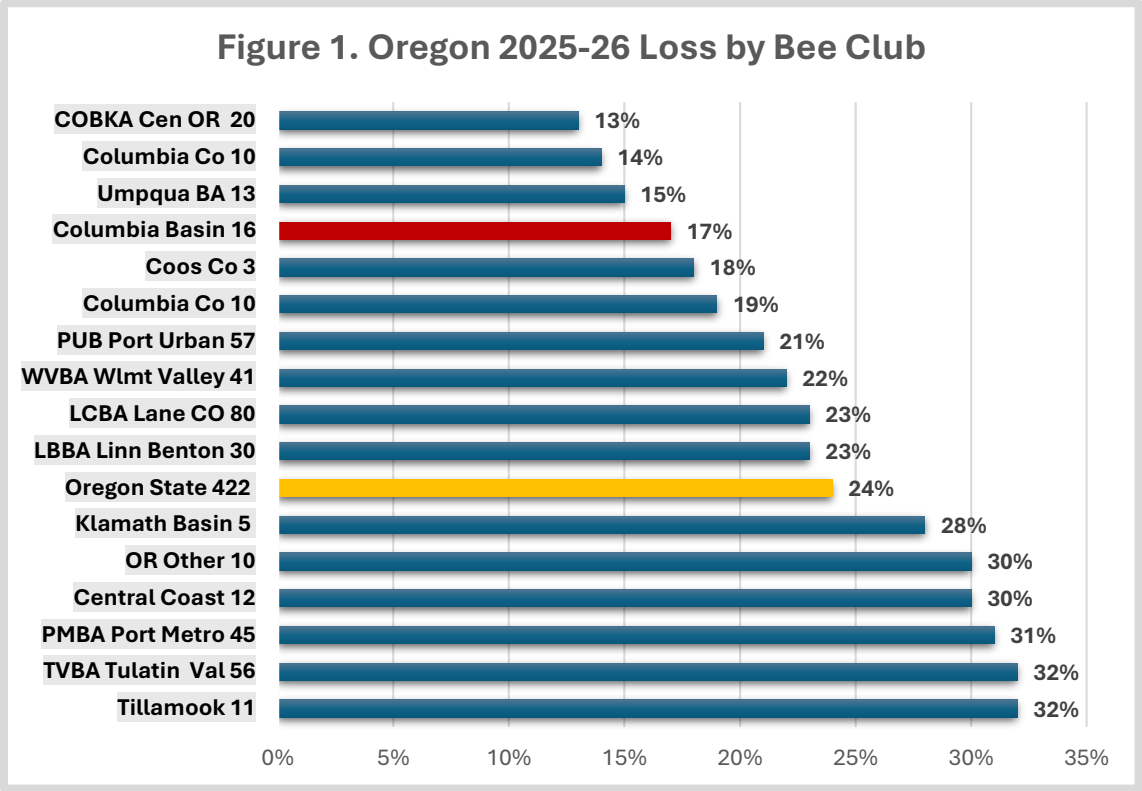
Winter Bee Losses of Columbia Gorge

Backyard Beekeepers for 2025-2026

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. A total of 422 Oregon beekeepers returned a survey, an increase of 170 from the previous year and 147 above the 10-year average response rate of 275 (range171-416) respondents. **Overall loss rate was 24.4%.** Washington respondents completed 227 surveys, more than 100 above the average response rate for the last 6 years of 120. The **Washington average loss was 28.8%,** 5.2 percentage points below loss rate last year. It was a record year for returns.



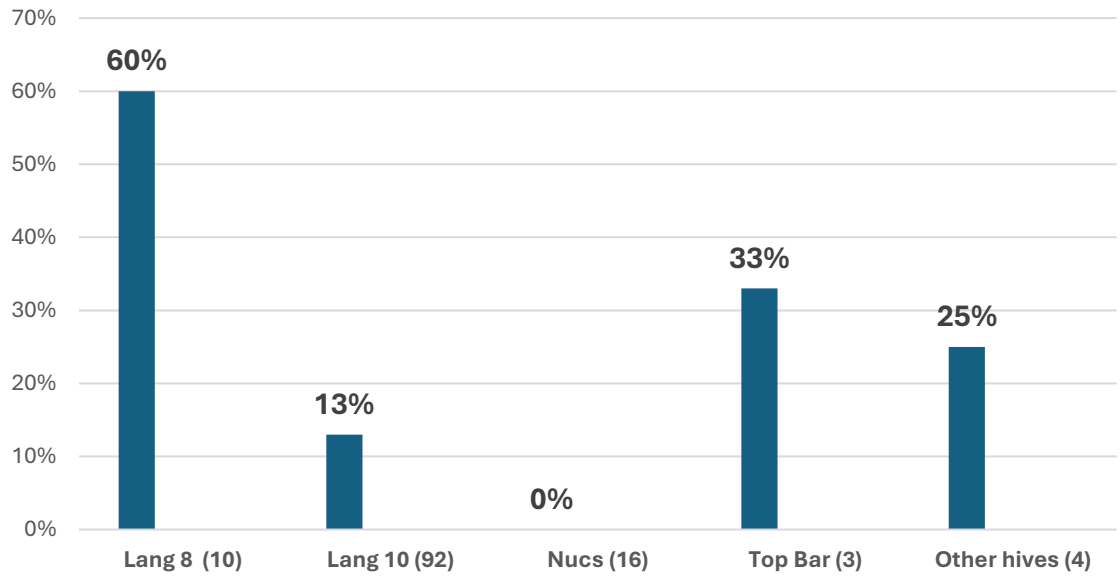
The Bee Club results of 15 local Oregon associations are shown in Figure 1 above. Individual colony numbers ranged from 1 to 45 colonies in Oregon (average 5.9 colonies, 0.2 percent higher than last year; medium number = 4 colonies, same as last year). The number of respondent individuals are listed following association name on Y axis. The bar length on x axis is the average club loss percentage for the year. Bars to left of 24% are

losses below the statewide average while those above 24% had heavier losses. Th same chart for loss by Washington clubs is posted to the Washington State loss report on website https://pnwhoneybeesurvey.com

Sixteen Columbia Gorge beekeepers returned a survey, seven more than the 10 surveys of the previous year and 4 more than the 9-year average of 13 returns. The average loss was 16.8%. The returns are a story of two sides of the river. The 10 members on Oregon side had 28 fall colonies (maximum of seven colonies) and loss of 46.5% while the 6 members on the Washington side had 99 fall colonies (maximum colony number was 48) and a loss of 7%. Last year 6 members were from OR and 4 from WA.

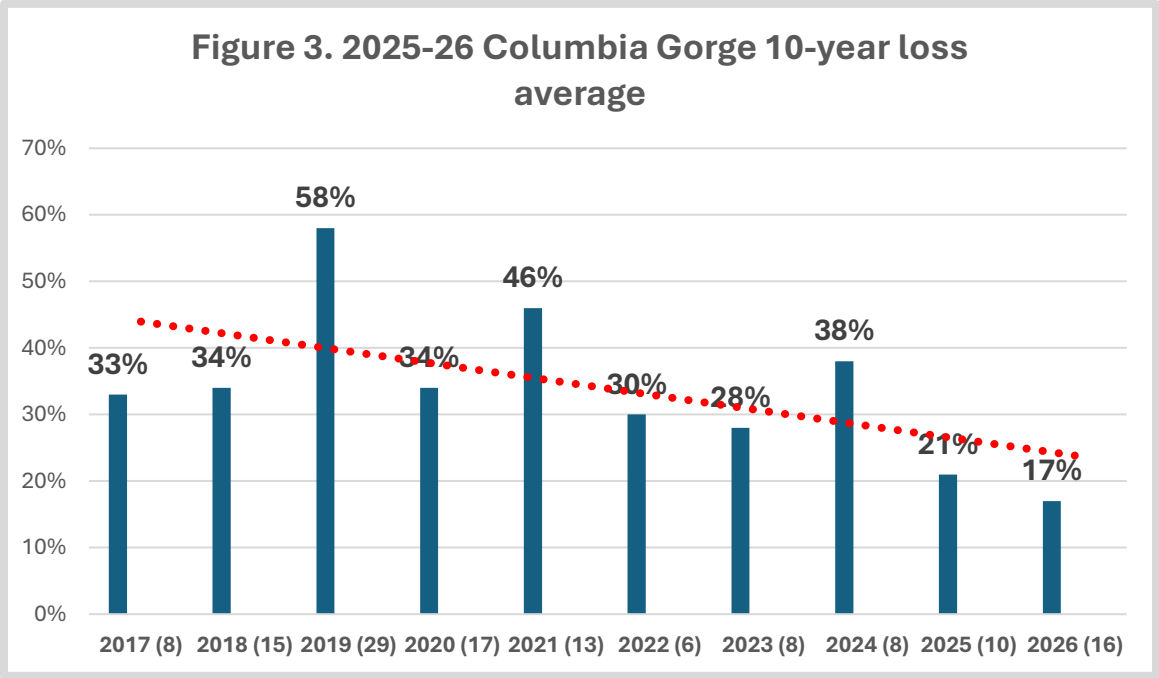
Loss level was computed by subtracting spring loss from the fall overwintering colony numbers by hive type. Six individuals had ten 8-frame Langstroth hives and lost 6 = 60% loss. There were 94 10-frame hives maintained by 12 individuals with 82 in the spring = 13% loss. In both OR and WA, there has been a trend of better survival with the 8-frame hives compared to 10-frame, but this was not evident for the Gorge beekeepers. Sixteen of sixteen nucs all survived. Two of three Top Bar Hives survived and for other hive types. One of two Layens hives survived and both "queen" (support) colonies survived. A total of 125 fall hives were included, 50 more than last year.

Figure 2. 2025-26 Columbia Gorge Loss by hive type

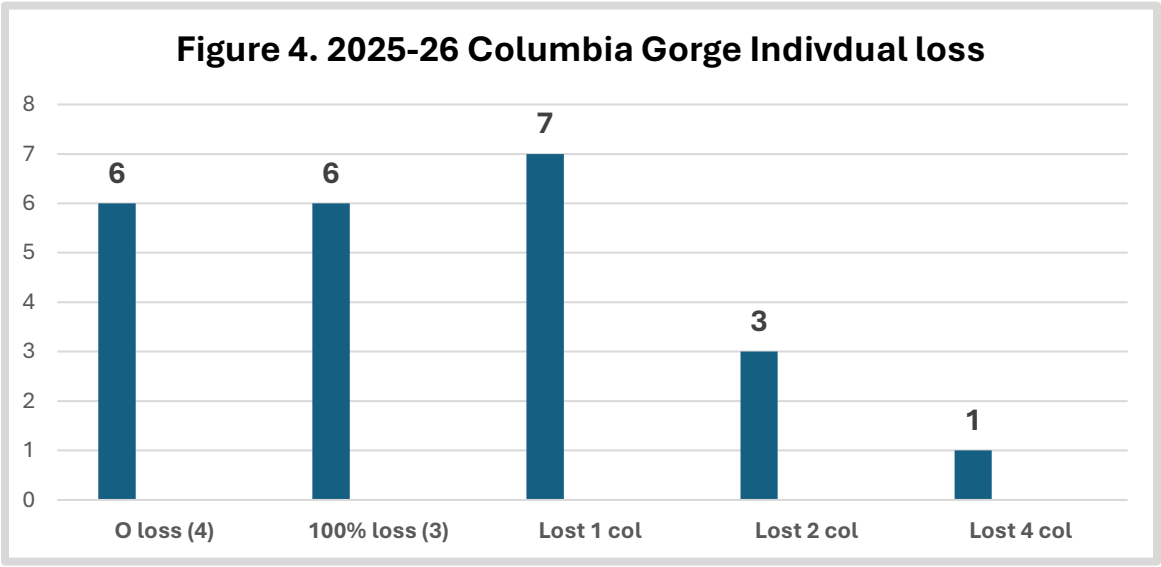


The Figure below shows losses for Columbia Gorge members over the past 10 years. A bit of caution – I have had 10 or fewer responses 4 of the last 5 years. Respondent numbers are shown in ( ). The dotted red line represents trend line; the 10-year average

losses have been 33.9%, essentially the same as OR statewide loss average of last 15 years. Respondent average for the last 9 years =12.8 respondents.



Not everyone had loss. Four individuals had no loss (6 colonies total), and three individuals lost 100% (also 6 colonies). Seven individuals lost one colony, three individuals lost two colonies and one individual lost four colonies, the heaviest loss. Figure 4.



Typical of the statewide data, 14 of the 16 Columbia Gorge OR respondents are largely beekeepers with few colonies; two individuals each had more than 40 colonies on Washington side of river. Statewide there is a relationship of decreasing losses with increasing colony numbers, which was the same for Columbia Gorge beekeepers as well. The 11 individuals with 1-3 colonies had 48% loss, the 3 individuals with 4 to 7 colonies had 5o% loss and the two individuals with 40+ colonies had only 2% loss.

There are too few individual responses to show a relationship of decreasing losses with increased beekeeping experience this year; statewide the relationship is wea, although in previous survey years there does appear to be decreased loss percentage with increased bee experience. The one Gorge individual with 3 years of experience lost their single colony, the 7 individuals with 4-6 years of experience had a 14% loss, 5 individuals with 7-9 years' experience had 31% loss, while the 3 individuals with 10+ years' experience lost 4.5%. The greatest experience was 51 years.

All but two individuals (88%) said they had a mentor available as they were learning beekeeping. None of the respondents on either side of the river said they had more than a single apiary and none indicated that they moved colonies during the year. For origination of colonies overwintered, 10 individuals used FAST TRACK and did not respond to the question. The six individuals who responded said 7 of 8 previously overwintered colonies survived the winter, 3 of 4 nucs survived, the one swarm originated colony did not survive, and one of two splits likewise did not survive. Individuals should consult the statewide surveys for their respective states to understand losses related to colony origination.

When asked the reason for losses, more than one response was available for selection. Recall that four individuals had no loss. There were 19 selections by the 12 individuals with loss, 1.6/individual. Three was selected by each of those who said they didn't know, starvation, queen failure, varroa and weak in the fall. Two selections were for moisture and poor wintering conditions. When asked for an acceptable loss level, 2 said none, 1 said 5%, 3 said 10%, 2 said 20%, 1 said 25%, medium s between those two levels, 1 said 25%, 3 said 33%, and the greatest selection was 4 individuals who said 50% loss was acceptable. Individuals should consult the larger numbers of their respective state reports for the best comparison to their reasons and acceptable loss level.

The questions related to management could also be FAST TRACKED. Nine individuals (56%) selected this option. The resulting numbers are too small and results can be skewed. Individuals should consult their respective state reports for comparisons. There were two feeding managements for Oregon and Washington beekeepers that helped reduce losses. Feeding protein was done by 6 of 7 Columbia Gorge individuals as pollen patties and one also fed as dry pollen. Dry sugar feeding, as candy, fondant or dry, was

done by 4 of 7 individuals. These managements were those that helped reduce losses for statewide beekeepers.

With respect to winterizing managements, top insulation, ventilation of the top and wrapping colonies were the managements that had lower loss levels for Oregon and Washington beekeepers. For the 7 Columbia Gorge respondents, 5 indicated they insulated the top and 5 also said they ventilated the colony top (multiple selections were possible) and 4 said they wrapped.

Selections for sanitation were generally shown to help reduce overwinter losses, but by only a small level for the Oregon and Washington beekeepers who did not FAST TRACK. The two that had the largest impact were using colors to individualize colonies and spreading colonies to reduce drifting. Five Columbia Gorge individuals said they used colony colors and two said they spread colonies to reduce drifting. Screen bottom boards were not effective according to statewide responses; blocking the screen board was helpful versus leaving it open over the winter.

The questions on monitoring and non-chemical and chemical varroa mite control could also be avoided with the FAST TRACK option. Six of 16 Columbia Gorge individuals used this option for monitoring questions and three used FAST TRACK for the control options. Thirteen of 14 individuals said they monitored; the one who did not monitor lost 1 of 2 colonies. For methods of sampling (multiple selections were possible), 4 used sticky boards, 2 used alcohol wash, none said they used powdered sugar, 4 said they looked at drone brood and 2 looked at adult workers.

The 12 respondents could make multiple selections for non-chemical or chemical controls to use for varroa control. Results of the most common selections are show in Figure 5 below. All the most common selections showed very positive results for Columbia Gorge members. The numbers are very small so for most accurate comparison individuals should consult the appropriate state report.

I appreciate the 17 members of the Columbia Gorge bee club who sent a report to the pnwhoneybeesurvey.com. Thank you. Dewey M. Caron 2026.

Figure 5. 2025-26 Columbia Gorge Loss w/ selected non-chemical/chemical managements