

**COST of POLLINATION SURVEY**

OMB No. 0535-0258

The National Agricultural Statistics Service (NASS) is asking for an extension of 3 years to an ongoing annual data collection and publication of data related to the costs involved with the pollination of various crops from across the United States. This is a voluntary data collection. The only significant change to this program involves the sample size. NASS was able to adjust the sample size downward based on the findings from the initial rounds of data collection. Additional information can be found in item 15 below.

**A. JUSTIFICATION**

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

The essential role of honey bees (*Apis mellifera*) for crop pollination is well known in modern agriculture, but for most of human history honey bees were kept primarily for honey production. In 1988, pollination services—renting out bee colonies to pollinate certain crops—produced only a small share of beekeeper revenue, at just under 11 percent. Since then, the value of pollination services has increased sharply. In 2016, pollination service fees represented over 41 percent of total beekeeper revenues and exceeded honey sales. The primary driver in the value increase has been growing demand for almonds, which were responsible for 82 percent of all pollination service fees in 2016. Recent data show almond farmers paid \$165 per colony rented over the several-week-long pollination season in 2016, roughly triple the average of \$55 for other crops. (USDA ERS, Amber Waves, March 27, 2018)

Other crops that rely heavily on the rental of bees includes, but is not limited to: apples, cherries, peaches, oranges, pears, cranberries, blueberries, cantaloupes, watermelons, cucumbers, squash, pumpkins, sunflowers, and clover.

NASS' primary focus will center on costs associated with honey bee pollination, but will also collect some basic information relating to other forms of pollination.

General authority for these data collection activities is granted under U.S. Code Title 7, Section 2204. This statute specifies that "The Secretary of Agriculture shall procure and preserve all information concerning agriculture which he can

obtain ... by the collection of statistics ... and shall distribute them among agriculturists.”

- 2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

The need for NASS to expand its programs was initiated by the Presidential Memorandum “Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators,” issued on June 20, 2014 to take “steps to reverse pollinator losses and help restore populations to healthy levels.” The memorandum can be found at this link <https://www.whitehouse.gov/the-press-office/2014/06/20/presidential-memorandum-creating-federal-strategy-promote-health-honey-b>. To this end, NASS is committed to collaborating with USDA and the other departments on a unified and complementary approach to the President’s pollinator health initiative.

Data that are collected from beekeepers through the expanded Bee and Honey Survey and the Colony Loss Survey (OMB # 0535-0153), combined with the cost of pollination data collected from crop farmers (fruits, nuts, vegetable and specialty crops) will provide researchers with a comprehensive view of the honey bee/pollinator industry. These data will give a more detailed view of the expenses associated with pollination and help policy makers, crop producers, and beekeepers “ensure the sustainability of our food production systems” and “avoid additional economic impact on the agricultural sector”. Furthermore, estimates from the Cost of Pollination survey will be used to fulfill the needs in the Pollinator Research Action Plan which specifically calls for NASS to conduct the Cost of Pollination Survey.

<https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Research%20Action%20Plan%202015.pdf>.

The *Cost of Pollination Inquiry* will collect data relating to the primary crops that rely on honey bees and other pollinators to perform the tasks of pollination. By publishing both regional and crop specific pollination costs, both, crop farmers and beekeepers will be able to benefit from this additional data. Federal and State Departments of Agriculture, universities, various Federal Agencies, and numerous other people will be able to benefit from this data as well.

- 3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Respondents can complete the Cost of Pollination questionnaire by any of the following methods: Electronic Data Reporting (internet), Computer Assisted Telephone Interview (CATI), FAX, or by paper/mail. NASS will utilize enumerators to do follow-up contacts either by phone or face to face interviews of non-respondents. Data collection efforts will be coordinated with end of year crop production surveys if possible, to help minimize any burden on respondents. In 2017, 1.7% of the respondents were by internet.

- 4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

The National Agricultural Statistics Service (NASS) cooperates with State Departments of Agriculture and land grant universities to conduct agricultural surveys. These surveys meet both State and federal needs, thus eliminating duplication and minimizing reporting burden on the agriculture industry. Data collected on these surveys are not available from any other source.

- 5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.**

Data collection will be conducted once per year with a standardized questionnaire that will capture all needed data.

The Small Business Administration defines, in 13 CFR, part 121, small agricultural producers as those having annual receipts of no more than \$750,000 and small agricultural service firms (handlers and importers) as those having annual receipts of no more than \$6.5 million. Out of the total estimated sample size of 18,000, approximately 15,300 operations are classified as small entities or approximately 85 percent.

- 6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

NASS continues to attend numerous meetings and tradeshows around the country and has obtained a great deal of input from data users and beekeepers as to what sort of published data they need and what sort of production data individual growers could provide. NASS works closely with the USDA Economic Research Service (ERS) to pinpoint exactly which data would be most useful.

- 7. Explain any special circumstances that would cause an information collection to be conducted in a manner inconsistent with the general information guidelines in 5 CFR 1320.5.**

There are no special circumstances associated with this information collection.

- 8. Provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8 (d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments.**

The Federal Register Notice soliciting comments was published on July 2, 2018 on pages 30910-30911. NASS received one public comment, it was from Ms. Jean Public, and the comment is attached to this submission.

**Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record-keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

Over the last few years NASS has worked closely with beekeepers, crop producers, researchers, and other government agencies to clarify which data would be most useful and how best to collect data. NASS has studied previous reports from the University of Wyoming and USDA, ERS. At the American Beekeeping Federation conference in January, 2015, NASS asked the opinions of beekeepers who participated in pollination what sort of data would be useful for them. A draft questionnaire was then drawn up and tested on a variety of crop producers.

NASS discovered that yearly data collection in the fall, after all blooming was completed, was optimal for the majority of respondents. Originally, the questionnaire allowed respondents to write in which crops they produced, however it proved to be less burdensome and more efficient to have the majority of crops listed on the form with a few place holders for any other unspecified crops.

- 9. Explain any decision to provide any payment or gift to respondents.**

There are no payments or gifts to respondents.

- 10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

Questionnaires include a statement that individual reports are confidential. U.S. Code Title 18, Section 1905; U.S. Code Title 7, Section 2276; and Public Law 107-347, Title V (CIPSEA) provide for confidentiality of reported information. All employees of NASS and all enumerators hired and supervised under a cooperative agreement with the National Association of State Departments of Agriculture (NASDA) must read the regulations and sign a statement of

compliance.

Additionally, NASS employees and NASS contractors comply with the OMB implementation guidance document, "Implementation Guidance for Title V of the E-Government Act, Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA)." CIPSEA supports NASS's pledge of confidentiality to all respondents and facilitates the agency's efforts to reduce burden by supporting statistical activities of collaborative agencies through designation of NASS agents, subject to the limitations and penalties described in CIPSEA.

The following confidentiality pledge statement will appear on all NASS questionnaires.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit:  
<https://www.nass.usda.gov/confidentiality>.

**11. Provide additional justification for any questions of a sensitive nature.**

There are no questions of a sensitive nature.

**12. Provide estimates of the hour burden of the collection of information. The statement should indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I. Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.**

Burden hour calculations are shown below. The minutes-per-response figures come from cognitive interviews. Cost to the public of completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. Reporting time of 5,340 hours is multiplied by \$36.66 per hour for a total cost to the public of \$195,764.40.

NASS uses the Bureau of Labor Statistics' [Occupational Employment Statistics](#) (most recently published on March 30, 2018 for the previous May) to estimate an hourly wage for the burden cost. The May 2017 mean wage for bookkeepers was \$19.76. The mean wage for farm managers was \$38.62. The mean wage for farm supervisors was \$24.11. The mean wage of the three is \$27.50. To

calculate the fully loaded wage rate (includes allowances for Social Security, insurance, etc.) NASS will be adding an additional 33% for a total of \$36.66 per hour.

**Estimated Annual Burden for Cost of Pollination Survey 2019 - 2021**

Survey	Sample Size	Waves of Data Collection	Responses				Non-response				Total Burden Hours
			Resp. Count	Waves x Count	Min./ Resp.	Burden Hours	Nonresp Count	Waves x Count	Min./ Nonr.	Burden Hours	
Initial Mailing of Questionnaire	18,000	1	6,300	6,300	15	1,575	11,700	11,700	2	390	1,965
Phone and Field Enumeration Follow-up	11,700	1	8,190	8,190	15	2,048	3,510	3,510	2	117	2,165
Respondent Cover Letter and Publicity Materials	18,000	1	14,490	14,490	5	1,207	101	101	2	3	1,210

**13. Provide an estimate of the total annual cost burden to respondents or record-keepers resulting from the collection of information.**

There are no capital/start-up or ongoing operation/maintenance costs associated with this information collection.

**14. Provide estimates of annualized cost to the Federal government; provide a description of the method used to estimate cost which should include quantification of hours, operational expenses, and any other expense that would not have been incurred without this collection of information.**

The total cost to the Federal Government for the Cost of Pollination Survey for Fiscal Year 2019 remains at \$1,050,000. About \$800,000 is for Federal salaries, \$180,000 for telephone and field enumeration by National Association of State Departments of Agriculture (NASDA) enumerators, and \$70,000 for printing, postage, data processing, publications, etc.

**15. Explain the reasons for, any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I (reasons for changes in burden).**

In 2015, NASS began conducting the Cost of Pollination survey. The target universe was crop farmers (fruit, nuts, vegetable and specialty crops) who relied on bees to assist with the pollination process. NASS did not know how large of a sample we would need to provide enough positive reports to generate strong summarized indications. After the first two years of data collection NASS was able to adjust the sample sizes significantly and still have strong indications.

18,000	1	14,490	14,490	5	1,207	101	101	2
18,000		14,490	14,490		4,830	3,510	15,210	

(32,000)		(25,710)	(25,710)		(8,570)	(6,290)	(22,590)	
----------	--	----------	----------	--	---------	---------	----------	--



16. **For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.**

**Sampled Crops:** The 19 sampled crops listed on the questionnaire were: alfalfa, almonds, apples, blueberries, cantaloupes, cherries, clover, cranberries, cucumber, nectarines, oranges, peaches, pears, pumpkins, raspberries, squash, strawberries, sunflowers, and watermelons. The 15 remaining crops that were sampled, but not listed individually on the questionnaire were: apricots, avocados, boysenberries, buckwheat, caneberries, canola, grapes, honeydew melons, kiwifruit, plums, prunes, macadamia nuts, mangos, tomatoes, and turnips

**Estimation Procedures:** Estimates were prepared by the Agricultural Statistics Board after reviewing recommendations and analysis submitted by each Regional Field Office. All data were analyzed for unusual values. Data from each operation were compared to their own past operating profile and to trends from similar operations. Data for missing operations were covered by weighting positive data of similar operations based on location and strata. National and State survey data were reviewed for reasonableness with each other, estimates from the previous year, and other USDA, NASS reports. In order to be published individually, a crop must have an appropriate threshold of paid pollinated acres in a region and meet USDA, NASS's confidentiality policy. If a crop did not meet either of these requirements, it was combined with all other unpublished crops under the "All Other" heading. Due to the differences in regions and years, the aggregate and other published estimates may include different crops.

**Revision Policy:** The previous year's estimates are subject to revision when current year's estimates are made. Revisions are the result of late reports or corrected data.

**Reliability:** Estimates were created by reviewing rounded indications from the survey and the associated measures of error. Due to the sampled population differing from other USDA, NASS surveys, estimates on this report may differ from other published numbers. Since all operations with crops were not included in the sample, survey estimates are subject to sampling variability. The measurement of error due to sampling in the current period is evaluated by the coefficient of variation for each estimated item. For individually published crops, coefficients of variation can be found using USDA, NASS's Quick Stats searchable database.

Survey results were also subject to non-sampling errors such as omissions, duplication, and mistakes in reporting, recording, and processing the data. While

these errors cannot be measured directly, they were minimized through strict quality controls in the data collection process and a careful review of all reported data for consistency and reasonableness.

The annual results can be found at the following link:

<https://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=2008>.

- 17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

There is no request for approval of non-display of the expiration date.

- 18. Explain each exception to the certification statement identified in Item 19, “Certification for Paperwork Reduction Act Submissions” of OMB Form 83-I.**

There are no exceptions to the certification statement.

October 2018