REDUCING BEE-KILLING PESTICIDES IN COMMUNITY FARMS AND GARDENS

Nick Gremmels

As the world’s food demand grows, so does the burden on the shoulders of those who provide. Yet when it comes to newer and more efficient ways of growing and producing food, no single factor is more important than the humble honey bee. Unfortunately it is the use of toxic pesticides which the agricultural industry is pursuing. The honey bee’s role in pollination (Apis mellifera being the most commonly domesticated) may just be perhaps the single most important step in modern agriculture. Through pollination the honey bee adds a staggering 200 billion dollars to the world’s agricultural economy per year. That is until 2006 when colony collapse disorder (CCD) began (4). The fact is; honey bees are now dying at an unprecedented rate because of CCD. Beekeepers now lose up to 40 percent of their colonies in a given year. If this rate continues it will wipe out honey bees in the United States for good. No one is sure as to exactly why this is happening. Ramesh Sagili, professor of apiculture at Oregon State University put it this way: “Six years of research: we haven’t found a single pathogen or a pest that is responsible for this” (2).

A combination of many factors including pesticides, poor diet, parasites and diseases are generally accepted as contributors to the honey bee’s decline (2). While many of these theories are still relatively mysterious, one factor; bee killing pesticides and herbicides is something that people can consciously limit their use of as a community. In order to cease contributing to the decline of the honey bee, large and small-scale farmers and gardeners must switch to less lethal pesticides, change their spraying habits, and reduce the amount of pesticides used.

Most of the United States’ high yield food crops such as broccoli, berries and nuts exist because of honey bees; in fact, just under ten percent of the world’s crop production is possible because of honey bee pollination (1). Commercial pesticides also play an enormous role in modern agriculture as well. However, the use of these pesticides is contributing to the rapid decline in honey bee population. Chemicals such as thiamethoxam (found in neonicotinoid pesticides such as Adage or Meridian) are particularly harmful to the honey bee as the toxin targets the nerves and can even kill a bee before it returns to its colony (3). While neonicotinoid pesticides are not present in everyday backyards, gardeners and home owners still spray other lethal chemicals such as Fenthion (aka Baycid or Talodex, used on decorative flowers), Methoxychlor (a common garden fungicide), and the infamous Carbaryl (aka Sevin) with which bees contaminate their hives with (4). Pesticides are by nature toxic, and what is susceptible to the toxicity is often impossible to control. The best way to reduce pesticide-caused CCD on a community level is to limit using highly toxic chemicals. A first step could be a community public awareness campaign to inform people what these chemicals do as well as possible alternatives. Many alternatives exist, both homemade and retail. For example, a mixture of vegetable oil, dish soap, and water creates an effective repellent of insects as it actually repels as opposed to killing
MESSAGE FROM THE PRESIDENT

The conference is over and it’s time to enjoy the holidays and start thinking of the new year approaching. It is hard to believe 2013 is almost gone. The new year brings the 2014 North American Beekeeping Conference & Tradeshow in Baton Rouge, Louisiana. I would encourage those who can to attend. After the ABF conference, things start moving fast for those who pollinate; those who don’t have a bit of a break. But it will be here before you know it.

With 2014 there will be a couple of changes that I would like to talk about. One is that the Oregon State Beekeepers Association has retained an accounting firm to keep our books so that they are consistent from year to year and from Treasurer to Treasurer. This is becoming more important as the Internal Revenue Service is more closely scrutinizing the activities of the 501(c)(3), which is the IRS classification that OSBA operates under. We need to make sure that our books are in order for the IRS, and as we are directing grant monies for the Oregon Department of Agriculture, ODA also has a right to review that aspect of our books. The cost to OSBA of a problem could be extremely expensive.

Our cost of operations has gone up some, but we have managed to keep it to a minimum. In order to maximize the flow of funds into the Oregon State University Honey Bee Lab and support educational activities around the state, the other change we initiated is that our dues will be going up starting January 1, 2014, to $40 per year. Note that this is generally considered to be a tax-deductible charitable contribution because we are a 501(c)(3), but check with your accountant or CPA. This is still a pretty minimal cost for what you get for your membership, such as representation to the Oregon Department of Agriculture, The Bee Line, the annual fall conference, the work with the Oregon Master Beekeeper Program, etc. There are benefits to all aspects of beekeeping for everyone involved. This may be a topic for a future column.

—Paul
Oregon and Washington commercial and semicommercial beekeepers (50 or more colonies) have been sent a single-page survey requesting information for the continuing survey of pollination rental economics in the Pacific Northwest. Please return the survey in a timely fashion. If you did not get a mail survey (with return postage prepaid), please contact either Ramesh Sagili (sagilir@hort.oregonstate.edu; 514.737.5460) or Dewey Caron (carond@hort.oregonstate.edu), and one will mailed out promptly. Thank you for your participation.

**THE SURVEY IS IN THE MAIL**

Lynn Royce

I started farming later in life with a garden and selling CSAs. Then, in an effort to find honey bees with resistance to a disease called *foulbrood* and a group of parasitic mites, I started raising queen honey bees. The garden and my members were awesome, so the CSA garden continued after I began queen rearing. I always liked to get up early and work in the cool hours of morning.

One morning I noticed an airplane flying low over a small bit of land about a quarter of a mile away and realized it was spraying a tiny plot of Christmas trees. To make a turn, the plane had to fly over my neighbor’s horses and my garden for the next pass over the trees. It took maybe three passes and the plane was gone, off to the next plot of Christmas trees somewhere. A few days later, I noticed the leaves of several of my corn plants were streaked. I took the leaves to OSU Botany Department and talked with a graduate student I knew there. He ran some tests for fungal pathogens, found none, and said he thought it was chemical burn. Chemical burn? I never use anything but well-composted horse manure in my garden. Chemical burn? Then, it hit me—the spray plane! It was dripping pesticides as it flew over, on me, the horses, my garden!

It took a bit of time to locate the owners of the Christmas trees. The neighbor whose land they were on was out of town. By the time I found and talked with the grower, a second spray event had occurred and bees in many of my colonies were dying. It was a time when spring was turning to summer, and there was a break in blooming crops. A few plants in the forest were still blooming, and the bees were traveling out to find these and contacting the drift from the spray plane. When I talked with the grower, I requested that he do ground sprays, which would be more efficient and drift would be less. Oh, no, he could not do that; they had too many Christmas trees to spray.

He said he could call me before he sprayed. Here is what that meant: I would have 12 hours or less to move my bees. I work by myself and it is not easy to find help on short notice. Usually, I move the bees alone, loading them on my small truck one box at a time. Each colony is usually two boxes, but some stronger ones can be three boxes. I can get nine colonies on my truck at one time. Could I move my garden? I called the Oregon Department of Agriculture, Pesticide Division, and found I had little recourse. Finally, the trees were harvested and that problem went away for a while.

Then, a few years later, I was in my bees early one morning. Weather was hitting triple digits by noon, it was July, and there was very little in the way of blooms for the bees. I wanted to work the bees and be home before it got too hot. As I finished the bigger colonies, I went to quickly check the mating nucs nearby. Most of the queens had been mated in this group, were already sold, and would be delivered within two days. I looked down at the entrance of the first nuc. The ground in front was littered with dead bees. At that moment, I heard a helicopter and watched it pass overhead and settle lower a half mile away over some Christmas trees. I looked at several of the dead bees; their tongues were outstretched. Many bees, however, were still coming and going into the small hives. Almost all the mating nucs had some dead bees on the ground in front. This meant that some pesticide was probably being carried into the small colonies by the workers that made it home. I could not in good conscience sell these queens. I had no idea how much damage they might have had from the pesticide being delivered with the forage. Let me explain a bit further. The major honey flow had ended, it was very hot and dry, very little if anything else was blooming. It turned out there were aphids on the Christmas trees. Aphids produce honeydew from their feeding process; this summer, theirs was the only sweet nectar available and the bees went to them as if they were flowers.

It was getting too hot to work the bees. I left the yard and as I passed the Christmas trees I looked over and saw the helicopter make his turn to pass over the trees again. He was perhaps 50 feet from the small creek, part of a major watershed for cities downstream. He released the spray and started his pass over the trees. I called the ODA Pesticide Division. They were sympathetic, but what could they do? What could I do? —the damage had been done. The recommendation was to talk with my neighbor. Because this was a big corporation, I was simply a nuisance. It seemed that was that. I had no options other than to quit raising bees or move them far away.

Then I saw National Pesticide Information Center’s website and tried to do the report form offered there, but I did not have all the answers. I could not get the report submitted,
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• OSBA REGIONAL ASSOCIATIONS

Cascadia Queen Breeders
Meets quarterly.
Chair: Paul Maresh
503.283.2060; pmaresh@spiretech.com
Vice Chair: James Hensel
Secretary: Alvalea Fong
503.742.0910; mamagoose@mac.com
Treasurer: Rex McIntire
503.720.7958; remcintire_5@msn.com

Central Oregon Beekeepers
Meets second Thursday, 63211 Service Rd, Bend
Visit www.orsba.org, Message Board, Central Oregon Branch. For information and meeting details, email:
contact@cobeekeeping.org
Ring Leader: Bindy Beck-Meyer
Bookkeeper: Allen Engle
Website: www.cobeekeeping.org

Coos County Beekeepers
Meets 6:30 PM, third Saturday (except December)
Ohlsen Baxter Bldg, 631 Alder St, Myrtle Point
President: Hal Strain
Vice President: Shigeo Oku—541.396.4016
Secretary: Maureen Goettlich
Treasurer: Jane Oku
541.396.4016; janeoku1958@gmail.com

Klamath Basin Beekeepers
Meets 9:00 AM, last Saturday (except Nov/Dec)
OSU Extension, 3328 Vandenberg Rd, Klamath Falls
President: Jim Smith
541.892.5888; tulebee@gmail.com
Vice President: Chris Kerns
541.884.8664; ker664@charter.net
Secretary: Cathy Vick
541.894.8274; elliott772@aol.com
Treasurer: David Ramirez
541.892.3726; ramirez.d.m@gmail.com
Website: www.klamathbeekeepers.org

Lane County Beekeepers
Meets 7:30 PM, third Tuesday, Trinity United Methodist Church, 440 Maxwell Rd, Eugene
President: Katharine Hunt
541.607.0106; keehunt@gmail.com
Vice President: Pam Leavitt—541.344.4228
Secretary: Rita Ostrofsky
541.685.2875; ostrofsky@pacinfo.com
Linn-Benton Beekeepers
Meets 6:30 PM, fourth Wednesday, South First
Alternative Co-op Meeting Room, 1007 SE 3rd, Corvallis
President: Linda Zielinski
541.929.4856; liz50@peak.org
Vice President: Greg Long
541.231.3480; gslong6@comcast.net
Secretary: Rosalie Bieneck; rosaliebieneck@gmail.com
Treasurer: Suzi Maresh
541.967.9607; sjomaresh@msn.com
Website: www.lcbaor.org

Oregon South Coast Beekeepers
Meets 6:00 PM, third Thursday, OSU Extension Office
located at the Fairgrounds in Gold Beach.
President: Del Barber
541.249.0160; goldcoastapiary@gmail.com
Vice President: Carla Fletcher
Secretary/Treasurer: Myrna Barber
goldcoastapiary@gmail.com

Portland Metro Beekeepers
Meets 7:00 PM, second Thursday, Clackamas Community
College, Clairmont Hall, Room 118, Oregon City
President: Chris Heath
503.734.7662; tafdad@ccwebster.net
Vice President: Jim Mellis
503.890.2465; craneguy97222@yahoo.com
Secretary: Alvalea Fong
503.742.0910; mamagoose@mac.com
Treasurer: Rex McIntire
503.720.7958; remcintire_5@msn.com

Portland Urban Beekeepers
Meets 6:30 PM, first Wednesday, Calaroga Terrace
Rtmt Comm, Terrace Auditorium, 1400 NE Second
Ave, Portland. For information, email: officers@portlandurbanbeekeepers.org
President: Tim Wessels—503.380.9381
president@portlandurbanbeekeepers.org
Vice President: Melissa Kerry—785.331.8003
vice-president@portlandurbanbeekeepers.org

Southern Oregon Beekeepers
Meets 7:30 PM, first Monday, Southern Oregon
Res & Ext Ctr, 569 Hanley Rd, Central Point
President: John Jacob
541.582.BEES; john@goldsolenterprises.com
Vice President: Ron Padgett
541.592.4678; padgett25@frontiernet.net
Secretary: Dana Rose—puckamok@yahoo.com
Treasurer: Cheryl Housden—541.955.5146
chousden@earthlink.net

Tillamook County Beekeepers
Meets 7:00 PM, second Tuesday, Art Space
Hwy 101 & 5th St, Bay City
President: Bob Allen—503.322.3819
Vice President: Terry Fullan
503.368.7160; tfullan@nehalem.net

Tualatin Valley Beekeepers
Meets 7:30 PM, last Tuesday
Cameron Public Svcs Bldg, 155 N First Ave, Hillsboro
President: Mike Van Dyke
503.642.5338; mvand581@gmail.com
Vice President: Andrew Schwab
503.538.7545; beesbuzzin@gmail.com
Secretary: Paul Andersen
503.332.5410; paulande@easystreet.net
Treasurer: Jerry Maasdam
503.648.7906; jmaasdam@mac.com

Willamette Valley Beekeepers
Meets 7:00 PM, fourth Monday, Chemeketa
Community College, Building 34, Room A, Salem
President: Richard Farrier—541.327.2673
Vice President: Bunny Carter
503.703.8546; dbcramer@hotmail.com
Secretary: Mike Rodia
503.364.3275; drodia@yahoo.com
Treasurer: Patricia Swenson—pkswenson@gmail.com
Website: www.wvbatoday.com

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REGIONAL NEWS

Regional Representatives

South Coast

“The Rogue River Honey Bee Trap-Out” was the highlight November 2013 project on the South Coast. This project was a collaborative, involving beekeeper members of South Coast Beekeepers Association (OSCBA) and the Coos County Beekeepers Association (CCBA) as well as private Curry County citizens. While in the process of property improvements, Dan Reinert discovered a feral hive of bees in a myrtle tree that would now be located adjacent to the play area for his grandchildren. The normal bee flight path would intersect the play area. Dan wished to preserve the honey bees, but desired a safe play area. Being aware of the activities of OSCBA and their ongoing efforts to protect honey bees, he contacted President Del Barber. Del recommended the trap-out process and recruited members of both OSCBA and CCBA to implement and document this project. Photographers Mureen Walker and Pat Reed recorded the events throughout the process. Del and Jim Sorber installed a five-frame nuc above the trap-out and provided an internal feeder, designed by Gary Nuechterlein, that incorporated an external reservoir siphon system designed to keep the feeder full without disturbing the bees. Next they fastened a screen funnel to the tree at the bee entrance so that bees would have only one exit through the narrow hole at the end of the screen where wires protruding outward prevented re-entry at that location. After spraying all of the bees liberally with peppermint water, it was anticipated that the feral bees would be able to enter the nuc unchallenged. The hive was then monitored to keep the exit unblocked and to measure the internal hive temperature. As time passed, the temperature decreased, indicating that fewer and fewer bees inhabited the tree hive. Concurrently, the nuc grew from five to ten frames and an additional ten-frame deep was added. After six weeks, the thermometer indicated 78°F. It was time to remove the screen and open the tree.

Shigeo and Jane Oku joined the effort with the chain saw and bee vacuum to remove the bees. The screen was removed, and the hive was exposed. Everyone worked to remove the comb, honey, and the remaining bees from the tree. The beekeepers then filled the space with insulation, reinserted the wood plug in the tree, and sealed holes with foam insulation. This outstanding project has been documented with photographs, video, and narrative on Pat’s website: http://solarbeez.com/2013/09/16/dels-trap-out/. Please visit the site to view this project that saved the bees and the tree, and preserved the children’s play space.

—Del and Myrna Barber

Eastern Oregon

The weather has been good. The bees are looking very good going into winter. And there have been inquiries and increased interest in contracts for queens next spring.

—Jordan Dimock

Portland Metro

Mid-summer I was asked to speak at an INFARMATION club meeting in downtown Portland. (Of course, I was late due to the ridiculous traffic, even though I left early.) I was one of three speakers and clearly the least prepared (the woman from Xerces Society did an excellent PowerPoint presentation!). This meeting was on the cusp between National Pollinator Week and the death of thousands of bees due to Safari, a neonicotinoid insecticide sprayed mid-day on flowering European linden trees in Wilsonville.

I spoke last, and when I did I felt the audience cringe when I said neonicotinoids may not be our most-serious problem when it comes to pesticide applications. My opinion was based on readings from Randy Oliver and my own experience. My position was certainly contrary to that of the two prior speakers, and maybe a good portion of the audience.

I then discussed the invasive Spotted Wing Drosophila, its exponential growth and damage to soft fruits if not controlled, and how loads of fruit are rejected because of the presence of a single larva. I explained that this has led to a significant increase in the usage of insecticides locally on a myriad of soft fruits, e.g., raspberry, marionberry, blackberry, blueberry, and so forth. Sometimes these sprays are done out of necessity, and sometimes as insurance. Spray begins before fruit is ripe and at short intervals—maybe every two weeks early during raspberry season, then down to a single week for late crops like blackberry or blueberry.

I have heard farmers lament that it is wrong and that their resident bumblebees are disappearing, but they don’t have an option—at least for now.

This is a big issue with profound ramifications full of horror stories, especially if the farmer/spray applicator in their own words “doesn’t care” and spray in the most inappropriate manner, i.e., when foragers are active even if just on the copious “ice cream” weeds growing below the main crop. I liken spraying mid-day when pollinators are present to dividing by zero. Or maybe zero is their “Concern About Others Index Score.” I have my own soap opera story with multiyear problems even after I had a sit-down meeting with the farm manager. Help from the Oregon Department of Agriculture, Pesticide Division, can come slow, and if they make corrective enforcement action against said farm, you will never know except for said farm lashing back at you and your other beekeeper friends. Maybe Rodney Dangerfield was secretly referring
to beekeepers when he said, “I don’t get any respect.” John Jacob’s article about the Oregon Department of Revenue not recognizing beekeeping operations as sufficient usage of farm land to qualify for the Exclusive Farm Use tax rate and zoning status is par for the course. —Todd Balsiger

South Willamette Valley
Early winter is a great time for reflection. Not a lot of time has passed since lessons were learned, and the taste of another successful year still tickles your taste buds. As the cold and wet covers the south valley at this time of year, there a few things to remember. Make sure your hives are covered and protected from the wet. It’s not a bad idea to check a hive if the temps come up to 50°F or so, just to make sure they are still there. Hopefully, your hives are full and heavy with the honey/syrup needed to make it through the long winter. Remember that bears love to eat honey and bees this time of year, so if you live in the sticks take the time to put up a fence before the bear forces you to. Food for thought, oxalic acid treatment this winter for those of you not sure if you got them all? If you’re like me, a long season of work always leaves me a little restless when Mother Nature forces us to take our time. Making and treating to check a hive if the temps come up to 50°F or so, just to make sure they are still there. Hopefully, your hives are full and heavy with the honey/syrup needed to make it through the long winter. Remember that bears love to eat honey and bees this time of year, so if you live in the sticks take the time to put up a fence before the bear forces you to. Food for thought, oxalic acid treatment this winter for those of you not sure if you got them all? If you’re like me, a long season of work always leaves me a little restless when Mother Nature forces us to take our time. Making and repairing equipment, cleaning up, planning for the next year, getting together with friends to talk about bees, or sitting by the fire drinking tea and enjoying your favorite bee-related video are all nice ways of spending time indoors when you live for the bees. Happy keeping. Thank the bees for another year.

—Jason Rowan

Regional Associations
Klamath Basin Beekeepers
Klamath Basin Beekeepers have had a busy season. The Intermediate Beekeeping class concluded September 28 with lessons on bee maladies: diagnosis, management, and treatment. An earlier session, held in August, covered extraction methods, handling beeswax, equipment care and management, fall management, and preparing colonies for winter. Approximately twenty-five eager beekeepers attended.

Members of the group reported a fair honey harvest, despite drought conditions in many areas. Fall supplemental feeding has begun in the area, and members are planning for winter. The September meeting of KBBA concluded with the annual club BBQ. Tri-tip and chicken, provided by the club, were barbequed by Randy Duval. Members contributed salads and dessert for a delicious and convivial end of summer, welcome to autumn. Our next meeting, October 26, will feature guest speaker Dewey Caron. We are all looking forward to an inspirational and informational presentation.

—Cathy Vick

Lane County Beekeepers
By the time you read this, our club will have met for our monthly meeting on Tuesday, October 15. Like every meeting, people will have gathered early to catch up with others or to seek out a more-seasoned beekeeper for advice. The October meeting’s program included a group of club members giving demonstrations about “The Products of the Hives.” Jeff Green, Oregon Department of Agriculture Food Safety Specialist, gave a very inspiring talk in September which included looking at and evaluating examples of honey labels.

Lane County members continue to be busy sharing their knowledge and love of beekeeping with others in Lane County. Gary Morgan gave a talk in September to the Willamette Businessmen Association. Also Nancy Ograin and Sandy Beal hosted our booth at the Veneta Farmers’ Market (the last one of the season), and Paul Anderson hosted one at the annual Willamelane Master Gardener’s event in Springfield.

On October 5, members Doug and Jen Hornaday were honored by the Northwest Center for Alternatives to Pesticides (NCAP) for their work with honey bees. NCAP recognized this important work by giving them the Rachel Carson Award.

Doug and Jen started another organization called Healthybees=Healthygardens a number of years ago. The goal of this organization is to make Eugene a safe place for all pollinators. To date, they have four neighborhoods that have signed the honey bee friend pledge. Beekeepers who would like to participate with this program are encouraged to contact them. The group does allow natural treatments to maintain the Varroa problem in their hives. Doug represented LCBA on October 12 at the Eugene World Food Day Celebration. He took part in a panel discussion, “Sustainable Food Systems for Food Security and Nutrition,” which is the United Nations theme for this year.

—Katharine Hunt

Portland Metro Beekeepers
The club met October 10 and shared some business matters. For future planning, the 2014 Bee Day will be April 26 at Foothills Honey in Colton. Thanks in advance to George Hansen for again hosting our annual event. Members were also asked to think about running for a club office next year. Elections aren’t until our January meeting, but it’s not too early to start thinking about how folks will serve the club. Thanks to Bev Koch for finishing out the year as the club librarian.

Our monthly “In the Bee Yard” discussion for October focused on fighting yellow jacket infestations. One of the...
The best ways to help protect bees from raiding yellow jackets is to put up an entrance fence made from ⅛-inch hardware cloth. A section about 4 inches high nailed to pieces of ½-inch sticks and then nailed to the front of the hive over the entrance really seems to work well. (Be sure to nail the fences on so the bees have a way to exit the hive!) If hives are light, continue to feed. It’s still possible to combine weak hives to help the bees get through the winter. Brandy from Ruhl Bee Supply offered a lesson in candle making and gave out a useful sheet of safety tips and helpful hints. She suggested watching videos on YouTube to get a visual of the process, especially if you missed her demonstration! Finally, there was a presentation about the costs of beekeeping from a business perspective. Bottom line: Best to have a motive beyond money for keeping bees! —Barbara Derkacht

Portland Urban Beekeepers
Portland Urban members were busy during the month of September reaping the rewards of their apiaries by harvesting excess honey and then arranging and rearranging their colonies in preparation for the coming fall and winter months. For Portland beekeepers, the last month of summer brought an abrupt end to the glorious days of sunshine everyone enjoyed this year. It was a long summer that was cut very short and without any warning. It seemed like PUB members were swimming and sunbathing one day and putting on their raincoats the next. The average temperature for the month of September is 64.5°F, and this month was not significantly different with an average of 64.7°F. The real difference was in the precipitation and cloud cover. A whopping 25 days of cloud cover brought with it 19 days of rain and September 28–29 seeing a full 2 inches in 24 hours. The average rainfall for the Portland area is 1.47 inches. The September of 2013 will go on record as one of the wettest, with 5.62 inches. What this all means for member colonies remains to be seen. What we do know is that the nectar flow ended early this year and September’s weather created an even more-challenging food problem for colonies.

At the monthly membership meeting, Glen Andresen presented his pollen and nectar report (with photos) highlighting the native and non-native trees, shrubs, flowers, and herbs that were currently blooming. Dewey Caron, who practically raced off a flight from Ireland (bringing a cold bug with him) to attend the PUB monthly membership meeting, made a presentation on what to do in the apiary as we transition to the fall season. He also shared some of the fascinating and interesting things he learned from our beekeeping friends in the UK. Just like that, he is off to South America for the next six months, leaving us to shiver and rust in the long, grey Portland winter. The Farmer’s Almanac predicts, for the region, winter will be much snowier than normal, with frequent snows from mid-December through the first three weeks of January. Rainfall will be near normal, with temperatures below normal, on average, in the north and above in the south. The coldest periods will occur in mid- to late December, early to mid-January, and mid- to late January. April and May will be much warmer and slightly drier than normal. Summer will be warmer than normal, with the hottest periods in early to mid-June and mid-July. Rainfall will be below normal in the north, above in the south.

The PUB will be hosting its first annual honey tasting at its November meeting. This will hopefully become a tradition for PUB members to show off samples of their spoils and hard work for the last year. Members, visitors, and residents of the Calaroga Terrace are all invited. Next up, for the December meeting, will be a show and tell where members will get a chance to share some of the innovating ideas and special
tants they have related to beekeeping. Finally, January will bring PUBs annual board elections. —Michael Carlson

Tillamook County Beekeepers
Our membership is still strong and motivated as we move further into fall. Other than for a few mischievous bears making a mess but not actually taking anything, most members are reporting no calamities and strong colonies going into winter. The majority of us have our hives in winter configuration: two deep boxes, secured for wind, and safe from predators. We discussed not disturbing the hives to maintain the seals the bees have made to guard against cold and moisture. Many of us are still feeding but doing so without disturbing the inner bee sanctuary. Al Leach brought in a blossoming branch of Japanese knotweed (Polygonum cuspidatum) for those who didn’t know what it looked like. Sharon Frantz offered up a great way to get more honey out of capping wax and making a light alcoholic mead in the process. Many of us will have cleaner capping wax in the future.

As our membership and enthusiasm have grown, the talk was of formalizing our club. We talked about electing officers, agendas and minutes, education workshops, and radio, newspaper, and community billboard spots to help draw in the many new beekeepers. Terry Fullan and myself are planning to attend other club meetings in the state to glean new ideas. Jim Fanjoy has arranged to have Drew Johnson with the Oregon Department of Agriculture, Food Safety Division, give a talk to our group. Dewey Caron will once again address us at the OSU Extension in Tillamook. Trisha Kauffman, who not only feeds us and provides the space we meet in, graciously offered her fully licensed commercial kitchen for workshops. Members Bob Allen and Andrew Silkwood will be attending the Cascadia Queen Breeders meeting at the OSBA conference in Seaside, and we hope to have a full report. We had a raffle for a free registration to the OSBA conference and it was won by Byron Richardson. Wrapping up, we tasted several of our members’ honey with no clear winners but a wonderful medley of flavors. —Jeffrey Hall

KEEPING BEES IN NOVEMBER-DECEMBER
Morris Ostrofsky

The most frequent question I get in fall is, “Should I put the collection board in place under my screened bottom board?” It seems reasonable to want to protect the bees from cold weather by covering the screened bottom board. Yet, the cold weather isn’t the greatest threat.

What isn’t as obvious is that moisture is a much greater problem than cold weather. The answer I give is, “Only leave the collection board in place when taking mite counts.” If you are using solid bottom boards, then you must provide an upper entrance. What can be done to deal with moisture? First, if you are using a solid bottom board, tilt the hive slightly forward.

I have found use of an insulation box that contains hay or other absorbent material to be very effective. Use a box with the same footprint as a standard box; add some ½-inch ventilation holes to it, and cover the bottom with hardware cloth to keep the absorbent materials in place. Place the box just under the outer cover. Venting moisture out of the hive can also be accomplished by adding an upper entrance.

- If you have not done so already, remove queen excluders and add mouse guards.
- Going into the coldest season of the year means monitoring the bees’ honey supplies. This is easily done by lifting the back of your hive just a few inches. Ideally, the bees should have stored from 40 to 60 pounds of honey.
- If your colony is light, November is the time to start feeding fondant. Note that we switch from a liquid feed to a solid feed now because at the lower temperatures the bees have a harder time metabolizing the sugar and evaporating off excess moisture in the syrup. A frame of honey from a known, healthy hive is also an excellent source of food. Leftover candy canes make a sweet holiday gift for your bees. Continue to check stores periodically.
- Light colonies can be fed saturated syrup until daily temperatures drop into the 40’s.
- Occasionally the temperature hits 50°F, and the bees should be out doing cleansing flights. With weeks between cleansing flights, it must be a great relief for them to get out. On these days, if you notice that a hive is inactive, it bears closer examination. If you find that the hive is a dead-out, examine the combs for scales of American foulbrood. If you have any doubt, send a sample to the lab in Beltsville for confirmation.
- It is usually a waste of time and resources to try to keep weak colonies going through fall and winter. It is easier just to unite them.
- Entrances should be reduced to prevent robbing. They should also be checked periodically to make sure they are not plugged with dead bees.

This is a good time to put down your hive tool, pick up a pen, and go to a conference. This time of year is also an opportunity to build bee equipment and gadgets for next year. And on those cold winter days when your bees are clustered and content, it is your turn to take a well-earned break and read that latest bee book.

From: The Bee Line, November-December 2012.
TREATMENT-FREE CONFERENCE

Barbara Bajec

I had no idea what to expect when I signed up for this conference. I came with a strong desire to learn what options were out there for changing my beekeeping methods to produce healthy and happy bees. The conference room was buzzing with 155 beekeepers from all over the country. Various beekeeping methods and hive styles were presented in the talks, and field demonstrations, including Langstroth, Top Bar, Warre, and Tree Hives. The conference had something for everyone on the agenda—even how to make honey ice cream!

The conference offered dorm accommodations that allowed small groups of beekeepers to meet and share ideas. The university was a perfect setting for the speakers, who were the highlight of the conference.

Listening to Tom Seeley made his words more real than reading his book Honeybee Democracy. His application of the five habits of highly effective hives drove home his concept of bee democracy—shared goals, diverse knowledge, sharing knowledge freely and honestly, vigorously debating, and voting independently and fairly—some Shakespeare influence here, Tom commented.

Kirk Webster amazed me with his perseverance keeping treatment-free bees since 2002. He said Russian bees were his favorite when it came to selecting for mite-tolerant bees. Kirk gave no illusions that treatment-free was easy, but the rewards were worth the time and effort spent.

Les Crowder was the storyteller of the conference with a long history of beekeeping evolving into Top Bar Hives. I lost track of time when he talked. Les called himself the “permissive beekeeper” in letting the bees decide what they want. After listening to his talk, Judy Scher and I rushed back to purchase a signed copy of his new book Top-Bar Beekeeping.

Melanie Kirby presented queen grafting techniques through the eyes of a professional who has been doing this for a living. When she said, “No one tells you how emotional this is going to be,” most attending the workshop gave a sincere nod of understanding. Melanie encouraged folks to produce local queens as our country needs more queen breeders.

Lynn Royce entertained all with a unique talk about her research on tree hive bees. I walked away thinking about how bees lived in the wild and how I can best mimic these ways to give the bees what they want in order to survive.

The speakers at the conference gave me a great feeling of optimism, like a renewal. Keeping bees doesn’t have to mean dumping lots of routine chemicals and antibiotics into a hive. Keeping bees can be on the “softer side,” letting the bees be bees. But this doesn’t come without lots of perseverance and acceptance of less-than-great outcomes at times. Beekeeping methods that resonated throughout the conference included re-queening hives, splitting hives, raising local queens from

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hives that survive year after year, avoiding sugar syrup feeding, and letting the bees draw out their own comb rather than purchasing foundation.

Judy Scher

Kat Nesbit of Bliss Honeybees did a wonderful job of putting this conference together. I attended this conference wondering if there really was a magic solution to keeping hives without any treatment. Even though this didn’t pan out, this conference was extremely fascinating and eye-opening. The lectures I attended stressed aspects of honey bee health and behavior without preaching total non-treatment for parasites and disease.

I found three themes throughout the conference:

First: With respect to nontreatment for Varroa mites, the take-home message was that you must break the brood cycle of the bee—and therefore the mite—in order to decrease the mite load. In the wild, bees do this by swarming. In the bee yard, we can do this by taking splits and introducing new queens.

Second: The great decrease in forage for honey bees in the United States was addressed many times. With huge acreages designated for mono crops, for example, corn, soybean, and almond, honey bees have no access to flowers which provide a good mix of essential amino acids needed to build their specific proteins. One solution is to plant a wide variety of “hedge” crops in between areas of cash crops to allow honey bees to collect this necessary mix of pollen.

Third: How honey bee colonies survive the entire year in the wild: what they choose in terms of hive location, hive construction, hive volume, and distance from other hives.

The big draw for many attendees was Dr. Tom Seeley from Cornell University who wrote Honeybee Democracy, the definitive text on how bees in a swarm come to consensus when deciding on their final home. The talk was as fascinating as the book. Dr. Seeley further talked about his research on wild tree bees compared to bees in a bee yard. He found that his tree bees consistently had Varroa levels between one and forth, and survived winter. The bee yard bees, which were kept in small hives, increased swarming but had low levels of mites compared to the hives with large volume of bees. The nest structures in trees, compared to Langstroth hives, were also more favorable to honey bees because of their smaller volume, higher distance from the ground, increased propolis deposit on walls of the cavity. Interesting was Dr. Seeley’s observation that tree hives always have a higher drone population than the Langstroth hives.

Dr. Deborah Delaney, from University of Delaware, studies the genetic makeup of honey bees using mitochondrial DNA. Mitochondrial DNA is passed down from the maternal line in all organisms. Dr. Delaney can determine the percentage of subspecies lineage in hives by studying m-DNA. A promiscuous queen (breeding with drones of diverse lineage) produces more genetic variety in progeny. This progeny shows a decrease in parasites and increase in beneficial bacteria and fungi in the guts of the bees. This causes an increase in longevity and general health.

Dr. Lynn Royce from Corvallis is also researching hives in trees. She uses actual hive boxes attached to trees, which mimic tree cavities. The boxes are narrow, frames are small, the bottom box is empty for debris, and the entrance is small. Similar to Dr. Seeley, she noticed that bees do better in a random distribution than in an organized bee yard. Bees with their entrance high in a tree are protected from bears and yellow jackets. They also have a bio space at the bottom for debris, unlike conventional hives. The bio space allows for ventilation and thermoregulation.

Dr. Royce also gave a workshop on testing for a hygienic queen. Using a frame of capped brood, we killed pupae underneath capped cells within a 3-inch diameter circle. We put the frame back in the hive for 24 hours, then measured the percent of pupae removed by the workers. A good measure of hygienicity is 95–100 percent. Melanie Kirby demonstrated grafting larvae for queen rearing. I learned a few great tricks, which I wish I had known about this year, but hope to apply next year!

SPECIALTY CROP BLOCK GRANT

The Oregon Department of Agriculture received funding from the United States Department of Agriculture Specialty Crop Block Grant Program to fund 22 projects, including one through OSBA: Enhancing pollination by promoting bee health via Master Beekeeper Program.

Abstract: Honey bees are very important pollinators of high value specialty crops and bee pollination is estimated to be worth approximately $500 million in Oregon. Recent honey bee colony losses attributed to colony collapse disorder and a steady decline of colonies for past two decades have caused serious concern and alarm. As best management practices are becoming more and more important in the wake of these bee declines, appropriate training has become a vital component. There is huge gap in dissemination of current information and knowledge on honey bee best management practices.
Very few agricultural professionals are familiar with honey bee management practices and challenges faced by beekeepers. Hence there is an urgent need to train and enhance knowledge base of these agricultural professionals, beekeepers, producers and citizens interested in bees to promote sustainable apiculture and pollination in Oregon. The primary goal of this grant proposal is to develop the advanced level (Masters level) of the Master Beekeeper Program to educate and train agricultural professionals, beekeepers, farmers and interested citizens. We anticipate that this project will provide advanced training in sustainable beekeeping to 300 beginner beekeepers, 25 commercial beekeepers, 25 extension agents, 50 farmers, 5 ODA and 10 USDA field personnel.

**Funding level:** $59,000

**Pesticides—Continued from page 1**

with toxins (4). Buying organic and plant based pesticides are effective control as well.

Many times farmers find themselves at risk of producing too low of yield or losing their livelihoods if they do not spray in order to keep productivity up. This is unfortunate as the pesticides which are so important to agriculture also kill the bees. While some pesticide use may be inevitable, it is possible to circumvent potential damage by following several key pesticide spraying guidelines. By avoiding spraying blooming flowers we can greatly reduce the risk of poisoning a bee and contaminating a colony (2). Time of pesticide application can be a factor too. Generally applying a short acting pesticide in the evening will give it the maximum amount of time to dissolve (3). Spraying in hot weather shortens the time toxic ingredients are active, while cold weather can preserve toxic agents. Another beneficial habit is to choose a liquid pesticide, liquids usually dissipate faster than a powdered form (3). Determining the types of weeds in a field of crops can let the grower know if any particularly bee-beneficial plants reside there. Common weeds such as milkweed or smartweed should be avoided at all costs when spraying. These plants are very attractive to honey bees. (3). Taking measure to reduce potential damage is a positive step towards saving the honey bee, but logic would dictate that phasing out toxic chemicals from agriculture altogether would ultimately be for the best.

Phasing out pesticides is not a simple endeavor. Many types of modern crops can only be cultivated efficiently because of pesticides. Most crops today have been selectivity bred or genetically modified for maximum produce yield and minimum insect/disease resistance due to the fact that commercial pesticides take care of that for them (6). Recently the focus on genetically modified (GM) crops has shifted from produce yield to hardiness and resistance. Farmers are finding that GM crops are easier to grow without the use of pesticides. While there are still many concerns and risk factors associated with GM crops it is certain that no technology in
the foreseeable future can replace the honey bee’s pollination. GM crops are not a perfect solution however, as well as concerns regarding GM crops mixing with wild plants or threat of shared susceptibility, it appears that some GM crops are so resistant to insects that they actually release bee killing pheromones as misguided self-defense (4).

It would seem that many more radical ways of keeping the honey bee alive need to be considered, but until then there are small steps, which combined with large scale community education, can make all of the difference to the bee. Sustainable crops must include the honey bee, therefore the use of toxic chemicals must be reduced or eliminated.


Note: Nick is the state winner from Oregon of the 2013 4-H Beekeeping Essay Contest, Foundation for the Preservation of Honey Bees.

Congratulations, Nick!

Congratulations also to Elise Dunning, Washington! Her essay took first place nationally. It can be read online at: http://honeybeepreservation.org/wp-content/uploads/2013/05/2013_firstplace_essay.pdf.

The essay topic for the 2014 essay contest is: Beekeeping in Colonial Times. To the earliest European settlers in the New World, honey bees were an important part of their existence. Cargo manifests show that honey bees were among the first shipments of animals. How were they shipped? Why were they important? Why were they so important to the colonists? How does that differ from today? For entries: http://honeybeepreservation.org/wp-content/uploads/2013/05/2014_4H_beekeeping_essay_rules.pdf.

NPIC—Continued from page 3

so I called them. At the other end of the phone line was someone who cared, who listened, and who took what information I had for submission. It did not save my bees, yet. But change requires education, and that will take information like the data NPIC turns over to the US Environmental Protection Agency. These data help build the support for change. I encourage all beekeepers to gather as much information as possible about pesticide incidents their bees encounter and report to NPIC.

The NPIC website has a lot of information. One page, “the ecological pesticide incidence reporting portal,” allows a report of adverse effects involving nontarget wildlife, birds, fish, shellfish, bees, plants, soil, and water to be made. This reporting is not for enforcement, as that is done by the state, which in Oregon is the Oregon Department of Agriculture, Pesticide Division. The information turned in at this NPIC portal is sent directly to EPA. The data collected are used to inform decision-making in federal regulations of pesticides. Data help us support our bees and educate the public, growers, and new beekeepers. If you prefer, or need help with reporting, you can report through the NPIC hotline at 800.858.7378, Monday through Friday, 7:30 am to 3:30 pm PST. You can also report to the manufacturers of pesticides, who are required by law to submit reports of adverse effects of their product(s) to EPA.
The latest issue of the WAS Journal of the Western Apiculture Society is now available. Among other things, it contains articles on Varroa resistance and treatment by John Kefuss and others, honey bees and pesticides by Eric Mussen, use and advantages of top-bar hives by Les Crowder, and marker-assisted work in breeding for hygienic behavior by Leonard Foster. It can be viewed online at: http://groups.ucanr.org/WAS/WAS_Journal. Once there, follow the link provided to this latest issue.

A 4+-minute “time out” can be taken with “John Cleese and Rowan Atkinson—Beekeeping.” See: https://www.youtube.com/watch?v=OGFz9gt0-Fc.

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Thank you!

UPCOMING EVENTS


Note: The ABF Conference Program is now available at: http://abfnet.org/associations/10537/files/2014%20ABF%20Conference%20Agenda%20v12.pdf, as is a photo gallery celebrating ABF’s 70th Anniversary (last gallery posted under Photo Gallery at www.abfnet.org).

Reminder: Dues will increase in 2014. Event listings are free and website ads are free to OSBA members—up to three per year!
Please note that *How to Reduce Bee Poisoning from Pesticides* is included with this mailing to members who did not receive a copy at the fall conference. The publication can be accessed at: http://bit.ly/OSU_ReduceBeePoisoning.

*Very best wishes of the season to everyone!*