COLONY LOSS SURVEY

OMB No. 0535-NEW

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.

Expanded totals and standard deviation parameters from the 2013 Bee and Honey Survey (OMB # 0535-0153) were used to estimate the sample sizes for the 2015 Quarterly Colony Loss Survey (operations with at least 5 bee colonies) and the 2015 Annual Bee Loss Survey (operations with less than 5 bee colonies).

$$n_h = \frac{N_h s_h^2}{\dfrac{(f_h T_h)^2}{N_h} + s_h^2}$$

Where:

h is the stratum,
n is the sample size for stratum h,
N_h is the stratum population,
s_h is the stratum standard deviation,
f_h is the stratum coefficient of variation, and
T_h is the stratum total.

Both sample size estimates were adjusted upward by an adjustment value (~60%) based on NASS's historic response and usable rates. A coefficient of variation value of five percent or less was used for strata comprised of relatively large operations (large strata). For all other strata (small strata), coefficient of variation values of at least 10% was used.

The population for the Quarterly Colony Loss Survey will be comprised of the useable records from the 2014 Annual Bee and Honey Survey. Based on the 2013 Bee and Honey Annual Survey it is estimated there will be 1,200 useable

records from the larger strata in the 2014 Bee and Honey Annual Survey. Using parameters from the 2013 Bee and Honey Annual Survey, the results suggest that the sample size for all other strata should be 1,800.   In total, the sample size was 3,000 (rounded to 3,300 after adjustments).

The NASS List Frame population of operations with less than 5 honey bee colonies will be used to create the Annual Bee Loss Survey sample. Using parameters from the smallest stratum in the 2013 Bee and Honey Survey, the results suggest that the sample size should be approximately 14,000 (rounded to 20,000 after adjustments).

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**

The sample design associated with the Quarterly Colony Loss Survey and the Annual Colony Loss Survey is a basic stratified sample design, where the strata are based on the number of colonies per operation. The surveys are conducted in all States. Most States have 300 or fewer operations and all eligible operations have a chance at being included in either the quarterly or annual sample.

Questionnaires are mailed at the end of each reference period. Beekeepers not responding by mail or internet will be attempted by telephone or in person. The telephone enumerators conduct the interviews using computer assisted telephone interviews (BLAISE). In-person contacts are used if requested by the operator or if there were reporting difficulties such as with cross-State producers. Headquarters acts as the clearing house for multi-State data between Field Offices.

All states execute a survey summary prepared in Headquarters. Review of summary results and preparation of estimates by Field Offices are completed and sent to Headquarters following each quarterly survey (January, April, July, and October.) The summary for the Annual states is run at the same time as the January Quarterly. Survey estimates are based on direct expansions and ratio estimates from matched reports to the previous year's survey. The census of agriculture provides a benchmark every five years to evaluate survey performance.

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.

Through the Annual Honey Production Survey (0535-0153) NASS has established long-term relationships with the larger honey producing operations and the respondents are familiar with NASS and our commitment to accuracy and to the confidentiality of the data they report. Some operators make special arrangements with NASS Field Offices to report by phone or personal interview. Telephone follow-up will be conducted for the non-respondents. NASS employs a staff of experienced phone enumerators in five calling centers. In the past all Bee and Honey calling has been done by two of these calling centers. Calling has been performed by a core set of enumerators who have been provided with commodity specific training. Surveys that are conducted by phone are monitored by supervisors for quality control. Non-respondents will be attempted by phone up to ten times.

After data collection closes, non-respondents in strata labeled as "EO" preselects will be manually imputed and the remaining strata reweighted. As a general rule, NASS designs surveys to produce coefficients of variations (CVs) under five for the states with a large number of honey bee colonies and under ten for the smaller producing states. If there are states with disclosure issues the data will be collapsed and published as "Other States". With non-response follow-ups, the resulting estimates should provide reliable and useable measures of this industry.

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

NASS plans to do nine or less cognitive interviews prior to the beginning of data collection. With this being a new data collection effort, NASS will do internal testing of the edit and summary programs before any publications will be generated to insure accuracy of data.

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.

The sample size for each State is determined by the Sampling and Frame Development Section, Methodology Division; Section Head is Peter Quan, (202)720-5269.

Data collection is carried out by NASS Field Offices; Field Operation's Director is Kevin Barnes (202) 720-8220.

The NASS commodity statistician in Headquarters for the bee and honey survey is Joshua O'Rear, (202)690-3676, in the Poultry and Specialty Commodities

Section of the Livestock Branch, Statistics Division. The Livestock Branch Chief is Dan Kerestes (202)720-3570. Commodity statisticians are responsible for national and regional summaries, analysis, presentations to the Agricultural Statistics Board for final estimates, publication, and the Estimation Manual.

The NASS Survey Administrative Statistician in Headquarters for the Colony Loss Survey is Jeff Lemmons (202)720-8092 in the Commodity Surveys Section of the Survey Administration Branch, Census and Survey Division; Branch Chief is Barbara Rater, (202) 720-3895. The Survey Administrator is responsible for coordination of sampling, questionnaires, data collection, training, Interviewers Manual, Survey Administration Manual, data processing, and other Field Office support.

The national summary is the responsibility of the Summary, Estimation and Disclosure Methodology Branch, Methodology Division; Branch Chief is Jeff Bailey (202)720-4008.

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