

Supporting Statement
Case-Control Study on Highly Pathogenic Avian Influenza in Poultry 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 Table Egg Flocks Case Control study are all commercial table egg layer, pullet, and breeder operations located in the 10 States where positive commercial table egg premises have been detected, as listed in the APHIS Emergency Response Management System (EMRS). The control farms will be recruited from within the same state as the matched case operation, and then will be randomly selected from the operations with 50,000 or more birds which had poultry for at least two weeks of a window defined as two weeks prior to the case operation becoming positive and for 4 weeks afterwards. Only those that meet the definition of eligible will be asked to participate.

States with a larger number of cases will likely have more up-to-date information on whether a premises is active and has poultry in the exposure period required to meet control requirements. The expected response rate overall is 30%.

Up to 5 table egg operations will be contacted for every 1 control premises included in the study to account for nonresponse. To date, there have been 26 HPAI positive commercial table egg premises in 10 States (CO, DE, IA, MD, MN, NE, PA, SD, UT, WI), therefore up to 260 control premises (5 screening contacts per participating respondent x 2 controls per case = 10 x 26 HPAI positives = 260 contacts) will be contacted for participation in the study. Contact information for case and control farms will be obtained from the USDA VS Emergency Management Response System, and, if needed, from shared company records, or by information provided by the State agricultural flock data base.

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

- **Statistical methodology for stratification and sample selection**
Negative control operations will be those that had the potential to become cases and selected from all operation-type matched commercial table egg operations with 50,000 or more birds in the state of the matched case. See above for more information.

- **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 and collaborators will train data collectors and data handlers 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 ask for and incentivize the information collection via survey.

- Contacting respondents:

1. APHIS and collaborators will call or email the case and control operations, present a brief description of the study, and request to set up an appointment for an interview. The first 2 eligible control operations that agree to participate will be selected for the study.

2. If fewer than 2 control operations respond, a follow-up phone call or email will be made to the operations that haven't responded a week after the first attempt to contact.

3. If the target sample size has not been reached within a week of the reminder phone call/email, APHIS and collaborators will contact additional 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 of 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 experts from APHIS, the University of Minnesota, and the Pennsylvania State Department of Agriculture 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 following people were consulted during planning and development of the Study:

- Dr. Elliott Dennis, agricultural economist and extension specialist, 208A Filley Hall, University of Nebraska Lincoln, Lincoln, NE 68583

Dr. Dennis was consulted on the value of the study and the general approach, as well as the potential for economic analysis work utilizing data collected.

- Dr. David Halvorson, avian health specialist, 144 Veterinary Science Building, 1971 Commonwealth Avenue, Saint Paul, MN 55108

Dr. Halvorson was a collaborator in development of the draft survey tool as well as seeking buy-in from industry veterinarians.

- Dr. Jennifer Burroughs, veterinary medical officer, Pennsylvania Department of Agriculture 2301 N. Cameron St., Harrisburg PA 17110

Dr. Burroughs was consulted on the value of the study, consideration of types of commercial layer premises to include, and the development of the draft survey tool.

The statistical aspects of the design were coordinated by:

- Dr. Alice Green, Veterinary Services, 2150 Centre Avenue, Building B, Fort Collins, CO 80526, (970) 286-1844

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

- Dr. Alice Green, Veterinary Services, 2150 Centre Avenue, Building B, Fort Collins, CO 80526, (970) 286-1844