AHPA
American Honey Producers Association

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AHPA Executive Board Article

Thoughts From Down South

Well, it's almost the end of January and I'm just now giving my update of the AHPA 2022 Convention. Is it still news if you haven't heard it yet? Well, the news about the recent

AHPA Convention is good news. For those who did not attend, you missed a great convention in Tucson. I saw several members who haven't attended the convention in a few years and met a few new members. The hot topic on Wednesday was the golf tournament. Yes, that was I said, a golf tournament at the AHPA convention! Well, it started out a little behind schedule and everyone had so much fun that it really became a great golf outing. Most groups didn't actually finish all 18 holes, but everyone had a great time and took a swing at a hole-in-one for their choice of forklift. Congratulations to golfer Bob Morlock, who won the drawing for the one-of-a-kind Bison cooler. We are planning another golf outing this year and I hope to have a chance at a new extraction system as one of the possible prizes.

Meeting new beekeepers and seeing old friends are the best parts of the convention but we did accomplish some things in Tucson besides catching up. We reached our fund-raising goal of $1.25 million we committed for the antidumping suit. Thank you to all who donated their $0.05/lbs and more. We could not have done it without your financial support.

Many of the attendees filled out the AHPA and NHB Tallow Economic survey. There were a little more than 20 surveys filled out that week. The analysis of the survey should be ready in the next few months.

I'm sure you noticed that we raised the membership dues. That was something that should have been done a few times over the past 10 years. Even at the current rates, it still doesn't cover all the Association's expenses. We still rely on the generosity of our members, especially those who see the value of AHPA.

The Auction was one for the record books. I didn't get the Star Wars poster but those in attendance set a record of more than $80,000 for the auction.

If you attended the convention, you know that we won the antidumping suit, which was really the first step in the fight. The next step is the appeals process, which has already started, and that means we owe more legal fees. The AHPA will need $350,000 for the appeals process. This is a long and expensive process that, in the past, was very beneficial to our members. Please keep that in mind as we start out the next pollination

and honey season.

Make plans now (buy some cheap clubs) to join us in San Diego on December 4-7, 2023, at the Marriott Mission Valley. This year the Golf tournament will be on Monday starting at 11:00 AM with the annual meet and greet starting at 6:00 PM. Our speakers will begin on Tuesday morning and end on Thursday afternoon. The convention will end on Thursday night at the annual banquet and auction.

If you have suggestions for specific vendors and/or speakers, please let me know as soon as possible. I can't promise we can get them, but we will try.

The AHPA and our Annual Convention are like all other aspects of life. What you get out of it is proportional to what you put into it.

We need your support and I hope to see you in San Diego, on the golf course or at the convention.

Now, for a few southern thoughts. I want to thank everyone who filled out the Tallow Economic Survey. Thanks to Margaret Lombard and the National Honey Board for supporting this and helping spread the word about the survey. We had almost 100 respondents from all the Gulf States. The economists are busy crunching the numbers and doing their economics thing. We hope to have the report in a few months. In the meantime, APHIS will continue to collect their data and do their government thing. We will keep a close eye on this and continue to work to prevent the release of the biocontrol.

I know you remember that cold snap the week of Christmas. It was COLD here in Wiggins, MS. The low was 190 F and the high temp didn't get above freezing for two days straight. I know most of you are laughing right now but it doesn't typically get that cold here in December. The cold definitely helped identify the weak hives and saved me some on my syrup bill. The maple started blooming good about the 12th of January and they are brooding up nicely now. I know most operations in my area are sorting bees and trying to load trucks or they already have their bees in CA.

For the colonies that don't make the first cut and are staying in the South, it looks like they

will have above normal temperatures for next several weeks. This should give them a chance to grow, maybe some will be big enough to make it on the last trucks headed West or be ready for your first splits of the season.

Well, the time for going to meetings and making big plans for the 2023 season has ended. Its time to start the cycle all over again. I hope you're able to place all your hives (the good ones) make all the splits you need and make a big honey crop.

I know it's wet out there, so just be careful and remember, if beekeeping was easy, everyone would be good at it.

Steven Coy
Vice-President
American Honey Producers Association

UNIVERSITY OF MARYLAND

Honey Bee Lifespans are 50% Shorter Today Than They Were 50 Years Ago

A drop in longevity for lab-kept honey bees could help explain colony losses and lower honey production in recent decades.

A new study by University of Maryland entomologists shows that the lifespan for individual honey bees kept in a controlled, laboratory environment is 50% shorter than it was in the 1970s. When scientists modeled the effect of today's shorter lifespans, the

results corresponded with the increased colony loss and reduced honey production trends seen by U.S. beekeepers in recent decades.

Colony turnover is an accepted factor in the beekeeping business, as bee colonies naturally age and die off. But over the past decade, U.S. beekeepers have reported high loss rates, which has meant having to replace more colonies to keep operations viable. In an effort to understand why, researchers have focused on environmental stressors, diseases, parasites, pesticide exposure and nutrition.

This is the first study to show an overall decline in honey bee lifespan potentially independent of environmental stressors, hinting that genetics may be influencing the broader trends seen in the beekeeping industry. The study was published November 14, 2022, in the journal Scientific Reports.

“We're isolating bees from the colony life just before they emerge as adults, so whatever is reducing their lifespan is happening before that point,” said Anthony Nearman, a Ph.D. student in the Department of Entomology and lead author of the study. “This introduces the idea of a genetic component. If this hypothesis is right, it also points to a possible solution. If we can isolate some genetic factors, then maybe we can breed for longer-lived honey bees.”

Nearman first noticed the decline in lifespan while conducting a study with entomology associate professor Dennis van Engelsdorp on standardized protocols for rearing adult bees in the laboratory. Replicating earlier studies, the researchers collected bee pupae from honey bee hives when the pupae were within 24 hours of emerging from the wax cells they are reared in. The collected bees finished growing in an incubator and were then kept as adults in special cages.

Nearman was evaluating the effect of supplementing the caged bees’ sugar water diet with plain water to better mimic natural conditions when he noticed that, regardless of diet, the median lifespan of his caged bees was half that of caged bees in similar experiments in the 1970s. (17.7 days today versus 34.3 days in the 1970s.) This prompted a deeper review of published laboratory studies over the past 50 years.

“When I plotted the lifespans over time, I realized, wow, there’s actually this huge time effect going on,” Nearman said. “Standardized protocols for rearing honey bees in the lab weren’t really formalized until the 2000s, so you would think that lifespans would be longer or unchanged, because we’re getting better at this, right? Instead, we saw a doubling of mortality rate.”

Although a laboratory environment is very different from a colony, historical records of lab-kept bees suggest a similar lifespan to colony bees, and scientists generally assume that isolated factors that reduce lifespan in one environment will also reduce it in another. Previous studies had also shown that in the real world, shorter honey bee lifespans corresponded to less foraging time and lower honey production. This is the first study to connect those factors to colony turnover rates.

When the team modeled the effect of a 50% reduction in lifespan on a beekeeping operation, where lost colonies are replaced annually, the resulting loss rates were around 33%. This is very similar to the average overwinter and annual loss rates of 30% and 40% reported by beekeepers over the past 14 years.

Nearman and vanEngelsdorp noted that their lab-kept bees could be experiencing some sort of low-level viral contamination or pesticide exposure during their larval stage, when they’re brooding in the hive and worker bees are feeding them. But the bees have not shown overt symptoms of those exposures and a genetic component to longevity has been shown in other insects such as fruit flies.

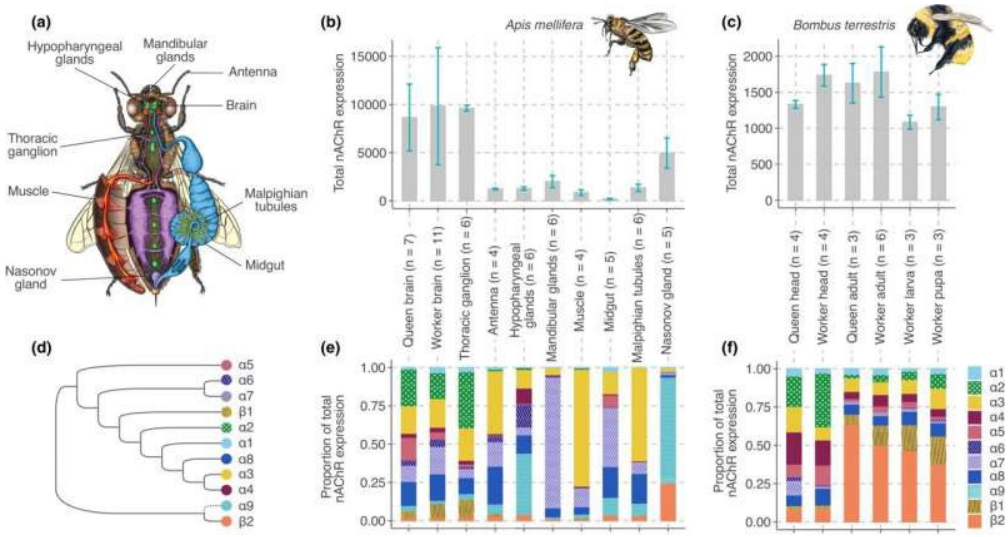
The next steps for the researchers will be to compare trends in honey bee lifespans across the U.S. and in other countries. If they find differences in longevity, they can isolate and compare potential contributing factors such as genetics, pesticide use and presence of viruses in the local bee stocks.

https://agnr.umd.edu/news/honey-bee-lifespans-are-50-shorter-today-they-were-50-years-ago

Safety tests of insecticides inadequate for bees

by Queen Mary, University of London

January 18, 2023



Queen Mary researchers have revealed unexpected variation in bee neural receptors, challenging current safety assessments of insecticides, which work by targeting these receptors.

Because bees use different versions of this receptor in different tissues and across species, it may be impossible to accurately predict the impacts of insecticide exposure on

bees.

Farmers use insecticides to protect plant crops from being eaten by pests. Unfortunately, although many commonly used insecticides were initially thought to be safe, they can also harm wild bees and other beneficial pollinators.

A new study by researchers from Queen Mary University of London, published in Molecular Ecology, uncovers the molecular mechanism that explains why measuring and evaluating the effects of the insecticides is so difficult using the current assessment practices.

The most commonly used insecticides, which include neonicotinoids and their potential replacements, target a neural receptor that is present in all animals. The idea that bees might have different versions of this receptor had not yet been considered in insecticide safety evaluations. Also, it was unclear to what extend bees use these receptors outside the brain.

The researchers used high-resolution molecular techniques to understand how the bodies of bumble bees and honey bees build the neural receptor targeted by insecticides. The researchers found that in different tissues, the receptor is made using different components.

There were also major differences between bees of different ages and between species. The effects on an insecticide depend on how the receptor is built. Thus, the diverse manners through which the receptors are built can explain why the insecticides have extremely diverse effects.

Discovering this much variation in how the neural receptors are assembled was surprising.

Queen Mary researcher Alicja Witwicka, lead author of the study, said, "We already knew that the insecticides can harm beneficial pollinators by affecting their behavior, their memory, their dexterity, their immunity, and their ability to reproduce. We now also know why insecticide can harm pollinators in so many different ways."

Call for action

The study's findings have serious implications for the safety assessments that are conducted before insecticides are sprayed onto crops to check if it could unintentionally harm pollinating insects. These assessments typically examine one or few measures of toxicity in one or few species and attempt to extrapolate those findings into general risks for the hundreds of other pollinator species that could be exposed.

Yannick Wurm, Professor in Evolutionary Genomics & Bioinformatics at Queen Mary, said, "Previous work showed that receptor composition affects susceptibility to the insecticides. We now found that receptor composition varies between tissues and between species. It is thus impossible to justify simple extrapolation of insecticide toxicity measures from one species or situation to another. Because the molecules for insecticide susceptibility vary so much within individuals and between species, policymakers should reconsider how the safety of insecticides is assessed."

Matt Shardlow, CEO of the Buglife charity, who was not involved in the study, said, "Despite the huge negative impact on wild pollinators caused by neonicotinoid pesticides, the lessons have not been learnt and the pesticide approval processes have not been improved. This research underlines the importance of testing the impacts of pesticides on a range of bee species and life stages, before chemicals that can cause huge damage to nature are released into the environment."

What are the targeted receptors?

Insecticides typically aim to kill one or few pest species. But in fact, the most widely used modern insecticides target a neural receptor that is essential in all animals for the transmission of signals between neurons. These neural receptors are called nicotinic acetylcholine receptors. The new research revealed that neurons in every body part of a bee uses these receptors. This shows that all parts of a bee could be affected by insecticide exposure.

The new research also revealed unexpected variation in how the receptors are built. Each receptor is made up of five sections or subunits, and bee's genetic blueprints include instructions for 10-15 versions of subunit. The researchers revealed that the receptors in different body parts are built using different combinations of subunits. The combination of

subunits that make up a receptor fundamentally changes how it is affected by an insecticide.

The large diversity of receptors used mean that insecticide safety would need to be tested on each version of receptor. This is likely to be infeasible.

"Our work demonstrates that high-resolution molecular approaches can help us to better understand how the bodies of pollinators work, and ultimately their health," added Alicia Witwicka.

More information: Alicja Witwicka et al, Expression of subunits of an insecticide target receptor varies across tissues, life stages, castes, and species of social bees, Molecular Ecology (2022). DOI: 10.1111/mec.16811

https://phys.org/news/2023-01-safety-insecticides-inadequate-bees.html

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BEYOND PESTICIDES

Growing Sunflowers Near Honey Bee Colonies Helps Reduce Mite Problems

(Beyond Pesticides, January 18, 2023) Sunflower plantings have the potential to significantly reduce mite infestations in nearby honey bee colonies, according to research recently published in the Journal of Economic Entomology by researchers with the U.S. Department of Agriculture (USDA). With pollinators under threat from

pesticides, climate change, loss of habitat, and the spread of disease and parasites, sustainable methods that address multiple factors at once are needed. This study points to a way to address destructive Varroa mites, while reducing the need for in-hive use of miticides that can likewise harm colony health. “If sunflowers are as big of a factor in mite infestation as indicated by our landscape-level correlations … having a few more acres of sunflower within a mile or two of apiaries could bring colonies below the infestation levels that require treatment of hives with acaracides (i.e., mite-controlling chemicals),” said lead author Evan Palmer-Young, PhD, of USDA’s Bee Research Lab in Beltsville, MD.

Prior research has pointed to sunflower pollen as a potential benefit for a number of common bee diseases and infestations, including the Varroa mite, the fungal parasites Nosema spp, and various viruses. Investigations went through four different experiments aimed at characterizing any potential effects. The first focused on landscape associations between Varroa mites and Nosema using National data on over 400 apiaries in 30 states, comparing the amount of sunflower crop area to colony health. The second took a group of 30 bee colonies at the University of Maryland and supplemented their feeding with either an artificial pollen patty, sunflower patty, or wildflower patty during the late summer to early fall, and then assessing the prevalence of mites and disease. The third supplemented a group of 30 colonies in Massachusetts with the same pollen options in springtime, and then evaluated colony health. The last experiment focused on the impact of sunflower pollen on worker bees already infected with Nosema and deformed wing virus.

For the initial experiment on landscape associations, areas with more sunflower production were found to have lower levels of mite infestation. For every doubling of sunflower crop production, models employed show a nearly 1/3 decrease in varroa mite infestation. For the fall pollen feeding experiment, colonies fed sunflower pollen saw a 2.75 fold reduction in the intensity of Varroa infestation compared to the artificial pollen treatment. For the spring feeding, Varroa was found in only one-third of hives sampled. Neither the fall nor spring feed experiment, or the individual caged bee experiment saw a significant effect on viral loading or Nosema prevalence, however. “Although we did not find significant effects of sunflower pollen on endopasrasites [Nosema ceranae] or viruses in laboratory or field settings, sunflower pollen was associated with reduced levels of Varroa mites in honey bee colonies,” the authors write.

This finding is important in the context of declining diversity in U.S. crops. According to the study, the acreage of US farmland under sunflower production has declined by 2% per year since 1980.

While the pesticide industry often cites Varroa mites as the primary factor in pollinator declines, it is critical to understand that pesticides are playing a role in this phenomenon. Evidence shows that exposure to neonicotinoid insecticides increase honey bee vulnerability to mite problems. While mites infestations are relatively simple to diagnose in the field, it is much more difficult to test for insecticide exposure in a hive, requiring specialized labs and equipment.

Typical approaches to Varroa management include regular hive treatments with various miticides, many of which can likewise place a colony at risk. Any approach that will allow beekeepers to reduce stress on honey bee hives provides important benefits. “If sunflower pollen can be used to effectively manage Varroa mites, the timing of sunflower pollen production—which peaks in late summer (in temperate regions), just as mite levels begin to rise towards their peak in October and November (Traynor et al. 2016)—is ideal for reducing infestation during the critical late-season time frame,” the study notes.

Nearly a decade ago, then-President Obama established a Presidential Pollinator Health Task Force aimed at reversing declines in honey bees and other pollinators, coordinating action among various government agencies, and including guidelines for federal agencies to protect pollinators. USDA did announce some actions to increase habitat, but neglected other factors like pesticides, and only two years later, the Government Accountability Office cited USDA and the U.S. Environmental Protection Agency for its failure to address threats to pollinator populations. While the Trump administration took an antagonistic approach towards pollinator safety, siding with industry and delaying even the listing of an endangered pollinator, President Biden has yet to pick up the important work that President Obama began, or take any similar steps to protect pollinators.

With a vacuum in leadership at the top, both managed and wild pollinators continue to suffer unacceptable declines that threaten not only the health of ecosystems, but critical food sources humans rely upon. Earlier this year a study found pollinator declines are the reducing the global production of nuts, fruits, and vegetables by 3-5% annually, and this

loss of healthy, nutrient-dense food is resulting in over 425,000 excess deaths each year.

Join Beyond Pesticides in urging the Biden administration to take meaningful steps to reform pesticide regulation and address the coinciding existential crises of our time – climate change, public health, and pollinator and biodiversity decline.

All unattributed positions and opinions in this piece are those of Beyond Pesticides.
Source: Entomology Today, Journal of Economic Entomology
https://beyondpesticides.org/dailynewsblog/2023/01/growing-sunflowers-near-honey-bee-colonies-helps-reduce-mite-problems/

Raw Honey from Argentina, Brazil, India, and Vietnam Injures U.S. Industry, Says USITC

May 11, 2022
News Release 22-058
Inv. No. 731-TA-1560-1562 and 731-TA-1564 (Final)

Contact: Jennifer Andberg, 202-205-1819

Raw Honey from Argentina, Brazil, India, and Vietnam Injures U.S. Industry, Says USITC

The United States International Trade Commission (USITC) today determined that a U.S. industry is materially injured by reason of imports of raw honey from Argentina, Brazil, India, and Vietnam that the U.S. Department of Commerce (Commerce) has determined are sold in the United States at less than fair value.

Chair Jason E. Kearns, Vice Chair Randolph J. Stayin, and Commissioners David S. Johanson, Rhonda K. Schmidtlein, and Amy A. Karpel voted in the affirmative.

As a result of the Commission's affirmative determinations, Commerce will issue antidumping duty orders on imports of this product from Argentina, Brazil, India, and Vietnam.

The Commission made a negative critical circumstances finding with regard to imports of this product from Argentina. The Commission made an affirmative critical circumstances finding with regard to imports of this product from Vietnam.

The Commission's public report *Raw Honey from Argentina, Brazil, India, and Vietnam* (Inv. Nos. 731-TA-1560-1562 and 731-TA-1564 (Final), USITC Publication 5327, May 2022) will contain the views of the Commission and information developed during the investigations.

The report will be available by June 20, 2022; when available, it may be accessed on the USITC website at: *http://pubapps.usitc.gov/applications/publogs/qry_publication_loglist.asp*.

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC 20436

FACTUAL HIGHLIGHTS

Raw Honey from Argentina, Brazil, India, and Vietnam

Investigation Nos.: 731-TA-1560-1562, 1564 (Final)

Product Description: Honey is a sweet, viscous fluid produced from the nectar of plants and flowers which is collected by honeybees, transformed, and combined with substances of their own, and stored and left in honeycombs to mature and ripen. Raw honey is honey as it exists in the beehive or as obtained by extraction, settling and skimming, or straining.

Status of Proceedings:

1. Type of investigation: Final antidumping duty investigations.
2. Petitioners: American Honey Producers Association ("AHPA"), Bruce, South Dakota; and Sioux Honey Association ("SHA"), Sioux City, Iowa.
3. USITC Institution Date: Wednesday, April 21, 2021.
4. USITC Hearing Date: Tuesday, April 12, 2022.
5. USITC Vote Date: Wednesday, May 11, 2022.
6. USITC Notification to Commerce Date: Tuesday, May 31, 2022.

U.S. Industry in 2020:

1. Number of U.S. producers: approximately 30,000 to 60,000.
2. Location of producers' plants: North Dakota, South Dakota, California, Texas, Montana, Florida, Minnesota, and Michigan
3. Production and related workers: 1,360.
4. U.S. producers' U.S. shipments: $302 million.
5. Apparent U.S. consumption: $690 million.
6. Ratio of subject imports to apparent U.S. consumption: 42.8 percent.

U.S. Imports in 2020:

1. Subject imports: $296 million.
2. Nonsubject imports: $93 million.

3. Leading import sources: Argentina, Brazil, India, Vietnam.

https://www.usitc.gov/press_room/news_release/2022/er0511ll1935.htm

What does this mean for beekeepers?

The decision will be transmitted to the Commerce Department, which will issue antidumping duty orders shortly. In addition, the Commission reached an affirmative critical circumstances determination against Vietnam. This means that U.S. Customs will collect antidumping duties on entries going back an additional 90 days prior to the preliminary antidumping duty determination—from August 28, 2020, forward. This is an important additional finding, and one that the Commission rarely makes.

These results should continue to ensure that the American honey producer gets the fair prices they deserve.

We truly appreciate all of the donations that we have received to cover legal fees.

The good fight isn't over yet, however, and we still need your support.

To donate to the Antidumping Fund, please contact
Cassie Cox: cassie@ahpanet.com
281-900-9740

Or donate on our secure website: https://www.ahpanet.com/donations-1

American Honey Producers Association

AHPA App

As AHPA continues to work on behalf of all beekeepers, one of our initiatives is advocating with the FDA in Washington D.C. to update honey labeling guidelines. As part of this effort, we need your help to collect pictures of honey labels from around the United States. Our goal is primarily to find honey that is mislabeled according to current FDA guidelines. Secondarily, we need examples of any labels which misrepresent country of origin or are purposefully confusing to consumers so that we can advocate for positive changes and updates.

Search the App Store or Google Play for "AHPA app". We need to collect as many pictures from honey on the store shelf as possible. Please take a few minutes to help collect this data.
