Kelley Beekeeping

SERVING THE BEEKEEPER SINCE 1924

ISSUE 74: OCTOBER 2016

IN THIS ISSUE

From the Queen's Court

by Melanie Kirby

Oh how it all comes to a crescendo of excitement! The Honey Harvest! It is really a matter of measurement. If our bees make honey for themselves and for us, we consider it a success. And when they don't and need to be fed, we deem it "unfavorable."

This bee season has been quite strange, partly due to the weather, and partly due to all the other variables that seem to hit the forefront when least expected. I think this keeps beekeeping very dynamic and exciting. And yet, at the same time, it can create anxiety and hesitation and bee downright scary! It can be a real challenge to figure out how to find "the balance" between a utopian and dystopian bee season.

I'm intrigued with figuring out what "the balance" is, what it means and for what reason. To share why I'm thinking about this, it all began about a month and a half ago when my beekeeping partner and I started making the late summer rounds to check on our bees. Being that we have individual perspectives for our beekeeping management and seasonal assessment, it was quite astonishing to hear how we each described the season. We manage some apiaries together and some individually. For instance, I do not mind travelling a bit of distance to capture interesting and resilient genetic stock lines while also sharing my bees with communities throughout my region to collect interesting nectars; whereas my partner likes to keep most of his apiaries close to home which can be more cost effective.

We've had a competitive race with each other since we teamed up to keep bees to see whose system and approach has higher yields, meaning whose individual apiary makes more honey and how does it compare to the apiaries that we manage together. It has been a friendly race which gives us some laughs and also helps us to analyze which spots are more consistent for nectar flows and seasonal manifestations.

So, this year was a scream. While we had a wetter spring and a dry summer start, the beloved monsoons returned (a little later than normal) and continued through September. I anticipated being able to start harvesting some high mountain honey in early September so

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Queen's Court *cont'd*

Life is all about balance.

I asked him if he would accompany me to my "out-of-area beeyards" to help me harvest. He surprised me by saying, "What honey? I gotta see it to believe it 'cause my yards are still stagnant from this hot dry July and now the late summer/fall flow is being washed away with the rains!"

Now, this puts me on the defensive…I feel the need to prove that my bees are making honey and that my choice to put most of my hives and mating nucs in out-yards was worthwhile. Flash forward a couple of weeks (early September) and we are excited to take a visiting French queen breeder, Quentin Geant of Beeopic to visit our collective and individual apiaries to help us harvest this supposed honey.

Well, lo and behold, my mountain hives were making some honey! Not barrels, but definitely more than a few pails. I had to travel about an hour north and west for this blessed honey, but I feel that the miles made the difference this year. Well, needless to say, my partner was astounded. Our French guest was glad to finally see him smile—asking him, "Are you less worried, are you more happy now?" So did my partner's bees make honey, too? Some did, yet for this season, it was a slightly smaller harvest.

In the end, we both described our bee seasons practically on the opposite end of the scales. I say, "it was a better year, not so scary." My partner says, "this bee season was a horror show….it started too wet, then got too dry, and now it is just too late." As some beekeepers say, one can look at the honey jar half full or half empty. And somehow with beekeeping, whether you tend to look at it one way or the other it is what it is... to bee or not to bee.

How does this relate to finding balance? Well, it made me realize that as an industry, we rarely discuss how much of an intense emotional roller coaster beekeeping can be. Whether you are a large scale operator....one apiary may have you soaring above the clouds while the next is dismal dumps; to the backyard hobbyist....one hive may have you jumping with glee while another is a depressing dose of our inability to understand Mother Nature. If you work your bees alone, or with a partner, it is a sure thing that sometimes both parties can see and experience similar situations and define them very differently. The balance is that yes, at times, the bees will be making honey- (yipeee!) and other times, they may be struggling (boo hoo!), but the middle ground is that no matter which beekeeper you talk to, the common ground and the point of balance is our shared awe and reverence for the bees! I can honestly say that every year since I started beekeeping (back in the 90's), I am continuing to learn and grow as a steward. And it does indeed take a community to raise bees and to teach, learn and grow.
The beekeeping community is growing—check out the following article on Kelley Beekeeping's new 82,000 square foot facility!—expanding to include more urban zones and inspiring more

organizations to promote positive pollinator policies for their villages. This month's newsletter features a new segment called, "The Townies," by Tara Chambers of TwoHivesHoney.com. Her segment will focus on urban beekeeping and she plans to share lots with readers on how to be a conscientious bee steward in populated areas.

Also check out the EPA National Pollinator Protection Plan synopsis in this month's issue. In the coming months, I'll be digging into this current administration's efforts to encourage each state to develop positive pollinator policies as I begin to help my own state compose theirs.

The beekeeping community is refocusing and diversifying as well. Readers may notice the Colorado Professional Beekeepers Association fall conference announcement. Some may ask, "Why do the professionals need their own association?" And the nut shell answer is that no matter how many bees you keep, or how long you've been keeping them, we all want to learn and grow more. Many organizations have had to adjust to the influx of new beekeepers over the past decade and the more seasoned beekeepers still desire to learn more in tandem with their years of experience and their specialties. By focusing on specific demographics, everyone will continue to have that opportunity, whether they desire more advanced trainings or are just starting out. And we can still mingle and share mentors.

I'm actually quite excited to see all the diversity that is out there in American and global beekeeping. From doing genetic stock exchanges in northern California and serving on the American Honeybee Germplasm Repository inaugural board, to traveling to other countries to visit and train beekeepers, to my favorite—serving as the editor of this newsletter for Kelley Beekeeping—I am truly amazed at the beatific grandeur of our industry, and I continue to be inspired...whether I have a half or full jar of honey. And speaking of jars of honey, the Center for Honeybee Research is accepting entries for their 6th Annual Black Jar Honey Contest (more info in this month's Bee Thinking About segment). We'll share info on honey judging in an upcoming issue as well and tips for entering honey contests, from how to package it pretty to shipping it appropriately.

There's just so much we can talk about! And so much that we feel and experience each bee season. I encourage all beekeepers to keep working towards an emotional balance and to keep up your studies this fall and winter. A beekeeper who gives up on learning something new is a beekeeper who has fallen behind. To keep current on what is going on with bees and the multi-faceted industry, consider attending the North American Beekeeping conference, which will be held January 10-14, 2017 in Galveston, TX. Kelley Beekeeping representatives will be at the tradeshow, too! More info on this joint conference in next month's issue as well. In the meantime, I hope you enjoy this month's newsletter.

Don't bee too scared to stop learning and sharing!
Hap-Bee Halloween!

Yours in Beekeeping,
Melanie Kirby, Editor

Melanie Kirby has been keeping bees professionally for over 20 years. She specializes in longevity-based queen breeding and serves as an international consultant on sustainable beekeeping concepts and practices. She was recently appointed to the American Honeybee Germplasm Repository Program board, which is a new national committee dedicated to preserving and sharing honeybee stock. She can be reached at Editor@KelleyBees.com

Kelley Beekeeping Helps to Realize a Community's Dream

by Melanie Kirby

Kelley Beekeeping, manufacturer of beekeeping products for the hobbyist, small business and commercial markets throughout the world, recently celebrated the grand opening of its newly expanded 82,000 square foot manufacturing and retail facility at 807 West Main Street, in Clarkson, Kentucky.

Kelley Beekeeping was founded in 1924 by Walter T. Kelley. For more than 90 years, Kelley Beekeeping has been manufacturing high quality beekeeping equipment with exceptional value and legendary customer service. Kelley Beekeeping manufactures more than 3,000 beekeeping products and offers their products worldwide.

And now, with their new 82,000-square-foot facility open, they will have more room to grow! On September 23rd, 2016 Kelley Beekeeping staff and several local and regional dignitaries, including Clarkson Mayor Bonnie Henderson were in attendance for the ribbon-cutting event. Also in attendance was the Frandsen Corporation, the Minnesota-based parent company of Kelley Beekeeping. Frandsen purchased the Kelley Beekeeping Company in September 2014.

The expansion is expected to create 50 additional jobs in Kentucky's Grayson County. Walter T. Kelley founded the Kelley Beekeeping Company in Paducah, KY in 1924 before moving the company to Clarkson in 1952. Having established roots in Clarkson more than 60 years ago, Kelley Beekeeping currently employs more than 100 people and holds a longstanding commitment to the local economy.

Frandsen Corporation President and CEO Dennis Frandsen said his company "could have moved anywhere." But thanks to the efforts of the Clarkson City Commissioners and many long-time and outstanding employees, Frandsen decided to remain in Clarkson.

Kelley Beekeeping Company General Manager Sam Ruckriegel said the new facility "improves our operational efficiency immensely by consolidating four buildings into one." The new Kelley Beekeeping facility will allow more room to grow for the company as they continue to expand their services to beekeepers across the United States and globally. The ribbon-cutting was held almost exactly one year to the day after groundbreaking on the new facility.

Dream *cont'd*

"We at Frandsen Corporation are extremely excited to be a part of the legacy that Walter T. Kelley started over 90 years ago, and will continue building on this for many more years to come," said Frandsen Corporation CEO Dennis Frandsen. He added that they will continue to strive to "keep [the late] Walter T. Kelley's vision alive." He also added that "We're going to double this company in five years," and that a plan is already in place to expand the facility further, if needed.

Frandsen Corporation Founder and President Dennis Frandsen

As a constant reminder of this vision, Frandsen announced that the new Kelley Beekeeping facility has been dedicated to Walter T. Kelley with a permanent bronze plaque. This vision also unites Frandsen Corporation's and Kelley Beekeeping Company's support to address the diminishing bee population. CEO Frandsen said the plan for the existing Kelley Beekeeping site is to convert the office space into the Walter T. Kelley Training Facility to train future generations of beekeepers.

As GM Ruckriegel mentioned, accommodating Kelley Beekeeping's continued growth, the new facility combines all business operations under one roof. A new retail store, spanning 8,200 square feet, now operates with extended store hours—from 7 a.m. to 6 p.m. c.s.t.—accommodating beekeepers hustle and bustle schedules. Also incorporated throughout the store are digital media components, which offer customers and visitors a heightened educational experience. Honey House services are also now available.

The new facility was built by Gray Construction. The Kelley Beekeeping new facility grand opening coincided with Grayson County's 22nd annual HoneyFest, held September 21-24. The event, which is the state's official honey festival, celebrates the community's ties to the beekeeping industry and draws thousands of people in attendance each year.

State Representative Tim Moore, who was in attendance at the ribbon-cutting ceremony, said of the new Kelley Beekeeping facility, "What a tremendous asset it is and what… it will continue to be."

Moore said the impact of beekeeping and the products provided by Kelley Beekeeping are "critical" to the nation's agriculture, and he commended the workers—"the secret of success"—for their dedication to the company and their community.

Kelley Beekeeping's facility features a new 82,000-square-foot retail store which now operates with extended store hours.

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If you have a question you would like to share, email it to Editor@KelleyBees.com

A•Bee•Cs

Beginning Beekeeping

by Dennis Brown

Hi Dennis, I got a nuc on May 12 and added another brood box in late June. I've been feeding a mixture of one sugar to one water sugar syrup. The bees are drinking about one gallon every two days. If the second brood box is completely drawn would it make sense to add a honey super while they still need sugar syrup? Or should I add another brood box? I'm not in a hurry for honey, just want a strong colony. Fred H

Hello Fred, I don't quite understand your set-up. You purchased a nuc in May. You placed the nuc frames into a standard ten frame brood box and then added another brood box on top of that in June? So, the hive consists of two brood boxes at this time?

Yes, two brood boxes now. Should I add another brood or a super? But I want to make sure they make it through the winter. Thanks for your expertise. Also, my bees have suddenly taken to the bloom of a weed we think is called Bone Set --- lots of weeds in our pasture.

Hello Fred, Having your bees in two brood boxes is what we should strive for. These two boxes should always remain for the bees use only. If those two brood boxes are full and there is a true honey flow going on, not a sugar water flow, you can add a honey super on top. Do not feed this or any hive sugar water that has a honey super on it. (By the way, you should feed a mix of two parts sugar and one part water. It's not the water that provides any value to the bees, it's the sugar. The sugar helps stimulate their wax glands.)*

If you add a honey super on top and there is no honey flow going on, the bees will "mine" the wax off the newly added wax foundation and use it somewhere else in the hive. So, make sure that there is a honey flow going on before you add an extra box.

You should remove the honey super soon after the honey flow is over. If you leave it on too long, the queen will move up into the honey super this time of year (fall) and begin to lay eggs. You don't want that to happen so, remove it as soon as the flow is over or add a queen excluder between the top brood box and the honey super until you can remove the honey super from the hive. (Before the cold weather sets in.) Bees typically cluster in the top box for winter. That's where they stay the warmest. So, let your bees winter in the top brood box.

I hope this helps. Enjoy your bees!

Dennis Brown is the author of "Beekeeping: A Personal Journey" and "Beekeeping: Questions and Answers." Contact Dennis at www.lonestarfarms.net.

**Editor's Note: For measurement clarification, most beekeeping books and experienced stewards such as Dennis will clarify measurement of sugar to water by weight, not volume. Seasonally, the measurement rule of thumb is as follows: 1 gallon of water to 8 pounds of sugar (spring feed); and 2 to 1 ratio for fall feeding which is 1 gallon of water to 16 pounds of sugar. Do your research into types of sugars acceptable and assimilated properly for honey bee health.*

Just the FAQs

Questions & Answers

by Phill Remick

BEE RELOCATION PROGRAM

With honey bees, sooner or later you will have to move them. Let's take a look at one way to transport hives across town, up into high or down into an even lower country.

Someone asked me if they could move their bees during the day. My reply, "Well if you don't mind losing a good portion of the colony, you can." Honey bees, under most circumstances, are relocated only at night. Obviously this permits foraging bees to safely return to the hive, so they aren't left behind. Bees can be transported, with netting during the day—moving to the almond orchards in California from New York, would be an example.

Meet Joe and Judy, new to beekeeping, owners of four thriving, freshly painted (white) full depth Langstroth hives. J & J need to relocate these since they were notified by a local farmer that he feels he simply must spray crops very near their apiary and a few bees had been spotted doing 'cannonballs' in the neighbors pool. Yes, it is always something.

As luck would have it, Joe has a pal who resides in the flower laden foothills east of town. This buddy and Joe walked the property recently and discovered an excellent location for the bees with plenty of forage and fresh, running water. The future apiary is level, no massive stones or major obstacles; sheltered from the prevailing west wind and replete with a smattering of late afternoon shade. The spot has easy access; no steep grades, no bears, no cows, no aardvarks, sheer cliffs or dangerous ruts in the road. BTW: Joe is stoked because he once lived in fear of marauding herds of aardvarks and had to abandon another bee yard because of them. Sorry Joe, tough luck.

ROLLIN', ROLLIN', ROLLIN'

After dressing properly for the propitious moving event, Joe and Judy provide sturdy, inch and one half sized nylon straps which run completely around the top and bottom of the hives. These straps will be tightened to prevent each unit from movement. Witnessing a beehive(s) pull apart while driving down the highway either in or on the back of a truck or in the rear view mirror inside your vehicle is slightly unsettling. Slightly.

J & J's colonies both have screened Integrated Pest Management (IPM) bottoms so no need to be overly concerned about adequate ventilation. Besides, they wisely chose a moonless, cool night to relocate.

IPM Screened Bottom Board, Model #: 5401

The 'bee-mobile ' is a vintage truck of undetermined origin, looks more like a morphed military Jeep that collided with a Mac truck in the space time continuum. It hums along like a top, in excellent mechanical condition. Joe is adjusting the straps on the four hives, cinching them up snugly, as Judy puffs a bit of smoke on any obvious bee resistors, herding them indoors for the trek. Next, a moving screen is gently tacked onto the front, over

the entrances, allowing the journeying bees full access to their porch, plenty of fresh country air and an unobstructed view of the slightly twisted, squeaky, nearly rusted out, tail gate. The hives are also strapped down and cross tied to large eye bolts on either side of the truck bed rendering them immovable. Joe even positioned two thick moving clothes beneath the hives to absorb and minimize some of the road vibration. Good job Joe.

Hang on to your hive tools, the bee relocation program is underway!

This will not be a quick trip; J & J are traversing an old highway which has little traffic and allows them to travel at a slower pace, with less jarring of their precious bee cargo.

50 minutes later the truck rumbles up the road and eases to a billowing, dusty stop. Joe slides down and out of the cab to handle the gate; fumbling the keys, he unlocks and re-boards, managing to guide the vehicle through the narrow entrance. He halts the bee mobile as Judy exits briefly, closing and locking the ornate, yet, stout metal gate behind them. Kudos to Joe, who had the foresight to mark the property prior, knowing precisely where to place the new arrivals in the dark!

Once stationary, they could hear the bees buzzing quite loudly after the rough ride through the canyon. Soon, the hives were liberated from the truck bed. With Joe and Judy on either side, they lifted, carried and placed colonies into position on top of sturdy 2x4 square stands. The stands, facing due east, to greet the morning sun, were now situated and angled slightly downward to avoid collecting rain inside each hive in the event of a downpour. Once the hives were settled, Joe grabbed his smoldering smoker and sent a small cloud of its exhaust into the entrances as he quickly dispatched the moving screens. Mission accomplished!

The intrepid beekeepers would return to check their hives in a couple of days allowing the bees to settle into their new neighborhood. Right now, it felt good to exit their restrictive bee gear and prepare to meet up with their waiting friends whom Judy had been texting prior to their arrival.

After staying the night, the following morning, they bid adieu to their friends at the canyon house. Joe and Judy release a collective sigh of relief as they climb up into the cab, slam the doors shut on the bee mobile and head home. The bee relocation program was a success.

Now, at last, they could return to their quiet metropolitan village and join the pool party already in progress—minus the honey bees!

Working on some night moves....

Phill Remick is a former commercial beekeeper and seasonal apiary inspector who teaches beekeeping, offers year round apiary consulting and sells supplies near Edgewood, NM. Contact: Phill@NewBeeRescue.com

X•Y•Zs

Advanced Beekeeping

by Liz Walsh

Hello,
I had the privilege of being at the International Congress of Entomology this past month, where the largest gathering of Entomologists ever, in the entire world and throughout history, assembled to discuss new research and share findings. Many of the bee talks were informative and I would like to share some of that information with you. Unfortunately, there is far too much to fit into one article, but I wanted to share some highlights and information that you may find informative or useful.

Some of my favorite talks were by **Dr. Dennis vanEngelsdorp of University of Maryland and the members of his lab. His lab is the one that compiles and sends out the Bee Informed Partnership surveys (their website is here: https://beeinformed.org/).** They have been surveying beekeepers in the United States for the past decade to learn why beekeepers think their colonies are dying and to try to discern management patterns related to bee colony death. There were some very good points made by him and his lab at the conference. One underlying theme of the vanEnglesdorp lab's talks was that colony mortality does not equal the honey bee decline which further does not equal CCD (Colony Collapse Disorder). This is a distinction that the media fails to recognize and, by not correcting this mistaken assumption when possible, we as beekeepers are partly responsible. This lack of understanding by the public makes it difficult to address real problems beekeepers and honey bees are facing, so please consider this if you give a bee interview anytime soon. Another of the points was the overall pattern between miticide use and varroa monitoring paired with survival over winters. Beekeepers who used miticides or who had strict varroa treatment patterns had much higher overwintering success than those who did not. Another point was that when beekeepers let their colonies die in an attempt to start breeding programs, varroa in the deadouts spreads about 10 km to other colonies in that radius. This sounds like it is mostly attributed to robbing bees, but the academic and peer reviewed paper is being published shortly. One thing that really continually came out of these talks is that miticide use is a necessary evil for successful beekeeping at this time in almost all cases in North America.

The flip side to this miticide use coin was showcased in a symposium on honey bee breeding. Researchers from all over the world shared about their breeding programs, some of which focused on things like overwintering in Canada and some on varroa resistance. The main thing that I got from these talks was that if you cannot control your drone population (or your semen stock for insemination), then you simply cannot have control over your breeding program, which results in a economically unstable amount of colony mortality and dramatically slows down the breeding process or makes a breeding program unviable. This is a major blow to urban beekeepers or beekeepers in densely populated areas who wish to start breeding programs, but it makes sense to me.

Another interesting talk was done by researchers from the former company Bee-o-logics, which was bought by Monsanto a few years ago. They are examining a method to control varroa mites using RNAi. This means, to most beekeepers, that you would put an additive in your syrup and the varroa would die, although we could have several more lengthy articles about RNAi if there is an interest. My takeaways from these talks were that it is a very interesting idea which shows some promise, but it's got a long way to go and I'm not all that sure about some of the results they presented. They are already doing field trials of this research, so they are progressing amazingly quickly on this project. They reported that their field trials have so far shown that colonies treated with the RNAi via syrup had about twice the survivorship and half the mites than colonies in the control group. Those results are very compelling and it is good that money and manpower are dedicated to the problem of varroa control. It will be interesting to see what happens in the next decade with this project.

I was also able to hear about the research that has been done in the Dr. David Tarpy Lab at North Carolina State and the work done in Dr. Marla Spivak's lab in Minnesota. Some topics of these presentations included genetic patterns in the larvae bees select to be emergency supercedure queens, queen mating numbers and general information about genetic diversity of queens in the United States, social immunity in honey bees, and propolis use in honey bees as antibiotic agents and methods to combat disease.

Other notable talks included those from my own lab, the Rangel Honey Bee Laboratory at Texas A&M (although I am definitely a little biased to say so). Dr. Rangel did a neat talk on our progress looking for a biocontrol agent for varroa mites and hers is the only presentation I will discuss in this article. As discussed in previous articles, the IPM (integrated pest management) pyramid relies on cultural, mechanical, and biocontrol pest control mechanisms which should be utilized before chemical mechanisms of pest control. As beekeepers in the United States, we have flipped the pyramid around and are predominately relying on miticides before fully utilizing cultural and mechanical controls (drone trapping, hygienic bees, etc.). A biocontrol agent would be a boon to our industry, but the varroa lifecycle is so closely paired with that of the honey bee that it is difficult to find a viable biocontrol agent which can kill varroa mites even if the mites are under capped cells with honey bee pupae. Furthermore, the method would have to leave the adult and immature bees unharmed as well. This makes it difficult to find candidates for bio control. Our lab has been testing a different mite that is ubiquitously found in North America, the Stratiolaelaps scimitus, which some Canadian beekeepers advocate as a mite that eats varroa mites. The S.S. mite (as it is known in our lab) has a history of successful biocontrol use in greenhouses, but our lab has not found it to be an effective varroa control agent in the field (although it does eat varroa if it is in a glass vial with them, so it does have some potential).

Rangel Laboratory member Pierre Lau presented on his survey of pollen diversity in urban settings of the United States. PhD candidate Adrian Fisher II presented on the effects of drones reared in miticide contaminated wax. Rangel Laboratory member Alexandria Payne presented

on her findings of colony growth as connected to the amount of semen a queen is inseminated with. Postdoc Dr. Alejandra Gonzalez presented on her findings of antioxidative enzyme activity in different varieties of queen. I presented on my findings regarding queens reared in miticide-contaminated wax.

I can talk a lot about these things, so I think I will save that for a future article. I hope that your bee season has gone well and that you and your operation are ready for the winter! Some neat books, videos, and other beekeeping educational materials are available and I would respectfully suggest enjoying the winter with some new bee knowledge!

Best,
Liz Walsh, Graduate Student
Rangel Honey Bee Laboratory at Texas A&M University

Liz Walsh is a graduate student at the Rangel Honey Bee Lab, Department of Entomology, Texas A&M University. She can be reached at walshe@tamu.edu

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Bee Health

FDA Finds Monsanto's Weed Killer In U.S. Honey

by Carey Gillam *Reprinted with permission from US Right to Know*

The Food and Drug Administration, under public pressure to start testing samples of U.S. food for the presence of a pesticide that has been linked to cancer, has some early findings that are not so sweet.

In examining honey samples from various locations in the United States, the FDA has found fresh evidence that residues of the weed killer called glyphosate can be pervasive - found even in a food that is not produced with the use of glyphosate. All of the samples the FDA tested in a recent examination contained glyphosate residues, and some of the honey showed residue levels double the limit allowed in the European Union, according to documents obtained through a Freedom of Information Act request. There is no legal tolerance level for glyphosate in honey in the United States.

Glyphosate, which is the key ingredient in Monsanto Co.'s Roundup herbicide, is the most widely used weed killer in the world, and concerns about glyphosate residues in food spiked after the World Health Organization in 2015 said its cancer experts determined glyphosate is a probable human carcinogen. Other international scientists have raised concerns about how heavy use of glyphosate is impacting human health and the environment.

Records obtained from the FDA, as well as the Environmental Protection Agency and the U.S. Department of Agriculture, detail a range of revelations about the federal government's efforts to get a handle on these rising concerns. In addition to honey, the records show government residue experts discussing glyphosate found in soybean and wheat samples, "glyphosate controversies," and the belief that there could be "a lot of violation for glyphosate" residues in U.S. crops.

Even though the FDA annually examines foods for residues of many pesticides, it has skipped testing for glyphosate residues for decades. It was only in February of this year that the agency said it would start some glyphosate residues analysis. That came after many independent researchers started conducting their own testing and found glyphosate in an array of food products, including flour, cereal, and oatmeal. The government and Monsanto have maintained that any glyphosate residues in food would be minimal enough to be safe. But critics say without robust testing, glyphosate levels in food are not known. And they say that even trace amounts may be harmful because they are likely consumed so regularly in many foods.

The residue issues are coming into the spotlight at the same time that the EPA is completing a risk assessment to determine if use of this top-selling herbicide should be limited. The agency has scheduled public meetings on the matter Oct. 18-21 in Washington. The EPA's risk assessment report was initially due out in 2015, but still has not been finalized. The agency now says it will be completed in "spring 2017."

In the records released by the FDA, one internal email describes trouble locating honey that doesn't contain glyphosate: "It is difficult to find blank honey that does not contain residue. I collect about 10 samples of honey in the market and they all contain glyphosate," states an FDA researcher. Even "organic mountain honey" contained low concentrations of glyphosate, the FDA documents show.

According to the FDA records, samples tested by FDA chemist Narong Chamkasem showed residue levels at 107 ppb in samples the FDA associated with Louisiana-based Carmichael's Honey; 22 ppb in honey the FDA linked to Leighton's Orange Blossom Honey in Florida and residues at 41 ppb in samples the FDA associated with Iowa-based Sue Bee Honey, which is marketed by a cooperative of American beekeepers as "pure, all-natural" and "America's Honey." Customers "can be assured that Sue Bee Honey is 100% pure, 100% all-natural and 100% American," the Sioux Honey Association states.
In a Jan. 8, 2016 email Chamkasem pointed out to fellow FDA scientists that the EU tolerance level is 50 ppb and there is no amount of glyphosate allowed at all in honey in the United States. But Chris Sack, an FDA chemist who oversees the agency's pesticide residue testing, responded by reassuring Chamkasem and the others that the glyphosate residues discovered are only "technically a violation."

"The bee farmers are not breaking any laws; rather glyphosate is being introduced by the bees," Sack wrote in response. "While the presence of glyphosate in honey is technically a violation, it is not a safety issue."

Sack said the EPA had been "made aware of the problem" and was expected to set tolerance levels for honey. Once tolerance levels are set by EPA - if they are set high enough - the residues would no longer be a violation. When contacted this week, the EPA said there are currently no pending requests to set tolerance levels for glyphosate in honey. But, the agency also said: "there is no dietary risk concern from exposure to glyphosate residues in honey at this time."

Sioux Honey Vice President Bill Huser said glyphosate is commonly used on farm fields frequented by bees, and the pesticide travels back with the bees to the hives where the honey is produced.

"The industry doesn't have any control over environmental impacts like this," Huser said. Most of Sue Bee's honey comes from bees located near clover and alfalfa in the upper Midwest, he said. Beekeepers located in the South would have honeybees close to cotton and soybean fields. Alfalfa, soybeans and cotton are all genetically engineered to be sprayed directly with glyphosate.

The FDA results are not the first to find glyphosate in honey. Sampling done in early 2015 by the scientific research company Abraxis found glyphosate residues in 41 of 69 honey samples with glyphosate levels between 17 and 163 ppb, with the mean average being 64 ppb.

Beekeepers say they are innocent victims who see their honey products contaminated simply because they might be located within a few miles of farms where glyphosate is used.

"I don't understand how I'm supposed to control the level of glyphosate in my honey when I'm not the one using Roundup," one honey company operator said. "It's all around me. It's unfair."

The FDA did not respond to a question about the extent of its communications with Monsanto regarding residue testing, but the records released show that Monsanto has had at least some interaction with the FDA on this issue. In April of this year, Monsanto's international regulatory affairs manager Amelia Jackson-Gheissari emailed FDA asking to set up a time to talk about "enforcement of residue levels in the USA, particularly glyphosate."

The FDA routinely looks for residues of a number of commonly used pesticides but not glyphosate. The look for glyphosate this year is considered a "special assignment" and came after the agency was criticized by the U.S. Government Accountability Office in 2014 for failing to test for glyphosate.

The FDA has not released formal results of its testing plans or the findings, but Sack made a presentation in June to the California Specialty Crops Council that said the agency was analyzing 300 samples of corn; 300 samples of soy; and 120 samples each of milk and eggs. He described some partial results achieved through April that showed glyphosate levels found in 52 samples of corn and 44 samples of soybeans but not above legally allowed levels. The presentation did not mention honey. The presentation also stated that glyphosate testing at the FDA will be expanded to "routine screening."

The USDA also will start testing for glyphosate, but not until next year, according to information the agency gave to the nonprofit group Beyond Pesticides in a meeting in Washington in January. Documents obtained through FOIA show a plan to test in syrups and oils in 2017.

Soybeans and Wheat

Like the FDA, the USDA has dragged its feet on testing. Only one time, in 2011, has the USDA tested for glyphosate residues despite the fact that the agency does widespread testing for residues of other less-used pesticides. In what the USDA called a "special project" the agency tested 300 soybean samples for glyphosate and found more than 90 percent - 271 of the samples - carried the weed killer residues. The agency said then that further testing for glyphosate was "not a high priority" because glyphosate is considered so safe. It also said that while residues levels in some samples came close to the very high levels of glyphosate "tolerance" established by EPA, they did not exceed those levels.
Both the USDA and the FDA have long said it is too expensive and is unnecessary to test for glyphosate residues. Yet the division within the USDA known as the Grain Inspection, Packers & Stockyards Administration (GIPSA) has been testing wheat for glyphosate residues for years because many foreign buyers have strong concerns about glyphosate residues. GIPSA's testing is part of an "export cargo sampling program," documents obtained from GIPSA show. Those tests showed glyphosate residues detected in more than 40 percent of hundreds of wheat samples examined in fiscal 2009, 2010, 2011 and 2012. The levels vary, the data shows. GIPSA has also been helping FDA access soybeans to test. In a May 2015 email, GIPSA chemist Gary Hinshaw told an FDA food safety official that "it isn't difficult to find soybeans containing glyphosate." In a December 7, 2015 email from FDA chemist Terry Councell to Lauren Robin, also a chemist and an FDA consumer safety officer, Councell said that glyphosate was present even in processed commodities, though "way below tolerance."

The fact that the government is aware of glyphosate residues in food, but has dragged its feet on testing for so long, frustrates many who are concerned about the pesticide. "There is no sense of urgency around these exposures that we live with day in and day out," said Jay Feldman, executive director of Beyond Pesticides.

Carey Gillam is a veteran journalist and Research Director for U.S. Right to Know, a non-profit consumer education group. For updates, visit www.usrtk.org/signup. Follow Carey Gillam on Twitter - www.twitter.com/careygillam

Bee Science

High Number of Pesticides Within Colonies Linked to Honey Bee Deaths

Reprinted with permission from Joe Graham, American Bee Journal Editor

Some compounds commonly regarded as "bee-safe" could be a major contributor to honey bee colony losses in North America.

Honey bee colonies in the United States have been dying at high rates for over a decade, and agricultural pesticides—including fungicides, herbicides and insecticides—are often implicated as major culprits. Until now, most scientific studies have looked at pesticides one at a time, rather than investigating the effects of multiple real-world pesticide exposures within a colony.

A new study is the first to systematically assess multiple pesticides that accumulate within bee colonies. The researchers found that the number of different pesticides within a colony—regardless of dose—closely correlates with colony death. The results also suggest that some fungicides, often regarded as safe for bees, correlate with high rates of colony deaths. The study appeared online September 15, 2016, in the journal Nature Scientific Reports.

"Our results fly in the face of one of the basic tenets of toxicology: that the dose makes the poison," said Dennis vanEngelsdorp, an assistant professor of entomology at UMD and senior author on the study. "We found that the number of different compounds was highly predictive of colony death, which suggests that the addition of more compounds somehow overwhelms the bees' ability to detoxify themselves."

The researchers followed 91 honey bee colonies, owned by three different migratory commercial beekeepers, for an entire agricultural season. The colonies began their journey in Florida and moved up the East Coast, providing pollination services for different crops along the way. They also spent time in locations meant for honey production, as well as "holding areas" where beekeepers prepare large numbers of colonies for upcoming pollination contracts.

A total of 93 different pesticide compounds found their way into the colonies over the course of the season, accumulating in the wax, in processed pollen known as bee bread and in the bodies of nurse bees. At every stop along the beekeepers' itinerary, the researchers assessed three different parameters within each colony: the total number of pesticides; the total number of "relevant" pesticides (defined as those above a minimum threshold of toxicity); and each colony's "hazard quotient," a measure devised by other researchers to integrate the total hazard posed to each colony by the cumulative toxicity of all pesticides present.

All three measures correlated with a higher probability of colony death or queen failure. In addition, the researchers found between five and 20 different pesticide residues in every sample of bee bread that exceeded a hazard quotient's safety threshold. The highest number of pesticides accumulated in the colonies early on, shortly after beekeepers placed colonies into early season flowering crops like apples and blueberries. Honey production stopovers and holding areas offered the bees some respite

from further contamination.

The study results also suggest that some fungicides, which have led to the mortality of honey bee larvae in lab studies, could have toxic effects on colony survival in the field. In the current study, pesticides with a particular mode of action also corresponded to higher colony mortality. For example, the fungicides most closely linked to queen deaths and colony mortality disrupted sterols—compounds that are essential for fungal development and survival.

"We were surprised to find such an abundance of fungicides inside the hives, but it was even more surprising to find that fungicides are linked to imminent colony mortality," said Kirsten Traynor, a postdoctoral researcher in entomology at UMD and lead author on the study. "These compounds have long been thought to be safe for bees. We're seeing them at higher doses than the chemicals beekeepers apply directly to the colonies to control varroa mites. So that is particularly concerning."

The current study borrows a concept from human cancer research: the "exposome," or the sum total of chemicals an organism is exposed to over its lifetime. But instead of looking at individual bees, the researchers assessed each colony as a single "superorganism" that functions as a single, cohesive unit.

Within this framework, the researchers tracked the death of queen bees, which is a life-threatening event for the colony as a whole. In some cases, a colony is able to create a new queen, but if those efforts fail the entire colony will die. In the current study, colonies with very low pesticide contamination in the wax experienced no queen events, while all colonies with high pesticide contamination in the wax lost a queen during the beekeeping season.

"This is a huge problem for beekeepers currently. Not long ago, a queen would typically last up to two years. But now many commercial beekeepers replace the queens in at least half of their colonies every spring in the hopes that this will prevent premature queen deaths," Traynor explained. "Even with such measures, many queens still don't make it through one season."

The research team did not find a significant contribution from neonicotinoid pesticides. These compounds, derived from nicotine, are currently some of the most common pesticides in use globally. Because of their ubiquitous use, neonicotinoids have received significant media attention for their potential role in honey bee declines.

"We just did not find neonicotinoids in the colonies," vanEngelsdorp explained. "There were some trace residues of neonicotinoids in a few samples, but not nearly on par with other compounds. However, it's possible we did not test the right matrix—we did not test nectar, for example—or that the product breaks down faster than others in the collection process or that neonicotinoids are simply not very prevalent when crops are flowering."

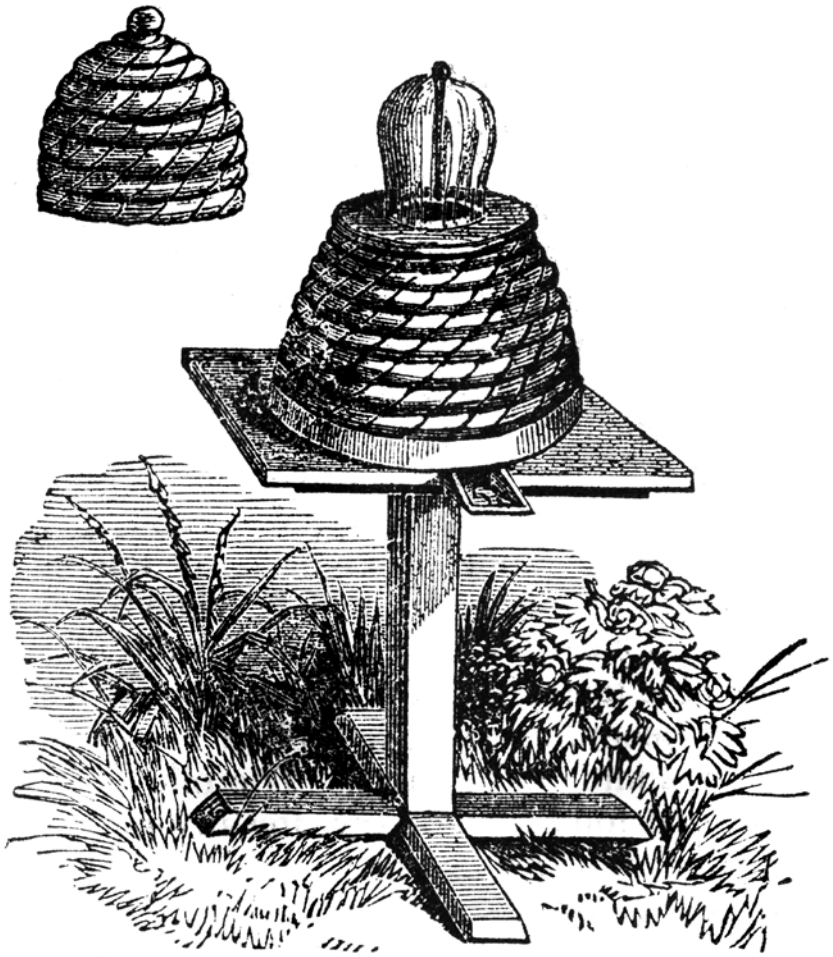
Because industrial practices have changed since the researchers collected the data for this study, Traynor and vanEngelsdorp acknowledge that further research could reveal new patterns in the relationship between pesticides and honey bee health. But the current study nonetheless offers some important insights for beekeepers and farmers alike.

"We have to figure out ways to reduce the amount of products that bees are exposed to while still helping farmers produce their crops," vanEngelsdorp said. "This will require careful examination of spray plans, to make sure we only use the products we need, when we need them, in order to reduce the number of products bees are exposed to while pollinating different crops."

In addition to Traynor and vanEngelsdorp, study co-authors include Jeffery Pettis (U.S. Department of Agriculture), David Tarpy (North Carolina State University), and Christopher Mullin, James Frazier and Maryann Frazier (Pennsylvania State University).

The research paper, "In-hive Pesticide Exposome: Assessing risks to migratory honey bees from in-hive pesticide contamination in the Eastern United States," Kirsten Traynor, Jeffery Pettis, David Tarpy, Christopher Mullin, James Frazier, Maryann Frazier and Dennis vanEngelsdorp, was published in the online journal Nature Scientific Reports on September 15, 2016.

This work was supported by the National Honey Board. The content of this article does not necessarily reflect the views of this organization. Check out our website at www.americanbeejournal.com



Apitherapy

2016 Charles Mraz Apitherapy Course and Conference

SAVE THE DATE
2016 Charles Mraz Apitherapy Course and Conference (CMACC)

October 21-23, 2016
The Redondo Beach Hotel • 400 N. Harbor Drive • Redondo Beach, CA 90277

The American Apitherapy Society proudly announces its 20th annual Charles Mraz Apitherapy Course & Conference to be held in the beautiful beach community of Redondo Beach, CA, located just 15 minutes south of Los Angeles International Airport (LAX). Invest in your health and join us for a weekend of Apitherapy while perhaps extending your stay in the area to enjoy the many oceanfront activities this area has to offer, such as bicycling, kayaking, sailing, or just enjoying the miles of white sandy beaches, the boardwalk, restaurants, shops, and unrivaled sunsets of the Pacific Ocean.

Medical doctors, a spectrum of holistic health practitioners, veterinarians, researchers, backyard beekeepers, and members of the general public interested in self-reliant health care will convene from all over the United States and the world to learn about apitherapy. Apitherapy, an ancient healing modality, refers to the therapeutic use of products from the beehive: honey, pollen, royal jelly, propolis, and bee venom therapy.

Attendees will receive basic training in the therapeutic properties of each of the hive products including a hands on bee venom therapy session where participants obtain practical experience with this amazing healing practice. Presentations are given by the CMACC faculty who are some of the most prominent and experienced apitherapists in the world. Examples of material covered in these presentations are allergic reactions, techniques of BVT, informed consent and legal issues, propolis and cancer, lyme disease, Parkinson's disease, veterinary apitherapy, wound healing, and much more. Certificates of completion will be available to all participants.

The AAS is a nonprofit membership organization established for the purpose of education in the advancement of Apitherapy. CMACC has been named in memory of Charles Mraz, an American pioneer in the use of bee venom to treat diseases.

All CMACC 2016 information and registration is now available at www.apitherapy.org. Conference information will also be shared and distributed via our free monthly newsletter from now until the conference date to include any updates or changes. You can sign up to receive our newsletter via a link at the bottom of the home page on our website.

A Saturday night sunset happy hour/dinner banquet will be held on the water at the R10 Social house in Redondo Beach within walking distance of the Redondo Beach Hotel giving attendees the opportunity to mingle with the AAS Board, the faculty, and others involved with Apitherapy. Membership or a one year renewal to AAS is included with the course fee. For further questions please contact the AAS office at aasoffice@apitherapy.org.

Looking forward to seeing you there!

Diversified Pollinators

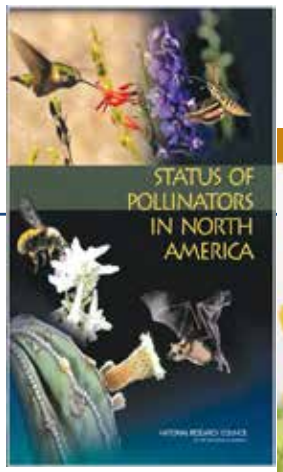
Pollinator Protection Plans

Marietta Echeverria
Office of Pesticide Programs
U.S. Environmental Protection Agency

May, 2015

Background

- Multiple federal reports have identified pollinator declines



http://www.nap.edu/openbook.php?record_id=11761

http://www.nap.edu/openbook.php?record_id=11761

https://www.fas.org/sgp/crs/misc/R42855.pdf

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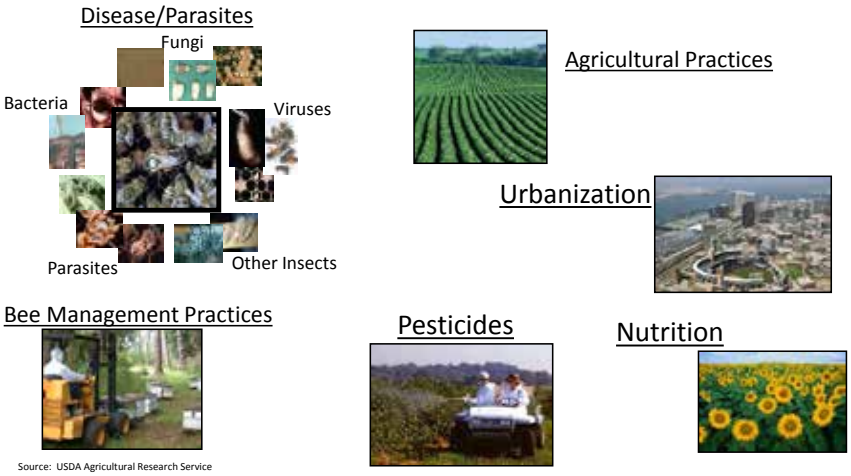
Background

USDA and EPA have identified multiple factors associated with pollinator declines; no single factor identified as "cause"



Source: USDA Agricultural Research Service

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Presidential Memorandum:

Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators

On June 20, 2014, President Obama issued a memorandum calling on Federal agencies to increase and coordinate their efforts to improve bee health by developing an integrated strategy.

The strategy incorporates and identifies:

1. Commitments from each Federal agency to promote health of honey bees and other pollinators
2. Pollinator Research Action Plan (PRAP)
3. Public Education Plan
4. Public/Private Partnerships

Photo courtesy of ARS

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EPA Requirements in the Presidential Memorandum

- **Assess the effects of pesticides on pollinator health**
- **Engage states and tribes in the development of pollinator protection plans**
- Encourage the incorporation of pollinator protection and habitat planting activities into green infrastructure and Superfund projects
- Expedite review of registration applications for new products targeting pests harmful to pollinators
- Increase habitat plantings around Federal facilities

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Managed Pollinator Protection Plans (MP3s)

- Several states have been working through this issue prior to the Presidential memo by engaging stakeholders and developing state pollinator protection plans
  - Key stakeholders include growers, applicators and beekeepers
  - Input from researchers
  - Examples of states with pollinator protections plans: California, Colorado, Florida, North Dakota, Mississippi
- These plans serve as examples of effective communication and collaboration between stakeholders at the local level
- Plans can establish local and appropriate agreements and best practices for managing needs of agriculture and beekeepers

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Engaging Co-Regulators – States and Tribes

- Letter to AAPCO President, SFIREG chair, TPPC chair expressing interest working with these groups
- Recent meetings with SFIREG have focused on managed pollinator protection plans (MP3s)
- Similar discussions with the Tribal Pesticide Program Council
  - Approaches for tribes to participate in state process where appropriate
- SFIREG drafted guidance document for states to develop plans
  - Identifies elements that are critical for an effective plan
  - EPA provided input to the guidance document
- Further meetings with AAPCO/SFIREG to discuss measures to evaluate effectiveness of pollinator protection plans

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SFIREG Draft Guidance - Critical Elements of MP3s

- Stakeholder participation process
- Method to know if managed bees are near the treatment area
- Method of communication between growers and beekeepers
- BMPs to minimize acute risk of pesticides to bees
- Clear defined plan for public outreach
- Process to review and modify plan
- Mechanism to measure effectiveness of the plan

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Acute Risk Mitigation Proposal

- Bees likely to be exposed from application of acutely toxic pesticides
  - Different mitigation approaches for exposure scenarios
- EPA is considering label restrictions to protect bees under contracted services at the treatment site
  - Large number of bees are likely to be directly exposed to pesticide spray
- EPA is considering state and tribal MP3s to protect bees in the vicinity of treatment site
  - SFIREG has drafted guidance document for states and tribes to develop MP3s

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State Progress

- According to APPCO pollinator committee report
- 5 states have developed and implemented plans (pre-SFIREG guidance)
- ~30 have plans in some stage of the development process
  - Establishing workgroups or committees
  - Identifying stakeholders
  - Convening stakeholder meetings
- Measuring the effectiveness of MP3s
  - Communication, behavior, exposure/risk, overall pollinator health

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Next Steps

- EPA will seek public input on proposed mitigation
- Goal is for states/tribes to start pollinator protection plan development where appropriate in 2015
- EPA will monitor the success of these plans in mitigating risk to bees and determine whether further regulatory action is warranted
- EPA will continue to conduct chemical-specific risk assessment according to risk assessment framework for bees and will consider additional mitigation as needed

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Questions or Comments?

Please contact:

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  703-308-8157

- Marietta Echeverria: echeverria.marietta@epa.gov
  703-305-8578

For more information on EPA's pollinator protection efforts, visit http://www2.epa.gov/pollinator-protection

The Townies

Urban Beekeeping for City-Dwelling Folk

by Tara Chapman

Hello Kelley Beekeeping readers! I met your fearless Kelley newsletter editor, Melanie Kirby, on a trip to Morocco this summer. We connected over our love of travel, adventure, and of course honey bees. So when she asked me to consider a new bi-monthly column on urban beekeeping, I didn't stutter! A quick intro: my name is Tara Chapman and I am the founder and owner of Two Hives Honey. Our small operation is almost completely urban, and we currently have 40 hives across the city of Austin, TX. We specialize in helping city folks become beekeepers, and I hope this column will help some of you fellow townies out there bring a bit of nature to your own city block.

For this first month's column, I thought we would cover some basics. Below are the most common questions I get that pertain specifically to aspiring urban beekeepers looking to place bees on rooftops and small garden plots.

Will my bees have plenty to eat?

You may be surprised to hear that my urban bees here in Austin do just as well, or even better, than my hives on more rural plots outside the city! The reason is landscaping. (I'd also be remiss if I failed to mention that Austin is a city full of folks that value herb and vegetable gardens over "useless" manicured lawns.) Keep in mind bees will forage up to 3 miles for food (or 5, depending on who you ask). But if they don't have to travel that far, they will be more productive and conserve more energy overall.

Take a look around your neighborhood. Is yours one full of rose bushes and well tended grass, or is it more common to find gardens, vines, and native blooms? If it's the latter, your bees may be well taken care of. I preach that your bees are ultimately YOUR responsibility to feed, and I'm not talking about sugar water.

Unsure about what to plant? Check out this blog to learn a bit more about how to select bee friendly plants for your yard. I wasn't born with a green thumb (a yellow one perhaps?) but I focus on hardy herbs such as rosemary and sage and plants native to my region to help ensure my bees' (and my) success. Think of plants that bloom outside of your region's main growing season to help extend your bees' forage calendar. The Lady Bird Johnson Wildflower Center's website has an extensive database of plants that are of special value to honey bees. Filter by those native to your state, plant type, bloom period, light requirement and more.

I have chickens/dogs/kids. Surely they can't coexist harmoniously!?

Let's take these one by one.

Chickens: I have seen no reason to have concerns about chickens, and several of my hives are a mere few feet from chicken coops. Chickens have been known to eat dead bees, and if you choose to employ the practice of drone culling to control for varroa mite, chickens love to eat larvae!

The Townies *cont'd*

Dogs: Generally speaking, dogs likely pose more of a concern to individual honey bees than the other way around. For some reason most dogs love to try to bite honey bees out of the air! Of course, if a dog chooses to stick his nose in the front of a hive, the bees will quickly educate him that he is invading their space. Most dogs are quite intelligent and will learn to not stick their nose where it doesn't belong twice. If you are the owner of one of those precious "all brawn and no brain" animals, you may want to build a sort of barrier to keep him from sniffing around the entrance.

Kids: Tending bees is a phenomenal hands-on learning experience for kids, and I highly recommend you involve your kids in the process from the very beginning. We provide hive tours and special kids classes here in Austin, and hopefully you can find something similar in your area. Plus, few things are more adorable than a kiddo in a bee suit! I bet you all have a stove in your homes, and you assuredly have taught your kids that the stove is off-limits and not to be touched. Employ the same thought process to bee hives and teach your kids the hives are not to be disturbed without adult supervision. Generally speaking, a kid can get a few feet away from a hive with few repercussions, but ensure they know they should never stand directly in front of an entrance or open the lid.

These two score off the cuteness charts!

Is my yard even appropriate for bees?

First things first—you need to learn if keeping bees in your city is legal. While urban beekeeping has become quite vogue in cities such as Brooklyn and L.A., plenty of cities still don't allow beekeeping in the city limits. Find out the regulations in your city, and follow them to a T.

Most will prescribe a certain hive density to your plot size, and may require you be a certain number of feet from your neighbor's property line. Even if regulations are lean, I recommend you place your hives, at a minimum, fifteen feet from your neighbor's property line. If you are any closer, consider installing a sort of barrier, such as a small fence or a line of foliage (vines, bamboo, etc.)

If you or your close neighbors have a swimming pool, make sure you place a water source for the bees within 5-10 feet of the hive. Honey bees love swimming pools, and once they establish a preferred water source it can be almost impossible to break them of that habit. Some swear by adding a few drops of lemongrass essential oil to your water to draw the bees to that particular source. Keep in mind bees drown very easily, so stones, corks, or a type of float is important to include.

Want to learn more about the specifics of preparing your yard for bees? Check out this blog on site

This coral vine makes a fantastic privacy screen for your bees, and it's a terrific late summer nectar source, WIN-WIN!

prep! A quick note on rooftops: rooftop hives are great for so many reasons. First, we know bees prefer to be higher and away from the commotion. Second, you generally don't have to fuss with trimming grass or ground cover, and down here in the south, that can meet no small hive beetles, which pupate in the soil. However, one word of caution: think about your roof access. Climbing a ladder isn't too bad until you have to carry a 45 pound super of honey along for the descent!

But what will my neighbors say?

If you have ensured you are within your legal rights (see previous question!) then your neighbors can complain, but probably to no avail. I get asked often if you should warn your neighbors before you start hives. No, you should not warn your neighbors.

However, unless you are concerned the conversation will head south quickly, I strongly encourage you to share the wonderful news that you are embarking on such a fun adventure. If your neighbors are gardeners, they likely already know the benefit of bees, but it doesn't hurt to remind them. (A quick anecdote: my first urban site partner saw four times the yield in his garden the first year we installed the hives.)

Do your research and educate yourself, and then find ways to share the experience that will resonate with your neighbors, even if it's just with a bit of honey from your first harvest. If they are particularly nervous, I'd strongly recommend you 'mask' the hives in some way. My experience is that the old adage is true: out of site, out of mind. Building a small trellis with some beautiful vines in between the hives and the neighbor is one idea, and clumping bamboo also provides a nice privacy screen.

Of course, if a close neighbor shares that her daughter is deathly allergic to honey bee venom, I'd strongly suggest you find somewhere else in town to place your hives. While you likely can't be liable and no one could prove it was your honey bees if she were to get popped, I doubt that guilt or hassle is one you want to be burdened with.

I hope you've enjoyed this first column. Nothing energizes me more than helping first-time urban beekeepers get started on their own honey bee adventure. In future columns we will delve further into these questions and concerns, and I hope to provide you some life hacks for beekeeping in small spaces without the benefit of lots of storage space for supers, easy tips on micro harvests, small space gardening to ensure your bees are well fed, and more. If you have any questions or suggestions for future topics for the column, please don't hesitate to email me!

Tara Chapman is founder and owner of Two Hives Honey in Austin, TX. Come visit our honeybees! www.twohiveshoney.com. Contact her at tara@twohiveshoney.com.

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REQUEST FOR PROPOSALS

PROJECT APIS M. ON BEHALF OF THE NATIONAL HONEY BOARD

SEPTEMBER 21, 2016

Background

U.S. Honey production is decreasing and colony losses are increasing, while many crops dependent on pollination services continue to expand. Honey bee colony losses in the United States were reported at 44% during 2015-2016. Rates of both winter loss and summer loss—and consequently, total annual losses—worsened compared with last year. Colony losses are attributed to pathogens, parasites, pesticides, hive management (queen mating, genetics, maintenance), climate, and available nutrition (beeinformed.org). United States honey production in 2015 from producers with five or more colonies totaled 157 million pounds, down 12 percent from 2014 (www.nass.usda.gov). Sustainable beekeeping is dependent on maximizing outputs (colony health, colony numbers, honey production, profitability) while minimizing the inputs (time, money, personnel). A sustainable beekeeping industry would contribute to a more sustainable agricultural landscape through a stable supply of bees for crop pollination. Therefore, PAm is requesting research proposals that focus on honey bee health, productivity, which provide practical and tangible solutions to the beekeeping industry.

The funding sponsor for these proposals is the National Honey Board (NHB), with Project Apis m. (PAm) administering the proposal, accountability and funding process. Beginning in 2017, this PAm and NHB collaboration will streamline efforts to support the beekeeping industry, by harmonizing the NHB funding opportunity with several other efforts which PAm coordinates. The NHB funds, collected by a federal research and promotion program ($0.015/lb), for Production Research, were approximately $416,000 in 2016. PAm administers several other initiatives with funding from many sources, including corporate sponsors, private donations and grants. Past proposals received and funded by PAm and NHB have much in common, reflecting similar interests in supporting the industry.

The National Honey Board is an industry-funded agriculture promotion group that works to educate consumers about the benefits and uses for honey and honey products through research, marketing and promotional programs. Project Apis m. is the largest non-governmental, non-profit honey bee research organization in the USA. Established by beekeepers and almond growers in 2006, PAm has infused over $6 million into bee research to provide growers with healthier bees resulting in better pollination and increased crop yields.

Priority Areas for Funding

With this call for research proposals, PAm is requesting proposals for research dealing with honey bee health, nutrition and productivity. Priority will be given to proposals which aim to

produce solutions to industry problems, including Varroa mites. Other projects will be considered, and research outside the U.S. is possible (all application materials must be in English). The goal of this research is to help producers maintain colony health and honey production. Most proposals will likely be of one-year duration. If multi-year projects are considered, it is with the understanding that funding for subsequent years would be contingent on performance and also AMS budget availability beyond 2017. The amount of funds available for a particular proposal will depend on the number and merit of successful proposals.

The submission guidelines are based on the format requested by PAm; they can be reasonably short as long as they include the items specified in the submission guidelines below.

Proposals must be received by Project Apis m. at Danielle@projectapism.org and Jean@projectapism.org by midnight (PDT), October 23, 2016. Proposals received after the deadline will not be considered. Copies of proposals will be distributed to a select Review Committee composed of representatives from Project Apis m. and the National Honey Board.

Since the USDA oversees these projects, a **Research Service Agreement** between the National Honey Board and the university or agency must be signed and returned with any proposal to be considered. Funds are distributed to the researchers, periodically, upon receipt of progress reports and a final report, which will be delineated in an agreement upon funding. Reasonable restrictions exist on dissemination of research information, etc. (see **Research Rights Issue Statement** below).

Submission Guidelines

1. Title and Principal Investigator – Clearly state the title and principal investigator (PI) of your proposal. Provide the PI's title, address, email address and telephone number. List cooperating investigators with their names and email addresses. Cooperating investigators must be aware of this proposal. If cooperating investigators are contacted by PAm and are unaware that their names have been added to the proposal, the proposal will not be considered.

2. Project Timeline (Dates and Duration of Study) – The proposed project timeline should be January 1, 2017 through December 31, 2017. Projects may include proposed phases beyond this year, but funding will be granted one year at a time based on performance and available funds. Proposal details can be included for the anticipated duration of the study.

3. Problem and Significance – To provide a background to the proposed study, state the problem the study addresses and its significance to managed honey bee colonies and/or pollinated crops. If this is a continuation of a previous PAm or NHB project, please state the title and funding provided in the previously funded project, the outcome of the previously funded project and justification for continuing research.

4. Objectives, Materials and Methods – State the project objectives and your experimental design, by objective, if necessary.

5. Intended Outcome – Give a brief statement of the intended outcome of the project. This may be used to better describe your project in a press release or website, it should blend the

objectives into a concise summary of the project while providing the bottom-line justification for its funding.

6. References – Provide literature references pertinent to your proposal. Letters of Support can be included but are not required.

7. Budget Request – Include a) salaries and benefits, b) supplies, c) equipment, and d) travel. If applicable, list other entities funding this research and the amount they are contributing. If this proposal is being submitted for consideration by other organizations, please list the organization and the amount requested. PAm and NHB policy is consistent with California commodity groups; we do not pay overhead or indirect costs. (These, typically, are expenses such as rent, utilities, depreciation, insurance, administrative or miscellaneous supplies, legal or accounting services, salaries/wages allocated to the project for persons not working directly on the project.)

8. Economic Feasibility for New Products – If the study involves new product development, please provide economic evaluation of the new product. This would include projected cost of the final product. Justification for the projected cost and cost-effectiveness will be a prime consideration in evaluating the proposal.

9. Publications and Presentations – Indicate the plan to present findings at professional meetings or conferences (which ones) or to publish the results in scientific, trade or other publications (specify).

10. Research Rights Issue Statement – Sign and return this page with your proposal. Except for contracts with USDA's Agricultural Research Service and U.S. universities, all non-proprietary information collected as part of the project will be the property of the NHB. The NHB reserves the right to review in advance publication of research results.

Selection Criteria

A Review Committee comprised of PAm and NHB representatives will review proposals and make decisions based on the following criteria:

1. Compatibility of the research objectives outlined in the project description with priority areas.
2. Potential to provide valuable tangible solutions to industry problems.
3. Overall scientific merit and originality.
4. Proposed dissemination of findings.
5. Total proposal budget.
6. Researchers/institutions relevant experience and industry collaborations if necessary.

Approval and Funding

PAm will notify the PI shortly after approval by the Review Committee. We anticipate approval by November 28, 2016. Unless other terms are stated, half of the requested funding will be provided at the commencement of the study, with the remaining half disbursed upon receipt of the final report.

Expectations

PAm and NHB assume projects will be executed as stated in the proposal, specifically with reference to the defined objectives, timeline, and budget. Successful applicants will sign an agreement with PAm. Interim and annual reports will be provided to PAm, which will then be forwarded to NHB. PAm and NHB reserve the right to review and comment on publications arising from the sponsored project.

Questions

Contact Jean@projectapism.org with brief questions concerning submission of proposals to Project Apis m.

Research Rights Issue Statement

Researchers associated with the U.S. Agricultural Research Service or universities can contact Project Apis m. for further information.

For other institutions or private entities, all non-proprietary information collected as part of the project will be the property of the National Honey Board. The NHB reserves the right to review, in advance, publication of research results.

In accordance with **§ 1212.62 Patents, copyrights, inventions, product formulations, and publications.**

Except for a reasonable royalty paid by the Board to the inventor of a patented invention, any patents, copyrights, inventions, product formulations, or publications developed through the use of funds collected under the provisions of this subpart shall be the property of the U.S. Government, as represented by the Board, and shall along with any rents, royalties, residual payments, or other income from the rental, sales, leasing, franchising, or other uses of such patents, copyrights, trademarks, information, publications, or product formulations, inure to the benefit of the Board; shall be considered income subject to the same fiscal, budget, and audit controls as other funds of the Board; and may be licensed subject to approval by the Department. Upon termination of this Order, § 1212.83 shall apply to determine disposition of all such property.

I have read this statement and confirm that I, the co-investigators, and the institution presenting this proposal can comply with it.

Signed: _____

Print name: _____

Title: _____

Date: _____

Institution or company: _____

Sign and return this page, Research Rights Issue Statement, with your proposal by email to:

Project Apis m.
Jean@projectapism.org

Bee Thinking About

Colorado Professional Beekeeping Association
"Celebrating Colorado's Rich & Successful Beekeeping Heritage"
2016 Fall Meeting – October 28th & 29th

Best Western Plaza Hotel & Convention Center
1900 Ken Pratt Blvd., Longmont, CO 80501

For Directions & Hotel Reservations:
call (303) 776- 2000 (ask for CPBA rate)
www.PlazaConventionCenter.com

Please register & prepay with credit card or PayPal by October 21st
http://coloradoprobeekeeping.org/events/2016-fall-meeting/

Featured Speaker: Randy Oliver of ScientificBeekeeping.com , owner of Golden West Apiaries in Grass Valley, California, teacher & 40 plus year beekeeper and frequent contributor to ABJ and other scientific bee publications.

Meeting Schedule
Friday Evening October 28th [In the Plaza Hotel]
7:00 – 9:00 p.m.: Informal roundtable on the general topic of "Pesticides and Honey Bees: How they're faring under Present Day Conditions" Featuring: Randy Oliver (ScientificBeekeeping.com), Lyle Johnston (CPBA President) & Al Summers (CPBA Communications Director) – discussing bee health issues, particularly as related to the livelihood based beekeeping industry. Q & A included.

Saturday October 24th [In the Convention Center]
8:30 – 9:00 a.m.: Reception & Registration - $50.00 Includes meeting, refreshments and buffet lunch. Assorted pastries, coffee and hot teas are available in the morning.

9:00 – 10:00 a.m.: "The Environmental Big Picture" – How beekeepers need to work within the agricultural community to appreciate our relationship to the environment - An objective assessment of the evidence regarding neonics. Randy Oliver

10:00 – 10:30 a.m.: "The Colorado Bee and Bee Products Act" – Where we've been and how we may move forward with regulation of managed bee hives in the state. Laura Pottorff, M.S., CGG, Plant and Pest Quarantine Program Manager, Colo. Dept. of Agriculture.

10:30 –10:45 a.m.: Break

10:45– 12:00 noon: "Plan B - Field Evaluations of Summer Mite Treatments" – Efficacy of mite treatments applied in rotation; with particular emphasis on formic and oxalic acid treatments. Randy Oliver

Bee Thinking About *cont'd*

12:00 Noon – 1:00 p.m.: Buffet Lunch in the Conference Center. Lunch theme is "Down Home Comfort" and is served buffet style. See below for menu. Coffee, hot and iced tea will also be available for lunch.

- Fresh Fruit Salad
- Traditional Tossed Garden Salad with Assorted Dressings
- Honey Fried Chicken
- Guinness Braised Short Ribs
- Garlic Mashed Potatoes
- Warm Fresh Seasonal Vegetable
- Flaky Buttermilk Biscuits
- Warm Cherry Cobbler

1:00 – 2:00 p.m.: "Evidence-Based Best Management Practices for successful beekeeping" – The reality of "natural" beekeeping; breeding for mite resistance, and the fallacy that "treatment free" beekeeping is necessarily a good thing. Randy Oliver

2:00 – 2:30 p.m.: "How Beekeeping Myths are Spread..Using Social Media" – Steven Lechner, Owner, Busy Bee Farm

2:30– 3:00 p.m.: "The State of Bees and Beekeeping in Colorado" – A brief update on commercial beekeeping in the state. Lyle Johnston, CPBA President.

[CPBA Officers & Board Members will meet after the regular meeting to discuss organizational business]

Attendees are invited to stay after the meeting to have dinner and visit with Randy and other CPBA members at a nearby restaurant (buy meal on your own). Usually around 6:30 p.m. Check with CPBA members after meeting to see what's been decided.

For further info contact:
CPBA Secretary Jacy Johnston-Eylar (970) 405-0709
jacy@beeyondthehive.com

6th Annual International 2016 Black Jar Honey Tasting Contest

Honey. The concentrated essence of plants collected by thousands of individual bees. Each a blend of the unique flora within foraging distance. Different within each colony in a single place - indeed, different within cells of a single comb. Different throughout the progressing season and noticeably different year to year.

Think of the variety of plants within an area. Consider how they respond to sunlight and rain, temperature and humidity. Even within a small distance microcosms produce subtle changes. The mineral content of every square meter of the earth varies due to eons of weathering and seismic shift - differences reflected in honey.

Taste. A sense all humans share. Wikipedia says an average of 3,00-10,000 taste receptors dot the human tongue - but they are marvelously imprecise in what they convey. We all more or less agree what is salty, bitter or sweet - but how can certain individuals reject a fruit as too bitter when others find it delicious?

Perhaps it is less about the chemical receptors on our tongues than it is how our brains interpret the sensations it receives? Ask people to rank what tastes best to them - and their answers will likely contradict the opinion of others sampling the same thing.

There exist in this world bees, people, and plants wonderfully exotic to each other. The goal of the Black Jar Honey Tasting Contest is to bring them together to share this intersection of honey with taste. The Center welcomes the prospect of 'discovering' varietals and blends from all parts of the Globe.

Entries must be received or post-marked by November 15, 2016. Due to difficulties and expense in shipping, international entries may be packaged in unbreakable containers (1 liter or 3 pounds US) which the Center will transfer into glass queenline bottles. Two beekeeper labels must be included for attaching. Please visit Contest Rules - http://chbr.org/2016HoneyContest.aspx

Grand Prize is $2,000 U.S., a blue ribbon, your name added to a trophy and the Center's website, and bragging rights across the globe. We will also award $150 each to winners in ten categories, which will be determined based upon the quality and quantity of entries received.

There will be numerous less publicized tastings to narrow the field, but winners will be determined in a public gala event to be held in the Renaissance Hotel in downtown Asheville, NC in late January of 2017.

Bee Culture

The Magazine Of American Beekeeping

Get Ready For Bee Culture's Next Event

A CASE FOR HONEY

Our case of honey is filling nicely this winter. Speakers committed so far include Dan Conlon, Warm Colors Apiaries, Massachusetts; Bob Binnie, Blue Ridge Honey Company, Georgia; Dave Shenefield, Clover Blossom Honey, Indiana; Steve Conlon, ThistleDew Honey, West Virginia; Roger Stark, Howalt-McDowell Insurance, South Dakota, Joann Dunlevey RS, Food Safety Specialist, Ohio Dept. of Ag; and a Representative of The FDA. Other speakers are firming up travel plans and will be announced as they become known.

This well rounded group has all aspects of this topic well covered. U.S. Producers, Packers, Producer/Packers, Insurance and Risk Brokers, Marketing, and all the new Food Safety rules and regulations from both Federal and State level perspectives

Unfortunately, missing from this discussion will be the National Honey Board, the marketing arm of the honey industry, and those large packers and importers who have chosen to have their annual meeting on the same weekend. The coincidence has not gone unnoticed. The focus of this event will remain on promoting and informing ambitious US Honey Producers and Packers of U.S. Honey.

New this year will be a Friday Night Social held in Bee Culture's Conference Center, the location of the Two day Conference on Saturday and Sunday. It's a low-key, meet and greet with the speakers and attendees from 5pm to 7pm on Friday where you can pick up your folders with speaker profiles, conference agenda, and lots of information on Medina's dining and shopping opportunities. Supper afterwards is on your own but you'll have plenty of places to choose from, and lots of people to join with.

Tuition is $150.00 per person which includes the Friday night social and classes and an exceptional lunch on Saturday and Sunday. On line Registration opens April 1, 2016.

Friday Night Social, October 21, and classes and lunch Saturday and Sunday October 22 & 23, *Bee Culture's* Conference Center, 640 W. Liberty St., Medina, Ohio. Register early.

Mark Your Calendars Now!

October 22 and 23, 2016 at
Bee Culture's Conference Center
640 West Liberty Street
Medina, Ohio

Watch BeeCulture.com and these pages for program and registration information

DON'T MISS OUT!

Kelley Beekeeping is looking for resale partners!

Ask yourself these questions:

Is your local beekeeping community strong and active?

Do you teach beekeeping classes?

Would you like to run a business that aligns with your passion?

If you answered YES, we may have an opportunity for you!

Contact Us Today

Email: aconstant@kelleybees.com

Or Call: 800-233-2899 ex. 213

UPCOMING EVENTS

October 2016

Kentucky: Kelley Beekeeping 101 with Jake Osborne
October 1, 2016
WTK Facility, Clarkson, KY
Info: www.kelleybees.com

New York: 4th Annual Greater NY Bee Conference featuring Kristin Traynor, Dr. Peter Borst, and Dr. Richard Fell
October 9, 2016
2350 Broadhollow Road –
Farmingdale- Long Island
Info: www.longislandbeekeepers.org

Hawaii: Western Apicultural Society of North America Annual Conference
October 13-15, 2016
Ala Moana Hotel
Waikiki Beach
Honolulu, Hawaii
Info: www.westernapiculturalsociety.org

Washington: West Sound Beekeepers Association featuring Michael Bush
October 22, 2016
Central Kitsap High School
3700 Anderson Hill Road - Silverdale
Info: http://westsoundbees.org/

Kansas: Kansas Honey Producers Association Fall Conference
October 28 & 29, 2016
Whisky Creed Wood Fired
Grill Conference Room
3203 Vine St., Hays, Kansas
Info: www.kansashoneyproducers.org

Illinois: Illinois Queen Initiative with Dr. Megan Milbrath, Dr. Stu Jacobson, & Jim Landau
October 29, 2016
Asmark Institute Agricenter
14171 Carole Drive
Bloomington, Illinois
Info: Stu Jacobson at (217) 498-7223.

Colorado: Colorado Professional Beekeeping Association featuring Randy Oliver
October 28-29, 2016
Best Western Plaza Hotel & Convention Center
Longmont, CO
Info: http://coloradoprobeekeeping.org

Indiana: Beekeepers of Indiana Fall Conference featuring Dr. Ernesto Guzman
October 28-29, 2016
Swan Lake Resort
5203 Plymouth LaPorte TR
Plymouth, Indiana 46563
Info: www.indianabeekeeper.com

November 2016

Wisconsin: Wisconsin Honey Producers Association Fall Convention
November 3-5, 2016
Holiday Inn – Fond du Lac
625 Rolling Meadows Drive
Fond du Lac, WI
Info: http://www.wihoney.org/

Colorado: Colorado State Beekeepers Assoc. Winter Meeting with Dr. Keith Delaplane
November 5, 2016
Kirk Hall, Douglas County Fairgrounds
Castle Rock, CO
http://coloradobeekeepers.org/winter-meeting.html

Ohio: Ohio State Beekeepers Assoc. Fall Conference with Jamie Ellis, Steve Repasky, Alex Zomchek , Reed Johnson
November 5, 2016
Tolles Career Center
7877 US Highway 42 S
Plain City, OH 43064
Info: http://www.ohiostatebeekeepers.org/event/2016-osba-fall-conference/

New Mexico: Quivira Coalition Conference- LIGHTS, SOIL, ACTION! Featuring Dr. Jon Lundgren
November 9-11, 2016
The Embassy Suites Hotel
1000 Woodward Place NE
Albuquerque, New Mexico 87102
Info: http://quiviracoalition.org

Iowa: 104th Iowa Honey Producers Assoc. Conference & Annual Meeting with Dr. James Tew, Dr. ennifer Berry, Charlotte Hubbarb, Andy Joseph, Andy Hemken, & the Iowa Honey Queen
November 11-12, 2016
Clarion Hotel and Convention Center
Cedar Rapids, Iowa
Info: www.iowahoneyproducers.org

We'd love to share news of your upcoming events. Please send the event name, date, website and/or contact information by the 10th of each month for inclusion in the following month's issue. Editor@KelleyBees.com

UPCOMING EVENTS

Illinois: Illinois State Beekeepers – 125th Annual Fall Meeting
November 12, 2016
Illinois Department of Agriculture
Illinois State Fairgrounds
Springfield, Illinois
Info: www.ilsba.com/summary-of-events.html.
Email mike.r.mason@comcast.net

New Mexico: Biodynamic Association Conference with beekeeping workshops by Michael Thiele and Gunter Haulk
November 16-20, 2016
Santa Fe Convention Center
201 W Marcy St
Santa Fe, NM 87501
Info: www.biodynamics.com

January 2017

Texas: 2017 North American Beekeeping Conference & Tradeshow-Building a Sweeter Future
January 10-14, 2017
San Luis Resort
Galveston Island Convention Center
Galveston, TX
Info: nabeekeepingconference.com/

We'd love to share news of your upcoming events. Please send the event name, date, website and/or contact information by the 10th of each month for inclusion in the following month's issue. Editor@KelleyBees.com