

2023/2024 Maine Honeybee Survey Results

Demographics

293 beekeepers, representing 2,150 hives responded to the survey. Most (97.3%) identified as backyard/hobby beekeepers (<30hives) and 95.6% have their apiaries registered with the state of Maine. Most (74.4%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). The average number of years of beekeeping experience was 8.1 years (range 1-50).

Table 1: Beekeeping experience.

Years Beekeeping	N
1 to 3	87
4 to 6	82
7 to 9	42
10 to 20	63
21 to 30	10
31 to 40	2
41+	7

Practices

Participants started colonies by splitting already existing hives (41.6%), buying packages (40.3%) and/or nucs (39.6%). Just under 15% reported collecting swarms to start new colonies.

Most beekeepers (88.4%) provided supplemental food to their hives during the 2023/2024 beekeeping season. Half (50.0%) used sugar syrup to boost food stores and encourage comb building. More than half (65.5%) of beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. Twenty three percent of respondents reported using pollen patties or pollen substitute. Around 17% of respondents use Honey Bee Healthy, Hive Alive, essential oils or other feeding stimulants in their hives and 2.1% reported using probiotic supplements in their hives.

Less than 1% of respondents rented hives for agricultural pollination services. Participants reported harvesting approximately 31,044 pounds of honey (n= 280, average 111 pounds per beekeeper, 17.0 pounds per hive). Participants reported approximately 31,453 pounds of honey (n= 294, average 107 pounds per beekeeper, 20.6 pounds per hive) harvested in 2022/2023 and approximately 26,611 pounds of honey (average 81.9 pounds per beekeeper, 13.7 pounds per hive) harvested in the 2021/2022 survey.

Hive losses

State wide hive loss was 24.3% (summer: 5.2%, winter: 19.1%) between April 2023 and April 2024. This was a 13.1% drop from the previous season where respondents reported a state wide loss of 37.4% (summer: 8.1%, winter: 29.4%) between April 2022 and April 2023.

Table 2: Average losses by county from April 2023-April 2024.

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	4	30.8	38.5	69.2
Aroostook	8	0.0	31.6	31.6
Cumberland	97	5.3	19.9	25.2
Franklin	8	1.7	13.3	15.0
Hancock	19	1.5	10.2	11.7
Kennebec	16	13.8	25.9	39.7
Knox	8	9.4	18.8	28.1
Lincoln	10	2.6	20.5	23.1
Oxford	13	0.0	20.9	20.9
Penobscot	24	4.9	13.8	18.7
Piscataquis	5	0.0	53.8	53.8
Sagadahoc	8	4.1	26.5	30.6
Somerset	12	2.3	27.3	29.5
Waldo	7	12.5	18.8	31.3
Washington	7	11.1	63.0	74.1
York	39	11.3	19.0	30.3

For those beekeepers reporting losses, the most commonly reported causes of summer loss were queen loss/failure (47.8%), varroa mites/viruses (26.9%), unknown (23.9%), environmental factors (16.4%), and robbing (6.0%). Two hundred eighteen (76.5%) respondents reported no summer losses.

For those beekeepers reporting losses, the most commonly reported causes of winter loss were varroa mites/viruses (33.5%), unknown (30.4%), environmental factors (29.1%), starvation (23.4%), and queen loss/failure (22.2%). One hundred twenty-seven (44.6%) respondents reported no winter losses.

Pest and Diseases

Varroa mites/ viruses: Over eighty percent (81.1%) of respondents monitored for Varroa mites. Of those that monitor for mites, 71.4% did so using alcohol rolls, 44.6% using screen bottom boards, 20.3% using visual survey and 12.1% using drone brood survey. Just over 43% of beekeepers monitor for varroa, report using more than one method.

Beekeepers report using screen bottom boards (17.5%), brood disruption (6.7%) and drone brood removal (2.8%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 52.3%), Apiboxal vaporization (oxalic acid, 42.4%), Apiguard (thymol, 19.3%) and Apivar (amitraz, 15.8%). Twenty-eight beekeepers (9.8%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (97.5%) report using no antibiotic treatments in their hives, 2.5% used Fumadil-B and 0.4% used Terramycin.