

Supporting Statement
Case-Control Study on Highly Pathogenic Avian Influenza in Turkeys 2022
OMB Control Number 0579-XXXX

Part B

COLLECTIONS 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 had been conducted previously, include the actual response rate achieved during the last collection.

The potential respondent universe for the Highly Pathogenic Avian Influenza Virus (HPAI) Commercial Turkey Case Control study are all commercial turkey operations located in states where positive commercial turkey premises have been detected, as listed in the APHIS Emergency Response Management System (EMRS). These total approximately 2,600 operations. NASS reported approximately 2,200 turkey operations with sales of \$50,000 or more in the 14 states currently with confirmed positive commercial turkey premises (CA, IN, IA, KS, KY, MI, MN, MO, NC, ND, PA, SD, UT, WI) in the 2017 Census of Agriculture. The control farms will be recruited from within the same state as the matched case operation. The expected response rate for cases is 75%, and for controls is 20% (to account for some farms having zero turkey inventory or being out of business).

Up to 5 turkey control operations will be contacted for every case premises included in the study to account for nonresponse and maximize the chances of having at least one control matched to each case. To date, there have been 173 HPAI positive commercial turkey premises in 14 states (CA, IN, IA, KS, KY, MI, MN, MO, NC, ND, PA, SD, UT, WI), and we anticipate approximately 194 case farms in 16 states will be available when the study begins. Therefore, up to 970 (194x5) control premises will be contacted for participation in the study. However, due to resource constraints and reliability of contact information, it is expected that 150 case farms will be selected for contact, of which 113, or 75%, of those are expected to complete the survey and we expect about 113 matching controls to complete the survey.

Contact information for case and control farms will be obtained from the USDA VS EMRS, and, if needed, from shared company records, or by information provided by the state agricultural flock data base. CLEAR software from Thomson Reuters® will be used to ensure the most up-to-date contact information is included in the sampling frame. The NASS list frame will not be used for selecting control farms because NASS was not able to offer this service on the short timeline needed for this study and because of the upcoming Census of Agriculture work that needs to be completed.

2. Describe the procedures for the collection of information including:

- **Statistical methodology for stratification and sample selection**
Control operations will be those that had the potential to become cases and will be selected from all operation-type (meat or breeder) matched commercial turkey operations in the state of the matched case.
- **Unusual problems requiring specialized sampling procedures and data collection cycles:**
There are no unusual problems requiring specialized sampling procedures and data collection cycles.
- **Any use of periodic (less frequent than annual) data collection cycles to reduce burden:**
This information is collected as part of an emergency response. There is no periodic data collection cycle for poultry operations affected by avian influenza.

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.

- **Questionnaire design and training:**
 1. The Study minimizes collection of data to that which is absolutely necessary to meet the stated objectives. Surveys are extensively reviewed by APHIS staff and experts both in industry and in academia.
 2. APHIS will ensure data collectors and data handlers have been trained on data and information security guidelines.
 3. Study collaborators have made numerous contacts and have been involved in collaborative efforts to identify the information needs of the industry and the best way to encourage participation in the information collection via survey.
- **Contacting respondents:**
 1. NASS will first send a presurvey letter by mail, and then enumerators will contact the case and control operations by phone the following week. Enumerators will present a brief description of the study, and then proceed with completing the questionnaire by phone if the respondent chooses to participate.
 2. Over a 2-week data collection period, follow-up phone calls or text messages will be made to the operations that did not respond to the initial phone call.

3. If the target sample size has not been reached within 2 weeks, APHIS or collaborators will contact additional case farms and poultry premises which meet the control definition from the same state of a positive flock to request their participation.

- Non-response adjustment:
There will be no adjustment for non-response and there are no plans to adjust for survey sampling factors.
- Sampling and design strategies:
No additional sampling strategies will be applied.

4. Describe any tests or procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

Animal health and economics experts from APHIS, the University of Minnesota, the University of Arkansas, and the Minnesota Board of Animal Health have reviewed this survey. Given the emergency nature of this situation, APHIS does not have time to pretest this survey prior to implementation. However, the questions APHIS is asking are typical for epidemiological investigative studies on the whole and are limited to HPAI infection.

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.

The statistical aspects of the design were coordinated by:

- Dr. Victoria Fields and Dr. Kelly Patyk, Veterinary Medical Officers, USDA APHIS VS, Fort Collins, CO (970-286-1514 and 970-305-7725, respectively)

The actual data collection will be conducted by NASS enumerators and APHIS-designated data collectors. Contact persons for data collection are:

- Gerald Tillman, Chief, Survey Administration Branch, USDA NASS, Washington, D.C. 20250, (202-720-3895).
- Dr. Amy Delgado, Director, Center for Epidemiology and Animal Health, USDA APHIS VS, Fort Collins, CO (970-494-7302).

Analysis of the data will be accomplished by collaborating veterinarians, epidemiologists, and statisticians under the direction of:

- Dr. Amy Delgado, Director, Center for Epidemiology and Animal Health, USDA APHIS VS, Fort Collins, CO (970-494-7302).