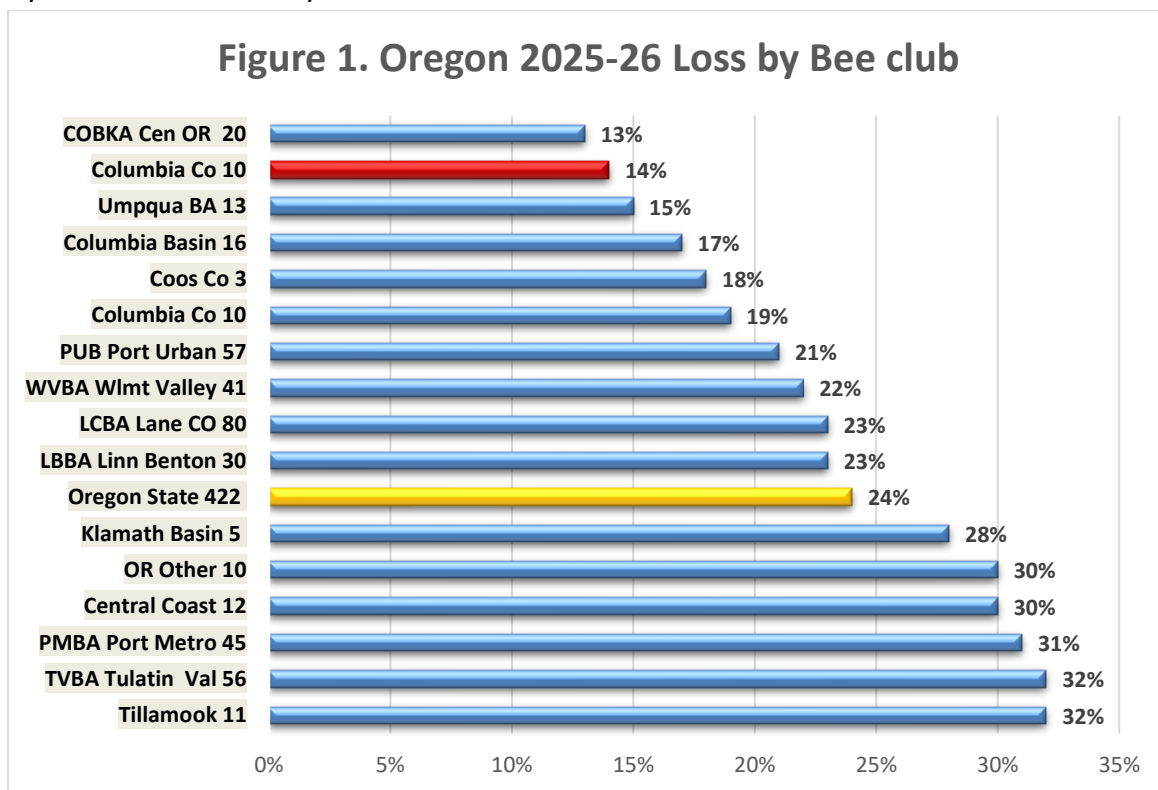
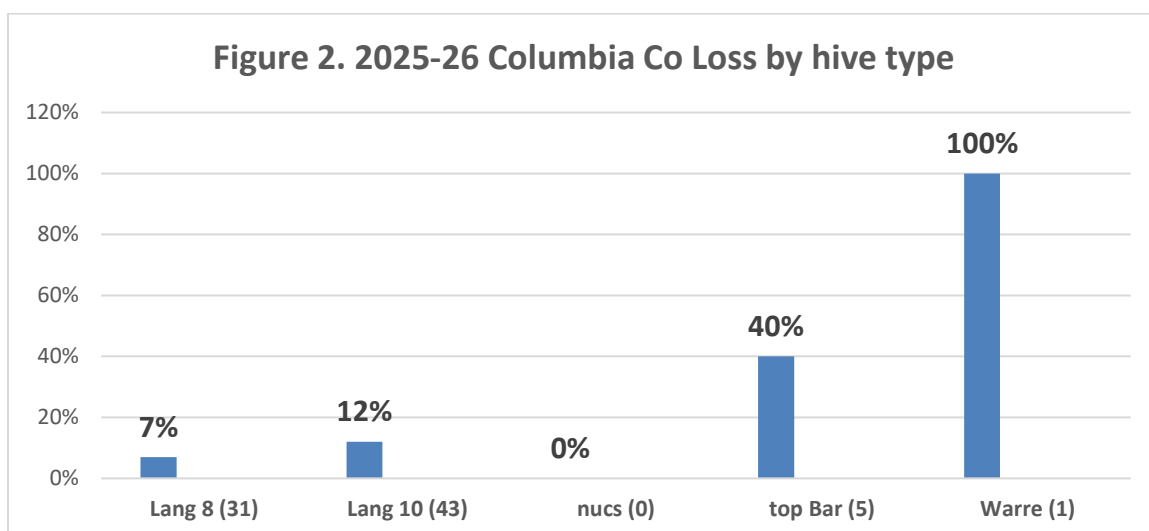


Winter Bee Losses of Columbia County Washington Backyard Beekeepers for 2025-2026

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 (range 171-416) respondents. **Overall loss rate was 24.4%**. Washington respondents completed 227 surveys, more than 100 above the average response rate of 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.



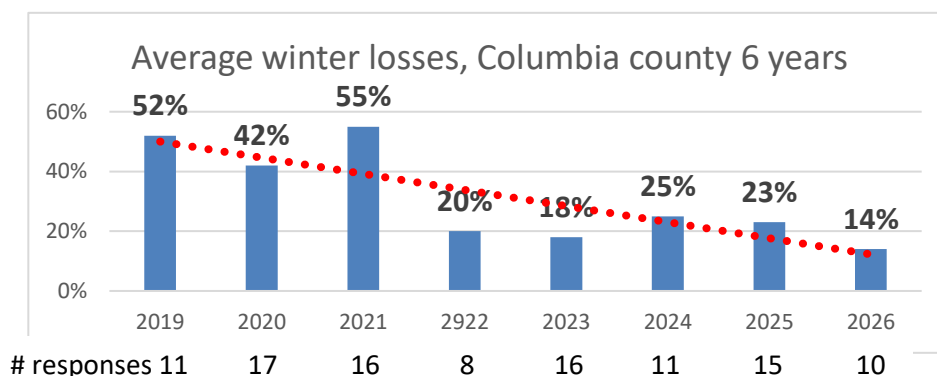
Eleven Columbia Co members returned a survey but one was a new beekeeper. They had a 13.5% average loss rate, ten percentage points below the statewide level. They had 80 fall colonies. Loss by hive type is shown below in Figure 2. Typical of statewide, the three individuals with Langstroth 8-frame colonies had improved winter survival over the seven with the Langstroth 10-frame hives. There were no nucs. Two of five top Bar hives did not survive and the single Warre hive also did not survive.



Columbia respondents, reporting on 80 fall hives, said they lost two 8-frame Langstroth hive (7% loss level) but 10-frame Langstroth hive owners did not do as well. Five of 43 10-frame hives did not survive, a 12% loss. Two of five Top Bar hives survived, the single Warre hive did not survive.

Figure 3 shows losses for Columbia County in the last 8 years. A bit of caution – I have had relatively few responses – the respondent numbers shown below years. Average loss =31% for the eight years. **Dotted red line** is loss trend – obviously in a very positive direction.

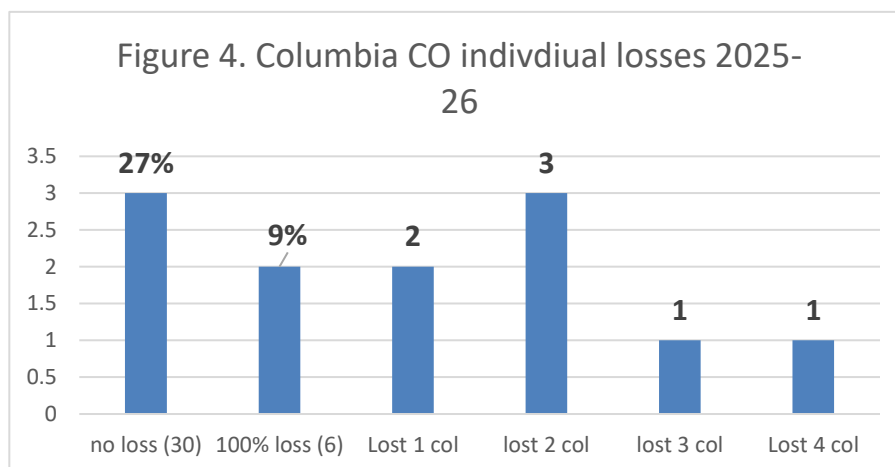
Figure 3



The survey also asked for loss by hive origination. Four individuals responded, the rest used FAST TRACK so numbers are low..Overwintered colonies (8 lost of 2 fall colonies) did not have the best survival in Columbia County respondents (25% loss) compared to statewide (19%). One of two packages survived, and one of two nucs did as well. Of six swarm originated colonies, five survived (17%) and of 16 splits 13 survived (19%). Statewide 25% of swarms were loss and 20% of splits were lost.

Not all individuals had a loss. Three individuals (30 colonies) had total survival, i.e., no colonies lost. Two individuals had a 100% loss (6 total colonies). Two individuals lost one colony and three lost two colonies with a single individual losing five colonies (heaviest loss).

Figure 5



Un-typical of the statewide data, the Columbia County respondents had more colonies. Two individuals had 2 colonies – they had no loss. Four individuals had 4 or 5 colonies (17 total – lost 7 = 41% loss), the individual with 8 colonies lost 2 and the 3 individuals with 10 plus colonies lost 2 (of 51 = 4% loss). Individuals with 5 or fewer colonies had 33% loss while those with 10+ had 4% - this is the same as Statewide - as individuals manage more colonies the loss percentage is reduced.

Three Columbia respondents had two to five years' experience; their loss was 18%. The 3 respondents with 6 or 7 years' experience (total 30 colonies), lost 5 for 17% loss level, the three individuals listing 11+ years experience (greatest number was 35) lost 2 colonies = 6% loss level. Statewide, as years of experience increases generally per cent loss level is lowered; this relationship is not evident for Columbia County respondents due to small sample size.

Seven Of ten CC respondents (70%) said they had a mentor available as they were learning beekeeping; state level was 77%. One individuals had two apiary sites. And one said they moved hives during the year.

Reasons for Colony Loss/Acceptable loss

We asked individuals that had colony loss to estimate what the reason might have been for their loss (multiple responses were permitted. A total of eight choices were listed. The highest two was varroa; there were one each of CCD, Pesticides, poor wintering, weak in fall, starvation and wintering. ``

In terms of reason for loss, individuals could make multiple selections - recall that three individuals had no loss. Survey also asked for an acceptable loss. This information is shown below. When asked about an acceptable loss, three said none, one said 10%, and three said 20% (median number), and three said 50%.

• Reasons – 6 individuals	Acceptable loss - 11
individuals	
• Don't know 1	None 3
• Varroa 1	10% 1
• Queen issues 4	20% 3 Medium
• Weak in the fall 1	50% 3
• Moisture 1	
• Starvation 1	
• Pesticide 1	
• Swarming 1	

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. Half of the Columbia County respondents did not respond. 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.

Feeding of protein, mainly as protein patties and feeding dry sugar were statewide feeding managements that helped reduce average losses. For winterizing using top insulation or a ventilated top such as quilt box or Vivaldi board and providing colors to hive and/or spreading colonies out to reduce drifting were the managements that helped the most in reducing loss. Sanitation measures and screen bottom boards provided little in improved wintering but might be useful managements for other reasons.

Monitoring helps determine if additional varroa control are needed. Most use sticky (debris) board or alcohol wash to monitor. Non-chemical managements of minimal inspections, drone brood removal and brood break, although not many individuals said they did such manipulations, were most helpful to reduce average losses. Chemical controls included Apivar, the synthetic amitraz, the essential oil Apiguard and oxalic acid as either extended or vaporized, to best defense against high mite numbers.

I will be joining the Columbia County members at their June 2 nd meeting to discuss the results and how we might manage varroa mites. Thank you to all members who sent in a survey. I hope to be back next year with another survey in March and April. Good luck with colonies this current season.

Dewey M. Caron June 2026

With this low level I recommend you examine the OR state report on the website pnwhoneybeesurvey.com/results/.

Closing comments

This survey was originally designed to 'ground truth' the larger, national Bee Informed loss survey. Unfortunately, the national BIP survey was discontinued after 2023. A new national survey administered by Apiary Inspectors of America, Auburn University and by Natalie Steinhauer, a research associate at Oregon State University has continued a national survey but response has not been as large. The BeelInformed survey measured larger scale OR beekeepers, not backyarders. Loss rates are of total colony number and more representative of commercial scale beekeeping. Reports for individual bee groups are customized and only available from the PNW website; they are posted for previous years.

I intend to continue to refine this 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. I have a blog on the pnwhoneybeesurvey.com and will respond to any questions or concerns you might have. Email me directly for quicker response. dmcaron@udel.edu

Thank You to all who participated. If you find any of this information of value, please consider adding your voice to the survey in a subsequent season. Dewey Caron May 2025