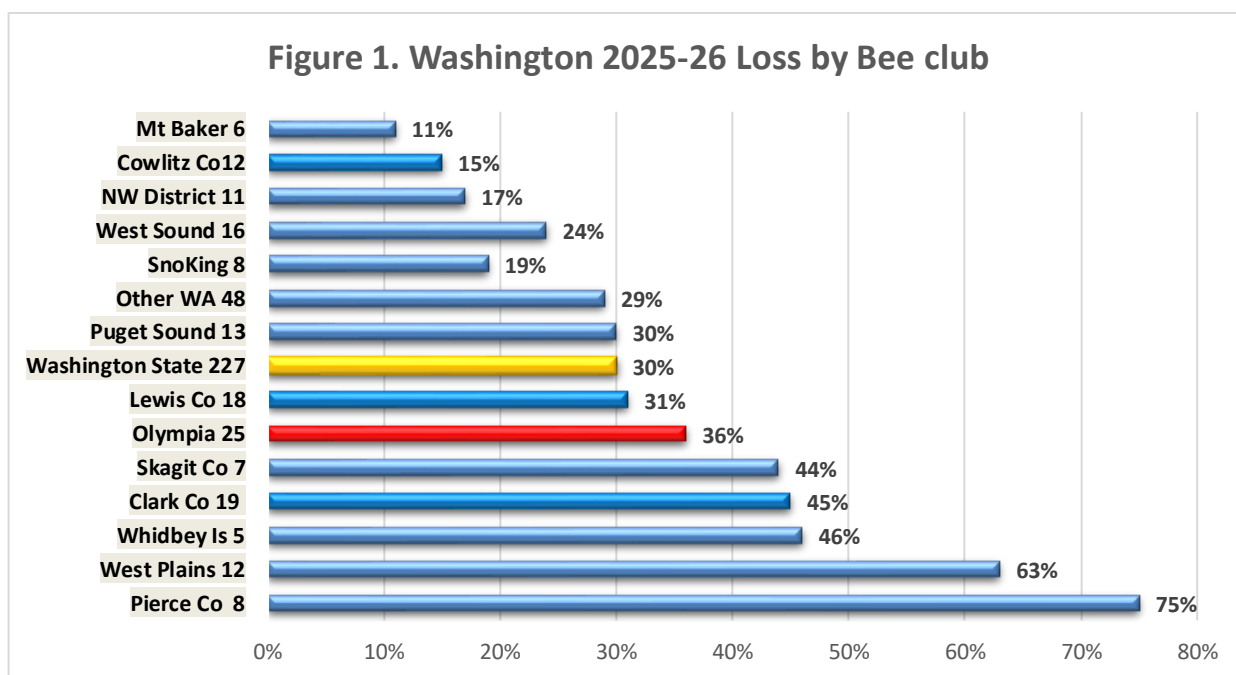


Winter Bee Losses of Olympia Washington Backyard Beekeepers for 2025-2026

by Dewey M. Caron

Overwintering losses of small-scale Washington backyard beekeepers = 30% a decrease of four percentage points from last year, 14 percentage points below the 10-year loss average. Two hundred twenty-seven, 97 more than last year completed a survey and 106 above the 120.8 average respondent rate for the last seven years. Individuals maintained up to 676 fall colonies. Information on winter losses and several managements related to bee health was included on the electronic honey bee survey instrument www.pnwhoneybeesurvey.com



Response by local Washington (WA) associations varied as indicated by blue bars in Figure 1. The number of respondent individuals is listed next to the association name. The bar length is the average club loss percentage for the year. Survey included 676 fall Washington beekeeper colonies, 17 fewer than last year: overall stat loss average =30% (red line). Twenty-five Olympic beekeepers responded to the latest survey. Their loss level was 36% (orange line).

The PNW survey overwintering loss statistic was developed by subtracting number of spring surviving colonies from fall colony number supplied by respondents by hive type. For the 25 Olympia Beekeeper respondents there were 10 individuals with 48 Langstroth fall 8-frame colonies (loss level =41%), 14 individuals with 83 fall Langstroth 10-frame colonies (loss level=35.5%), 2 nucs both survived, 2 top bar hives (2 individuals) both survived and 6 individuals had “other” hive type (9 Hive IQ, 5 survived, 1 AZ hive, it survived and 1 other hive type not IDed – it survived. Statewide there was an apparent advantage of 8-frame Langstroth hives, but this was not the case for Olympia beekeepers - results were 23% loss of Langstroth 8-frame and 30% loss of Langstroth 10-frame hives and this has

been the case most years. Statewide nuc losses were 48% (78 fall nucs overwintered). Losses of top bar hives were 33% (21 fall overwintered) and 25% for Warre (only four total statewide).

Statewide 81 individuals had no loss (329 colonies, range 1-20) while 24 beekeepers lost 100% (84 colonies, range 1-10). The greatest loss was one colony (58 individuals). Nine individuals lost 10+ colonies. For Olympia members, five members lost 100% (9 total colonies, range 1-4) while nine individuals had no loss (26 colonies, range 1 -7). Eight Olympian beekeepers lost one colony and two lost two colonies; heaviest loss was 17 colonies.

Six Olympia individuals had one colony (50% lost), five had two colonies (also 50% loss), and three had three colonies with no loss (median number was three colonies for Olympia beekeepers while it was four colonies for statewide. For individuals with one to 3 colonies loss level was 29.5%. Six individuals had 4-9 colonies with a 22% loss level, and 4 individuals had 10+ colonies with 42.5% loss level. Statewide, the 108 individuals with 1 to 3 fall colonies lost 41%, while the 42 individuals with 10+ colonies lost 31%. Statewide, simple average colony number was 6.8 while for Olympia beekeepers it was 6.1 colonies. As colony numbers increase statewide percentage of loss decreases but this was not the case for Olympian beekeepers.

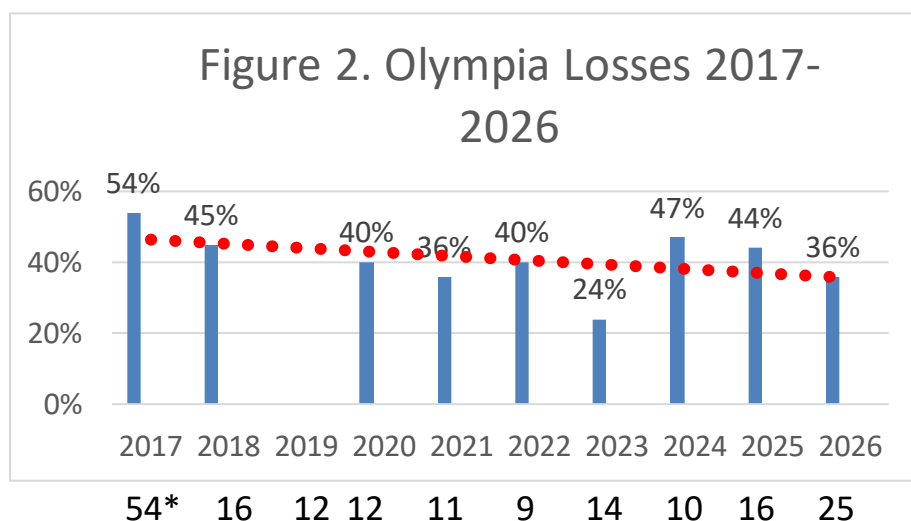
For Olympia beekeepers, 8 individuals had 1-3 years' experience with 45% loss, 8 had 4 or 5 years' experience (36.5 loss level) and 9 had 10+ years' experience (27% loss level. Five years' experience was median and highest was 40 years. Statewide 61 respondents had 1 - 3 years of experience (37% loss level). Seventy-six individuals had 4 – 6 years' experience (33.5% loss level), 30 individuals had 7-9 years' experience (loss level 29%), 45 had 10-18 years keeping bees (39% loss level and the 15 individuals with 20 to 64 years' experience lost 24%. Medium number = 5 years' experience and 64 years' experience was greatest. Examining the relationship of years' experience related to loss shows that the greater the number of years of experience the percent loss decreases.

Sixteen (67%) of Olympia beekeepers said they had an experienced beekeeping mentor available as they were learning beekeeping. This percentage was lower than statewide 72% - 10-year average =77%).

We also asked about hive loss by origination. Nine of the 25 Olympia beekeepers used FAST TRACK and did provide answers – 16 did. Twelve individuals had 17% loss of 29 previously overwintered colonies, one individual lost 1 of 2 packages, 4 of 11 nucs were lost (36% loss level) but only 2 of 11 swarms (18% loss) and 2 of 13 splits were lost. Statewide 50% used FAST TRACK. The best survival was previously overwintered, with a 22% loss rate (80 individuals). Packages overwintered by 28 individuals had 30% loss Overwintered nucs, 86 fall colonies, had 29% loss. There were 45 individuals overwintering swarms (72 colonies), they had 32% loss. Forty-five individuals overwintered splits, 127 total and they had 21% loss.

Ten-year loss record for Olympia beekeepers is shown below. The numbers below the graph indicate the number of Olympia respondents. I am unable to find the loss of 2019 year – I believe there were 12 respondents that year, but it was a heavy loss year with cool wet spring. The 2017

numbers include numbers generated by the club, with 10 individuals from the PNW survey added to total. **Red dashed line** is loss trend. Average Olympia loss for 9 years is 40.7%, compared to a 46.15% statewide loss the past 9 years.



Colony death perceived reason and acceptable loss level

We asked survey takers who had winter losses for the “reason” for their losses. More than one selection could be chosen. In all there were 31 WA selections (1.7/individual) provided. Eighteen Olympia members had 31 selections (recall that six had no loss and there were four who said they didn’t know.) Varroa 10 selections, Weak in the fall five selections and queens and moisture, three selections each were the most common reasons stated for losses. Two said starvation and absconding. Single choices were CCD, pesticide, spoor wintering, yellow jackets, treatment effects and colony suffocated in spring with too many bees on bottom board.

Acceptable loss: Olympia survey respondents were asked what an acceptable level of loss was. Five indicated zero (no loss), four said 10%, eight said 20%, medium for both Olympia and statewide, three said 25%, one said 33% and three said 50%.

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. There appears to be no single reason for loss and 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. Major factors are thought to be mites, pesticides, declining nutrition adequacy of the environment and diseases, especially viruses and Nosema. Management, failure to do something or doing things incorrectly, remains a factor in our losses. More attention to colony strength and checking stores to help avoid winter starvation will help reduce some of the losses. **So, there is no simple answer to explain the levels of current losses nor is it possible to**

demonstrate that they are excessive for all the issues facing honey bees in the current environment.

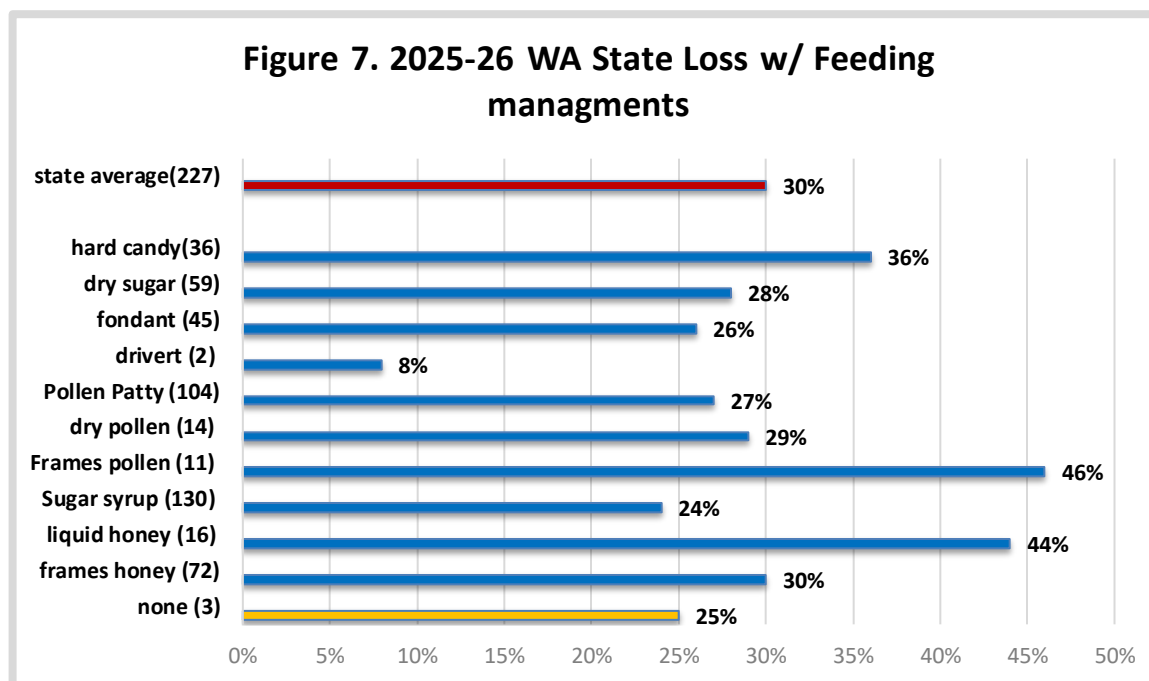
Managements

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. Three Olympia respondents FAST TRACKED and did not respond while 22 did respond to initial questions on managements.

FEEDING: Statewide, individual had 3.15 selections/individual. Only those who indicated a single choice (36%) had a loss level below the 30% statewide average. The three individuals selecting none had a 25% loss level, five percentage points better than the average. The two Olympia respondents (of the 22 who did not FAST TRACK) who made no selections had 2 colonies total and one was lost = 50% loss.

Statewide (see Figure 7) only sugar syrup feeders had better survival than average loss (30%) but of the 15 syrup feeders (72 colonies) in Olympia the loss was 10 percentage points greater, 40%. The six that fed frames of honey (81 colonies) fared even worse with a 47% loss. Four individuals fed liquid honey (75 colonies) had 44% loss.

Statewide pollen patty feeding (104 individuals) had a 3-percentage improvement over normal. For Olympia there were 15 pollen patty feeders (84 colonies), but their loss was 40%. There were no dry pollen feeders. The two individuals who fed a frame of pollen (35 colonies) had a 58% loss.



The dry sugar feeders statewide had better survival when drivert (only two individuals), fondant (45 individuals – 26% loss) and dry sugar (59 individuals - 28% loss) was used. The 36 hard candy users had a 6-percentage point higher loss than statewide average. The two drivert feeders were Olympia beekeepers (one of 12 colonies lost). The 10 fondant feeders (95 colonies had a 40% loss), the two dry sugar feeders (35 colonies) had a 48.5% loss and the five candy feeders (15 colonies) had a 40% loss.

While some feeding methods seemed to promote better survival statewide, none did s for Olympia beekeepers.

WINTERIZING: Washington survey respondents checked 3.15 feeding options/individual. The 66 individuals that fast tracked had a 37% loss. Only those making one selection (37% loss) had losses heavier than statewide average (30%) while increasing the number of selections resulted in better survival (the 10% making 5 or 6 selections lost 12%). For loss level by selection see Figure 7. All but wrapping colonies had a better survival than statewide average and that was only a single percentage point different. Equalizing colonies, rain shelter and wind/weather protection were choices that were most conducive to better survival.

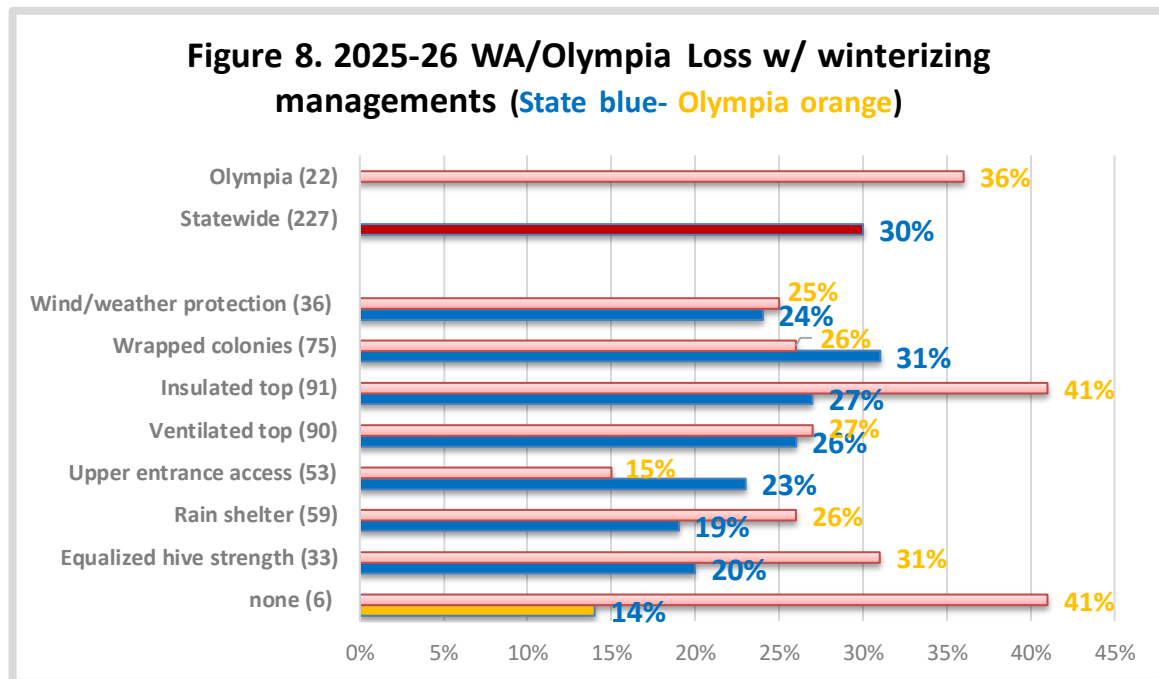
Olympia beekeepers had 2.6 selections per individual. The three who used FAST TRACK had a 35% loss. The three Olympia individuals who made no selections lost 1 of 9 colonies (11% loss). For Olympia beekeeper selection that was poorer than the average –the most frequently selected by highest number = was Insulated top -13 individuals, 104 colonies, 41% loss. It was the only choice over the Olympia loss level (36%). The remaining were below the Olympia loss level:

Equalize hive strength - 5 individuals, 55 colonies, 31% loss,
 The quilt box (ventilated top) selected by 7 individuals, 34 colonies, 27% loss,
 wrapping colonies - 8 individuals, 57 colonies, 26% loss,

Rain shelter -7 individuals, 55 colonies, 25.5% loss

Wind/weather protection – 8 individuals, 12 colonies, 25% loss

Upper entrance use - 5 individuals, 26 colonies, 15% loss

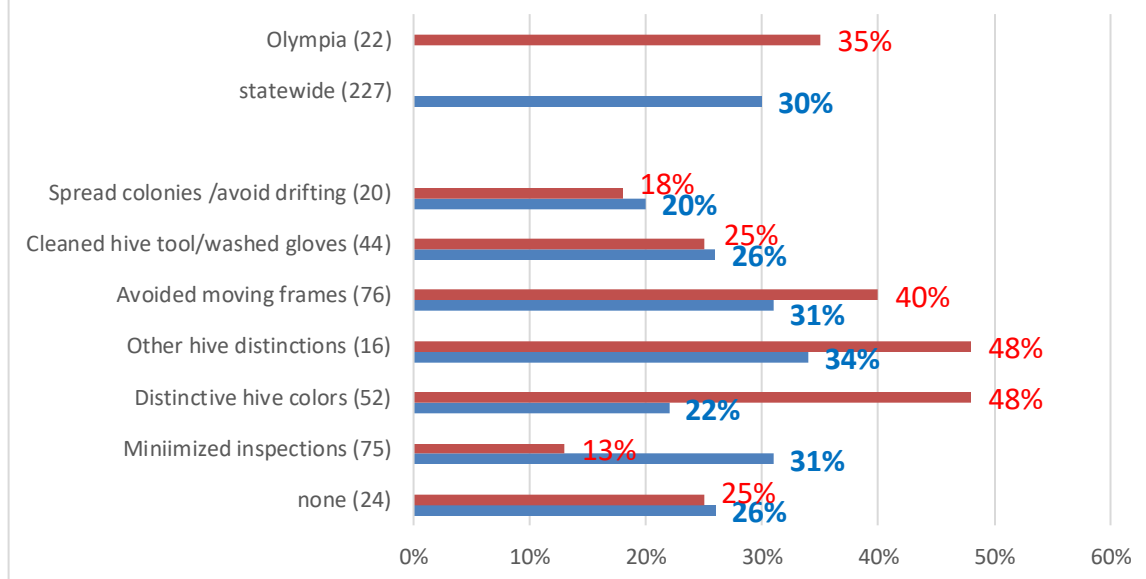


What was a bit surprising is that insulated top colonies (condensing colonies) and ventilated top both had slightly better survival rates for statewide individuals but only the ventilating colony did better for Olympia beekeepers – the insulated top loss was five percentage points poorer for Olympia.

SANITATION: It is critical that we practice some basic bee sanitation (some prefer use of term bee biosecurity) in our bee care to help ensure healthy bees. We received 311 responses for this survey question 2.3/individual. Twenty-four individuals (15%) said they did not practice any of the six offered alternatives; they had a loss rate of 26%, four percentage points lower than the statewide average. The 66 individuals who used Fast Track (no response) had a 37% loss. For Olympia there were 39 selections, 1.85/individual. The three selecting none lost one of four colonies 25%.

There are general agreements of the managements of Olympia beekeepers (shown in red) and those statewide (blue) in Figure 9. The exception is providing hives with distinct colors was not effective for Olympia individuals (6 individuals, 56 colonies, 48% loss) while it was for those in the state. Minimal hive inspections (9 individuals, 31 colonies, 13% loss) was more effective. It was also the most commonly selected alternative by nine individuals.

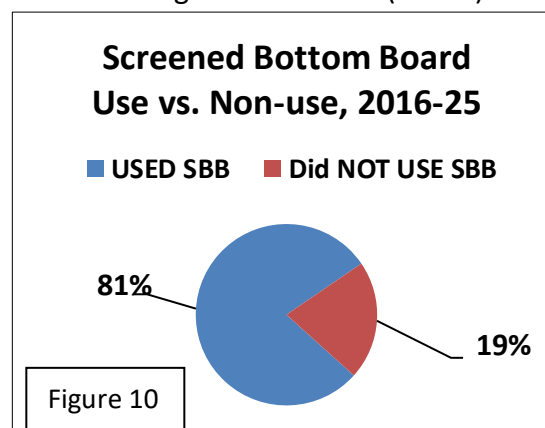
Figure 9. WA/Olympia Loss w/ Sanitation managements



SCREEN BOTTOM BOARDS (SBB)

Although many beekeepers use SBB to control varroa mites, BIP and PNW surveys clearly point out they are not or at best not a highly effective varroa mite control tool. Those 66 individuals who used FAST TRACK (no response) had a 37% loss. The 25 Washington individuals (15.5%) who said they did not use screen bottom boards lost 32.5% of their colonies. Those 31 beekeepers using SBB on some of their colonies lost 22.5% and the 105 individuals (65%) using SBB on all of their colonies had 27.5% loss. Two Olympia beekeepers used none and had 48,5% loss while the 16 using on all colonies had a 31% loss.

In nine survey years 19% of Washington beekeepers said they did not use SBB and 81% did use SBB on some or all of their colonies, see Figure 10. Ninety-one percent used on some or all colonies, 10 percentage points higher than statewide.



Examining the eight-year average SBB use, those using SBB on all or some of their colonies had a 40% loss level whereas for those not using SBB the loss rate was 40.9%, <1% positive survival gain for those using SBB versus those not using them. SBB is a very minor aid in improving overwinter survival for Washington beekeepers.

We asked if the SBB was left open (always response) or blocked during winter season. For Olympia beekeepers six individuals said they never blocked - left open (12 colonies) with 17% loss, while 10 individuals always blocked with 38% loss, (3 sometimes blocked for 11% loss). Statewide 83 individuals said they always blocked SBB during winter. They had a 25.5% loss rate. Forty-five individuals (32%), a surprisingly sizable percentage, said they never blocked SBB and had a loss rate of 26%. Twelve individuals (8.5%) blocked them on some of their colonies. Their loss rate was 33%. So, the 65 individuals that blocked or sometimes blocked screen boards had 33% loss. Over the past seven years, those closing have nearly an 8-percentage point advantage when the SBB is closed during the winter (although it was the opposite this season, both statewide and for Olympia beekeepers).

There is no good science on whether open or closed bottoms make a difference overwinter, but some beekeepers “feel” bees do better with it closed overwinter. An open bottom, at least during the active brood rearing season, can assist the bees in keeping their hive cleaner and promote good hive ventilation.

Things that seem to improve winter success: It should be emphasized that these comparisons are correlations not causation. They are single comparisons of one item with loss numbers. Individual beekeepers do not do only one management option, nor do they necessarily do the same thing to all the colonies in their care. We do know moisture kills bees, so we recommend hives be located in the sun out of the wind. If exposed, providing some extra wind/weather protection might improve survival. Early spring pollen is important so locations where bees have access to anything that may be flowering on sunny winter days is also good management.

Feeding, a common management, appears to be of some help in reducing losses. Feeding hard sugar candy or fondant during the winter meant lower loss levels. Providing honey or sugar syrup, the most common selection, does not usually mean lower winter losses (but sugar syrup feeders did better this year). These basic managements are useful in other ways such as for spring development and/or development of new/weaker colonies besides insuring better winter survival.

Feeding protein dry or as pollen patty does seem to slightly improve survival. The supplemental feeding of protein (pollen patties) might be of assistance earlier in the spring season as it has been demonstrated to help bees build strong colonies, but this may lead to greater swarming.

Winterizing measures apparently help lower losses for beekeepers. Rain shelter and top insulation, spreading colonies out in the apiary and painting distinctive colors or doing other measures to reduce drifting are of value in reducing winter losses.

Replacing standard bottom boards for screened bottoms only marginally improved winter survival. It is apparently advantageous to close the bottom screens during winter.

Mite monitoring/sampling and control management

We asked the percentage of Washington hives monitored for mites during the year 2025 and/or overwinter 2025-26, and, of the five possible mite sampling methods, what method was used and when it was employed. Sixteen Olympia beekeepers monitored all their colonies. They had a 23.5% loss. One hundred and nine individuals statewide said they monitored all their hives. Losses of those individuals monitoring was 22%. Three Olympia beekeepers did no monitoring – they had a 11% loss while the thirty-four statewide individuals who reported no monitoring had a higher loss rate of 25.5%. opposite the Olympia responders.

In order of popularity of use, 13 Olympia individuals used sticky boards, 10 monitored adults, 9 used alcohol, seven monitored drone or drone brood and three powdered sugar. 86 individuals used sticky boards (27.5% loss), 79 used alcohol wash (26% loss), 69 examined worker adults (28.5% loss), 59 looked on drones or drone brood (26% loss) and 17 used powder sugar, (27% loss). Monitoring is recommended to help as basic management to reduce losses.

The most common sampling of respondents in 2025-26 was sampling both pre and post (56 individuals, 59% of responses); they had 21% loss, nine percentage points lower than overall lost rate for Washington beekeepers statewide. Those 28 sampling pre had a higher loss rate (35%) while those 11 only sampling post treatment had a 21% loss. The 26 individuals who treated without sampling had a 21% loss. The three individuals that sampled but did not treat lost 55% of their colonies.

It is important to KNOW mite numbers. Mite monitoring methods using sticky (detritus) boards below the colony can be a challenge (often so much detritus drops onto a sticky board that picking out the mites can be hard, especially for new beekeepers) but sticky boards used for a day can help confirm the efficacy of a treatment when inserted post treatment. Visual sampling is not accurate: most mites are not on the adult bees; they are in the brood. Unfortunately looking for mites on drone brood is also not effective as a predictive number but can be used as an early warning that mites are present; if done, look at what percentage of drone cells had mites.

See ***Tools for Varroa Monitoring Guide*** www.honeybeehealthcoalition.org/varroa on the Honey Bee Health Coalition website for a description of and to view videos demonstrating how best to do sugar shake or alcohol wash sampling. The Tools guide also includes suggested mite level to use to base control decisions based on the adult bee sampling. A colony is holding its own against mites if the mite sample is below 2%. It is critical not to allow mite levels to exceed 2% during the fall months when bees are rearing the fat fall bees that will overwinter. It is also the most challenging time to select a control method (if one is deemed needed) as potential treatment harm may negatively impact the colony. We are seeing more colonies suddenly disappear (abscond?) during the fall, which may be related to the treatment itself.

Mite Control Treatments

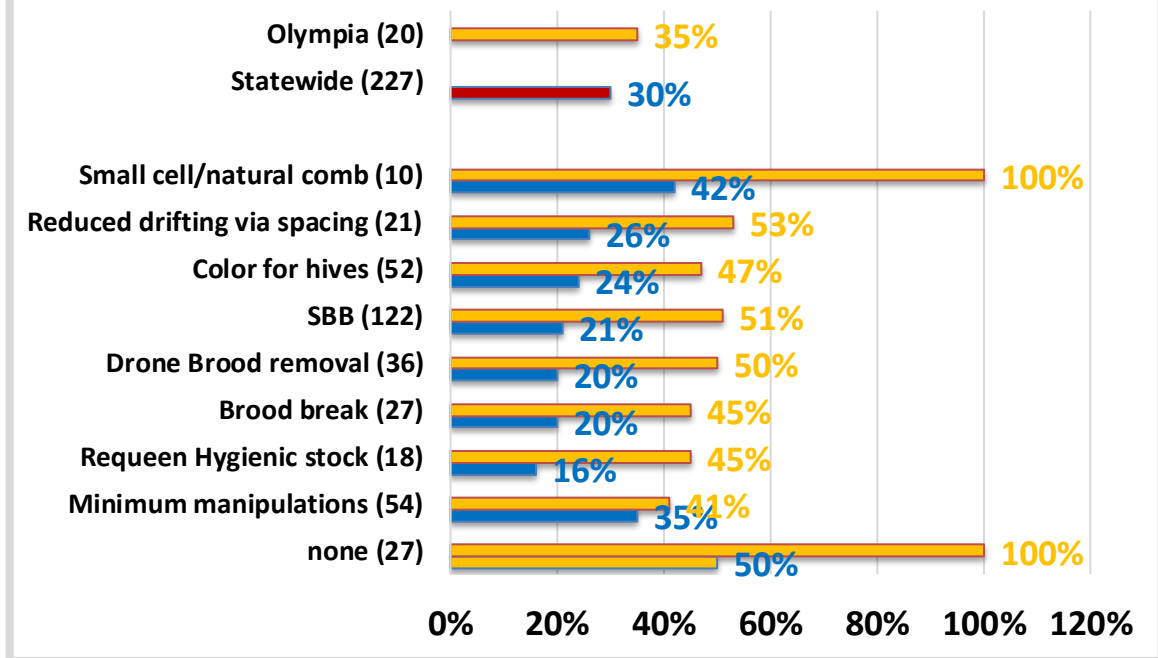
The survey asked about non-chemical mite treatments and also about the use of chemicals for mite control. A total of 20 answered this question for non-chemicals, with the remainder electing to FAST TRACK – those five not responding to non-chemical treatment had a 31.5% loss. One Olympia individual said they did none of the alternatives – they lost their single colony. Statewide twenty-seven individuals (15.5%) said they did not employ a non-chemical mite control – they lost 50%. One respondent with a single colony did not use a chemical control and their colony did not survive. Statewide, the five not using a chemical control had a 49% loss. The individual options chosen for non-chemical and chemical control are discussed below.

Non-Chemical Mite Control: Of nine non-chemical alternatives offered on the survey (+ other category), 378 selections were indicated statewide. 2.2/individual. For Olympia 43 selections were made by the 20 individuals - 2.15/individual. The five individuals who FAST Tracked and did not respond had a 31.5% loss level. Statewide there was no correlation that with increased number of selections that loss level will decrease.

Use of screened bottom board was listed by 17 individuals, 92 colonies 50.5% loss, minimal hive disturbance (9 individuals, seven colonies, 41% loss). None of the others had significant respondents and three, drone brood removal (2 colonies), powdered sugar (1 colony) and small cell/natural comb (1 colony) each were the selection of a single individual. I have no explanation for why each choice did not reduce survival compared to the state averages. The selection of the selection choices is shown in Figure 11; number of individuals in (), bar length represents average loss level of those individuals using each method with Olympia in orange and state in blue.

Three of the statewide non-chemical alternatives – drone brood removal (36 individuals, 20% loss), brood cycle interruptions (27 individuals, 20% loss) and requeening with hygienic stock (18 individuals, 16% loss) have also been the most useful in previous year surveys in reducing winter losses. Painting hives with distinctive colors has resulted in better survival in each of the past five years. Minimum intervention (35% loss) and small cell/natural comb (42%) showed poorer survival.

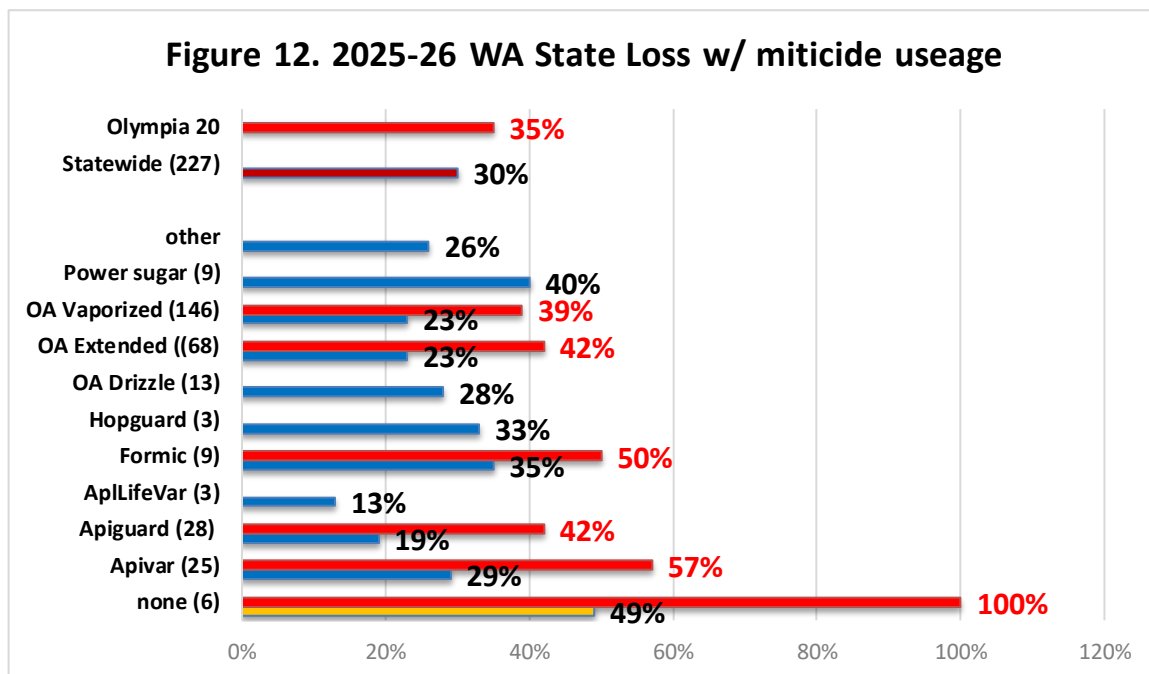
Figure 11. 2025-26 WA/Olympia Loss w/ non-chemical treatments (State blue Olympia orange)



Chemical Control: For mite chemical control, five individuals (3% of total respondents) used NO chemical treatment; these five individuals (53 colonies) had a 59% loss level (the last three years those doing no treatments lost 100%, 61% and 67% but colony number lost (average 8) was not extensive- this year it was a 10 colony average). Those using chemicals used at rate of 1.7 /individual (last year 2.1/individual). Eighty-one individuals (58%) used one chemical and had 32% loss, 57 used two and had a 46.5% loss, 22 used 3 (7% loss), four used four, (8%). Figure 12 illustrates the number of uses () and bar length indicates the loss rate for those using that chemical. The blue bars represent loss Statewide and the red bars percent loss by Olympia individuals.

Apivar: the two one-time users (7 colonies) lost 3 a loss rate of 57%.

Apiguard: The 1 individual that used it twice (32 colonies) had a 53% loss, the 3 individuals who used it once twice had a 30% loss: overall the 4 individuals using Apiguard =41.5%.



ApiLifeVar: No Olympia respondents used.

Hopguard: No Olympia respondents used.

. **Oxalic acid.** Oxalic acid is being extensively used, and it is proving to be effective in reducing overwintering loss. It can be mixed into sugar syrup and applied as a dribble between frames (often during winter). For convenience it is simply termed OAD. It can be absorbed into a pad and used between brood boxes for an extended time, even when supers are in place (OAE) and finally it may be cooked with a vaporizer and used as gas - OAV. And it may be used many times.

OAD: No Olympia respondents used.

OAE: Eight Olympia individuals used Oxalic Acid in an extended manner. Use has increased dramatically. Absorbent pads may last 4-6 weeks and then be replaced. Two users of OAE indicated use 6+ times and lost only 2 of 16 so treated colonies for loss rate of 12.5%. Three individuals used it four times and had a 48.5% loss, the three individuals that used it once had a heavy 55.5% loss. Overall, the use of OAE resulted in 42% loss for Olympia individuals. OAE is now a legal use with the product of Varroxxsan; many users are using a home remedy of absorbing OA into sponges with glycerin.

OAV: This chemical mite treatment was by far the most popular, used on 115 colonies (compared to 69 colonies treated with OAE). Fourteen of 19 individuals said they used OAV. The number of individuals, their fall colony number and loss are shown in table below. It is clear that OAV needs repeated use to be effective.

2X	1	1	100%
3X	4	17	35%
4X	3	53	47%
5X	3	35	25.5%
6+	3	9	22%
Total	14	115	39%

Note: one individual with 32 colonies used both OAV and OAE 4 times (and Apiguard 2 times) yet had a 53% loss. The poorer overall results are skewed, largely due to this individual.

Statewide, in the last seven years five different chemicals have helped beekeepers realize better survival. The essential oils Apiguard and ApiLifeVar have consistently demonstrated the lowest loss level; this year 19% and 13% loss. Apivar, the synthetic amitraz, has demonstrated better survival over the past 7 of 9 years but this year by only a single percentage point poorer survival - last year it was two percentage points poorer in survival.

Oxalic acid vaporization over the past 6 years has a 14% better survival (the survey did not differentiate Oxalic vaporization from drizzle prior before); this year a 9-percentage point better survival difference. Formic acid use is declining, nine individuals indicated using it this year, and it seems not to be highly effective – a 5-percentage point poorer survival this year.

Antibiotic use

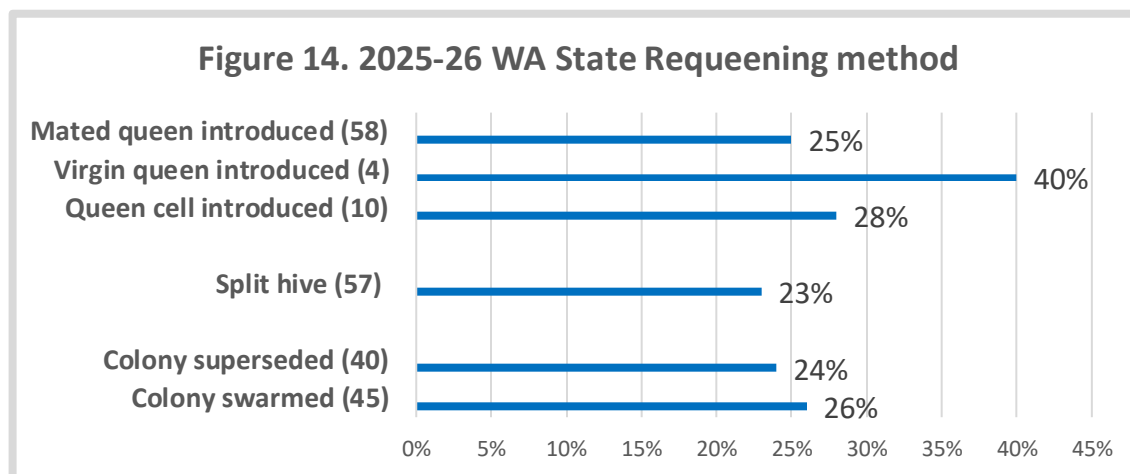
One individual with 32 fall colonies reported using Terramycin; the loss level was 53%. NOTE: This same individual used OA as extended and vaporization four times and Apiguard twice. There was something happening in this apiary to have such poor survival despite use of chemicals and antibiotics. No Olympia members used a Nosema treatment.

Queens

Results are presented here for statewide respondents. We hear lots of issues related to queen “problems.” Twenty-four percent of individuals indicated queen problems as reason for loss in earlier part of survey (Figure 6). Queen events can be a significant factor contributing to a colony not performing as expected. Seventy individuals FAST Tracked and did not respond to the section on queens; they had loss level of 51%. We asked if you had marked queens in your hives. Eighty individuals said yes (loss level 25%), and 77 individuals said no (loss level 26.5%.) The related question then was ‘were your hives requeened in any form?’ to which 80% (124 individuals) said yes (loss 25%); nearly equal numbers said no or ‘not that that I am aware of.’ Loss level of no was 35%, and 23% for ‘not aware of’ responders.

One technique to reduce mite buildup in a colony is to requeen/break the brood cycle. The question “How did bees/you requeen” received 120 responses, 2/individual (more than one option

could be checked). Fifty-eight individuals indicated they requeened with a mated queen, and they had a 24.5% loss level, four used a virgin queen (40% loss) and 10 used a queen cell (27.5% loss). Fifty-seven said they split their hive(s) 23% loss, 45 indicated their colonies swarmed 25.5% loss and 40 said supersedure occurred – they had a 24% loss. Loss levels of colonies that did it themselves via supersedure and swarming were not very difference compared to those whose queen replacement was managed by the beekeeper via mated queen or queen cell. Splitting hive was slightly lower loss.



Closing comments

I intend to continue to refine this instrument each season and hope you will join in response next march/April. If you have questions or concerns please email me directly for quicker response: dmcaron@udel.edu

I whole heartedly thank Jenai Fitzpatrick, who has been an invaluable assistant through the years with the data and to Bill Cauterall who has been our webmaster for PUB and who has graciously continued with the loss survey. For different reasons, neither individual now keeps honey bees, so for both this is a labor of love. Both say it is payback to those years they had bees and the wonderful friendships developed among the beekeepers.

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 June 2026

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