

## 1 Supporting Statement – Part B

### AGRICULTURAL PRICES

OMB No. 0535-0003

#### **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.**

Universe lists for the prices received surveys are made up of all known firms that purchase agricultural commodities directly from farmers. The prices received surveys typically are built with a better knowledge of the universe. All firms from the list are not surveyed. Collecting most of the data from firms, instead of farmers, greatly reduces respondent burden. The farm-to-farm sales marketing channel is not currently surveyed except for some of the surveys that collect hay prices. Farm-to-farm sales make up a small proportion of total sales for other commodities and that portion of total sales is valued based on the market channels that are surveyed.

The NASS prices paid surveys sample consists of firms selected from a target population of establishments that sell selected input items to farmers and ranchers. State field offices add retail outlets or establishments to replace the dropped sampling units to maintain the state's target sample size and universe. A complete list of the agribusiness population is unknown. There are no target coefficients of variation (CV) for the sample process. Additionally, sample weights are not generated from the sampling process. State level estimates from the prices paid surveys are averages of the data reported from usable reports. State estimates are weighted based on primarily data from the annual Agricultural Farm Resource and Management Survey (ARMS 0535-0218). This sample is rotated annually, dropping approximately 20 percent of the old sample and adding a new replicate of 20 percent from the target population. Rotation of the sample reduces respondent fatigue.

Updating of the prices received and prices paid universe is done annually. An important part of this process is updating the prices received control data on the list frame for capacity, amount purchased, and other appropriate criteria to stratify the list.

The overall response rates for prices surveys are shown below. There has been improvement in the overall response rates from the previous submission. NASS is looking into standardizing and centralizing the data collection for more of these surveys in the upcoming years. Ideally, this will help to continue an improvement in response rates while helping to lower costs and respondent burden. It is difficult to sample for hay prices, since the growers of hay, may not have sales every year. Some years farmers may use all hay produced on their farms to feed their own livestock, so NASS has to oversample hay growers in order to get an ample number of respondents with positive price data.

| Prices Paid and Prices Received Response Rates - 2012 |               |       |                |                 |               |
|---|---------------|-------|----------------|-----------------|---------------|
| Survey  | Sample Size   | Freq. | Total Contacts | Total Responses | Response Rate |
| <b>Prices Received</b>                                |               |       |                |                 |               |
| <b>Crops</b>  |               |       |                |                 |               |
| Cotton, Monthly                                       | 103           | 12    | 1,236          | 1,103           | 89.2%         |
| Grain and Beans                                       | 1,723         | 12    | 20,676         | 16,683          | 80.7%         |
| Peanuts   | 61            | 52    | 3,172          | 2,633           | 83.0%         |
| Rice  | 89            | 12    | 1,068          | 995             | 93.2%         |
| Operation profiles <sup>1/</sup>                      | 1,976         | 1     | 1,976          | 1,605           | 81.2%         |
| Sweet Corn  | 504           | 1     | 504            | 289             | 57.3%         |
| Sugar   | 15            | 2     | 30             | 29              | 96.7%         |
| <b>Hay Prices</b>                                     |               |       |                |                 |               |
| Hay, Monthly, Dealers                                 | 71            | 12    | 852            | 656             | 77.0%         |
| Hay, Monthly Price Survey (growers)                   | 1,904         | 12    | 22,848         | 16,679          | 73.0%         |
| Hay, Biennial Prod and Sales                          | 32,297        | 1     | 32,297         | 23,092          | 71.5%         |
| Hay, Quarterly Milk Prod. Quest. <sup>2</sup>         | 11,392        | 4     | 45,568         | 31,670          | 69.5%         |
| Potatoes  |               |       |                |                 | Discontinued  |
| Potatoes - Monthly <sup>2/</sup>                      |               |       |                |                 | Discontinued  |
| Potatoes - Annual <sup>2/</sup>                       |               |       |                |                 | Discontinued  |
| Tobacco <sup>2/</sup>                                 |               |       |                |                 | Discontinued  |
| <b>Livestock and Livestock Products</b>               |               |       |                |                 |               |
| Beef Cattle Prices                                    | 15            | 12    | 180            | 180             | 100.0%        |
| Hog Prices  | 7             | 12    | 84             | 84              | 100.0%        |
| Sheep and Lamb Prices - US                            |               |       |                |                 | Discontinued  |
| Sheep and Lamb Prices - New England                   |               |       |                |                 | Discontinued  |
| Milk Price Inquiry - Monthly                          | 90            | 12    | 1,080          | 936             | 86.7%         |
| Milk Price Inquiry - Annual                           | 71            | 1     | 71             | 53              | 74.6%         |
| Livestock and Crops - AK                              | 130           | 1     | 130            | 107             | 82.3%         |
| <b>Subtotal</b>                                       | <b>50,448</b> |       | <b>131,772</b> | <b>96,794</b>   | <b>73.5%</b>  |
| <b>Prices Paid</b>                                    |               |       |                |                 |               |
| Farm Machinery  | 2,083         | 1     | 2,083          | 1,700           | 81.6%         |
| Feed  | 1,695         | 1     | 1,695          | 1,174           | 69.3%         |
| Fertilizer and Ag Chem                                | 2,424         | 1     | 2,424          | 1,752           | 72.3%         |
| Fuels   | 2,147         | 1     | 2,147          | 1,852           | 86.3%         |
| Seed  | 1,568         | 1     | 1,568          | 1,277           | 81.4%         |
| Screener  | 4,000         | 1     | 4,000          | 2,600           | 65.0%         |
| <b>Subtotal</b>                                       | <b>13,917</b> |       | <b>13,917</b>  | <b>10,355</b>   | <b>74.4%</b>  |
| <b>Total</b>  | <b>64,365</b> |       | <b>145,689</b> | <b>107,149</b>  | <b>73.5%</b>  |

<sup>1/</sup> Operation profiles are obtained at beginning of each sample year for cotton, grains, pulse crops, oilseeds, peanuts, and rice samples.

<sup>2/</sup> States add hay price questions to their monthly milk questionnaires during peak hay purchasing months. The Milk Production questionnaire (OMB No. 0535-0020) has a total burden of 15 minutes on the questionnaire (6 minutes for milk questions, 9 minutes for hay prices). This

## 2. Describe the procedures for the collection of information.

- 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**

The first time a prices received respondent is included in the sample, the respondent is contacted in person by Field Office staff or professional interviewer. The NASS price program is explained to the respondent; for cotton, grains, pulse crops, oil seeds, peanuts, and rice an operation profile form (see IC list for this and others mentioned below) is completed at this time. This profile verifies that each firm is purchasing the commodities of interest according to technical specifications, such as standard moisture content, purchase directly from farmers, and exclusion of storage costs. Follow-up visits are made as necessary to answer any questions the respondents may have. After the initial interview, questionnaires are generally mailed to the respondent or data are collected by telephone or EDR. Most Field Offices (FOs) use telephone follow-up of mail non-response. Field Offices are also encouraged to mail an advance letter at the beginning of each cycle. The instructions for surveys available on the Web accompany the questionnaire and are included in the minutes-per-response allowance.

As part of the prices received surveys, information is collected on the quantity purchased and comparable dollars paid to the farmer for the entire previous month and the average price paid to farmers around the 15th of the current month. The quantity purchased during the previous entire month includes all purchases made on a daily basis "over the scale" as well as purchases made under contract for which payment was made during the month. The dollars paid for the comparable quantities reflect all premiums and discounts for the commodity at the "point of first sale."

For some commodities, price survey questions are included on questionnaires in other information collections for the ease of securing information. For example, the hay price item is included on some cattle on feed questionnaires (OMB No. 0535-0213) and the monthly milk production survey (OMB No. 0535-0020). This has the advantage of sending the respondent only one questionnaire instead of two, thus reducing cost and respondent burden. The burden minutes reported on the monthly milk production questionnaire is split between the Milk docket and the prices docket.

The prices paid surveys use mail, phone, EDR and personal interview as its modes of data collection. Field Offices are encouraged to use the personal interview to increase response rates as well as reduce the burden on the respondent by assisting the respondent in the completion of the form(s). The farm machinery, fertilizer and agricultural chemicals, and the seed questionnaires are the versions that headquarters is encouraging Field Offices to conduct

personal interviews for non-response to mail questionnaires. NASS is continually evaluating how we can best utilize administrative data for the price index farmers pay for inputs. NASS met with BLS on May 15, 2013. The meeting was held to discuss how the BLS Producer Price Indexes and retail margin indexes could potentially relate to the NASS prices paid by farmers, which is a retail price that farmers pay for products. The focus on the discussion was farm machinery, because other NASS prices paid groups are more complex. BLS does not have a method to combine PPI and retail margin indexes to estimate a retail price index. Additionally, obtaining only prices paid by farmers is also problematic for smaller farm machinery. We have used EIA data for adjustments in fuel price outside of the annual survey, and the annual survey has a reference period and coincides with the annual survey of all farmer inputs, which is the annual retail baseline of survey data for the program.

**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.**

In April 2010, NASS headquarters began providing Field Offices with a review and listing of potential updates to the master List Frame for firms or agribusinesses that interact (buy or sell products) with farmers or ranchers. The lists contain the names and addresses of operations that sell feed, fertilizer, farm machinery, etc. The Field Offices will use the screening form to determine if these operations sell to farmers or if they sell predominantly to pet owners, home gardeners, or landscapers. By removing the operations that do not sell to farmers we are able to increase response rates. This screening survey is included in this docket, with a simple mail questionnaire to approximately 20,000 firms.

The first time a prices received or prices paid respondent is included in the sample, the respondent is contacted in person and the NASS price program is explained. Follow-up visits are made as necessary to answer any questions the respondents may have. After the initial interview, questionnaires are mailed to the respondent unless a different arrangement is requested. There is a full telephone follow-up of mail non-response. Recurring non-respondents may be personally visited by Field Office managers to encourage cooperation.

NASS has established targets of precision for the prices received program. Survey results are assessed for eight different commodities in two of their respective peak marketing months. The commodities are No. 2 yellow corn, soybeans, upland cotton, all wheat, barley, oats, sorghum, and all sunflowers. Standards are given in terms of the coefficient of variation and run from 0.5 percent for the most common crops (corn and soybeans) to 2.5 percent for smaller volume crops (barley and oats). In any given year, NASS survey results meet prescribed standards 14 of 16 times.

Point estimates for the prices paid program are average prices paid by farmers for inputs. No expanded totals are computed. Results of the survey are compared to price indices for all sectors from the Bureau of Labor Statistics and the Energy Information Agency.

The 2012 value of production for hay totaled \$18.6 billion. Data collection for hay prices requires special procedures because of the high percentage of sales between farmers, the relative infrequency of hay purchases, and the lack of organized marketing channels. A biennial survey is conducted to determine the difference between the price level of hay sold to dealers and for all hay sold to farmers. Monthly prices reported by hay dealers are adjusted by this difference.

Estimates from the prices received are used to administer programs involving budget outlays. Consequently, this program is periodically audited by the USDA Office of the Inspector General.

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

No testing is done.

**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), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

In 2011, the Price Program Methodology was documented in detail. As part of the program review, NASS consulted many statistical organizations on price and price index methodology, including the Bureau of Labor Statistics, the Department of Commerce, the Bureau of Economic Analysis, and price index methodologies in Canada, Australia, the European Union, and the Food and Agricultural Organization (FAO) of the United Nations.

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 Data Collection Branch, Census and Survey Division; Branch Chief is Scott Cox, (202)720-6201.

Data collection is carried out by NASS Field Offices; Eastern Field Operation's Director is Norman Bennett, (202) 720-3638 and the Western Field Operation's Director is Kevin Barnes (202) 720-8220.

The NASS Survey Administrative Statisticians in Headquarters for the Agricultural Prices Paid Surveys is Tenopra Shepphard, and for the some of the Prices Received Surveys is Tony Dahlman, both are in the Environmental and Economic Surveys Section of the Survey Administration Branch, Census and Survey Division; Branch Chief is Barbara Rater, (202) 720-3895. The Survey Administrators 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 Prices Surveys are Daryl Brinkman and Vincent Davis in the Economics Section of the Environmental, Economics, and Demographics Branch of Statistics Division; Branch Chief is Troy Joshua (202)720-6146. Commodity statisticians are responsible for national and regional summaries, analysis, presentation to the Agricultural Statistics Board for final estimates, publication, and the Estimation Manual.

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