SUPPORTING STATEMENT FOR INFORMATION COLLECTION

Part A

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

VETERINARY SERVICES (VS)

CENTERS FOR EPIDEMIOLOGY AND ANIMAL HEALTH (CEAH),

NATIONAL ANIMAL HEALTH MONITORING SYSTEM (NAHMS)

Small Enterprise Chicken Study

SUPPORTING STATEMENT FOR INFORMATION COLLECTION BY THE CENTERS FOR EPIDEMIOLOGY AND ANIMAL HEALTH (CEAH), OMB NUMBER 0579-0260 SMALL ENTERPRISE CHICKEN STUDY

August 2007

INTRODUCTION

The NAHMS National Poultry Study 2004 which is currently approved through 3/31/2008 is being revised to incorporate the Little Chicken Study. The forms used in the 2004 study are NAHMS 165, 167, and 168. The Little Chicken Study will use only one form NAHMS 200 to:

- Address emerging and recurring issues in disease control related to poultry
- Provide parameters for disease simulation models and use models for avian influenza emergency preparedness, and comparison of disease control strategies.
- Determine which information sources on poultry are most likely to be used by the smaller commercial producer and so provide industry and government with the most effective conduit to dispense new information to this demographic.

A. JUSTIFICATION

The Small Enterprise Chicken study is an information collection by the Animal and Plant Health Inspection Service (APHIS). This study is designed to collect information on flocks with 1,000 to 19,999 chickens. In the past, APHIS poultry studies, conducted by National Animal Health Monitoring System (NAHMS) have focused on the commercial table-egg layer industry, backyard poultry, and live poultry markets. This submission request is for approval to initiate the Small Enterprise (1,000 to 19,999 chickens) Chicken Study. This population is previously unstudied, and is believed to be a diverse group. The study questionnaire will be administered via mail with a telephone follow up interview for those who do not respond. The objectives of the study are as follows:

1. Describe characteristics of operations with 1,000 to 19,999 chickens, including bird species on-hand, seasonal inventory, and marketing of free-range chickens or eggs, and organic, or other niche-market products.

2. Describe movements of animals, people, waste products, vehicles, and equipment on and off operations, and estimate the distances associated with these movements.

3. Examine biosecurity practices, including bird access to the outdoors.

The information collected by administering this study will primarily be used to develop parameters for two disease simulation models: the North American Animal Disease

Spread Model (NAADSM) and the Multiscale Epidemiologic/Economic Simulation and Analysis Model (MESA). This data also has the potential to be useful in other modeling efforts. These disease simulation models investigate how a contagious disease may spread in an animal population. In order to use these models, a data set and a series of parameters must be entered into the model. The parameters needed to run a complete simulation are specific to each production type and include transmission characteristics between farms, including contacts between operations, frequency of contact, and distance associated with contact. Due to the length of the questionnaire and producer recall, very few distances are included in the questionnaire. While the disease simulation models are currently being configured to model Highly Pathogenic Avian Influenza (HPAI), the contact and movement parameters are not specific to HPAI and can be used to model other contagious poultry diseases. See Appendix A for a detailed description of infectious disease modeling.

In addition to the use of the data for modeling, the information will also be used to develop background information on this segment of the poultry industry. The information will be analyzed and organized into a descriptive report. Information sheets will be derived from this report and disseminated by APHIS to producers, stakeholders, academia, and other interested parties. The potential benefit to the industry is a scientifically valid national estimate of health and management practices of the nation's small commercial chicken operations which are a group not previously measured in NAHMS poultry studies.[1] Participation in this study is voluntary; it is up to the individual producer to decide whether or not it is desirable to participate.

1. Explain why the collection of this information is necessary.

NASS estimated that the value of production of broilers, eggs, turkeys, and chickens exceeded 28 billion dollars in 2005[2]. Infectious disease outbreaks in poultry can have large economic impacts. For example, the 2002-2003 outbreak of Exotic Newcastle Disease in the Western United States was estimated to cost the poultry industry 167 million dollars in lost exports over a 14 month period. While Exotic Newcastle disease does not have significant potential to cause disease in humans, other poultry diseases, such as Highly Pathogenic Avian Influenza are zoonotic. Such diseases would result in decreased domestic consumer demand for poultry products, which potentially could be more costly than trade losses[2].

Proposed risk factors for the introduction of avian influenza into the domestic poultry population include access of commercial poultry to wild birds, especially ducks, drinking water contaminated with avian influenza viruses, and links to the live poultry marketing system[3]. Risk factors for the spread of disease between domestic poultry operations

[1] NAHMS Layers '99 was completed in 1999, and Poultry '04 (focused on backyard and gamefowl breeder flocks and live poultry markets) was completed in 2004.
[2] END 2002-2003: Role of Economists and Economic Impacts. Jennifer Grannis, John W. Green, Stephen Ott, and Ann Hillberg-Seitzinger. April 2004.
[3] Swayne, D.E. and Suaraz, D.L. 2005. The United States strategies for controlling avian influenza in agricultural systems. In :Knobler, S.L., Mack, A., Mahmond, A., Lemon, S.M. The Threat of Pandemic

include movement of animals, people and equipment between farms. The Small Enterprise Chicken Questionnaire contains questions that address all these issues.

While the information collected here will initially be used in modeling for Highly Pathogenic Avian Influenza, the information concerning biosecurity and contacts between farms can be applied to many poultry infectious diseases. This information will also give extension and government officials increased insight on how to communicate with this segment of the poultry industry.

Knowledge of the various segments of the poultry industry is not only valuable for policy-making, research, education, and disease modeling, but can also be used to support trade. The OIE Terrestrial Animal Health Code and the OIE Aquatic Animal Health Code has adopted the concept of compartmentalization as a way to recognize animal populations that are free of certain diseases, without unnecessarily disrupting trade[4]. Compartmentalization is based primarily on management practices and biosecurity[5] so that traditional commercial poultry and poultry raised under other types of management systems could be considered separate compartments for the purpose of trade.

The mission of the USDA and APHIS includes safeguarding agricultural resources from disease and monitoring livestock in the U.S. for the presence of potentially crippling pathogens, as well as the risk factors surrounding them. Previous NAHMS poultry studies in 1999 and 2004 examined a wide variety of husbandry practices and biosecurity measures prevalent in commercial table-egg layer flocks, backyard flocks, gamefowl breeder flocks, and live poultry markets throughout the country. Risk factors for the introduction of infectious poultry diseases are likely to exist in the 1,000 to 19,999 flock size category, although they have not been specifically studied. This information will provide a more complete picture of this aspect of the poultry industry, adding to the information previously collected.

Statutory authority to collect and disseminate animal health data is granted by 7 U.S.C. § 391, the Animal Industry Act of 1884, which established the precursor of the APHIS, Veterinary Services, the Bureau of Animal Industry. Legal requirements for examining and reporting on animal disease control methods were further mandated by 7 U.S.C. § 8308 of the Animal Health Protection Act, "Detection, Control, and Eradication of Diseases and Pests," May 13, 2002. This collection of poultry data is consistent with the APHIS mission of protecting and improving American agriculture's productivity and competitiveness. APHIS is collecting information for flocks with 1,000 to 19,999 birds, which is not available from any other source on the general management practices, such as organic or other niche production, biosecurity practices, and animal, human, and equipment movement.

Influenza: Are We Ready? Washington, D.C. Institute of Medicine, National Academies of Science. P 233-242.

[4] OIE Terrestrial Animal Health Code, 12th edition 2004. CHAPTER 1.3.5. Zoning, regionalization and compartmentalization. http://www.oie.int/eng/normes/mcode/en_chapitre_1.3.5.htm (cited May 2005)

[5] Thiermann, A. (2005). Globalization, international trade and animal health: the new roles of OIE. Prev. Vet. Med. 67, 101-108.

National Surveys Providing Baseline Information

The small enterprise chicken study will add to the ongoing series of NAHMS studies on the U.S. poultry population[6]. The first NAHMS study of the poultry industry focused on commercial table-egg layer operations. The study objectives were to provide information on health and management practices used by the U.S. layer industry, to describe biosecurity practices on the US layer industry, and to study prevalence and risk factors for *Salmonella enteritidis* in layer flocks. The operations included in this study had to have 30,000 or more layers, and therefore no information was gathered on operations with 1,000 to 19,999 chickens.

The second NAHMS study of the poultry industry was conducted in 2004. The objective of this study was to provide a basic understanding of bird health, management, and movement practices of non-traditional poultry industries, such as live bird markets, gamefowl breeder flocks, and backyard flocks. The live bird market component of the study covered practices in the majority of the known poultry markets. The backyard flock component focused on flocks with less than 1,000 birds that were within one mile of a commercial poultry operation. The third portion of the study covered gamefowl breeder flocks. The average size of a participating gamefowl breeder flock was approximately 385 birds. Less than 4 percent of the flocks had more than 1,000 birds. While this does represent a slight overlap in some of the target population with the proposed small enterprise chicken study, the gamefowl breeder flocks serve a very specific purpose (exhibition and competition) and are unlikely to represent other types of small commercial poultry flocks primarily raised for food production.

This study is designed to fulfill a critical gap in our knowledge of the poultry industry. It will focus on farms with 1,000 to 19,999 chickens in an attempt to gain a better understanding of small-enterprise poultry operations.

The upper limit of 19,999 chickens per operation was chosen based on expert opinion. The results of the questionnaire pre-test add credibility to our expert's advice. If the upper limit of the size range were to go beyond the 19,999 chickens, the integrated commercial growers, who often have between 20,000 and 30,000 chickens, would be included. These contract farms are believed to be more closely related to large operations, in terms of management and disease, than to small operations. In addition, although the commercial table-egg layer study selected operations with 30,000 or more layers, the sample was primarily large contractors and the reporting units were their contracted farms. Twenty percent of the farms in the study had fewer than 30,000 birds. Therefore, APHIS has adequate information on the 20,000 to 30,000 size category.

[6] Additional information and publications resulting from previous studies are available at: http://www.aphis.usda.gov/vs/ceah/ncahs/nahms/poultry/.

2. Indicate how, by whom, and for what purpose the information is to be used. Indicate the actual use the Agency has made of information received from the current collection.

This data will be used to parameterize disease spread simulation models for avian influenza and other infectious poultry diseases. In general, disease spread models can be used for emergency preparedness, to compare disease control strategies, and to estimate resources needed in the event of an outbreak. For more information about the parameters required for simulation models, see Appendix A.

Data collected, analyzed, and interpreted will be disseminated to a wide variety of constituents. Producers will use the information to compare their operation's animal health and productivity with other small enterprise flocks. Producer groups and veterinarians will use information derived from analyses to improve preventative measures and information outreach efforts. Extension specialists will use the information to identify potential disease trends (risk) and for outbreak planning. State and Federal officials, responsible for regulatory veterinary medicine, will use the information to gain a more complete picture of animal health as a basis for program planning, response planning, and to evaluate the likelihood of various scenarios in disease incursion situations. State and Federal officials will also use the data to make scientifically based program and policy decisions and to direct priorities for research. Veterinary and agricultural students in universities in the U.S. will use these data to determine the occurrence, potential risk factors, and cost of animal disease as a foundation for training in health management, animal welfare, nutrition, and environmental impacts. Other potential benefits from this study include insight into a variety of management characteristics in this previously unsurveyed stratum of the poultry industry and fulfillment of part of the USDA's overall mission.

In summary, APHIS will use the data collected to:

- Address emerging and recurring issues in disease control related to poultry
- Provide parameters for disease simulation models and use models for avian influenza emergency preparedness, and comparison of disease control strategies.
- Determine which information sources on poultry are most likely to be used by the smaller commercial producer and so provide industry and government with the most effective conduit to dispense new information to this demographic.

Small Enterprise Chicken Study Data Collection Forms

NAHMS-165 – Backyard Flock Questionnaire – will be used by APHIS data collectors to collect information on certain aspects of backyard flock owner's practices ranging from general management to carcass and litter disposal. The form is divided into five sections.

Section one, *General Management*, collects data on how many different types of birds of any age are kept on premises (Chickens (egg, meat, other), turkeys, ducks, other water

fowl (geese, swan), pigeons/doves, ratites (ostrich, emu), game birds (pheasant, quail), guinea fowl, pet birds).

Section two – *Biosecurity* – collects data on what best describes the biosecurity precautions for the feet (boots or shoes dedicated solely for the poultry area, disposable boot/shoe covers, use of footbath before/after entry, scrub boots/shoes before or after entry, no requirements).

Section three – *Bird Movement* – collects data on if fertilized eggs for hatching were brought onto the premises last year.

Section four – *Carcass and Litter Disposal* – collects data on the number of birds that died or were destroyed last year not counting birds slaughtered for human consumption.

Section five – *About You* – collects data on why the owner has birds (family tradition, fun/hobby, income, food source, lifestyle, social interactions (4H), or any other reason (scale of 1 to 10)).

NAHMS-167 – Game Fowl Questionnaire – will be sent via U.S. Mail to all members of the United Game Fowl Breeder's Association (UGBA). The questionnaire will collect information on backyard flock management practices ranging from general management to carcass and litter disposal. The UGBA will mail this questionnaire out to their members to show support for the study and to enhance response rates. The form is divided into five sections.

Section one, *General Management*, collects data on how many different types of birds of any age are kept on premises (Chickens (egg, meat, other), turkeys, ducks, other water fowl (geese, swan), pigeons/doves, ratites (ostrich, emu), game birds (pheasant, quail), guinea fowl, pet birds (parrots, cockatiels, parakeets, finches, etc.), and any other type of birds).

Section two – *Biosecurity* – collects data on what best describes the biosecurity precautions for the feet (boots or shoes dedicated solely for the poultry area, disposable boot/shoe covers, use of footbath before/after entry, scrub boots/shoes before or after entry, no requirements).

Section three – *Bird Movement* – collects data on if fertilized eggs for hatching were brought onto the premises last year.

Section four – *Carcass and Litter Disposal* – collects data on the number of birds that died or were destroyed last year not counting birds slaughtered for human consumption.

Section five – *About You* – collects data on why the owner has birds (family tradition, fun/hobby, income, food source, lifestyle, social interactions (4H), or any other reason (scale of 1 to 10)).

NAHMS-168 – Live Bird Market Questionnaire – will be used by the APHIS data collector to collect information on the management practices of the market owner/manager. The form collects data on the volume of birds in the market, weekly sales, disinfection techniques, and extent of contact with other birds.

NAHMS-200 – Small Enterprise Chicken Questionnaire -- This form will be sent out to participants via U.S. Mail. If a response is not received after two weeks the questionnaire is stamped "Second Request" and sent with the original pre-survey letter. If a response is still not received two weeks after the second request is sent (one month after the initial mailing) a NASS data collector will call the producer to administer the questionnaire via Computer Assisted Telephone Interview (CATI). Up to seven calls will be made, if necessary, to administer the questionnaire. If no contact is made after seven attempts the respondent will be coded as inaccessible. There will not be any attempt to convert refusals other than a clear explanation of the importance of their voluntary participation during the phone call. Data from all completed mail questionnaires will be entered in a database by NASS. The CATI responses will be directly incorporated into the same database and no hard copy record will be available. Edit/validation specifications will be prepared by APHIS and incorporated by NASS.

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.

Up to seven telephone calls will be made to all mail nonrespondents and the questionnaire administered via Computer Assisted Telephone Interview [7] (CATI).

4. Describe efforts to identify duplication.

Literature searches for existing data relevant to the small operation component have been performed. Available data were reviewed and compiled from all known sources. Sources reviewed include; cooperative state research, private industry and professional publications, diagnostic laboratories, other Federal and State agencies, and universities. Personnel from Federal agencies and academia were consulted in their area of expertise to identify areas of potential duplication. No other entity is collecting this type of data on small operations.

5. If the collection of information impacts small business or other small entities, describe the methods used to minimize burden.

The study is designed to collect the minimum amount of data required from a minimum number of producers to ensure statistically and scientifically valid data. This is a voluntary program; it is at the discretion of the individual poultry producer to decide whether or not it is desirable for them to participate.

[7] See Appendix D for the CATI introduction script.

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

Specific segments of the U.S. poultry industry were examined in 1999 and 2004, but did not include the collection of data regarding management practices on small commercial chicken operations; such as the average flock size, prevailing production practices, frequency of production practices, and biosecurity and movement practices. The type, quality, and frequency of data collected by the NAHMS through national collections are unique in the U.S. No other entity/source is collecting and analyzing this type of information. Without collecting this type of information, the U.S.' ability to predict likely disease spread scenarios and detect trends in management, production, and health status on small commercial operations would be reduced or nonexistent. Small operations are an important area of interest which directly impacts the U.S. poultry industry as a whole. Determining the health status of the U.S. poultry industry must be expanded to include the small commercial sector. Additionally, parameters needed for disease simulation models would not be available. These models are very useful for emergency preparedness and response.

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

This information collection is consistent with guidelines established in 5 CFR 1320.5.

8. 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 recordkeeping, disclosure, or reporting form, and on the data elements to be recorded, disclosed, or reported. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, soliciting comments on the information collection prior to submission to OMB.

The Agency's notice of information collection activity was announced in the Federal Register on Tuesday, May 8, 2007, pages 26071 - 26072. Three comments were received.

- One comment addressed welfare concerns about the poultry industry and was not responsive to the proposed collection.

- A second comment indicated import restrictions would preclude the need for this study. The study is actually intended to assist with disease modeling that is needed for preparedness planning which is important regardless of importation policy.

- The third comment requested inclusion of low volume production and specifically operations with less than 1,000 birds. Our current need is to fill the information gap regarding small, primarily independent commercial operations with 1,000 to less than 20,000 birds. The NAHMS poultry 2004 study addressed health and management practices of operations with less than 1,000 birds. That has provided the information needed for the modeling and preparedness planning work for the smaller size operations and we do not need to include them in this collection.

Consultants used for the Small Enterprise Chicken Study during 2007 are:

Dr. Donna Carver
Associate Professor and Extension Veterinarian
Department of Poultry Science
North Carolina State University
919-515-5526

Dr. Kristy Pablionia
Assistant Professor and Avian Disease Diagnostic Veterinarian
Colorado State University
Ft. Collins, CO
970-491-1281

Dr. Ashley Hill
Assistant Professor, College of Veterinary Medicine
Colorado State University
Ft. Collins, CO
970-297-4050

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

There will be no payments or gifts provided to respondents.

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

Only summary estimates based upon the inference population will be reported to protect the privacy and confidentiality of individual producers/farmers. Only the NASS data collector will have knowledge of the participant's identity. All forms, data, and reports will refer to the respondent by a numeric code, which is assigned by NASS. All completed study forms will be stored securely in a limited access records vault. Names, addresses, and personal information will not be collected and therefore no connection can be made between a completed questionnaire and a respondent's information. Completed

questionnaires received via mail will have the name and address sticker "blacked out" by NASS prior to sending to APHIS.

NASS has statutory protection that allows them to keep on-farm data (such as producer name and address information) confidential. Several U.S. Codes apply to data collected by NASS:

- Title 7, Section 2276 - Confidentiality of Information.
- Title 18, Section 1902 - Disclosure of Crop Information and Speculation Thereon.
- Title 18, Section 1905 - Disclosure of Confidential Information Generally.

There are also additional protections available through the Confidential Information Protection and Statistical Efficiency Act (CIPSEA):

- Title V of E-Government Act of 2002, Public Law 107-347, Section 513. Fines and Penalties.
- Title V of E-Government Act of 2002, Public Law 107-347, Section 512. Limitations on Use and Disclosure of Data and Information.

Every NASS employee and appropriate APHIS employees or other individuals that may handle a questionnaire, or data coming from a completed questionnaire, are required to sign a form governing Certification and Restrictions on use of Unpublished Data. Furthermore, once reports are published, individuals are generally limited to the use of aggregate data files. Access to individual data files is restricted whenever possible to maintain respondent confidentiality.

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

There are no questions of a sensitive nature used in this collection activity.

12. *Provide estimates of the hour burden of the collection of information*.

A. A total of 2,531 burden hours are needed to complete this information collection activity. A detailed burden estimate has been included on the enclosed APHIS 71 Form.

B. Respondent costs: Estimated respondent costs for the information collection proposed is calculated based on a data collection estimate of $9.14 per hour[8]. The total respondent cost for the Small Enterprise Chicken Study is $23,133.34.

[8] NASS Farm Labor, published report for 2005, released November 18, 2005.

13. Provide an estimate of the total annual cost burden to respondents or record keepers resulting from the collection of information (do not include any hour burden shown in items 12 and 14).

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

14. Provide an estimate of annualized cost to the federal government.

The estimated cost to the Federal Government to administer the Small Enterprise Chicken Study is $ 68,203. For more specific information, please see the enclosed APHIS 79 form.

15. Explain the reasons for any program changes or adjustments reported in items 13 or 14 of the OMB form 83-I.

This is a program change of +1250 hours because of the addition of a new form to collect data on the Lil' Chickens.

16. For collections of information whose results will be published, outline plans for tabulation and publications.

Information from this study will be summarized immediately following the data collection and validation phase. Data will be entered into a database management system utilizing microcomputers or workstations, and statistical calculations will be performed; e.g., descriptive statistics including frequency distribution, and prevalence and point estimates of producer responses. Variance measures and confidence intervals for the point estimates will be calculated in order to describe the precision of the descriptive statistics generated. Findings will be utilized as inputs for computer modeling, so that prediction of future events can be estimated. Considerable effort has been placed on reducing the time between the end of data collection and release of a final publication. Hardcopy information from the study will be made available to producers, universities, researchers, practitioners, animal health related industries, Federal agencies, and legislators.

17. If seeking approval to not display the expiration date for OMB approval.

APHIS is not seeking approval to not display the expiration date for OMB approval on the forms used in this collection.

18. Explain each exception to the certification statement identified under "certification for paperwork reduction act submission," of the Act.

APHIS is able to certify compliance with all provisions under the Act.