2017-18 Lane County Beekeeper Winter Loss Report by Dewey M. Caron

Oregon and LCBA beekeepers were directed to a web-based survey document as a continuing effort to define overwintering successes/losses. This was the 10h year of such survey activity. I received 303 responses from OR backyarders and 104 from Washington beekeepers keeping anywhere from 1 to 50 colonies . Lane County members sent in 34 surveys, 5 more than last year. A report of the OR beekeeper survey responses, including losses and, eventually when prepared, responses to management questions in the survey, with easy to understand graphs, will be posted at www.pnwhoneybeesurvey.com .
Figure below shows the number of respondents (within () next to association name) and bar length expresses overwintering bee losses in most recent overwintering period as reported by members.

Lane County overwinter losses = 37%, 1 percentage point lower than statewide.

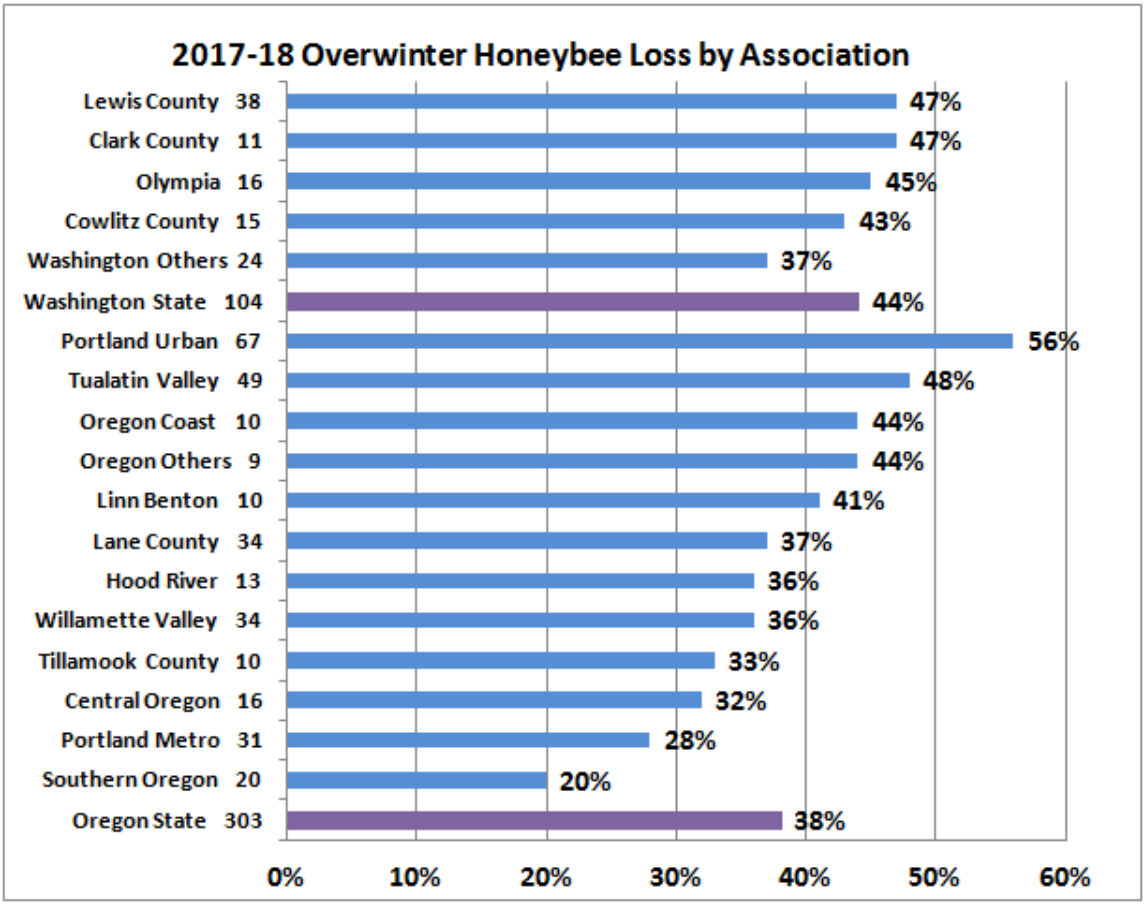
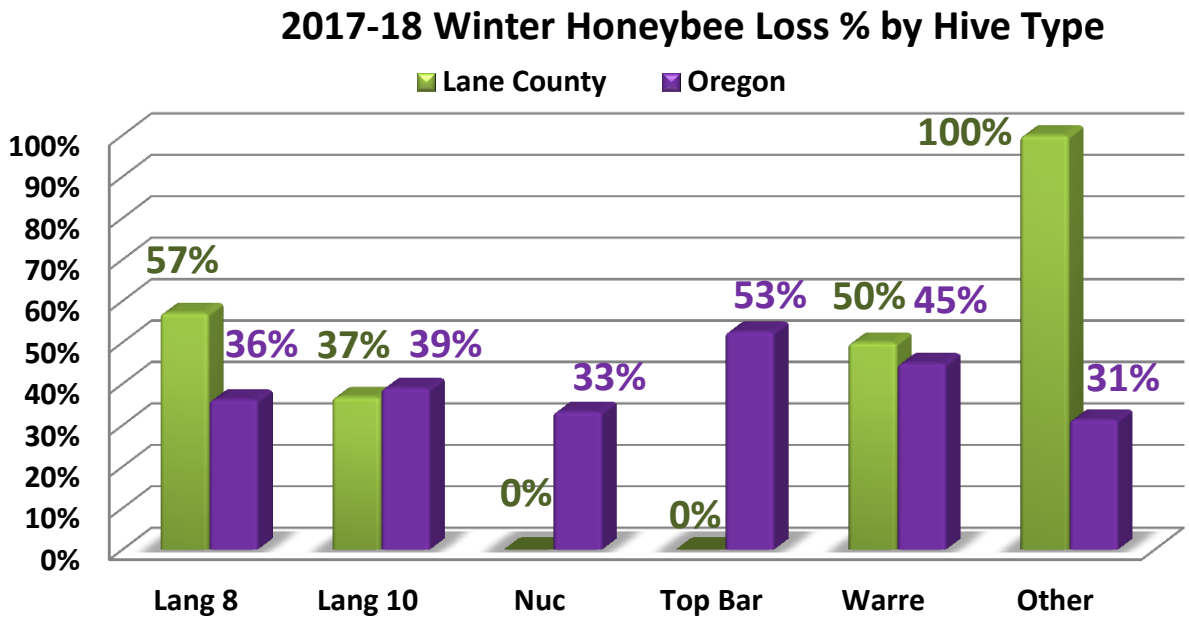


Figure 1

Overwintering losses were determined by asking number of fall (October) colonies by hive type and subsequently how many were still alive in the spring (April). LCBA response included 95 Langstroth 10 frame hives in the fall, of which 60 survived (37% loss) + 7 Langstroth 8 frame hives (3 survived, 57% loss), 6 nucs (all survived), 2 Warré hives, only one of which survived and one other (hollow tree hive) that survived. LCBA respondens did not report any top bar hives. Of 111 total fall hives, 70 spring = 41 colonies lost **Total LCBA loss = 37%.** Data comparing Lane Co and state-wide respondents shown in Figure 2.

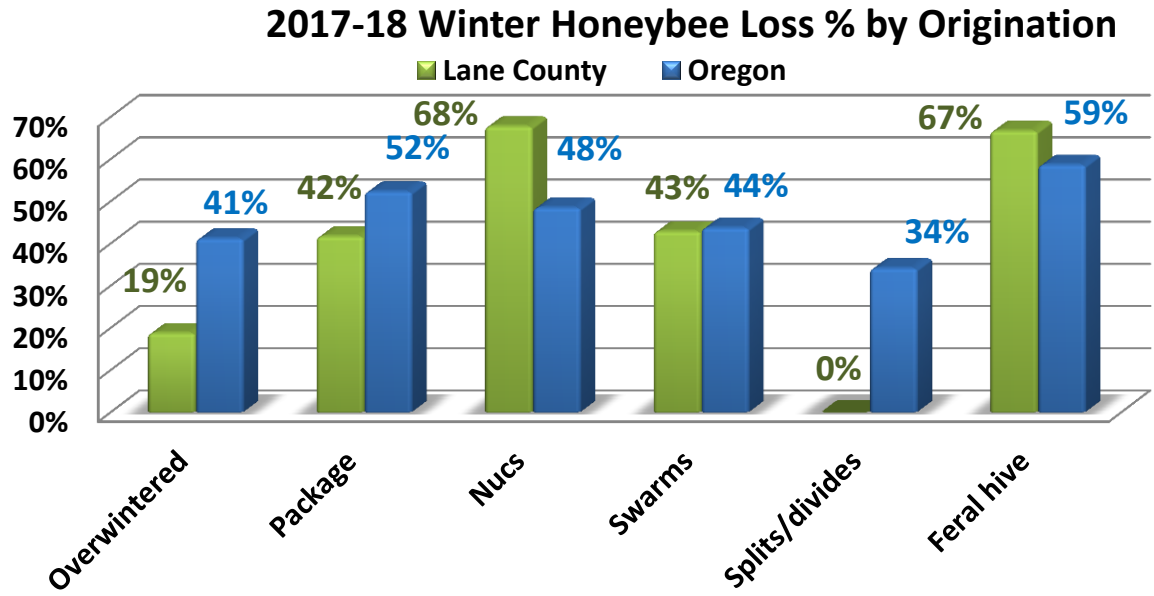
Figure 2



	Lang 8	Lang 10	Nuc	Top Bar	Warre	Other
FallCol # (loss)	7(4)	95(35)	6(0)	0(0)	2(1)	1(1)

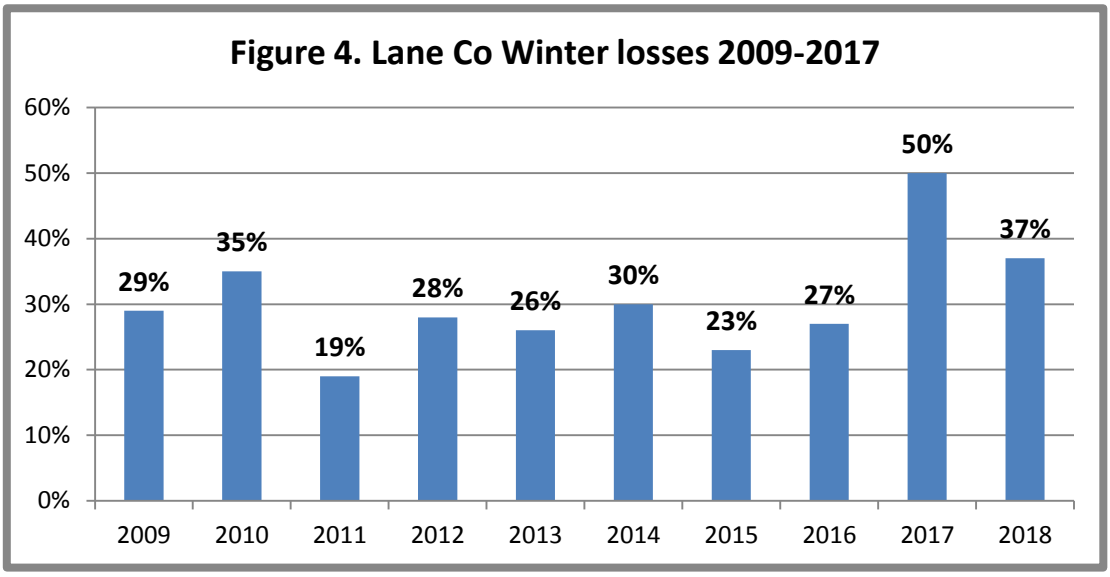
Survey also asked about colony losses by hive origination. Sixteen of 16 splits survived, most unusual, followed by 39 of 48 overwintered colonies (19%). Nucs did poorly (68% loss) while swarms and packages did OK with just over 40% loss. Two of three feral hives did not survive. LCBA compared with statewide in Figure 3.

Figure 3



	Overwintered	Package	Nucs	Swarms	Splits/divides	Feral hive
Fall col # (loss)	48(9)	12(5)	31(21)	14(6)	16(0)	3(2)

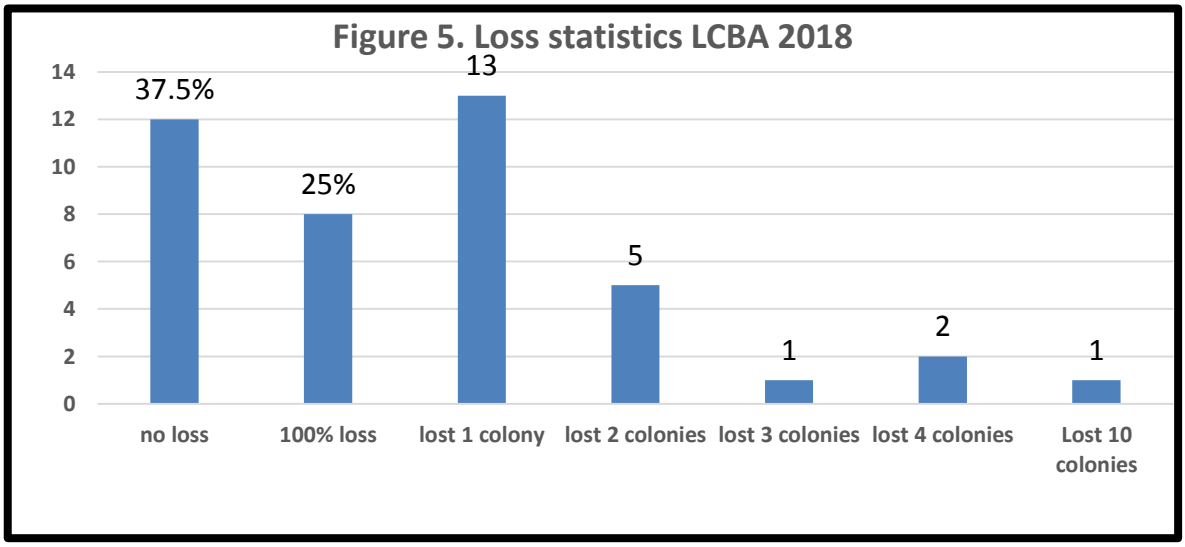
Losses this past overwinter were reduced from the very heavy losses last winter, both by Lane County beekeepers (50%) and statewide beekeepers (48%) but they are 7 percentage point higher than average of colony losses for past 9 seasons (30%) and in fact are the 2nd highest loss level in past 10 years.



The LCBA association respondents can be characterized, as are the state respondents, by small numbers of colonies and a wide range of years of experience. Eight individuals had 1 fall colony, 10 had two and 2 had three (60%). Six individuals had 4 colonies, 3 had 5 fall colonies and 2 had 6 colonies in the fall (33%). Two individuals had 10+ colonies. One had 12 and another had 15 fall colonies (their respective losses were 1 (8% of total) and 10 of 15 colonies (67% of total).

Years experience shows a broad spread. There were 9 individuals with 1,2 or 3 years, 16 with 4, 5, 6 or 7 (medium =5 years experience which was also the most common with 8 individuals indicating they had 5 years of beekeeping experience) and there were 9 individuals with 10+ years, 3 over 20 years and 2 over 40 years. Forty nine years experience was the greatest. Twenty one individuals (64%) said they had a mentor available when they were learning beekeeping, same as statewide.

Not all LCBA individuals had losses Twelve individuals (37.5%) had NO LOSS while 8 (25%) lost all their fall colonies. Thirteen individuals lost one colony, 5 lost two colonies, one individuals lost 3 colonies, two individuals lost 4 colonies and one individuals (7 years experience) lost 10 colonies, the heaviest loss (in this case a 67% total loss).



Two individual respondents (6%) kept their bees in 2 apiaries. Those two individuals had no loses in their home apiary but 75% loss rate in the 2nd apiary site.. NO LCBA said they moved colonies during the year.

Reasons indicated for losses

Individuals with loss were asked to what they attributed their loss (multiple factors could be chosen; one individual chose 5 factors. There were 40 choices (1.7/individual) selected. Varroa with 9 and Weak in the fall, 7 + queen failure, 6 individuals were the most common selections. Yellow jackets were selected by 4, poor wintering by 3 and don't know + starvation by 2 individuals each. Single indications were pesticides, bear attack, Nosema, moisture, swarmed, cold and no opinion. Asked to indicate an acceptable level of loss display range of zero to 100%. No loss, 8 individuals and 10%, also 8 individuals, were the most common selections. 10% was the medium choice.

There is no easy way to verify reason(s) for colony loss nor an acceptable loss level. 59% percent of LCBA beekeepers felt 10% or less was acceptable while statewide 47% felt likewise. 10.5% statewide stated 50% or higher was acceptable while among LCBA beekeepers only one individual stated over 50%. Colonies in the same apiary may die for different reasons. **Doing the dead colony necropsy is the first step in seeking to solve the heavy loss problem. More attention to colony strength and possibility of mitigating winter starvation will help reduce some of the losses. Effectively controlling varroa mites will definitely help reduce losses.**

Management selections and losses

The survey inquired about feeding practices, wintering preparations, sanitation measures utilized, screen bottom board usage, queens, mite monitoring and both mite control techniques (such as screen bottom board use, drone brood removal efforts, etc.) and chemical mite controls used. Individuals could check none or more than one response; most LCBA and OR beekeepers most often do not do just one thing/management to their colony (ies) to control mites toward improving overwintering success.

I will complete an analysis of these managements relative to loss levels for the statewide data base and indicate responses for LCBA member respondents This will be posted to the same website, when completed.

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 2018