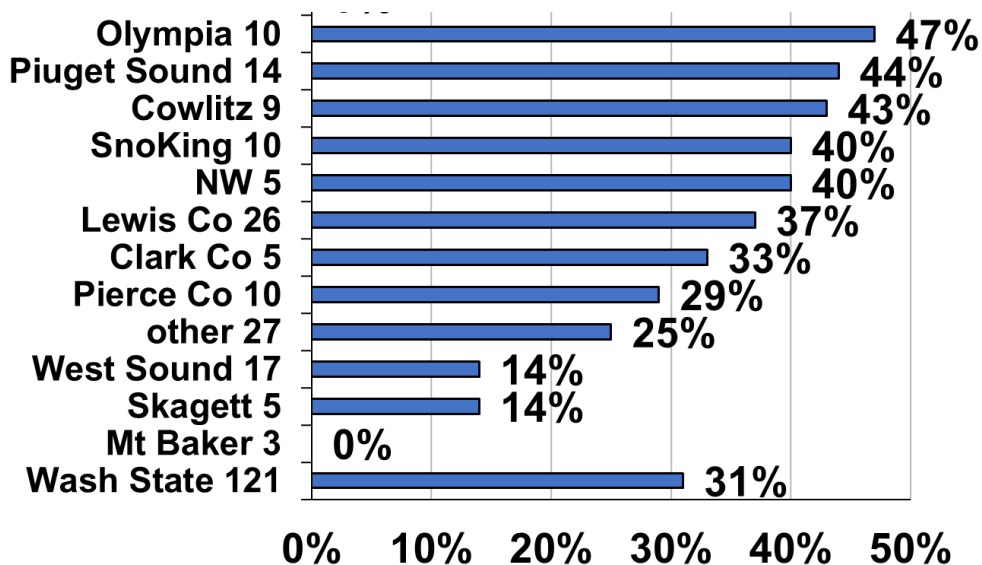


Cowlitz Co beekeeper Losses 2023-24 by Dewey Caron

Overwintering losses of small-scale Washington beekeepers was determined from information provided by 121 Washington backyard beekeepers with an electronic honey bee survey instrument www.pnwhoneybeesurvey.com. Statewide losses were 31%. Cowlitz losses were elevated from the previous year. Nine Cowlitz beekeepers returned surveys reporting on 44 fall colonies with a 43% loss. Figure 1 shows total WA response by club.



The loss survey overwintering statistic was developed by our asking number of fall colonies and surviving number in the spring by hive type. Results, shown in Figure 2 bar graph illustrate overwintering losses for statewide Washington beekeepers. Langstroth 8-frame 37% loss and Langstroth 10-frame was 30%. For Cowlitz losses of 9 of 16 8-frame (56%) and 8 of 23 Langstroth 10-frame hives (35%), both loss levels higher than statewide. Only other colonies were five “other” (not identified – 40% loss). No Nucs, Top bar or Warre hives reported.

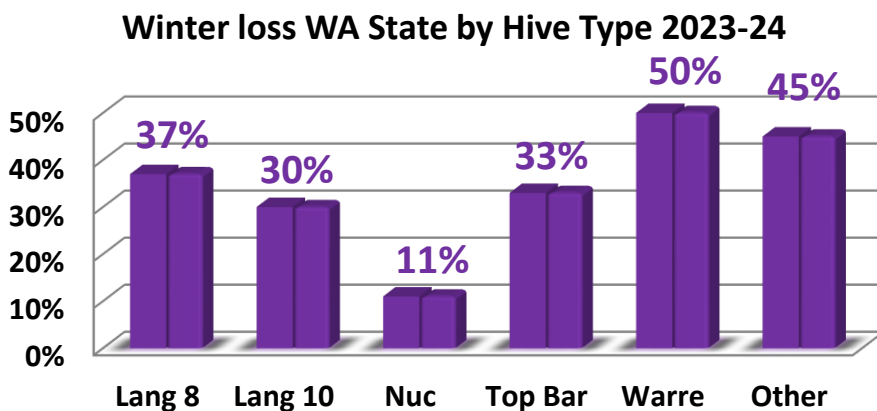
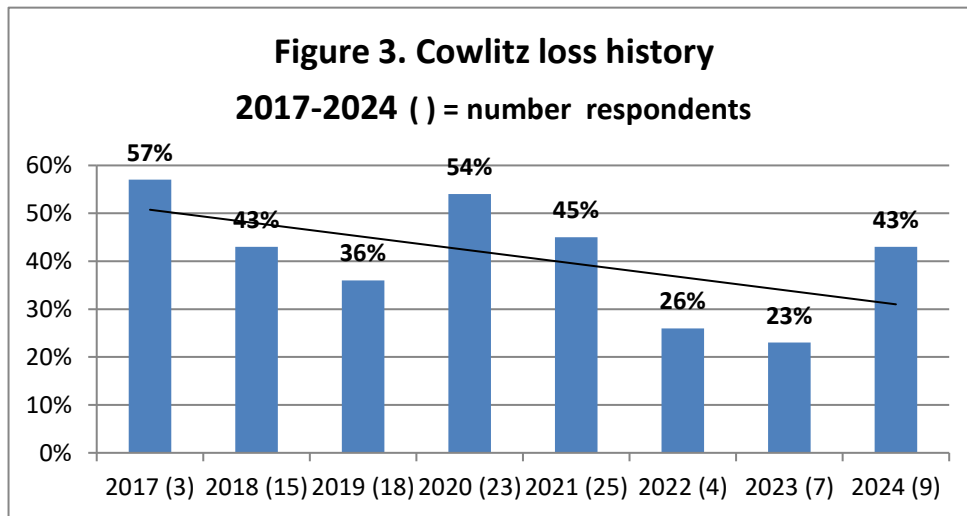


Figure 2

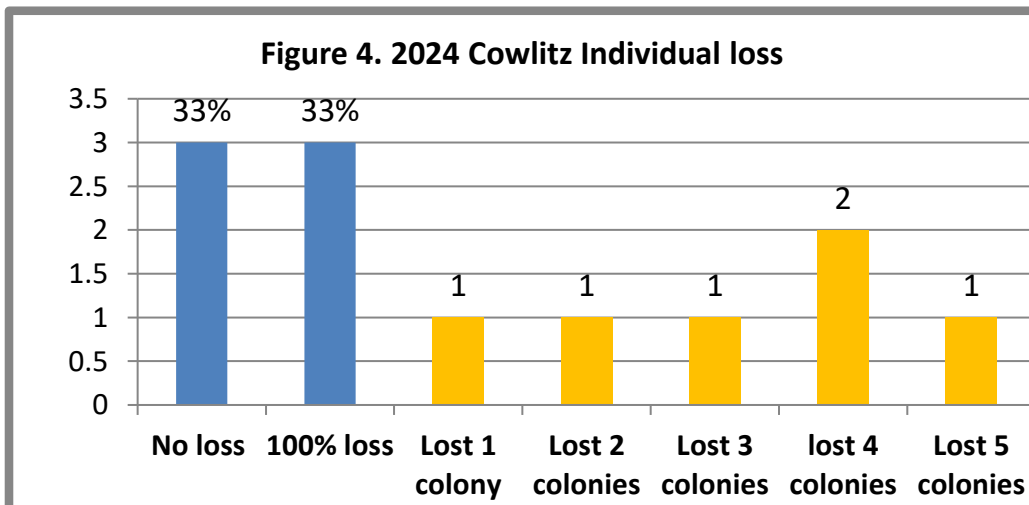
Loss by hive origination: We also asked survey respondents to list their loss by hive origination. Cowlitz respondents reported 3 of 13 overwintered colonies did not survive (23%), 5 of 6 packages failed to survive (83% loss), 4 of 9 nucs did not overwinter (44% loss), 2/3rds of 6 swarms were lost and 40% of splits, 2 of 5, did not successfully overwinter.

Loss History: Losses of Cowlitz beekeepers this past overwinter returned to greater than 40%. Response rate however (9 individuals) was three less than the 8-year average. Figure 3 shows 8-year Cowlitz loss history (bars) with number of survey respondents in () on x-axis. Response the last 3 years has been reduced.

Figure 3



The 9 Cowlitz Co respondents to the electronic survey had 1 to 11 colonies. Four of nine (44%) had 1, 2 or 3 colonies (loss level 40%), three had 4-6 colonies (11 of 15 lost= 73%) and 2 individuals with 8+ (greatest = 11) lost 4 of 19 colonies overwinter (21%). Individuals with 1-2 years' experience lost 5 of 7 colonies (71%), those with 4-7 years' experience lost 67% and the 3 individuals with 10+ years' experience lost 4 of 22 colonies (18%). 12 years was the most extensive experience.



For the nine respondent Cowlitz beekeepers, three individuals (33%) had no loss (16 colonies) and three had total loss (12 colonies). One individual lost one colony one lost two and one lost three. Two individuals lost four colonies and one lost five colonies, the heaviest loss. See Figure 4 above.

Self-reported “reasons” for colony losses: One survey question asked respondents to check the “reasons” for winter loss; multiple responses were possible. There were a total of 14 selections provided by six Cowlitz County respondents as the reasons for their overwintering losses. Four individuals said weak in fall, three indicated varroa, poor wintering conditions and moisture had two each with Don’t know, pesticides and yellow jackets one each.

Acceptable loss. When asked to choose an acceptable loss Cowlitz Co mirrored statewide respondents. One said none, two said 10%, three indicted 25% (median) and three said 33% or greater.

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. Cowlitz Co individual choices varied from zero to 75%, with medium of 25%, slightly above state level of 20% but lower than actual losses.

Major factors in colony loss are thought to be mites and their enhancement of viruses especially DWV (deformed wing virus) and declining nutritional adequacy/forage and diseases. Pesticide 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, 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 facing honey bees in the current environment. Varroa mites and the viruses they transmit are considered a major factor colonies are not as healthy as they should be.

Colony Managements: We asked in the survey for information about some managements practiced by respondents. 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. This analysis seeks to compare responses of this past season to previous survey years.

Most Washington beekeepers do not perform just one management to their colony (is) toward improving colony health and overwintering success. This analysis however compares a single

factor equated with loss level. Such analysis is correlative and doing a similar management as fellow beekeepers does not necessarily mean you too will improve success. With only nine survey returns I direct members to the statewide analysis of managements.

Thank you to all members for completing a survey.