

**SUPPORTING STATEMENT FOR INFORMATION COLLECTION**

**UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)**

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)**

**VETERINARY SERVICES (VS)**

**THE CENTERS FOR EPIDEMIOLOGY AND ANIMAL HEALTH (CEAH),**

**NATIONAL ANIMAL HEALTH MONITORING SYSTEM (NAHMS)**

**NAHMS DAIRY 2014 SUPPORTING STATEMENT FOR INFORMATION  
COLLECTION BY THE CENTERS FOR EPIDEMIOLOGY AND ANIMAL HEALTH  
(CEAH),**

**NATIONAL ANIMAL HEALTH MONITORING SYSTEM (NAHMS)<sup>1</sup>**

**OMB NUMBER 0579-0205**

**NAHMS DAIRY 2014 STUDY**

**July 2013**

**A. Justification**

This submission is a request for approval to reinstate IC 0579-0205 and to initiate the National Animal Health Monitoring System's (NAHMS) Dairy 2014 study, a previously approved information collection by the Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS). This is the fifth study of the U.S. dairy industry with previous studies conducted in 1991, 1996, 2002, and 2007. The 2014 study will consist of two phases: Phase I will be conducted by the National Agricultural Statistics Service (NASS) and will consist of computer-assisted telephone interviews (CATI) on operations with fewer than 30 dairy cows and an on-farm questionnaire for operations with 30 or more dairy cows. Phase II will be conducted by APHIS-VS and will consist of an on-farm interview and biologic sampling. Seventeen of the top

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<sup>1</sup> The National Animal Health Monitoring System is responsible for collecting national data on animal health and productivity from voluntary participants.

dairy-producing States<sup>2</sup> will be included in the study. The collection will support the following objectives:

2014 study objectives:

- 1) Describe trends in dairy cattle health and management practices
- 2) Describe management practices and production measures related to animal welfare
- 3) Estimate the prevalence of lameness and evaluate housing and management factors associated with lameness
- 4) Evaluate calf health from birth to weaning
- 5) Describe antibiotic use and residue prevention methods used to ensure milk and meat quality
- 6) Estimate the prevalence and antimicrobial resistance patterns of select foodborne pathogens.

The information collected through the Dairy 2014 study will be analyzed and organized into descriptive and interpretive reports. Several information sheets will be derived from these reports and will be disseminated by APHIS to producers, stakeholders, academia, veterinarians, and any other interested parties. The potential benefits to the industry from the Dairy 2014 study are scientifically valid national estimates of health and management practices of the Nation's dairy industry. Data collected will be used to measure change over time from previous NAHMS dairy studies. Participation in this survey is voluntary; it is up to the individual producer to decide whether it is desirable to participate.

**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.**

Collection and dissemination of animal health data and information is mandated by 7 U.S.C. § 391, the Animal Industry Act of 1884,<sup>3</sup> which established the precursor of APHIS, Veterinary Services, and 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.<sup>3</sup>

Collection, analysis, and dissemination of livestock and poultry health information on a national basis are consistent with the APHIS mission of protecting and improving American agriculture's

<sup>2</sup> California, Colorado, Idaho, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, New York, Ohio, Pennsylvania, Texas, Vermont, Virginia, Washington, Wisconsin..

<sup>3</sup> 7 United States Code § 391, and 7 U.S.C. § 8308, are available upon request.

productivity and competitiveness. In connection with this mission, the NAHMS program includes periodic national commodity studies to investigate current issues and examine general health and management practices used on farms. These studies are driven by industry and stakeholder interest. The information collected is not available from any other source. Without this study, APHIS would be unable to continue the trends analysis that began with the National Dairy Heifer Evaluation Project in 1991–92 that various parts of the industry as well as many Federal and State partners have come to rely on.

NAHMS will initiate the fifth national data collection for dairy through the Dairy 2014 study. NAHMS staff has completed a needs assessment which was a collaborative effort with producers, industry, extension specialists, Federal and State personnel, and university researchers. Information gathered through this needs assessment was used to determine the study objectives.

### **National Surveys Provide Baseline Information**

The Dairy 2014 study is part of an ongoing series of NAHMS studies on the U.S. dairy population. The first NAHMS dairy study, which provides a baseline for the 2014 study, was conducted in 1991. The National Dairy Heifer Evaluation Project (NDHEP), 1991–92, provided an overview of dairy herd management practices, morbidity, and mortality concentrating on the preweaned heifer. The objectives of the study were to provide information on the production and health levels of the U.S. dairy herd and to suggest factors that may affect morbidity and mortality in preweaned heifers. Subsequent studies, focusing on all ages of animals, were performed in 1996, 2002, and 2007.

Dairy 1996 was NAHMS' second national dairy on-farm monitoring activity. Data were collected from operations in 20 of the largest dairy-producing States. Dairy '96 obtained baseline information on all phases of dairy production and management. The sub-sampling phase of Dairy '96 collected fecal and blood samples which were tested for the presence of *Mycobacterium avium* subspecies *paratuberculosis*, *Salmonella*, *Escherichia coli*, and other dairy pathogens which have an economic impact on dairy operations. Eighty-three percent of the U.S. milk cow inventory and 80 percent of U.S. dairy operations were represented in that study.

Dairy 2002 gathered information that described changes in management practices and animal health in dairy operations from 1991–92 and 1996 to 2002. Data were collected from operations in 21 States to describe management practices on dairy operations. Dairy 2002 also identified factors associated with shedding of specific pathogens, described antimicrobial usage, and described animal health management practices and their relationships to dairy health. Approximately 85 percent of the U.S. milk cow inventory and 83 percent of U.S. dairy operations were represented in the study.

Dairy 2007 gathered information that described changes in management practices and animal health in dairy operations from 1991–92, 1996, and 2002 to 2007. Data were collected from operations in 17 States to describe management practices on dairy operations. Dairy 2007 also evaluated management factors related to cow comfort and removal rates. In addition, Dairy 2007 described current milking procedures on U.S. dairy operations and estimated the prevalence of

contagious mastitis pathogens, as well as other pathogens such as *Mycobacterium avium* subspecies *paratuberculosis* and food safety pathogens. The Dairy 2007 study represented 79.5 percent of U.S. dairy operations and 82.5 percent of U.S. dairy cows.

**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.**

Data collected, analyzed, and interpreted<sup>4</sup> is disseminated to a wide variety of constituents. Producers will use the information to compare their operation's animal health and productivity with other herds regionally and nationally. Producer groups and veterinarians will use information derived from analyses to improve preventive measures and information outreach efforts. Pharmaceutical and biologics companies will use the information to plan and develop research and marketing strategies for their products. Extension specialists will use the information to target producer education programs. 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 and to direct funding and make scientifically based policy decisions. Public health officials will use the information to estimate the magnitude of health conditions which affect public health. Research scientists will use the information to define current and future animal health issues and direct research funding. Veterinary and agricultural students 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. The benefit to the industry from the Dairy 2014 study is scientifically valid national estimates of health and management practices of the Nation's dairy industry.

APHIS will use the data collected to:

- Establish national and regional production measures (such as average weaning age) for producer, veterinary, and industry reference.
- Estimate or detect national and regional trends in disease emergence and animal movement.
- Address emerging issues.
- Examine the economic impact of health management practices.
- Provide estimates of both outcome (disease or other parameters such as bulk tank somatic cell count) and exposure (risks and components) variables that can be used in analytic studies in the future by APHIS.
- Provide input into the design of surveillance systems for specific diseases.

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<sup>4</sup> A complete list of publications using NAHMS Dairy 2007 data is available on the Web at: [http://www.aphis.usda.gov/animal\\_health/nahms/dairy/index.shtml#dairy2007](http://www.aphis.usda.gov/animal_health/nahms/dairy/index.shtml#dairy2007).

## **Dairy 2014 Study Data Collection Forms**

**NAHMS-307, General Dairy Management Questionnaire (enumerator version)**—will be administered on dairy operations with at least 30 dairy cows by a NASS enumerator to collect data on the producer’s dairy inventory, management practices, and preventive care practices. A unique NAHMS identification number is assigned to each operation. NASS will enter and validate data collected and provide consenting producer questionnaires to the APHIS State NAHMS coordinators. The complete dataset is then sent to NAHMS.

**NAHMS-314, General Dairy Management Questionnaire (CATI version)**—will be administered to producers on operations with fewer than 30 dairy cows via computer assisted telephone interview by NASS. The CATI questionnaire will consist of a subset of questions from NAHMS-307 and will collect data on the producer’s dairy inventory and selected management and preventive care practices. Each producer will also have the opportunity to complete the questionnaire and return by U.S. mail in place of the CATI. A unique NAHMS identification number is assigned to each operation. NASS will enter and validate data collected, and the complete dataset is then sent to NAHMS.

**NAHMS-308, Veterinary Services Visit Questionnaire**—will be administered to consenting producers with at least 30 dairy cows to collect data on management practices. Upon completion, the form (without producer contact information) is returned via U.S. mail to NAHMS in Fort Collins, Colorado, for data entry and validation. A copy is retained by the data collector to facilitate validation.

**NAHMS-309, Calf Blood, Colostrum, and Ear Notch Collection Record**—will be used by the Federal VMO or other authorized personnel to record information about colostrum, blood, and ear notch samples taken from calves on each participating farm. Samples will be sent to a State or university laboratory for analysis and test results will be returned to NAHMS. The form is returned via U.S. mail to NAHMS for data entry and validation and a copy is retained by the data collector to facilitate validation.

**NAHMS-306, Calf Fecal Collection Record**—will be used by the Federal VMO or other authorized personnel to record information on fecal samples taken from individual calves to be tested for presence of parasites or food safety pathogens. Samples will be sent to a State or university laboratory for analysis. Test results will be returned to NAHMS and will be added to the farm record database. The form is returned via U.S. mail to NAHMS for data entry and validation and a copy is retained by the data collector to facilitate validation.

**NAHMS-305, Calf Health “Diary Card” Questionnaire**—will be used by the producer to collect information about calf growth, milk feeding, housing types, vaccinations administered, disease incidence, and treatments from two calves per month on each participating farm. This information should take no more than 30 minutes to complete per calf. The form is returned via U.S. mail to NAHMS for data entry and validation.

**NAHMS-310, Environmental Sample Collection and Submission Record**—will be used by the Federal VMO to collect information on the location from which fecal samples from the adult cow farm environment are collected. These samples will be sent to the USDA Agriculture Research Service (ARS) Bacterial Epidemiology and Antimicrobial Resistance Research Unit for culture and characterization of potential food safety pathogens and commensal organisms. Test results will be returned to NAHMS. The form is returned via U.S. mail to NAHMS for data entry and validation and a copy is retained by the data collector to facilitate validation.

**NAHMS-311, Bulk Tank Milk Sample Collection and Submission Record**—will be used by the Federal VMO to collect information about bulk tank milk samples from dairy operations. Test results will be returned to NAHMS. The form is returned via U.S. mail to NAHMS for data entry and validation and a copy is retained by the data collector to facilitate validation.

**NAHMS-312, Animal Assessment Record**—will be used by the Federal VMO or other authorized personnel to collect information on various adult cow health measures from each participating farm. Assessments will include lameness, body condition, and hock condition scoring from a subset of adult dairy cows. The form is returned via U.S. mail to NAHMS for data entry and validation and a copy is retained by the data collector to facilitate validation.

**NAHMS-313, Producer Agreement**—is presented to the participant by the APHIS-designated data collector upon entry into Phase II of the NAHMS study. This form is designed to increase the participant's understanding of the study focus, highlight data safeguards, and explain participation requirements. After completing the form with the participant, it will be signed by the participant and the data collector. One copy of this agreement is left with the participant and one copy is retained by the data collector.

- 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.***

The data collection for small operations with fewer than 30 dairy cows will be conducted via computer-assisted telephone interviews (CATI) by NASS. The collection of basic, limited dairy management and health information via this method has proven successful and efficient for previous studies that require information on small operations, which account for a relatively large number of farms but a small proportion of the total animals in the entire study inference population. The other nine questionnaires will be paper copies only.

- 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.***

Literature searches for existing data relevant to the Dairy 2014 study 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, the National Milk Producers Federation (NMPF), American Association of Bovine Practitioners (AABP) and universities. Personnel from Federal agencies and academia were consulted in their areas of expertise to identify areas of potential duplication. No other entity/source is collecting and analyzing this type of information on the health of the U.S. dairy industry.

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

Several attempts to reduce the burden on small dairy operations have been incorporated. Only a subset of questions used for the larger dairy operations will be asked of the small dairies. This subset of questions will be collected via a short computer-assisted telephone interview. Those completing the questionnaire by computer-assisted telephone interview can do so in 30 minutes or less. In addition, many skips within the questionnaire have been incorporated to reduce respondent burden and frustration.

Both the small and large dairy components of the study are designed to collect the minimum amount of data required from a minimum number of operations with adult dairy cows to ensure statistically and scientifically valid data to fill the most critical information gaps identified by the stakeholders. Industry and producer input was solicited to ensure that information collected is relevant and timely. This is a voluntary study; it is at the discretion of individual producers to decide whether it is desirable for them to participate. Fourteen percent of the dairy operations participating in the survey will be small businesses.

**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.***

Seven years have passed since the last NAHMS dairy study, and a new look at the health and management practices of U.S. dairy operations is needed as evidenced by requests from stakeholders. An update of the key indicators for health, productivity, and management practices is needed which will contribute to an evaluation of trends with the studies conducted in 1991–92, 1996, 2002, and 2007. In addition, it is imperative that we continue to track disease levels through biologic sample testing. The type, quality, and frequency of data collected by NAHMS through national on-farm collections is unique; no other entity is collecting this type of information in the United States.

Without this type of national data, the ability to detect trends in management, production, and health status, either directly or indirectly, would be reduced or nonexistent. The possibility of assessing the reduction of risk to human health from *E. coli*, *Salmonella*, or *Campylobacter* due to management changes based on NAHMS data would also be nonexistent. Furthermore, the

ability to respond to international trade issues involving the health status of the U.S. dairy population would be severely reduced, potentially impacting the global marketability of animals, milk, meat, and byproducts.

**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:**

**a. Requiring respondents to report information to the agency more often than quarterly;**

On a subset of operations participating in the Dairy 2014 study, information will be collected on NAHMS-305, NAHMS-306, and NAHMS-309 forms more often than quarterly. For approximately 300 operations with at least 30 dairy cows that consent to participate, samples and information will be collected monthly from preweaned calves. The objectives of this specific aspect of the Dairy 2014 study will be to determine practices related to colostrum management, milk feeding, and housing from birth to weaning, estimate incidence of disease, evaluate growth rates on different planes of nutrition, and test for calves persistently infected with bovine viral diarrhea. Information on dairy calf health is lacking in the U.S. dairy industry, and it is expected that the information collected from this aspect of the Dairy 2014 study can be used to improve productivity.

- b. Requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt;**
- c. Requiring respondents to submit more than an original and two copies of any document;**
- d. Requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;**
- e. In connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- f. Requiring the use of statistical data classification that has not been reviewed and approved by OMB;**
- g. That includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- h. Requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

There are no other special circumstances that exist to cause this information collection to be conducted in a manner inconsistent with the guidelines of 5 CFR 1320.5.



**8. If applicable, 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. Specifically address comments received on cost and hour burden.**

The Agency's notice of information collection activity was announced in the Federal Register on May 9, 2013, pages 27183-27184. APHIS received one comment from Jean Public but it had no bearing on the information that will be collected.

**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. Only the data collectors collecting on-farm data will have knowledge of the participant's identity. All forms, data, and reports will refer to the respondent by the unique identification number, which is assigned by NASS. This link between participant identity and identification number will be destroyed once data collection, entry, and validation are complete (except in those cases where the producer indicated interest in further study). All completed survey 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 or laboratory results and a respondent's information. The information provided will be protected and will not be disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5. U.S.C. Sec. 552. APHIS will protect the information provided in accordance with its privacy and security policies and procedures.

Several U.S. Codes apply to data collected for the Dairy 2014 study:

- 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.
- Section 1619 of the 2008 Farm Bill

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

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior or attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

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. Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated.**

**A. 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.**

A total of 7,439 burden hours are needed to complete the Dairy 2014 study information collection activity. A detailed burden estimate has been included on the enclosed APHIS 71 Form.

**B. Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.**

Respondent costs: Estimated respondent costs for the information collection proposed is calculated based on an on-farm data collection estimate of \$11.91 per hour.<sup>5</sup> The total respondent cost for the Dairy 2014 study is \$88,598 (7,439 hours \*\$11.91).

**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). The cost estimates should be split into two components: (a) a total capital and start-up cost component annualized over its expected useful life; and (b) a total operation and maintenance and purchase of services component.**

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

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<sup>5</sup> NASS Farm Labor, published report, released May 21, 2013, is available upon request.

**14. Provide an estimate of annualized cost to the federal government. Provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.**

The estimated cost to the Federal Government is \$828,721. 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 reinstatement of 0579-0205 [Dairy 2007 Study] to investigate animal health related issues and examine general health and management practices used on dairy farms.

There will be 500 fewer respondents in this 2014 Study, 6,824 more annual responses, but 1,432 fewer burden hours. The reason for the increase in total annual responses is because three forms used in this collection will require more responses per respondent: the NAHMS 305 is asking for 24 responses per respondent, and both the NAHMS 306 and 309 are asking for 6 responses per respondent. However, the hours per response for completion of the forms are decreasing by 1.933 hours which will result in 1,432 fewer burden hours.

	<u>Dairy 2014</u>	<u>Dairy 2007</u>		
Respondents	2045	3544		
Non-respondents	1455	456		
Total	3500	4000	-500	decrease in respondents from 2007
Total Responses	16813	9989	6824	increase in total responses
Hours	7439	8862	-1423	decrease in hours from 2007
Cost Estimate	828,720.56	689,260.33	\$ 139,460.23	increase in cost from 2007

**16. For collections of information whose results are planned to be published, outline plans for tabulation and publication.**

Information from this survey 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, prevalence, and point estimates. Variance measures and confidence intervals for the point estimates will be calculated in order to describe the precision of the descriptive statistics generated. Standard errors will be published along with the point estimates. Findings will be utilized as inputs for simulation modeling so that future events can be modeled.

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 dairy producers, universities, researchers, practitioners, animal health related industries, Federal agencies, legislators, and any other interested party. Copies of current and past information from NAHMS are available at: [http://www.aphis.usda.gov/animal\\_health/nahms/](http://www.aphis.usda.gov/animal_health/nahms/).

***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.***

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.”***

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