

2021/2022 Maine Honeybee Survey Results

Demographics

329 respondents, representing 2,129 hives. Most (97.9%) identified as backyard/hobby beekeepers (<30hives) and 94.2% have their apiaries registered with the state of Maine. Most (70.2%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). The average number of years of beekeeping experience was 8.9 years (range 1-68).

Table 1: Beekeeping experience.

Years Beekeeping	N
1 to 3	114
4 to 6	101
7 to 9	24
10 to 20	53
21 to 30	14
31 to 40	14
41+	7

Practices

Participants started colonies by splitting already existing hives (41.0%), buying packages (39.5%), and/or nucs (34.0%). 15.5% reported collecting swarms to start new colonies.

Most beekeepers (76.0%) provided supplemental food to their hives during the 2021/2022 beekeeping season. About a third (35.0%) used sugar syrup to boost food stores and encourage comb building. 62.9% of beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. About a quarter of respondents (25.2%) reported using pollen patties or pollen substitute. Almost 23% of respondents use Honey Bee Healthy, Hive Alive or essential oils as feeding stimulants and 1.8% report using probiotic supplements in their hives.

Less than 1% of respondents rented hives for pollination of agricultural. The 388 participants reported harvesting approximately 26,611 pounds of honey (average 81.9 pounds per beekeeper, 13.7 pounds per hive). Participants reported approximately 33,845 (average 86.1 pounds per beekeeper, 14.6 pounds per hive) harvested in the 2020/2021 survey and 59,840 pounds of honey harvested (averages 191.8 pounds per beekeeper, 31.9 pounds per hive) in the 2019/2020 survey.

Hive losses

State wide hive loss was 33.7% between April 2021 and April 2022 (summer: 5.7%, winter: 28.0%). This was 10.2% lower than the previous season where respondents reported a 43.9% loss (summer: 9.2%, winter: 34.7%) between April 2020 and April 2021.

Table 2: Average losses by county from April 2021-April 2022.

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	14	4.0	17.6	21.6
Aroostook	3	10.0	15.0	25.0
Cumberland	87	8.6	28.5	37.1
Franklin	6	11.1	38.9	50.0
Hancock	17	1.2	20.5	21.8
Kennebec	27	6.7	26.0	32.7
Knox	16	1.4	34.2	35.6
Lincoln	28	3.6	23.7	27.2
Oxford	11	1.8	56.4	58.2
Penobscot	23	10.1	38.5	48.6
Piscataquis	1	0.0	50.0	50.0
Sagadahoc	17	6.2	14.8	21.0
Somerset	16	4.5	23.2	27.7
Waldo	16	13.3	56.6	69.9
Washington	3	16.7	16.7	33.3
York	41	6.7	32.6	39.3

The most commonly reported causes of summer loss were queen loss/failure (11.2%), varroa mites/viruses (4.6%), unknown (4.6%), environmental factors (4.0%), and robbing (2.4%). Two hundred fifty-one (76.3%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (19.5%), starvation (18.2%), environmental factors (17.0%), unknown (16.1%), and queen loss/failure (12.5%). One hundred twenty-one (36.8%) respondents reported no winter losses.

Pest and Diseases

Varroa mites/ viruses: Over eighty percent (81.2%) of respondents monitored for Varroa mites. Of those that monitor for mites, 67.0% did so using alcohol rolls, 49.2% using a sticky board, 24.2% using visual survey and 14.8% using drone brood survey. Many beekeepers (45.1%) that report monitoring for varroa using more than one method.

Beekeepers report using screen bottom boards (19.8%), brood disruption (7.9%) and drone brood removal (3.3%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 46.5%), Apiboxal vaporization (oxalic acid, 38.3%), Apivar (amitraz, 18.8%) and Apiguard (thymol, 16.7%). Thirty-nine beekeepers (11.9%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (95.4%) report using no treatments in their hives, 4.3% used Fumadil-B and 0.3% used Terramycin.