

SUPPORTING STATEMENT

Generic Testing – 2017 Census of Agriculture

OMB No. 0535-0248

This mini-supporting statement is being submitted to OMB to define the need for conducting the 2017 Census of Agriculture Condensed Form Testing.

A. JUSTIFICATION

1. Circumstances making collection of information necessary.

Every 5 years, NASS conducts the Census of Agriculture with farms of all sizes across the entire US. The questionnaire used in 2012 was 24 pages and may have appeared burdensome, especially to small farms. NASS has entered into a cooperator agreement with Washington State University (WSU) to develop a condensed paper version of the 2017 Census of Agriculture to be used for some portion of the sample to reduce respondent burden. Testing is necessary in order to ensure that the shortened paper form obtains the best possible data when used with the entire farm population during the 2017 Census of Agriculture.

The Census of Agriculture questionnaire used for the majority of the farm population (the “long” form) will be approximately 24-28 pages and will be similar to what has been used in the past (but will incorporate some content changes, as well as possibly some design changes). The “short” questionnaire(s) will be used for special populations with the aim of increasing response by providing them with a form that is easier to fill out.

NASS used a “short” questionnaire in 2007. In that data collection, the “long” and “short” versions collected the same content, but were formatted differently. The current project with Washington State University (WSU) was initiated to explore alternatives to the “short” questionnaire used in 2007. To that end, WSU was asked for their input on redesigning the 2007 questionnaire, but to also offer an alternative — an even shorter questionnaire. This “shorter” version differs from the “short” questionnaire used in the past since it eliminates some content. WSU worked with NASS Methodology Division and Census and Survey Division staff to determine content that could be eliminated without substantially impacting the overall Census dataset. The elimination of content was possible because of the special populations for which the “short” form will be used. Where content is removed, a screener question is maintained to followup if necessary.

2. How, by whom, and for what purpose information is to be used.

The information gathered through this testing will be used by our Census Data Collection Testing Team and the Census Content Team to determine the best

content, format, and layout for the paper version of the questionnaire. Approved changes will be part of future testing that will be conducted in December 2015 and January 2016 (OMB No. 0535-0243).

3. Use of improved information technology.

The testing will be done via mail.

4. Efforts to identify duplication.

The NASS list frame is constantly updated to eliminate duplication, and will be used to create the universe to draw a test sample, so duplication should be minimal.

5. Methods to minimize burden of small businesses.

The condensed questionnaire being tested will target mainly small farms. We hope that the test will allow us to reduce overall burden for the 2017 Census of Agriculture by making the form easier and faster to fill out. We use the Small Business Administration definition of \$500,000 and below in potential sales for a small farm. In creating the universe for the test, we removed farm operations based on several criteria, based on what we would likely do during the 2017 Census. Some operations were removed because we would not likely use a short form for them during production Census data collection. These records include operators who operate more than one farm, partners, operations that require or have requested special handling, and the largest operations as measured by our list frame Land in Farms and Total Value of Production values by state. Using these as exclusion criteria excludes the largest operations.

The short form is meant to target farms that have only a few traditional commodities. Therefore, we also **removed** operations from the universe based on criteria related to the less detailed questionnaire design of the 'shorter' questionnaire version such as farms with specialty commodities, farms with a large number of commodities, and certain types of farms (such as nurseries, aquaculture, and Christmas tree farms). These criteria don't necessarily remove any particular size of operation, but remove specialty operations from the universe.

6. Consequence if information collection were less frequent.

This is a one-time data collection test. Results will be used for future testing and implementation for the Census of Agriculture.

7. Special circumstances.

There are no special circumstances associated with this information collection.

8. Federal register notice and consultation with outside persons.

Not applicable.

9. Payments or gifts to respondents.

There will be no payments or gifts to respondents.

10. Confidentiality provided to respondents.

The same confidentiality that is applied to the Census of Agriculture will be provided to respondents. All WSU personnel who work with data on the project will sign the ADM-043 NASS Certification and Restrictions on the Use of Unpublished Data. All labeling and mailings will be done by NASS. Identifying information including names, addresses, and phone numbers will not be shared with WSU. The Census of Agriculture test is voluntary.

11. Questions of a sensitive nature.

The questions on race and ethnicity on the report form comply with the OMB Standards for the Classification of Federal Data on Race and Ethnicity. The question on total household income of the principal operator is a collapse of the strata breaks used on the OMB approved Agriculture Resource Management Survey, OMB Control #0535-0218.

12. Hour burden and annualized costs to respondents.

The test will consist of mailing a pre-survey letter to the selected sample followed by mailing the shortened questionnaire along with instructions on how to access the internet. This will be followed by a post card reminder and a second mailing of the questionnaire to non-respondents. The respondents will be asked to complete the questionnaire by either return mail or by internet. The amount of data being collected will be similar to the longer version of the questionnaire used in 2012. However, the questions will be displayed differently, and therefore, possibly answered differently. Approximately 6,000 operations will be contacted by mail. NASS is expecting a 25% response rate from this mailout strategy.

Survey	Estimated Sample Size	Estimated Responses			Non-response			Total Burden Hours
		Resp. Count	Min./ Resp.	Burden Hours	Nonresp Count	Min./ Nonr.	Burden Hours	
2017 Census of Agriculture Testing								
Pre-Survey Mailing	6,000	3,600	5	300	2,400	2	80	380
First Mailing of Quest.	6,000	900	20	300	5,100	2	170	470
Post Card Reminder	5,100	225	20	75	4,875	2	163	238
Second Mailing of Quest.	4,875	390	20	130	4,485	2	150	280
Total	6,000	1,515		805	16,860		562	1,367

Cost to the public for completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. Average annual reporting time of 1,367 hours, are multiplied by \$25 per hour for a total annual cost to the public of \$34,175. NASS regularly checks the Bureau of Labor Statistics' [Occupational Employment Statistics](#). Mean wage rates for bookkeepers, farm managers, and farm supervisors are averaged to obtain the wage for the burden cost. The May, 2013, mean wage for bookkeepers is \$17.91. The mean wage for farm managers is \$35.20. The mean wage for farm supervisors is \$22.09. The mean wage of the three is \$25.07.

13. Total annual cost burden to respondents.

There are no capital/start-up or ongoing operation/maintenance costs associated with this information collection.

14. Annualized costs to federal government.

Costs for developing the forms, and conducting the test interviews are estimated at \$186,000. This will cover expenses for the contracted work as well as staff time for NASS personnel and minimal out-of-pocket costs for labels.

15. Reasons for changes in burden.

This mini-supporting statement addresses the use of burden to conduct testing for the 2017 Census of Agriculture.

16. Tabulation, analysis, and publication plans.

No data will be published from these tests. Data are for internal use only.

17. Request for approval of non-display of expiration date.

There is no request for approval of non-display of the expiration date.

18. Exceptions to certification statement.

There are no exceptions to the certification statement.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS:

1. Respondents universe, sampling and response rate.

NASS will select 6,000 operations nationwide to be divided into two groups. The operations will likely be small operations as identified on our list frame. With a mailout only approach on a voluntary survey, we expect a 25% response rate.

The sample size was determined using the following methodology. A two-sided univariate hypothesis test ($H_0 : p_1 = p_2$ vs. $H_1: p_1 \neq p_2$, for sample size $n_1 = n_2 = n$) was chosen to compute treatment group sample sizes.

$$n_{per\ group} = \frac{(\sigma_1^2 + \sigma_2^2)(z_{1-\alpha/2} + z_{1-\beta})^2}{\Delta^2}$$

Where:

n_i : treatment group sample size.

i : 1,2.

p_i : response rate.

σ_i^2 : variance of the response rate.

σ_i^2 : $p_i*(1-p_i)$.

α : Type I error.

β : Type II error.

Δ : Margin of error.

A binomial approximation of the normal variance (using previous Census of Agriculture content test data and corresponding response rate of 0.25) was used to calculate a common variance ($\sigma_1^2 = \sigma_2^2 = \sigma^2$). Using α , power ($1 - \beta$), and Δ equal to 0.05, 0.95 and 0.04, respectively, resulted in a sample size of 3,046 per group. The number per treatment group was rounded to 3,000. For this sample size, a difference can be detected between the response rates of the two groups with 95% power which is sufficient for our needs.

2. Procedures for the collection of information.

With the exception of the sampling of operations and labeling and mailout of envelopes, WSU will conduct the data collection and analysis for the test. They will use a mail only methodology, including an advance letter, two questionnaire mailings, and a post card reminder.

The Internet will not be used for this test. The scope of the cooperative agreement included the production and mailout of paper forms. The cooperator initially thought they could provide an Internet option, but as the project continued, they decided it was not feasible. An Internet version will be tested under the full Census of Agriculture docket which will be forthcoming.

3. Ways to maximize response, information collected adequate for intended uses.

Four mailings will be used to achieve at least a 25% response rate. This rate will be sufficient to detect differences between the treatment group(s) and the control group as well as to make generalized statements about those differences.

When tested in 2005 using the same universe for both samples, the response rates for the two questionnaires were virtually identical (54.5% for the long form and 53.1% for the short form). When used in production, the universe for the two forms was different (the short form was not sent to large farms) and a more comprehensive data collection methodology was used including more mailings, telephone followup, and some face to face followup interviews. The response rates for the production Census of Agriculture were 83.2% for the short form and a range of 72.5 – 78.5% for the regional long forms.

4. Test of procedures or methods.

The focus of this mailout is the data collection instruments.

We will look at several data items, including response rates, to determine which form might be used. We do not have a target difference in response rates that will determine whether to adopt the shorter version, but will look at response rates along with other data and any evidence of decreased burden associated with a shorter form (such as lower item nonresponse).

For analysis, no sampling weight will be applied. Nonresponse weights will be used to account for nonresponse in each group.

Comparisons planned by group:

- Response rates
- Number of total operations identified as farms
- Number of operations by size (identified by TVP)
- Number of operations by type
- Item nonresponse rates for certain variables (such as total land, expenditures)
- Number of commodities reported
- Number of farms reported with commodities we attempted to remove from the universe (such as bees, Christmas trees, maple syrup, etc.)
- Demographics. For example: Average age of operator, number of minority operators, number of women operators, education level

Each of these will be compared to each other as well as to the counts generated from the sample.

5. Individuals consulted on statistical aspects of survey.

WSU will conduct the development work, as well as almost all of the testing data collection. Danna Moore, Senior Research Fellow at the Social & Economic Sciences Research Center at WSU is the lead contact.

Dan Beckler, Branch Chief of the Standards and Survey Development Methodology Branch (202)720- 8858 will be the lead contact on the project, in consultation with Chris Messer, Branch Chief of the Census Planning Branch (202)690-8747.

Others at WSU and NASS may be consulted as the testing plans are finalized.

February 2015