Supporting Statement – Part A

COLONY LOSS SURVEY

OMB No. 0535-NEW

The National Agricultural Statistics Service is seeking approval to conduct a new group of surveys that will collect data related to the loss of honey bee colonies across the United States. In the Federal Register Notice the title of this group of surveys was referred to as "Pollinator Surveys". NASS will be changing the name of these surveys to simply "Colony Loss Surveys". At a future date NASS plans to conduct a separate survey of crop farmers to collect data on the cost of pollinating their crops. NASS felt that the title "Pollinator Surveys" may be confusing, thus warranting this change.

A. JUSTIFICATION

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.

Pollinators (honeybees) are vital to the agricultural industry for producing food for the world's population. Ad hoc surveys showed a dramatic rise in the number of disappearances of honeybee colonies in North America in late 2006; disappearances ranged from 10-15 percent annual colony loss in some areas to greater than 30 percent in other areas. Often called Colony Collapse Disorder (CCD), the condition occurs when worker bees from a beehive or a European honeybee colony abruptly disappear, with minimal mortality evident near the hive and food supply readily available. European beekeepers observed similar phenomena in Belgium, France, the Netherlands, Greece, Italy, Portugal, and Spain, and initial reports have also come in from Switzerland and Germany, albeit to a lesser degree, while the Northern Ireland Assembly received reports of a decline greater than 50 percent. The mechanisms of CCD and the reasons for its apparent increasing prevalence remain unclear. Possible factors include: infections with Varroa mites and other pathogens and viruses; pesticides, such as the neonicotinoid class; inadequate nutrition and loss of natural forage habitat; genetic factors; and changing beekeeping practices and stress on colonies from transportation.

The collapse or decline of honeybee colonies is significant economically because many agricultural crops worldwide are pollinated by European honeybees. According to the Agriculture and Consumer Protection

Department of the United Nations Food and Agriculture Organization, the worth of global crops with honeybee pollination was estimated to be close to $200 billion in 2005. Shortages of honeybees in the United States have led to substantial increases in the cost to farmers renting them for pollination services.

USDA and the Environmental Protection Agency (EPA), in consultation with other relevant Federal partners, are scaling up efforts to address the decline of honeybee health with a goal of ensuring the recovery of this critical subset of pollinators. NASS supports this *USDA – EPA CCD National Action Plan*, which emphasizes the importance of coordinated action to identify the extent and causal factors in honeybee and pollinator declines.

General authority for these data collection activities is granted under U.S. Code Title 7, Section 2204. This statute specifies that "The Secretary of Agriculture shall procure and preserve all information concerning agriculture which he can obtain ... by the collection of statistics ... and shall distribute them among agriculturists."

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.

The need for NASS to expand its programs was initiated by the Presidential Memorandum "Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators to take "steps to reverse pollinator losses and help restore populations to healthy levels." To this end, NASS is committed to collaborating with USDA and the other departments on a unified and complementary approach to the President's pollinator health initiative, and to deliver consistent, statistically defensible pollinator loss estimates to better inform decision makers.

By publishing state specific numbers that allow for the calculation of summer and winter loss, NASS will provide estimates useful for State Departments of Agriculture, state apiarists, and local and national beekeeping organizations. These numbers will also be useful for universities and pollinator researchers as independent loss data or checks on their own estimates. Government agencies with interest in this data are: Agricultural Research Service (ARS) to supplement their own research into colony loss, Economic Research Service (ERS) to support their research into the inputs of beekeeping, and Environmental Protection Agency's (EPA) research into pesticides effects on colony health and Colony Collapse Disorder (CCD).

NASS has reached out to APHIS-NAHMS about working together to collect objective, colony level data on mortality. Doing so would allow for a more detailed analysis describing the relationship between colony loss and specific stressors. At this time, NAHMS does not have a plan or the funding to engage in such an activity.

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.

NASS's Questionnaire Repository System (QRS) was built to enable the simultaneous creation of comparable paper and web survey instruments for almost any survey. This being a group of new surveys, NASS will develop an internet version along with a computer assisted telephone interview (CATI) hopefully during the first year of data collection. NASS utilizes multiple modes to collect data. Initially, NASS will mail paper questionnaires to the target sample and follow-up with telephone and face to face interviews with non-respondents. Once the internet and CATI versions are developed, they will be added to the other modes offered to respondents. This will allow the respondents to reply by whichever means they are most comfortable using.

NASS is scheduled to begin data collection on the Quarterly Loss surveys in April 2015. An annual loss survey for operations with fewer than 5 colonies will be done in January 2016 with the reference period of 2015. The first publication of data will be in the April-May time period of 2016.

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.

The National Agricultural Statistics Service cooperates with State Departments of Agriculture and land grant universities to conduct agricultural surveys. These surveys meet both State and federal needs, thus eliminating duplication and minimizing reporting burden on the agriculture industry. Data collected on these surveys are not available from any other source.

The Bee and Honey survey (OMB # 0535-0153) currently focuses on the honey production side of the beekeeping industry. Estimates published are for maximum number of honey producing colonies, honey production, price, and stocks on December 15th. The Bee and Honey survey provides a data

series spanning several decades and a maintained list frame of beekeepers. The current Bee and Honey survey collects data from operations with five or more colonies. NASS will be able to utilize the sample design established for the Bee and Honey survey by sub sampling approximately 3.300 operations for the Quarterly Colony Loss survey. The proposed colony loss surveys will bolster NASS's ability to describe changes in colony size by giving annual point-in-time estimates (as compared to the 5 year Census colony numbers) and provide consistent, year-to-year estimates on colony health.

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

Operators with fewer than five colonies will be contacted only once a year to collect annual data. The sample of operations with five or more colonies will need to be contacted quarterly in order to identify any patterns or seasonality that may be associated with the health of the colony and to minimize any memory bias that may occur. Information requested on the colony loss questionnaires can be provided with a minimum of difficulty by respondents, generally without having to consult their record books.

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

NASS has attended numerous meetings and tradeshows around the country and has obtained a great deal of input from data users and beekeepers as to what sort of published data they need and what sort of production data individual growers could provide. In order for the data to be the most useful, they need to be collected quarterly, so that it is easy for the respondents to recall the data and to help minimize any memory bias.
Operations with five or more colonies will be contacted by NASS to collect data for the previous quarter and operations with less than five colonies will only be contacted in January for the previous year's data.

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

There are no special circumstances associated with this information collection.

8. 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.

The Federal Register Notice soliciting comments was published on October 28, 2014 on pages 64165 – 64166. NASS received one public comment, it was from Rebecca Riley of the Natural Resources Defense Council (NRDC). The NRDC's comment suggested that NASS also collect data relating to the number of and the movement of bumble bee colonies around the United States. Renee Picanso, Associate Administrator of NASS responded "Pollinators are very important and NASS is working with other USDA agencies on this task. In the area of livestock, NASS works primarily with those commodities that are on the farm or are managed livestock commodities. NASS has had a honey bee program for many years. The new surveys would expand that program into collecting data on colony loss. Bumble bees are not one of the commodities that NASS considers to be farm located managed livestock. Whereas, we maintain a list of operators who have honey bees NASS does not maintain a list of individuals who have bumble bees.

Probably the most important item to mention is that NASS is working with a multitude of agencies and the collection of data for honey bees has been assigned to NASS because of the previous work we have done in this same area. Also, we would not want to duplicate the government's efforts in the collection of this data so NASS will not be collecting any information on bumble bees. Other agencies will be taking up the task of collecting information on pollinators other than honey bees." The comment and NASS's reply are both attached to this submission.

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 record-keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

NASS's first step in researching the issues of colony health and loss was to identify outside programs with a similar scope. Using the Bee Informed Partnership's (BIP) annual winter loss and colony management surveys as a guide, NASS drafted a questionnaire focused on colony loss and health. The first version of the questionnaire was presented to BIP and beekeepers with varying operation sizes. NASS inquired about how much information a beekeeper would be able to recollect, how much detail could be asked, and the best way to collect data from operators. Responses came back that NASS should focus on collecting data quarterly to strike a balance between memory

bias and respondent burden. NASS should also identify loss on a state basis and include clear descriptions in each question, as the beekeepers may not always agree on the meaning of certain terms.

A revised questionnaire was drafted and input was solicited from BIP, the American Beekeepers Federation (ABF), the Environmental Protection Agency (EPA), the Agricultural Research Service (ARS), and the Economic Research Service (ERS), the University of Wyoming, and the University of Georgia. NASS concluded from these discussions that consistent, defensible data needed to be collected on: number of colonies per state at a point in time, colonies lost, colonies added, instances of CCD, and colony health by state. The questionnaire was expanded to capture data relevant to all of these suggestions. NASS's proposal to publish data on a quarterly basis with point-in-time colony numbers meets the National Academy of Science's suggestions listed in the 2007 publication "Status of Pollinators in North America". The questionnaire was further refined to clarify movement between states, colony health issues, and management practices. Colony health in particular drew a lot of interest; there were concerns that NASS may not receive reliable data on specific diseases and pests as their symptoms were not immediately recognizable. NASS combined some health groups together into "catch-all" columns to improve reliability and meet publishing standards.

The questionnaire was then shown to beekeepers at the American Beekeeping Federation's (ABF) annual conference to see how the full questionnaire would be received. Response of the beekeepers was positive, but an issue with defining loss became apparent. At the conference, NASS met with representatives from Bee Culture Magazine and several ABF board members. On their suggestion, the original question regarding loss was split into two: one questioning completely collapsed colonies and one for colonies that required renovation (requeened, and/or nuc or package added.) NASS is confident that the questionnaires meet the data needs that were requested by stakeholders while minimizing the response burden on beekeepers.

9. Explain any decision to provide any payment or gift to respondents.

There are no payments or gifts to respondents.

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

Questionnaires include a statement that individual reports are kept confidential. U.S. Code Title 18, Section 1905 and U.S. Code Title 7, Section 2276 provide for the confidentiality of reported information. All employees of NASS and all enumerators hired and supervised under a cooperative

agreement with the National Association of State Departments of Agriculture (NASDA) must read the regulations and sign a statement of compliance

Additionally, NASS and NASS contractors comply with OMB Implementation Guidance, "Implementation Guidance for Title V of the E-Government Act, Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA), (Public Law 107-347). CIPSEA supports NASS' pledge of confidentiality to all respondents and facilitates the agency's efforts to reduce burden by supporting statistical activities of collaborative agencies through designation of NASS agents; subject to the limitations and penalties described in CIPSEA.

The following CIPSEA Pledge statement will appear on all future NASS questionnaires.

> The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107–347 and other applicable Federal laws, your responses will be kept confidential and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee and agent has taken an oath and is subject to a jail term, a fine, or both if he or she willfully discloses ANY identifiable information about you or your operation.

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

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should 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. Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.

Burden hours based on the average completion time per questionnaire are summarized below.

NASS has spoken with small beekeepers, and believes that quarterly data collections would be overly burdensome. Given the extremely low number of colonies per operator (fewer than five), memory bias should not play a large factor in accurately reporting number of colonies. Limiting the number of

contacts to just once a year will lower the response burden for this survey. Operations with fewer than five colonies also account for a disproportionately small percentage of the total colonies in the US; therefore, it is more cost efficient for NASS to only contact them once a year.

NASS based the tables in the questionnaires on work previously done by the Bee Informed Partnership (BIP) on collecting data related to colony health and mortality. BIP currently conducts an annual study of colony loss and health (through a NIFA grant that is soon to expire) and has experience in collecting and analyzing these data. An average beekeeper may not always be able to accurately identify what was negatively affecting their colonies. For example, certain stressors, such as Varroa, are readily apparent and can be easily spotted; while others, like tracheal mites and lesser known diseases, would require testing to verify and might be misidentified by the keeper. Therefore, NASS includes colony health questions that can be reliably and accurately reported by beekeepers.

Cost to the public for completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. Average annual reporting time of 8,353 hours, are multiplied by $25 per hour for a total annual cost to the public of $208,825. NASS regularly checks the Bureau of Labor Statistics' Occupational Employment Statistics. Mean wage rates for bookkeepers, farm managers, and farm supervisors are averaged to obtain the wage for the burden cost. The May, 2013, mean wage for bookkeepers is $17.91. The mean wage for farm managers is $35.20. The mean wage for farm supervisors is $22.09. The mean wage of the three is $25.07.

Estimated Annual Burden for Colony Loss Surveys											
Survey	Sample Size	Freq	Responses				Non-response				Total Burden Hours
			Resp. Count	Freq x Count	Min./ Resp.	Burden Hours	Nonresp Count	Freq. x Count	Min./ Nonr.	Burden Hours	
Colony Loss Survey - Operations with < 5 colonies (mailing)	20,000	1	8,000	8,000	15	2,000	12,000	12,000	2	400	2,40
Colony Loss Survey - Operations with < 5 colonies (non-resp. follow up)	12,000	1	7,998	7,998	15	2,000	4,002	4,002	2	133	2,13
Colony Loss Survey - Operation with > 4 colonies (mailing)	3,300	4	1,320	5,280	10	880	1,980	7,920	2	264	1,14
Colony Loss Survey - Operation with > 4 colonies (non-resp. follow-up)	1,980	4	1,320	5,279	10	880	660	2,641	2	88	96
Respondent Letter and Publicity Materials	23,300	1	18,638	18,638	5	1,553	4,662	4,662	2	155	1,70
Total	23,300		18,638	26,557		7,313	4,662	26,563		1,040	8,35

13. Provide an estimate of the total annual cost burden to respondents or record-keepers resulting from the collection of information.

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

14. Provide estimates of annualized cost to the Federal government; provide a description of the method used to estimate cost which should include quantification of hours, operational expenses, and any other expense that would not have been incurred without this collection of information.

NASS has a budget for FY 2015 and is working to collect colony loss data first, with data collection work to begin in April 2015. NASS is planning to conduct the cost of pollination survey in FY 2016. Based on funding provided in the Presidential Budget for FY 2016, NASS believes that work on both topics can be addressed. NASS' information collection plans will reflect the priority the President has placed on determining the causes and limiting the effects of Colony Collapse Disorder.
The total cost to the Federal Government for the Colony Loss Surveys is approximately $1.4 million annually. About $1,195,000 is for Federal salaries, $125,000 for telephone and field enumeration by National Association of State Departments of Agriculture (NASDA) enumerators, and $80,000 for printing, postage, data processing, etc.

15. Explain the reasons for, any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I (reasons for changes in burden).

This is a new data collection package so all changes are due to program changes.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Questionnaires will be mailed on or about the 1st of January, April, July and October for the preceding reference period. Operations that do not respond by mail or internet within a couple of weeks will be attempted by phone or personal enumeration. After data collection is complete, the data will be edited for reasonableness and completeness. The data will then be summarized. It is NASS policy to collect two years' of data when beginning a new data series before we publish any estimates. However, due to the sensitivity to these data, NASS plans to publish data after the first year of data collection is completed. NASS will then evaluate the data series to see if quarterly publications are possible or if NASS needs to continue to publish the data on an annual basis, with the data being

broken out on a quarterly basis within the publication.

Reference Period	Data Collection Begins	Survey Title	Publication Date
Jan – Mar, 2015	Apr. 1, 2015	Quarterly Colony Loss Survey	Apr. 2016 1/
Apr – Jun, 2015	July 1, 2015	Quarterly Colony Loss Survey	Apr. 2016 1/
Jul – Sept, 2015	Oct. 1, 2015	Quarterly Colony Loss Survey	Apr. 2016 1/
Oct – Dec, 2015	Jan. 2, 2016	Quarterly Colony Loss Survey	Apr. 2016 1/
Jan. – Dec 2015	Jan. 2, 2016	Annual Colony Loss Survey	Apr. 2016 1/
Jan – Mar, 2016	Apr. 1, 2016	Quarterly Colony Loss Survey	Apr. 2017 2/
Apr – Jun, 2016	July 1, 2016	Quarterly Colony Loss Survey	Apr. 2017 2/
Jul – Sept, 2016	Oct. 1, 2016	Quarterly Colony Loss Survey	Apr. 2017 2/
Oct – Dec, 2016	Jan. 2, 2017	Quarterly Colony Loss Survey	Apr. 2017 2/
Jan. – Dec 2016	Jan. 2, 2017	Annual Colony Loss Survey	Apr. 2017 2/

1/ Data will be collected for the four quarterly surveys targeting operations with five or more colonies. Annually, data will be collected from operations with one to four colonies. This data will be combined into an annual publication that will be released in late April 2016.

2/ Data for calendar year 2016 will be collected with the same frequency as in 2015 and released in April of 2017. In the 2017 release, comparisons between the two years can be made and any seasonal variances can be identified for both large and small operations. This will help to identify if changes in colony numbers are simply due to a seasonal variance rather than a change due to some external factor(s) (pests, chemicals, transportation, weather, etc.).

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.

There is no request for approval of non-display of the expiration date.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions" of OMB Form 83-I.

There are no exceptions to the certification statement.

February 2015

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