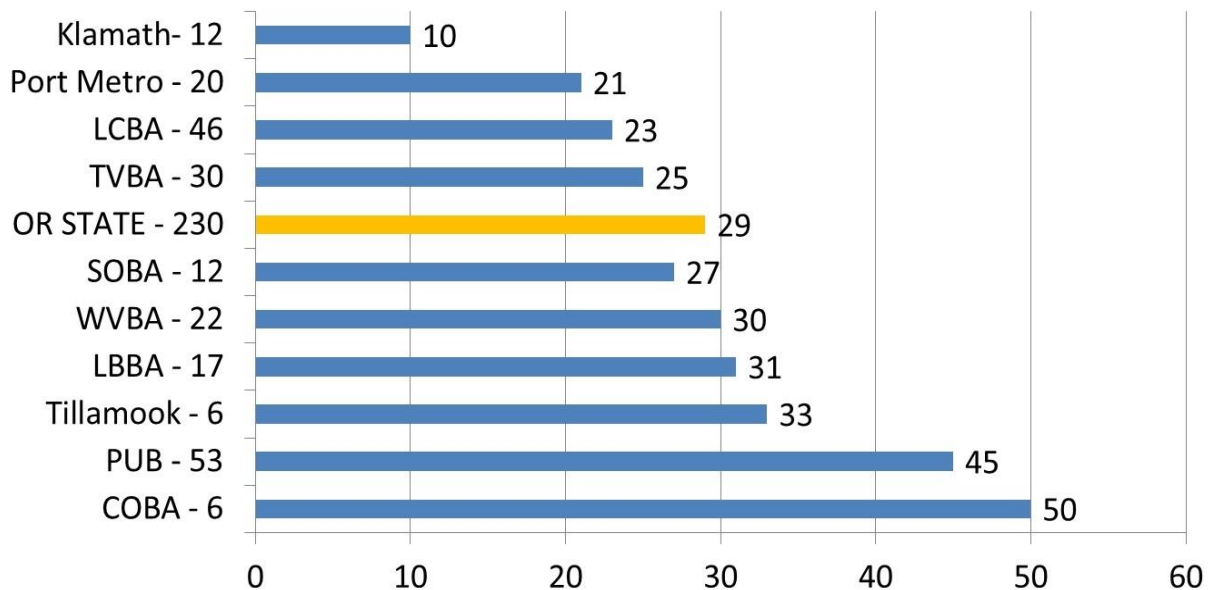


2015 Southern Oregon (KBBA & SOBA) Winter Loss by Dewey M. Caron with statistical assistance of Jenai Fitzpatrick

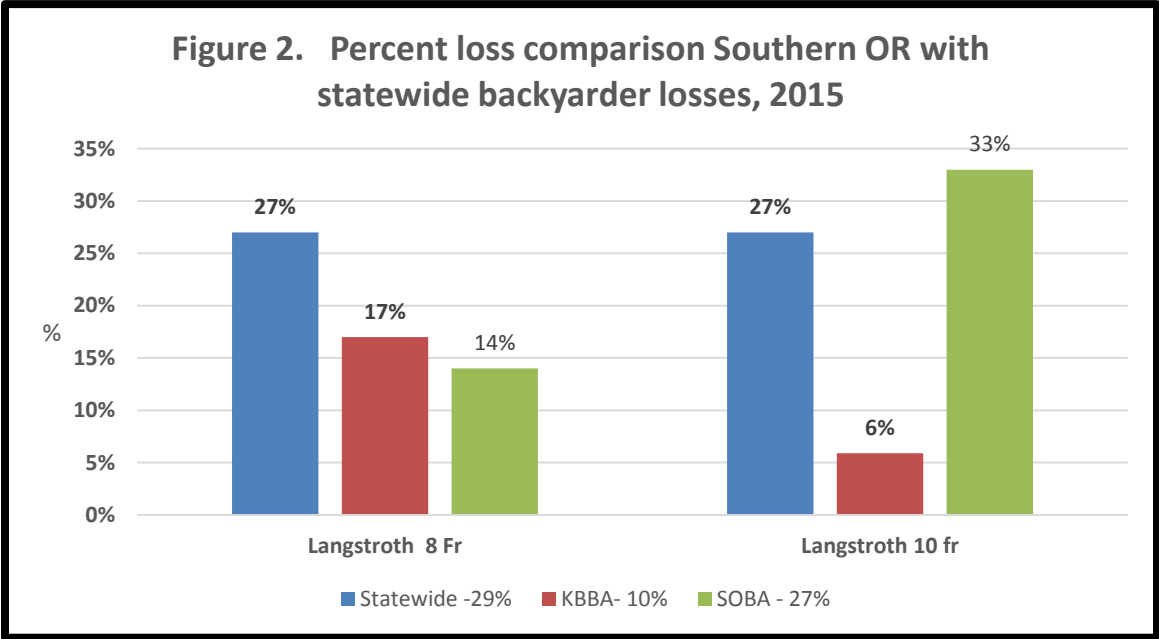
Paper copies of the 2014-2015 overwintering loss survey we distributed at the April meetings and members directed to a web-based survey document (posted at www.pnwhoneybeesurvey.com). Such survey activity is a continuing effort to define overwintering success, now the 8th spring survey. I received 230 responses from OR backyarders, plus 20 others from Washington associations, keeping anywhere from 1 to 50 colonies. Southern tier beekeepers of Klamath Basis (KBBA) and Southern Oregon (SOBA) each contributed a dozen surveys.

Figure 1 Oregon Bee Association Losses 2014-2015

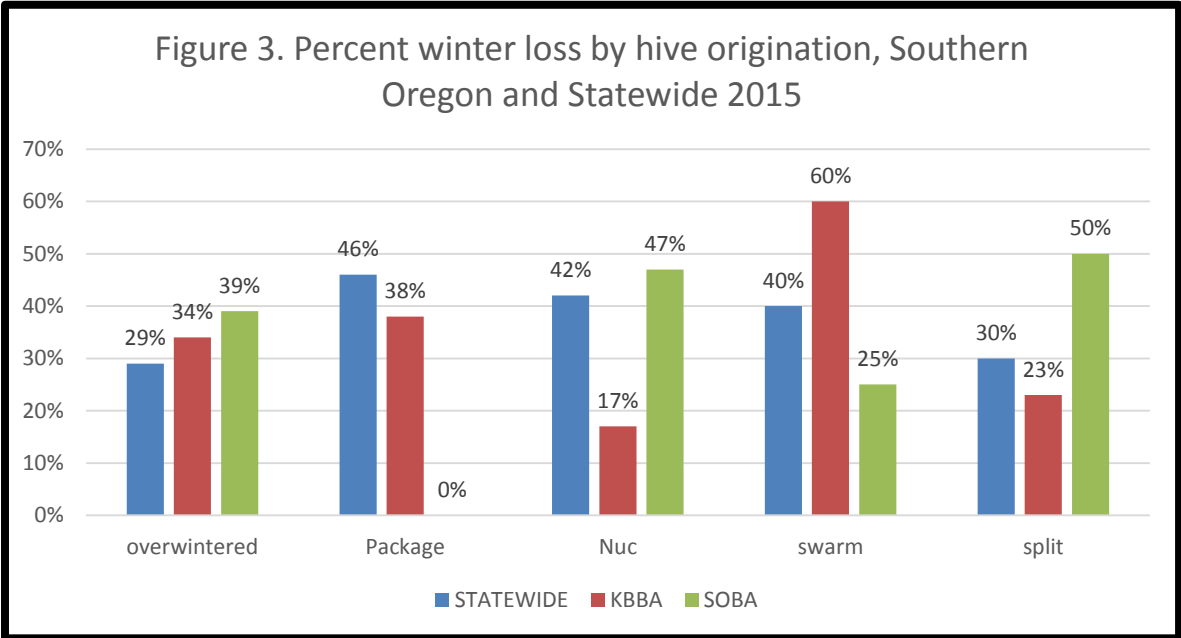


Overwintering losses of KBBA respondents was 24 colonies = 10%, the lowest of 10 bee groups included in the survey. For SOBA loss rate was 27% slightly lower than the statewide loss of 29% (database of 230 OR backyarders.) The heaviest losses were those of the Portland Urban association PUB. See Figure 1.

Percent losses was determined for Langstroth 8 and 10 frame hive types. Data in Figure 2. For SOBA members they started winter with 14 8-frame Langstroth hives with 2 lost overwinter and 33 10-frame hives of which 11 died overwinter. KBBA started winter with 30 Langstroth 8-frame and 51 Langstroth 10-frame hives. Five 8-frame hives were reported lost and 3 10 frame hives. For the two groups a single Top Bar hive and three Warré hives were also overwinter, all successfully. Statewide the loss rate of 8 and 10 frame Langstroth hives was the same at 27%.

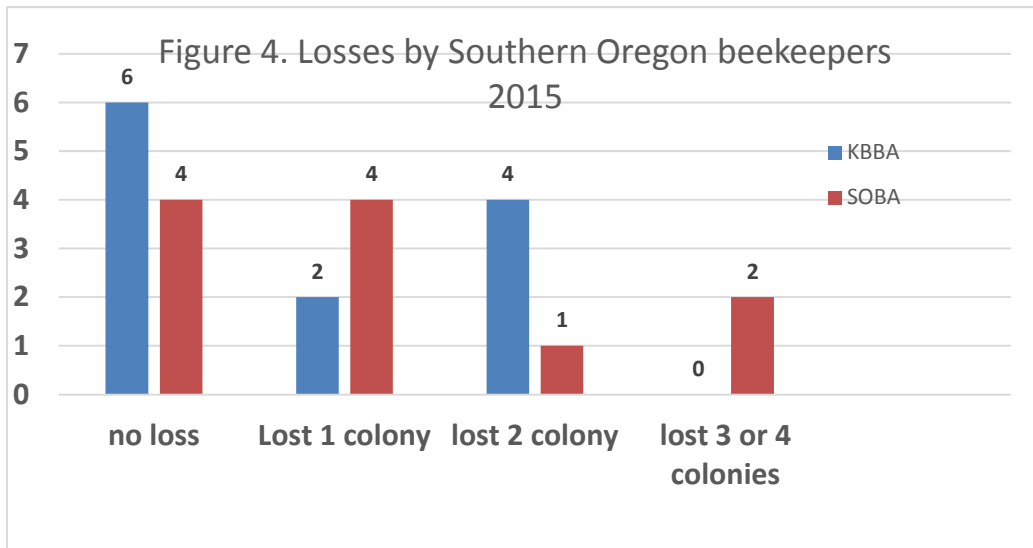


The survey also asked for hive loss by hive origination. Eleven of 18 overwintered SOBA member colonies were alive in the spring (34% loss rate), slightly higher compared to statewide (29%) and 35 of 53 KBBA overwintering colonies were alive in the spring (39% loss rate). There were no packages hived by SOBA respondents. Nuc losses were 50% less for KBBA members, swarm winter losses less for SOBA and although the split losses appear higher in actuality one of two was lost for 50% rate. See Figure 2.



Losses this past winter, based on the 17 survey respondents, were much lower compared to the terribly elevated losses of the previous winter (55%). Note in previous survey years I have not had many Southern Oregon responses to directly compare this year with previous years.

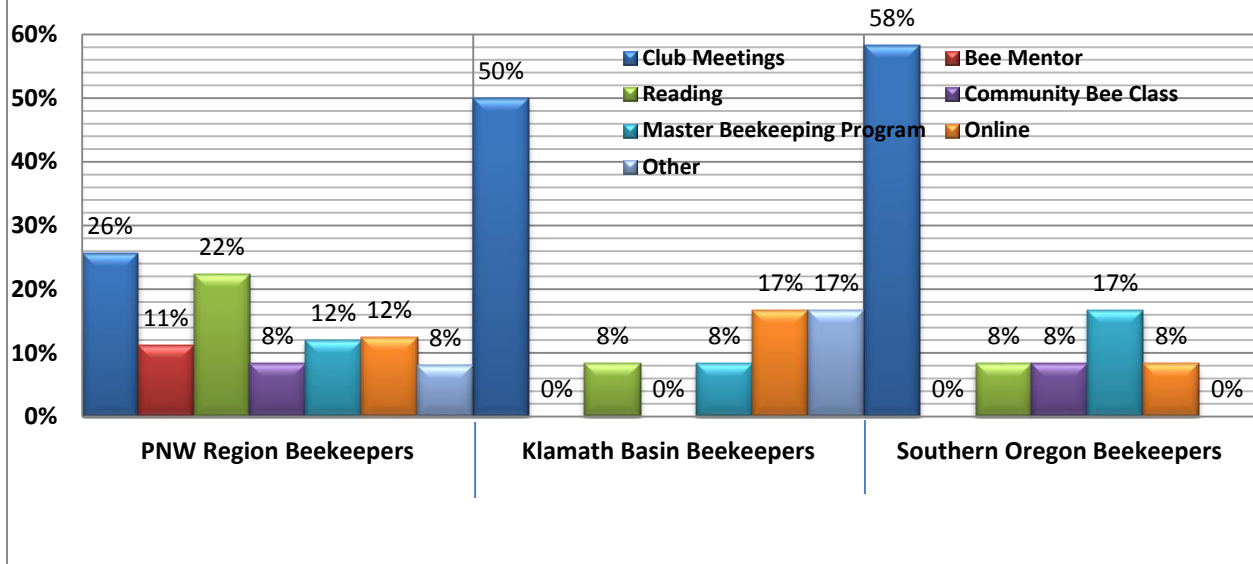
Not everyone had loss. Six individuals (50%) of KBBA members and 4 (33%) of SOBA reported total winter survival compared to 48% statewide; no individuals lost 100% of their colonies. Heaviest loss by KBBA members was 2 colonies and 4 colonies by a SOBA member. Data shown graphically below in Figure 4. Seventy-two percent indicated acceptable overwinter loss as zero or 5-15%.



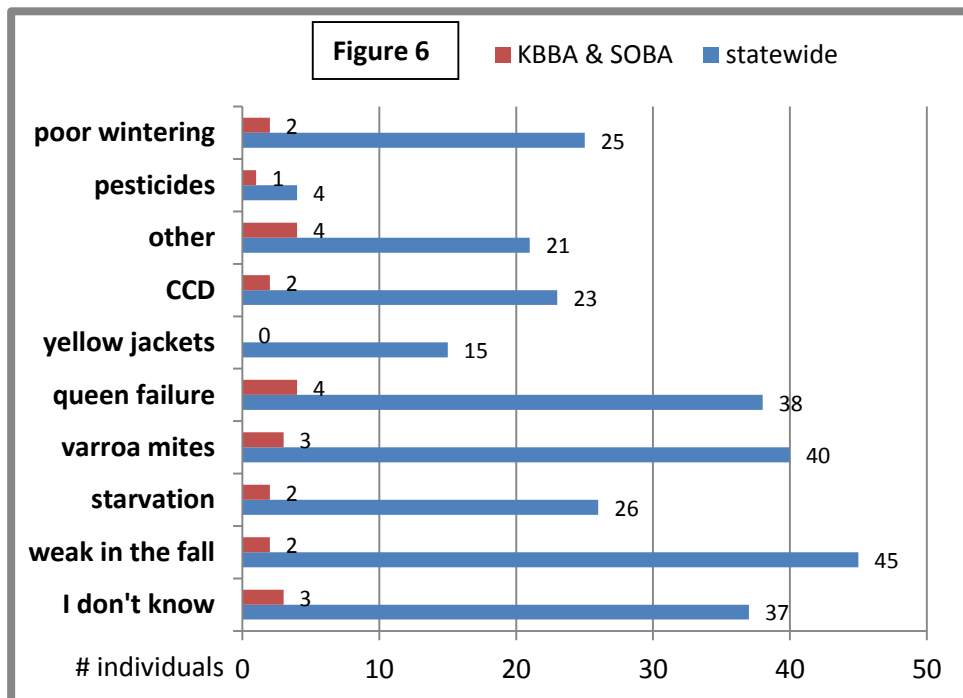
Seven SOBA respondents had 1, 2 or 3 colonies (58%); the largest number was 10. Nine KBBA respondents had 1, 2 or 3 colonies (67%) with largest number 35. Two KBBA and three SOBA individuals had more than one apiary location. Two KBBA individuals moved hives, one to better site and another due to bear attack; three SOBA individuals moved hives, 1 for pollination, one for better site and the other to do hive splits.

When asked to indicate where the majority of their beekeeping education was received, both KBBA and SOBA highly valued the monthly bee meetings compared to statewide responses. Ten of 12 SOBA member said they had a mentor available in their early beekeeping education and eleven of 12 KBBA members did likewise, compared to 69% statewide.

Majority of Beekeeping Education is From



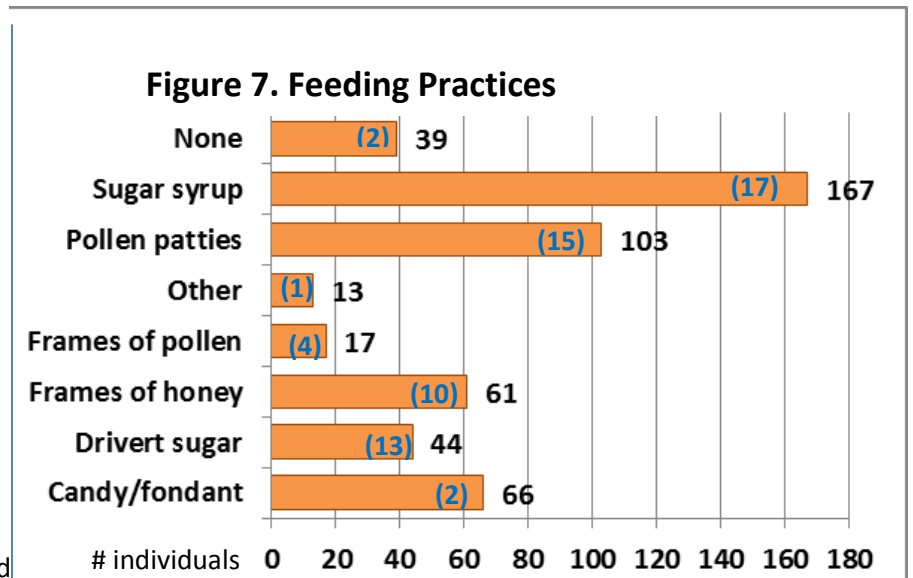
We asked for individuals that had colony loss to estimate what the reason might have been. Multiple responses were permitted. Of 276 statewide responses, 45 chose weak in the fall (16%), 40 selected Varroa mites (15%) and 14% said queen failure. I don't know was also 14%. The 23 combined SOBA & KBBA responses had similar choices with queen failure, varroa, and I don't know. Among other bears, skunks, moisture and mistake were indicated. See Figure 6.



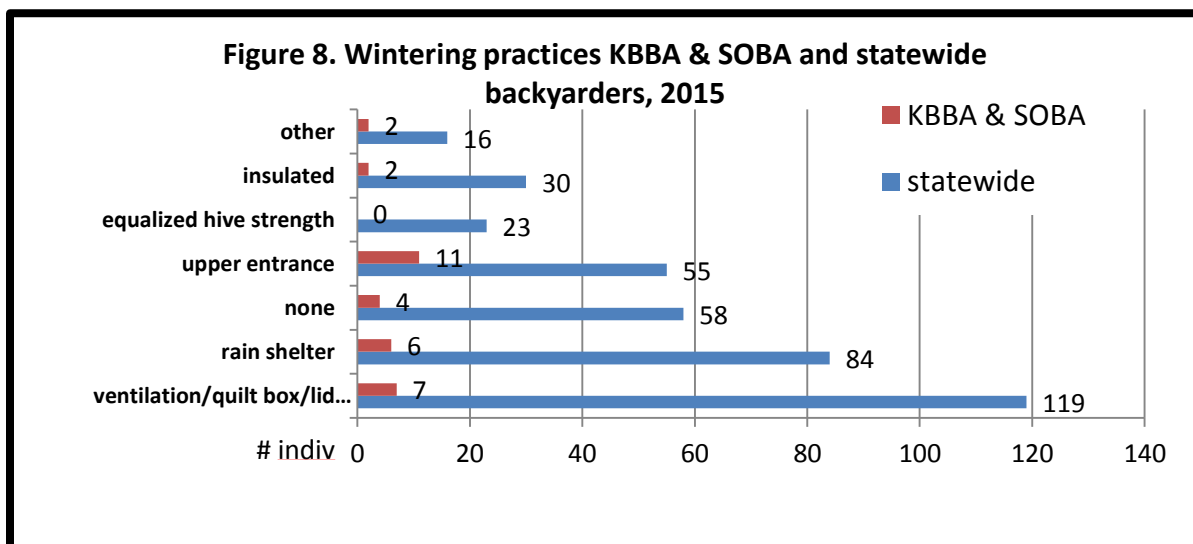
General hive practices

We asked in the survey for information about some managements practiced by respondents. Multiple responses were encouraged.

Feedings: The number of statewide responses (510 total) are shown in bar graph below (Figure 7). Thirty nine individuals (8% of total) did not do any of the options offered. Sugar syrup (33%) and pollen patties (20%) feeding were the most common managements. Feeding fondant/candy (13%) and providing frames of honey (12%) were next most common with drivert and frames of pollen less commonly fed. Under "other," dry sugar or dry pollen or honey as a liquid were statewide responses. Combined KBBA and SOBA respondents shown in (# indiv) mirror those of rest of beekeepers statewide.

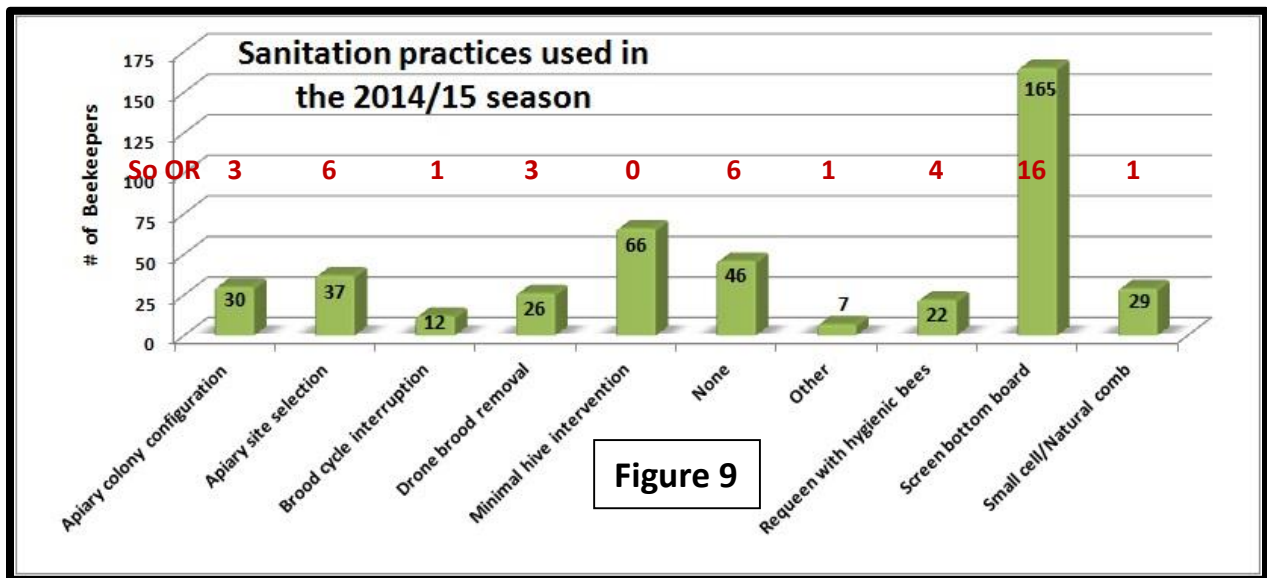


WINTERING PRACTICES: We received 385 responses about wintering management practices statewide and 32 from KBBA and SOBA members (more than one option could be chosen). Fifteen percent (15%) of statewide and 12.5% of southern beekeepers indicated none of the several listed wintering practices was done. The most common wintering management selected was ventilation/use of a quilt box/lid insulation statewide (31%) and upper entrance for southern Oregon beekeepers (34%). Use of a rain shelter was next most common statewide (22%) and in Southern Oregon. Other choices as shown. Other listing for KBBA included reduced entrance and wrapping hive for winter. See Figure 8.



Some choices were not mutually exclusive and this question needs to be revised for a subsequent survey season. Additional items listed was use of cedar lumber for box or lid construction or use of lid with moisture trap or special insulated cover, use of a wintering shed, tying colonies down and providing a winter wind break were also included.

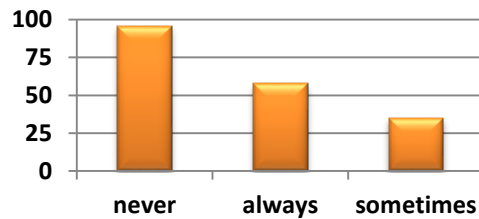
SANITATION PRACTICES: It is critical that we practice some basic sanitation in our bee care. We probably do too little to help insure healthy bees. We received 440 responses for this survey question. Ten percent said they did not practice any of the 8 offered alternatives. Screen bottom board use (38%) was the most common option selected and 16 of 24 Southern Oregon beekeepers indicated use of them – the remainder did nothing. This was encouraging because bees need to get rid of diseased brood, pests and other potential negatives from within their hive. The screen bottom helps promote a “garbage pit” for getting potentially harmful organisms and materials out of the hive. The next most common selection was minimal hive intervention (15% of responses statewide); none from Southern Oregon. Less intervention means less opportunity to compromise sanitation of a hive; needless inspections/manipulations can only interfere with what the bees are doing to stay healthy. As caring bee stewards we should believe we can do our inspections without necessarily compromising bee colony health. Other choices shown in Figure 9. Southern Oregon sanitation selections are shown in red line at 100 beekeepers



Other sanitation measures listed were cleaning of hive tool between inspections, planting medicinal plants in apiary and replacing/cleaning moldy boxes/frames. What we intend to do is compare individuals who had heavier winter losses with those who did not have losses and their responses to these three categories of feeding, wintering and sanitation.

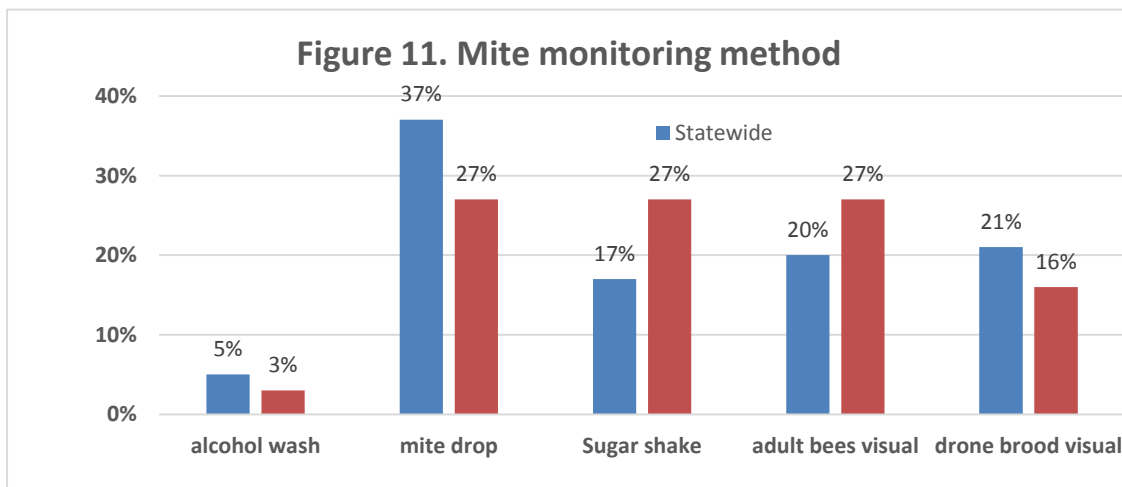
Screen bottom boards: In our national BIP surveys, fully 95% of respondents indicated they have modified colony bottom boards and now use a screen bottom board. We asked what percentage of

hives had screen bottom boards and whether they were blocked during the winter. Statewide 21% said they did not use screened bottoms; for KBBA and SOBA members only 5 of 24 individuals (4 from KBBA) said they did not use them. Statewide 66% used them on all their hives while 84% of LBBA beekeepers using Screen bottom boards used on all their hives. The majority statewide (51%) only 36% of southern Oregon beekeepers left them open over the winter period (never response). 18% statewide and 5% in Southern Oregon sometimes blocked them and 31% statewide and 60% KBBA and SOBA beekeepers closed them during the winter. Statewide response shown below.



Mite monitoring/sampling and control management

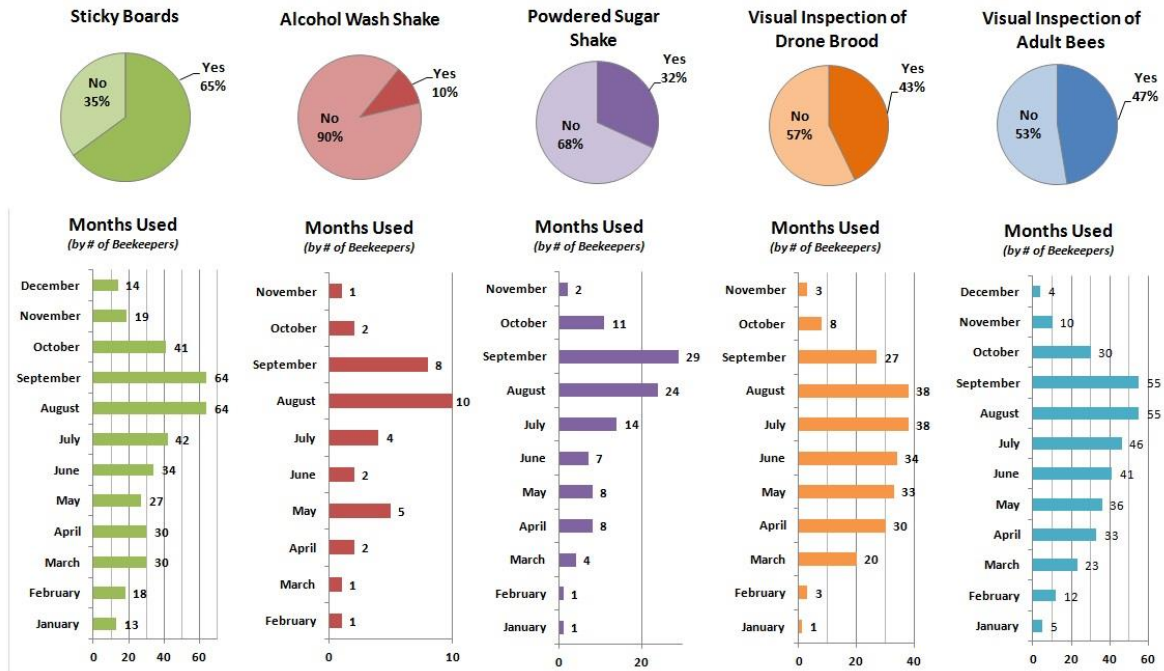
We asked percentage of hives monitored for mites during the 2014 year and/or overwinter, whether sampling was pre- or post-treatment or for both pre and post-treatment and by which of the 5 possible



sampling methods was that tool used. In order of popularity of use, statewide sticky boards was used by 37% (for KBBA & SOBA 27%). Sugar shake, visual inspection of adults and drone brood were about the same statewide with drone brood visual inspection lower for southern Oregon beekeepers. Twenty-one percent of KBBA & SOBA members said they did not monitor. Figure 11. Most sampling was done in July, August, September and October as might be expected (Figure 12 shows statewide response).

Figure 12

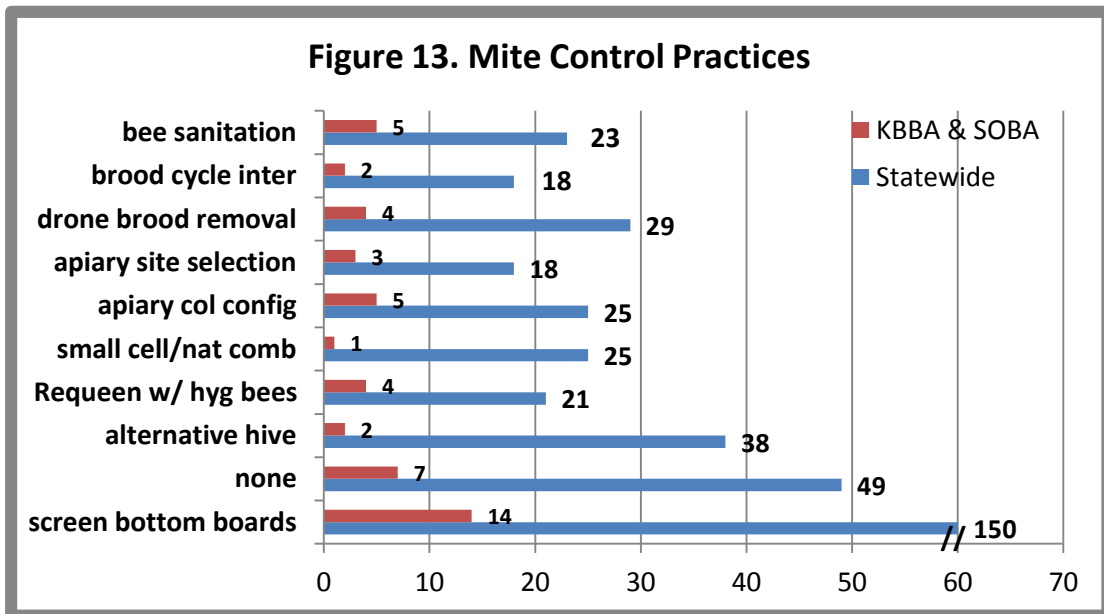
Use and Timing of Mite Monitoring Methods



Use of medications and control treatments

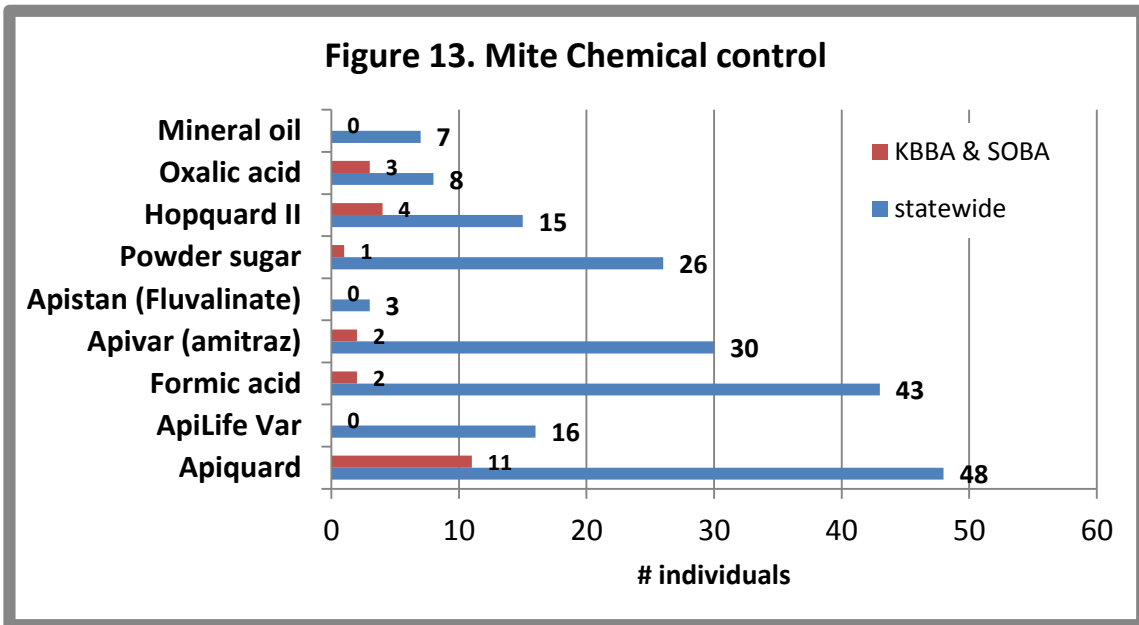
Non-Chemical control: We asked about general mite treatments and also about use of chemicals for mite control. Under general controls, 12% (49 individuals) said none of the 9 alternatives was used; 6 individuals (25%) said same in Southern Oregon. For the respondents statewide who checked at least one (more than one selection was permitted), use of screened bottom board was listed by 150 individuals (42% of respondents) who did indicate use of at least one of the techniques, 40% of

Figure 13. Mite Control Practices



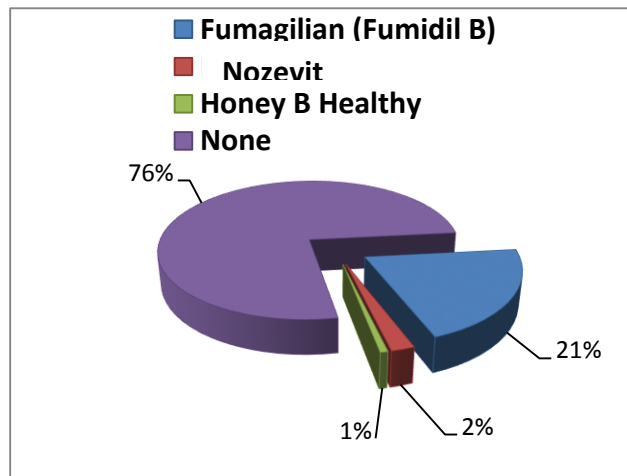
Southern Oregon individuals. The remaining 8 selections were indicated by smaller numbers of individuals statewide and for Southern Oregon beekeepers, which mirror those of the statewide respondents as shown in graph 13 above. Sixty-five percent of KBBA and SOBA respondents had more than one choice.

Chemical control: For chemical control there were 215 statewide responses, 25 by southern Oregon beekeepers. Statewide, Formic acid followed by Apivar and powdered sugar were the most commonly used tools. Apiguard was the most common utilized by Southern Oregon beekeepers. Others as shown in Figure 13.

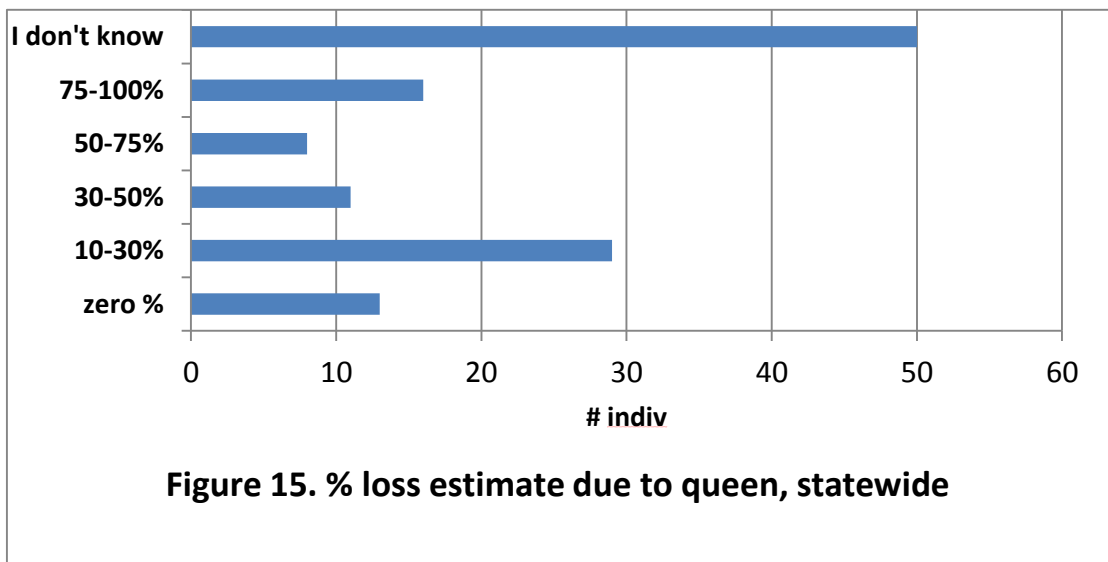


Six individuals of 144 that responded statewide (4%) indicated they treated with terramycin for foulbrood disease, none from either KBBA or SOBA groups. Thirty individuals (21%) indicated use of Fumigillin for Nosema disease control, again none from Southern Oregon. Three individuals in state indicated use of Nozevit (correct spelling), 2 of those from SOBA. And another indicated use of Honey Bee Healthy. See Figure 14

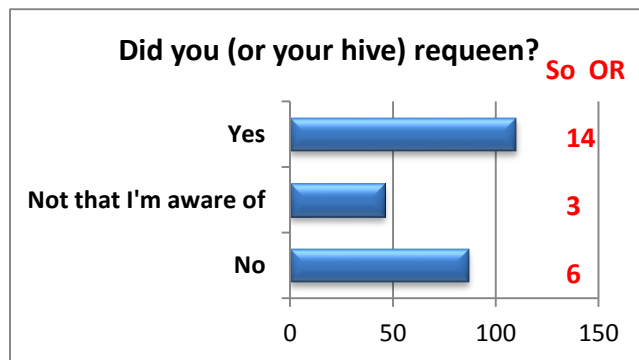
Figure 14



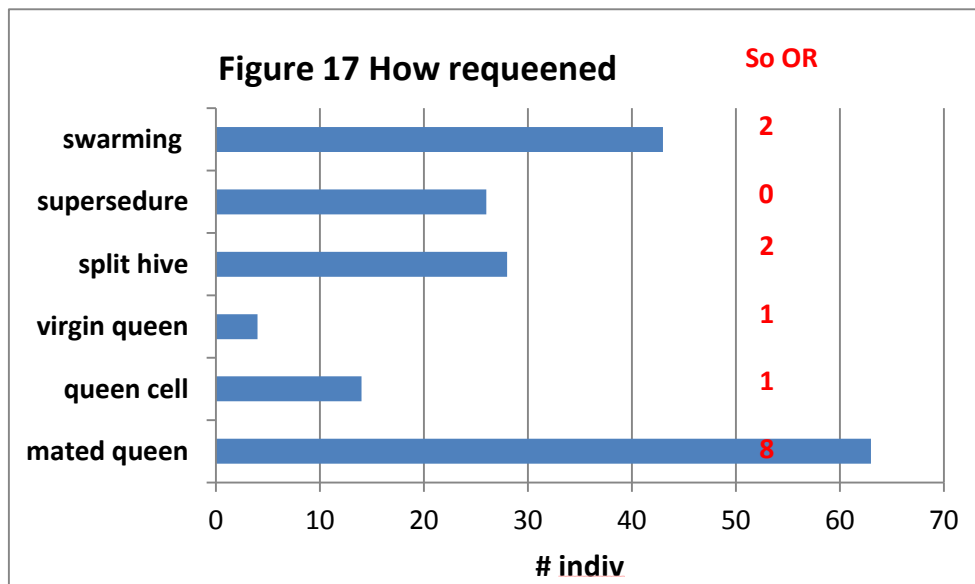
We are not satisfied with our questions about queens on this year’s survey. We asked what percentage of colonies lost died because of queen problems. The largest response statewide was I don’t know (39%) followed by 10-30% at 23%. See Figure 16. KBBA and SOBA responses were similar.



Our subsequent questions asked “Did you, or did your hive requeen, in any form during the year”. Of 243 responses, 87 (36%) said no, 46 said ‘Not that they were aware of’ (19%) and 110 (45%) responded yes. KBBA and SOBA responses are shown in red.



One hundred seventy seven individuals responded to the question “If you did requeen, how did you do it.” The largest response was mated queen introduced (34.5%) followed by colony swarmed (24%). Southern Oregon responses are shown in red. We are not sure how to interpret the responses to these three questions. They will be modified in a subsequent survey instrument.



Summary

As indicated we will further analyze the loss by managements (feeding/wintering practices/sanitation) as well as losses relative to use of control techniques/chemicals utilized. Some of this information is available on the BeeInformed website (beeinformed.org) and individuals are encouraged to examine that data base as well.

We intend to refine this instrument for another season and hope you will join in response next April. We have a blog on the pnwhoneybeesurvey.com and will respond to any questions/concerns you might have.

Thank You to all KBBA and SOBA Members who participated – if you find any of this information of value please consider adding your voice to the survey in a subsequent season.