

FLORICULTURE SURVEY

OMB No. 0535-0093

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.**

Beginning in January 2022 and collecting data for 2021 production, NASS will be collecting data for all 50 States. Operations with more than \$100,000 in total sales will be asked to complete the entire questionnaire with detailed data on the varieties of plants produced and sold. In the 28 largest producing states, all operations with sales of \$10,000 to \$99,999 in total sales will only be asked to report data for total area in production, total gross value of sales, and peak number of hired workers.

The Commercial Floriculture Survey (CFS) sampling frame comprises all active operations on the NASS List Frame that have floriculture value of sales. All operations for published targeted and unpublished non-targeted states, with a floriculture value of sales of at least \$10,000 and 100,000, respectively, will be sampled at a 100% rate. All other operations that do not meet the minimum value of sales, will be sampled at a rate less than 100%. The motivation for selecting a sample from entities that do not meet the minimum threshold is to generate an estimate of entities that may have expanded and now meet the publication threshold.

In the past, NASS conducted the floriculture/horticulture survey in Hawaii under a cooperative agreement. If funding is provided for any of the next three years by the State of Hawaii, then Hawaii will use a modified questionnaire that will include additional commodities not found on the US questionnaire version. In addition, Hawaii will modify their sample; operations with \$10,000 or more in total sales will be asked to complete the longer detailed version of the questionnaire and operations with sales of \$1,000 to \$9,999 in total sales will be asked to complete the shorter version of the questionnaire and only provide total sales, total area in production and peak number of workers.

In the 2018 OMB approval, the CFS was handled under the "limited coverage" survey plan. Data was collected in the 16 largest producing States, listed below, plus Alaska. The 16 states were chosen based on highest amount of total dollars in sales reported on the 2014 Census of Horticultural Specialties (CHS) for floriculture commodities. Alaska was added on due to its unique growing conditions and expanding production.

Alaska	New Jersey
California	New York
Colorado	North Carolina
Connecticut	Pennsylvania
Florida	Texas
Illinois	Virginia
Michigan	Washington
Ohio	Wisconsin
Oregon	

In addition, the Hawaii Horticulture survey was conducted under a cooperative agreement and published separately.

Inaccessible	Adjusted Sample Size
9901=3	
1066	3878
599	2375

Annual Floriculture	
Response Rates	Completed forms
2021	
Small Operations	63.4%
Large Operations	60.7%

Hawaii Horticulture Survey			
Response Rates	Completed forms	Refusals	Inaccessible
2018			
Conducted under a cooperative agreement with	68.1%	15.3%	16.7%

In the 2021 survey (collecting data for 2020 production) the sample size was 6,922 with an overall response rate of 62.6% and an overall coverage rate of 51.8%. With the COVID pandemic, face to face interviews were not permitted, thus impacting both the response and coverage rates.

Growers in these States, and who are on NASS's List Sampling Frame with annual gross sales of \$10,000 or more will be included in the universe. The entire universe will receive the initial mailing with a second-request mailing to non-respondents approximately 2 to 3 weeks later and telephone and/or personal follow-ups after that.

NASS used the standardized response rate calculations as identified in the OMB statistical directive (1 and 2), *Standards and Guidelines for Statistical Surveys* in the calculation of the response rates reported above.

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**

CFS questionnaires are mailed to the target population either in late December or early January (mail dates may be adjusted to coordinate the survey with other surveys being conducted at that time of year). A second request mailing will be sent to non-respondents 2 to 3 weeks later, followed by telephone or face to face enumeration. Face to face interviewing of large growers or operations with complex operating conditions will only be done if COVID guidelines permit it. Data for operations that refuse to respond or are inaccessible are manually estimated based on past reports or information supplied by other informed sources. The survey administrator and commodity statistician in NASS Headquarters has provided editing guidelines and a Floriculture Estimation Manual to each RFO. All completed reports are given a preliminary review by the floriculture statistician in each RFO before running the data through a computer edit.

State survey indications are reviewed and combined to create US level results. The summarized data are checked through NASS's disclosure protocol before the data are published. This ensures that no confidential data are published.

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 NASS Regional Field Offices (RFOs) in conjunction with our Frames Maintenance Group (National Operations Center in St. Louis, MO) conducts

list building efforts for this census-type survey; all available list sources are used to build the universe lists, including information compiled from the 2017 Census of Agriculture and the 2019 CHS. RFO's try to develop relationships with their State industries and large floriculture producers to encourage completion of this questionnaire. The survey enjoys significant industry support and producers respond because they are vitally interested in the publication of this data.

Survey data are subject to non-sampling errors such as omissions and mistakes in reporting and in processing the data. While these errors cannot be measured directly, they are minimized by carefully reviewing all reported data for consistency and reasonableness.

Coverage weights from the most recent CHS are applied to the CFS records to account for list incompleteness. Item and unit level nonresponse are addressed by manual imputation by subject matter experts in the RFOs. The summary provides multiple point statistics at both the strata and state level to evaluate the quality of the survey estimates. These include response rates and number of usable positives reports for each item summarized.

Industry representatives have mentioned in the past that the annual CFS serves as a strong indicator of change within this industry. The CHS provides detailed data on both state and national levels. Previously, the CFS was conducted in 17 key states, the data that was collected, represented approximately 86% of the total US floriculture production.

Efforts to increase response rates and reduce nonresponse bias prior to data collection includes extensive enumerator training, survey coordination, improving data collection instruments, talking with industry representatives and looking for additional ways to promote this survey to all growers.

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

No testing of procedures or methods 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), or other person(s) who will actually collect and/or analyze the information for the agency.

Sample sizes for each state are determined by the agency's Sampling, Editing, and Imputation Methodology Branch, Methodology Division; headed by Branch Chief Mark Apodaca, (202) 690-8141.

Data collection is carried out by NASS Field Offices; Eastern Field Operation's Director is Jody McDaniel (202) 720-3638 and the Western Field Operation's Director is Troy Joshua, (202) 720-8220.

The national summary is the responsibility of the Summary, Estimation and Disclosure Methodology Branch, Methodology Division; Branch Chief is Jeff Bailey (202) 690-8141.

The Crops Branch, Statistics Division is responsible for the Estimation Manual, analysis, review of the final estimates, presenting the summarized data to the Agricultural Statistics Board for final estimates, and publication. The Crops Branch Chief is Lance Honig (202) 720-2127.

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