



United States Department of Agriculture
Office of Inspector General





United States Department of Agriculture
Office of Inspector General
Washington, D.C. 20250



DATE: January 20, 2012

AUDIT
NUMBER: 50099-0084-Hy

TO: Catherine E. Woteki
Under Secretary
Research, Education, and Economics

FROM: Gil H. Harden
Assistant Inspector General
for Audit

SUBJECT: USDA's Response to Colony Collapse Disorder

This report presents the results of our audit of the U.S. Department of Agriculture's Response to the Colony Collapse Disorder crisis. Your response to the official draft report, dated, November 4, 2011, is included in its entirety in the audit report, with excerpts and the Office of Inspector General's position incorporated into the relevant sections of the report. Based on the written response, we have accepted management decision for all recommendations in the report, and no further response to us is necessary.

Please note that Departmental Regulation 1720-1 requires final action to be reached on all recommendations within 1 year of management decision to avoid being listed in the Department's annual Performance and Accountability Report. Please follow your office's internal procedures in forwarding final action correspondence to the Office of the Chief Financial Officer.

We appreciate the courtesies and cooperation extended to us by members of your staff during our audit fieldwork and subsequent discussions.

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USDA's Response to Colony Collapse Disorder (50099-0084-HY)

Executive Summary

After the large-scale, unexplained losses of managed honey bee colonies in the United States during the winter of 2006-2007, investigators identified a set of symptoms that were termed Colony Collapse Disorder (CCD). The main symptom of CCD is the low number or absence of adult honey bees in a hive, but with a live queen still present. CCD threatens the production of honey and the production of crops dependent on bees for pollination. Bee pollination is responsible for \$15 billion annually in added crop value, particularly for specialty crops such as nuts, berries, fruits, and vegetables. The Department of Agriculture's (USDA) Agricultural Research Service (ARS) and National Institute of Food and Agriculture (NIFA)¹ co-chaired a collaborative effort through a newly-formed CCD Steering Committee² to define an approach to CCD with a number of other Federal agencies, State departments of agriculture, universities, and private research groups. They issued a CCD Action Plan in 2007 to address the CCD crisis through four components: survey and data collection, analysis of samples, hypothesis-driven research, and mitigation and preventative action. The Office of Inspector General (OIG) initiated this audit to evaluate the effectiveness of USDA's implementation of its response to the CCD crisis, as described in the 2007 CCD Action Plan, and USDA's implementation of the applicable provisions of the 2008 Farm Bill.³

During this audit, we reviewed the actions of seven USDA agencies responding to the CCD crisis: ARS, NIFA, the National Agricultural Statistics Service (NASS), the Animal and Plant Health Inspection Service (APHIS), the Natural Resources Conservation Service (NRCS), the Risk Management Agency (RMA), and the Farm Service Agency (FSA). Overall, we found that USDA's implementation of the CCD Action Plan was adequate in three of the plan's four components: analysis of samples, hypothesis-driven research, and mitigation and preventative action. With the exception of not completing a comprehensive survey of honey bee colony reduction and loss due to CCD, the various agencies' actions were appropriately responsive to the CCD Action Plan and consistent with the requirements of the 2008 Farm Bill.⁴

We found that although the CCD Steering Committee developed the CCD Action Plan approximately 4 years ago, USDA has not completed comprehensive surveys of honey bee colony production and colony loss due to CCD. This occurred because of insufficient funds and because the CCD Steering Committee did not adequately communicate the need for performing such a comprehensive survey. No one on the CCD Steering Committee was specifically

¹ Formerly the Cooperative State Research, Education, and Extension Service.

² The original CCD Steering Committee included representatives from four USDA agencies (ARS, NIFA, the Animal and Plant Health Inspection Service, and the Natural Resources Conservation Service), the Environmental Protection Agency, the Department of Defense, Pennsylvania State University, and Perdue University. As of June 2010 USDA's Office of Pest Management Policy had joined the committee, by which time neither the Department of Defense nor the two universities were still members.

³ The Food, Conservation, and Energy Act of 2008 (H.R. 2419).

⁴ We determined that RMA is not implementing a crop insurance program for CCD losses sustained by beekeepers, because its contracted study of insurance policies for bees (completed in August 2010) reported that an insurance program is not feasible.

authorized or designated to ensure that all parts of the CCD Action Plan were completed and that funding problems were resolved. The 2008 Farm Bill authorized \$2.75 million in annual funding for fiscal years 2008 through 2012 that could potentially have been used for this purpose. However, Congress never appropriated the funds and USDA officials did not take other measures to identify funds that might have been used to complete the surveys. As a result, the true extent of CCD in the United States has not been adequately assessed, despite USDA's use of significant resources for honey bee research and to address CCD. USDA's strides in combating CCD could be compromised by the lack of an adequate survey and data collection component, the lack of which impacts USDA's ability to assess the actual extent and prevalence of CCD in the United States. We believe if USDA conducts a comprehensive, nationwide survey, it would have baseline information to better allocate scarce resources to mitigate and prevent CCD.

Overall, OIG concluded that the Under Secretary for Research, Education, and Economics needs to strengthen oversight to ensure that USDA performs comprehensive surveys of honey bee colony production and health.⁵ The Under Secretary should also facilitate communications and funding to complete the surveys, so that the actual extent of CCD can be determined.

Recommendation Summary

We recommend that the Under Secretary seek adequate funding for NASS to conduct comprehensive surveys of honey bee colony production and health, provide the Steering Committee with written authority to adequately conduct a comprehensive survey of honey bee colony production and colony loss, and include NASS on the CCD Steering Committee. Further, we recommend that the Under Secretary assign responsibility and delegate authority to a USDA official to monitor the implementation of the CCD Action Plan and to follow up to ensure that all actions under the plan are completed.

Agency Response

In the written response to the audit report, dated November 4, 2011, the Under Secretary generally concurred with all the audit findings and recommendations. The response is incorporated in its entirety the end of the report.

OIG Position

Based on the Under Secretary's response, we are accepting management decisions on all recommendations in the report.

⁵ Responsibilities of the Under Secretary for Research, Education, and Economics include oversight of ARS, NIFA, and NASS. In July 2007, the Under Secretary announced in a press release that USDA researchers had finalized a CCD Action Plan.

Background and Objectives

Background

Beekeepers in the U.S. reported large-scale, unexplained losses of managed honey bee colonies during the winter of 2006-2007. Colony losses occurred when bees failed to return to their hives, which was an abnormal phenomenon for honey bees. Investigators identified a set of symptoms for this dramatic and unprecedented decline and it was termed Colony Collapse Disorder (CCD). The main symptom of CCD is the absence or low number of adult honey bees in a hive, even though a live queen is present. Often there is still honey in the hive, and immature bees are present. In addition to honey production, CCD also threatens the production of crops dependent on bees for pollination. Bee pollination is responsible for \$15 billion annually in added crop value, particularly for specialty crops such as nuts, berries, fruits, and vegetables. In 2006, pollinator-dependent crops reportedly comprised an estimated 23 percent of total U.S. agricultural production.

To address this crisis the Department of Agriculture (USDA) formed the CCD Working Team, which consisted of academic, private, and Federal scientists. The CCD Working Team's purpose was to coordinate the efforts of USDA's research agencies⁶ in defining an approach to combating CCD. During a 2-day workshop in April 2007, a newly-formed CCD Steering Committee of Federal program leaders and land-grant university scientists and administrators identified critical research and other actions that would be needed. The Agricultural Research Service (ARS) and the National Institute of Food and Agriculture (NIFA) co-chaired this Steering Committee, which included representatives from the Animal and Plant Health Inspection Service (APHIS), the Natural Resources Conservation Service (NRCS), the Department of Defense, the U.S. Environmental Protection Agency, and two universities (Pennsylvania State University and Purdue University). The CCD Steering Committee has no authority or responsibility over self-organized teams of CCD researchers or their work. Although the CCD Steering Committee was not established under the Federal Advisory Committee Act,⁷ representation on the committee was later limited to Federal agencies. This was done at the advice of the Office of the General Counsel, to ensure compliance with the Federal Advisory Committee Act.

A collaboration of government and non-government apiary⁸ experts predicted that beekeepers would be unable to meet the pollination demand for specialty crops unless researchers discovered a solution to CCD. In June 2007, the CCD Steering Committee and CCD Working Team developed a CCD Action Plan, which strategized how to address the CCD problem. Their plan addressed the problem through four components. The first component, survey and (sample) data collection, focuses on developing standardized survey processes to provide a baseline assessment of bee production and bee health. The second component, analysis of existing samples, focuses on analyzing previously collected samples to identify CCD causes. The third

⁶ The Agricultural Research Service and the National Institute of Food and Agriculture (formerly the Cooperative State Research, Education, and Extension Service).

⁷ Public Law (P.L.) No. 92-463, 86 Stat. 770 (1972) (codified in the Appendix to Title 5 United States Code (U.S.C.)).

⁸ An apiary (also known as a bee yard) is a place where beehives of honey bees are kept.

component, research, focuses on identifying factors affecting honey bee health, either individually or in combination.⁹ The fourth component, mitigative and preventive measures, focuses on improving bee health and habitat and countering known mortality factors. The CCD Action Plan identifies tasks that USDA agencies and others were to perform to support the plan's critical research and response needs under the four components.

While the CCD Action Plan addressed causes and potential cures for CCD, the 2008 Farm Bill¹⁰ authorized funding for research for fiscal years 2008 through 2012 and included provisions intended to reduce the impact of CCD. Annual authorizations totaled \$10 million for pollinator protection through research and extension grants, \$7.25 million to build ARS' research capacity to study CCD and other threats to pollinator health, and \$2.75 million for honey bee pest and pathogen surveillance. The 2008 Farm Bill provided potential monetary relief for apiary producers through either disaster payments or insurance and monetary incentives to improve habitat for managed and native pollinators on land enrolled in conservation programs. This was to be administered by NRCS, the Farm Service Agency (FSA), and the Risk Management Agency (RMA). Specifically, NRCS and FSA were permitted, but not required, to provide increased payments to producers who participate in conservation programs to improve managed and native pollinator habitats. RMA was to enter into a contract to study the feasibility of providing insurance to apiary producers. The 2008 Farm Bill required the Secretary to submit an annual report to Congress on the response to honey bee CCD, and to describe the progress made by USDA in investigating the cause or causes of honey bee colony collapse and the progress made in finding appropriate strategies to reduce colony loss.

Objectives

The overall objective of this audit was to evaluate the effectiveness of USDA's implementation of its response to the CCD crisis, as described in the CCD Action Plan, and its implementation of the applicable provisions of the 2008 Farm Bill. Specifically, our objectives were to:

- (1) determine if standardized survey procedures were developed by the National Agricultural Statistics Service (NASS) and APHIS as recommended by the CCD Action Plan, and whether ARS, NIFA, NASS, and APHIS sufficiently managed new survey and sample data collection;
- (2) assess whether ARS effectively managed analysis of existing samples;
- (3) evaluate whether ARS and NIFA effectively performed their research responsibilities to identify the causes of CCD;
- (4) determine whether ARS, APHIS, NIFA, and NRCS effectively implemented measures to mitigate and prevent CCD;

⁹ The CCD Action Plan identified four possible causes for CCD: new or reemerging pathogens; bee pests; environmental and nutritional stresses; and pesticides.

¹⁰ The Food, Conservation, and Energy Act of 2008 (H.R. 2419).

- (5) assess whether RMA implemented a crop insurance program for CCD losses sustained by beekeepers, and whether RMA adequately contracted for studies of insurance policies for bees; and
- (6) determine FSA's progress in implementing the 2008 Farm Bill's conservation practices for pollinators and the emergency assistance program for honey bee producers for CCD losses by reviewing controls established at the Headquarters level.

Section 1: Survey and Data Collection

Finding 1: USDA Needs To Perform a Comprehensive Survey of Honey Bee Colony Production and Health

Approximately 4 years have passed since the CCD Action Plan was developed, and although the Plan called for a comprehensive survey of honey bee colony production and colony loss due to CCD, we found that USDA has not completed the survey. We also found that although the 2008 Farm Bill authorized \$2.75 million in annual funding between 2008 and 2012 that could potentially have been used for this purpose, Congress never actually appropriated the funds, and Departmental officials did not take other measures to identify funds that might have been available to use for this purpose. We attributed this to the fact that no one on the CCD Steering Committee was specifically authorized or designated to ensure that all parts of the CCD Action Plan were completed and that funding problems were resolved. The CCD Steering Committee also did not adequately communicate the need, particularly to NASS, of performing such a comprehensive survey. This may have resulted from the fact that NASS was not a member of the CCD Steering Committee. As a result, the true extent and impact of CCD in the United States has not been adequately assessed, despite USDA's use of significant resources for honey bee research to address CCD. We believe that if USDA conducts a comprehensive nationwide survey, it would have baseline information that could be used to better allocate scarce resources to mitigate and prevent CCD.

The 2007 CCD Action Plan described the need for new surveys to determine the extent of CCD in the United States and the status of honey bee colony production and health. To accomplish this goal the Action Plan required, as a "Very High" priority, that NASS modify its annual honey survey to include information on pollination services and colony loss. The Action Plan explained that much-needed baseline data could not be obtained from NASS' existing Honey Survey. Criticisms by the National Academy of Sciences and the National Research Council supported the concern that NASS' annual survey of the beekeeping community did not monitor pollinating colonies unless they also produced honey. This limited the extent to which data could be extrapolated to estimate pollination services provided by the honey bee. In addition, NASS' methods resulted in undercounting because beekeepers with fewer than five hives were excluded. This could adversely affect USDA's ability to determine whether CCD is more prevalent among large or small colonies. Further, migratory beekeepers' colonies, leased in different regions of the country for different seasons, could be counted more than once.

The Steering Committee has, on its own, no means to collect information on the number of hives used for pollination. Therefore, the Committee must rely on NASS for this service. However, communications between NASS officials and members of the CCD Steering Committee were limited and NASS was not represented on the Committee.¹¹ Although NASS officials made

¹¹ CCD Steering Committee officials stated that NASS was invited by email to assist in developing the CCD Action Plan and to participate in conference calls about the USDA response to CCD. However, NASS never received an official request from the Steering Committee to help develop a survey to document pollination services or CCD losses.

several informal suggestions to the Steering Committee in 2008, their discussions did not cover this area and NASS officials were not asked to change their existing survey procedures.

The purpose of the Steering Committee is to enhance communication, coordination, and implementation of the Federal response to CCD, especially to coordinate CCD research, education, and extension responses among Federal agencies. The Steering Committee is currently made up of representatives from five USDA agencies (ARS, NIFA, APHIS, NRCS, and the Office of Pest Management Policy) and the U.S. Environmental Protection Agency. In 2007, the former Secretary of Agriculture endorsed the activities of the CCD Steering Committee and the CCD Action Plan, and made statements in 2007 and 2008 that implied its authority to implement the mandates of the CCD Action Plan. However, there is no written charter outlining the Committee's authorities and responsibilities, or any clear process for it to follow in coordinating USDA agency activities. There have been no Federal Register notices or proceedings under the Federal Advisory Committee Act.¹² The Steering Committee is not specifically authorized to provide oversight concerning the implementation of the CCD Action Plan. No one on the CCD Steering Committee has been designated to ensure that the various parts of the plan are completed and to follow up on problems, including insufficient funding.

The CCD Steering Committee's co-chairs believed that the lack of comprehensive NASS surveys did not preclude the performance of other work under the CCD Action Plan, particularly experimental work that looked at causes of bee decline and ways to mitigate this decline. However, the Steering Committee agreed that a comprehensive survey would help identify where CCD was prevalent and on what potential causal factors to focus, i.e., pests, pathogens, poor nutrition, and or pesticides. They felt that comprehensive NASS surveys would have been a good reference point for CCD colony losses, and that they would be useful for assessing the extent of the CCD problem. The Steering Committee also felt that data from a NASS colony decline survey might provide clues to the causes of honey bee decline, if correlated with other data, such as pesticide use patterns.¹³

Currently, NASS conducts an annual survey of honey producers only. Beekeepers that provide pollination services only are excluded. The survey report publishes the number of honey producing colonies, yield per colony, total honey production, stocks of honey, average price per pound, and value of production. For the 5-year census of agriculture, NASS conducts a survey that collects the number of bees owned, total colonies sold, and honey collected. However, NASS does not specifically collect any data concerning pollinator losses. Therefore, national surveys of pollinator colonies are needed to provide a more accurate estimate of honey bee hive populations, to include hives used for pollination as well as honey. These surveys were also intended to develop a standardized measure of pollinator decline due to CCD and other bee health issues each year. To meet this requirement of the CCD Action Plan, it would be necessary for NASS to modify its data collection methodologies. NASS would have to build its list of products to be surveyed and change the way it performs the annual honey survey. This would involve adding questions about pollination services and colony loss to NASS' annual honey survey. NASS officials wanted additional funds to expand the honey survey to include colony

¹²P.L. No. 92-463, 86 Stat. 770 (1972) (codified in the Appendix to Title 5 U.S.C.).

¹³ NASS collects, analyzes, and disseminates agricultural chemical usage data.

losses. They told us that two new surveys would be needed to address colony loss and pollination services, which had not been communicated to the CCD Steering Committee. NASS officials estimated that the annual costs for quarterly colony loss surveys would be \$450,000.¹⁴ In addition, they estimated that the cost of conducting an annual pollination survey would be \$1.5 million.

To support the Action Plan, researchers from ARS and APHIS assisted in conducting several surveys to better identify and refine the symptoms of CCD-affected bee populations, to assess winter colony losses, and to document the presence of diseases, pests, and parasites in colonies with poor health. However, these surveys were either of insufficient scope, or otherwise did not obtain sufficient information to provide a comprehensive baseline for honey bee production, including pollination services, and losses due to CCD. The 2009 CCD Progress Report to Congress documented these efforts, but also noted that NASS had no resources for a survey that included information on pollination services, colony loss, and honey production. The 2010 CCD Progress Report to Congress stated that NASS had discussed methods and procedures to incorporate colony loss questions into the current NASS national honey production survey, but again reported that NASS lacked the resources for a comprehensive survey.

Establishing an adequate control environment includes assigning authority and responsibility in a way that contributes to internal control.¹⁵ We believe that the process of developing and funding comprehensive NASS surveys of honey bee colony production and colony loss might have been expedited if higher-level officials had established an adequate control environment and assigned clear responsibility for conducting the survey.

USDA needs to provide funding for NASS to conduct a comprehensive survey of honey bee colony production and health. Given the importance of honey bee pollination to U.S. agriculture and the possible damage that could be caused by CCD, funding should be requested from Congress or reprogrammed from other research and extension areas. USDA needs to ensure that the CCD Steering Committee has the necessary written authority to get the needed comprehensive survey done accurately and timely. In addition, USDA should include NASS on the Steering Committee, to improve overall coordination between that agency and the Committee and to increase the likelihood that the comprehensive survey envisioned in the 2007 CCD Action Plan will be completed in a timely manner. USDA needs to assign responsibility and delegate authority to a USDA official to monitor the implementation of the CCD Action Plan and to follow up to ensure that all of the plan's actions are completed. We recommend that the Under Secretary for Research, Education, and Economics implement the following recommendations:

¹⁴ NASS officials told us that it would actually be more effective to survey colony losses quarterly, rather than annually, to capture changes that happen with colonies throughout the year as beekeepers lose and replace bees.

¹⁵ November 1999 GAO report entitled "Standards for Internal Control in the Federal Government" (GAO/AIMD-00-21.3.1).

Recommendation 1

Assign responsibility and delegate authority to a USDA official to monitor implementation of the CCD Action Plan, and to follow up to ensure that all actions under the plan are completed.

Agency Response

The Under Secretary assigned one ARS and one NIFA official joint responsibility for monitoring and implementing the CCD Action Plan and for following up to ensure that all actions under the plan are completed. The officials will assume this responsibility on November 1, 2011.

OIG Position

We accept management decision on this recommendation.

Recommendation 2

Provide adequate funding for NASS to conduct comprehensive surveys of honey bee colony production and health as outlined in the 2007 CCD Action Plan.

Agency Response

The Under Secretary agreed to conduct comprehensive surveys of honey bee colony production when the U.S. Congress appropriates funds for this purpose. In a followup e-mail, dated November 28, 2011, one of the officials assigned responsibility for implementing the CCD Action Plan stated that the CCD Annual Report to Congress for fiscal year 2010, would outline the need for the comprehensive NASS surveys and request that Congress provide the necessary funding to perform the surveys. The report would be submitted to Congress by December 31, 2011.

OIG Position

We accept management decision on this recommendation.

Recommendation 3

Provide the Steering Committee with written authority to adequately address the CCD Action Plan component to conduct a comprehensive survey of honey bee colony production and colony loss.

Agency Response

The Under Secretary agreed to draft by December 1, 2011, written authority for the Steering Committee to conduct the comprehensive survey of honey bee colony production and colony loss.

OIG Position

We accept management decision on this recommendation.

Recommendation 4

Include NASS on the CCD Steering Committee and ensure that responsibilities, deadlines, and accountability over goals and objectives are well established.

Agency Response

The Under Secretary agreed with the recommendation and has appointed two NASS officials to the CCD Steering Committee, effective October 17, 2011. The Steering Committee will ensure that the CCD Action Plan is updated and that responsibilities, deadlines, and accountability over goals and objectives are well established.

OIG Position

We accept management decision on this recommendation.

Scope and Methodology

We conducted our audit of USDA's implementation of its response to the CCD crisis, as described in the CCD Action Plan, and its implementation of the applicable provisions of the 2008 Farm Bill. We performed our fieldwork in Washington, DC, and Beltsville, MD, at the national offices of seven USDA agencies: APHIS, ARS, FSA, NASS, NIFA, NRCS, and RMA.

To accomplish our objectives, the audit included review of records; analysis of data; and interviews with officials from the seven USDA agencies, which included the CCD Steering Committee's co-chairs at ARS and NIFA. We performed procedures that specifically targeted the five objectives of the audit concerning survey and sample data collection, sample analysis, research, mitigation and prevention, and insurance. We did not contact research sites and industry officials because we were able to obtain information about their activities from USDA officials and from the internet.

APHIS

At APHIS Headquarters, we interviewed officials from Plant Protection and Quarantine, which regulates the import and transit of bees and provides safeguards from risks associated with the entry, establishment, and spread of animal and plant pests. We reviewed records concerning their activities under the CCD Action Plan. We focused on the National Honey Bee Survey, the Bee Diagnostic Network, bee import controls, and resources committed to CCD-related activities.

ARS

At ARS Headquarters, we determined the status of USDA's CCD-related intramural research efforts by reviewing records and interviewing the ARS co-chair of the CCD Steering Committee. We focused on ARS research projects and CCD Steering Committee operations, including liaison with other USDA agencies in support of the CCD Action Plan. We evaluated the adequacy of ARS' oversight of the review process for honey bee research. We also determined the status of accomplishments under the CCD Action Plan.

FSA

At FSA Headquarters, we reviewed records and interviewed officials from the Operations Review and Analysis Staff and the Production, Emergencies, and Compliance Division to identify apiary-related program changes that they made in response to the 2008 Farm Bill. This included a review of FSA's adjustments to conservation programs to encourage pollinator habitat, as well as a review of FSA's emergency assistance program for CCD-related apiary losses under the Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program.

NASS

At NASS Headquarters, we determined program changes made in response to the CCD Action Plan by reviewing records and interviewing appropriate officials from the Livestock Branch, which performs surveys of honey producing colonies. We focused on surveys of pollination services and colony loss.

NIFA

At NIFA Headquarters, we determined the status of USDA's CCD-related extramural research efforts by reviewing records and interviewing the NIFA co-chair of the CCD Steering Committee. We focused on NIFA's research grant projects and CCD Steering Committee operations. We evaluated NIFA-funded research according to the CCD Action Plan's Topics, Goals, and Objectives.

NRCS

At NRCS Headquarters, we identified program changes made in implementing the 2008 Farm Bill by reviewing records and interviewing the officials from the external compliance function. We focused on NRCS' review of conservation practice standards, its pollinator initiative under the Conservation Stewardship Program, and its means of encouraging Environmental Quality Incentives Program practices that would develop and protect pollinator habitats.

RMA

At RMA Headquarters, we interviewed officials from Compliance and reviewed records to identify program changes resulting from the 2008 Farm Bill's apiary provisions, focusing on the crop insurance program for CCD losses and the feasibility of insurance policies for apiaries.

In addition, we determined whether prior OIG and GAO audits conducted in the last 5 years were relevant to the CCD topics addressed in this audit. We determined, from OIG Investigative officials, whether ongoing investigative actions might be impacted by this audit. We reviewed 2009 Federal Managers' Financial Integrity Act assurance statements of the seven agencies involved in our audit, to identify issues that might affect the scope of this audit. We reviewed ARS' and NIFA's most recent Government Performance and Results Act reports to identify performance measures related to the areas covered in this audit.¹⁶ We reviewed a wide variety of CCD-related information that was available from the internet. This included the 2008 Farm Bill, the CCD Action Plan, the Secretary's 2009 and 2010 annual reports to Congress on USDA's response to honey bee CCD, the Congressional Research Service's 2010 report to Congress on Honey Bee CCD, a Public Broadcasting video ("Silence of the Bees"), and excerpts from the National Research Council's 2007 report on the Status of Pollinators in North America.

¹⁶ ARS' Annual Performance Report for fiscal year 2009 and Performance Plan for fiscal years 2010 – 2012 and NIFA's annual reports.

We performed our fieldwork from July 2010 through April 2011. Our performance review was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the review to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. In addition, NIFA provided to OIG data from its Current Research Information System database and its Sustainable Agriculture Research and Education projects database on bee grants. FSA provided to OIG data from its Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program data files on CCD payments. We make no representations regarding the accuracy or reliability of these data as information system controls were not part of our audit objective.

Abbreviations

APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
CCD	Colony Collapse Disorder
FSA	Farm Service Agency
NASS	National Agricultural Statistics Service
NIFA	National Institute of Food and Agriculture
NRCS	Natural Resources Conservation Service
OIG	Office of Inspector General
RMA	Risk Management Agency
USDA.....	United States Department of Agriculture

**USDA'S
UNDER SECRETARY FOR RESEARCH,
EDUCATION, AND ECONOMICS'
RESPONSE TO AUDIT REPORT**



United States
Department of
Agriculture

Research
Education
Economics

Office
of the Under
Secretary

Room 216W
Jamie L. Whitten Building
Washington, DC 20250-0110

November 4, 2011

SUBJECT: USDA's Response to OIG Audit Number 50099-84-Hy

TO: Gil H. Harden
Assistant Inspector General for Audit
Office of Inspector General

FROM: Catherine E. Woteki /s/
Under Secretary, REE
Chief Scientist, USDA

This memorandum contains a response to the findings and recommendations contained in the audit report on the Department of Agriculture's (USDA) response to Colony Collapse Disorder (CCD) from the agencies that fall within the USDA Research, Education, and Economics (REE) mission area (Agricultural Research Service, ARS; National Agricultural Statistics Service, NASS; and National Institute of Food and Agriculture, NIFA).

Recommendation 1: Assign responsibility and delegate authority to a USDA official to monitor implementation of the CCD Action Plan, and to follow up to ensure that all actions under the plan are completed.

REE Response: Working under the general direction of the Under Secretary for REE, [...],[...], ARS; and [...],[...], NIFA, jointly will be responsible for monitoring and implementing the CCD Action Plan and for following up to ensure that satisfactory progress is being made for relevant actions under the plan contingent upon funding. [...] and [...] will assume this responsibility on November 1, 2011.

Recommendation 2: Provide adequate funding for NASS to conduct comprehensive surveys of honey bee colony production and health as outlined in the 2007 CCD Action Plan.

REE Response: NASS will conduct comprehensive surveys of honey bee colony production and health as outlined in the 2007 CCD Action Plan when the U.S. Congress appropriates funds for this purpose. Because money has not been appropriated for this purpose, it is not possible to provide a proposed or actual completion date for this action.

Recommendation 3: Provide the Steering Committee with written authority to adequately address the CCD Action Plan component to conduct a comprehensive survey of honey bee colony production and colony loss.

REE Response: The Under Secretary for REE will, by December 1, 2011, draft written authority to the Steering Committee to conduct a comprehensive survey of honey bee colony production and colony loss. The survey is contingent upon Congressional appropriations.

Risk Management Agency Response: CCD is not a covered cause of loss under the Federal crop insurance Apiculture Pilot program. The condition is not addressed in the crop insurance policy, and the mortality or disappearance of bees is not covered. The existing Apiculture Pilot is based on the rainfall index or vegetative index, which address only the amount of rainfall or greenness in the insured area.

Recommendation 4: Include NASS on the CCD Steering Committee and ensure that responsibilities, deadlines, and accountability over goals and objectives are well established.

REE Response: The Under Secretary for REE, with assistance from the NASS Administrator, has assigned two senior-level NASS staff members, [...], [...], and [...], [...], to participate on the CCD Steering Committee. The appointment of [...] was effective May 2011; [...] appointment was effective October 17, 2011. The Steering Committee will ensure that the CCD Action Plan is updated and that responsibilities, deadlines, and accountability over goals and objectives are well established.

cc:

Edward B. Knipling, Administrator, ARS
Cynthia Clark, Administrator, NASS
Chavonda Jacobs-Young, Acting Director, NIFA
Gregory Parham, Administrator, APHIS
William Murphy, Administrator, RMA

Informational copies of this report have been distributed to:

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Administrator, FSA

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Administrator, NASS

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Director, NIFA (1)

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Chief, NRCS

Attn: Agency Liaison Officer (5)

Administrator, RMA

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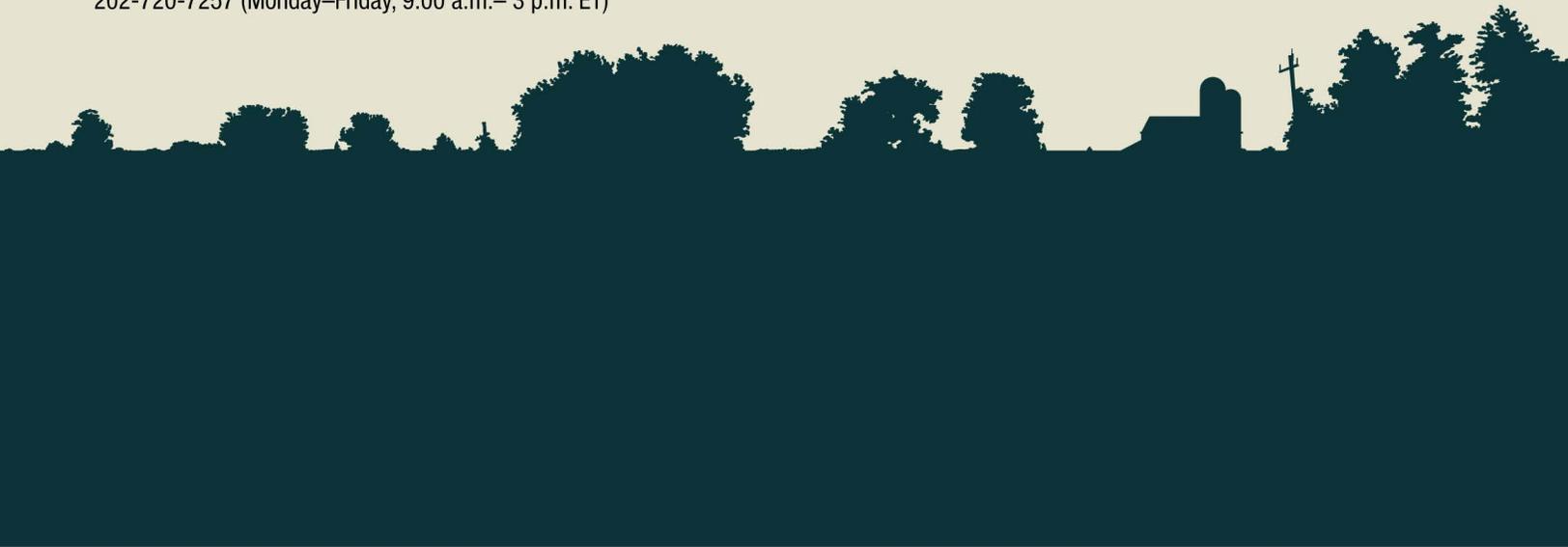
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