September was a busy, busy month at UC Davis! During the Labor CAMBP AND WAS 2017

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To stay up-to-date on the most current news from the E. L. Niño Bee Lab visit our Facebook page.
Day weekend we tested the first group of this year’s Apprentice level Master Beekeepers, followed by the second test date on September 10. A few dozen brave souls took on the 100+ degrees weather to complete a comprehensive practical exam, followed by a two-hour written exam. As we hoped and expected, the exam was challenging but the participants certainly performed very well. Congratulations 2018 Graduates!

Sandwiched between the two CAMBP exams, the Western Apicultural Society celebrated its 40th anniversary. It was a return to the place where it all started. Forty years ago Dr. Eric Mussen, Dr. Norman Gary and Dr. Becky Westerdahl created the society which was to become a premier organization for education of beekeepers, particularly small scale beekeepers in western North America. The conference kicked off with the Bee Buzz Social on (September 5) Tuesday evening and the fun continued with the opening remarks by Drs. Mussen and Gary when they recounted many entertaining stories from the long history of WAS. By the way, here is a fun trivia fact for you, Dr. Gary is well known as the Bee Wrangler and has worked as a bee consultant on many Hollywood movies – he even has his own IMDB page! Plus he is in the Guinness Book of record as holding most bees in his mouth, 109 bees for 10 seconds. If you ever get a chance to listen to his “Hollywood stories”, you certainly will have a lot of fun.

In addition to great local and visiting speakers and educational topics covered, there were several tour options as well. The attendees had a chance to tour the Z Specialty Foods LLC, a local natural food company specializing in honey and other bee products; Mann Lake Ltd., the beekeeping supplies store in Woodland,

NOTES OF INTEREST

Among other recent changes, as of January, 2018, truckers will have to enter their logs in a digital format rather than in a written, hard-copy format.

Also, as of this year the Needles border station in California will no longer provide water for truck washing in case there is a need for it. The water is now located about 30 miles away. This might be particularly inconvenient since the Fire ant inspections are going to be tightening up at the border stations into California, particularly for those coming from FL. Be aware that the washing can cost $1000-$5000+ per truck. If you have questions visit California Department of Agriculture website.

Lastly, there is STILL no movement on registering oxalic acid for use in California. As soon as there is anything new I assure you I will update you immediately.
CA; and finally, a half-a day tour of the Harry H. Laidlaw Jr. Honey Bee Research Facility with six different stations. On the second to the last day, the conference also featured and interesting discussion of pesticide toxicity testing in bees led by several industry experts and Dr. Mussen. All in all, the conference was a success and the participants certainly left knowing a lot more about bees, and the Annual Banquet was a chance for everyone to network and recount their experiences from the week.

Randy Oliver at the Western Apicultural Society Annual Conference speaking with the participants about Nosema infection and performing nosema testing (left). Bernardo Niño (left) speaking to the participants about alternative hives at the Educational Apiary featuring new arrivals: the Hungarian Rotating Hive, Flow Hive and the Turkish hive (right).

ALMONDS BY JOE TRAYNOR

2018 Almond Pollination: For those beekeepers with signed agreements with us (Scientific Ag Company), the number of colonies we will need from you in 2018 is given on the hard copy of this letter mailed to you. We are still signing up growers and hope to increase your numbers in the coming weeks. There appears to be an ample bee supply for 2018, with new beekeepers looking for almond contracts and established beekeepers increasing their numbers. Like every year, the supply picture will be clearer after winter losses
This year’s almond crop is good, and almond prices are holding between $2 and $2.50/lb, --- above the break-even point of $2. About 25% of the new plantings up and down the state are self-fertile varieties (mainly the Independence variety) that need only ½ colony of bees/acre. The economic life of an almond orchard is about 20 years, and as self-fertile trees replace current standard plantings the long-term need for bees will decrease. The main standard variety, Nonpareil, commands a premium prices, so many growers will stick with Nonpareil + a pollinizer variety.

Water – Still a Concern for Almond Growers: After our wet winter, billions of gallons of precious water wound up in the Pacific Ocean because we lacked the reservoir capacity to store it. Current emphasis is on re-charging ground-water reserves (essentially, underground reservoirs) using recharge basins (where soil type permits) and even flood-irrigating orchards (although increased humidity from flood irrigation can increase tree diseases).

Almond Growers Planting Bee Habitat: 6200 acres of bee-friendly ground cover were planted in California in 2016. Both the Almond Board of California and Blue Diamond Almond Growers encourage such plantings in areas near or adjacent to almond orchards. Caution must be used if planting orchard middles since spring temperatures can be 2 degrees colder with an in-orchard cover crop, increasing the possibility of frost damage to developing almonds from bloom until several weeks after petal fall (close

While this photo does not necessarily have much to do directly with the article to the left, it does show a stunning example of what happens when the bees are not able to cope with Varroa mites and/or have not been managed for Varroa. In the upper left corner is a visible phoretic mite on a worker bee. Usually, this means it is likely too late for the colony and particularly this late in the season. To the left and below are workers with clearly visible deformed wings, a result of an infection with the Deformed wing Virus readily transmitted by Varroa mites. Photo by B. Niño.
mowing reduces this hazard). Bees work almond bloom in the morning, then switch to ground-cover bloom in the afternoon. This extra dose of pollen and nectar means healthier, more active bees, a win-win situation for both growers and beekeepers. Check out www.projectapism.org and click on Seeds for Bees. Billy Synk of ProjectApisM has written articles on the subject for almond publications and other outlets.

**BEEING A BETTER BEE GARDENER SYMPOSIUM**

We (Häagen-Dazs Honey Bee Haven and UC Davis Department of Entomology and Nematology) were very excited to have the opportunity to partner with the California Center for Urban Horticulture to present the “Bee-ing a Better Bee Gardener: Learning from Research” symposium. The target audience for this event were Master Gardeners as well as “keen” gardeners or those who have a higher level understanding of gardening for a specific cause. The symposium was held on the main UC Davis campus on September 23 with a great line-up of speakers covering contemporary research topics.

Before I discuss some of the topics covered, I would like to extend my GREATEST thanks to David Fujino, executive director and Eileen Hollett, program manager for their tremendous work on making the symposium happen. We truly appreciate all the hard work for the symposium attended by over 150 attendees. Most of the participants also attended the Haven garden tour portion of the event and contributed to the plant sale at the end of the day.

Upon the successful symposium, David Fujino stated: “The CCUH was pleased to be a partner of the Department of Entomology and Nematology in the design, development and installation of the Honey Bee Haven Garden in 2008-2009. We believe in and strongly support the garden’s mission and its focus on education and outreach, and are thrilled to find ways to continue supporting the Haven and their constant efforts. For the CCUH, it has always been and will always be “about the bees”!”

The symposium kicked off by a welcome note from David Fujino and an overview of the UC Davis Bee and Pollination Program research and extension activities by Dr. Niño. Still, one of my favorite cocktail party-worthy tidbits of trivia is the fact that the original site of the first Honey Bee research Facility was where the current Mrak Hall was erected. To make way for Mrak Hall, the Bee Building was used by the fire department as a site for fire fighting exercise.

This talk was followed by an extremely interesting talk by Dr. Vannette, where she talked about how microbiomes of flower nectar affect the
plant attractiveness to pollinators. It seems that at least one kind of fungus increases the plant attractiveness to bees, while bacteria did not have the same effect. This interaction seems to be regulated by changes in nectar volatile composition and it is a possibility that various pesticides applied for control of various pests and pathogens of crops might be modifying this plant-insect interaction.

Followed was Dr. Maj Rundlöf who spoke about her research on the effects of neonicotinoids on pollinators. Perhaps the most important take-home message that came from the talk was that not all bees are made equal. While certain species of bees, like bumble bees, are more susceptible to neonicotinoids at sublethal doses, other bees, such as honey bees, might not be or might be better able to deal with these effects. Importantly, we should not extrapolate the effects of various pesticides on one pollinator species to a different pollinator species. To learn more about this research visit the Entomology and Nematology news website.

Lastly, both Dr. Christine Casey and Ellen Zagory spoke about pollinator supportive plant species and what are some of the better plant species to select for planting. I will not tell you what you should plant as it can depend on many different things including what your goals might be, but if you are curious about the plant lists that were included remember to check out the CCUH website in the upcoming days. Dr. Casey also briefly mentioned preliminary data from a couple of studies happening at the garden and in terms of plant attractiveness there were clear preferences correlated with specific bee species. Further work will explore the effect of various irrigation regimes on plant pollinator attractiveness.

After the speaking portion of the symposium was over, the attendees headed to the Honey Bee Haven to enjoy the

THE ALMOND CONFERENCE 2017

December 5-7, 2017 are the dates of this year's Almond Conference put on every year by the Almond Board of California. I have attended this conference since I arrived to California and I can vouch that it is always chock-full of excellent information.

Whether you are an almond grower, a beekeeper, a researcher, a pesticide applicator, or just a curious almond connoisseur I highly recommend you attend if you are able and you are guaranteed to learn about the current issues and potential solutions for the almond industry. And the best part - the conference has a free registration as long as you pre-register online.

To learn more and to register for the conference, visit their website.
plants, the pollinators and other beneficial insects, as well as to snag some wonderful pollinator-supportive plants for their own gardens. Once again we are truly grateful to CCUH and the symposium attendees.

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Sincerely,

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