147 593	.7
Grand Forks	768	.6	8 531	17.5	695	.7	719 073	.4	593	.8	628 690	.4
Grant	596	1.1	3 367	24.7	506	1.2	447 707	1.1	469	1.3	297 087	1.0
Griggs	357	.9	2 893	32.5	327	.8	317 722	.8	281	1.0	239 772	.7
Hettinger	436	1.0	8 695	11.2	411	.9	577 879	.7	352	1.1	394 033	.5
Kidder	513	1.2	5 365	16.6	471	1.1	416 231	1.2	408	1.3	251 924	1.1
La Moure	616	1.0	10 899	9.8	568	1.2	569 938	.8	512	1.2	454 113	.7
Logan	401	1.3	4 535	35.8	363	1.3	287 066	1.1	327	1.5	212 249	1.1
McHenry	904	1.1	10 819	9.0	815	1.2	683 303	1.0	718	1.3	488 181	.9
McIntosh	505	1.2	5 068	30.8	460	1.3	348 158	1.2	383	1.5	252 936	1.1
McKenzie	667	1.0	7 682	13.9	610	1.0	521 533	1.0	543	1.1	298 604	.8
McLean................	968	1.0	15 371	9.4	909	1.0	866 193	.7	815	1.1	655 881	.6
Mercer................	473	1.3	32	(H)	413	1.5	283 584	1.4	388	1.6	187 615	1.2

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	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)
Morton	907	1.6	6 818	21.1	788	1.6	565 363	1.3	712	1.6	391 719	1.1
Mountrail	754	1.0	10 291	12.6	712	1.1	649 747	1.0	636	1.2	438 416	.8
Nelson	471	1.0	484	(H)	453	.9	440 994	.7	373	1.1	337 421	.7
Oliver	327	1.3	3 564	38.1	289	1.4	186 405	1.4	266	1.5	137 452	1.3
Pembina	615	.7	25 658	7.2	597	.6	587 041	.4	533	.8	511 735	.4
Pierce	490	1.0	4 416	20.3	464	1.0	443 504	.9	410	1.1	342 664	.8
Ramsey	525	1.0	−570	(H)	494	.9	596 778	.7	417	1.1	450 796	.6
Ransom	485	1.0	7 531	13.4	428	1.1	359 870	.8	396	1.2	299 848	.8
Renville	390	1.1	8 913	14.5	374	.8	456 243	.6	356	.9	373 361	.6
Richland	873	.7	27 868	6.2	812	.7	747 510	.4	767	.7	686 490	.4
Rolette	511	.9	5 088	16.1	464	.8	355 854	.8	420	1.0	271 830	.7
Sargent	449	.9	12 133	13.3	415	.8	402 614	.6	375	.9	333 358	.6
Sheridan	380	.9	3 910	19.2	363	.8	339 973	.8	329	1.0	247 436	.7
Sioux	192	1.1	2 744	15.4	161	1.2	(D)	(D)	155	1.3	97 647	1.0
Slope	263	1.3	3 658	15.1	243	1.1	(D)	(D)	221	1.3	165 441	1.0
Stark	802	1.4	6 714	13.6	704	1.5	535 740	1.3	626	1.6	356 211	1.2
Steele	290	.9	5 770	11.7	272	.8	377 451	.4	259	.9	353 900	.4
Stutsman	978	1.0	6 043	21.8	891	1.0	984 714	.6	759	1.1	712 155	.5
Towner	428	.9	1 799	80.5	406	.7	499 187	.5	369	.9	409 742	.5
Traill	471	.8	11 974	10.5	449	.6	480 154	.4	434	.7	458 568	.4
Walsh	755	.8	11 469	14.3	716	.7	641 869	.6	622	.9	539 443	.5
Ward	1 172	1.0	14 964	15.1	1 071	1.1	949 278	.9	997	1.2	722 960	.7
Wells	593	1.0	6 736	28.8	552	.9	616 692	.5	496	1.0	519 994	.5
Williams	849	1.2	12 924	8.2	765	1.1	829 313	1.0	689	1.2	451 163	.9

Geographic area	Irrigated land				Livestock and poultry							
					Cattle and calves inventory				Beef cows inventory			
	Farms		Acres		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)
North Dakota	**710**	**1.2**	**180 362**	**.8**	**14 232**	**1.0**	**1 810 409**	**.8**	**12 744**	**1.0**	**920 559**	**.9**
Adams	–	–	–	–	209	1.7	38 124	1.6	186	1.8	18 780	1.7
Barnes	9	7.4	2 343	1.6	300	1.7	24 862	1.9	267	1.8	12 651	2.0
Benson	6	13.3	1 640	10.9	295	1.7	32 522	1.8	273	1.8	16 356	2.1
Billings	4	8.3	395	11.7	177	1.5	29 595	1.6	159	1.7	17 207	1.8
Bottineau	2	19.3	(D)	(D)	264	1.8	19 425	2.4	244	1.9	10 648	2.5
Bowman	7	13.3	615	13.6	226	1.8	35 847	1.7	207	1.9	20 927	1.9
Burke	–	–	–	–	171	2.3	13 698	2.8	162	2.4	8 691	2.9
Burleigh	31	5.9	3 349	5.4	488	1.6	58 418	1.9	421	1.7	32 799	1.9
Cass	18	5.1	7 770	1.9	188	2.0	18 476	1.4	156	2.3	6 599	2.0
Cavalier	2	24.9	(D)	(D)	114	2.6	5 923	3.9	107	2.7	3 173	3.8
Dickey	29	3.8	10 436	1.9	256	1.7	42 441	1.3	233	1.8	19 210	1.6
Divide	12	7.0	2 836	4.1	206	1.8	20 277	2.0	195	1.9	11 212	1.9
Dunn	19	7.6	1 550	5.2	493	1.3	85 134	1.2	460	1.3	45 206	1.3
Eddy	10	8.1	1 581	11.6	147	1.3	19 751	1.3	138	1.3	11 135	1.5
Emmons	11	9.7	3 909	2.8	456	1.7	70 771	1.6	373	1.8	31 824	1.8
Foster	5	10.0	3 031	.4	121	1.7	14 832	2.0	112	1.9	7 699	2.2
Golden Valley	6	5.3	1 010	.2	133	1.6	27 532	.9	116	1.7	13 820	1.1
Grand Forks	40	2.4	14 928	.3	153	2.2	15 881	1.7	136	2.4	8 170	1.5
Grant	14	8.9	1 603	15.3	451	1.3	65 137	1.4	414	1.4	35 479	1.4
Griggs	13	5.7	4 321	5.3	169	1.7	17 025	2.2	159	1.7	8 566	2.2
Hettinger	3	18.5	(D)	(D)	217	1.6	24 883	1.4	191	1.8	13 078	1.6
Kidder	15	7.5	6 992	2.5	357	1.5	66 393	1.6	335	1.5	35 157	1.7
La Moure	20	7.0	6 504	3.1	308	1.7	32 470	1.6	260	1.9	13 673	1.8
Logan	5	–	1 779	–	278	1.6	49 684	1.6	234	1.9	20 236	1.8
McHenry	22	6.3	8 406	5.6	531	1.5	72 340	1.5	492	1.6	37 202	1.7
McIntosh	–	–	–	–	295	1.7	41 385	1.7	243	2.0	16 813	2.3
McKenzie	83	2.9	23 057	2.7	419	1.3	71 805	1.4	400	1.3	42 592	1.3
McLean	33	4.7	5 178	3.6	449	1.5	43 975	1.6	410	1.5	22 355	1.7
Mercer	13	7.8	1 988	1.2	304	1.8	42 494	1.9	278	2.0	23 856	2.0
Morton	33	6.1	3 991	5.7	643	1.7	104 432	1.5	530	1.9	49 202	1.7
Mountrail	2	29.5	(D)	(D)	373	1.7	34 876	2.0	356	1.7	(D)	(D)
Nelson	3	13.6	(D)	(D)	136	2.4	12 537	2.2	124	2.5	5 892	2.5
Oliver	15	7.5	3 839	3.0	238	1.7	37 001	1.7	197	2.0	16 411	2.0
Pembina	1	–	(D)	(D)	120	2.5	9 035	3.2	108	2.7	4 090	3.2
Pierce	4	15.0	465	9.5	238	1.8	26 130	1.8	219	1.9	12 954	2.2
Ramsey	3	15.9	205	9.3	85	3.2	6 124	2.2	78	3.4	(D)	(D)
Ransom	47	3.3	16 538	1.6	246	1.8	32 750	2.2	218	1.9	15 089	2.4
Renville	2	–	(D)	(D)	103	2.4	8 105	3.1	95	2.6	4 248	3.6
Richland	12	8.5	1 822	6.8	284	1.6	31 535	1.9	227	1.8	12 854	2.2
Rolette	–	–	–	–	291	1.4	25 157	1.7	267	1.5	13 429	1.7
Sargent	19	3.5	6 046	3.2	199	1.7	27 507	1.8	169	1.9	12 656	2.0
Sheridan	–	–	–	–	217	1.5	27 283	1.3	193	1.6	13 938	1.6
Sioux	1	35.5	(D)	(D)	149	1.4	33 259	1.2	143	1.5	20 995	1.1
Slope	3	15.9	210	15.9	175	1.7	30 632	1.4	167	1.8	17 793	1.4

See footnotes at end of table.

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

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

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)
Stark	10	9.7	687	15.0	528	1.6	60 427	1.7	451	1.8	26 369	1.9
Steele	7	5.4	4 441	.1	79	2.7	7 344	3.2	70	2.8	3 638	3.5
Stutsman	16	6.1	6 584	2.1	481	1.5	66 004	1.4	429	1.6	32 676	1.6
Towner	3	16.1	(D)	(D)	105	2.4	6 865	3.2	98	2.5	(D)	(D)
Traill................	–	–	–	–	73	3.1	5 490	3.0	61	3.4	(D)	(D)
Walsh	9	–	1 358	–	192	2.1	12 327	2.5	176	2.2	6 460	2.6
Ward	20	7.9	1 027	23.4	484	1.6	42 209	1.9	434	1.7	21 528	2.1
Wells	3	–	(D)	(D)	246	1.6	30 579	1.8	225	1.7	14 534	1.9
Williams	65	3.8	13 797	3.6	372	1.6	31 701	1.8	348	1.7	19 384	1.8

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)
North Dakota .	**1 170**	**1.6**	**54 024**	**1.3**	**797**	**1.4**	**197 372**	**1.0**	**1 101**	**1.3**	**130 892**	**1.5**
Adams...............	12	9.1	402	3.4	11	8.7	985	12.6	43	4.5	12 327	3.4
Barnes...............	25	6.0	648	6.4	25	6.1	3 226	4.2	25	6.9	2 426	18.6
Benson	15	9.6	587	5.8	16	7.4	1 062	7.5	20	7.1	1 559	6.6
Billings...............	19	6.9	435	7.0	7	12.7	538	15.9	6	12.8	427	23.0
Bottineau	6	12.9	127	15.6	8	13.4	388	15.5	31	6.0	1 709	7.4
Bowman	9	12.3	271	11.6	12	11.2	(D)	(D)	62	4.2	15 576	3.9
Burke.................	4	18.9	113	19.3	9	9.8	(D)	(D)	12	11.3	527	17.8
Burleigh..............	19	8.4	752	9.3	18	8.0	1 851	12.1	39	6.5	3 062	10.5
Cass	10	9.1	500	5.9	47	4.3	13 380	3.6	29	5.9	1 789	5.0
Cavalier..............	3	21.1	3	21.1	10	9.7	2 331	1.3	5	16.6	564	19.9
Dickey	17	5.8	835	3.9	18	7.3	11 581	1.6	33	5.9	3 453	6.3
Divide	6	10.2	147	11.7	15	7.0	4 685	1.3	7	9.7	713	28.4
Dunn	40	5.1	1 383	6.2	18	7.9	2 967	11.6	28	6.6	1 838	9.2
Eddy	7	7.3	194	10.4	5	10.1	230	14.3	9	7.2	2 500	6.9
Emmons	111	3.3	5 810	2.8	22	7.8	1 053	10.4	13	10.4	599	12.6
Foster	3	12.6	140	11.9	9	9.5	3 750	18.7	20	4.9	3 618	6.2
Golden Valley	11	5.7	362	3.7	13	6.5	2 559	15.9	15	7.3	2 559	5.2
Grand Forks	7	11.5	330	10.2	15	7.2	6 466	.5	12	8.4	675	11.9
Grant	74	3.5	2 954	3.6	39	4.7	4 373	4.7	32	6.1	3 524	7.5
Griggs	12	9.6	393	12.7	6	13.5	38	15.9	11	9.6	566	13.7
Hettinger	23	6.5	1 140	6.2	10	9.1	6 142	5.5	15	7.4	1 904	4.0
Kidder	30	6.2	1 187	6.5	16	8.5	932	16.3	48	4.5	8 288	4.9
La Moure	38	5.2	2 087	4.0	13	6.7	7 278	.9	27	6.2	2 356	8.2
Logan	37	5.2	1 725	4.9	7	12.7	645	21.1	5	16.0	613	19.0
McHenry	40	5.7	1 696	4.4	19	8.4	876	12.9	45	5.0	5 054	6.1
McIntosh	36	5.0	2 314	3.6	11	9.7	1 821	11.6	14	9.1	1 204	15.5
McKenzie	14	7.7	391	9.2	12	9.5	1 929	4.3	26	6.1	7 479	2.8
McLean	37	5.5	1 366	5.6	12	9.1	299	12.7	18	7.3	1 187	8.3
Mercer................	19	9.0	303	11.4	9	8.2	243	8.3	21	7.2	746	10.2
Morton................	116	3.2	7 195	2.7	36	5.5	5 102	8.6	52	5.6	5 496	7.4
Mountrail..............	2	29.8	(D)	(D)	12	11.3	182	14.8	14	8.1	1 540	9.1
Nelson................	6	11.7	245	8.6	2	–	(D)	(D)	8	10.4	942	2.1
Oliver.................	31	5.4	1 791	4.8	11	10.2	3 185	5.5	16	8.1	2 378	10.5
Pembina	–	–	–	–	14	7.4	8 752	3.1	6	13.8	123	15.4
Pierce	28	5.8	1 099	4.9	4	16.0	80	26.0	10	10.2	659	11.9
Ramsey...............	3	14.7	(D)	(D)	11	10.6	739	26.2	8	13.5	824	18.0
Ransom...............	9	11.5	731	3.3	25	6.3	16 300	3.9	24	7.3	1 121	8.9
Renville..............	5	10.5	223	6.5	3	12.5	50	7.5	14	7.0	1 932	10.0
Richland	21	6.8	941	6.4	53	4.0	9 601	4.6	34	4.9	5 894	4.4
Rolette...............	14	8.0	469	8.7	9	12.4	178	21.6	13	8.3	1 191	7.4
Sargent	9	8.5	1 270	3.4	41	4.1	38 715	.8	14	9.5	945	10.9
Sheridan	30	5.2	1 161	5.7	5	12.2	522	3.5	11	8.8	552	10.5
Sioux	13	8.4	402	12.3	7	10.6	579	12.8	7	11.0	967	14.2
Slope.................	8	13.0	154	21.6	15	9.0	1 101	11.0	18	7.2	2 327	14.6
Stark	65	4.4	3 371	4.2	30	6.6	4 865	12.4	23	7.5	1 457	9.9
Steele	7	11.1	165	5.1	3	20.6	42	35.4	14	7.7	2 395	14.8
Stutsman	50	4.9	3 254	4.0	17	7.9	2 641	6.0	35	6.2	4 000	7.1
Towner	2	28.7	(D)	(D)	5	10.6	110	14.0	8	10.8	454	19.5
Traill................	2	17.5	(D)	(D)	3	–	795	–	11	8.6	940	10.6
Walsh	5	13.1	178	8.3	7	8.6	2 540	.6	12	10.5	1 605	19.5
Ward	35	5.8	1 709	5.0	18	7.4	(D)	(D)	42	5.2	1 755	7.7
Wells	13	8.1	519	7.5	9	9.1	440	10.4	19	6.9	1 666	6.9
Williams	12	9.8	122	19.1	25	7.5	1 562	13.1	17	8.1	887	16.2

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.							
	Layers 20 weeks old and older inventory				Broilers and other meat-type chickens sold			
	Farms		Total		Farms		Total	
Geographic area	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)
North Dakota .	**537**	**1.9**	**199 319**	**.4**	**83**	**4.0**	**193 401**	**25.6**
Adams	7	13.8	240	18.1	–	–	–	–
Barnes	3	20.4	115	21.6	1	28.7	(D)	(D)
Benson	6	17.1	104	19.2	–	–	–	–
Billings	9	10.5	185	12.1	–	–	–	–
Bottineau	9	11.0	263	14.3	5	13.1	334	29.1
Bowman	7	14.4	105	16.7	–	–	–	–
Burke	2	19.1	(D)	(D)	1	–	(D)	(D)
Burleigh	22	7.8	843	13.6	1	46.3	(D)	(D)
Cass	7	12.4	(D)	(D)	5	16.3	1 325	19.5
Cavalier	9	10.5	444	12.4	1	36.6	(D)	(D)
Dickey	9	13.1	589	9.6	3	20.9	(D)	(D)
Divide	6	13.7	273	26.2	–	–	–	–
Dunn	29	6.8	988	9.5	2	20.5	(D)	(D)
Eddy	4	8.2	95	9.5	–	–	–	–
Emmons	11	10.6	634	9.2	3	20.7	1 773	10.1
Foster	3	16.1	65	16.1	1	–	(D)	(D)
Golden Valley	8	9.7	291	10.7	1	31.8	(D)	(D)
Grand Forks	7	12.6	(D)	(D)	1	–	(D)	(D)
Grant	18	8.2	1 322	11.1	3	22.9	(D)	(D)
Griggs	6	14.5	122	17.0	1	37.3	(D)	(D)
Hettinger	6	15.2	170	16.2	2	19.7	(D)	(D)
Kidder	10	11.1	346	11.8	2	24.7	(D)	(D)
La Moure	9	11.1	(D)	(D)	2	–	(D)	(D)
Logan	4	21.3	65	28.3	1	42.7	(D)	(D)
McHenry	15	10.0	528	12.5	6	14.9	530	26.1
McIntosh	14	8.1	642	8.6	6	14.9	815	18.9
McKenzie	18	8.6	2 230	23.4	1	38.4	(D)	(D)
McLean	7	13.2	192	16.1	1	37.5	(D)	(D)
Mercer	23	7.8	811	8.6	4	19.8	720	20.1
Morton	33	6.9	1 079	8.2	2	34.3	(D)	(D)
Mountrail	8	13.5	290	18.0	1	42.1	(D)	(D)
Nelson	5	10.2	83	19.9	1	30.7	(D)	(D)
Oliver	13	9.3	1 067	11.4	3	18.5	(D)	(D)
Pembina	7	12.4	488	15.7	–	–	–	–
Pierce	4	21.7	295	30.0	1	42.1	(D)	(D)
Ramsey	6	14.0	90	16.0	2	22.7	(D)	(D)
Ransom	8	11.7	126	11.2	1	35.0	(D)	(D)
Renville	4	15.6	100	15.6	–	–	–	–
Richland	16	7.8	680	13.1	9	10.5	3 510	20.7
Rolette	14	9.6	553	12.0	1	36.0	(D)	(D)
Sargent	3	22.5	155	27.1	–	–	–	–
Sheridan	6	15.0	250	15.2	2	29.5	(D)	(D)
Sioux	6	11.0	152	15.4	–	–	–	–
Slope	7	12.2	150	18.0	–	–	–	–
Stark	38	6.4	912	8.0	–	–	–	–
Steele	3	17.2	130	16.6	–	–	–	–
Stutsman	11	9.9	493	4.5	1	42.1	(D)	(D)
Towner	4	17.7	108	17.6	–	–	–	–
Traill	3	20.4	(D)	(D)	1	35.0	(D)	(D)
Walsh	6	9.9	66	7.2	1	37.9	(D)	(D)
Ward	23	7.5	546	9.0	1	42.8	(D)	(D)
Wells	10	8.2	355	9.5	1	26.6	(D)	(D)
Williams	11	11.7	311	13.1	1	41.0	(D)	(D)

	Selected crops harvested											
	Corn for grain or seed						Corn for silage or green chop					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
Geographic area	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)	Tons, green	Relative standard error of estimate (percent)
North Dakota .	**2 812**	**.7**	**578 953**	**.3**	**54 996 430**	**.3**	**2 024**	**1.1**	**164 276**	**.9**	**1 162 005**	**.8**
Adams	15	3.8	1 685	.7	107 597	1.1	21	4.8	3 018	3.2	16 327	3.1
Barnes	103	2.0	10 096	1.1	844 269	1.2	63	3.5	4 099	4.1	35 907	3.8
Benson	43	2.5	5 030	1.8	309 864	1.8	32	4.5	2 203	2.8	15 862	2.4
Billings	7	–	1 132	–	63 863	–	8	8.7	483	9.6	3 171	13.4
Bottineau	13	6.7	575	4.4	35 498	3.3	6	11.1	200	16.0	1 060	18.9
Bowman	12	5.5	1 093	1.9	60 090	1.3	16	7.4	1 392	4.3	10 071	3.0
Burke	–	–	–	–	–	–	2	–	(D)	(D)	(D)	(D)
Burleigh	38	4.3	3 730	3.5	209 040	2.5	57	3.7	6 176	3.7	40 016	5.0
Cass	247	1.2	69 562	.6	6 963 415	.6	50	3.6	2 991	2.8	30 153	2.0
Cavalier	6	8.3	826	3.9	57 955	4.4	4	12.9	119	17.4	533	14.8
Dickey	174	1.8	50 354	1.0	4 754 809	.7	56	3.6	4 160	2.6	31 589	2.2
Divide	1	35.2	(D)	(D)	(D)	(D)	–	–	–	–	–	–
Dunn	15	6.7	820	5.5	38 960	10.9	79	3.1	8 257	2.8	48 135	3.3
Eddy	28	2.7	3 214	1.0	199 587	1.7	35	2.5	2 645	2.5	18 849	2.6

See footnotes at end of table.

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

Geographic area	Corn for grain or seed						Corn for silage or green chop					
	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)	Tons, green	Relative standard error of estimate (percent)
Emmons	72	3.6	8 556	3.1	552 061	2.4	135	2.8	12 793	2.7	71 616	2.7
Foster	33	2.9	3 779	1.3	340 139	1.0	27	3.8	1 766	3.6	13 067	4.5
Golden Valley	14	3.2	2 958	.2	161 248	.1	9	6.0	911	1.7	12 330	.9
Grand Forks	98	1.7	17 214	.8	1 538 902	.7	28	5.2	1 589	5.6	12 089	5.4
Grant	29	4.5	2 794	4.0	149 474	4.8	104	2.9	9 183	2.8	44 664	3.2
Griggs	37	3.3	3 501	3.3	308 728	3.3	39	3.7	1 992	4.3	19 855	6.0
Hettinger	17	4.0	1 482	2.1	87 247	1.6	20	4.3	1 417	2.8	9 485	3.2
Kidder	31	4.1	4 952	3.0	500 205	2.9	64	3.6	6 733	3.4	35 882	3.0
La Moure	169	1.9	22 813	1.5	2 170 340	1.5	75	3.5	3 648	3.4	28 342	3.7
Logan	17	2.5	2 207	1.0	188 512	.8	46	3.4	4 103	2.6	26 779	2.0
McHenry	27	4.7	3 268	3.1	175 645	2.1	61	3.7	5 689	2.2	38 626	2.2
McIntosh	25	4.9	2 444	3.1	126 524	3.9	34	5.2	2 783	4.3	17 665	4.2
McKenzie	9	8.0	665	8.9	66 130	6.2	26	4.8	1 891	3.3	24 034	2.9
McLean	30	3.7	3 413	3.2	163 056	3.1	49	3.4	3 340	3.1	24 728	2.6
Mercer	7	13.0	739	17.9	37 920	19.9	29	6.1	2 410	4.9	18 510	3.1
Morton	66	2.7	9 111	1.4	645 619	1.3	147	2.8	16 226	2.2	93 372	2.2
Mountrail	4	14.2	253	17.5	15 550	16.4	5	8.4	250	8.4	1 170	7.2
Nelson	27	4.3	2 642	2.3	207 108	2.9	20	5.0	1 605	2.6	11 259	2.8
Oliver	11	5.4	2 002	1.4	118 530	.7	42	4.4	5 808	2.3	58 257	1.5
Pembina	48	3.1	4 743	3.3	423 354	3.7	17	6.9	743	9.8	5 906	8.2
Pierce	14	5.2	1 158	2.9	72 112	2.1	33	4.8	2 301	3.3	16 361	3.0
Ramsey	20	3.2	1 999	1.2	137 373	1.2	11	5.7	791	4.2	8 507	6.6
Ransom	189	1.8	52 539	1.0	5 218 631	1.0	63	3.3	4 322	3.0	34 291	3.5
Renville	4	–	183	–	6 350	–	9	7.2	551	7.7	2 923	9.8
Richland	476	1.0	159 573	.5	17 166 457	.5	93	2.7	5 065	2.0	55 241	2.2
Rolette	10	8.0	462	8.1	21 900	9.5	13	5.5	627	7.6	3 701	8.7
Sargent	208	1.4	51 222	1.0	4 847 704	1.0	47	3.9	2 966	2.6	25 854	2.6
Sheridan	16	2.2	2 101	.6	131 301	.5	12	5.7	1 286	3.4	6 464	2.8
Sioux	2	–	(D)	(D)	(D)	(D)	21	5.0	2 124	4.0	8 123	4.2
Slope	10	7.8	745	3.6	34 054	4.5	11	8.4	781	7.1	4 280	7.3
Stark	17	6.1	2 120	4.3	116 389	4.2	65	4.1	6 154	4.0	33 935	3.4
Steele	49	2.7	12 290	1.0	1 228 732	1.0	13	7.0	753	5.6	6 410	7.5
Stutsman	84	2.5	9 374	2.3	708 185	2.4	91	3.2	7 341	3.1	65 535	2.9
Towner	3	12.6	125	12.1	6 400	8.3	2	18.9	(D)	(D)	(D)	(D)
Traill.................	145	1.5	26 529	1.0	2 786 526	1.0	13	6.1	1 515	2.7	15 850	2.0
Walsh	42	3.3	4 382	1.8	449 331	1.4	30	5.3	1 320	4.9	11 682	4.4
Ward	7	6.1	658	2.9	37 550	.9	23	4.6	1 625	2.2	11 132	2.1
Wells	41	2.0	4 835	1.7	310 806	1.4	53	3.7	3 500	3.5	26 400	3.2
Williams	2	–	(D)	(D)	(D)	(D)	15	7.2	526	10.4	4 953	12.1

Selected crops harvested—Con.

Geographic area	Wheat for grain						Barley 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)
North Dakota .	**19 488**	**.9**	**10 874 126**	**.5**	**260 522 260**	**.4**	**9 565**	**.8**	**2 178 700**	**.4**	**98 641 946**	**.4**
Adams	223	1.5	146 708	1.0	3 559 286	1.0	65	2.8	9 079	1.7	326 480	1.8
Barnes...............	565	1.1	357 814	.5	8 984 154	.5	394	1.3	104 883	.8	5 318 982	.7
Benson	404	1.4	237 435	.7	5 186 076	.7	325	1.5	88 934	.8	3 624 870	.8
Billings...............	103	2.4	31 652	2.3	732 718	2.6	25	5.2	2 392	3.3	102 427	2.5
Bottineau	560	1.0	354 277	.5	7 735 790	.5	419	1.1	126 941	.6	5 119 470	.6
Bowman	183	2.0	116 268	1.1	2 821 738	1.2	76	3.0	12 116	2.0	468 889	1.8
Burke	349	1.4	225 975	.9	4 866 166	.9	137	2.3	27 427	1.7	960 196	1.6
Burleigh..............	334	1.9	148 135	1.2	2 783 260	1.3	87	3.2	11 342	1.8	377 387	1.9
Cass	695	.8	405 205	.4	12 661 505	.4	252	1.3	50 737	.8	2 657 815	.7
Cavalier..............	584	.8	385 571	.4	9 480 062	.5	518	.8	200 868	.5	9 908 092	.5
Dickey...............	292	1.4	130 692	.8	3 510 342	.7	83	2.8	12 334	2.1	624 759	2.0
Divide	410	1.1	254 471	.9	5 943 239	1.0	57	3.3	6 954	2.3	243 204	2.2
Dunn	329	1.7	127 012	1.4	2 685 263	1.3	156	2.3	15 291	2.0	517 154	2.3
Eddy	185	.9	74 979	.6	1 548 689	.7	108	1.4	19 226	1.1	808 468	1.2
Emmons	464	1.6	217 639	1.1	4 430 559	1.1	138	2.6	18 669	2.1	649 175	2.1
Foster	197	1.0	126 808	.5	2 846 069	.5	126	1.4	26 701	.9	1 396 105	1.0
Golden Valley	138	1.4	86 383	.9	2 122 276	.8	57	2.4	7 786	1.7	306 241	1.6
Grand Forks	483	.9	268 467	.4	8 285 866	.4	322	1.2	79 057	.8	3 984 154	.7
Grant	324	1.6	143 183	1.1	2 895 378	1.1	129	2.4	13 454	2.2	456 511	2.2
Griggs	215	1.3	110 153	.7	2 421 353	.7	181	1.4	47 801	1.0	2 220 736	1.0
Hettinger	302	1.2	308 719	.5	8 499 945	.5	66	2.6	8 923	1.3	351 109	1.0
Kidder	241	1.8	75 884	1.6	1 448 897	1.4	75	3.3	8 135	2.8	267 034	2.9
La Moure	442	1.3	233 388	.8	5 897 868	.7	170	2.2	31 099	1.4	1 703 115	1.3
Logan	239	1.8	104 164	1.3	1 825 132	1.3	115	2.6	14 372	1.9	504 465	2.1
McHenry	469	1.6	204 038	1.1	4 753 262	1.0	280	1.9	54 760	1.3	2 376 267	1.3
McIntosh	287	1.7	137 275	1.2	2 553 833	1.2	105	2.9	13 373	2.7	478 434	2.6
McKenzie	381	1.4	185 758	1.0	3 851 473	1.0	99	2.5	12 912	1.7	384 311	1.9
McLean...............	688	1.1	475 528	.6	11 272 531	.6	205	1.8	33 527	1.2	1 677 206	1.2
Mercer...............	269	2.0	105 496	1.3	2 679 855	1.2	58	3.8	5 921	2.8	237 319	2.5

See footnotes at end of table.

USDA, National Agricultural Statistics Service

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	Wheat for grain — Farms Number	Relative standard error of estimate (percent)	Wheat for grain — Acres Number	Relative standard error of estimate (percent)	Wheat for grain — Quantity Bushels	Relative standard error of estimate (percent)	Barley for grain — Farms Number	Relative standard error of estimate (percent)	Barley for grain — Acres Number	Relative standard error of estimate (percent)	Barley for grain — Quantity Bushels	Relative standard error of estimate (percent)
Morton	450	1.9	186 398	1.2	3 812 984	1.2	223	2.3	30 554	1.5	996 834	1.6
Mountrail	531	1.3	349 371	.9	6 999 789	.8	104	2.6	15 858	1.5	634 780	1.3
Nelson	313	1.3	161 270	.7	3 538 896	.7	273	1.4	73 900	1.0	3 384 788	.9
Oliver	189	2.0	60 571	1.6	1 479 501	1.6	76	3.4	11 746	2.4	443 966	2.9
Pembina	412	.9	265 733	.5	7 903 381	.5	250	1.3	58 645	.8	2 910 553	.8
Pierce	343	1.3	174 893	.8	3 999 801	.9	254	1.5	58 313	1.2	2 528 112	1.2
Ramsey	353	1.2	206 973	.6	4 543 835	.7	348	1.2	118 944	.8	5 086 347	.8
Ransom	258	1.6	117 645	1.0	3 162 419	.9	74	3.1	12 934	3.2	614 930	2.0
Renville	337	1.0	237 727	.6	5 106 001	.6	270	1.2	80 280	.8	3 381 375	.8
Richland	564	.9	191 389	.6	6 482 568	.6	83	2.5	9 915	1.6	606 308	1.4
Rolette	242	1.4	120 372	1.0	2 732 691	.9	224	1.5	67 943	1.1	3 168 738	1.0
Sargent	308	1.0	126 559	.7	3 610 254	.7	52	3.1	7 293	2.0	377 512	1.9
Sheridan	262	1.2	135 965	.8	2 975 321	.9	136	1.8	27 992	1.4	1 200 085	1.2
Sioux	84	2.2	37 121	1.3	693 249	1.5	18	4.6	1 275	5.2	38 290	3.1
Slope	180	1.6	115 834	1.2	3 202 542	1.2	64	3.3	7 382	3.1	280 577	3.8
Stark	451	1.8	213 912	1.2	5 142 897	1.2	148	2.7	19 644	2.1	773 198	2.1
Steele	241	.9	166 810	.5	4 150 815	.5	177	1.3	57 976	.7	2 873 790	.8
Stutsman	571	1.2	376 230	.5	8 308 324	.5	297	1.5	71 495	.8	3 524 345	.8
Towner	323	1.0	238 262	.5	5 329 040	.5	292	1.0	94 112	.7	4 097 514	.6
Traill	370	.8	176 466	.5	4 990 416	.5	223	1.2	48 594	.7	2 393 947	.8
Walsh	502	1.0	273 117	.6	8 052 970	.5	301	1.4	57 254	1.2	2 814 884	1.1
Ward	829	1.3	512 545	.8	11 144 094	.8	444	1.5	91 746	1.0	4 263 016	.9
Wells	429	1.0	263 465	.6	6 311 487	.6	312	1.2	79 076	.7	3 858 847	.6
Williams	591	1.3	386 421	.9	8 566 371	1.0	94	3.0	10 815	2.4	338 835	3.0

Selected crops harvested—Con.

Geographic area	Oats for grain — Farms Number	Relative standard error of estimate (percent)	Oats for grain — Acres Number	Relative standard error of estimate (percent)	Oats for grain — Quantity Bushels	Relative standard error of estimate (percent)	Sunflower seed — Farms Number	Relative standard error of estimate (percent)	Sunflower seed — Acres Number	Relative standard error of estimate (percent)	Sunflower seed — Quantity Pounds	Relative standard error of estimate (percent)
North Dakota	**4 937**	**1.2**	**423 877**	**.9**	**18 616 546**	**.8**	**5 069**	**.7**	**1 347 376**	**.3**	**1 678 505 673**	**.3**
Adams	90	2.9	10 059	2.7	417 752	3.2	16	5.0	3 532	2.9	4 268 028	3.0
Barnes	76	3.6	4 400	4.8	201 546	4.1	397	1.2	120 821	.6	154 432 431	.6
Benson	110	2.8	10 452	2.6	497 664	2.3	212	1.6	62 752	1.2	74 488 644	1.2
Billings	70	3.1	5 814	2.6	255 282	2.8	5	6.7	1 300	2.6	1 720 000	2.3
Bottineau	147	2.1	14 392	1.7	741 795	1.5	112	2.0	27 845	1.0	33 889 240	1.0
Bowman	71	3.6	5 687	2.9	190 688	2.7	6	7.5	1 729	3.4	2 252 113	3.4
Burke	53	3.8	3 225	3.7	123 917	4.1	16	4.7	2 993	2.9	2 478 585	3.0
Burleigh	141	2.8	12 686	2.3	398 600	2.2	38	4.2	11 944	1.7	12 327 941	1.9
Cass	27	4.9	1 443	3.1	68 399	3.5	201	1.4	42 881	.9	45 810 807	.8
Cavalier	33	4.7	2 845	5.7	125 942	6.8	144	1.5	32 983	1.1	38 997 473	1.3
Dickey	88	3.0	7 965	1.7	419 889	1.4	209	1.6	62 003	.7	86 326 978	.8
Divide	64	3.3	5 061	2.8	206 568	2.6	8	7.3	1 013	7.4	1 077 854	4.7
Dunn	198	2.2	14 620	2.0	627 807	1.7	7	5.8	917	.2	1 174 197	.3
Eddy	79	1.8	5 802	1.7	232 917	1.8	125	1.2	37 676	.9	47 133 116	1.0
Emmons	233	2.4	21 129	2.4	921 759	2.5	78	3.5	18 171	2.1	24 165 724	2.1
Foster	34	2.8	2 146	2.9	95 423	3.5	135	1.3	52 620	.6	70 522 207	.5
Golden Valley	59	2.4	7 304	3.6	408 631	2.2	8	5.6	1 428	1.4	1 746 235	.6
Grand Forks	42	4.2	2 443	4.6	125 051	4.4	161	1.8	26 622	1.4	25 100 843	1.4
Grant	202	2.1	19 079	1.9	841 246	1.8	18	6.3	7 172	2.5	9 214 469	2.1
Griggs	33	4.8	2 792	6.3	116 579	5.6	127	1.7	35 935	1.0	49 254 276	1.0
Hettinger	84	2.6	8 038	2.1	409 315	2.1	15	5.3	2 820	1.7	3 697 586	.9
Kidder	144	2.5	15 297	2.3	530 082	2.4	22	4.7	6 360	1.8	6 633 231	1.4
La Moure	89	3.2	6 168	2.7	359 068	2.7	323	1.5	90 343	.9	122 753 822	.9
Logan	109	2.8	8 859	3.0	368 425	2.9	50	3.3	15 417	2.3	17 341 656	1.8
McHenry	210	2.3	18 541	2.2	825 987	2.2	165	2.1	42 774	1.1	55 074 831	1.2
McIntosh	160	2.4	17 595	2.1	747 742	2.1	74	3.2	22 101	1.9	27 426 806	1.8
McKenzie	96	2.8	5 649	2.3	204 884	2.5	2	27.1	(D)	(D)	(D)	(D)
McLean	174	2.2	15 695	1.9	742 544	1.9	54	3.0	9 906	2.0	9 664 892	1.8
Mercer	125	3.0	12 492	2.4	584 165	2.5	4	11.4	1 283	3.6	1 353 375	3.8
Morton	241	2.4	23 799	2.1	872 804	1.9	30	4.8	8 311	2.4	7 581 482	3.1
Mountrail	104	3.0	8 922	3.2	346 409	2.8	17	4.8	3 220	2.8	2 951 745	2.5
Nelson	36	5.0	2 792	6.0	125 344	5.2	193	1.6	56 673	1.0	72 696 414	1.0
Oliver	109	2.9	7 955	3.2	345 053	3.1	15	6.8	3 197	5.2	2 894 000	6.6
Pembina	15	7.4	841	8.4	39 472	7.9	80	2.2	13 410	1.9	16 134 251	1.9
Pierce	118	2.6	11 591	2.4	447 095	2.8	140	1.8	34 317	1.2	43 403 463	1.0
Ramsey	32	3.6	3 490	1.9	168 282	1.7	212	1.5	60 630	.8	68 041 770	.8
Ransom	27	6.4	1 447	6.6	77 335	7.7	154	2.1	32 889	1.2	45 703 541	1.2
Renville	64	2.9	6 192	2.5	309 985	2.3	69	2.2	17 519	1.0	19 733 750	1.2
Richland	44	4.5	1 574	5.4	82 150	5.6	84	2.2	14 483	1.6	18 658 203	1.8
Rolette	78	3.2	5 620	3.5	282 362	3.4	39	3.7	7 586	2.8	9 064 224	2.6
Sargent	32	4.6	1 657	4.1	103 637	3.6	102	2.2	19 877	1.4	25 751 805	1.5
Sheridan	97	2.5	7 351	2.0	289 832	2.1	86	2.3	24 543	1.3	31 338 206	1.3
Sioux	53	3.1	6 019	2.4	230 777	1.8	2	–	(D)	(D)	(D)	(D)
Slope	59	3.6	3 667	4.0	173 139	4.0	8	5.9	2 127	4.5	2 792 350	4.1

See footnotes at end of table.

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

	Selected crops harvested—Con.											
	Oats for grain						Sunflower seed					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
Geographic area	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)	Pounds	Relative standard error of estimate (percent)
Stark	236	2.3	19 018	2.2	902 401	2.2	7	9.5	1 051	5.1	1 272 400	4.6
Steele	9	4.2	534	2.8	26 350	2.9	100	1.9	22 931	1.3	33 016 762	1.4
Stutsman	133	2.7	10 466	2.7	465 025	2.8	367	1.3	130 040	.7	156 925 441	.7
Towner	36	4.0	3 949	3.8	129 927	4.9	82	1.9	17 885	1.4	21 479 432	1.4
Traill.................	9	7.6	536	5.0	32 611	4.0	70	2.3	11 667	2.2	13 570 671	1.6
Walsh	47	4.8	2 056	7.5	87 465	6.6	160	2.0	27 237	1.5	34 027 611	1.4
Ward	144	2.5	12 524	2.0	615 204	1.9	89	2.5	19 323	1.5	23 942 973	1.5
Wells	93	2.6	7 874	2.2	367 897	2.4	229	1.3	73 979	.7	96 505 632	.7
Williams	80	3.5	6 325	4.6	306 323	2.3	2	–	(D)	(D)	(D)	(D)

	Selected crops harvested—Con.					
	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)					
	Farms		Acres		Quantity	
Geographic area	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
North Dakota .	**14 707**	**1.0**	**2 702 807**	**.9**	**3 765 662**	**.9**
Adams...............	225	1.6	62 245	1.5	90 332	1.7
Barnes...............	323	1.6	27 108	2.2	47 718	2.1
Benson	318	1.6	53 686	1.8	71 864	1.9
Billings...............	175	1.5	34 770	1.8	41 385	1.9
Bottineau	346	1.5	50 372	2.0	62 317	2.4
Bowman	224	1.8	63 613	1.7	76 186	1.7
Burke................	205	2.0	30 327	2.7	34 191	3.4
Burleigh..............	541	1.5	112 422	1.8	142 268	1.9
Cass	192	1.9	12 507	2.3	31 057	2.3
Cavalier..............	111	2.6	7 517	3.5	12 497	3.4
Dickey	262	1.6	46 095	1.8	82 316	1.6
Divide	262	1.6	40 262	1.9	49 422	1.9
Dunn	457	1.4	127 739	1.3	154 936	1.3
Eddy	173	1.1	37 747	1.5	49 543	1.4
Emmons	443	1.7	93 576	1.8	137 651	1.8
Foster	123	1.7	18 193	1.7	25 116	2.1
Golden Valley	148	1.4	33 283	1.5	39 205	1.2
Grand Forks	179	1.9	15 043	2.5	27 452	2.7
Grant	400	1.4	107 246	1.5	148 392	1.5
Griggs	155	1.8	19 014	2.5	31 016	2.9
Hettinger.............	228	1.5	44 756	1.8	69 583	1.8
Kidder	343	1.5	129 600	1.5	164 146	1.7
La Moure	311	1.7	33 474	1.8	65 337	2.0
Logan	272	1.7	69 183	1.8	90 394	2.0
McHenry	535	1.5	158 191	1.5	204 912	1.5
McIntosh	289	1.8	58 970	2.0	97 339	2.0
McKenzie	425	1.3	84 027	1.4	82 557	1.4
McLean	494	1.3	72 071	1.8	104 557	1.7
Mercer...............	301	1.8	61 788	1.9	97 082	2.2
Morton...............	600	1.7	134 045	1.7	185 090	1.7
Mountrail.............	408	1.6	65 066	2.0	74 359	2.0
Nelson...............	157	2.2	17 752	2.7	25 454	2.8
Oliver................	239	1.7	48 277	2.0	73 539	2.1
Pembina	120	2.5	11 224	3.1	19 349	2.6
Pierce	259	1.6	48 206	2.2	64 698	2.7
Ramsey...............	117	2.6	10 276	2.9	16 962	3.0
Ransom	250	1.8	31 647	2.3	65 047	2.0
Renville..............	112	2.3	12 422	2.9	14 708	2.9
Richland	293	1.5	23 984	2.2	50 111	2.0
Rolette...............	310	1.3	53 458	1.6	80 959	1.9
Sargent	186	1.7	23 675	2.2	44 664	2.3
Sheridan	230	1.4	48 183	1.8	63 780	1.7
Sioux	135	1.5	53 209	1.5	70 527	1.8
Slope	169	1.7	35 417	1.7	41 726	1.8
Stark	532	1.7	101 915	1.7	141 763	1.7
Steele	79	2.5	6 078	3.1	13 751	3.7
Stutsman	458	1.5	78 808	1.8	125 955	1.9
Towner	122	2.2	10 317	2.1	13 809	2.3
Traill.................	66	3.2	8 344	2.3	16 350	2.2
Walsh	231	1.9	21 000	2.3	38 897	2.5
Ward	530	1.5	69 422	1.8	81 354	1.8
Wells	267	1.5	40 660	1.6	57 972	1.8
Williams	377	1.6	44 597	2.2	54 067	2.2

[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..	30 504	1 835	32 339	1.7	5.7
Land in farms .... acres..	39 359 346	239 131	39 598 477	1.0	.6
Average size of farm .... acres..	1 290	130	1 224	(X)	(X)
Farms by size of farm:					
Less than 10 acres	545	111	656	23.8	16.9
10 to 49 acres	1 420	21	1 441	12.8	1.5
50 to 179 acres	3 573	771	4 344	6.6	17.7
180 acres or more	24 966	932	25 898	1.6	3.6
Farms by value of sales:					
Less than $2,500	4 164	1 418	5 582	6.5	25.4
$2,500 to $9,999	3 417	312	3 729	5.6	8.4
$10,000 or more	22 923	105	23 028	1.5	.5
Market value of agricultural products sold .... $1,000..	2 869 322	−30 284	2 839 038	1.2	−1.1
Farms by type of organization:					
Individual or family	26 660	1 945	28 605	1.9	6.8
Partnership, corporation, or other	3 844	−110	3 734	3.7	−2.9
Farms by tenure of operator:					
Full owners	10 760	1 592	12 352	3.7	12.9
Part owners	15 064	68	15 132	1.4	.4
Tenants	4 680	175	4 855	3.3	3.6
Operators by place of residence:					
On farm operated	20 071	1 038	21 109	2.0	4.9
Not on farm operated	7 238	841	8 079	3.8	10.4
Not reported	3 195	−44	3 151	2.0	−1.4
Operators by principal occupation:					
Farming	22 677	172	22 849	1.6	.8
Other	7 827	1 663	9 490	4.3	17.5
Operators by sex:					
Male	29 168	1 521	30 689	1.8	5.0
Female...	1 336	314	1 650	8.5	19.0
Operators by race:					
White	30 305	1 822	32 127	1.7	5.7
Black and other races	199	13	212	26.9	6.1
Operators by years on present farm:					
4 years or less	2 431	434	2 865	5.4	15.1
5 years or more	22 358	1 695	24 053	1.8	7.0
Not reported	5 715	−294	5 421	5.3	−5.4

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