

Supporting Statement – Part B

**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 such as a farm’s soybean and corn acreage, to determine the probability of selection. Sub-populations of row crops, small grains, and specialty 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.

In the previous approval, NASS tested a third sampling frame which was based on the Farm Service Agency's (FSA) data. The test was conducted in Nebraska. Following the completion of this test, NASS determined that the use of this data did not provide any increase in the accuracy of the data collected, nor did it provide any cost savings. As a result NASS has discontinued this practice and has returned to the use of the List and Area Frames for all surveys covered by this docket.

### Ag Surveys 2009 - OMB 0535-0213

Survey	Survey Month	Sample Size	Freq.	Total Contacts	Total Responses	Response Rates
<b>Area Frame</b>						
Agricultural Tracts <u>3/</u>	June	41,820	1	41,820	34,305	82.0%
Non-agricultural Tracts		41,360	1	41,360	41,360	100.0%
Area Quality Control		1,313	1	1,313	1,298	98.9%
Area Questionnaire Testing <u>1/</u>	NA	NA	NA	NA	NA	NA
<b>List Frame</b>						
Ag Yield	May	14,524	1	14,524	12,250	84.3%
	Jun	6,062	1	6,062	4,802	79.2%
	Jul	9,501	1	9,501	7,664	80.7%
	Aug	27,868	1	27,868	21,513	77.2%
	Sep	13,432	1	13,432	10,766	80.2%
	Oct	15,249	1	15,249	11,849	77.7%
	Nov	11,609	1	11,609	9,426	81.2%
Cattle Inventory	Jan	48,846	1	48,846	38,173	78.1%
	Jul	10,438	1	10,438	7,844	75.1%
Cattle on Feed (1,987 / mo.)	All	1,987	12	23,844	20,267	85.0%
Crop Acreage and Grain Stocks (Quarterly Agricultural Surveys)	Mar	79,817	1	79,817	59,159	74.1%
	Jun	71,213	1	71,213	49,813	69.9%
	Sep	63,993	1	63,993	48,589	75.9%
	Dec	81,351	1	81,351	56,991	70.1%
Crop and Livestock Loss Survey (New) <u>2/</u>	NA	NA	NA	NA	NA	NA
Hog Inventory	Mar	10,438	1	10,438	7,844	75.1%
	Jun	7,958	1	7,958	6,436	80.9%
	Sep	7,947	1	7,947	6,530	82.2%
	Dec	11,702	1	11,702	9,078	77.6%
Land Values	Jan	2,420	1	2,420	1,632	67.4%
Rice Stocks (on farm)	Aug	1,739	1	1,739	1,369	78.7%
Sheep and Goat Survey	Jan	23,003	1	23,003	19,081	83.0%
	Jul	4,657	1	4,657	3,821	82.0%
List Quality Control	Jun	2,850	1	2,850	2,780	97.5%
List Questionnaire Testing <u>1/</u>	NA	NA	NA	NA	NA	NA
Totals				634,954	494,640	77.9%

1/ The Area and List questionnaire testing was not conducted in 2009. Burden request remains in place for potential need for testing in the future.

2/ The loss survey is a newly proposed survey to allow for potential disasters that may need to be accounted for to accommodate natural disasters (flooding, disasters, freezes, etc.) or late harvests that could impact current estimates.

3/ Agricultural Tracts: includes allowance for nominal pre-screening when indicated.

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 was 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 frame) is collected via mail, internet, 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 16 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 11 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 survey is conducted in 10 States for agricultural land values and all States except for Alaska for cash rents (0535-0002). 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 six States with on-farm rice stocks. There is a mail, internet, and 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.

NASS will be incorporating more publicity materials in future years with each survey. Operators who are selected for each survey will be encouraged to complete the surveys using the internet at their convenience. Hopefully, this will result in an increased response rate and reduced data collection 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)720-3638.

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. The survey statisticians are responsible for coordination of sampling, questionnaires, data collection, training, Interviewer's Manuals, Survey Administration Manuals, 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 Lance Honig (crops) (202)720-2127, and Dan Kerestes (livestock) (202)720-6146. Commodity statisticians are responsible for the Estimation Manuals, national and regional summaries, analysis, presentation to the Agricultural Statistics Board for final estimates, and publication.

October, 2010