

Supporting Statement

**DISTILLERS CO-PRODUCTS SURVEY**

OMB No. 0535-0247

**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.**

The sampling population for the 2011 Distillers Grains Survey consists of all active farm records in the 48 contiguous States listed on the NASS List Frame, with minimum inventory levels for any of four livestock types or 6 poultry types. The minimum inventory numbers used are beef cattle 10 head, cattle on feed 50 head, dairy cattle 20 head, hogs 25 head, and 1,000 for all poultry types. An approximate 59,000 operations will be selected, using a multivariate probability proportional to size (MPPS) sample design.

2011 Distiller's Co-Products Survey		
Commodity	Minnimum Cut Off Point	Estimated Sample Size
Turkeys	1,000	440
Broilers	1,000	800
Table Eggs	1,000	850
Hatchery (all)	1,000	260
Pullets	1,000	50
Hogs	25	11,200
Dairy	20	10,400
Cattle on Feed	50	7,000
Beef Cattle	10	28,000
Total		59,000

Total sample sizes in the table are approximations. The target sample sizes were derived based on expected response rates and positive usable rates from the previous 2006 survey.

The response rate will be maximized by using an initial mailing to the entire sample, followed with a second mailing to non-respondents, and then either a telephone or face to face interview with the remaining non-respondents.

In 2007 the Distillers Grains Survey was conducted in 12 States (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) with an overall response rate of 75.8%.

Response Rates for Distiller's Grains Survey 2006						
Survey		Sample Size	Freq.	Total Contacts	Total Responses	Response Rates
Distiller's Grain Survey	Annual	9,400	1	9,400	7,129	75.8%

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

Statistical methodology for sample design and sample selection

The sample design will be an MPPS design which is a nonstratified design. Separate probabilities of selection will be calculated for each commodity based on probability proportional to size (PPS) sampling methodology. Then for each operation in the population one probability of selection will be calculated by taking the maximum probability of selection computed across all the commodities. This probability of selection will be used for sample selection. Individual operations can and will be interviewed for all commodities of interest.

In order to facilitate non-response adjustment under this MPPS design the population will be stratified using a prioritized stratification design. These strata will comprise the nonresponse strata for nonresponse adjustment. The weights will also be calibrated back to the population totals.

*Estimation procedures*

By using the techniques mentioned briefly above at the end of question B.1, we hope to maximize response on the survey but we know we will not be able to achieve 100 percent response. Our follow-up efforts should ensure that the non-response is random, allowing us to apply statistical techniques (i.e., the re-weighted estimator), to systematically compensate for the remaining non-response. This estimator increases the original sampling weight by the ratio of all reports to usable reports (reports where the data items of interest are provided). The re-weighted estimator is especially useful for ratios---which will appear extensively in our output---because it treats the numerator and

denominator similarly, thereby increasing the likelihood that any biases that are present in either number will at least partially cancel out each other. This estimator adjusts for non-response within each non-response stratum individually in order to make use of the similarity of the operations within strata. Those similarities strengthen the estimator's reliability in expanding the data to reflect accurately the population data and to help preserve the distribution of the population.

**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.**

The estimated response rate for the Distillers Grains Survey is 80 percent. The following techniques will be used:

- Two questionnaire mailings
- Publicity materials and EDR instructions mailed out with questionnaires,
- Non-response telephone and field enumerator follow-ups.

To understand more about the non-respondents to the survey, response rates, and survey data, the data will be analyzed by subgroups. Weighted unit response rates will be calculated by strata or size group (using strata or list frame control data). This will identify size groups that may be under-represented in the final data set. If the strata (or size group) response rate analysis indicates some size groups are under-represented in the final data set, the next step would be to determine if those size groups are different from the other groups for key survey variables by comparing weighted averages for key survey variables by strata.

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

The proposed questionnaire was evaluated after testing with 30 respondents. Testing was accounted for under the Generic Testing docket (0535-0248). Results of the test will be used to refine the data collection instrument in order to reduce respondent burden and to improve the quality and usefulness of the information.

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.**

NASS Headquarters

Chris Messer, Program Administration Branch Chief...202-690-8747  
Dave Aune, Statistical Methods Branch Chief.....202-720-4008  
Bill Iwig, Sampling Branch Chief.....202-720-3895  
Dan Kerestes, Livestock Branch Chief.....202-720-3570

June 2011