Kelley Beekeeping

SERVING THE BEEKEEPER SINCE 1924

ISSUE 55: MARCH 2015

IN THIS ISSUE

From the Queen's Court

by Melanie Kirby

Spring is popping—catching some of us still scrambling to get everything prepared and organized for the bee season while others are already making splits, rearing queens and getting ready for migrations. It can be a surprise when we slowly peel our eyelids open from under the warmth of our fleece blankies and hear frogs croaking in the pond, skunks coming out of hibernation and birds a chatter building their nests. Up here, on our island in the sky at 8300' elevation in the southern Rocky Mountains of northern New Mexico, we already heard the frogs in the melting pond above the home apiary. Then, the next day, it snowed again. Poor froggies.

No doubt they are equipped to handle such natural transgressions. And though it may appear that Mother Nature can be cruel at times, she can also be oh so nurturing. Her dynamic interface is giving birth to new life at this time of year. In anticipation, stewards are strategizing their seasonal management plans and goals. All we can do is navigate her dynamic interface—which can take us on a merry or frightening carpet ride through the warmer months.

In our area of the country, March gets notoriously warm. Everyone gets excited—even the plants. The initial melt of the previous month gets everyone's blood and pith warming. The trees start budding as the ground turns to mud. And then as the Rockies begin to melt, the cold air from their tippy tops comes cascading down to the valleys below. There's the Rocky Mountain Blast—as I call it; that comes racing down the northern Rio Grande Gorge corridor. It brings below freezing temps that spill into the valley—jarring the tender buds. Never fails, the only thing we can count on in this area are late frosts. April always chills down again for us.

And so, we are then brought back to the reality of the fragility of spring. If it can dupe the plants and us, it can surely dupe the bees, too. They get started rearing brood after winter solstice—albeit in little increments. With warming weather, they want to ascend to their crescendo of brooding in anticipation of spring bloom—by finishing

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Editor
Melanie Kirby
Editor@KelleyBees.com

Website & Ecommerce
KelleyBees.com

Address
807 W. Main St.
P.O. Box 240
Clarkson, KY 42726

Phone
270-242-2019
800-233-2899

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up their winter stores. And then with the late frosts that damage initial bloom, they could easily run out of their reserves and not have what is needed to feed all the developing babies.

Spring winds are indeed picking up…they'll blow in like a lion and out like a lamb—as the age old adage states. I know I'm revving up for the intensity of the season's start. And at the end—towards October, I'll curl up in my fleece blanket again and go into cluster to review the season and concoct my plans for next year. The cycles of life- oh how they bring comfort and joy, and lots of work!

We learn to blow with the breeze—like a petal or a leaf rolling end over end down the path. The bees learn to blow with the breeze—capturing wiffs of spring perfumes as the nectar begins to waft between orchards and meadows, back yards, medians, and farm fields. Blowin' in the wind—as Bob Dylan shared—can carry the answer. It can also carry dust, pollen grains, and the scents of life from animals, people, and vehicles.

COVER PHOTO: Steve Wall, proprietor of Buckin' Bee Honey, keeps bees in Santa Fe, New Mexico. See his site at Buckinbee.com.

I hope you enjoy the cover shot this month. We'll be featuring various photos that readers send in—though I'll admit with this month's photo was posted by a good friend on the Santa Fe beekeepers listserve. I was so impressed with it's clarity—and the eagerness of the bees to capture the first offerings of spring on the impending elm bloom, that I asked him if I could use it as a spring cover shot. Steve Wall is the photographing Master Beekeeper's name. Info on him follows. This newsletter welcomes pictures throughout the year. If we select one of yours for publication—we'll also run a profile of you and your connection to beekeeping to share with readers near and far. Did you know that Kelley newsletter now goes out to over 40,000 subscribers?! Guess I better dot my i's and cross my t's…and also, cross my fingers for a phenomenal bee season!

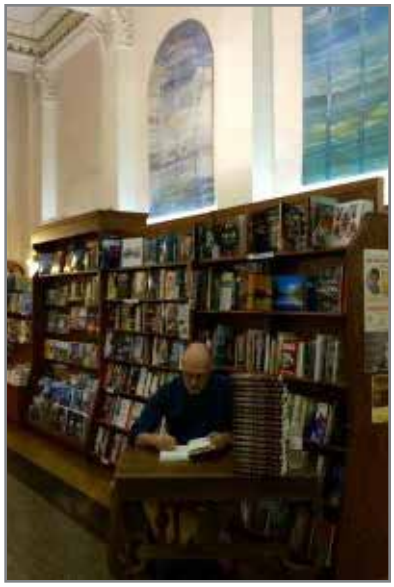
Spring has sprung my friends—let's enjoy the transition from dearth to birth.

Paz y Alma
Peace & Soul—
Melanie

Melanie Kirby has been keeping bees professionally for 19 years. Her "sky island" farm Zia Queenbees specializes in survivor stock queen honeybee breeding, exquisite hive products and apiceuticals, and sustainability research. She can be reached at editor@kelleybees.com

Hungry bee finds elm pollen on a warm Santa Fe day in February. Photo by Steve Wall.

Bee Education

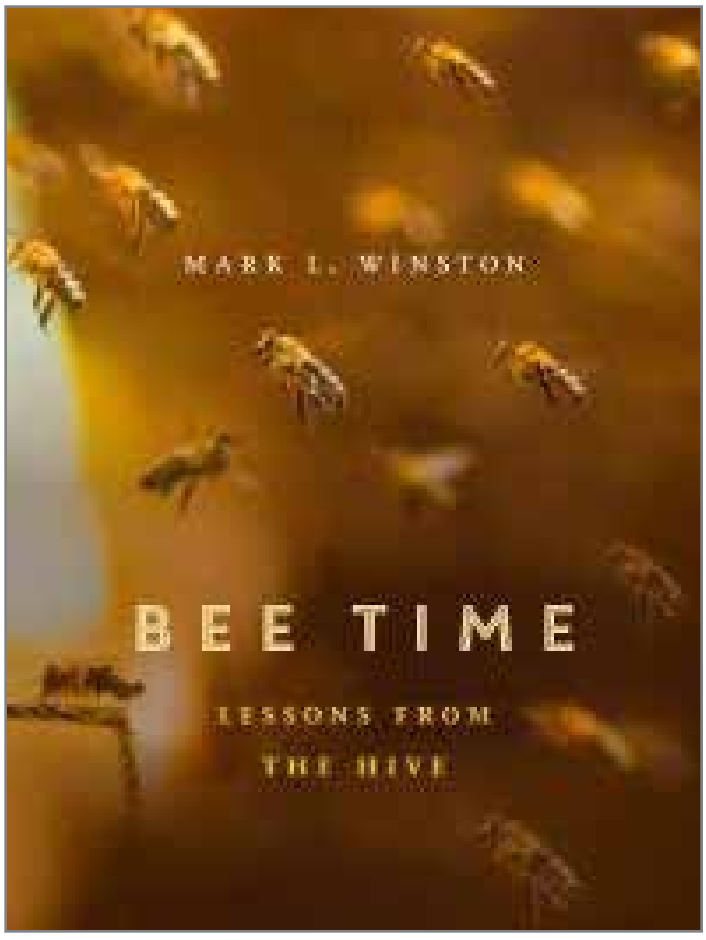


Bee Time: Lessons From the Hive by Mark L. Winston

There are powerful lessons to be learned from bees about how we humans can better understand our place in nature, engage the people and events surrounding us with greater focus and clarity, interact more effectively in our relationships and communities, and open ourselves to a deeper understanding of who we are as individuals, communities and a species. I'll talk about my experiences over 30 years of walking into apiaries, and the lessons learned from a life spent among the bees.

Jacket Copy

Being among bees is a full-body experience, Mark Winston says—from the low hum of tens of thousands of insects and the pungent smell of honey and beeswax, to the sight of workers flying back and forth between flowers and the hive. The experience of an apiary slows our sense of time, heightens our awareness, and inspires awe. Bee Time presents Winston's reflections on three decades spent studying these remarkable creatures, and on the lessons they can teach about how humans might better interact with one another and the natural world.



Like us, honeybees represent a pinnacle of animal sociality; how they submerge individual needs into the colony collective provides a lens through which to ponder human societies. Winston explains how bees process information, structure work, and communicate, and shows how corporate boardrooms are using bee societies as a model to improve collaboration. He examines how bees have altered our understanding of agricultural ecosystems, and how urban planners are looking to bees in designing more nature-friendly cities.

The relationship between bees and people has not always been benign. Bee populations are diminishing due to human impact; we can't afford to ignore what the demise of bees tells us about our own tenuous affiliation with nature. Toxic interactions between pesticides and bee diseases have been particularly harmful, foreshadowing similar harmful effects of pesticides on our health.

Bee Education *continued*

There is much to learn from bees in how they respond to these challenges. In sustaining their societies, bees teach us ways to sustain our own.

"No other book celebrates the long relationship between humans and honey bees as powerfully, thoughtfully, and enchantingly as this one. Written in lyrical prose, Bee Time is a delightful and inspiring read." Thomas D. Seeley, author of "Honeybee Democracy"

"Bee Time is a unique book: in turn a touching memoir, a warm paean to the honey bees that have fueled Winston's impressive scientific career, and an insightful analysis of some of the serious environmental problems facing us today." Gene E. Robinson, University of Illinois at Urbana-Champaign

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Harvard University Press: http://www.hup.harvard.edu/catalog.php?isbn=9780674368392
Amazon: http://www.amazon.com/Bee-Time-Mark-L-Winston/dp/0674368398/ref=sr_1_1?ie=UTF8&qid=1401819067&sr=8-1&keywords=Bee+Time+lessons
Chapters: http://www.chapters.indigo.ca/books/bee-time-lessons-from-the/9780674368392-item.html?ikwid=bee+time+lessons&ikwsec=Home&ikwidx=0

Reviews
New Scientist: *"A charming and poetic account, Winston writes lovingly of the rhythms and quiddities of the apiary, stepping between reportage, scientific exactitude and a deep, poetically expressed love of bees, beekeeping and the cultural forms that bees inspire . . . An insightful delight." 21 October 2014*
Nature: "From the whirr of wings to the whiff of honey, the "full-body experience" of working in apiaries has, for biologist Mark Winston, sparked insights into humanity's relationship with nature. In this personal and scientific journey into the history we share with bees, he ranges over neonicotinoid pesticides and colony collapse, the control of African 'killer' bees and more. The charismatic social insects emerge as both icons of societal cohesion and symbols of nature's paradoxically mingled power and fragility." 30 October 2014

Literary Review: *"Winston's argument – that the experience of interacting with a beehive is akin to the neurological state brought about by focused dialogue – is a fascinating one [. . .] The most impressive aspect of Winston's wide-ranging study into social and cultural appropriations of the apiary is his awareness of how NGOs in America have adopted the example of bees to enhance participatory democracy. Turning our long-standing habit of anthropomorphising bee colonies on its head, Winston draws eloquent parallels between a swarm's 'discussions' on the best spot for a new nesting site and the activities of organizations like AmericaSpeaks [. . .] And if, as Winston suggests, the answers lie within the intricate colloquies of the hive, perhaps it's about time we let the bees tell us."* 1 November 2014

Bee Craft: *"This is a very thought-provoking book, examining the relationship between humans and bees and exploring the lessons we can learn from the colony . . . It grows from "bee time," that time in the apiary when everything else is put aside, time slows down, and you are immersed in the world of the honey bee."* 1 October 2014

Bee Education

Pollinate MN by Erin Rupp

In 2003, as an undergraduate in Minneapolis, I managed a crew of teenage garden farmers. We grew and sold flowers and veggies and, on occasion, took field trips to places like the neighborhood beekeeper's house. Kevin took us all on his roof in St. Paul, put some of us in beekeeping suits, and opened one of his rooftop hives while the rest of us watched from behind a screened window.

It was an incredible experience- watching these shy kids, already out of their comfort zone that summer, now way, way outside of it, having an amazing time! It was my first time close to a hive and it was terrifying and awesome.

Fast forward 13 years, and now I'm a beekeeper myself, and offering these experiences- to put on a beekeeping suit and safely hang out with honeybees- to everyone over 5 in our Pollinate Minnesota Classes. I founded Pollinate Minnesota this January. We're working for a better Minnesota for pollinators and people, through honey bee education and advocacy.

Our classes aren't designed for building beekeepers. As a Minneapolis organization, we have an invaluable neighbor in that work- Marla Spivak's U of M Bee Lab and Bee Squad. Our Pollinate Minnesota classes are for an inquisitive public, interested in learning more about who bees are, what's going on with them, and how we can help. They're just as much for people looking for a unique date, teachers searching for engaging teaching tools, or a family, looking for a new afternoon activity, as they are for folks curious about what working a beehive and being a beekeeper feels like.

As people, we all know something about bees- because honey is delicious, because stings are scary. Building on existing student knowledge is a key teaching tool- one which encourages student success. Our Pollinate Minnesota classes raise awareness of the critical work honey bees and beekeepers do for our food security while providing an engaging tool for teachers to connect to wide ranging subjects like math, history, science and literacy.

In teaching these classes, I talk to people everyday about who bees are and what's going on with them. I see the care that people have about bees, the depth of their understanding, and scope of their questions. I see them choosing with their hearts, their dollars, and their trowels to help bees. We need more than that to end pollinator decline, and at Pollinate Minnesota, we also do advocacy work to connect this care to policy change. Last year, Minnesota passed two nationally unprecedented pollinator laws; we're working to make sure this continues.

Bee Education *continued*

As we know, it's hard to be a bee these days for a number of reasons. We know that bees are struggling because they don't have enough food to eat, because there aren't enough flowers in ecosystems. Planting flowers and increasing foraging areas helps. We know that the varroa mite weakens bees, and research on how to treat and manage for varroa is of critical importance to bee health. We also know that pesticides are toxic to bees—and the systemic pesticide class, neonicotinoids, which bees are exposed to through nursery practices, homeowner use, and agricultural seed coats, are acutely and sub-lethally toxic to bees.

Neonicotinoids are not the only pesticides toxic to bees. With honey bees gathering food from millions of flowers within a 2-3 mile radius of their hive, they pick up a cocktail of many different types of pesticides. We don't know how these chemicals interact together or their synergistic toxicity to bees. The reason to focus on neonicotinoids is that our governing bodies already are. We need to encourage them to take the opportunities they have to pursue regulatory change to limit the use of chemicals.

At the same time, it's amazing that our individual actions make a difference! Planting untreated flowers in your yard feeds the hungry bees in your neighborhood. We see change growing this way- in individual yards, through dynamic, safe, one-on-one experiences with our critical pollinators. As individuals, we're stepping up.

We need our government to do the same. Pollinate Minnesota is working with others on a number of issues related this year, from increasing forage along roadsides and buffer strips, to a 5- year moratorium on neonics, as our Minnesota Farmers Union supports. We need your help! Let's all Pollinate Minnesota! (and Kentucky! And the country!)

To learn more about Pollinate Minnesota, visit: www.pollinatemn.org, www.facebook.com/pollinatemn, or on twitter @pollinatemn We're now accepting donations!

Let's all Pollinate Minnesota!

Contact Erin Rupp at erin@pollinatemn.org

AMERICAN BEEKEEPING FEDERATION 2015 CALL FOR RESEARCH PROPOSALS

The American Beekeeping Federation (ABF) Research Committee has developed a program to support small research projects conducted by beekeepers and members of the beekeeping industry. Resources from the ABF's "Friends of the Bee" fund have been earmarked for this purpose. The amount for the small research project(s) will not exceed $1500. The submissions will be accepted from March 1, 2015 through April 13, 2015. The winner(s) will be contact by May 15, 2015. If you have any questions, please contact Regina K. Robuck at **reginarobuck@abfnet.org** or 404.760.2887

Scope of Research:
Proposals for funding should focus on issues of concern to the beekeeping industry as a whole and to members of the ABF. Projects need to result in a product, solution or method that directly benefits the apiculture industry.

Guidelines for Written Research Proposals:

The guidelines for written research proposals are as follows:
• Written research proposals need to include the following items:
(1) Descriptive Title
(2) Researcher Information: Name; Mailing Address; E-mail; Phone Number
(3) Abstract/Summary: Clear, concise summary of the project in layman's language to include: a) Overall objective of the project; b) Summary of work plan and/or methodology; c) Expected outcomes, product or solution to question addressed.
(4) Introduction: Clear statement of the problem that you will study and why it is significant to the beekeeping community. Include background information and any literature associated with the problem. Describe the expected outcomes of the proposed research and how beekeepers would use the information that you generate.
(5) Objectives: Clearly state what the goal of the research will be.
(6) Plans and Procedures: Clearly state how you will study the objectives. Define the experiments will you conduct to address the objectives. Clearly outline how you will conduct the experiments. Discuss how you will interpret the results of experiments. Outline the timeline for conducting and analyzing the results from the research.
(7) Budget: Define how resources provided by the ABF will be used to support the proposed research.
• Written research proposals should be submitted to the ABF via postal mail at: ABF, Attn: ABF Research Committee, 3525 Piedmont Road, Building Five, Suite 300, Atlanta, GA 30305. Or, sent via e-mail to: info@abfnet.org.

Evaluation and Expectations:
The evaluation of the written research proposal and the expectations of the research projects are as follows:
• Receipt of proposals by the ABF will be confirmed in writing, via e-mail, to the researcher within two (2) weeks after submission.
• Proposals will be evaluated by the ABF Research Committee and results provided to the researcher within two (2) months of receipt of the proposal.
• Projects are to be completed within a maximum of one (1) year from the date of the award or after one field season.
• Awardees must provide a final written report of the outcomes of the research.

For full proposal requirements and format, visit: http://www.abfnet.org/?page=2015Call4ResearchPrj

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

A•Bee•Cs

Beginning Beekeeping

by Phill Remick

The Pollen Trap

Q: Does a colony of bees need as much pollen as they do honey going in to winter in order to survive; in other words do they mix about half and half pollen and Honey?

A: You do not need a 50/50 mix of pollen and honey to make it through winter, but you'll be surprised how much each hive actually requires! Most beekeepers allow between 50-65 pounds of honey to remain on their colonies, while pollen/bee bread stores vary by region as well as the hive and its location.

A rocket scientist acquaintance (literally) declares that the average hive drags in a bit over 125 pounds of pollen per year. Pollen amounts vary per hive.

Bee bread is formed by the bees mixing pollen, with their enzymes and fluids which set the blend up for storage in cells; dang, it's probably great heated with a pat of butter and of course, wait for it—a bit of honey!

Pollen is on the stamen of the plant: it is the male reproductive segment of the plant. Our valiant honey bees fly from flower to flower, dispersing pollen from stamen to stigma—the female portion of plants. Bees need a high protein pollen source to feed their brood and support the colony's longevity—it's all about strong growth and proper maturity.

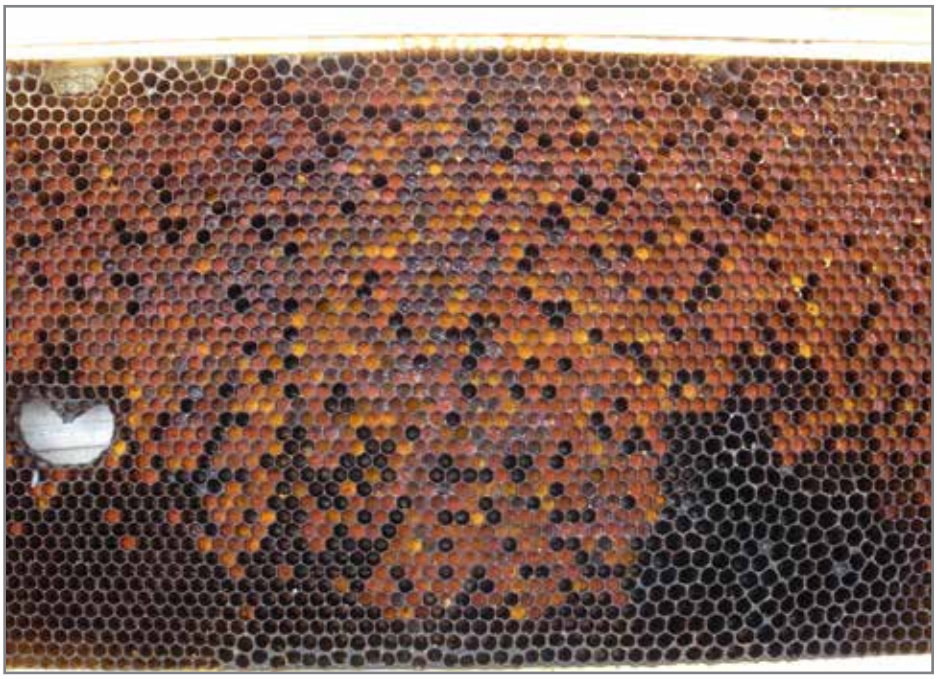
Pollen in 'bee bread' form becomes the honey bee's primary protein, replete with trace nutrients, fats or lipids, amino acids, minerals and vitamins. Bees can die is short order if they do not have adequate stores of carbs. Nectar/honey will supply carbohydrates along with many minerals. Our friends the honey bees benefit from clean water which contains other minerals to aid and balance nutritional demands. Some beekeepers use a pollen trap at the entrance of the hive to collect pollen. Just like removing too much honey from the hive, removing too much pollen can affect the health and strength of the bees.

Depending on the season, the colony's pollen requirements will vary. All pollen is not created equal. For example, some evergreens have pollen but it is inferior pollen, hence you will not see many bees on it. Translation: the quality of the pollen source is more significant than the quantity.

I'm visualizing darting bees nicely rounded, weighed down with bright red, orange and yellow colors, floating across a brilliant blue foreground. It's a wonder they get enough lift to move, let alone glide back to their home miles away! My 'expert 'acquaintance believes bees can carry their own weight in pollen when returning to the hive, others say about half that; either way—it's quite impressive.

I normally have at least 4-6 full frames of bee bread in stronger colonies going into winter and on occasion, provide pollen substitute in late December, prior to the first spring bloom, that way the bees have a good supply. Do I weigh it out 50/50 with the honey? If I do that, I believe the honey supply would be too low.

Final answer: leave an adequate supply of honey on your hives over the winter. The amount of pollen/bee bread will vary per hive and you may need to supplement with a pollen patty at the end of the season.



This picture we call, 'Heart of Bee Bread', is a frame loaded with bee bread, snapped near Corrales, NM.

Phill Remick is a former commercial beekeeper who teaches beekeeping classes, offers year round apiary troubleshooting, hive management and sells beekeeping supplies near Albuquerque, NM. Contact him at www.NewBeeRescue.com

Just the FAQs

Frequently Asked Questions for Getting Started & How Kelley Beekeeping Can Help!

Q: I'm a new beekeeper, what equipment do I need to get started?
A: That's a great question! Kelley Beekeeping makes that easy for you! We have two beginner kits: Kelley's Beginner's Kit (item #365-N) and the Deluxe Beginner's Kit with shallow supers (item #365-NE). The (item #365-N) contains one deep hive body, (10) "N" style frames, wired foundation, (20) support pins, a wooden inner cover, plastic telescoping outer cover, screened bottom board, entrance reducer, entrance feeder, hive tool, smoker, goatskin gloves, round veil and helmet, plus the HOW TO KEEP BEES AND SELL HONEY book written by Walter T. Kelley as well as assembly instructions. It has everything you need to become a "Newbee". However, the deluxe version includes additional equipment that will be needed just a few short weeks after your first bee install. The (item #365-NE) contains all the before mentioned equipment plus a 2nd deep hive body, (2) additional shallow honey supers, giving you a complete (4) box hive, (30) more frames & wired foundation to fill your three extra boxes, a bee brush, smoker fuel, a pullover jacket and a second beginning beekeeper book. By purchasing this kit, you won't have to place a 2nd order for the additional equipment that you'll need in a surprisingly short amount of time.

We also suggest that new beekeepers start with two complete hives. Our suggestion, purchase the Deluxe Beginners Outfit (item #365-NE) and a Kentucky Special (item #KS), which is a complete hive containing (2) deep hive bodies, (2) shallow supers, (40) frames, wired foundation, plastic telescoping cover, screened bottom board, entrance reducer and boardman entrance feeder. Sounds complicated - It's not. By purchasing both the (item #365-NE) and the (item #KS) you have two complete hives and all the equipment for a new beekeeper to get started.

Q: Your catalog has six types of frames, what type of frame do you recommend?
A: That depends on several factors: foundation being used, how "handy" you are, and the amount of time you have. We generally recommend our "N" style frames due to ease of use. You'll simply slide the foundation into the slotted top bar until it seats in the grooved bottom bar. The "D" style frames have a long tradition with beekeepers; however the "wedge" that stabilizes the foundation must be nailed in place. The "D" style frame has a slotted bottom bar that allows the foundation to lie between the two piece bottom bar. If you're using plastic foundation then you will need the "SGX" frames, which have a grooved top and grooved bottom bar. Some natural beekeepers prefer the "F" frames, which are foundationless frames which require the bees to develop the comb, without the help of foundation. We even have two final frames, the "S" frame and the "SG" frame, both of these frames have wedge top bars that must be nailed on. The difference between these two frames is their bottom bar. "S" frames have a solid bottom bar and the "SG" frames have a grooved bottom bar.

By the way – it is very important that you match your frame style with the correct foundation.

Just the FAQs *continued*

Q: What is foundation and what does "with hooks" mean?
A: Foundation is what we call "the bees' comb starter kit" – it gives the bees a jump start on drawing out comb, which means you get a jump start to extracting honey. We sell foundation that is made of 100% beeswax, which the bees love or foundation that is made of plastic and covered with beeswax. Typically you'll see beeswax foundation used by most hobbyist and sideliner beekeepers, with plastic foundation heavily used by the commercial beekeepers – although they too use beeswax foundation. Foundation "with Hooks" is foundation that is attached to any frame with a "wedge" top bar. Frames that use foundation "with hooks" include the following styles: D, S, & SG. Wired foundation that contains "no hooks" includes frame styles: N & SGX. Remember "F" style frames have no foundation.

Q: What type of package bee do you sell and are they guaranteed?
A: Kelley Beekeeping sells Italian and Russian queens with our package bees. Unfortunately, we cannot guarantee our package bees; however, they can be insured through the United States Postal Service in zones 1-4 if you choose to have them shipped to you. Zones 5-8 cannot be insured by USPS. For those of you that choose to pick up your bees at the Clarkson campus, you must visually inspect your bees and queens before signing for them.

Q. When can I place an order for package bees?
A. Our answer, the earlier, the better! You can start ordering package bees as early as December. You can place orders from December through May, with pick-up or USPS shipment occurring each Saturday in April and May; however, we are only able to purchase a certain quantity for each bee Saturday and please remember, they are first come, first serve. Order early!

Q: What type of queens do you sell and are they guaranteed?
A: Kelley Beekeeping sells Italian and Russian queens; and yes, we do guarantee our queens to arrive healthy and egg producing. Should you find that your queen is not producing eggs within 7-10 days of installation, simply notify us and we will send you a replacement queen; however, Kelley Beekeeping does not cover the shipping cost for the replacement queen.

Q. My hive is infested with Small Hive Beetle. What should I do?
A. We recommend that you install either Beetle Jails (56-JA) or Beetle Blasters (56-B) in the hive, two jails or blasters per brood box. Then spread granulated salt on the ground underneath and around the hive.

Q: I want to sell my honey. Do you provide custom printed labels for honey containers?
A: Yes, we provide 24 different designs that can hold (4) lines of information advertising your honey. Please allow 2-3 weeks for printing and delivery. We suggest that if this is your first label order that you send us your information by email or fax. Orders taken over the phone have a higher probability for mistakes and are at the customer's risk. When ordering labels please be sure to your four lines of information (normally your company name and address), label number, size and quantity.

Just the FAQs *continued*

Q: What is the recommended hive tool?
A: Actually the most desired hive tool we carry is the Kent Williams Hive Tool (Item #152-KWA). Yes, it is our most expensive hive tool at $19.95, but it combines two tools in one. Designed by one of Kentucky's two Master Beekeepers, this tool has a strong scraper end for prying between hive bodies and removing burr comb plus a hook that makes prying up frames during your hive inspections easier. You'll quickly see that this hook comes in very handy when you're trying to work efficiently in your hive – and like we stated earlier – it was developed by a master beekeeper, so it must be a useful and needed piece of equipment!

X•Y•Zs

Advanced Beekeeping

by Dennis Brown

Hi Dennis,
I'm confused about performing powdered sugar treatments. A lot of beekeepers and beekeeping books say to treat the hive once a week for three weeks and others say to treat once every two weeks for six weeks. What's better? Thanks in advance. Pam Dawson.

Background info: Some may ask; "What does the powdered sugar do?" The powdered sugar will coat the adult bee population causing the bees to groom themselves and each other. During the grooming process, some mites are knocked off the bees. Hopefully, the hive will have a screen bottom, so the mites can fall through to the ground and die. (After each powdered sugar treatment, splash water underneath the hive to dissolve the powdered sugar. Otherwise, field bees will forage the powdered sugar. While they are gathering the powder, the fallen mites will have an opportunity to catch a ride back to a hive.) If you're using a solid bottom board, the mites will land on the board and crawl back on a bee that is passing by.

Hello Pam,
Neither of those choices is better than the other. For the powdered sugar dusting to be most effective, you should dust once a week for four weeks. Think about it this way. Worker brood takes twenty-one days to hatch from egg to adult. Then there's the drone brood which takes twenty-four days to hatch. The drone brood is where you'll find 80% of the mite level because the drone cell is larger. If you treat the hive for only three weeks, you will have missed 80% of the breeding mite load in the drone brood. When you dust once a week for four weeks you are able to cover both the worker and drone brood cycle. This will catch the newly hatched mites before they move into a ready to cap cell. Always sprinkle one cup of sugar on the top bars of each hive body individually. Don't make the mistake of dumping the powder on the top bars of the top box and hope it makes it down to the bottom box. After the treatment cycle, check the mite level again. It may be that you'll have to repeat the treatment cycle.

Here at Lone Star Farms we are all about raising bees that can take care of themselves without any chemical treatments or any extra work. Powdered sugar treatments are really nothing more than putting a band aid® on the problem. It's good for the short term, but hopefully long enough for you to purchase and replace the hive with a more hygienic queen. So, we are convinced that using a hygienic queen from the start is the way to go. Make sure that the queens are marked so you know the queen you originally placed in the hive is the same queen. If the bees replace the queen or if the hive swarms then we typically replace that queen with a known hygienic queen.

Remember, if you do replace the queen with a hygienic queen, go ahead and dust the hive through at least one more cycle. This will give the new hygienic queens brood time to hatch and take over in reducing the mite load themselves.

I hope this helps.
Enjoy your bees! Dennis Brown

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

Bee Health

Catch the Buzz

Reprinted w/ permission from Kim Flottum

Only 85 Comments on a Definition of Honey. And Nobody Agrees On What That Definition Should Be.

Excerpts From The ERS Report

Report to the Commissioner of the FDA

How an appropriate Federal Standard of Identity for Honey would be in the interest of Consumers, the Honey Industry, and US Agriculture.

AMS – USDA Agricultural Marketing Service – published a Federal Register notice on August 20, 2014, seeking public comment on how a Federal standard of identity for honey would be in the interest of consumers, the honey industry, and US agriculture.

Overall 76, or 89% of the 85 comments supported establishing a Federal standard in some form. Only 1 commenter stated a standard is not needed.

BEE CULTURE
The Magazine of American Beekeeping

Generally, the favorable comments mentioned a single standard would be better than several from various states, others felt marketing practices that allowed unrestricted imports of substandard product are putting small businesses out of business, while others felt that without this protection small producers would simply fold, threatening pollination and overall US honey production. By far the majority felt there was a need for a definition for honey, there were disparate opinions about how to frame it.

Some recommended the inclusion of detailed analytical data, such as:

- Defined filtration levels…from none to a breakdown by microns
- Raw honey should have a maximum HMF content of less than 25 mg/kg
- Requiring a measurable pollen count to ID floral sources, growing region and excessive filtration

Of the 85 positive comments received, 66 were from individuals, the remaining from organizations with affiliations in the honey industry. These organizations are notable, including

ABF, AHPA, Center for Food Safety, FL Dept of AG, Food and Water Watch, Impex Group, Monsanto, National Honey Packers and Dealers, Robert Mondavi Institute for wine, Sioux Honey, Western State Honey Packers and a few others. 29 comments were from Texas, with the next highest contributing state California, with 9. In Summary, AMS finds that 1) the preponderance of comments across multiple regions and organizations support the establishment of a standard; and 2) there are divergent opinions on the content and wording of such a standard, and its relationship to existing international standards.

NHB Funds New Bee Research Projects For 2015

The National Honey Board has approved funding for ten new research projects focusing on honey bee health. The Board's Research Committee, with input from an independent panel of experts, selected the projects from 22 proposals received from researchers around the world. The total dollar commitment for the ten projects is $231,800. In addition, the Board's 2015 budget includes $61,366 for ongoing bee research projects from prior years.

The ten new projects approved for funding in 2015 include:

• "Investigating the roll of pathogens on honey bee colony health," Flenniken/Montana State University.

• "A temporal analysis of honey bee colony heath in migratory beekeeping operations: Assessment of the relative contributions of agrochemical residues, pathogen incidence and abundance and pest loads to colony declines," Kegley/Pesticide Research Institute & Pollinator.

• "Evaluating the potential benefits of native prairie flowers for honey bees," Spivak/University of Minnesota.

• "The probiotic potential of Lactobacillus Kunkeei for honey production," McFrederick/University of California.

• "Influence of Varroa mite (Varroa destructor) levels and management practices on insecticide sensitivity in the honey bee," Rinkevich/Louisiana State University.

• "Drought induced impacts on honey bee nutrition and productivity," Rankin/University of California.

• "Effect of commonly used agrochemicals and their interactions on honey bee colony health," Sagili/ Oregon State University.

• "Understanding how nutritional source and behavioral state interact and influence resistance to abiotic stressors in honey bees," Ottea/Louisiana State University Ag Center.

• "Effects of inducible reactive oxygen species production on Nosema ceranae infection," Snow/ Barnard College/Columbia University.

• "Field exposure and toxicity of neonicotinoid insecticides to honey bees via flowering field margins: The importance of continual pesticide exposure in bee forage," Lundgren/USDA-ARS, NCARL.

Honey bee research projects funded by the National Honey Board are listed on the Board's website, www.honey.com. Visitors can click on the "Honey Industry" tab and then go to "Honey and Bee Research" for further information on ongoing and completed projects. The call for proposals for 2016 funding is expected to be posted on the Board's website by the end of July, with proposals due by early-November.

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.
Check Out The Latest Info at www.Beeculture.com

Bee Science

Fat Bees, Hygenic Bees

by Liz Frost

Editor's note: Let's get technical! We'll be sharing a few articles this year by Liz Frost, an experienced queen inseminationist whom I met while visiting beekeepers in northern California last year. She is travelling the globe. Currently, she is working with beekeepers in Vietnam. This entry is from her post last year stationed in Australia.

While editing and updating the NSW DPI Queen Bee Breeding Course in Australia, I am ever on the lookout for areas in need of expansion. How to select breeder queens and drone mothers is an area only touched upon in the current Course notes, yet is of utmost importance once a beekeeper has the knowledge, tools and passion to rear high-quality queens.

The ideal colony for most would be a good producer of both bees and honey, of gentle temperament, and resistant to diseases. While it's second-nature to identify top-ranking field colonies in regard to brood and honey production and gentleness, ranking colonies for disease resistance takes more effort. Obviously any colonies with foulbrood symptoms or chalkbrood (*Ascosphaera apis*) mummies littering the entrance are out of the running. The fastest way to seed disease resistance into one's stock is to test and select for hygienic behaviour.

Background

Hygienic behaviour is a genetic trait of honey bees that confers resistance to chalkbrood and AFB (*Paenibacillus larvae*) as well as limited resistance to Varroa mites. Bees that carry the hygienic behaviour trait detect and remove dead and diseased brood before it reaches the infectious stage, thereby preventing the spread of disease within the colony.

This behaviour is heritable, transferred from parents, queen and drone, to their offspring. Breeding for hygienic behaviour in one's beekeeping operation can increase colony population by way of decreasing chalkbrood incidence, increase colony numbers by way of decreasing AFB incidence and provide an initial step toward Varroa-preparedness. The easiest way to start selecting for hygienic behaviour is to adopt a strict "no chalkbrood" policy when selecting breeder queens and drone mothers from amongst your top-performing colonies.

Every beekeeper has the ability to test for hygienic behaviour in their stock. As with most things a beekeeper does, success is won with the proper tools and know-how within the context of environmental conditions. In the case of hygienic testing one shouldn't test during a heavy nectar flow, periods of very high or low temperatures or prolonged drought. In a US context, queen breeders would ideally test potential breeder colonies once in the spring and a second time toward the end of summer, going into fall. In either of these time frames there might be a light nectar flow

on or the beekeeper might be supplementally feeding. What I'm trying to get at is, you shouldn't test for hygienic behaviour when environmental conditions tell you not to open colonies.

Testing

The two methods of testing are known as the **freezer-killed brood test** or the **liquid nitrogen-killed brood test.** For either test a small portion of capped brood must be frozen then returned to the colony. 24 hours later the freeze-killed portion is checked to see how much dead brood the colony removed. The percentage of brood removed shows how hygienic that colony is. For example, if you freeze a section of brood with a solid pattern (no empty cells) and, after 24 hours in the colony, the workers removed 100% of the cappings and dead pupae, that colony would be considered 100% hygienic. If you want to select for hygienic behaviour this colony would be part of your breeder pool.

To follow are the materials and methods for performing the **liquid nitrogen-killed brood test** only. This is the preferred method as the **freezer-killed brood test** requires an additional day to freeze a 5cm x 6cm section of comb which must be cut out of a brood frame.

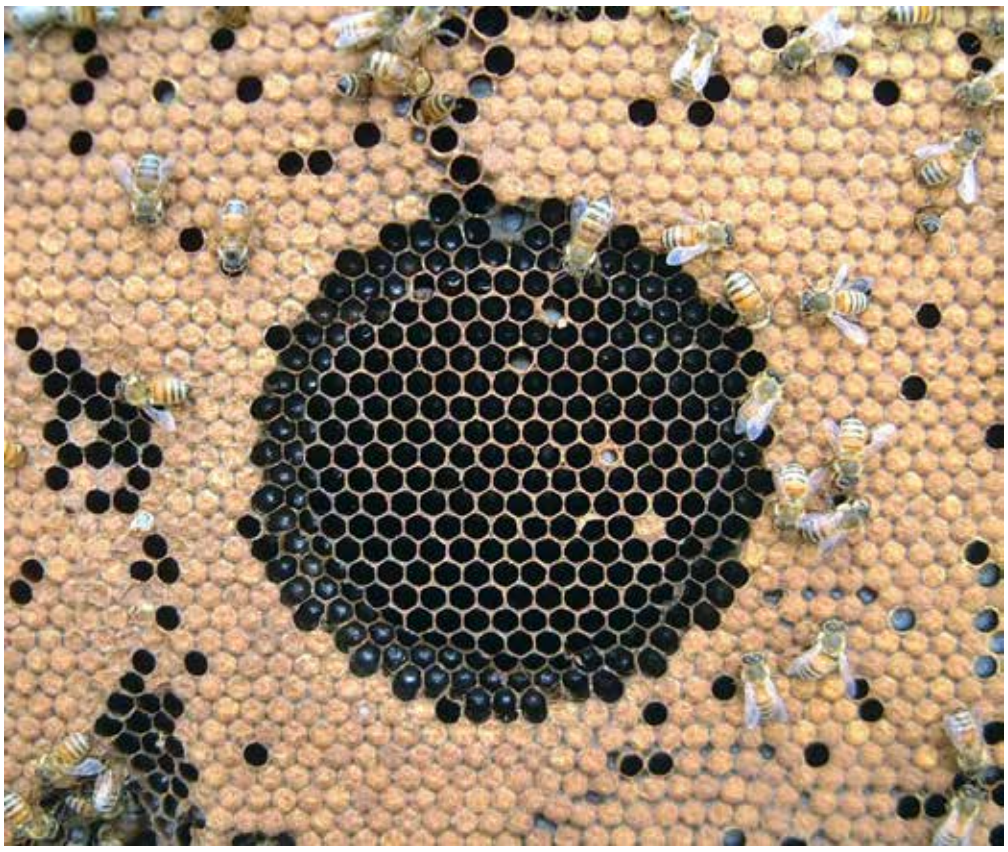


Figure 1. A hygienic colony 24 hours after liquid nitrogen-killed brood test. Photo: Katie Lee, Courtesy of The Bee Informed Partnership.

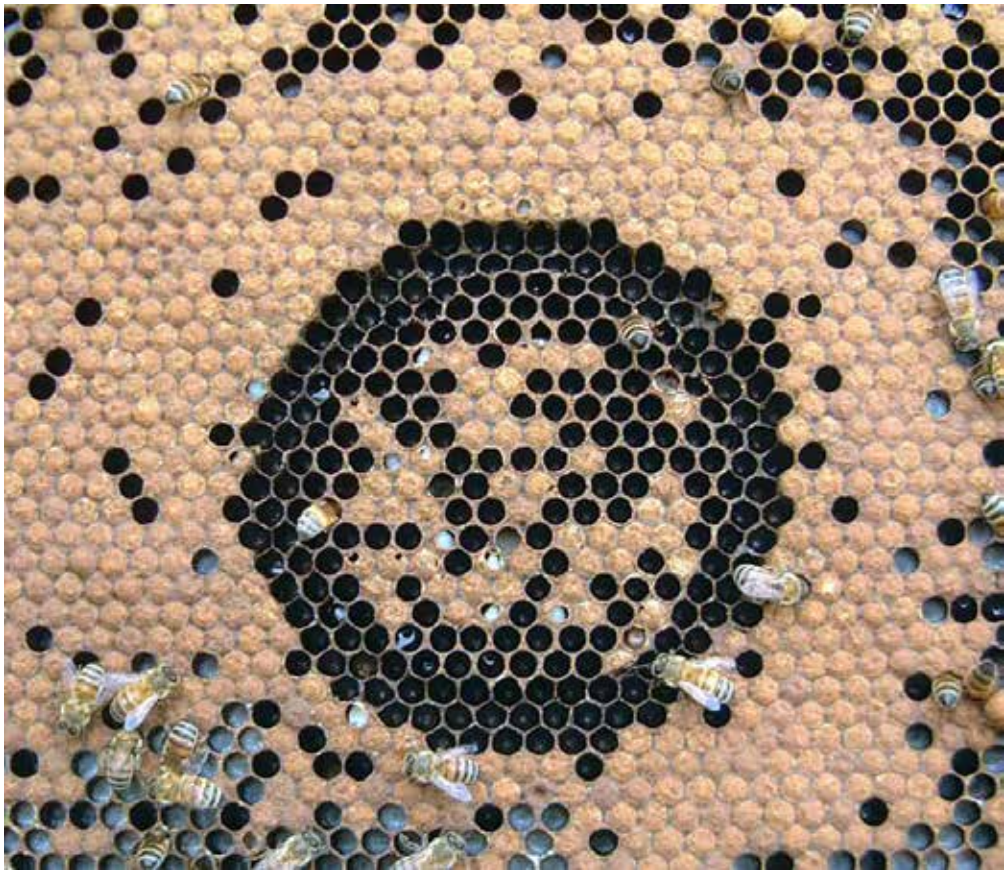


Figure 2. A non-hygienic colony 24 hours after liquid nitrogen-killed brood test. Photo: Katie Lee, Courtesy of the Bee Informed Partnership.

Liquid Nitrogen-Killed Brood Test

This is a 2 day test. All frame types can be tested in this way. The process requires the use of a liquid nitrogen tank, personal protective equipment (PPE) and proper transport and handling of liquid nitrogen which can cause cold burns similar to frostbite upon contact with skin and asphyxiation in unventilated areas. Search for the liquid nitrogen **MSDS (Material Safety Data Sheet)** online for further precautionary guidelines.

Quick Cautionary Tale

Disclaimer: I did not work for NSW DPI at this time.

On one occasion where I had an abundance of liquid nitrogen after testing colonies I decided to put on my PPE (gloves, eye protection, waterproof boots) and pour some liquid nitrogen in a metal bowl with a small chunk of bbq'd meat in it. After all the liquid nitrogen had evaporated I picked up the chunk of beef (in my glove-protected hand) and threw it as hard as I could at the ground. You guessed it. It shattered into several pieces, like a block of ice. Good thing that piece of meat wasn't my finger and I wore all that PPE! Now back to business.

Materials

- **Thumb tacks**/drawing pins or permanent marker
- **VC or metal tubes**, 100mm long, 80mm(3inch) outside diameter (10 tubes/60 colonies)
  - -Base cost: $20/metre PVC pipe (+ fee if cut at store)
  - -Check your shed, local irrigation supply or hardware store
- **Liquid nitrogen tank** (20L capacity, will test ~60 colonies)
  - -Base costs: $25 rental/delivery fee and $50 return freight or $650+GST purchased new*
  - -Check with regional cattle Artificial Insemination (AI) suppliers or gas supply store
- **Liquid nitrogen** (300ml per colony)
  - -Base costs: $4.50+/kg, ~$75+/20L liquid nitrogen*
  - -Check with regional cattle AI suppliers or gas supply store
- **Polystyrene cup** (300ml capacity) fashioned with a long handle. Mark 300ml level inside cup.
- **Gloves** (leather/insulated and waterproof)
- **Splash-proof eye-wear**
- **Safety boots** (waterproof)
- **Record book**

* **Liquid nitrogen cost and tank hire varies by region and state/territory. Costs shown are low due to widespread use of liquid nitrogen for livestock AI in regional NSW.**

METHODS

1) Select and label colonies to be tested.
Colony labels should withstand the elements and be located on a permanent component of the colony, for example front face of brood box or hive cover.

2) Select frame to be tested. Search for frame with the best brood pattern (least amount of empty cells). Avoid frames with lots of uncapped brood or emerging brood. Uncap a few cells to find pupae between 3-10 days old (from just pupating to white to light tan with purple eyes). Any pupae within this range can be tested.
Label top-bar of selected frame with thumb tack or scrape messy top bar with hive tool and mark with permanent marker. This will aid in locating the frame later on.

3) Place frame on flat surface (upturned cover, empty super, etc.) and insert PVC tube. Press and twist the PVC tube into the selected brood area. Press until the midrib of the comb is reached.

4) Pour 300ml of liquid nitrogen into polystyrene cup. An initial small pour (~50ml) into the PVC tube will allow a seal to form at the base of the tube if there are gaps. When the first pour is nearly evaporated pour the remaining liquid nitrogen into the tube.

5) Move onto the next colony while the liquid nitrogen evaporates and the test thaws. Repeat steps 1-4. Thawing is dependent on weather. On a cool/cloudy day the frames may need

to thaw for 10 minutes or more. Depending on foraging conditions it may be necessary to keep thawing frames in a screened tent to prevent robbing.

6) Gently twist the PVC tube off once thawed and record #unsealed cells. Count and record the number of unsealed/uncapped cells in the tube area after twisting off the PVC tube in case a cell capping is damaged during removal. **This number is your Uncapped Count (0HR).**

7) Return the frame to the colony and record the time of return. Recording the time helps keep the pace on the 2nd day of testing, ensuring that one doesn't speed up and check tests before 24 hours has passed.

8) 24 hours later check the comb section for test results. Count cells still capped or still containing dead pupae (whole and parts). This number is your 24HR Count. A colony is hygienic if it has cleaned out 95% or greater of the frozen pupae and cappings within 24hrs.

9) Return frame to colony (remove thumbtack if used). Removing thumbtack will prevent confusion during future hygienic testing.

10) Calculate hygienic behaviour. You will need your **Uncapped Count (0HR), 24HR Count and total number of cells within the PVC tube.**

First, calculate the **total number of cells within your PVC tube**. Within an 80mm/3inch PVC tube my average count was 150 cells. For increased accuracy, in **Step 6)** count all whole cells (capped and uncapped) within the area your PVC tube from three different tested frames and then get the average of the three. This average is the **total number of cells within the PVC tube.**

Next, calculate **0HR Count** by subtracting **Uncapped Count (0HR)** from the **total number of cells within the PVC Tube**. Subtract **24HR Count** (remaining capped cells and pupae parts) from the **0HR Count**. Divide this sum by the **0HR Count**. Move the decimal over twice to the right to get Total % Removed.

EQUATION:
([0HR Count] – [24HR Count]) / [0HR Count] = ___% Removed

EXAMPLE:
Total # Cells in PVC: 150
Uncapped Count (0HR): 12
0HR Count: 138 (That is, 150 total cells minus 12 uncapped)
24HR Count: 4

Given the equation and counts above:
([138] – [4]) / [138] = .97
This colony removed 97% of the liquid nitrogen-killed brood and is considered hygienic.

Discussion
At this point you may be rationalizing why you can't test your colonies for hygienic behaviour. If you're already selecting for brood and honey production and gentle temperament, among other traits, it's time to take the next step. If you can train someone to mark and cage queens and fix up nucs you can train yourself to test for hygienic behaviour. Ask yourself these questions: How would my operation be affected if chalkbrood and AFB incidence decreased? Could I add value to queen sales with this additional beneficial trait? If *Varroa* came tomorrow is my stock as healthy as it could possibly be?

For additional information on hygienic behaviour and success stories read:

"A Sustainable Approach to Controlling Honey Bee Diseases and Varroa Mites" by Marla Spivak and Gary Reuter
http://www.sare.org/Learning-Center/Fact-Sheets/A-Sustainable-Approach-to-Controlling-Honey-Bee-Diseases-and-Varroa-Mites/Text-Version/Breeding-for-Resistance

"New Direction for the Minnesota Hygienic Line of Bees" by Marla Spivak and Gary Reuter
http://beelab.umn.edu/prod/groups/cfans/@pub/@cfans/@bees/documents/asset/cfans_asset_317501.pdf

Elizabeth Frost specializes in bee breeding and instrumental insemination of queen bees. She has just returned from working as a Honey Bee Development Officer with The University of Newcastle in Australia. Her current focus is beekeeper vocational training in the form of an online course on honey bee pests and diseases and an educational online and hard copy publication on queen bee breeding. She got her start in beekeeping working for Sue Cobey at UC Davis and has worked for the Bee Informed Partnership as a field technician on the California and Midwest Bee Tech Teams and the New South Wales Dept. of Primary Industries as a Honey Bee Development Officer. Elizabeth provides honey bee semen collection, queen insemination services and training under her business E. Frost Apicultural Services on a contract basis. To follow Elizabeth's passions and progress in real time, follow her on Twitter @bee_Efrost. She can be reached at frost.elizabeth.a@gmail.com

Beekeeping 'Round the Globe

Haitian Bee Project

by Bo Sterk, Master Beekeeper

Summary: The mission of the project is to help the local Haitian farmers / beekeepers create opportunities for sustainable income thru beekeeping that equals better education, better food, and better health, The goals are to provide more information about honeybees, the art of beekeeping, modern apiculture, and demonstrations and trainings in effective practices with their hives and within their apiaries for proper management and increase in productivity.

Over the past 10 years, I have had the opportunity to serve as a volunteer consultant with FAVACA (Florida Association for Volunteer Action in the Caribbean and the Americas: http://www.favaca.org). My beekeeping missions have ranged from teaching beginner classes in Barbados to helping organize the Bequia Beekeepers Association in the Grenadines. One of my largest missions and I have embarked on to date with FAVACA and continue on my own accord has been to help several groups of Haitian beekeepers in the rural areas of southwestern Haiti learn about more effective beekeeping techniques and practices, better equipment, and how to create sustainable income from their apiaries.

The Haitian Beekeeping Project was started in 2007 in the rural village of Plaisance de Sud in the mountains of southwestern Haiti, about an hour's ride off the grid. A request for beekeeping assistance was made to FAVACA from Amainvil Yossoiné, president of REJEPMA, Regroupements des Jeunes Progressistes de Mathurin - a coalition of farmers, agricultural students, and beekeepers from the area. Yossoiné, an elementary school teacher by profession, recognized a need in his community for more education about beekeeping. He reached out to the Florida Organization for aide in the form of basic lectures and training.

My first trip to the village of Plaisance de Sud was to provide this basic beekeeping information and basic training. Since language was a problem, (I do not speak Creole), I traveled with an interpreter from FAVACA to assist me with the lectures. Even with an interpreter, a second person was needed since the dialect of the village is different than basic Creole-French. One of the participants was a young agronomist who became the second translator.

The lectures took place in and on the grounds of the local Catholic Church, the largest meeting place in the village. A diverse group of 40 men and women, farmers and beekeepers of all ages, including many who were college students from the capital, Port au Prince, came to participate. One farmer walked four hours each way to class for the four consecutive days of lectures and trainings. A testament to how much Haitians value education. All were excited and eager about the opportunity.

For the first 3 days we stayed in the classroom of the sanctuary and talked about bee biology. I went over the basic anatomy of the honeybee and discussed how this super-organism functions. Many

asked questions throughout the lectures. I also introduced the use of top-bar hives and its benefits, especially in Haiti where wood is very scarce from the 100 years plus of deforestation. Top-bar hives are simple to use with limited woodenware that anyone can build and with no need for extractors.

The final day we spent building a top-bar hive (TBH). We purchased 6 sheets of plywood (US$80 / per sheet) that would allow us to build 24 TBH's from the city of Les Cayes, an hour and a half away. Aware of this challenge and the realization that it would take a month's wages for them to buy the wood for 1 hive, I scaled down the size of the TBH to get a 4 hives per sheet of plywood. As a proponent of IPM (Integrated Pest Management), I included screened hive-bottoms in the design. Although Varroa mites are present (but hard to find in this part of Haiti), Small Hive Beetles had been reported in reported in Dominican Republic, so it's a matter of time until it spreads across the island. For precaution, and education, it was better to inform them on how to be prepared. Peace Corps beekeeping manuals along with blueprints for building hives and smokers printed in French were distributed among the class members as references.

After the hives were built, the next step was to transfer the comb from the log hives to the top-bar hives. Luckily I had brought a few pieces of equipment down on this visit such as a bee smoker and bee gloves. They had never seen these before in their area in the tropical environment. Filled with wonder, they exclaimed, "What is it? A smoker! What a great idea!" I also handed out 10 pairs of bee gloves. Much to my amusement, everyone put them on upside down. I put on a pair myself and used the smoker. I had never personally done this before. I will never forget the experience of sticking my arms directly into the log, cutting out the comb, and placing it in the top-bar hives. (It is something they never teach or write about in textbooks.)

After this first trip, I was able to assess the major challenges to this project; land use and geography of Haiti, traditional practices and techniques employed, and lack of education and poverty faced by Haitian farmers and beekeepers. First of these challenges is the use of the land. Although the area is agricultural and families have small garden plots to grow root vegetables to supplement their meager diets of white rice imported from the US, pigeon peas and carrots, the geology, like most of the island, is rocky and composed of limestone with little

Explaining the top-bar hive and how it works in Haiti.

topsoil making it very difficult to grow a variety of crops. Also, gardens are becoming scattered further from family homesteads as land is passed on and divided up among family members. Setting up small apiaries would be a way these people could harvest honey and its by-products providing them with another food source, bartered items, and income potential.

Second, most beekeepers still use traditional hollow bee logs as hives in their small apiaries. The disruption/destruction of the hive during harvesting of the honey and the beeswax limits production and jeopardizes colony survival. Using this method is a major disadvantage in beekeeping enterprise. Better hives, better equipment would be beneficial.

Bo Sterk inspecting a hive frame.

Third, poverty, lack of funds and resources to purchase proper bee equipment, supplies for building effective beehives, and access to good education and training about beekeeping is very limited. Addressing these issues with creative solutions, particularly proper education and trainings, not through just donations of monies, for the Haitian farmers and beekeepers would be essential to ensure opportunities for productive, healthy apiaries and sustainability.

I was to return to Haiti in 2008 to provide further education and training. Unfortunately the trip was canceled, due to one of the four hurricanes that impacted Haiti in that year. Most of the infrastructures already in extremely poor condition in the country had been wiped out. Water supplies had been contaminated, not to mention mud slides everywhere. The project was put on hold until winter of 2009.

Part II of this story by Bo Sterk will be printed in next month's April 2015 issue.

Bo Sterk, Master Beekeeper; Advanced Beekeeper of the Year, Univ. of Florida Bee College 2011; Instructor, Caribbean Bee College; St. Johns County Beekeeping Association - President; Florida State Beekeeping Association – Board of Managers; Director, Bees Beyond Borders; FAVACA volunteer – 2003-2015, Volunteer of the Year, 2007; Past, Associate Professor, Case Western Reserve University, Cleveland, Ohio.

Bee Thinking About

The Urban Farmist

by Aaron de Leon

College combats local food desert converting football field into working farm

South of Dallas on highway 45, the city breaks beyond the Trinity River and gives way to a nondescript swath of land seemingly occupied by thick trees and dense underbrush. Exit at Simpson Stuart Road, turn right, cross the railroad tracks and there, to your right, you will see a gated entryway cut into the trees. Drive a little farther and you will find the stone-walled, paved pathway welcoming you to Paul Quinn College.

Paul Quinn College (PQC) is a private, historically black (HBCU) liberal arts institution affiliated with the African Methodist Episcopal Church (AME). Located on 144 acres of rustic trees, brush and a creek bed, PQC sits in the middle of one of Dallas largest food deserts.

Hannah has been with the farm for two years. Working her way up from one of its first employees, Hannah is now the farm manager and director. “I came to the farm looking for information. After a 6-hour conversation, I was hired!” she said.

Hannah received her undergrad in anthropology and archaeology from Vassar College. Realizing she didn’t want to dig up rocks for the rest of her life, Hannah decided to pursue her love of farming. After serving as a farm apprentice in Maine, Hannah traveled throughout Europe and West Africa learning cultural farming for a year.

“One thing that really stood out to me,” she said. “Farming isn’t just about growing food. It brings people together.”

Feeling unsatisfied with traditional farming, Hannah decided to go back to school. She received her Master’s Degree in Cooperative Extension and Urban Agriculture from Cornell University. “I really wanted to focus on farming to grow community. I wrote my thesis on cooperative extension.” Hannah said. Cooperative extension includes the practice of education and growing community through agriculture.

Resonating beyond her passion for farming, is Hannah’s passion for her students. “Eighty-eight percent of our students have Pell Grants. Meaning they come from families earning less than $20,000 per year,” she said. “We do most of our recruiting in Oakland, Chicago, LA and NY.”

Hannah isn’t just planting seeds in the ground, she’s planting seeds of hope in her students. The vast majority of Hannah’s students come from food deserts themselves. Most have never stepped foot out of the inner city. “I quite have to teach them everything about farming. They’ve never worked with the tools. I have to teach some that it’s okay to get dirty and bees aren’t going to attack you.” She said with a chuckle. “I have this thing where I say, ‘I do it. You watch. You do it. I watch. You do it. I walk away.”

Bee Thinking About *continued*

Every semester Hannah gets to witness a sort of metamorphosis take place before her eyes with her students. "They learn life lessons out here. If you don't show up to care for your crops, they die. There are real world consequences out here," She said. "The skill sets go beyond farming. Leadership, interacting with the community, managing your business… There are so many lessons learned."

Students are divided into teams with older students serving as team leaders and newer students serving as team members. Each team is given a tract of land and held responsible for its production, management and sales.

Volunteers help with the crops at Paul Quinn College's onsite farm.

"This is the first year we are totally self-sufficient as a business." Hannah said. The first two years, We Over Me Farm was funded by PepsiCo. The next two years, We Over Me Farm was funded by a Federal grant. However, this year is the first year We Over Me Farm is totally supporting itself. "Now that we're on our own, I am counting every penny!" Hannah laughed.

We Over Me divides its produce into 3 categories: direct sales, commercial and donations. We Over Me sells directly to the community on an on-going basis. Half of the field is reserved for Legends Hospitality, the catering company that services the AT&T Center — home of the Dallas Cowboys.

Legends buys 100 percent of the produce grown in that section of the field. We Over Me also provides aquaponic pea shoots to local restaurants. Lastly, We Over Me donates 15 percent of its yield to the North Texas Food Bank.

Hannah has 22 students this semester. In addition to community involvement and support from other institutions, We Over Me Farm has a monthly workday the 2nd Saturday of every month from 9am – 11am. "If I could say anything at all," Hannah said. "I want to encourage people to come meet these students. Come to volunteer day. Don't sleep in because it's Saturday. These students will change your life. I promise."

Originally posted on http://latinalista.com

Aaron de Leon is "growing" awareness of the "Farmist" movement via his blog, The Urban Farmist, his weekly LatinaLista columns, and on Instagram at theurbanfarmist.

Western Places/Western Spaces: Building Fair & Resilient Communities Denver, CO • March 11 – 13, 2015

The Rocky Mountain Land Use Institute's 24th annual land use conference focuses on the innovative ways cities and towns across the West are building more resilient, equitable, and vital communities. Visit RMLUI online to learn more about the conference, download a program, and to register.
Go to: www.law.du.edu/rmlui. Use promo code WEST to take $25 off your registration!

The Rocky Mountain Land Use Institute's annual land use conference presents a forum for land use professionals, planners, lawyers and real estate developers to share their knowledge, network, and learn about cutting-edge issues.

Western Places/Western Spaces looks at how we can meet the many challenges of the future while better addressing issues of social and environmental justice. We will also explore the innovative tools, business models, and technologies that are helping planners, developers, and communities move forward in a smarter way.

Early Bird rates expire on February 13. Register now to take advantage of lower rates, and be sure to use the promo code WEST to receive a $25 discount.

If you have any questions about the event, please contact us at rmlui@law.du.edu or 303-871-6319.

RMLUI
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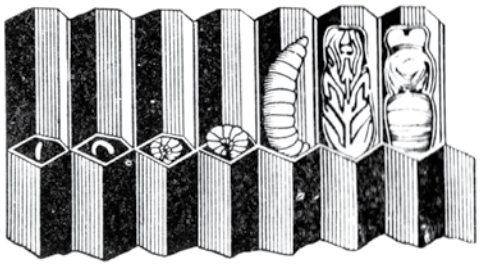

Bee SYMPOSIUM

SATURDAY
MAY 9, 2015
With Generous Funding From:
The Henry J. Kaiser Family Foundation

Keeping Bees Healthy

Presented by the Honey and Pollination Center and Department of Entomology and Nematology, UC Davis

This educational program is designed for beekeepers of all experience levels, including gardeners, farmers and anyone interested in the world of pollination and bees. In addition to our speakers there will be an active 'Buzz Way' featuring graduate student research posters, the latest in beekeeping equipment, books, honey, plants and much more.

Additional Speakers Include:
Christine Casey, Brian Johnson, Elina Lastro Niño, Amy Toth, Neal Williams

To Register, visit:
https://registration.ucdavis.edu/Item/Details/147

Keynote:
MARLA SPIVAK
Distinguished McKnight Professor
University of Minnesota
2010 MacArthur Fellow

EAS 2015 is coming to Canada!

University of Guelph, Guelph, Ontario **August 10-14, 2015**

EASOntario2015
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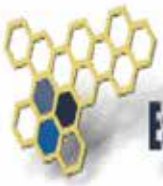

EAS
Eastern Apicultural Society

Hosted by: OBA
ONTARIO BEEKEEPERS' ASSOCIATION

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Mark Winston, Robert E. Page Jr., Dewey Caron, Phil Craft, Robert Currie, Keith DelaPlane, Ernesto Guzman, Pierre Giovenazzo,Tammy Horn, Zachary Huang, Greg Hunt, Doug McRory, Heather Mattila, Medhat Nasr, Gard Otis, Steve Pernal, Nigel Raine and many more!

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Queen rearing, Integrated Pest Management, mead and beer making, how to win at honey competitions, beginner, intermediate and advanced beekeeping

Technical Tour

Full day bus tour featuring Niagara Butterfly Conservatory, Rosewood Estates winery and meadery, two of Ontario's largest commercial apiaries and a BBQ with queen auction and live entertainment

Register at www.easternapiculture.org

Mail in registration is now open, online registration will open early April

UPCOMING EVENTS

March 2015

Kentucky: 2015 Audubon Beekeeping School
March 1, 2015
Henderson County Co-op Extension Expo Center
3341 Zion Road, Henderson, Kentucky 42420
Info: http://www.ksbabeekeeping.org/
Kelley's will be attending this event.

Arkansas: 2015 Spring ABA Beekeeping Conference with Jerry Hayes & Landi Simone
March 6-7, 2015
Univ. of Arkansas Cooperative Extension Office
Little Rock, AR
Info: www.arbeekeepers.org
Kelley's will be attending this event.

Ohio: Tri-County Beekeepers Association Inc. 37th Annual Spring Beekeeping Workshop
March 6-7, 2015
Fisher Auditorium and Shisler Conference Center
Ohio Ag Research & Development Center
1680 Madison Ave, Wooster, Ohio
Info: www.tricountybeekeepers.org
Kelley's will be attending this event.

KY: Kelley's March Beekeeping 101 Class
March 7, 2015
Clarkson, KY
Info: www.kelleybees.com

KY: Bluegrass Beekeepers School
March 7, 2015
KY State University, Frankfort, KY
Info: www.kybeeco.com
Kelley's will be attending this event.

Virginia: VSBA 1st Honeybee Symposium with Dr Richard , Michael Bush & Dr David Tarpy
March 7, 2015
Higher Education Center
Virginia Highlands Community College
Info: http://www.highlandsbeekeepers.com

California: 28th Small Farm Conference
San Diego Marriott
Mission Valley, CA
Info: http://www.californiafarmconference.com/schedule/

Michigan: MBA Spring Conference
150th Anniversary featuring Michael Bush
Friday, March 13-14, 2015
Kellogg Center
Michigan State University
Info: www.michiganbees.org

Kansas: The Kansas Honey Producers with Dr. Clarence Collison
March 13-14, 2015
Holiday Inn at the Campus
1641 Anderson Avenue
Manhattan, KS 66502
Contact: Joli at 913-593-3562 or email joli@heartlandhoney.com
Info: www.kansashoneyproducers.org

Vermont: Organic Beekeeping Course with Ross Conrad
March 14, 2015
The Nature Museum
NewsBank Conference Center
352 Main Street
Grafton, VT
Info: http://www.nature-museum.org/

NE Kansas Beekeepers: Beginning Beekeeping Class with Dr. Clarence Collison
March 15th and 22nd, 2015
Douglas County Fairgrounds
Lawrence, KS
Contact: Joli at 913-593-3562 or email joli@heartlandhoney.com
Info: www.nekba.org

Free Webinar: Ohio State University Gardening for Pollinators with Denise Ellsworth
March 18, 2015
Info: http://u.osu.edu/beelab/

California: In Her Majesty's Chambers- Intro to Queen Breeding with Melanie Kirby & Mark Spitzig of Zia Queenbees
March 21, 2015
Wings of Nature Apiaries
Palo Alto, CA
Info: www.wingsofnaturebees.com

KY: Kelley's March Beekeeping 201 Class
March 21, 2015
Clarkson, KY
Info: www.kelleybees.com

Wisconsin: Second Step Bee Class
March 21, 2015
Madison, WI
Contact: Jeanne Hansen
Tel: 608.244.5094
Email: jeanniealabeannie@yahoo.com

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

You can save shipping costs and sales tax by placing a pre-order before any meetings that we attend (excluding events in KY). We note on our website which meetings we are attending, and we'd love to meet you there to deliver your equipment.

UPCOMING EVENTS

Wyoming: 2nd Wyoming Bee College Conference featuring: Glenn Andresen, Dr. William Meikle, Dr. Randa Jabbour, Keziah Katz, & Dr. Ronald Fessenden.
March 21-22, 2015
Laramie County Community College
1400 E. College Drive
Cheyenne, WY
Info: http://wyomingbeecollege.org/

California: Hive Medicines - Making Apiceuticals w/ Zia Queenbees
March 22, 2015
Wings of Nature Apiaries
Palo Alto, CA
Info: www.wingsofnaturebees.com
Contact: ziaqueenbees@hotmail.com

Utah: 8th Annual International Symposium on Integrated Pest Management
Mar 23-26, 2015
Salt Palace
Salt Lake City, Utah
Visit Website: http://ipmcenters.org/ipmsymposium15/index.html

Germany: 13th International Apitherapy Congress
March 27-31, 2015
Info: http://www.apitherapie.de/en/dab-ev/startseite.html

California: In Her Majesty's Chambers - Intro to Queen Breeding w/ Zia Queenbees
March 28, 2015
Wings of Nature Apiaries
Info: www.wingsofnaturebees.com
Contact: ziaqueenbees@hotmail.com

Virginia: 4th Annual Mid-Atlantic Organic Honey Bee Convention with John Adams, Sam Comfort & Dr. Wyatt Mangum
March 28, 2015
4500 Kensington Ave, Richmond, VA
Contact John Adams, 804 285-BEES
Email: maohbc@hssi.net

California: 2nd Step Beekeeping - Taking your skills to the next level of management
March 29, 2015
Wings of Nature Apiaries
Info: www.wingsofnaturebees.com
Contact: ziaqueenbees@hotmail.com

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