AMERICAN BEEKEEPING FEDERATION

QUARTERLY

VOL. 77, NO. 2, 2019

SWEET SUMMER

ALSO IN THIS ISSUE:

Healthy Bees, Healthy People, Healthy Planet

Commercial Beekeeper Spotlight: Winter Apiaries LLC

2017 Census of Agriculture Results

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AMERICAN BEEKEEPING FEDERATION
QUARTERLY

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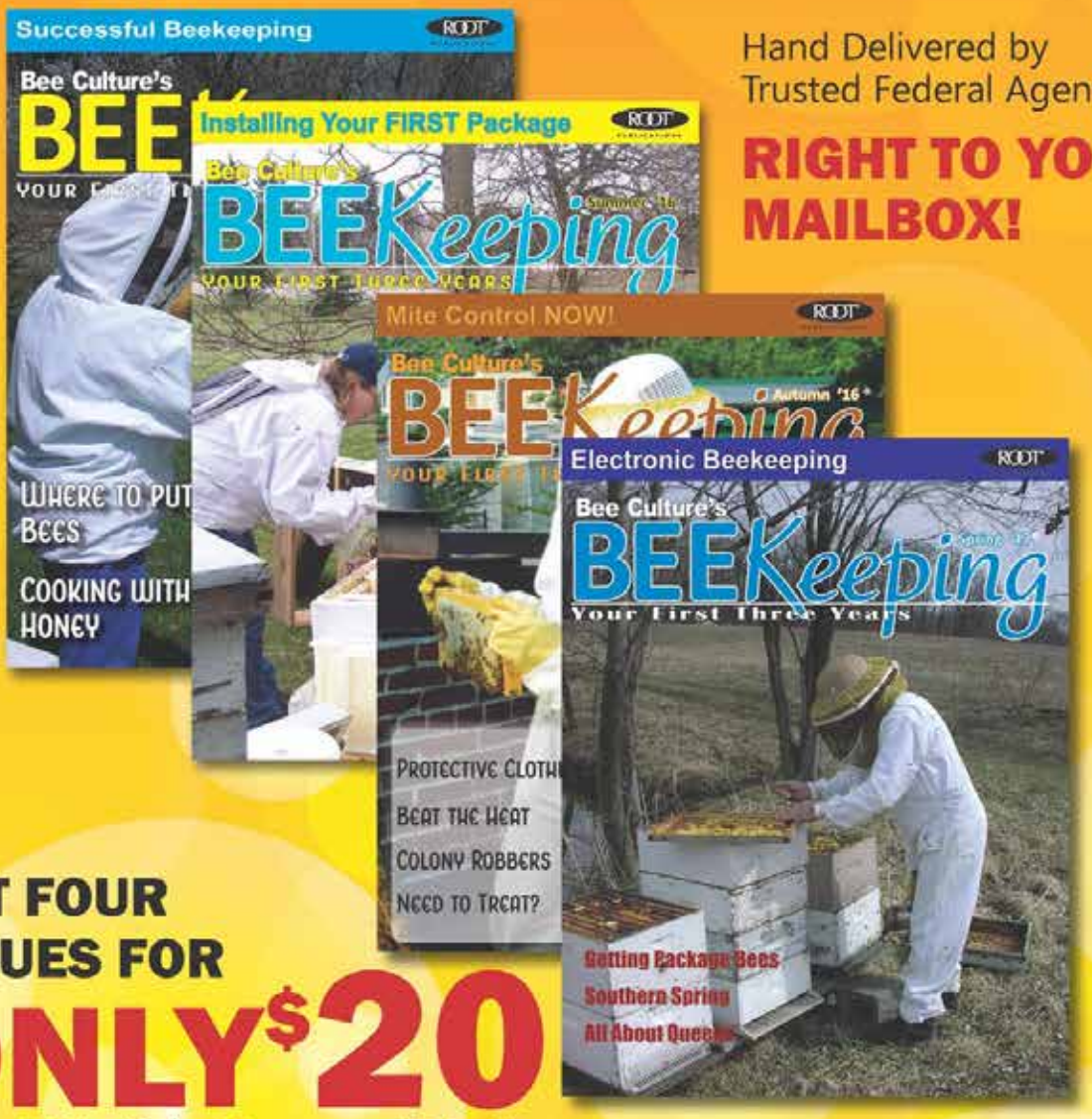

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Work in Washington for Prosperous Pollintation

TIM MAY, ABF PRESIDENT

I hope everyone is enjoying some nice weather. Flowers are blooming, and the summer honey flow is starting in the upper Midwest. It is nice to see, but what is more noticeable is the lack of forage out there.

It is said that the declining bee health is due to the four Ps. The four Ps are Pests, Pathogens, Pesticides and Poor Nutrition. The use of Roundup here in the Midwest has turned the forage-rich tree lines into barren dirt. Although progress is being made to reduce roadside grass cutting, it is still a cause of diminished bee forage. Fortunately, the general public is aware of this problem and seems willing to do what they can to help the bee population.

I will be going to Washington, D.C., this month to participate in a meeting with Administrator Richard Fordyce of the U.S. Department of Agriculture Farm Services Agency and Chief Matthew Lohr of the Natural Resources Conservation Service. This meeting was organized by the Honey Bee Health Coalition (HBHC). In addition to Administrator Fordyce, Chief Lohr and members of their staff, attendees will include representatives from the American Honey Producers Association (AHPA), Almond Board, Bee & Butterfly Habitat Fund, US Geological Survey, U.S. Canola Association, National Corn Growers Association and the American Seed Trade Association.

The purpose of this meeting is to elevate awareness of pollinator habitat issues. We will also encourage Administrator Fordyce and Chief Lohr, along with their staff, to engage with the HBHC and other stakeholders to understand and implement our forage recommendations.

One of the recommendations is to assist these agencies in implementing the 2018 Farm Bill's directives to increase Conservation Reserve Program (CRP) acreage and to decrease the per acre cost of this program. Existing seeding specifications and seed mixtures will also be addressed.

We hope that this meeting will have the Farm Service Agency (FSA) and Natural Resources Conservation Services (NRCS) agree to form a working group with the proper staff members to begin to implement our recommendations.

Although Poor Nutrition is only one of the four Ps, having the proper dialogue with the proper agencies is a key factor in improving habitat for honey bees and other pollinators.

Pests and Pathogens are also factoring into declining bee health. This year, the ABF partnered with Bee Informed Partnership's (BIP) Sentinel Apiary Program. This program provides the participants with sampling kits to monitor four of their colonies for a six-month period. During this 6-month period, Varroa mite and Nosema levels as well as the general health of the colony will be evaluated. The results will be sent back to the participants and will also become part of a national database. This is a great opportunity for beekeepers of all levels to find out what is actually happening with their colonies. The results will help participants adjust their management practices and increase the health of their bees. This also provides a great opportunity to share your results with other beekeepers and local bee clubs.

ABF is sponsoring the first 50 members who participate with $100 towards the cost of the program. We intend to continue our partnership with BIP and sponsor this program in the future. For more information on the program go to *https://beeinformed.org/programs/sentinel/*.

Planning for the ABF Conference and Tradeshow "2020 Vision of the Future" is moving along. We have three outstanding keynote speakers as well as other new and exciting events planned. The facility is exceptional, with easy access to Chicago's O'Hare Airport. I hope you are planning to attend. I am looking forward to seeing everyone in January. Have a great summer!

> "PLANNING FOR THE ABF CONFERENCE AND TRADESHOW "2020 VISION OF THE FUTURE" IS MOVING ALONG. WE HAVE THREE OUTSTANDING KEYNOTE SPEAKERS AS WELL AS OTHER NEW AND EXCITING EVENTS PLANNED."

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for January, February, March 2019

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JOAN GUNTER,
ABF VICE PRESIDENT

THE HIGH COST OF BEE THEFT

Whether the beekeeper is from North Dakota, Texas, Florida or New York, the high cost of bee theft seems to be going unchecked and is increasing at an alarming rate.

The introduction of bee theft has become a very real situation to beekeepers. It started with a frame or two of brood disappearing, possibly used to boost existing hives. Then a few more with the queen, clearly meant to establish a new hive. Now it seems to be the whole hive or worse yet, a semi load of beehives right under our careful watch. This is a deliberate act that is meant to start a business of their own, either for resale to other beekeepers or to use these stolen hives strictly to collect a pollination check.

WHAT HAS BEEN LOST?

A semi load of doubles (two stories) equals about $150,000 to $200,000. This number is determined by calculating the cost of the bees themselves along with the brood frames with brood and the mated queen. The equipment includes the box, cover, pallet or bottom board (whichever you are using) and generally a feeder. Count any treatments that have been applied and any feed that has been given to the bees. It also includes the loss of the payment per hive for pollination.

A ballpark figure for almond pollination is around $200 per hive. This depends on the timing of the season and is usually negotiated with a contract between landowners and a beekeeper or broker. The later in the season, the higher the cost per hive. It also depends on a supply-and-demand ratio. If the general population of bees is down, the more you will receive. If there seems to be an abundance of bees, the price is lower.

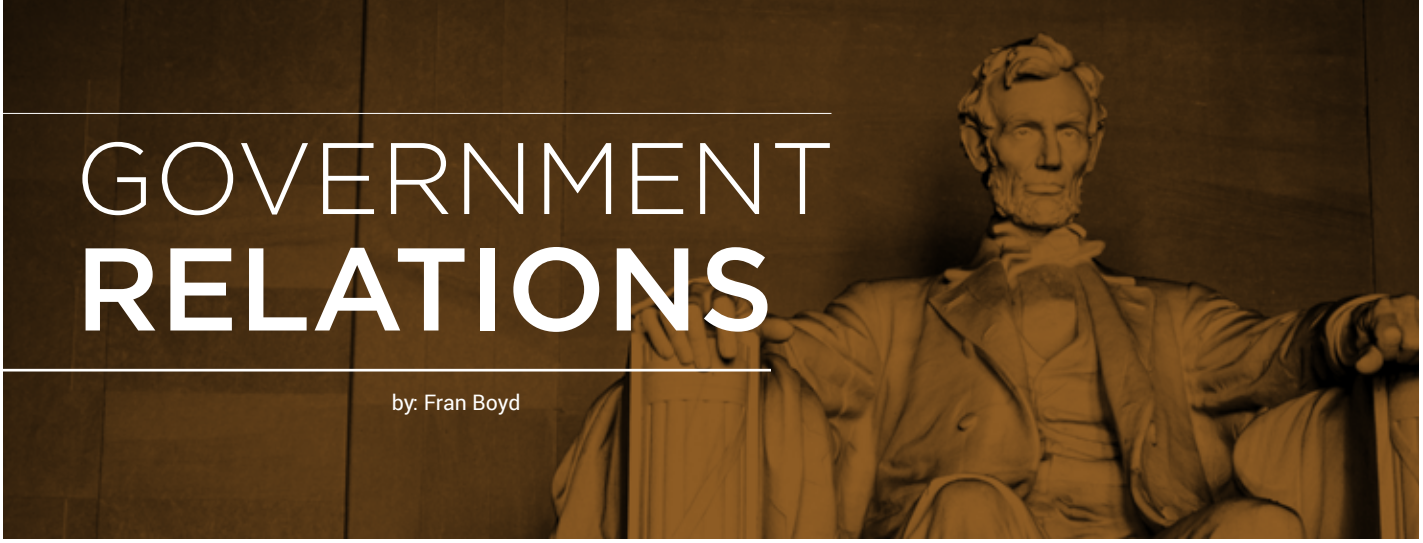
Additional losses that must be included is the devastation to your business. A commercial beekeeper's loss not only includes his or her bees and equipment. It also includes his or her business contacts. If you are a queen breeder or if you raise cells, you may be losing your breeder queens and cell builders or be forced to use your breeder queens and cell builders to fill in for the missing hives. If you are raising packages or selling nucs, you simply will not have enough to supply the beekeepers who depend on you to supply their needs. In turn, we see fewer bees for pollination and honey production, an area in which we are struggling already. This turns out to be a devastating loss to the industry as a whole.

I have met with a few beekeepers who have lost all of their colonies to bee theft. These beekeepers will start from scratch. The buck stops with them. There is no other responsible party.

Solutions to the problem are slow in coming. There is a bee tracker that can be placed into the hive that can track locations, however, anyone with experience will know how to remove it. It is too expensive to place in every hive, and there are questions as to the distance it can be tracked. Branding the boxes and frames may be a deterrent, but it doesn't seem to keep thieves at bay for long.

We were personally touched by bee theft this spring in the California almond orchards. I have always been the one who has said it has never happened to us. Not anymore! Beekeepers who I have spoken with have also experienced losses similar to ours.

My closing message is clear. Whoever is looking for a quick fix, I suggest you choose a different path. Become a better beekeeper. One who does not rely on the deficit of others, but instead, builds their own business – something you can be proud of.



GOVERNMENT RELATIONS

by: Fran Boyd

The cherry blossoms are blooming, and spring is finally in D.C. I know this is one of the busiest times of the year for beekeepers as it is for legislators and their staff. Primarily, the focus is on the appropriations committees as the House and Senate Appropriations continue to hear testimony from administration officials concerning the President's budget request.

As I write this column, Congress has not yet agreed on a budget, so the appropriations committees do not have the exact spending levels for their respective subcommittees. They are hopeful that an agreement can be reached. It will be a long process until a spending bill works its way through the House and Senate and to the President's desk, but the process is well under way.

ABF is working closely with the members and staff of the House and Senate agriculture appropriations subcommittees on the funding levels necessary for the bee/honey industry, particularly the importance of adequate funding for research and conservation programs.

Child Nutrition

It has been nine years since Congress last updated federal child nutrition programs. That may change this year. Both Senate Agriculture Committee Chairman Pat Roberts (R-KS) and Ranking Member Debbie Stabenow (D-MI) have said they hope to reauthorize the child nutrition programs this Congress. The 2010 child nutrition legislation expired in 2015. However, the program has continued through annual appropriations since the authorization expired.

USDA Releases New Agriculture Census

The USDA's National Agricultural Statistics Service has released the 2017 Census of Agriculture. The census offers detailed insight into the long-standing trend of fewer but larger farms across all sectors. The full report is available on the NASS website at *www.NASS.USDA.gov/AgCensus/index.php*. Key points found in the 2017 census include:

- There are 2.04 million farms and ranches, down 3.2% from 2012, with average size of 441 acres, an increase of 1.6%.
- Just 105,453 farms produced 75% of all sales in 2017, down from 119,908 in 2012.
- Average farm income is $43,053. A total of 43.6% of farms had positive net cash farm income in 2017.
- Ninety-six percent of farms and ranches are family owned.
- The average age of all farm producers is 57.5, up 1.2 years from 2012.

Melinda Cep Returns to House Agriculture Committee

Melinda Cep has been named Legislative & Policy Director of the House Agriculture Committee by Chairman Collin Peterson (D-MN). Melinda, a veterinarian, was Deputy Chief of Staff to USDA Secretary Tom Vilsack and was one of the principals involved in the "President's Task Force Report on Pollination." Melinda, more than most, understands the problem facing America's beekeepers.

ABF Officers to Travel to Washington, D.C.

In June, in conjunction with National Pollinator Week, your ABF officers will be in D.C. representing ABF on Capitol Hill. Meetings are scheduled with members of Congress and committee staff as well as many officials from the EPA, FDA and departments of agriculture, interior and transportation. I hope to report to you in my next column the details of these meetings.

ASK HOOPIE

Q. ***How much honey can a new hive produce in its first year?***

A. The answer depends upon a few other parameters other than "a new hive." For example, is this a truly new hive starting on wax foundation? Additionally, how early was the package of bees introduced to the hive? And how abundant are the local honey plants? The answer also depends on rainfall (and when it rains), sunshine and good flying weather during the honey flow, etc.

For most new beekeepers starting with the wax foundation, in average locations, in most years, the answer is not a lot of surplus honey. A new colony needs to produce the beeswax for the new combs, and it takes from 6 to 8 pounds of honey to produce a pound of wax. Thus, a new colony will not produce a lot of surplus honey for extracting, but that first honey produced in your hive is extra special. So, when the honey flow has ended, remove as much honey as you desire and then immediately start feeding 2:1 sugar syrup to replace the honey that was removed. This feeding needs to be done before cool or cold weather so as to allow the colony to convert the sugar syrup into honey.

The amount of honey that the colony needs to get through winter will depend upon your location. Colonies in the northern U.S., with longer winters, will need more honey above the fall cluster than a colony in the southern U.S. When you extract the honey, which should be done immediately after removing it from the colony, you should put the drawn combs (that had the honey in them) back into the hive. The sugar-syrup honey can then be stored in these combs, and the colony will not have to produce new combs. However, if you are producing comb honey, that would not apply.

The first colony I had 70-plus years ago, in the city of Detroit, Michigan, produced a super of comb honey. I did not feed it any additional syrup for winter, and the colony survived. Sometimes it is better to be lucky than smart and in the right location and the right year. Honey bees use about one-third of the nectar they collect for the energy to fly back and forth collecting nectar and pollen. Another third (about 100 pounds of honey) is used for winter, and because bees are industrious, beekeepers harvest the surplus.

Q. ***During a tree removal, our arborist found a colony of bees in a hollow limb. We saved the 24-inch by 18-inch section of limb with the bees, and it is currently in a trash can that is lying on its side to protect the hive. We would like to save it and move the colony to a good location. Any suggestions and tips on how to preserve the colony so that it can survive and grow?***

A. Colonies like you describe are more difficult to have survive and prosper, and this is why Langstroth's invention of the movable-comb hive was so successful. Before his invention, most bee colonies were kept in log "gums" or straw skeps. What movable-comb hives allow beekeepers to do is inspect a hive and determine its needs related to food, disease and mite control and the addition of comb space if needed. A log hive, such as yours, does not. This sums up your problems, for the most part.

First, I would suggest you make a cover for the log gum out of a board with a hole the size of a feed jar so that you can feed the colony if it appears it might need more honey to survive. You can plug the hole when not needed with a jar cover or board. The log gum of this size is not large, and I suspect the colony will be out of honey space or comb space for brood most of the time. Thus, the colony will need feeding and will also swarm more frequently. You will have to control diseases and mites by assuming they are there and treating automatically. Again, the size of the tree hollow is not great. It may die over the winter, and in that case, you could re-stock it with a package of bees or a swarm.

There is one other problem. Some states do not allow colonies to be kept in hives with non-movable frames, as the hives cannot be inspected for disease control. Check with your state bee inspection service.

There used to be a large feral population of honey bees that has been greatly reduced since the advent of the tracheal and Varroa mites. Additionally, we have tightened up our houses and buildings (so we expose fewer man-made cavities) and have cut down many of the large cavity-bearing trees. This feral population provided a genetic buffer for our bees and a source of natural swarms. These feral colonies were generally a benefit to beekeeping.

Q. ***Do you have any advice on how to position hives with respect to one another?***

A. In nature, honey bee colonies were found randomly in hollow trees throughout the forest. Now we often line them up in similar white-painted boxes at a conveniently spaced distance. Bees regularly drift between such identical hives. Such drifting can cause problems and disease and mite transmission between colonies. In a study we did at Michigan State University some years ago, we found that 25 percent of the foragers, in such identical-row colonies, were not raised in that colony. If you went to the end of the row of colonies, the number of stray foragers rose to 40 percent (a good reason for the end-of-row colonies being the most productive).

Now for the correction and the answer to the question. Arranging colonies in a serpentine pattern with each colony facing a slightly different angle helps greatly. Painting the hives different colors is very effective as well. Commercial beekeepers regularly keep their hives on a pallet with each colony facing a different direction. This helps in some degree except that all pallets are alike.

The number of colonies in an apiary and the placement of the colonies is for the convenience of the beekeeper. If you can live with the problems brought on by such hive placement or apiary size, such as equalized drifting, then continue doing what beekeepers have done, more or less successfully, for years.

Please email your questions to ***info@abfnet.org*** with *"Ask Hoopie"* in the subject line.

ABF AUXILIARY

Warm weather is finally upon us, bringing with it many new beginnings. We have the new life spring brings, along with longer days, blooming flowers and the full swing of pollination season. With the new growth the spring and early summer seasons bring, why not capture this growth through photos and then enter those photos into the 2020 Auxiliary Photo competition?

Speaking of new, your auxiliary officers have been working hard to develop plans that will positively impact the auxiliary and all our members as we look toward the future. However, we need your help. Each of you have a wealth of ideas and suggestions on where you would like to see the auxiliary in five, 10, even 15 years from now. We need those suggestions. In the coming weeks, you will receive a survey via email, asking for your suggestions regarding future growth and initiatives for the auxiliary. I hope you will take a few moments to complete this survey. I thank you in advance for your participation. I hope this spring brings many positive new beginnings for you.

Auxiliary Photo Competition

There are five categories featured in the 2020 competition including:

1. Adults and Beekeeping
2. Kids and Beekeeping
3. Honey
4. Bees and Nature (bees on flowers, bees on frames, etc.)
5. Pollination

Competition Rules and Requirements:

- Amateur photographers only.
- Submit two 5x7 (before matting) photos for each entry. At least one photo must be matted for judging (single-mat only). A 3x5 index card must be attached to the back of the photo with the photographer's name and address and the photo category.
- Photos must be submitted by 12:00 pm CT on the Wednesday of conference week.
- Photos will not be returned. A waiver for rights to photos will be signed at the ABF Conference & Tradeshow. Winners will be asked to submit their photos to ABF in high-resolution JPEG for publication.
- For those who cannot be at the conference by 12:00 pm CT on Wednesday, entries will be accepted prior to the conference via mail (mailing address to be provided).
- Only one entry per person per category will be accepted to enable more participation in the competition.
- If the above requirements are not met, photos will be disqualified.

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2019 Foundation for the Preservation of Honey Bees Scholars

Thanks to scholarships awarded by the Foundation for the Preservation of Honey Bees, four emerging scientists were able to present their research at the 2019 ABF Conference & Tradeshow. The $3,000 awards also enabled these graduate students to meet fellow honey bee researchers and people in the industry they hope to serve.

JENNIFER ALBRECHT

Jennifer Albrecht is working to earn a master's degree in Entomology from the University of Nebraska-Lincoln while studying alongside Dr. Judy Wu-Smart. Her research primarily focuses on the accumulation of pesticide residues within the hive and how it impacts the health of the colony. With this research, Jennifer hopes to help develop more economic methods to recognize and prevent pesticide incidents, as well as remediate them when they occur.

JOE MILONE

Joe Milone is a PhD student in the North Carolina State University Apiculture Program with Dr. David Tarpy. He is working to better understand how chemical exposure environments influence colony biology and interact with other stress factors. Joe is an active member of the beekeeping community and has performed numerous presentations to local and statewide beekeeping groups.

ANTHONY NEARMAN

Anthony Nearman is a graduate student studying Entomology under Dr. Dennis vanEngelsdorp at the University of Maryland. He is currently using epidemiological data to study the pathophysiology of honey bee diseases. Anthony's long-term research goal is to reduce colony losses by identifying pathophysiological symptoms that are predictive of colony health.

EMILY NOORDYKE

Emily Noordyke joined the Honey Bee Research and Extension Lab as a master's degree student in 2018. Her research focuses on issues surrounding honey bee nutrition. She is interested in developing research-driven solutions that can help beekeepers and bee health. Previously, Emily worked on honey bee health and extension projects with the Bee Informed Partnership, United States Geological Survey and Michigan State University.

Honey Bee Stressor Interactions and Influence on Colony Health

SCHOLARSHIP WINNER ESSAY

by: Joseph Milone

Background

Contemporary apiculture requires an integrated management strategy in order to cope with the many challenges presented by our modern world. Queen events, disease, parasites and environmental chemical exposures all require consideration by individual beekeepers in order to successfully manage colonies. A more holistic understanding of honey bee stressor interactions will help beekeepers and protect pollination services which are valued at $15 billion annually in the U.S.[1]

Honey bee colony collapse and native pollinator declines have been largely attributed to pesticide exposure and research has focused on beneficial insect toxicology. However, most of this work has been exploratory and is not indicative of realistic exposure conditions. Predominant single-pesticide response studies fail to uncover realistic exposure interactions driving colony losses. A recent literature review of publications from 2005-2016 has found that 69% of honey bee-pesticide publications failed to test realistic multi-stressor systems, and instead fixated on single-pesticide response.[2] Furthermore, of the 142 scientific publications reviewed, more than 78% tested a single class of pesticides (neonicotinoids).[2] This severely limits our understanding of real-world pesticide exposure risk and how it influences colony health.

In the real world, internal hive environments retain a wide variety of chemicals resulting from pesticide acquisition during foraging flights and in-hive chemotherapies by beekeepers. Recent large-scale pesticide residue surveys have clearly demonstrated the diversity of chemicals that can pose risk inside a colony and likely interact with other colony susceptibilities. Beebread (stored and processed pollen) and wax within commercial colonies have been found to contain an average of seven and ten different pesticides respectively.[3] Chemicals can present colony risk through different pathways depending on the source of the exposure. Pesticide-impregnated wax comb used to store food facilitates pesticide transfer and poses a risk to larvae that are exposed through contact while developing inside wax cells.

Oral exposure to pesticides can occur when consumed as bee bread directly or as larvae during consumption of brood food or royal jelly. All of the combined chemical exposures over the lifetime of a bee can ultimately influence overall colony health. Multi-pesticide exposure has been found to be ubiquitous within honey bee colonies and presents a challenge to understanding overall pesticide risk. Each pesticide has a different honey bee toxicity and thus the use of a metric that can quantify the total exposure of a mixture is needed.

A hazard quotient (HQ) can be used to measure species-specific toxicity from multiple chemicals by dividing the quantity/exposure of each pesticide by its respective oral LD_{50}/toxicity and summing each pesticide's HQ value.[4] The use of a cumulative toxicity measure, such as a hazard quotient, enables a top-down approach to pesticide exposure research where the overall exposure from multiple pesticides can be measured and tested.

$$HQ = \underbrace{\left(\frac{\text{Exposure}}{LD_{50}}\right)}_{\text{Pesticide X}} + \underbrace{\left(\frac{\text{Exposure}}{LD_{50}}\right)}_{\text{Pesticide Y}} + \ldots$$

Figure 1: Illustration of the hazard quotient (HQ) for estimating risk from multiple chemicals.

A colony's total pesticide load influences its survival, and longitudinal residue sampling has determined some of the resulting consequences of exposure. It has been observed that colonies containing high HQ levels in wax have reduced queen longevity,[3] and pesticide-associated queen losses have been a common finding in various pesticide exposure studies.[5-8] Reporting pesticide-associated queen turnover or loss in a colony-level assessment fails to fully capture the many sublethal stressor dynamics faced by queens in the colony environment. As the sole female reproductive and source of genetic diversity in the colony, queen reproductive potential has a direct impact on colony extended phenotype and survival.[9]

Viral infections, vectored by the *Varroa destructor* parasitic mite, are thought to be one of the major drivers of colony losses and many prevalent honey bee viruses are transmitted vertically from queen to offspring.[10] The interactions among pesticides, queens and colony disease remains largely unknown and by using queens, we can better test the interactions between these stress factors.

Research Impacts

According to the Bee Informed Partnership's annual management survey from 2010-2015, around 90% of commercial beekeepers surveyed requeened their colonies in the U.S. annually. During the requeening process, queens are normally culled and replaced with a new queen. This incurs a major cost to beekeepers, threatens the sustainability of the apiculture industry and ultimately increases pollinator insecurity. Queen and colony survival are challenged by a variety of stressors including pesticides and disease. Understanding queen-pesticide interactions and their relationships at the colony level can help improve queen longevity and provide insight into multi-stressor mechanisms.

Our work seeks to clarify this relationship by testing the impact of developmental exposure on queen reproductive fitness and viral loads at the individual and colony levels. It is likely that certain diseases may capitalize on reduced immunocompetence, and we will use this information to better understand how pesticide exposure can have downstream colony-level implications relating to colony growth, survival and disease. Furthermore, the proposed study system strongly emphasizes realism and will be the first to examine multi-pathway exposure from pesticides in both wax and pollen.

The use of a cumulative toxicity measure, such as a hazard quotient, enables us to take a top-down approach to pesticide exposure research and test realistic pesticide mixtures based on previously recorded pesticide residue data. Our project will further build on this data by sampling within our experimental colonies to detect how pesticides are transmitted within a hive. This will help clarify exposure dynamics within internal hive environments and possibly help inform potential strategies to minimize future exposure.

This work will help advance pollinator toxicology and improve pesticide risk assessment. This can lead to the improvement of industry practices and benefit both growers and beekeepers who have a vested interest in gains resulting from healthy bees and improved crop pollination. Our work will provide insight into exposure mechanisms and thus will aid future multi-stressor and sublethal pesticide research. In conclusion, a better understanding of multiple stressor interactions in honey bees will improve beekeeping and help develop best management practices.

Citations

1. Calderone, N. W. Insect pollinated crops, insect pollinators and US agriculture: Trend analysis of aggregate data for the period 1992-2009. PLoS One 7, 24–28 (2012).

2. Benuszak, J., Laurent, M. & Chauzat, M. P. The exposure of honey bees (Apis mellifera; Hymenoptera: Apidae) to pesticides: Room for improvement in research. Sci. Total Environ. 587–588, 423–438 (2017).

3. Traynor, K. S. et al. In-hive Pesticide Exposome: Assessing risks to migratory honey bees from in-hive pesticide contamination in the Eastern United States. Sci. Rep. 6, 33207 (2016).

4. Stoner, K. A. & Eitzer, B. D. Using a Hazard Quotient to Evaluate Pesticide Residues Detected in Pollen Trapped from Honey Bees (Apis mellifera) in Connecticut. PLoS One 8, 1–10 (2013).

5. Berry, J. A., Hood, W. M., Pietravalle, S. & Delaplane, K. S. Field-Level Sublethal Effects of Approved Bee Hive Chemicals on Honey Bees (Apis mellifera L). PLoS One 8, (2013).

6. Pettis, J. et al. Effects of coumaphos on queen rearing in the honey bee, Apis mellifera. To cite this version: Original article. (2004). doi:10.1051/apido

7. Sandrock, C. et al. Impact of Chronic Neonicotinoid Exposure on Honeybee Colony Performance and Queen Supersedure. 9, 1–13 (2014).

8. Collins, A. M., Pettis, J. S., Wilbanks, R. & Feldlaufer, M. F. Performance of honey bee (Apis mellifera) queens reared in beeswax cells impregnated with coumaphos. J. Apic. Res. 43, 128–134 (2004).

9. Rangel, J., Keller, J. J. & Tarpy, D. R. The effects of honey bee (Apis mellifera L.) queen reproductive potential on colony growth. Insectes Soc. 60, 65–73 (2013).

10. Amiri, E., Strand, M., Rueppell, O. & Tarpy, D. Queen Quality and the Impact of Honey Bee Diseases on Queen Health: Potential for Interactions between Two Major Threats to Colony Health. Insects 8, 48 (2017).

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Your engaging and novel presentation should include a how-to component, best practices and an innovative approach. Educational sessions may not include product or company-specific sales initiatives.

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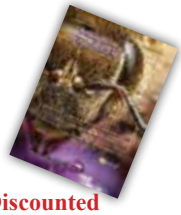

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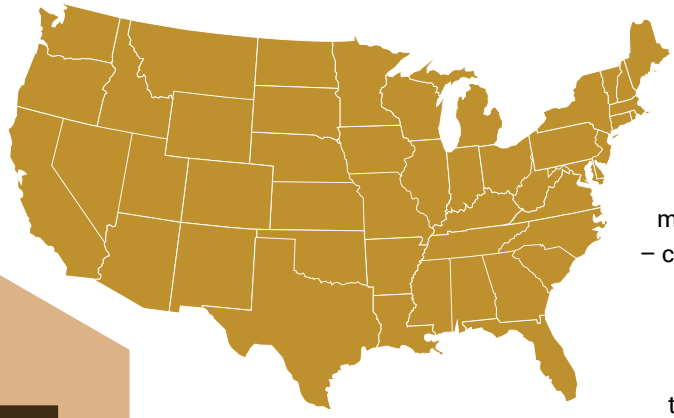
ABF e-buzz



Each state with ABF members may appoint a State Delegate to serve as a liaison between ABF and its state association and local clubs. Each State Delegate acts as a membership and legislative coordinator – communicating important membership and legislative information between ABF and these organizations.

Let's grow together! Don't miss this opportunity to publicize your state meetings. Let us know if you want your state more involved with the membership and legislative happenings of the ABF.

STATE DELEGATES

DON'T SEE YOUR STATE MEETING LISTED?

Contact your state beekeeping organization. State Delegates should submit state-level meetings by emailing us at *info@abfnet.org*.

STATE MEETINGS

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2019 Alabama Beekeeper Fall Convention
September 20-21, 2019
Clanton Conference & Performing Arts Center
Clanton, Alabama

FOR MORE INFO OR DETAILS:
www.alabamabeekeepers.com

CALIFORNIA

2019 CSBA Annual Convention
November 12-14, 2019
Pechanga Resort & Casino
Temecula, California

FOR MORE INFO OR DETAILS:
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INDIANA

Purdue Field Day
June 15, 2019
Purdue Bee Lab
West Lafayette, Indiana

Indiana State Fair
August 2-18, 2019
Indiana State Fairgrounds & Event Center
Indianapolis, Indiana

Fall Conference and Workshops
Guest Speaker: Randy Oliver, ScientificBeekeeping.com
October 25-26, 2019
French Lick Springs Hotel
French Lick, Indiana

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NEW JERSEY

NJBA Spring State Meeting
Keynote Speaker: Gary Reuter, University of Minnesota
May 18, 2019
Doane Academy
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NJBA Winter State Meeting
Keynote Speaker: Dr. Christina Grozinger, Penn State University
November 9, 2019
Ramapo College
Mahwah, New Jersey

FOR MORE INFO OR DETAILS:
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NORTH CAROLINA

2019 NCSBA Annual Convention
August 8-10, 2019
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Burlington, Vermont

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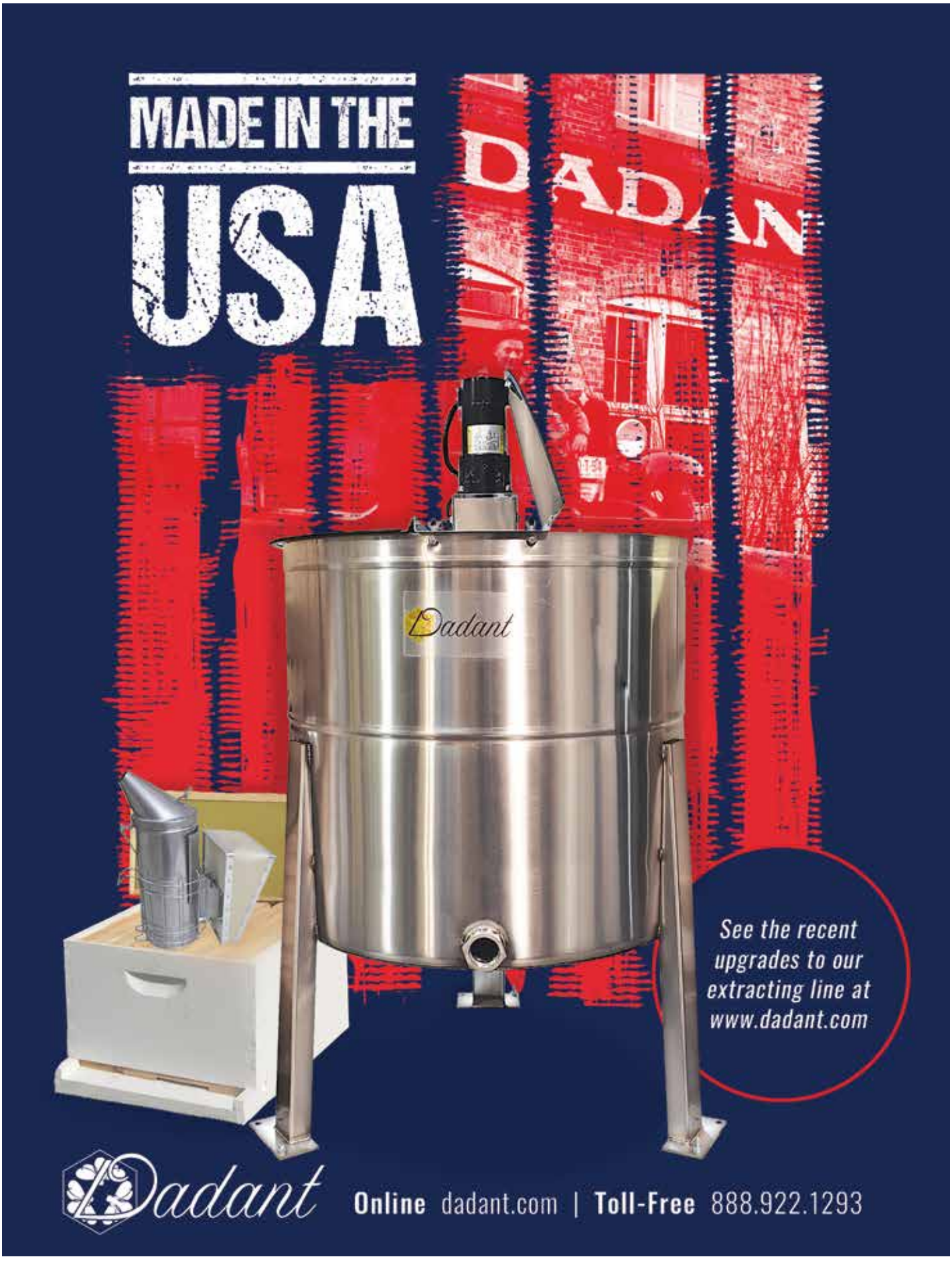
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HEALTHY BEES, HEALTHY PEOPLE, HEALTHY PLANET

by: Alli Langley

HOW THE HONEY BEE HEALTH COALITION HELPS BEEKEEPERS AND FOSTERS COLLABORATION FOR POLLINATOR HEALTH

HONEY BEE HEALTH COALITION

One unique group has worked for the last five years to break down silos, build understanding and collaboratively improve and protect honey bee health.

Honey bees are a key component to sustainable agriculture, healthy diets, the global food supply and the economy. Roughly one-third of global food production relies on honey bees and other pollinators. According to the U.S. Department of Agriculture, honey bees pollinate more than $15 billion of U.S. crops annually, including more than 100 different fruits and vegetables.

But honey bees and other pollinators are in trouble.

Compared to historical rates, the average annual mortality of honey bee colonies has skyrocketed to roughly 30 percent today, with some beekeepers losing more than half of their colonies each year. This is especially devastating to commercial beekeepers who must replace dead colonies as they struggle to retain their livelihoods, and the challenge not only affects beekeepers but also everyone else throughout the agricultural supply chain.

In 2014, the Honey Bee Health Coalition formed to bring together a diverse group of stakeholders to address this issue.

How the Coalition Works

The coalition's roughly 50 members include national and regional beekeeping organizations, crop associations, small and large seed companies, agricultural manufacturers and suppliers, consumer-facing brands, conservation nonprofits, government regulators, university researchers and extension agents.

Bee on corn tassels. Photo by Scott Stewart.

Bee on canola. Photo by Jay Bjerke.

This collaborative, public-private partnership aims to implement solutions that will help achieve a healthy honey bee population, while also supporting healthy populations of native and managed pollinators in the context of both productive agricultural systems and thriving ecosystems.

The coalition does this by addressing the multiple factors impacting honey bee health – hive pests and disease, poor nutrition and forage and pesticide exposure. In addition to this three-pronged approach, the coalition also focuses on education and outreach across all of its initiatives.

Members meet in person at least once a year to build relationships, learn from each other and strategize. Smaller groups within the coalition hold regular conference calls to drive momentum forward on collaborative projects. The Keystone Policy Center, a non-advocacy non-profit founded in 1975 and headquartered in Keystone, Colorado, facilitates the coalition.

Over the years, this unique collaboration has worked to develop free resources for beekeepers, farmers, crop consultants, retailers, policymakers and the general public.

Free Resources for Beekeepers

This year, the coalition released *Best Management Practices for Bee Health* – for hobbyists to commercial beekeepers – that promotes in-hive management strategies that strengthen colonies and encourages communication and collaboration with farmers and landowners.

An expert team of beekeepers, entomologists, extension and regulatory agents, bee suppliers and apiary inspectors produced and reviewed the guide which is available for free download. The guide has chapters about safety considerations, apiary setup and maintenance, pesticide exposure, pests and diseases, queens and nutrition and is full of photos and graphics. Each

Bee Field Day. Photo by Dr. Dewey M. Caron.

chapter is also followed by a summary of key points to remember as well as resources, should beekeepers seek more information.

The coalition also launched a free, mobile-friendly tool to accompany its popular *Tools for Varroa Management* guide. This Varroa-specific guide, first released in 2015 and now in its seventh edition, helps beekeepers implement practical techniques to control the Varroa mite, the honey bee's most destructive pest.

The new tool guides beekeepers through five questions to determine techniques and treatment options that fit their hive conditions and management preferences. Then they can study their options using the provided information and videos before making decisions.

Building Relationships with Farmers

Most recently, the coalition worked with two of its member organizations – the National Corn Growers Association and the U.S. Canola Association – to develop best practices for pollinator protection for corn and canola growers.

In addition to specific recommendations for each lifecycle stage of the crop, both guides highlight best practices growers, crop consultants and beekeepers can use all season long as well as a summary of key practices. These include:

- Coordinating with beekeepers and communicating about hive locations, crop management practices and any related concerns;
- Checking extension recommendations, considering multiple strategies for pest control and verifying in-field needs before applying pesticides; and
- Planting and preserving flowering plants in non-crop areas.

Look for more information about other Honey Bee Health Coalition resources in future issues of the American Beekeeping Federation magazine. In the meantime, you can learn more about the coalition and access all its free resources at *www.honeybeehealthcoalition.org*.

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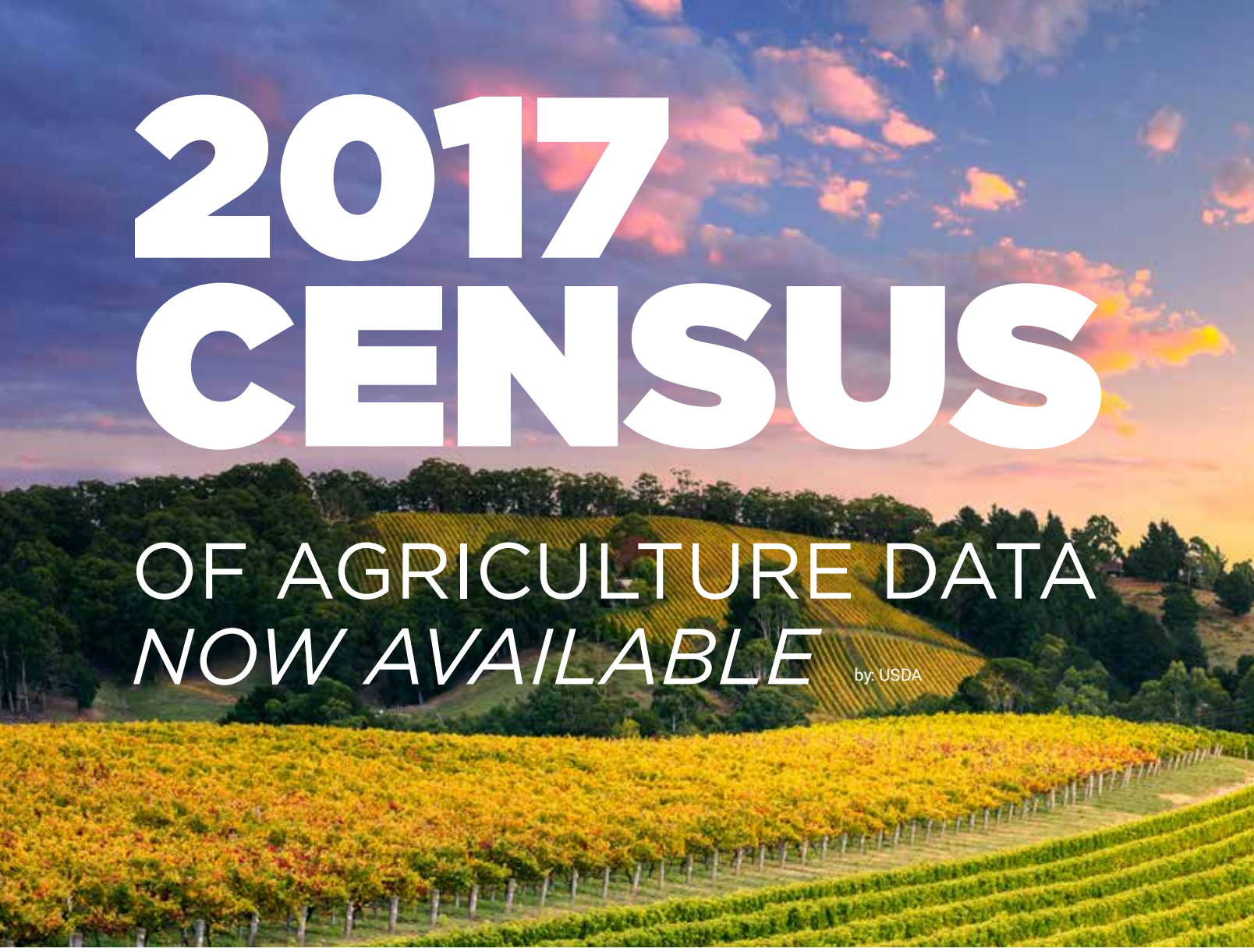


2017 CENSUS OF AGRICULTURE DATA *NOW AVAILABLE*

by: USDA

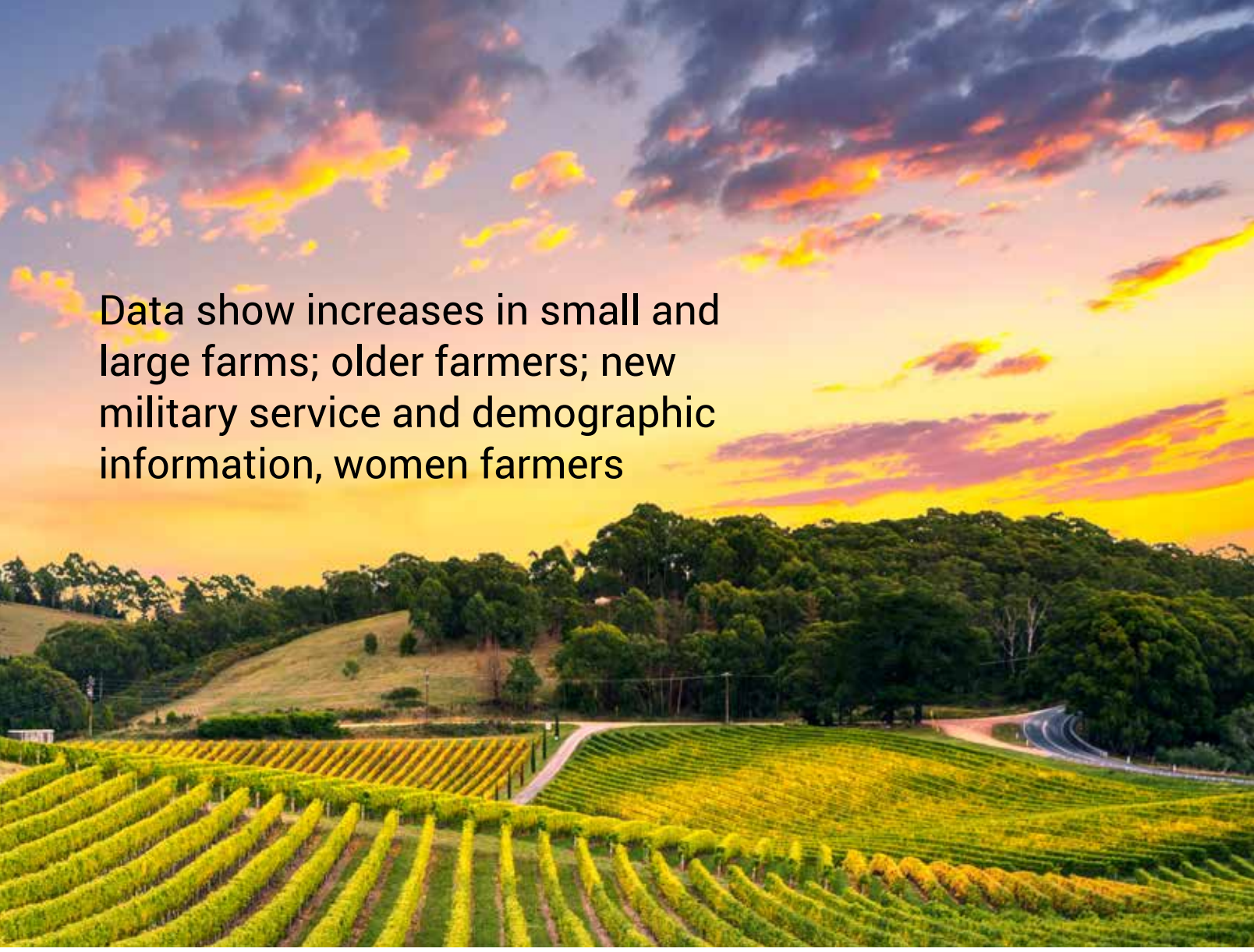
On April 11, 2019, the U.S. Department of Agriculture (USDA) announced the results of the 2017 Census of Agriculture, spanning some 6.4 million new points of information about America's farms and ranches and those who operate them, including new data about on-farm decision making, down to the county level. Information collected by USDA's National Agricultural Statistics Service (NASS) directly from farmers and ranchers tells us both farm numbers and land in farms have ongoing small percentage declines since the last census in 2012. At the same time, there continue to be more of the largest and smallest operations and fewer middle-sized farms. The average age of all farmers and ranchers continues to rise.

"We are pleased to deliver Census of Agriculture results to America, and especially to the farmers and ranchers who participated," said U.S. Secretary of Agriculture Sonny Perdue. "We can all use the census to tell the tremendous story of U.S. agriculture and how it is changing. As a data-driven organization, we are eager to dig into this wealth of information to advance our goals of supporting farmers and ranchers, facilitating rural prosperity and strengthening stewardship of private lands efficiently, effectively and with integrity."

"The census shows new data that can be compared to previous censuses for insights into agricultural trends and changes down to the county level," said NASS Administrator Hubert Hamer. "While the current picture shows a consistent trend in the structure of U.S. agriculture, there are some ups and downs since the last census as well as first-time data on topics such as military status and on-farm decision making. To make it easier to delve into the data, we are pleased to make the results available in many online formats including a new data query interface, as well as traditional data tables."

Census data provide valuable insights into demographics, economics, land and activities on U.S. farms and ranches. Some key highlights include:

- There are 2.04 million farms and ranches (down 3.2 percent from 2012) with an average size of 441 acres (up 1.6 percent) on 900 million acres (down 1.6 percent).
- The 273,000 smallest (1-9 acres) farms make up 0.1 percent of all farmland while the 85,127 largest (2,000 or more acres) farms make up 58 percent of farmland.
- Just 105,453 farms produced 75 percent of all sales in 2017, down from 119,908 in 2012.
- Of the 2.04 million farms and ranches, the 76,865 making $1 million or more in 2017 represent just over two-thirds of the $389 billion in total value of production while the 1.56 million operations making under $50,000 represent just 2.9 percent.
- Farm expenses are $326 billion with feed, livestock purchased, hired labor, fertilizer and cash rents topping the list of farm expenses in 2017.
- Average farm income is $43,053. A total of 43.6 percent of farms had positive net cash farm income in 2017.



Data show increases in small and large farms; older farmers; new military service and demographic information, women farmers

- Ninety-six percent of farms and ranches are family owned.
- Farms with Internet access rose from 69.6 percent in 2012 to 75.4 percent in 2017.
- A total of 133,176 farms and ranches use renewable energy producing systems, more than double the 57,299 in 2012.
- In 2017, 130,056 farms sold directly to consumers, with sales of $2.8 billion.
- Sales to retail outlets, institutions and food hubs by 28,958 operations are valued at $9 billion.

For the 2017 Census of Agriculture, NASS changed the demographic questions to better represent the roles of all persons involved in on-farm decision making. As a result, in 2017 the number of producers is up by nearly seven percent to 3.4 million, because more farms reported multiple producers. Most of these newly identified producers are female. While the number of male producers fell 1.7 percent to 2.17 million from 2012 to 2017, the number of female producers increased by nearly 27 percent to 1.23 million. This change underscores the effectiveness of the questionnaire changes.

Other demographic highlights include:

- The average age of all producers is 57.5, up 1.2 years from 2012.
- The number of producers who have served in the military is 370,619, or 11 percent of all. They are older than the average at 67.9.
- There are 321,261 young producers age 35 or less on 240,141 farms. Farms with young producers making decisions tend to be larger than average in both acres and sales.
- More than any other age group, young producers make decisions regarding livestock, though the difference is slight.
- One in four producers is a beginning farmer with 10 or fewer years of experience and an average age of 46.3. Farms with new or beginning producers making decisions tend to be smaller than average in both acres and value of production.
- Thirty-six percent of all producers are female and 56 percent of all farms have at least one female decision maker. Farms with female producers making decisions tend to be smaller than average in both acres and value of production.
- Female producers are most heavily engaged in the day-to-day decisions along with record keeping and financial management.

USDA United States Department of Agriculture

Results are available in many online formats including video presentations, a new data query interface, maps and traditional data tables. All information is available online at *www.nass.usda.gov/AgCensus*.

CREATING NEW NECTAR/ POLLEN SOURCES FOR BEE FORAGE

by: Dr. Dewey M. Caron

Most beekeepers agree there is a need for more forage resources for our bees and pollinators in both urban and rural settings. We need better, cleaner and more plentiful forage for honey bees, vital to our continued food supply, as well as native pollinators for the foods needed by our native fauna and for a more diverse and beautiful environment.

One expanding opportunity is utilizing the land beneath solar panel arrays to grow bee forage. Agrivoltaics is an emerging field that utilizes photovoltaic solar panel systems that convert sunlight directly into energy (no need for heating liquids or storage batteries) and pollinator-friendly ground cover. Challenges abound for appropriate ground cover since sites will include heavily shaded portions beneath panels to the fully lighted areas. Some sites prefer converting land cover to something other than plants (gravel) or extensive use of herbicides to control the vegetation around panels.

There are cost-effective siting considerations. Larger solar arrays are more efficient. There are some basic considerations about appropriate land use such as conversion of high-value soils versus sitting on marginal soils or set-aside sites, often useful for weedy plants that bees currently are foraging. Another land use issue involves local/state regulations versus landowners' right to pick between traditional farming or convert farmland from crop/animal use and lease to a more-or-less permanent solar collection array. Use of livestock, such as sheep, are not always compatible as they may interfere with or damage the solar hardware.

Beekeepers and bees can potentially benefit from a solar array and offer an alternative livestock solution. The recent ABF conference had a presentation on agrivoltaics, and recently published magazine articles point out how.

In February, Rob Davis of Fresh Energy, a renewable energy independent non-profit, provided *Bee Culture* with a list of eight best management practices for combining bees with solar farms (p. 92). In the April issue of *American Bee Journal*, Oregon State Beekeepers Association President John Jacob expands upon the subject, describing solar/apiary projects from Vermont to Minnesota to Oregon (p. 451-456). Agrivoltaics is labeled as a "powerful sweet synergy" by the authors.

Most land use regulatory agencies and experienced beekeepers have seen the consequences of one-way conversion of agricultural land to housing developments, golf courses and long-term cropping systems (such as vineyards or Christmas trees). There is some concern that a solar "farm" might represent yet another one-way land conversion. Can honey bees help ease such concerns and, at the same time, provide more forage for bees? Projects of several state universities, partnerships of energy firms and beekeepers and the National Renewable Energy Lab say, "Yes."

The national news has picked up on the potential conflict of solar energy array development on agriculturally zoned lands. Agricultural lands are ideal as they are generally flat, and landowners are often eager to opt for the certainty of leasing income over vagaries of commodity price markets. In a number of states, such as Oregon, current land use goals of preserving farmland have prompted land use regulations that directly impact solar power facilities. The Oregon Department of Agriculture (ODA) specifies that solar power facilities on agricultural land can be no larger than 12 acres without exception and are prohibited on high-value soils. In Illinois, solar arrays on high-value soils, while currently permitted, have come under increased scrutiny.

A 73-acre solar project near Estacada in Clackamas County, Oregon, in the northern end of the intensely agricultural Willamette Valley, received a county exemption as a solar farm on agricultural land by establishing 100 beehives on the property and planting "bee-friendly forage" around the panels and "shade-resistant native plants" beneath the solar panels. The Oregon Department of Agriculture took exception, as did agricultural lobbying groups interested in land conservation including the Oregon farm bureau. The issue is not necessarily the right of bees to forage, nor that bee forage doesn't qualify as agriculturally zoned land for taxation.

In contrast, there is a 40-acre "clean-energy farm" in Eagle Point (outside Medford in southern Oregon) which includes honey bees and is considered the largest "solar bee farm" in North America. John Jacob, the author of the *American Bee Journal* article cited above, maintains 48 colonies interspersed among the solar panels. The colonies average 100-200 pounds of honey per colony, compared to the county average of 30-40 pounds per colony.

If you wish to investigate the opportunity of collaboration in your area, be sure to look at these articles. The *American Bee Journal* article has a solar site pollinator habitat assessment checklist that will provide a useful starting point. It was developed in association with the bee lab of Marla Spivak at the University of Minnesota and other bee specialists. Bees and solar, agrivoltaics, can enhance the development of alternative energy with solar while increasing bee forage opportunities and even potentially provide "new" apiary sites.

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SOLVING BEEKEEPING PROBLEMS:

CAN BE LIKE TRYING TO PUT PLUGS IN A SPONGE TO STOP WATER

by: Albert Chubak

As thought-provoking as that title sounds, this is the yearly challenge for beekeepers. With regard to how to keep honey bees alive, some use the old adage, "If it isn't one thing that kills my bees, it's another." Honey bees are "livestock," and as such, there is an unseen and visible world threatening them daily. Each year, lessons are sadly learned as a result of mistakes both intentional and unintentional. These lessons vary from apiary to apiary, hive to hive and beekeeper to beekeeper. One apiary may not have a single issue, yet another apiary is overrun with threats. One colony may appear healthy, yet one inches away is looking towards that "heavenly light at the end of the tunnel."

No one can say, "If you learn this…you won't fail as a beekeeper." The truth is, everyone fails. It is how each recovers from a failure that varies. Many chalk it up and say, "Darn it, I am done." Others say, "I'll buy another package next season." The list continues, "I'll try a different queen type next time." "I'll find a mentor." "I'll take a class." "Bless this hive, dear God, so I don't kill them again despite my ignorance!" You will, though. Colony after colony will fail, and each time, it will be a learning experience you can share or file away.

Another challenge is a tough piece of meat to chew on. "It seems that another beekeeper knows nothing and does little, and his little nightmares survived." What gives?

Over twenty years, these eyes have watched over colonies, and death has come to many colonies, swarms, yards, by everything imaginable including a bulldozer! It truly is depressing when an entire apiary is destroyed, but it happens. Some are loaded on a thief-mobile and carted away. Some are turned into what looks like a child's domino collection after a day of uncontrolled play time. Whatever the challenge, another will mount its horrific face and shout "boo," and you will have to deal with it!

What can be said to alleviate the failures? The answer is an obvious one, and it isn't the suggestion to take up another hobby like fishing. Sustainability in beekeeping is elusive, but it is the answer.

Buying a package of bees is like going to a nursery and acquiring a seedling or "start" ready to plant. It takes little or no insight of the gardener about what it took to get it to that tender size. All that is hoped is that it is far enough along to make it despite what nature throws at it (and what the gardener does or doesn't do). Like a bee colony, many buy a package of bees with an unfamiliar, mated queen in hopes the two will learn to love each other. Sometimes this "match-making" style of union fails. At that point, if caught soon enough, a new queen can be purchased from a "royal queen maker" and again introduced like Snow White in hopes of the loving kiss of acceptance.

The key above is the availability of a new Snow White.

Sustainability comes from understanding how to create a colony from a fertile seed (egg). Printed in the genes of each bee is a list of instructions about what to do when a problem occurs. One of the ancient instructions is how to create a new queen. A queen can lay thousands of fertile, female eggs a day which could ALL become a queen under the right conditions. The instructions they follow are simple.

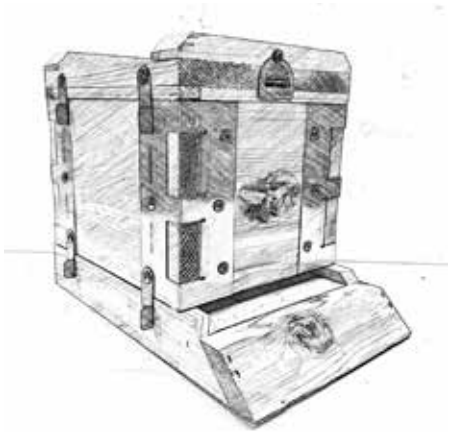
When the scent of the queen disappears, the nurse bees (the ones that were feeding her and attending to the young) innately decide to keep feeding the tiny larvae royal jelly. From three to five days after the queen goes missing, other replacements are started. That instruction causes the larva to grow fast. It would soon outgrow the cell, so the bees add more wax – extending it outward and downward. Once the larva has aged and grown to about day eight, these amazing insects cap the cell and protect it from all outside variations. This princess is now incubating. Once she has developed into adulthood, this maturing teenager wants to tackle the world. She fights her way out and dries, and her armor hardens.

Again, back to the "instructions." Once she is perfected, the ladies of the hive kick her out into the world like a young bird from a nest. She may return or die, so others were prepared along with her, and they, too, are sent off in hopes of finding boys (drones). The hangout for boys is called a "drone congregation area" – where drones go in hopes of finding their princesses. All the efforts of the successful drones end in death. The newly mated queen returns, and if mated enough, she begins her mission in life – to lay eggs and build a colony.

The baffling question many ask is, "How do I raise a queen?" Not much has to happen other than the queen being removed and there being "open brood" they can use to start the cycle.

A mating nuc, like a Mini Urban Beehive (MUB), is a tiny, single box. This tight, confined area is suitable for a small cluster of bees to make a new Snow White. They need resources at their disposal, such as honey or sugar water (I suggest adding a supplement to sugar water to increase life-supporting nutrients) and protein for use in making royal jelly. Water needs to be available so the bees can increase the humidity and maintain the perfect temperature with their wings and aerobically generated body heat.

By having an understanding of how bees make new queens, the lesson on how to grow a colony emerges. It is insightful and valuable to have a second hive or colony in waiting to take resources from to support another failing colony. Not much is needed if a queen has disappeared. Once the colony has gone broodless, the beekeeper only needs to add a frame of open brood, and they will



MUB mating nuc by Eco Bee Box.

take care of the rest. Three to five days later, queen cells appear, and the cycle starts again.

Many don't have a second colony or access to an open brood frame. That is like having a house without an insurance policy. Something happens, and without the insurance, it becomes a total loss or nightmare. Similarly, it is with a colony. The second colony does not have to be huge, nor does it have to be heavily populated. A small MUB in a single box can supply a queen to a larger colony, and the small MUB goes on and regenerates a new queen. If the little MUB colony grows to fill the four boxes, the beekeeper can take brood frames and add to the larger colony, so it grows even faster – a separate two-queen system. This can be achieved by adding mini frames inside a deep frame, or by adding a 28-frame comb box to an existing hive.

28-Frame medium Langstroth comb box by Eco Bee Box.

Any failure can be overcome if another colony is available. Some use a second deep Langstroth colony for regeneration. This takes away growth from the large, growing colony, and if the colony that was supplied with the new frame still fails, an

entire huge frame wasn't lost in the process. A tiny mini frame of open brood the size of a palm is all that is needed. If there are eggs still on that brood frame, it will be okay.

Small colonies are quite enjoyable to maintain and grow. Their temperament is docile due to needed to regenerate a queen for survival. This permits time for the beekeeper to learn and see what happens to the length of each cycle – a valuable lesson in beekeeping that should NOT be missed.

Beekeepers can add a mini frame of open brood to a top-bar hive.

Raising queens can be complex or simple depending on how many are wanted.

This step of rearing a new queen in a separate mating nuc (or MUB hive) is like a reset button or "alt-shift-delete" step, as this new colony naturally is uninviting to Varroa mites due to a period of time in which no brood exists. This step can be achieved even in a full-sized colony by caging a queen for 16 days or letting it requeen. During this step, the Varroa mites have no place to incubate. This recovery step also produces a new queen that's eager to lay. Any laying queen is better than a dead colony!

A mini frame of open brood can be added to a deep Langstroth frame.

The key to sustainability is the ability to recover from the beginnings of a failure. How many colonies could be saved if available resources were near? Most problems can be rectified before loss sets in. The other asset of a MUB is its size. A large box can be too big for a tiny colony to grow. Remember, this colony must control its environment to succeed. In too big of a space, these little ladies cannot maintain humidity or heat suitable for growing young.

Everything young bees need are on this mini frame.

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Commercial Beekeeper SPOTLIGHT

DANIEL WINTER
Winter Apiaries LLC
Wolcott, New York

My name is Daniel Winter. I am a second-generation commercial beekeeper from New York. In 1994, I started to transport all my hives to southern Florida to help overwinter. I pollinate apples, cranberries, almonds, pumpkins and sometimes watermelons.

I like to stay involved in beekeeping issues and feel it's very important for commercial beekeepers to remain vocal in support of research and issues that affect our industry. I am President of the Empire State Honey Producers Association (ESHPA) and serve on the apiary industry advisory committee for the New York Department of Agriculture and Markets. I also represent commercial beekeepers on the ABF Board of Directors.

I like spring bees the most. You can see the results of months of preparation. Seeing my numbers increase always makes me smile. It is very gratifying when you place a nice strong hive into pollination and realize your hard work and sacrifice away from family is helping another farmer succeed.

I've seen tremendous growth in the beekeeping industry. I've seen companies come and go. The most successful beekeepers learn to work with and help other beekeepers because, in this industry, the only people who can and will help you are other beekeepers.

I like to see new beekeepers getting active in clubs and organizations like ABF. There's a tremendous amount of knowledge to be learned within these professional networks. Just being involved with ABF has introduced me to many people who all strive for the common good of bees.

I've been fortunate enough in my career to have a great mentor, my father, Laurence W. Winter. He's trained many state inspectors and was a commercial advisor for Dr. Roger Morse at Cornell University. I can remember him quoting Ben Gabor, a fellow commercial beekeeper, when I was young and exhausted. My father would say, "Life's just one miserable hive after another." Then we'd laugh and go back to work.

As I near the end of my term, I'd like to thank the ABF membership for electing me to represent this great organization. It was truly a learning experience with everything that ABF strives to accomplish in a small amount of time. I'd also like to thank my wife, Tamara, who works endlessly when I'm away from home. Thank you all.

QUEEN Committee Report

by: Anna Kettlewell, *American Honey Queen Program Chair*

The first quarter of 2019 has been an incredibly successful promotional quarter for Queen Hannah and Princess Nicole. Both have been very busy, presenting in 10 states, reaching thousands of consumers at a variety of fairs and other promotional venues and reaching millions through multiple media interviews, generating amazing amounts of free publicity for ABF and the beekeeping community. Hannah and Nicole have proven already to be dedicated, passionate spokespersons for ABF.

At the American Honey Queen Program training session earlier this year, Hannah and Nicole established goals for their work for the year. We focused on areas in which they have tremendous passion. These include a focus on product demonstration, at fairs, festivals, in small groups, and through social media outlets, giving presentations in Spanish (Nicole), participating in media interviews, speaking to 4-H clubs (Hannah) and creating educational resources related to honey's medicinal properties. Keep these goals in mind when you schedule Hannah and Nicole at your events this year!

I thank all ABF members who have quickly submitted their promotional requests for Hannah and Nicole this year. Thanks to your support, both will have very full travel schedules between July and October. The Queen Committee is working diligently to assemble robust promotional schedules on a regional scale for our representatives between April and May, while Hannah and Nicole complete their spring semester.

We are still looking for more promotional events between late May and early July. Early fairs, farmers markets, school visits and community groups (seniors, scouts, civic groups, etc.) are always fantastic opportunities during the second quarter of the year. Does your business welcome packaged bees? Consider an open house where the queens can greet visitors and teach the public about honey bees and promote the fruits of our labors in the early spring.

We still have openings on the calendar for some additional events in the summer and during National Honey Month in September. Contact me at *honeyqueen99@hotmail.com* or 414-545-5514 to discuss your event.

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AMERICAN HONEY QUEEN REPORT

Hannah Sjostrom

Greetings ABF members! Between January and March, I have been busy getting into the full swing of my spring semester at the University of Wisconsin-Eau Claire as well as Honey Queen training and beginning promotions for the ABF.

To start our year, Princess Nicole made her first trip to Wisconsin, joining me during the extreme polar vortex between January 29 and February 5. We spent the week at "Honey Queen University" learning tips, tricks and media interviewing skills from several teachers. With rigorous training, coursework and effort from our trainers and us, we spent a week making our honey recipes, touring the Henry's Honey Farm commercial beekeeping operation, giving school presentations and enhancing our interviewing skills.

To better hone our interview skills, our trainers created actual media experiences where we practiced several different media environments, including working with a former television reporter. We recorded our media interviews so that we could watch our interviews to critique and improve.

Another part of training was cooking with honey and trying recipes from our brochure. A wonderful part of our job this year is to help increase the consumption of honey throughout the United States. A great way to do that is demonstrating ways the public can use honey! Nicole and I practiced making the recipes, along with incorporating the importance of our industry into a presentation. Each day, we developed new skills and left feeling prepared for the various promotional events we have this year. A huge thank you goes out to all those who volunteered their time to help us become prepared to have the best year possible!

Returning to college after training garnered the attention of the local media in Wisconsin. On February 8 and 11, I was interviewed by the *Red Wing Republican Eagle*, *Pierce County Herald*, *The Country Today*, *The Eau Claire Leader-Telegram*, *The Courier Wedge* and the University of Wisconsin-Eau Claire for its website. The free press received from these newspapers on behalf of the industry is valued at an estimated $22,480 through nearly 600 print inches! Along with the local newspapers, I gave two radio interviews with Wisconsin Public Radio on February 11 and March 11 about my spokesperson role, the health of honey bees and ways to help honey bees.

One of these interviews featured a segment where listeners called in to ask questions. Callers asked for beginner beekeeper resources and how individuals can help honey bees. These two interviews had a combined 13 minutes of interview time, airing on 10 different stations! "The Morning Farm Report" with Bob Bosold, Scott Schultz and Pam Jahnke was the last of my media interviews for the month. This nine-minute radio interview aired on 22 different stations spanning most of Wisconsin, valued at nearly $20,000 in free industry publicity!

Princess Nicole made another trek back to the Midwest, joining me for the University of Minnesota Beekeeping in Northern Climates class held February 23 and 24. We learned about beekeeping in the North for the first two years of beekeeping. This helped us to expand our knowledge on beekeeping in different parts of the United States so that we can better represent the American Beekeeping Federation.

On the first day, there was a vendor reception. Princess Nicole and I managed a booth promoting the American Beekeeping Federation and encouraged membership to the beginner beekeepers. A special thank you to Dr. Marla Spivak and Gary Reuter for helping to expand our knowledge of beekeeping!

From February 28 through March 4, I traveled to Arizona promoting with AZ Queen Bee's Audra Waddle in the Phoenix area. We spent the first morning of my stay at a farmers market at the Arizona State Capitol! This farmers market had legislators and legislative staff stop by to learn more about honey and beekeeping. After finishing the farmers market, Audra and I buzzed over to the local Aveda store. Aveda is a hair product store that prides itself on its environmentally friendly products. The owner of this Aveda store wanted to tie in the connection of their natural hair products with the necessity for pollinators in our environment. Audra and I spread pollinator awareness, handed out honey samples and sold honey to customers. The store assembled a raffle

Queen Hannah teaches South Carolina students about the different jobs of the bees in the hive during the Kids and Bees program.

Queen Hannah introduces herself during the general session of the ABF convention.

We are excited to teach and speak at a variety of promotions and would love to come to your state. If you are interested in inviting Princess Nicole or me to your event, please contact Anna Kettlewell at (414) 545-5514 or *honeyqueen99@hotmail.com*. Have a sweet day!

box full of items from their store to raise money for the American Honey Queen Program!

The rest of my time in Arizona was spent at the Maricopa Home and Landscape Show interacting with the estimated 23,000 attendees. I had two stage appearances where I demonstrated three honey recipes. When I wasn't demonstrating how to use honey in cooking, I was selling honey and talking to attendees about the importance of beekeeping from AZ Queen Bee's booth. During this trip, I learned more about the behaviors of Africanized honey bees and procedures to properly handle and requeen them. This was helpful, as attendees were inquisitive about them and intrigued by the ways they benefit our environment. Thank you to Audra Waddle for inviting me to these events and for hosting me during my stay in Arizona!

With more than 100 people in attendance, the Florida Bee College was buzzing with eager new beekeepers on March 8 and 9. I learned, alongside the beginning beekeepers, to expand my knowledge of how beekeeping is different in southern climates – better preparing me to represent the nation's diverse beekeeping industry! It was fascinating to learn how Florida beekeepers prepare their hives for hurricanes and how the honey bees are fed during the hottest part of the year when the nectar flows are the slowest.

I interacted with many attendees, explaining my role and the benefits of joining the American Beekeeping Federation. During the last class of the weekend, many attendees wanted to learn how to maneuver around a hive. To give them the best experience possible, extra volunteers were asked to help, and I was one of them! I walked attendees through a hive demonstration and taught them how to correctly maneuver their way through the hive. From a queen, to brood, to nectar, the students learned many facets that constitute a hive. Thank you to Dr. Jamie Ellis, Mary Bammer and David Westervelt for inviting me to this event and arranging my visit.

To round out March, I spent my spring break in Connecticut and Wyoming. My trip to Connecticut was from March 16 to 21. I presented at Wamogo Agri-Science High School, where I stressed the importance of honey bees to our society. Following my presentation, the Culinary and Food Service students served lunch with honey-inspired dishes.

My next school presentations were at Amity High School, which has beehives on its roof that are cared for by the Alternative Program. The teachers who head this program were looking for a different way to get the students excited about learning with a more hands-on approach. With the assistance of the local beekeeper, Ted Jones, the school started two hives. The Alternative Program students are ecstatic over the bees and are actively engaged with them. Funding for this project was not a problem, as the superintendent of the school was extremely supportive of this idea and rearranged the budget to fund two hives, beekeeping suits for the students and all the other supplies.

Queen Hannah teaches a new Florida beekeeper how to correctly open a hive at the Florida Bee College in Fort Lauderdale, Florida.

A school that incorporates beekeeping into their learning curriculum is extremely unique and gained the attention of the local news station. Fox 61 News stopped by to see what all the buzz was about, and the students and I participated in three live television interviews. One of these interviews was a Facebook Live interview. The Facebook Live interview is posted online – reaching 4,000 people who can interact by asking questions or leaving comments. I finished my day at Amity High School with two more school presentations. I spoke to a science class as well as a culinary class on the beekeeping industry and ways to use honey in cooking.

Finally, on this trip, I joined members of the Connecticut State Beekeepers Association for Agriculture Day at the State Capitol. The Lieutenant Governor, legislators and legislative staff visited the various exhibits, learning more about the agriculture commodities of Connecticut. Our booth highlighted the food sources requiring pollination by honey bees. Thank you, Ted and Becky Jones, for arranging my promotions and hosting me during my stay!

I'm presently composing this column as I promote beekeeping in Wyoming! Over the next two months, I look forward to more events in Wisconsin, Minnesota, Oregon and Texas.

Do you have an upcoming event or promotion in your area? Princess Nicole or I would love to come! To schedule a promotional event with us, contact Anna Kettlewell at *honeyqueen99@hotmail.com* or 414-545-5514.

AMERICAN HONEY PRINCESS REPORT

Nicole Medina

Princess Nicole learns the art of a media interview with Honey Queen Committee member Louann Hausner during Honey Queen training in January.

Spring has sprung, and our bees are buzzing! Queen Hannah and I have had a great start to our year! January 30 through February 5 was our training session in Wisconsin. "Honey Queen University" was tough. There was never a dull moment. My first experience with Wisconsin winters was in the middle of the polar vortex. The temperature was -9 degrees (with windchills between -20 and -30) when I landed. Many of our in-person sessions became video chat sessions. Hannah and I learned a lot throughout training and became a great team.

Every day there was something new to learn, and learn we did! Our media training was extensive, and our confidence grew with each practice run. In everything we did, we could see our improvement. Throughout the week, we did various things. We toured Henry's Honey Farm, spoke to 175 students at two local schools and learned about all our social media platforms. We refined our presentation styles, and by the end of the week, Hannah and I were confident in our abilities to use our newly honed skills to be great in everything we do this year.

After training, I traveled to the Florida State Fair, from February 6 to 13. The fair began early with the annual Taste of Florida breakfast. Many breakfast goodies highlighted local agriculture, including freshly squeezed orange juice, berry parfaits made with fresh strawberries and muffins topped with local honey butter. This was a busy function with hundreds of attendees.

I had the opportunity during this event to meet Florida Governor Ron DeSantis, and we discussed honey bees' impact on agriculture. The Florida State Beekeepers Association had a great exhibit where they offered four different kinds of local honey for sale – orange blossom, tupelo, palmetto and wildflower. I helped fairgoers at the sample station, where people could try each flavor of honey.

In addition to my work at the fair, I also visited three elementary schools. I want to thank Alicia Folsom, who coordinated my school presentations and provided me with equipment to show students! I also was a guest speaker at the Lakeland Beekeepers Association meeting, and I promoted honey at a church's Valentine's Day dinner. I thank my hosts from this trip, Stephanie Ramthun and Bert and Caryl Kelley, for their hospitality, arranging my events and providing me with fresh strawberries and oranges!

Back home in New Jersey, I spoke at several beekeeping meetings. I presented at the New Jersey Beekeepers Association winter meeting on February 16 about my new national role and about the American Beekeeping Federation. It was nice to see the people who helped me on my way to being the American Honey Princess. During the meeting, I was honored with a joint legislative proclamation from the State of New Jersey.

I also spoke at the Raritan Valley Beekeepers Association and Sussex County Beekeepers Association meetings on January 17 and 22. In February, I spoke before the Northeastern New Jersey Beekeepers Association and participated in an educational event with my hometown beekeeping organization. For the first time, my local organization offered an educational experience for the youth to get involved in beekeeping as their parents attended the general session.

On February 22, I went back to the Midwest for the University of Minnesota Beekeeping in Northern Climates class. For this weekend-long event, Queen Hannah and I attended the classes. During lunches, we promoted the American Beekeeping Federation and membership. A huge thank you to Dr. Marla Spivak, Gary Reuter and everyone who helped put on the bee school. No matter how long you have been a beekeeper, there is always something new to learn. Hearing about certain topics in a different way shines a new light on things and makes you think. I found myself having these moments of awe and returned home with newer understandings and things to try in the field!

From March 4 to 10, I was in Kentucky for the Bluegrass Beekeepers Bee School. Before the main event, I went from school to school, speaking to almost 600 students. After one of the school days, I toured the Dadant bee supply store in Frankfort. I had my first radio interview of the year on Froggy Country Radio. I stressed the importance of honey bees and promoted the Bluegrass Beekeepers Bee School.

Another highlight of this trip was meeting with the Kentucky Agriculture Finance Corporation and Kentucky Commissioner of Agriculture Ryan Quarrels. With this group, I spoke about how honey bees affect all areas of agriculture. I was honored to meet many speakers, attend sessions and host a session of my own. During breaks, I talked to many new beekeepers and the vendors about their experiences, encouraging them on their beekeeping journey! A special thanks goes out to my hosts Marsha and Lou Bezold and all

the members of both the Capital City Beekeepers and the Bluegrass Beekeepers who made my stay so pleasant.

My next stop was Texas for the Houston Livestock Show and Rodeo. This event spans 21 days and has an attendance of more than 2 million people! From March 15 to 18, I worked with the Harris County Beekeepers Association in the AGventure section of the livestock show. For a function as big as this one, the bee booth is one that captures thousands of daily visitors. Here we had a giant skep that people could walk through and look into the observation hive stationed there. There was another observation hive outside the skep, and both were always surrounded by a crowd.

I had a chance to watch the finals of the rodeo and enjoyed the experience. Before the rodeo, there was a group of people who circled the arena in fire trucks, on horseback or in a wagon. Along with other agriculture representatives, I participated in this event during the finals of the rodeo. Thank you to Harrison and Mary Rogers for opening their home to me during this function.

I closed out my March promotions on March 18. I spoke before the Green Township Committee, and my town committee honored me with a proclamation for my work as American Honey Princess. The members of this government body were eager to learn about the bees and the American Beekeeping Federation and all the work it does. My slotted five-minute presentation quickly passed, but the questions lasted much longer!

Princess Nicole provides Florida State Fairgoers honey samples.

I am thankful to everyone I have met so far and am excited to meet everyone to come! I will venture soon to Connecticut and California and will continue to promote locally in New Jersey. Queen Hannah and I are working hard to promote our sweet industry and would love to join you at a farmers market, festival, school, civic group or media event in your area. If there is an event that comes to mind, please contact Anna Kettlewell at *honeyqueen99@hotmail.com* or at 414-545-5514. Until next quarter, be sure to check in on Facebook or YouTube!

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