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STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER

July 12, 2024

Richard Ball
Commissioner
Department of Agriculture and Markets
10B Airline Drive
Albany, NY 12245

Re: Protection of Managed Pollinators
(Honey Bees)
Report 2023-F-43

Dear Commissioner Ball:

Pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law, we have followed up on the actions taken by officials of the Department of Agriculture and Markets (Ag&Mkts or Department) to implement the recommendations contained in our initial audit report, *Protection of Managed Pollinators (Honey Bees)* (Report [2021-S-40](#)).

Background, Scope, and Objective

Wild and managed pollinators are critically important to the health of New York State's environment and agricultural economy. The State has more than 7 million acres of agricultural production, and many of the State's leading crops – such as apples, cabbage, and berries – rely heavily on pollination by insects. These crops' plants use pollen to produce a fruit or seed and cannot reproduce without pollen carried to them by foraging pollinators. Honey bees are essential to the agricultural industry for the pollination services they provide. However, the pollinator population has declined drastically during the last three decades due to, among other issues, invasive pests and diseases (including American foulbrood – a highly contagious and very destructive bacterial disease), exposure to pesticides and other chemicals, and changing climate.

In 2016, the State developed the New York State Pollinator Protection Plan (Plan) to address the high loss of pollinators in the State. According to the Plan, the loss of managed honey bee colonies in the State exceeded 50% and some commercial migratory pollinators experienced colony losses in excess of 70%. Further, in December 2021, Article 15 of the Agriculture and Markets Law (Law) was amended to include the Cooperative Honey Bee Health Improvement Program (Program), which, among other actions, reinstated the apiary registration requirements that were eliminated in 2010. When registering their apiaries, beekeepers are required to report certain information to Ag&Mkts on the honey bees they manage, including the number of managed colonies they maintain, the county in which each of the colonies is located, current contact information of the individual(s) responsible for the care of the honey bees, and whether they intend to sell nucleus colonies (nucs).

One goal of the Program is to document the health of the State's managed pollinator population, including the presence of parasites, diseases, and environmental threats. To this end, Ag&Mkts conducts, at its discretion, general inspections of apiaries for the presence of infections, contagious or communicable diseases, harmful insects and parasitic organisms, and species or subspecies of bees that are injurious to the State's managed bee population, crops, or other plants. The Law established a zero-tolerance level for American foulbrood and allows Ag&Mkts to establish tolerance levels for other diseases and parasitic organisms.

Where beekeepers indicate they intend to sell nucs or queen honey bees, Ag&Mkts conducts apiary inspections to ensure and certify that nucs and queens are fit for sale. Where honey bees are being shipped into the State, the Law requires a permit from Ag&Mkts or a certificate from the state of origin attesting that the honey bees are disease-free. These documents should certify that a proper inspection was made no sooner than 60 days preceding the date of shipment.

For calendar years 2022 and 2023, Ag&Mkts performed a total of 752 inspections of 1,419 active apiaries. The inspection season begins in the spring with the required inspections of the sale of nucs and queen honey bees. According to Ag&Mkts officials, conducting these inspections first minimizes the risk of spreading infected colonies across the State. Another large portion of the inspection effort is performed in late summer and early fall when beekeepers prepare to migrate their colonies out of the State. Ag&Mkts conducts general inspections when time permits.

The objective of our initial audit, issued in January 2023, was to determine whether Ag&Mkts was adequately monitoring the health of honey bee pollinators to prevent and mitigate harmful effects to their populations. This audit covered the period from January 2017 through August 2022. The audit found that Ag&Mkts had established sufficient processes to meet its responsibility to certify nucs and queens for sale and to meet the needs of beekeepers requiring certificates to ship honey bees out of State. It was able to conduct all the required inspections requested for the sale of nucs and queens as well as all those requested for transport for the 5-year period ending December 2021. Further, Ag&Mkts had procedures in place for addressing the discovery of American foulbrood during inspections, in support of the Law's zero-tolerance level, but did not establish tolerance levels for other diseases, insects, or parasites. We also found that Ag&Mkts did not have support or reasonable assurance that it had identified the full population of active apiaries in the State, which is necessary for thorough monitoring and inspection purposes. In addition, Ag&Mkts could strengthen actions to combat disease and parasitic organisms within colonies by including additional tests for certain diseases, and could improve its efforts to ensure honey bees entering the State are healthy and free from disease.

The objective of our follow-up was to assess the extent of implementation, as of May 2024, of the two recommendations included in our initial audit report.

Summary Conclusions and Status of Audit Recommendations

Ag&Mkts officials made significant progress in addressing the issues identified during the initial audit. Of the initial report's two audit recommendations, both were implemented.

Follow-Up Observations

Recommendation 1

Improve the Department's registration and apiary inspection efforts, which may include but not be limited to:

- *Increasing efforts to identify and register active apiaries;*
- *Incorporating identification of additional diseases, insects, and parasites that may be contributing to colony losses in the State;*
- *Officially establishing and publishing tolerance levels for diseases or parasitic organisms and following up on treatment recommendations;*
- *Considering the use of alternative testing methods that will help preserve honey bee populations; and*
- *Expanding risk assessment criteria for targeting inspection activities.*

Status – Implemented

Agency Action – Ag&Mkts has made efforts to improve apiary registration and inspections. Ag&Mkts created brochures that provide guidance on honey bee health, instructions on how to register an apiary, and requirements for interstate travel of colonies. Ag&Mkts distributed these resources to existing registered apiaries and provided them as handouts at trade shows. As we recommended in the initial report, Ag&Mkts also started utilizing social media as a means to identify beekeepers advertising the sale of nucs and queens as well as information Ag&Mkts maintained on unregistered apiaries. The State apiculturist sent letters to the beekeepers identified on social media reminding them of the need for an inspection and certification of health prior to selling nucs and queens.

Ag&Mkts has incorporated identification of additional diseases, insects, and parasites that may be contributing to colony losses in the State. In 2023, Ag&Mkts obtained a research grant to test hive debris for the presence of Tropiclaelaps mites, viruses, and pathogens. Ag&Mkts officials stated they also plan to set traps to sample for non-native wasps (e.g., murder hornets). Further, according to officials, if an inspector suspects European foulbrood is present during an inspection, they take samples to test for antibiotic resistance and increased virulence. Ag&Mkts continues to wait for the Office of Information Technology Services to develop an improved apiary database. Once completed, officials stated staff should be able to create more robust reports with useful disease information.

After discussions with, and recommendations from, the Apiary Industry Advisory Committee (AIAC), Ag&Mkts decided not to adopt or publish new tolerance levels for diseases and parasites other than American foulbrood. However, Ag&Mkts, as recommended by AIAC, will follow established (but not published) tolerance levels for other diseases and parasites. For example, Ag&Mkts will continue to test for and recommend beekeepers treat for Varroa mites if the levels exceed two or three mites per 100 honey bees (2% or 3%), depending on the time of year.

The initial audit noted that Ag&Mkts' method of testing for the presence of Varroa mites – the alcohol wash – is itself destructive to honey bees, as it requires the killing of

approximately 300 honey bees per test. According to Ag&Mkts officials, they considered the use of the sugar roll method – a method that is approved by the U.S. Department of Agriculture and allows for the safe return of the honey bees (female bees will clean the tested bees) to the colonies. However, officials decided the method provided a less reliable outcome than the alcohol wash and therefore inspectors will continue to use that method when testing for Varroa mites.

Since our initial audit, Ag&Mkts has expanded inspectors' efforts on targeting nuc producers in the State as Ag&Mkts considers them the highest risk because used comb is moved around. Used comb can and does harbor American foulbrood spores and an inexperienced beekeeper would not be able to recognize the disease. From 2019 to 2023, Ag&Mkts increased inspections of nucs by 140%. Ag&Mkts also increased inspections of hobbyist beekeepers because they had been previously underinspected due to staffing limitations. From 2019 to 2023, Ag&Mkts inspections of hobbyists increased by 196%.

Recommendation 2

Develop additional procedures to ensure honey bee shipments into the State are certified disease- and parasite-free, and if warranted, consider reinspection upon entering the State.

Status – Implemented

Agency Action – In January 2023, Ag&Mkts updated its inspection manual to include procedures for inspecting incoming shipments of colonies, nucs, and equipment. The procedures require the State apiculturist to monitor incoming certificates for beekeepers returning from out of State and, where certificates are missing, contact the beekeepers and the certifying official in the state of origin to secure an inspection or health certificate. When no proof of inspection or health certificate is presented, the State apiculturist should provide the beekeeper's contact information to the nearest inspector, who should then initiate an inspection. Additionally, for beekeepers with colonies certified for out-of-State travel, Ag&Mkts should issue a letter reminding them of the requirement to obtain a permit or certificate of inspection prior to re-entering the State.

Ag&Mkts' procedures also include requirements focused on increasing awareness among apiary owners of the rules for interstate travel and certification. Ag&Mkts tracks interstate travel and certifications issued internally on an electronic spreadsheet. We received a copy of the spreadsheet and found it contains detailed data, including the beekeeper's name, state traveling to, date of departure, and the State certification number. We also obtained copies of the letters sent from Ag&Mkts to beekeepers traveling outside the State reminding them of the requirement to obtain a certificate of health prior to re-entering the State – the spreadsheet also contains a list of return inspections Ag&Mkts completed.

Major contributors to this report were Christopher Herald, CIA, CGAP; Jason Getman, CPA; and Norris Wilson, CIA.

We thank the management and staff of Ag&Mkts for the courtesies and cooperation extended to our auditors during this follow-up.

Very truly yours,

Amanda Eveleth
Audit Manager

cc: Shelly Taleporos, Department of Agriculture and Markets