## 2019/2020 Maine Honeybee Survey Results

### Demographics

312 respondents, representing 1875 hives. Most (97.8%) identified as backyard/hobby beekeepers (<30hives) and 96.5% have their apiaries registered with the state of Maine. Most (69.6%) 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 (94.6%), bee product production for personal use (72.1%), and to help the bee population (67.0%). The average number of years of beekeeping experience was 8.4 years (range 1-66).

Table 1: Beekeeping experience.

| Years Beekeeping | N |
|---|---|
| 1 to 3 | 115 |
| 4 to 6 | 81 |
| 7 to 9 | 35 |
| 10 to 20 | 49 |
| 21 to 30 | 10 |
| 31 to 40 | 12 |
| 41 to 70 | 6 |
| unknown | 4 |

### Practices

Participants started colonies by buying packages (46.5%), buying nucs (39.7%), and/or splitting already existing hives (36.5%). 18.9% reported collecting swarms to start new colonies.

Most beekeepers (79.5%) provided supplemental food to their hives during the 2019/2020 beekeeping season. About a third (31.4%) used sugar syrup to boost food stores and encourage comb building. 55.1% beekeepers used either fondant, candy boards or dry sugar for supplemental winter feeding. About 17.3% or respondents reported using pollen patties.

Less than 1% of respondents rented hives for pollination of agricultural. The 312 participants reported approximately 59,840 pounds of honey harvested (averages 191.8 pounds per beekeeper, 31.9 pounds per hive). Participants reported approximately 35,003 pounds of honey harvested (average 97.2 pounds per beekeeper, 18.3 pounds per hive) in the 2018/2019 survey and 15,093.5 pounds of honey harvested (average 71.2 pounds per beekeeper, 13.1 pounds per hive) in 2017/2018 survey.

### Hive losses

State wide hive loss was 35.8% between April 2019 and April 2020 (summer: 9.7%, winter: 26.1%). This is 10% lower than last year where respondents reported a 45.2% (summer: 6.2%, winter: 39.0%) loss between April 2018 and April 2019.

Table 2: Average losses by county from April 2019-April 2020.

| County | N | Summer Loss (%) | Winter Loss (%) | Total Loss (%) |
|---|---|---|---|---|
| Androscoggin | 11 | 0.0 | 23.7 | 23.7 |
| Aroostook | 4 | 41.4 | 20.7 | 62.1 |
| Cumberland | 72 | 9.6 | 27.9 | 37.5 |
| Franklin | 6 | 27.3 | 12.1 | 39.4 |
| Hancock | 19 | 3.1 | 29.7 | 32.8 |
| Kennebec | 31 | 12.0 | 26.5 | 38.6 |
| Knox | 20 | 15.7 | 34.3 | 50.0 |
| Lincoln | 22 | 6.4 | 16.7 | 23.0 |
| Oxford | 19 | 4.4 | 25.7 | 30.1 |
| Penobscot | 29 | 11.4 | 22.5 | 33.9 |
| Piscataquis | 4 | 0.0 | 19.0 | 19.0 |
| Sagadahoc | 10 | 13.3 | 22.2 | 35.6 |
| Somerset | 9 | 13.3 | 33.3 | 46.7 |
| Waldo | 17 | 11.3 | 30.2 | 41.5 |
| Washington | 3 | 5.6 | 16.7 | 22.2 |
| York | 36 | 14.2 | 40.0 | 54.2 |

The most commonly reported causes of summer loss were queen loss/failure (13.8%), varroa mites/viruses (11.3%), unknown (8.7%), and environmental factors (5.1%). Two hundred seventeen (69.6%) respondents reported no summer losses.

The most commonly reported causes of winter loss were varroa mites/viruses (25.6%), unknown (17.0%), environmental factors (16.0%), and queen loss/failure (14.1%). One hundred eighteen (37.8%) respondents reported no winter losses.

**Pest and Diseases**

Varroa mites/ viruses: Three quarters (75.0%) of respondents monitored for Varroa mites. Of those that monitor for mites, 47.4% do so using alcohol rolls, 45.3% using a sticky board, 16.2% using sugar rolls, and 16.2% using drone brood survey. Many beekeepers (43.6%) that report monitoring for varroa use more than one method of monitoring. Beekeepers report using screen bottom boards (28.5%), brood

disruption (7.1%) and drone brood removal (2.9%) as part of their varroa mite management strategy. The most common miticides used were oxalic acid (vaporization, 51.0%), Formic Pro (formic acid, 34.6%), Mite-Away-Quick-Strips (formic acid, 15.7%), and Apiguard (thymol, 14.1%). Twenty-three beekeepers (7.4%) reported no varroa mite management.

Other Pests/Diseases: Most respondents (87.2%) report using no treatments in their hives, 12.5% used fumagillin and 2.2% used Terramycin.