

2022/2023 Maine Honeybee Survey Results

Demographics

304 respondents, representing 1,957 hives. Most (98.4%) identified as backyard/hobby beekeepers (<30hives) and 92.7% have their apiaries registered with the state of Maine. Most (71.7%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). The average number of years of beekeeping experience was 8.6 years (range 1-59).

Table 1: Beekeeping experience.

Years Beekeeping	N
1 to 3	81
4 to 6	92
7 to 9	39
10 to 20	65
21 to 30	12
31 to 40	10
41+	2

Practices

Participants started colonies by splitting already existing hives (41.4%), buying nucs (41.7%), and/or packages (36.4%). 10.9% reported collecting swarms to start new colonies.

Most beekeepers (89.1%) provided supplemental food to their hives during the 2022/2023 beekeeping season. About half (46.9%) used sugar syrup to boost food stores and encourage comb building. More than half (58.3%) of beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. Seventeen percent of respondents reported using pollen patties or pollen substitute. Almost 19% of respondents use Honey Bee Healthy, Hive Alive, essential oils or other feeding stimulants in their hives and 0.7% reported using probiotic supplements in their hives.

Less than 1% of respondents rented hives for pollination of agricultural. Participants reported harvesting approximately 31,453 pounds of honey (n= 294, average 107 pounds per beekeeper, 20.6 pounds per hive). Participants reported approximately 26,611 pounds of honey (average 81.9 pounds per beekeeper, 13.7 pounds per hive) harvested in the 2021/2022 survey and approximately 33,845 (average 86.1 pounds per beekeeper, 14.6 pounds per hive) harvested in the 2020/2021 survey.

Hive losses

State wide hive loss was 37.4% (summer: 8.1%, winter: 29.4%) between April 2022 and April 2023. This was 3.7% higher than the previous season where respondents reported a 33.7% loss (summer: 5.7%, winter: 28.0%) between April 2021 and April 2022.

Table 2: Average losses by county from April 2022-April 2023.

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	8	3.6	32.1	35.7
Aroostook	4	0.0	75.0	75.0
Cumberland	80	6.8	37.1	43.9
Franklin	5	15.4	38.5	53.8
Hancock	7	17.0	14.9	31.9
Kennebec	33	4.6	32.3	36.9
Knox	14	6.5	22.6	29.0
Lincoln	17	9.6	20.2	29.8
Oxford	7	24.1	48.3	72.4
Penobscot	32	11.0	21.2	32.2
Piscataquis	0	ND	ND	ND
Sagadahoc	7	6.9	24.1	31.0
Somerset	15	2.1	30.5	32.6
Waldo	15	4.2	18.3	22.5
Washington	3	16.0	48.0	64.0
York	50	8.0	29.1	37.1

The most commonly reported causes of summer loss were queen loss/failure (15.1%), varroa mites/viruses (5.6%), unknown (4.6%), environmental factors (4.6%), and robbing (3.9%). Two hundred eight (69.8%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (24.2%), queen loss/failure (15.8%), environmental factors (15.4%), unknown (13.4%), and starvation (9.7%). One hundred thirteen (37.9%) respondents reported no winter losses.

Pest and Diseases

Varroa mites/ viruses: Over eighty percent (82.2%) of respondents monitored for Varroa mites. Of those that monitor for mites, 64.5% did so using alcohol rolls, 46.1% using a sticky board, 21.6% using visual survey and 10.2% using drone brood survey. Many beekeepers (38.5%) that report monitoring for varroa using more than one method.

Beekeepers report using screen bottom boards (24.1%), brood disruption (13.5%) and drone brood removal (2.2%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 57.6%), Apiboxal vaporization (oxalic acid, 48.5%), Apivar (amitraz, 19.7%) and Apiguard (thymol, 19.7%). Twenty-four beekeepers (8.1%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (99.0%) report using no treatments in their hives, 0.3% used Fumadil-B and 0.7% used Terramycin.