

## 2020/2021 Maine Honeybee Survey Results

### Demographics

388 respondents, representing 2,688 hives. Most (98.0%) identified as backyard/hobby beekeepers (<30hives) and 93.9% have their apiaries registered with the state of Maine. Most (70.6%) are also members of a beekeeping organization (MSBA, local MSBA chapters, EAS). Respondents keep bees for a variety of reasons, the top of which are hobby/enjoyment (89.4%), to help the bee population (66.3%), and bee product production for personal use (63.0%). The average number of years of beekeeping experience was 7.7 years (range 1-65).

Table 1: Beekeeping experience.

Years Beekeeping	N
1 to 3	135
4 to 6	128
7 to 9	31
10 to 20	65
21 to 30	16
31 to 40	7
41+	6

### Practices

Participants started colonies by splitting already existing hives (42.7%), buying nucs (41.5%), and/or buying packages (35.1%). 19.1% reported collecting swarms to start new colonies.

Most beekeepers (82.4%) provided supplemental food to their hives during the 2020/2021 beekeeping season. About a third (31.9%) used sugar syrup to boost food stores and encourage comb building. 54.3% beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. About 21.2% of respondents reported using pollen patties or pollen substitute. Sixteen percent of respondents use Honey Bee Healthy, Hive Alive or essential oils as feeding stimulants.

Less than 1% of respondents rented hives for pollination of agricultural. The 388 participants reported approximately 33,845 pounds of honey harvested (average 86.1 pounds per beekeeper, 14.6 pounds per hive). Participants reported approximately 59,840 pounds of honey harvested (averages 191.8 pounds per beekeeper, 31.9 pounds per hive) in the 2019/2020 survey and 35,003 pounds of honey harvested (average 97.2 pounds per beekeeper, 18.3 pounds per hive) in the 2018/2019 survey.

## Hive losses

State wide hive loss was 43.9% between April 2020 and April 2021 (summer: 9.2%, winter: 34.7%). This was 8% higher than last year where respondents reported a 35.8% (summer: 9.7%, winter: 26.1%) loss between April 2019 and April 2020.

Table 2: Average losses by county from April 2020-April 2021.

County	N	Summer Loss (%)	Winter Loss (%)	Total Loss (%)
Androscoggin	12	0.9	64.0	64.9
Aroostook	9	9.5	31.0	40.5
Cumberland	86	14.9	42.8	57.7
Franklin	6	0.0	29.2	29.2
Hancock	21	3.2	13.4	16.7
Kennebec	39	5.8	35.7	41.6
Knox	25	11.8	41.8	53.6
Lincoln	36	7.2	39.1	46.4
Oxford	15	6.4	46.2	52.6
Penobscot	33	12.1	20.3	32.4
Piscataquis	10	4.3	28.3	32.6
Sagadahoc	16	9.2	41.5	50.8
Somerset	12	4.3	31.4	35.7
Waldo	18	11.9	34.3	46.3
Washington	9	13.8	22.4	36.2
York	40	9.3	43.3	52.6

The most commonly reported causes of summer loss were queen loss/failure (13.9%), varroa mites/viruses (10.6%), environmental factors (7.2%), robbing (4.6%) and unknown (4.1%). Two hundred sixty-seven (68.8%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (32.2%), environmental factors (18.8%), unknown (17.5%), queen loss/failure (12.6%) and starvation (11.1%). One hundred fifteen (29.6%) respondents reported no winter losses.

## Pest and Diseases

Varroa mites/ viruses: Over three quarters (78.4%) of respondents monitored for Varroa mites. Of those that monitor for mites, 59.0% do so using alcohol rolls, 53.1% using a sticky board, 24.3% using visual survey and 17.0% using drone brood survey. Many beekeepers (42.3%) that report monitoring for varroa using more than one method. Beekeepers report using screen bottom boards (19.6%), brood

disruption (7.0%) and drone brood removal (1.5%) as part of their varroa mite management strategy. The most common miticides used were Formic Pro (formic acid, 44.8%), Apiboxal vaporization (oxalic acid, 39.9%), Apivar (amitraz, 13.6%) and Mite-Away-Quick-Strips (formic acid, 12.9%). Forty-two beekeepers (10.8%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (94.9%) report using no treatments in their hives, 4.1% used Fumadil-B and 1.0% used Terramycin.