



Honey Bee Colonies Methodology and Quality Measures

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Scope and Purpose: The Quarterly Colony Loss Survey that provides the data necessary to produce the Honey Bee Colonies report is conducted in all 50 States. The target population consists of all known producers with five or more honey bee colonies. Data are collected on the beginning of quarter and end of quarter inventories and which State the colonies are located in. If honey bee colonies were present in more than one State during the quarterly period, then the colonies are included in the total for each State. The number of colonies lost, requeened, received nucleus colonies or package bees, added, or sold or given away is also collected. In addition, respondents are asked to report the number of colonies affected by Colony Collapse Disorder symptoms, Varroa mites, other pests and parasites, diseases, pesticides, other stressors, and unknown stressors.

Estimates are published for 44 States, Other States (which includes six States with low levels of inventory), and the United States for beginning of quarter inventory and during the quarter estimates for maximum number of colonies, colonies lost, colonies added, and colonies renovated. The percent of colonies affected by various health stressors are estimated and published for the same 44 States, Other States, and the U.S. including Varroa mites, other pests and parasites, diseases, pesticides, other stressors, and unknown stressors. Finally, the number of colonies lost with Colony Collapse Disorder symptoms is published at the U.S. level only.

Survey Timeline: For the Quarterly Colony Loss Survey, data collection begins at the beginning of each quarter for the following months: January, April, July, and October using the current year as the reference period. Questionnaires are mailed around the first of the referenced month. Telephone follow-up is conducted for nonresponse records beginning approximately a week later. Enumerators at National Agricultural Statistics Service (NASS) data collection centers collect data for a period of approximately two weeks. Assigned Regional Field Offices (RFOs) have approximately two weeks from the end of data collection each quarter to complete editing and analysis, execute the summary, interpret the survey results, and submit recommendations for estimates. A National review is then completed, and National estimates are established. Estimates are released to the public in early August for the preceding six quarters as specified by the Agricultural Statistics Board (ASB) on its annual publications calendar.

Sampling: The target population for the Quarterly Colony Loss Survey is all operations with five or more honey bee colonies. It is a follow-on survey to the [Bee and Honey Inquiry](#) as the sample is drawn from those that respond to that survey with 5 or more honey bee colonies. All records from the higher strata (i.e., operations with large number of colonies and/or operating in multiple states) are included in the Quarterly Colony Loss sample while a simple random sample is drawn from records from the lower strata (i.e., operations with fewer colonies). Strata boundaries vary by State, depending on the distribution and size of operations.

Data Collection: All federal data collections require approval by the Office of Management and Budget (OMB). NASS must document the public need for the data, apply sound statistical practice, prove the data does not already exist elsewhere, and ensure the public is not excessively burdened. The questionnaire must display an active OMB number that gives NASS the authority to conduct the survey, a statement of the purpose of the survey and the use of the data being collected, a response burden statement that gives an estimate of the time required to complete the form, a confidentiality statement that the respondent's information will only be used for statistical purposes in combination with other producers, and a statement saying that response to the survey is voluntary and not required by law.

All Regional Field Offices (RFO) use the same standardized questionnaire for data collection. For consistency across modes, the paper version is considered the master questionnaire and the Computer Assisted Self Interview (CASI), mobile

Computer Assisted Telephone Interview (mCATI), and Computer Assisted Telephone Interview (CATI) instruments are built to model the paper questionnaire. The questionnaire content and format are evaluated annually through a specification process where requests for changes are evaluated and approved or disapproved. Input may vary from question wording or formatting to a program change involving the deletion or modification of current questions or addition of new ones. If there are significant changes to either the content or format proposed, a NASS survey methodologist will pre-test the changes for usability. Prior to the start of data collection, all modes of instruments are reviewed, and CASI, mCATI, and CATI instruments are thoroughly tested.

Sampled operations receive a pre-survey letter explaining the purpose and importance of the survey and that they are being contacted for survey purposes only. Attached to the letter is a complete copy of the paper questionnaire and a pass code, which can be used to complete the survey securely online. RFOs are responsible for their data collection strategy, but RFOs must include provisions for respondents to report securely online. If response is not received by mail or online, respondents are contacted by CATI. Limited personal interviewing may be conducted, generally for large operations or those with special handling arrangements.

Survey Edit: As survey data are collected and captured, they are edited for consistency and reasonableness using automated systems. Relationships between data items on the current survey are verified and in certain situations those items may be compared to data from earlier surveys to make sure certain relationships are logical. The edit will determine the status of each record to be either “dirty” or “clean”. Dirty records must be updated and reedited or certified by an analyst to be clean. If updates are needed, they are reedited interactively. Only clean records are eligible for analysis and summary.

Analysis Tools: Edited data are processed through an interactive analysis tool which displays data for all reports by item. The tool provides scatterplots, tables, charts, and special tabulations that allow the analyst to compare an individual record to similar records. Outliers and unusual data relationships become evident and assigned RFO staff review them to determine if they are correct. The tool allows comparison to an operation’s previously reported data to detect large changes in the operation. Data found to be in error are corrected, while data found to be correct are retained.

Nonsampling Errors: Nonsampling errors are present in every survey process. These errors include reporting, recording, and editing errors. Steps are taken to minimize these errors, such as comprehensive interviewer training, validation, and verification of processing systems, application of detailed computer edits, and evaluation of the data via the analysis tools.

Estimators: Each operation in the sample has an initial weight based on the final nonresponse adjusted weights from the Bee and Honey Inquiry and any additional sampling. Response to the survey is voluntary. Some producers refuse to participate in the survey. Others cannot be located during the data collection period, and some submit incomplete reports. In the Quarterly Colony Loss Survey, nonresponse is accounted for in one of two ways. For operations in strata made up of large and often unique operations, some data items must be manually imputed. Nonrespondents in all other strata are accounted for by adjusting the weights of the complete responses to account for responses that are not complete. The adjustment occurs at the stratum level and is performed for each individual item because sometimes only a partial report is obtained.

Point estimates, called direct expansions, are calculated by multiplying the reported value by the combined nonresponse weight and sampling weight and summing to a stratum total. A variance estimate is also computed at the stratum level. Totals and variances are additive across strata to form a State estimate, and State estimates are additive to a National estimate.

Ratio estimates are also computed for many items. Ratio estimates use the reweighted estimator described above for the numerator and denominator direct expansions. Both the numerator and denominator must be complete for that record to be included in the ratio estimate.

Estimation: When all samples are accounted for, all responses fully edited, and the analysis material is reviewed, each assigned RFO executes a summary to evaluate and analyze the data under its responsibility. When all assigned RFOs have run summaries, Headquarters receives all State files and pools the data. Since identical surveys are conducted in each State, the samples can be pooled, and National survey results computed. The summary results provide multiple indications

and their standard errors. It also provides information to assess the performance of the current survey and evaluate the quality of survey indications, such as response rates and strata level expansions. RFOs are responsible for performing a detailed review of their survey results. Any irregularities revealed by the summary must be investigated and, if necessary, resolved. Assigned RFOs interpret the survey results and submit a recommended estimate to Headquarters for beginning of quarter inventory and during the quarter estimates for maximum number of colonies, colonies lost, colonies added, colonies renovated, the percent of colonies affected by Varroa mites, other pests and parasites, diseases, pesticides, other stressors and unknown stressors and the number of colonies lost with Colony Collapse Disorder symptoms. The survey indications used in State summaries are produced by the National summary. All these estimates are set at the State level and the U.S. estimates are a sum of the States.

The Quarterly Colony Loss survey and estimation periods are conducted quarterly. The estimates are published in an annual report which includes the four quarters of the previous year and the first two quarters of the current year. Prior to the annual report, the previous six quarters are subject to revision. Revisions are the result of late reports or corrected data. Every five years, NASS conducts the Census of Agriculture, which is an exhaustive data collection effort for all known farm operations across the United States. Estimates are thoroughly reviewed for possible revision after data from the Census of Agriculture are available. The information gathered from the Census of Agriculture is used to establish benchmark levels by which the survey estimates can be compared, and bias determined.

Quality Metrics for Honey Bee Colonies

Purpose and Definitions: Under the guidance of the Statistical Policy Office of the Office of Management and Budget (OMB), the United States Department of Agriculture's National Agricultural Statistics Service (NASS) provides data users with quality metrics for its published data series. The metrics table below describe the performance data for all surveys contributing to the publication. The accuracy of data products may be evaluated through sampling and non-sampling error. The CVs measure the error due to sampling as well as some nonsampling error. Nonsampling error is also evaluated by examining response rates and the weighted item response rates.

Sample size is the number of observations selected from the population to represent a characteristic of the population. Operations that did not have the item of interest or were out of business at the time of data collection have been excluded.

Response rate is the proportion of the above sample that responds to the survey.

Weighted item response rate is a ratio of reported survey data expanded by the original sampling weight compared to final nonresponse adjusted summary totals.

Coefficient of variation provides a measure of the size for the standard error relative to the point estimate and is used to measure the precision of the results of a survey estimator.

Quarterly Colony Loss Survey Sample Size and Response Rates: To assist in evaluating the performance of the estimates in the Honey Bee Colonies report, the sample size and response rates are displayed. Response rates overall for 2021 and 2022 are displayed.

Quality Metrics for Quarterly Colony Loss Survey - States and United States: January 1, 2021 and January 1, 2022

State	First of quarter inventory							
	Sample size		Response rate		Weighted item response rate		Coefficient of variation	
	2021	2022	2021	2022	2021	2022	2021	2022
	(number)	(number)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Alabama	67	63	50.7	74.6	37.6	72.8	6.1	7.9
Arizona	28	23	64.3	56.5	33.1	60.4	4.7	1.2
Arkansas	44	45	77.3	73.3	76.8	34.7	9.8	1.9
California	233	238	53.2	41.2	40.5	26.4	2.0	1.0
Colorado	53	43	28.3	46.5	23.5	57.6	2.6	3.0
Connecticut	26	29	61.5	62.1	42.9	65.8	7.9	2.6
Florida	225	230	54.7	47.0	46.2	37.0	4.2	2.7
Georgia	119	124	61.3	54.0	70.0	56.3	3.6	2.9
Hawaii	35	(D)	42.9	(D)	61.3	(D)	6.1	(D)
Idaho	62	60	66.1	60.0	58.6	67.4	1.1	1.2
Illinois	105	104	72.4	69.2	73.3	54.3	7.5	9.2
Indiana	70	64	60.0	48.4	64.5	49.0	4.5	6.0
Iowa	83	67	61.4	55.2	28.5	25.1	2.5	1.5
Kansas	37	37	70.3	67.6	87.7	74.2	10.2	18.2
Kentucky	94	100	61.7	59.0	57.9	53.3	9.2	5.2
Louisiana	44	47	72.7	53.2	42.6	35.1	4.4	8.4
Maine	22	22	68.2	54.5	82.1	80.2	3.9	2.4
Maryland	33	36	60.6	50.0	42.2	36.8	8.6	5.9
Massachusetts	30	36	70.0	50.0	65.4	14.7	1.1	2.0
Michigan	99	97	47.5	36.1	21.0	24.0	4.6	1.1
Minnesota	96	91	47.9	58.2	39.6	32.7	0.9	1.5
Mississippi	43	41	55.8	61.0	69.0	68.2	11.6	6.8
Missouri	54	48	64.8	79.2	61.3	72.2	11.9	17.9
Montana	38	39	55.3	46.2	52.5	41.1	0.3	0.9
Nebraska	40	38	62.5	60.5	64.7	60.0	5.1	5.2
New Jersey	35	34	48.6	32.4	8.0	5.1	2.5	3.3
New Mexico	19	14	68.4	64.3	73.3	90.0	2.3	2.4
New York	103	109	56.3	52.3	38.0	39.1	3.7	6.3
North Carolina	76	110	80.3	72.7	92.0	76.7	5.8	4.8
North Dakota	88	83	47.7	45.8	42.8	30.4	0.7	1.6
Ohio	90	97	66.7	55.7	66.0	64.1	19.1	11.0
Oklahoma	41	31	48.8	61.3	33.4	45.6	8.9	25.0
Oregon	74	68	63.5	52.9	43.8	68.0	1.1	2.0
Pennsylvania	106	143	67.0	50.3	34.6	20.0	5.4	2.1
South Carolina	58	59	74.1	55.9	47.4	32.5	3.2	4.9
South Dakota	63	59	58.7	66.1	41.9	52.8	0.1	0.7
Tennessee	81	82	56.8	63.4	50.6	65.3	6.8	13.1
Texas	116	90	50.0	55.6	49.2	31.1	2.7	31.3
Utah	40	48	70.0	77.1	62.4	76.3	0.6	4.2
Vermont	27	24	51.9	54.2	16.4	14.7	7.2	0.6
Virginia	67	79	62.7	72.2	57.0	74.8	14.1	8.4
Washington	80	68	43.8	45.6	50.2	39.0	4.5	0.6
West Virginia	54	53	74.1	64.2	82.3	46.7	3.6	4.2
Wisconsin	88	93	52.3	57.0	36.2	33.0	7.1	4.7
Wyoming	24	20	66.7	65.0	78.2	87.7	(Z)	(Z)
Other States ¹	35	56	60.0	42.9	33.1	65.2	5.8	4.7
United States	3,145	3,142	58.7	55.4	45.8	39.9	0.7	1.8

(D) Withheld to avoid disclosing data for individual operations.

(Z) Less than half of the unit shown.

¹ Includes data for States not published in this table.

Quality Metrics for Quarterly Colony Loss Survey - States and United States: April 1, 2021 and April 1, 2022

State	First of quarter inventory							
	Sample size		Response rate		Weighted item response rate		Coefficient of variation	
	2021	2022	2021	2022	2021	2022	2021	2022
	(number)	(number)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Alabama	64	61	65.6	67.2	55.9	60.0	14.1	7.9
Arizona	28	22	46.4	59.1	56.3	38.3	7.3	1.1
Arkansas	44	45	56.8	55.6	57.7	31.5	15.0	4.2
California	224	230	44.6	46.1	25.9	32.0	2.3	1.0
Colorado	51	43	47.1	65.1	45.4	62.1	4.0	2.6
Connecticut	26	26	53.8	73.1	47.9	70.7	8.0	5.0
Florida	214	226	49.1	45.1	39.1	33.1	4.0	2.7
Georgia	118	122	61.9	57.4	51.7	57.8	2.5	2.0
Hawaii	34	(D)	44.1	(D)	72.0	(D)	2.7	(D)
Idaho	58	55	56.9	63.6	41.6	62.0	0.7	1.3
Illinois	100	98	66.0	70.4	67.5	53.7	7.5	9.3
Indiana	68	60	51.5	53.3	50.2	53.0	5.1	4.1
Iowa	80	65	70.0	70.8	22.5	32.9	1.3	1.2
Kansas	38	34	81.6	70.6	90.6	80.1	10.7	23.0
Kentucky	88	98	59.1	58.2	51.7	35.8	10.2	4.7
Louisiana	44	45	68.2	53.3	65.2	21.0	4.2	6.6
Maine	22	21	54.5	76.2	73.4	82.7	1.7	4.4
Maryland	32	33	68.8	69.7	44.0	42.6	6.7	4.9
Massachusetts	29	36	58.6	72.2	18.7	28.2	2.3	1.6
Michigan	94	92	53.2	50.0	26.2	43.3	2.5	2.4
Minnesota	92	81	59.8	54.3	37.6	30.6	2.0	1.7
Mississippi	42	40	54.8	52.5	58.5	61.1	10.6	7.8
Missouri	53	45	66.0	68.9	72.0	65.5	14.9	13.5
Montana	37	39	51.4	48.7	51.0	50.4	0.3	0.9
Nebraska	37	37	64.9	35.1	37.5	11.6	5.3	6.3
New Jersey	32	33	46.9	45.5	49.3	21.1	2.1	10.8
New Mexico	18	14	55.6	50.0	14.2	53.6	4.0	0.6
New York	100	109	46.0	62.4	14.9	36.0	2.2	5.5
North Carolina	72	104	56.9	80.8	47.7	69.9	10.6	7.4
North Dakota	88	79	42.0	50.6	32.8	58.7	1.0	0.5
Ohio	87	89	67.8	64.0	56.0	45.5	14.8	10.7
Oklahoma	41	31	51.2	54.8	33.0	24.7	14.9	26.4
Oregon	68	64	52.9	59.4	29.2	45.2	1.1	3.2
Pennsylvania	103	139	57.3	56.8	30.3	44.9	3.3	2.2
South Carolina	57	56	66.7	58.9	40.7	39.0	4.4	3.1
South Dakota	61	59	55.7	47.5	37.5	38.7	0.5	0.6
Tennessee	80	80	38.8	51.3	47.9	44.6	8.6	9.0
Texas	115	83	55.7	56.6	48.6	72.7	2.8	32.6
Utah	37	48	67.6	68.8	66.9	83.3	0.5	4.2
Vermont	27	27	63.0	48.1	27.2	8.5	4.4	1.5
Virginia	65	76	52.3	69.7	64.4	62.2	17.3	8.8
Washington	76	65	43.4	40.0	48.3	38.6	10.3	1.6
West Virginia	53	50	47.2	68.0	45.3	58.8	5.0	5.5
Wisconsin	81	86	54.3	61.6	48.4	34.8	5.0	4.8
Wyoming	21	19	61.9	57.9	46.4	63.9	0.1	(Z)
Other States ¹	31	51	58.1	43.1	33.8	57.9	4.5	2.5
United States	3,030	3,016	55.1	57.3	37.0	44.0	0.8	1.9

(D) Withheld to avoid disclosing data for individual operations.

(Z) Less than half of the unit shown.

¹ Includes data for States not published in this table.

Quality Metrics for Quarterly Colony Loss Survey - States and United States: July 1, 2021 and July 1, 2022

State	First of quarter inventory							
	Sample size		Response rate		Weighted item response rate		Coefficient of variation	
	2021	2022	2021	2022	2021	2022	2021	2022
	(number)	(number)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Alabama	67	99	67.2	67.7	70.3	69.0	7.3	11.8
Arizona	26	29	73.1	44.8	88.0	37.0	2.1	5.4
Arkansas	53	45	77.4	75.6	73.9	41.1	3.0	16.8
California	246	301	49.6	44.2	41.8	28.2	0.8	0.7
Colorado	46	45	52.2	51.1	51.8	57.7	1.4	2.9
Connecticut	30	24	66.7	45.8	61.2	32.1	1.8	3.1
Florida	237	214	53.6	43.9	44.0	35.9	2.4	5.0
Georgia	133	147	58.6	53.1	53.0	52.5	2.9	1.6
Hawaii	22	(D)	45.5	(D)	64.5	(D)	2.4	(D)
Idaho	59	56	66.1	51.8	63.0	45.0	1.8	2.3
Illinois	110	92	76.4	64.1	50.7	67.4	7.8	6.2
Indiana	68	49	63.2	44.9	64.7	68.4	3.8	5.1
Iowa	67	64	58.2	59.4	24.9	24.6	1.1	0.8
Kansas	38	47	71.1	78.7	79.8	81.6	34.5	6.3
Kentucky	114	42	49.1	35.7	48.3	33.3	6.0	8.0
Louisiana	47	45	78.7	64.4	67.4	85.1	7.9	7.1
Maine	23	27	95.7	66.7	93.0	80.1	1.8	3.4
Maryland	37	41	86.5	46.3	56.9	29.6	6.7	4.6
Massachusetts	36	28	61.1	60.7	62.3	15.9	1.1	0.8
Michigan	101	126	55.4	57.1	38.1	33.4	1.5	2.9
Minnesota	93	94	59.1	51.1	33.8	29.4	2.2	2.0
Mississippi	46	49	69.6	67.3	72.7	79.8	6.0	4.4
Missouri	50	78	86.0	59.0	80.2	36.8	19.1	28.4
Montana	40	41	62.5	53.7	46.9	37.1	1.0	(Z)
Nebraska	40	41	77.5	58.5	65.2	25.9	5.3	6.0
New Jersey	35	39	60.0	25.6	23.2	5.0	1.7	12.8
New Mexico	17	21	76.5	66.7	71.5	66.6	1.7	21.6
New York	113	122	69.9	44.3	44.1	40.0	4.9	5.6
North Carolina	118	93	76.3	78.5	62.9	64.9	4.8	7.6
North Dakota	90	84	51.1	41.7	51.6	40.2	(Z)	0.8
Ohio	104	61	73.1	39.3	74.7	50.1	9.9	10.8
Oklahoma	33	34	63.6	55.9	27.6	21.8	25.5	11.5
Oregon	68	66	69.1	51.5	47.4	46.1	1.1	2.8
Pennsylvania	148	144	53.4	62.5	20.0	30.6	1.7	2.4
South Carolina	60	45	65.0	60.0	40.6	42.6	4.5	5.2
South Dakota	59	64	57.6	54.7	42.8	44.5	0.9	0.1
Tennessee	87	97	47.1	43.3	34.1	42.9	7.5	7.2
Texas	96	171	62.5	67.3	35.3	73.7	21.0	6.0
Utah	51	40	84.3	65.0	91.2	67.7	4.2	0.3
Vermont	27	24	63.0	66.7	19.1	25.3	0.7	6.3
Virginia	87	66	65.5	62.1	52.9	56.0	7.2	14.5
Washington	74	74	45.9	45.9	17.9	52.8	0.8	0.7
West Virginia	60	41	66.7	58.5	23.9	73.4	3.5	13.0
Wisconsin	96	109	56.3	64.2	47.5	25.6	5.3	1.9
Wyoming	21	21	71.4	47.6	84.6	60.4	(Z)	0.1
Other States ¹	36	60	55.6	48.3	23.1	63.6	3.6	2.8
United States	3,309	3,300	62.1	54.6	45.9	40.8	1.2	0.6

(D) Withheld to avoid disclosing data for individual operations.

(Z) Less than half of the unit shown.

¹ Includes data for States not published in this table.

Quality Metrics for Quarterly Colony Loss Survey - States and United States: October 1, 2021 and October 1, 2022

State	First of quarter inventory							
	Sample size		Response rate		Weighted item response rate		Coefficient of variation	
	2021	2022	2021	2022	2021	2022	2021	2022
	(number)	(number)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Alabama	65	100	73.8	63.0	73.0	66.1	7.4	9.2
Arizona	26	29	69.2	48.3	87.9	47.6	1.7	4.5
Arkansas	50	44	68.0	84.1	47.0	90.2	2.2	15.9
California	244	295	40.6	36.6	34.0	26.1	1.0	0.9
Colorado	43	43	44.2	48.8	15.1	54.3	2.4	3.3
Connecticut	28	27	60.7	55.6	50.9	41.7	5.0	3.0
Florida	236	212	48.3	38.2	33.9	36.4	2.7	2.4
Georgia	126	144	60.3	47.9	67.3	46.4	3.0	1.5
Hawaii	22	(D)	54.5	(D)	72.4	(D)	7.4	(D)
Idaho	61	53	57.4	52.8	55.6	48.6	2.0	4.3
Illinois	108	88	64.8	61.4	52.1	58.0	9.5	7.2
Indiana	66	49	59.1	46.9	59.3	59.2	5.1	6.8
Iowa	67	64	68.7	56.3	23.0	26.5	1.0	1.2
Kansas	37	45	64.9	75.6	60.7	86.8	18.2	5.7
Kentucky	106	42	66.0	52.4	70.5	62.4	4.5	13.3
Louisiana	47	44	63.8	63.6	61.2	72.6	6.8	7.6
Maine	22	25	68.2	76.0	79.9	84.6	4.8	7.3
Maryland	35	40	54.3	70.0	41.0	79.2	6.0	9.8
Massachusetts	35	28	57.1	67.9	56.2	62.2	2.2	0.8
Michigan	96	120	45.8	56.7	34.5	42.9	4.6	2.7
Minnesota	93	92	66.7	54.3	51.2	42.8	1.5	1.9
Mississippi	44	47	65.9	61.7	50.7	65.5	6.3	4.4
Missouri	49	73	81.6	53.4	82.9	42.5	12.2	14.4
Montana	39	38	59.0	57.9	63.7	31.9	0.9	0.1
Nebraska	40	40	60.0	57.5	55.2	54.5	4.8	5.8
New Jersey	35	37	45.7	51.4	5.9	14.7	2.1	5.2
New Mexico	15	21	33.3	61.9	5.0	62.7	3.4	26.1
New York	114	120	57.9	39.2	37.1	18.8	5.2	3.5
North Carolina	116	88	83.6	76.1	72.5	64.9	4.1	6.8
North Dakota	87	85	44.8	48.2	32.5	49.0	0.2	0.7
Ohio	97	60	71.1	55.0	76.2	63.4	11.3	9.1
Oklahoma	30	32	76.7	56.3	40.9	37.4	22.9	13.4
Oregon	69	63	73.9	49.2	60.6	61.8	1.4	2.6
Pennsylvania	148	147	59.5	58.5	23.9	22.8	1.8	2.3
South Carolina	58	44	60.3	59.1	38.6	44.8	3.0	5.0
South Dakota	55	63	63.6	58.7	51.8	77.3	0.8	0.1
Tennessee	82	93	68.3	46.2	72.0	56.4	6.8	7.5
Texas	94	168	63.8	48.8	75.2	32.8	36.1	6.1
Utah	49	39	77.6	69.2	74.1	80.8	4.8	0.3
Vermont	24	26	54.2	65.4	9.3	52.7	0.6	6.5
Virginia	82	64	78.0	60.9	77.4	53.5	8.2	8.8
Washington	72	72	36.1	34.7	34.1	29.0	1.0	0.8
West Virginia	55	38	74.5	73.7	42.3	86.9	4.7	9.4
Wisconsin	94	109	55.3	50.5	40.1	59.3	5.7	0.8
Wyoming	20	21	60.0	81.0	74.9	81.5	(Z)	0.1
Other States ¹	35	58	40.0	56.9	35.9	69.6	3.9	3.0
United States	3,216	3,230	59.9	53.1	45.7	43.5	2.2	0.5

(D) Withheld to avoid disclosing data for individual operations.

(Z) Less than half of the unit shown.

¹ Includes data for States not published in this table.

Information Contacts

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Estimation	Livestock Branch	(202) 720-3570	HQ_SD_LB@usda.gov
Data Collection	Survey Administration Branch	(202) 720-3895	HQ_CSD_SAB@usda.gov
Questionnaires	Data Collection Branch	(202) 720-6201	HQ_CSD_DCB@usda.gov
Sampling and Editing	Sampling Editing and Imputation Methodology Branch	(202) 690-8141	HQ_CSD_SB@usda.gov
Summary and Estimators	Summary Estimation and Disclosure Methodology Branch	(202) 690-8141	HQ_SD_SMB@usda.gov
Dissemination	Data Dissemination Office	(202) 720-3869	HQSDOD@usda.gov
Media Contact and Webmaster	Public Affairs Office	(202) 720-2639	HQOAPAO@usda.gov

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