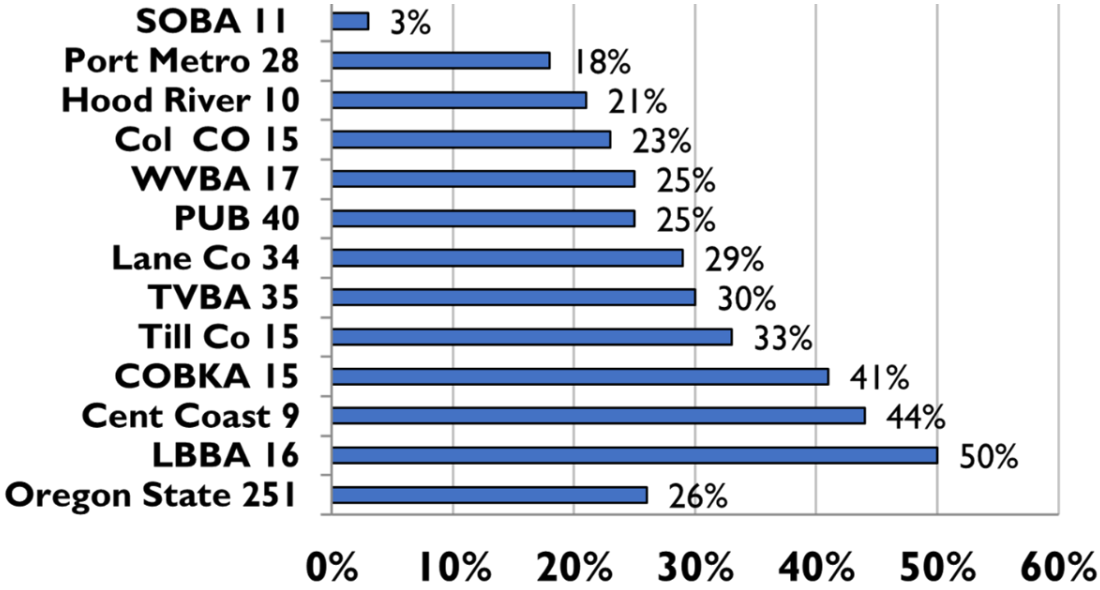
2024-2025 LCBA Winter Loss Report by Dewey M. Caron

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 16th year of such survey activity. I received 251 responses from OR backyarders, keeping anywhere from 1 to 49 colonies; LCBA members sent in 34 surveys, nearly double the response rate last year. These 34 individuals had 156 fall colonies.

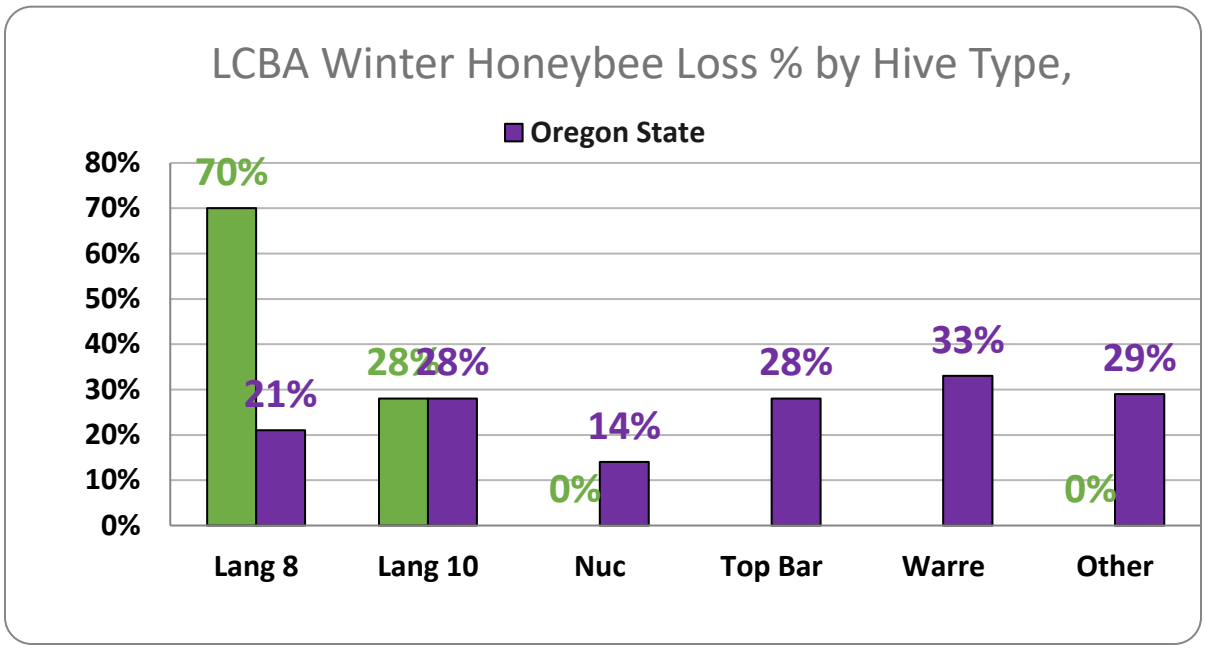


Average losses of LCBA members was 29% this past overwinter, slightly greater than statewide (statewide loss average 25.5%). The average 15-year loss level statewide is 36.7%. The average overwintering 15-year losses of LCBA respondents is 28.5 %, so this past year losses were just over the last 15-year average loss level. This is the fourth year in a row losses have been below 30% overwinter.

LCBA member losses, reporting on 156 fall hives, showed higher losses of 8-frame (70%) compared to 10-frame (28%) Langstroth hives. Twenty-nine individuals kept the 141 Langstroth 10-frame colonies (largest number 20) and 7 individuals maintained the 10 8-frame colonies reported in the survey (largest number 3), The four overwintered nucs (kept by 2 individuals) - all survived. Nuc losses are typically higher most years. No Top Bar or Warre hives were reported by LCBA members; one other hive (not specified what this hive was) survived. Loss of LCBA members alongside statewide loss is shown in Figure 2.

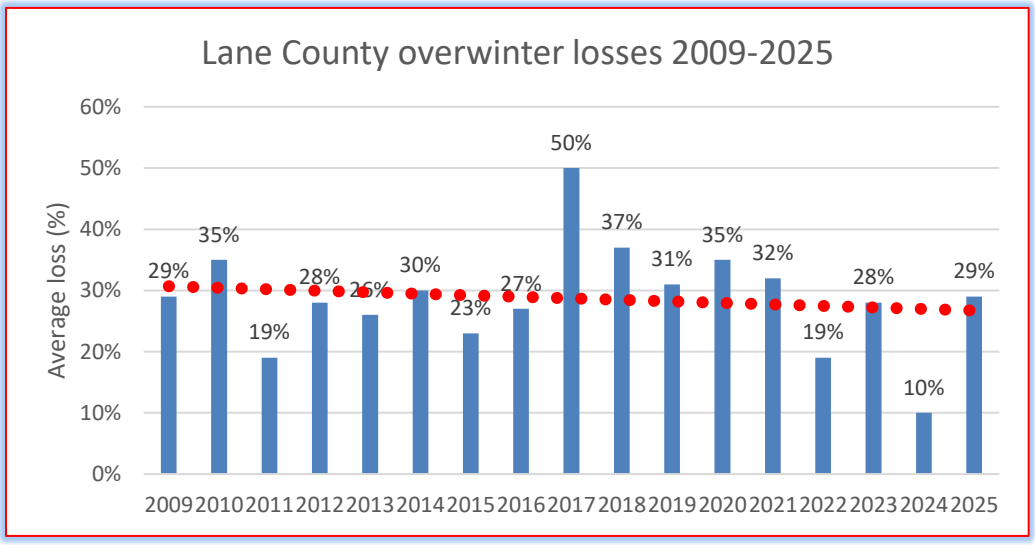
O**verwintering losses of LCBA respondents = 29** %, which is at average of the 15-year loss average of 28.5% average loss for Lane County members. The **attached figure 2 shows LCBA losses for the past 16 years**. Dashed red line is loss trend. The average loss level for the last 15 years is 28.5%. Graphic in Figure 3 below.

Figure 2



Fall	10	141	4	0	0	1
Spring	3	101	4			1

Figure 3



The survey also asked for hive loss by **hive origination** but individuals could FAST TRACK around this question and 70% did not provide a response. Those members who did respond reported 3% loss of previously overwintered colonies (1 colony lost of 36 in the fall), loss of the single nuc, 10% loss of swarms (1 of 10 colonies lost), a 21% loss of splits (3 of 14) plus loss of 1 of 2 feral originated overwintered colonies. But fewer than half answered this question, so data base is not very robust.

Some Other Numbers

Not everyone had a loss. In fact, 15 members (45% of survey respondents, 59 colonies) reported NO LOSS. Six respondents (9%) reported total winter loss, total of ten colonies. Greatest loss was seven colonies by two individuals; there were six individuals who lost one colony and 7 lost 2 colonies. Twenty Individuals with 1 to 3 fall colonies lost 36% of their colonies, 6 individuals with 4-6 fall colonies lost 22%, while the 7 individuals with 9 or more colonies (largest number 20) lost 30% of fall colonies.

Atypical of the statewide data, the LCBA respondents are not new beekeepers. Nine individuals (27% of respondents) had one to three years' experience; they had a 53% loss. Seven ne individuals had 4 to 6 years experience (loss rate = 50%), five had 7-9 years' experience (28% loss), seven had 10-17 years (15% loss) and 5 individuals with 20+ years' experience had only a 7% loss. The greatest number was 56 years. Statewide, as with LCBA, when years of experience increases the percentage of survival rate increases.

Three individuals had more than a single apiary location. The loss level at 2nd apiary was the same as at home apiary for one person, was better for another but a third lost all their colonies at the 2nd apiary site. Only 17 individuals (52% of respondents) said they had a mentor available as they were learning beekeeping, down from the 72% last year and 68% from the year before that. last year. Three LCBA individuals reported moving their bees – one to pollinate clover, another to new property purchase and the third had to move as property changed owner.

Reasons for Colony Loss/Acceptable loss

We asked individuals that had colony loss to estimate what the likely reason(s) might have been, Multiple responses were permitted. Ten said don't know, the most common response. Six individuals said weak in the fall, 4 said queen issues and 3 said varroa. Wo individuals each said moisture and poor wintering while one individual said CCD, another small hive beetle.

Why do colonies die?

There is no straightforward way to verify reason(s) for colony loss. Colonies in the same apiary may die for several 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

We asked in the survey for information about some managements practiced by respondents. New this year respondents could FAST Track and not provide responses to these questions on management. The survey inquired about feeding practices, wintering preparations, sanitation measures utilized, screen bottom board usage, mite monitoring, both non-chemical and chemical mite control techniques and queens. Most Oregon beekeepers do not perform just one management to their colony (ies) toward improving colony health and overwintering success. This analysis, however, is of a single factor equated with the loss level of those same individuals. Such analysis is correlative - doing a similar management as fellow beekeepers does not necessarily mean you too will improve success. It takes me longer to do this analysis. It will be posted when completed.

Closing comments

I intend to continue to refine the survey instrument each season and hope you will join in response next April. If you would like a reminder when survey is open, please email us at info@pnwhoneybeesurvey.com with "REMINDER" in the subject line. We have a blog on the pnwhoneybeesurvey.com and will respond to any questions or concerns you might have.