

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

Linn Benton 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; LBBA members sent in 26 surveys, 10 fewer than last year, reporting on 108 fall colonies.

Overwintering losses of LCBA respondents = 34 %, same level as last year. Loss level was 6 percentage points lower than the 6-year average losses of Linn Benton beekeepers. The trend line of losses is improving with the lower losses the last 2 years; 40% loss level is the same as the total Oregon beekeeper population average over the past dozen years but double what commercial beekeepers experience.

Percent losses, determined by hive types were 51% Langstroth 8 and 25% for Langstroth 10 frames hives (41 and 70 fall colonies respectively). Nuc losses were 1 of 5 fall colonies =20%. Of four Top bar hives all were lost. Two Warré hives were alive and the one “other,” a horizontal hive, also survived. The **attached figure shows LBBA losses for past 7 years**. Solid line is loss trend.

The survey also asked for hive loss by **hive origination**. Members reported 37% loss of previously overwintered colonies, a loss of 22% packages (18 total), while nuc (31% - 16 total), swarm (18% - 17 total) and split (30% - 13) losses were intermediate.

Typical of the statewide data, the LBBA respondents are largely new beekeepers. 50% of LBBA respondents had 1 to 3 fall colonies, another 30% had 4 or 5 colonies while 4 respondents (15%) had 8+ colonies – maximum number for any respondent was 10 colonies. Not everyone had loss. In fact, 7 members reported NO LOSS (27% of survey respondents) while 9 respondents (35%) reported total winter loss of colonies. Heaviest loss was 5 colonies by 2 individuals.

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. Ten individuals (53%) of those having losses said varroa, 9 said queens, 7 (41%) said starvation, 5 indicated weak colonies (29%) 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 an **individual club report** when that analysis is completed. I thank all LBBA members who sent in a report. Please get in touch directly if you have questions or comments. dmcaron@udel.edu

