

AGRICULTURAL SURVEYS PROGRAM

OMB No. 0535-0213

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection has been conducted previously, include the actual response rate achieved during the last collection.

The June Area Survey is an area frame probability-designed survey. The population of interest is all land in the United States. Identifiable land units called segments are visited by enumerators to determine planted crop acreages; inventories of hogs, cattle and sheep; plus other agricultural items of interest. Land in each State has been stratified by type of land use. The area within a land use stratum is divided into substrata called “paper” or “geographic” strata. Within each paper stratum, segments are randomly selected and assigned to one of five replications. Rotation of segments within a land use stratum is achieved by replacing one or more complete replications: each year 20 percent of the segments are replaced with new ones. Segments falling in predominately cultivated areas are about one-half to two square miles in size while those in residential and urban areas are about one tenth to one-quarter square mile. Segments in open range and woodland areas vary in size from 1 to 100 square miles.

The Agricultural Surveys list frame respondent universe is the two million farms in the United States. However, only those farms which meet certain minimum size criteria are eligible for sampling. A design called multivariate probability proportional to size (MPPS) is used to select the list sample. Under this method of sampling, a record’s probability of selection is based on some measure of the size of the record (acres of cropland, head of cattle, etc.). MPPS sampling uses multiple measures of size--a farm’s soybean and corn acreage, for example--to determine the probability of selection. Sub-populations of row crops, small grains, and speciality farms are created; operations may be in one, many, or all sub-populations. From each of these sub-populations samples are drawn independently, to be used alone or in any combination, based on what is needed in a particular survey quarter. Additionally, the samples are drawn so they have maximum overlap and so that records with more items of interest are more likely to be chosen, which reduces the number of contacts needed. The sample is replicated and different combinations of samples and replicates are used in different quarters, providing some continuity from quarter to quarter, while reducing burden.

There is now a third sampling frame based on data from the Farm Service Agency (FSA). NASS had an interest in using USDA’s Farm Service Agency’s records as a data source for many years. Since farmers report their crop acreages to FSA on an annual basis, NASS looked forward to using these data to reduce respondent burden, reduce data

collection costs, and improve published estimates for crops. Prior to 1997, NASS researched using FSA data as a sampling frame and as an administrative data source. After passage of the 1996 Farm Bill, which reduced the emphasis on producers reporting to FSA, NASS temporarily stopped working on this issue. When the 2002 Farm Bill required producers participating in the FSA program to report all program crops, NASS once again began examining different ways of using FSA data. A NASS team conducted research studies to evaluate using FSA data as an independent sampling frame in Nebraska and Minnesota in December 2004 and in these two States plus North Carolina and Oregon in June 2005 (see Change Worksheet of November 8, 2004). NASS senior management endorsed using FSA data as a production sampling frame for one State--Nebraska--starting in December 2006.

This new frame was implemented for the June Area Survey part of this Agricultural Surveys Program information collection, OMB No. 0535-0213, in June 2006 (see Change Worksheet of May 9, 2006). The second survey affected was the July 2006 Agricultural Labor Survey, OMB No. 0535-0109 (see Change Worksheet of May 30, 2006). The last survey affected in 2006 was the December Crops/Stocks Survey. The sampling frame change will affect other surveys in Nebraska in 2006 and 2007 but those effects will be in list maintenance, sampling, and estimation which do not effect public burden. For 2008, change worksheets will be submitted to OMB with more information.

As shown in table below, the response rates for area tracts are expected to be approximately 85 percent with 8 percent refusals and 7 percent inaccessibles at the U.S. level. Response rates for list surveys are expected to be approximately 75 percent with 11 percent refusals and 14 percent inaccessibles at the U.S. level. NASS includes “known zeroes” and confirmed out-of-scope operations as useable contacts.

Counts and Response Rates for 2006-07								
Survey	Survey Month	No. of States	Sample Size	Usable Responses				
				Mail	Telephone	Interview	Total* Response	Response Rate %
Area Frame								
Agricultural Tracts	Jun	50	41 518	---	---	33 920	33 920	81.7
Non-ag Tracts			41 164	---	---	41 164	41 164	100.0
Quality Control			1 500	---	500	1 000	1 500	100.0
List Frame								
Agricultural Yield	Mar	48	14 870	1 606	10 796	208	12 610	84.8
	Jun	30	6 391	582	3 585	1 150	5 317	83.2
	Jul	26	10 417	770	6 771	1 157	8 698	83.5
	Aug	48	27 257	2 670	18 067	710	21 447	78.7
	Sen	42	14 023	1 332	8 764	1 557	11 653	83.1
	Oct	40	15 231	1 416	9 763	899	12 077	79.3
	Nov	42	12 977	947	7 332	2 362	10 641	82.0
Cattle Inventory	Jan	49	44 057	2 587	26 020	3 871	33 701	76.5
	Jul	48	10 380	397	5 198	1 493	7 499	72.2
Cattle on Feed	All	19	24 358	1 683	8 939	1 594	17 507	71.9

Counts and Response Rates for 2006-07								
Crop Acreage and Grain Stocks (Quarterly Agricultural Survey)	Mar	48	87 034	7 206	45 034	6 716	61 141	70 2
	Jun		87 604	4 649	36 062	20 655	62 334	71 2
	Sen		66 725	3 076	32 033	4 530	48 595	72 8
	Dec		85 594	4 939	43 478	6 477	56 602	66 1
Hog Inventory	Mar	30	9 929	488	3 787	893	7 227	77 8
	Jun		9 957	511	4 804	1 159	7 579	76 1
	Sen		9 985	390	3 422	995	7 676	76 9
	Dec		49	12 108	878	6 383	1 221	9 189
Land Values	Jan	10	2 400	363	1 049	5	1 417	59 0
Rice Stocks	Aug	5	17 356	475	8 727	1 544	11 238	64 7
Sheep and Goat Inventory	Jan	49	23 200	1 809	14 718	1 689	18 957	84 2
	Jul	42	4 600	285	2 860	508	4 008	86 0
Quality Control		50	3 000		2 900		2 900	

* NASS includes “known zeroes” and confirmed out-of-scope operations as useable contacts.

2. **Describe the procedures for the collection of information including:**
- **statistical methodology for stratification and sample selection,**
 - **estimation procedure,**
 - **degree of accuracy needed for the purpose described in the justification,**
 - **unusual problems requiring specialized sampling procedures**

Data for the June Area Survey is obtained by personal contact. Refusals must be accounted for by visual observation or based on similar type operations where data were collected. The Area Screening form is used to screen for farm operators living inside the segment or having any land inside the segment; the Area Version questionnaire is used to record data for agricultural tract operators. The reporting unit for crop acreage is the number of acres located inside the segment. Acreage within a segment is expanded to the State level using the sampling probability assigned to each segment: this is called the “closed segment” expansion. Estimates of livestock inventories and number of farms use the “weighted farm” approach in which each farm is weighted by the ratio of acres inside the segment to the total acres of the entire farm, both inside and outside the segment.

Quality control for the area agricultural survey consists of two parts: (1) review of two segments during the data collection period by the supervisory enumerator for each enumerator under his or her supervision and (2) telephone calls made to at least one additional randomly selected tract operator from each enumerator's assignment list. Telephone contacts are made by either a statistician from the State Field Office or a supervisory enumerator.

Information for the quarterly agricultural acreage surveys (list and FSA frames) is collected via mail, telephone interview, and face-to-face interview. The mix of data collection modes is determined by the State Office according to resources available. Over half of the information is obtained by telephone. Data collection begins on or around the first of the survey month. Reference dates for livestock inventories and grain stocks are the first of the survey month; crop acreage and production are collected for the current crop year. Mail and telephone non-contacts are followed up with face-to-face enumeration. The entire sample is accounted for. As a rule, large operations and

operations requiring special handling (previous survey refusals and inaccessibles, complex operations, etc.) are contacted for a face-to-face interview only.

Agricultural yield surveys are based on subsamples of the March and June agricultural acreage surveys and are conducted monthly during the growing season, May through November. These surveys provide increased accuracy while reducing sample sizes and burdens associated with previous surveys to collect these data. Data collection for the Agricultural Yield Surveys centers around the first of the month, starting about 3 days prior to the date to which the report relates.

The January cattle inventory survey is a multiple frame sample selected in all States except Alaska. It is designed to estimate and publish inventories at the State and U.S. levels. The July cattle inventory survey is a list frame sample selected in all States except Alaska and Hawaii. The July sample is smaller and is used to estimate regional and U.S. inventory only.

The cattle on feed survey program is a monthly census of all known cattle feeding operations with a capacity of 1,000 head or more. It is conducted in 19 States which account for 99 percent of the U.S. cattle on feed inventory in 1,000+ feedlots. Monthly estimates of inventory, placements, marketings, and other disappearance of cattle in 1,000+ feedlots are published for the 13 largest States, for "Other States," and for the U.S.

The quarterly hog survey program for March, June, and September is a list frame sample selected in 30 States for State- and U.S.-level inventory numbers. In December all States except Alaska are surveyed using a multiple frame sample.

The land values and cash rents survey is a multiple frame survey. It comes from the June Agricultural Survey (area) and a supplemental list sample conducted in 10 States. State- and U.S.-level values are published.

The January sheep and goat sample is designed to estimate and publish inventories at the State and U.S. levels. The July sample is smaller and is used to estimate regional and U.S. inventories for sheep only.

The Rice Stocks survey is conducted in August for five States with on-farm rice stocks. There is a mail version and an interview version of the questionnaire.

For survey quality control NASS uses telephone interview monitoring and a telephone quality control worksheet. The telephone check is conducted twice a year for each enumerator to ensure the original contact provided reliable data and that the enumerators are collecting the data accurately and in a professional manner.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

Coefficients of variation on the Agricultural Surveys for major items are 2 to 5 percent at

the national level. This level of accuracy is sufficient to provide reliable estimates while minimizing sample sizes and costs.

4. Describe any tests of procedures or methods to be undertaken.

Quality control for the area agricultural survey consists of two parts: (1) review of two segments during the data collection period by the supervisory enumerator for each enumerator under his or her supervision and (2) telephone calls made to at least one additional randomly selected tract operator from each enumerator's assignment. Telephone contacts are made by either a statistician from the Field Office or a supervisory enumerator.

The telephone quality control worksheet is also used to test methods for the list surveys. The telephone check is conducted twice each year for each enumerator collecting Agricultural Surveys data. The purpose of this is to ensure the original contact provided reliable data and that the enumerators are collecting the data accurately and in a professional manner.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Survey design and methodology are determined by the Statistical Methods Branch, Statistics Division; Branch Chief is Dave Aune, (202)720-4008.

Sample sizes for each State are determined by the Sampling Branch, Census and Survey Division; Branch Chief is William Iwig, (202)720-3895.

Data collection is carried out by NASS State Statistical Offices; Deputy Administrator for Field Operations is Marshall Dantzler, (202)720-8220.

The NASS survey statisticians in Headquarters for the Agricultural Surveys are in the Commodity Surveys Section of the Survey Administration Branch, Census and Survey Division; Branch Chief is Norman Bennett, (202)720-2248. They are responsible for coordination of sampling, questionnaires, data collection, training, Interviewers Manual, Survey Administration Manual, data processing, and other Field Office support.

The NASS commodity statisticians in Headquarters for the Agricultural Surveys are in the Crops Branch and Livestock Branch of Statistics Division; Branch Chiefs are Jeff Geuder (202)720-2127, and Dan Kerestes, (202)720-3570, respectively. Commodity statisticians are responsible for the Estimation Manual, national and regional summaries, analysis, presentation to the Agricultural Statistics Board for final estimates, and publication.