

## 2024-25 Tillamook Winter Loss by Dewey M. Caron

For the past 16 years, PNW winter colony losses and several managements related to bee health were solicited with an electronic honey bee survey instrument developed within the PUB bee group [www.pnwhoneybeesurvey.com](http://www.pnwhoneybeesurvey.com). A total of 250 responses were received, this year from Oregon and 150 from Washington beekeepers. Results are posted on the website under results for both states and clubs with a larger response. The Oregon average loss was 25.5% and the Washington average loss was 34%, During the 2024-2025 overwintering period, 5 Tillamook member surveys were returned.

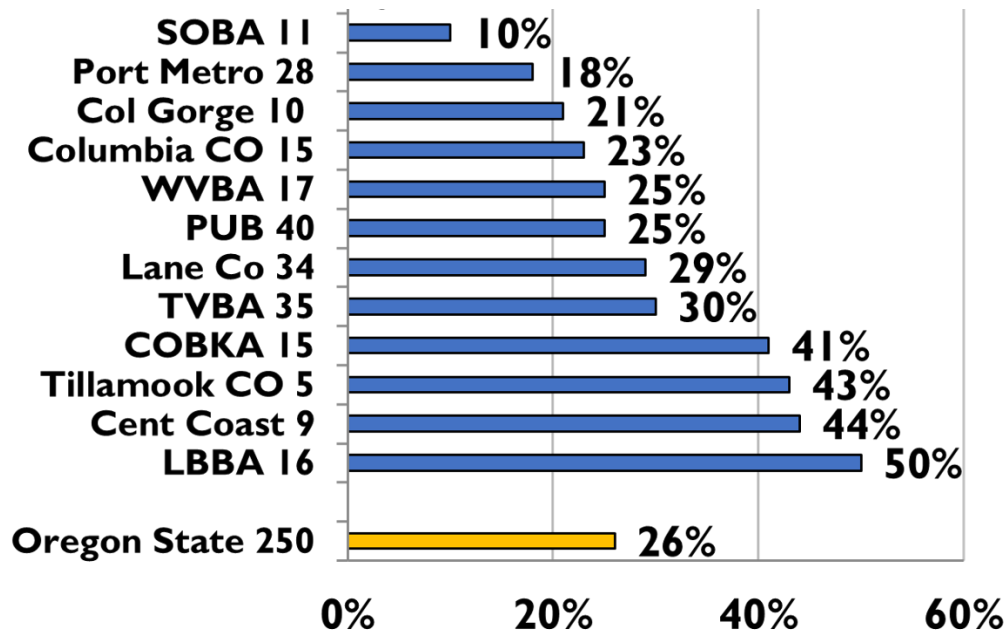
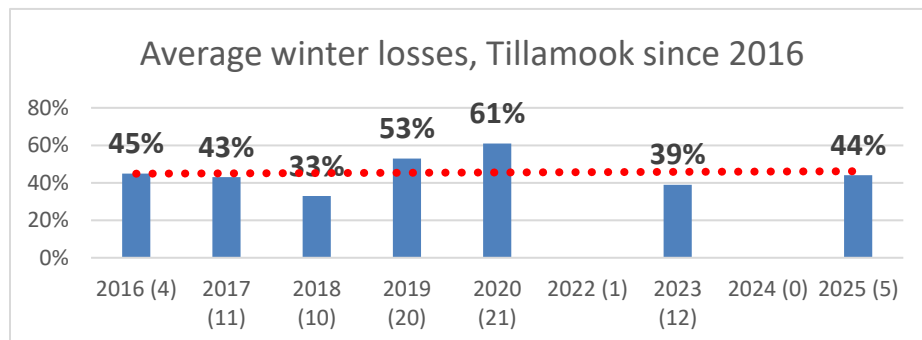


Figure 2 shows losses for Tillamook beekeepers since 2016. There was only a single survey returned in 2022 and zero in 2024, so no loss levels are available for those years. A bit of caution – I have had relatively few responses from Tillamook beekeepers, so numbers are not likely representative of beekeepers in the region. – the respondent numbers are shown in ( ) beside the year. The red dotted line is the loss trend line.

Figure 2



Loss level is determined by asking number of fall colonies by hive type and how many survived (are alive) upon spring inspection. There were 27 fall colonies. The single Langstroth 8-frame colony survived, 7 Langstroth-10 colonies did not survive of 13 in the fall (54%) loss, the one horizontal hive did not survive but 3 Layens hives survived.

One individual with 6 hives had total survival while one individual had a single colony that did not survive. Three individuals lost one colony while one lost 6 colonies, the heaviest loss. In terms of years' experience, the one individual with 4 years of beekeeping had total survival, (6 colonies), 3 individuals that had 6 to 8 years' experience lost 690 while the one individual with 10 years' experience lost 75% of overwintered colonies. Statewide, as colony numbers increase and years of experience increase the percentage of colony loss decreases. See the state report for this information.

Previously overwintered colonies did better as they did for statewide respondents— all 6 survived. A single package survived. Overwintered nucs had 60% loss, all swarm capture originated hives died but 3 of 4 splits survived. All 5 individuals had a mentor in starting.

Claire Moody asked individuals who started nucs about overwintering success. She found 38 of 139 purchased nucs the previous year survived – a 75% loss rate. She said 37 of the 59 people who started nucs lost everything. In my statewide survey, beekeepers are asked loss rate of colonies by origination. In 2023-24 winter 33% of colonies that originated from nucs stateside were lost. Ninety-two nucs were still alive of 138 overwintered. Nuc survival is normally less than 50% most winters. We intend to follow up on this question of nuc survival this coming season.

Asked the reason why individual with loss thought their colonies did not survive, 1 said they didn't know, another said pesticide exposure an the 3 listed queens reason for loss. As to an acceptable loss level, 2 said 5%, 1 said 10% another 20% (this was statewide median) and one said 25% was an acceptable loss level.

### **Why do 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 often confusing, 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. Our acceptable loss level has crept upwards over time.

Major factors in colony loss are thought to be mites and their enhancement of viruses, especially DWV (deformed wing virus, plus declining nutritional adequacy/forage and diseases. Pesticides in the agricultural environment weakens colonies. Yellow jacket predation is a

constant challenge 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, contrails, electromagnetic forces, including human disruption of it, human alteration to the bee's natural environment 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 currently facing honey bees. Varroa mites and the viruses they transmit are considered a major factor why colonies are not as healthy as they should be.**

### **Colony Managements**

We asked in the survey for information about some managements practiced by respondents. This year individuals could FAST TRACK through the electronic survey and not answer the questions on management. Three of the 5 individuals (60%), slightly lower compared to statewide (69%), did supply management information. 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. Respondents could select multiple options and there was always a none and other selection possible.

The statewide report compares responses of the current winter season with previous survey years. With only 3 respondents to management questions from Tillamook individuals the reader is referred to the state report for a more comprehensive evaluation of managements that might help survival.

Thank you to all those who supplied the information.

Dewey Caron May 2025