

**Supporting Statement for the Supplemental Questions to the National Agricultural Workers Survey related to employment, health, and safety and health practices during the Coronavirus pandemic**

**B. Collection of Information Employing Statistical Methods**

**The existing NAWS sample selection and estimation methods applied in OMB Clearance #1205-0453 (expiring January 2023) are modified for the proposed NAWS Collection of Supplemental Questions related to employment, health, and safety and health practices during the Coronavirus pandemic as noted in the following documentation.**

**1. Respondent Universe and Samples**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**2. Statistical Methods for Sample Selection**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**3. Calculating the Sampling and Post-Sampling Weights**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**4. Statistical Reliability**

**a) Maximizing Response Rates**

**Employer Response**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**Worker Response**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**b) Addressing Nonresponse**

**Possible worker nonresponse bias**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

**Possible employer nonresponse bias**

There are no expected changes in the employer non-response rates from the currently approved ICR for OMB Control No.1205-0453.

In the currently approved OMB submission (2019), the following studies were proposed

and completed in fiscal year (FY) 2019:

- Nonresponse Study 1 – NAWS Item Nonresponse Rates
- Nonresponse Study 2 – NAWS Unit (Employer) Nonresponse
- Nonresponse Study 3 – Follow Up with Employers Who Were Not Successfully Screened During the Initial NAWS Data Collection
- Nonresponse Study 4 – Examining Employer Eligibility Over Time and NAWS Response Rates
- Design Study A – Efficiency of the NAWS Sampling Design
- Design Study B – Optimal Interview Allocations for NAWS Sampling

In addition, the contractor completed six studies in FY 2020 and 2021 to further examine possible nonresponse bias and the efficiency of the NAWS design (please see Appendix A):

- Nonresponse Study 1 – NAWS Item Nonresponse Rates
- Nonresponse Study 2 – NAWS Unit (Employer) Nonresponse Rates
- Nonresponse Study 3 – Measuring Differences Between Responding and Non-Responding Grower Populations
- Design Study 1 – Optimal Interview Allocations for NAWS Sampling Using Underlying National Farmworker Jobs Program (NFJP) Variables
- Design Study 2 – Design Effect Study for Partial Missing Cycles (FY 2019 Spring Cycle)
- Design Study 3 – Design Effect Study for Partial Missing Cycles (FY 2020 COVID-19)

Collecting data during the COVID-19 pandemic raises a concern that employer nonresponse may be related to and biased by the pandemic. There are several possible causes of potential pandemic-related bias.

- Since the NAWS conducts in-person interviews, the interviewers are limited to traveling to areas where COVID-19 case rates are low.
- Employers may refuse to allow interviewers to conduct interviews out of concern for the safety of their workers.
- There may be selection bias as employers who refuse to allow their workers to respond to the survey may differ from other employers in how they are addressing the pandemic.

To address these potential biases, NAWS staff will collect additional paradata and do so in a way that does not affect the burden for the employer. The paradata will be used in the following ways:

- a. Survey staff has tracked the locations where interviewers could not travel due to state restrictions or safety concerns about the infection level. Survey staff will assess the impact of these restrictions on the probability or selection of locations and also

compare the responses of workers and employers to see if the limitations on traveling to sites resulted in bias and/or affected the precision of estimates.

- b. Survey staff added a response code to track employers who refuse to participate due to COVID-19 concerns. Analysis of this additional response code will allow the Survey staff to examine changes in non-response due to COVID-19 concerns and to assess the degree of non-response bias that might be related to COVID-19.

Nonresponse bias will be calculated using the bias calculation formula from OMB's *Standard and Guidelines for Statistical Surveys* (2006). The formula defines bias for a particular estimate,  $B(\bar{y}_r)$ , as the following:

$$B(\bar{y}_r) = \bar{y}_r - \bar{y}_t = \left( \frac{n_{nr}}{n} \right) (\bar{y}_r - \bar{y}_{nr})$$

where:

- $\bar{y}_t$  = the mean based on all sample cases;
- $\bar{y}_r$  = the mean based only on respondent cases;
- $\bar{y}_{nr}$  = the mean based only on the nonresponding cases;
- $n$  = the number of cases in the sample; and
- $n_{nr}$  = the number of nonresponding cases

#### **Possible item nonresponse bias**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

#### **c) Reliability**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

#### **d) Estimation Procedure**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

#### **e) Precision of Key Estimators**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

### **5. Tests**

This submission seeks approval to add supplemental questions to the NAWS that address health and safety issues related to the COVID-19 pandemic.

The Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC/NIOSH) developed the supplemental questions in collaboration with

CDC's Division of Global Migration and Quarantine, the Health Resources and Services Administration, the Employment and Training Administration within the Department of Labor, and organizations that represent agricultural employers and farm workers.

The proposed questions are similar to questions used in the California Institute for Rural Studies' COVID-19 Farmworker Survey and the National Health Interview Survey.

Draft questions were obtained or adapted from existing questions in federal and academic surveys to strengthen the ability to compare NAWS findings with the findings from other surveys. Cognitive interviews in Spanish and English were used to test the survey with respondents from diverse backgrounds and geographic regions (Florida, California, and Texas). Focus groups were not possible given safety concerns regarding possible COVID-19 exposure.

## **6. Statistical Consultation**

There are no changes from the currently approved ICR for OMB Control No. 1205-0453.

## **REFERENCES**

Ryu, E., Couper, M., & Marans, R. (2006). Survey incentives: Cash vs. in-kind; Face-to-face vs. mail; Response rate vs. nonresponse error. *International Journal of Public Opinion Research*, 18 (1): 89–106.

Zhang, F. (2010). *Incentive experiments: NSF experiences*. (Working Paper SRS 11-200). Arlington, VA: National Science Foundation, Division of Science Resources Statistics.