

Supporting Statement - Part B

**Nursery and Christmas Tree Production Survey
and
Nursery and Floriculture Chemical Use Survey**

OMB No. 0535-0244

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 Nursery and Floriculture Chemical Use Survey universe consists of all operations with horticultural crop sales of \$10,000 or more on the 2007 Census of Agriculture along with any operation that came into business since 2007. Horticultural crops include bedding plants, potted flowering plants, cut flowers, cut cultivated greens, herbaceous perennials, foliage plants, trees, shrubs, ground covers, vines, fruit and nut trees, sod, dry bulbs, greenhouse produced vegetables, commercial vegetable transplants, vegetable and flower seeds, Christmas trees, short term woody crops, aquatic plants, unfinished or prefinished plants, propagation materials, and other nursery and greenhouse plants.

The six States (CA, FL, MI, OR, PA and TX) that were selected for the Nursery and Floriculture Chemical Use Survey were chosen based on diversity of plants, total value of sales, climate, growing conditions, geographic location, etc. NASS chose the six largest States that would best represent the diversity of plant materials in this industry.

| Average Response Rates | | | | | |
|---|------------------|------------------------------|-----------------|--------------------|-------------------------|
| Survey | Data Year | Year Survey Conducted | Universe | Sample Size | Percent Response |
| Nursery and Floriculture Chemical Use | 2006 | 2007 | 27,500 | 3,703 | 72.7% |
| Oregon Nursery Production Survey | 2007 | 2008 | 1,948 | 777 | 82.1% |
| Oregon Christmas Tree Production Survey | 2007 | 2008 | 1,863 | 926 | 93.0% |

The Nursery and Christmas Tree Production Survey which was included in the previous docket approval, has been discontinued for this 3 year cycle. NASS will be collecting the production data that will be used to expand the chemical data, through the Census of Horticulture (0535-0236) that will also be conducted in 2010.

The Oregon Nursery Production Survey and the Oregon Christmas Tree Production Survey were sampled from their universe of growers. The large operations were all included in their sample, along with a random sampling of medium and small size operations (small operations were sampled at a rate of approximately 1 out of every 10 operations).

2. Describe the procedures for the collection of information.

The Nursery and Floriculture Chemical Use Survey is conducted exclusively as a field enumerated survey. The field enumerator will meet with the most knowledgeable person (owner, manager, book keeper, etc) at each operation to collect the data. Only a small portion of the questionnaire will involve direct contact with the respondent. The majority of the data collection process involves the enumerator sitting down with each operations chemical application records and recording the relevant information into our questionnaire.

The majority of the data for California is available electronically; we receive much of the chemical data directly from California EPA. The remaining data on pest management practices and certain columns in the chemical tables need to be collected from the respondent.

Publicity materials have been created that the State offices can mail to respondents, display at trade shows or include in State trade magazines advertising the importance of the surveys and how this data will be used to help the nursery and floriculture industry.

The two Oregon production surveys are designed to be used as mail surveys with either phone or personal interview follow-up for non-respondents.

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.

Information on the data needs of users is routinely requested and data users are involved in survey content development. The American Nursery and Landscapers Association and the Society of American Florists were consulted frequently during the design of the survey instruments. Data User meetings are held yearly and give all interested individuals the opportunity to express their data needs. NASS makes every effort to accommodate the needs of the U.S. public. When NASS meets with data users and industry representatives we ask that they convey the message to their members of how important these data collections are to their industry.

NASS's Marketing and Information Services Office (MISO) is responsible for promoting NASS survey efforts and educating respondents about the need and use for the data they are being asked to provide. MISO works with data users and industry leaders to

provide concrete examples of data use. They are also actively publicizing survey activities by generating and distributing news reports and drop-ins for industry publications and news outlets.

The different publicity materials are used to inform the respondents of the importance of these surveys. How the information is used by the floriculture and nursery growers, chemical manufacturing companies, and legislative bodies is included in the materials provided to the growers in hopes to encourage them to respond. NASS has expanded the data collection period for this year's chemical use survey, so that the field enumerators can schedule the most convenient time for the respondent. Depending on the type of plants being produced and the region of the country, we have to allow this degree of freedom in the data collection, to help insure good responses.

For non-response to the Oregon Nursery and Christmas Tree surveys, after two attempts by mail the Oregon Field Office has their telephone or field enumerators conduct follow-up interviews.

The chemical use sample survey is designed so that estimates are statistically representative of chemical use on nursery and floriculture commodities. The reliability of the survey results is affected by sampling variability and non-sampling errors. Sampling variability is a measure of how the estimates would differ if other samples had been drawn; it is expressed as a percent of the estimate called the coefficient of variation (CV). For the January 2007 survey, the variability of the estimates differed considerably by chemical. In general, the more often the chemical was applied, the smaller the sampling variability. For the more commonly used chemicals, CV's ranged from 5-50 percent at the six-State program level; other, more rarely used items ranged from 50-200 percent. Items with CV's above 200 percent or that had an insufficient number of reports were not published.

Follow-up contacts of operations have provided NASS with a greater insight to the variations in rates of applications for many of the chemicals. For example some operations may only produce small seedling trees and sell them to other operations that produce larger trees that are sold to final consumers. The chemical application rates can vary greatly, dependant upon the size or maturity of the plants being produced.

Non-sampling errors occur during a survey process but, unlike sampling variability, are difficult to measure. They may be caused by interviewers failing to follow instructions, poorly worded questions, non-response, problematic survey procedures, or data handling mistakes between collection and publication. In this survey all survey procedures and analyses were carried out in a consistent and orderly manner to minimize the occurrence of these types of errors.

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

NASS's experience with previous production and chemical use surveys has been beneficial in designing the surveys covered in this docket. NASS has done extensive information gathering interviews over the years; this will be the fourth time that NASS has conducted the chemical use survey. The questionnaires in this docket have been developed with the assistance of greenhouse operators and nursery growers.

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.

Specifications and survey design were developed by Statistical Methods Branch, Statistics Division; Branch Chief is Dave Aune, (202)720-4008.

The sampling plan was developed by the Sample Design Section of the Sampling Branch, Census and Survey Division; Branch Chief is Bill Iwig, (202)-720-3895.

Data collection and editing is carried out by NASS State Statistical Offices; Deputy Administrator for Field Operations is Marshall Dantzler, (202)720-3638.

The NASS survey statistician in Headquarters for the Nursery and Floriculture Chemical Use Survey is Jim Johnson, (202) 720-7216 in the Environmental and Economic Surveys Section of the Survey Administration Branch, Census and Survey Division. He is responsible for coordination of sampling, questionnaires, data collection, data processing, and FO support.

The NASS commodity statistician in Headquarters for the chemical use survey is Liana Cuffman, (202) 690-0392 in the Environmental and Demographics Section of the Environmental, Economics, and Demographics Branch, Statistics Division. She is responsible for analysis, summary, and publication.

The NASS commodity statistician in Headquarters for the nursery production survey is Dawn Keen (202) 720-4215 in the Fruit, Vegetable, and Special Crops Section of the Crops Branch, Statistics Division. She is responsible for analysis, summary, and publication.

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