

Vermont Apiary Status: 2023

Introduction

The Apiary Program at the Vermont Agency of Agriculture, Food & Markets (VAAFMM) registers, inspects, and provides education and training to Vermont's beekeepers in accordance with 6 VSA 172. This report presents the number of registered apiaries and colonies reported to VAAFMM in 2016, and from 2019 to 2023 (data from 2017 and 2018 were not available for this report; recovery efforts are underway), along with beekeeper-reported data on colony loss. *Varroa* mite pressures are determined through beekeeper reports and the VAAFMM inspection process. American Foul Brood (AFB) is a reportable disease that is verified by VAAFMM through laboratory analysis. This report contains additional data provided by the National Agricultural Statistics Service (NASS).

A colony is defined as one hive and its equipment, including bees, comb, and honey. An apiary is defined as a place where one or more colonies are kept.

Numbers of Honeybee Colonies and Apiaries in Vermont

The number of colonies registered in Vermont in 2023 at date of publication was 17,145. In 2016, for comparison, Vermont's number of registered colonies was 9,715, representing a 43% increase over the seven-year period.

The number of apiaries registered in Vermont in 2023 was 1,213. In 2016, the number of registered apiaries in Vermont was 1,215. The increase in the number of colonies alongside the relatively stable number of apiaries indicates an increase in the number of colonies in the existing apiaries. Table 2 provides the number of colonies and apiaries registered in 2016 and in 2019 through 2023. (*Note: As of date of publication, several large Vermont beekeeping operations have not registered for 2023.*)

In 2023 in Vermont there were 22 beekeepers who manage 100 or more colonies, representing 13,539 colonies; there were 40 beekeepers managing 20 to 99 colonies, representing 561 colonies; and there were 608 beekeepers managing 2,149 colonies (Table 2).

Table 1. Colonies and apiaries registered with VAAFMM for 2016, 2019-2023

Year	Number of colonies	Number of apiaries
2016	9,715	1,216
2019	14,398	1,236
2020	14,845	1,263
2021	15,110	1,251
2022	14,695	1,203
2023	17,145	1,213

Note: Data from 2017 and 2018 are being recovered.

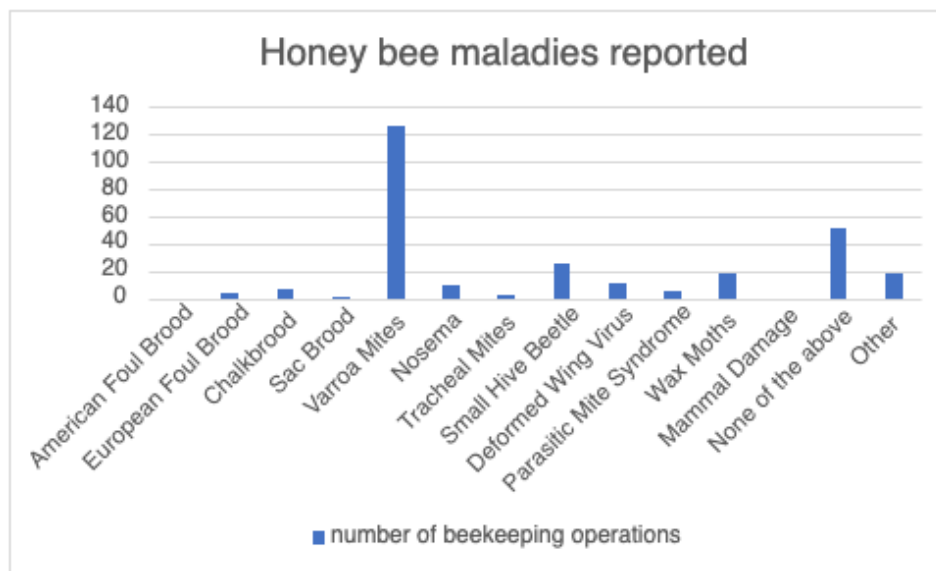
Table 2. Number of colonies managed by operation size, 2023

	Number of individual beekeepers	Total number of colonies managed
Backyard operations managing <20 colonies	608	2,149
Sideline operations managing 20-99 colonies	40	561
Commercial operations managing 100+ colonies	22	13,539

Parasites and Diseases of Honeybees in Vermont

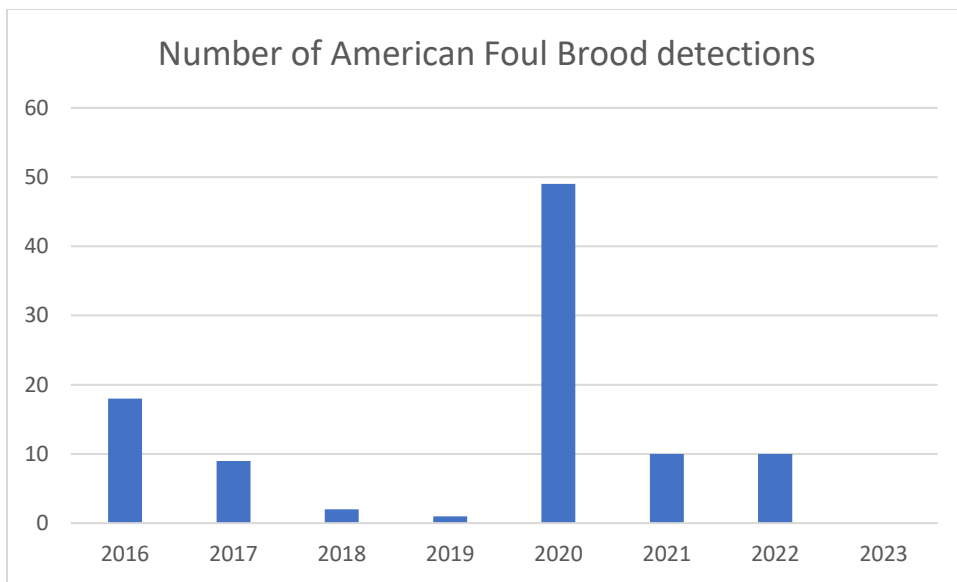
Varroa mites are the major pest of managed honeybees in Vermont. Table 3 shows the presence of honeybee maladies reported by beekeeping operations. *Varroa* mites are the most prevalent malady reported in Vermont apiaries. VAAFMM inspectors assist beekeepers in identifying elevated levels of mites in apiaries to assist in the management of this parasite. Management of *Varroa* mites is a major consideration for beekeepers in Vermont.

Table 3. Honeybee maladies reported by Vermont beekeeping operations, 2023



American Foul Brood is an extremely contagious disease. VAAFMM inspectors prioritize inspections and responses to the incidence of this disease. Fortunately the number of cases declined to zero in 2023.

Figure 1. American Foul Brood detections in Vermont, 2016-2023



Winter Colony Loss by Beekeepers

Winter colony loss can be an indicator of honeybee colony health. Winter colony loss reported by Vermont beekeepers is tracked by VAAFM through annual surveys, as well as by the National Agricultural Statistics Service (NASS) of the USDA.

For the VAAFM survey, beekeepers are asked to report colonies lost between September and April of the following year (winter loss). Beekeepers are asked to report the reasons for these losses. Beekeepers report losses due to weather, starvation, bears, *Varroa* mite infestation, and other reasons. For the two most recent years' data, the losses reported on the VAAFM survey for operations with more than 20 colonies are provided below.

2020-2021: **24.9%** based on responses, totaling 4,574 colonies

2021-2022: **28.7%** based on responses, totaling 7,208 colonies

The NASS Survey collects loss data by quarter (October to December and January to March). The NASS data are not provided in a format that allows segregation of the size of the operation. However, the process of identifying respondents to the survey likely results in contacting larger operators. Their results and the number of colonies represented by their survey for the reports from Vermont for the winter of 2020-2021 are shown in Table 4. The NASS Survey results can also be compared to the numbers reported nationally. Data for the winter of 2021-2022 are not yet available.

Table 4. NASS Survey results: Vermont, winter 2020-2021

	September to December	January to March
Vermont reporting		
<i>Total colonies reported</i>	8,000	7,500
<i>Percent loss reported</i>	3%	17%
National Reporting		
<i>Total colonies reported</i>	3,135,340	2,903,240
<i>Percent loss reported</i>	15%	16%

Additional data are available from NASS at:

<https://usda.library.cornell.edu/concern/publications/rn301137d?locale=en>

Conclusions

Colony numbers are at an all-time high in Vermont. There were no cases of American Foul Brood detected in 2023, compared to 49 cases in 2020. *Varroa* mites remain the biggest hive management challenge to Vermont's beekeepers. However, based on the increase in the number of colonies managed, Vermont beekeepers have learned to effectively manage colony stressors in the current environment and successfully maintain a thriving beekeeping industry in the state. The Vermont Agency of Agriculture, Food and Markets remains actively engaged in supporting beekeepers through education, outreach, and regulation.