# 2020-2021 LCBA Winter Loss Report Part 1 by Dewey M. Caron

Lane Beekeepers were encouraged to complete a web-based survey document in a continuing effort to define overwintering losses/successes of backyard beekeepers in Oregon and Washington. This was the 12th year of such survey activity. I received 328 responses from OR backyarders, keeping anywhere from 1 to 40 colonies; LCBA members sent in 38 surveys, 17 fewer than last year, reporting on 176 fall colonies.

**Overwintering losses of LCBA respondents = 32** %, an improvement of three percentage points from 35% average losses last year. Loss level was one percentage point higher than the 13-year average losses of Lane beekeepers. The trend line of losses however is an increasing one. Percent losses, determined by hive types were 31% Langstroth 8 and 33% for Langstroth 10 frames hives (26 and 124 fall colonies respectively). Nuc losses were 2 of 3 fall colonies =67%. Of three Top bar hives none were lost. Two of 8 Warre hives were lost (38%) and the one "other," a valkyrie (horizontal) hive, did not survive. The **attached figure shows LCBA losses for past 8 years**. Solid line is loss trend.

The survey also asked for hive loss by **hive origination**. Members reported 25% loss of previously overwintered colonies, a loss of 27% packages (16 total), while nuc (41% - 32 total), swarm (36% - 39 total) and split (43% - 28) losses were intermediate.

Typical of the statewide data, the LCBA respondents are largely new beekeepers. 63% of LCBA respondents had 1 to 3 fall colonies, another 21% had 4 to 6 colonies while56 respondents (13%) had 9+ colonies – maximum number for any respondent was 26 colonies. Not everyone had loss. In fact, 16 members reported NO LOSS (42% of survey respondents) while 7 respondents (18%) reported total winter loss of colonies. Heaviest loss was 11 colonies.

## Reasons for Colony Loss/Acceptable loss

We asked of individuals that had colony loss to estimate what the likely reason(s) might have been, Multiple responses were permitted. Eleven individuals (50%) of those having losses said varroa, 8 said weak (36%), 7 said Don't know, 6 indicated queens. Four said poor overwintering and 2 said yellow jackets.

## Why colonies die?

There is no easy way to verify reason(s) for colony loss. Colonies in the same apiary may die for different reasons. Examination of dead colonies is, at best confusing, and, although some options may be ruled out, we are often left with two or more possible reasons for losses. There is a good deal of variance in opinion as to what might be an acceptable loss level. We are dealing with living animals which are constantly exposed to many different challenges, both in the natural environment and the beekeeper's apiary.

Major factors in colony loss are mites and their enhancement of viruses especially DWV (deformed wing virus) and declining nutritional adequacy/forage and diseases. Pesticide exposure in the agricultural environment weakens colonies. Yellow jacket predation is a constant danger to weaker fall colonies, Management, especially learning proper bee care in the first years of beekeeping, remains a factor in losses. What effects our changing environment such as global warming and other factors, play in colony

losses are not at all clear. There is no simple answer to explain the levels of current losses nor is it possible to demonstrate that they are necessarily excessive for all the issues facing honey bees in the current environment.

## Management selections and losses

I will be preparing a report of how managements affected winter losses similar to earlier years. A full report will be posted to pnwhoneybeesurvey.com for the state respondents along with a **LCBA individual club report** when that analysis is completed. I thank all LCBA members who sent in a report. Please get in touch directly if you have questions or comments. dmcaron@udel.edu