





LATEST NEWS

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Annual Conference & Trade Show



December 4 - 7, 2023 Monday - Thursday Marriott Mission Valley Hotel



Australian Broadcasting Corporation

Bee pest varroa may have arrived in Australia 12 months earlier than detected

Vic Country Hour

Broadcast Tue 14 Feb 2023 at 6:00pm



The bee pest varroa destructor mite could have been in Australia for up to a year before it was detected in New South Wales.

The bee pest was first discovered at the Port of Newcastle in June, 2022, and 114 premises have been infected since.

Dr Chris Locke, deputy secretary of Biosecurity and Compliance with the Federal Department of Agriculture,

told Senate Estimates in Canberra, that NSW Department officials believe varroa had been in the country for 12 months earlier than detected.

Under questioning by Greens Senator Peter Whish Wilson about how the varroa mite entered Australia, Dr Locke said multiple modes of entry were being investigated, from air and sea ports to mail.

See Video Here:

https://www.abc.net.au/radio/programs/vic-country-hour/varroa-here-possibly-12-monthsearlier-than-detected/101978500



Penn State University is offering a free webinar series on <u>Beekeeping around the</u> world webinar series.

Webinars will take place from 12 p.m to 1 p.m. ET each Thursday from March 2 to April 13, apart from the March 23 webinar, which will take place from 4 p.m. to 5 p.m. ET. Each week will feature a different location, and presenters will discuss what it is like to keep bees there.

The series will cover the following topics:

- "Apimondia," March 2. Apimondia is the International Federation of Beekeepers' Associations. Participants can learn why beekeeping is a popular and profitable venture around the world.
- "The Canadian Prairies," March 9. Instructors will discuss how bees are kept inside buildings during the long, cold winters in the Canadian Prairies and how large amounts of honey are extracted in the spring.

- "East Africa," March 16. This webinar will focus on beekeeping in Kenya and the challenges beekeepers face; traditional log hives and other styles of hives; and management of highly aggressive colonies.
- "Australia," March 23. Attendees can learn about the parasites that have reached Australia, how authorities are reacting and how beekeepers deal with the pests.
- "China," March 30. China has developed a line of bees that produce royal jelly, which is used in cosmetics and medicine. This webinar will cover how royal jelly is made and harvested and differences between European honey bees and Asian hive bees.
- "Argentina," April 6. This session will focus on drone congregation areas for honey bees, where they form, and how European and African honey bees hybridize.
- "Switzerland," April 13. Participants can learn about managing bees in bee houses and how queen breeders mate their queens in remote parts of the Swiss Alps

https://extension.psu.edu/campaigns/beekeeping-around-the-world



National Honey Board Annual Report

The year 2022 was a milestone for the honey industry and the National Honey Board (NHB). U.S. honey consumption reached a record high. The National Honey Board continued programming that educated consumers on how honey is both "Good for Me" and "Good for the Planet," including the return of the National Honey Month Honey Saves

Hives® initiative and the expansion of the Celebrating Beekeeping video series to Facebook and Instagram. The NHB's commitment to honey research continued in 2022 with nearly \$1 million in funding for research on consumer awareness, bee health, nutrition and more. The National Honey Board remains committed to continuing this success for the honey industry for many years to come.

To watch the full Annual Report Video, click here.

NHB Shares New Strategic Plan

The National Honey Board developed a new strategic plan, which will serve as the guiding light for the NHB's initiatives on behalf of the honey industry moving forward. The plan outlines the objectives, strategies and key performance indicators for marketing, industry outreach and research in 2023 and moving forward.

This plan will help the National Honey Board continue to work toward our goals of:

- Increasing honey demand
- Connecting the dots between consuming honey and how that supports the beekeepers and ultimately the greater food supply
- Serving as the go-to resource for all things honey
- Unifying the greater honey industry

To read the full strategic plan, please click here.



Neonicotinoids Combined with Other Pesticides Elevate Hazards to Honey Bee



(Beyond Pesticides, February 22, 2023) Combining neonicotinoid insecticides with other commonly used pesticides can result in synergistic effects on honey bees, increasing toxicity more than any individual chemical could, according to research published in <u>Scientific Reports</u> earlier this month. The data highlight the grave inadequacy of the U.S. Environmental Protection Agency's (EPA) process for evaluating pesticide risks. Under current regulations, EPA requires chemical manufacturers to submit data only on singular active ingredients. Yet, pesticide products may be packaged or 'tank mixed' with other, equally toxic pesticides without any obligation to determine the toxicity of the material that is actually being applied. Independent research is left to fill in these gaps, and the data increasingly shows that toxicity with pesticide mixtures amounts to a roll of the dice: sometimes combinations are less toxic, sometimes their toxicities are merely additive. But more often than not, pesticide mixtures result in synergistic effects that make the product significantly more toxic than either individual chemical alone.

To understand how pesticide combinations are harming pollinators, scientists began with baseline data on the individual toxicity range that common pesticides pose to honey bee colonies. Research was conducted on honey bees reared in the Stoneville Wildlife Management Area in Mississippi, with each colony containing a healthy egg-laying queen and nine frames of comb with honey, pollen, larvae, and pupae. Toxicity was measured by the lethal concentration that killed more than 50% of exposed pollinators after two days of treatment in a sugar solution. Among the eight pesticides tested, honey bee toxicity was as follows from most to least toxic: the neonicotinoid insecticide <u>thiamethoxam</u>, the organophosphate insecticide <u>dimethoate</u>, the carbamate insecticide <u>methomyl</u>, the synthetic pyrethroid insecticides <u>permethrin</u>, and then <u>cypermethrin</u>, the triazole fungicide <u>tetraconazole</u>, and the synthetic pyrethroids <u>cyfluthrin</u> and then <u>esfenvalerate</u>. These results did change based on different treatment lengths, yet thiamethoxam was found to remain the most toxic throughout all studies.

In the study, scientists evaluate a total of 98 different mixtures, from binary combinations of two different chemicals to octonary combinations of all eight different pesticides. Within these tests, approximately 30% of these were found to be synergistic to honey bees, exhibiting toxicity greater than each individual material in the mixture. Only 18% of these combinations were antagonistic, and presented lower risks to the pollinators.

Perhaps the most concerning interaction came from combinations that included thiamethoxam and the fungicide tetraconazole. Any variation of pesticide combinations that include these two chemicals have a roughly 55% chance of exhibiting synergistic toxicity to honey bees. "In other words, the synergistic interaction between THI [thiamethoxam] and TET [tetraconazole] could transcend the effect of the additive or antagonistic interactions among other pesticide combinations," the study notes.

This is not the first time tetraconazole has been implicated in generating synergistic toxicity. A study by the same authors of another neonicotinoid, acetamiprid, <u>found similar</u> results when combining that neonicotinoid with tetraconazole.

It is also important to note that this study focuses on the acute toxicity of these pesticide combinations to pollinators; it does not capture chronic or sublethal impacts, <u>on which</u> there is a broad body of scientific literature showing harm that can eventually result in the deaths of individual pollinators or even the collapse of entire colonies. The authors note this limitation in their discussion, indicating that, "Apart from lethal effects, some reports have demonstrated that exposure to field-realistic concentrations of neonicotinoids can exert sub-lethal effects on the bees. Therefore, it is necessary to conduct chronic

determinations for pesticide exposure in the pollination insects...some studies have shown that neonicotinoids have time-dependent and time-cumulative effects, so that the risk of foraging bees feeding on small levels of residues becomes an unignorable issue. This means that these pesticides can cause effects at any level if the exposure duration is sufficient. Therefore, the traditional risk assessment method can not predict the influences of neonicotinoids on the environment."

It is indeed the traditional risk assessment process that is now failing pollinators. Beekeepers and managed honey bees continue to experience devastating losses, while wild pollinators like the American bumblebee and Monarch butterfly flirt with extinction. It is clear that neonicotinoids are harming pollinators; as DDT was to birds of prey neonicotinoids are to pollinators. These species are the bald eagles and osprey of our time. It is now commonly knowledge that the reason why we now see increasing populations of these animals are because we protected them from toxic pesticides when it was most needed.

Join in telling Congress that the nation's pesticide law needs real reform. Not only must we stop the ongoing use of neonicotinoids, we must prevent the next DDT, and the next neonicotinoids from ever coming to market in the first place.

All unattributed positions and opinions in this piece are those of Beyond Pesticides. Source: <u>Scientific Reports</u>

https://beyondpesticides.org/dailynewsblog/2023/02/neonicotinoids-combined-with-other-pesticides-elevate-hazards-to-honey-bee/



Fluorescent protein sheds light on bee

brains

by Heinrich-Heine-Universität Düsseldorf March 3, 2023



An international team of bee researchers involving Heinrich Heine University Düsseldorf (HHU) has integrated a calcium sensor into honey bees to enable the study of neural information processing including response to odors. This also provides insights into how social behavior is located in the brain, as the researchers now

report in the scientific journal PLOS Biology.

Insects are important so-called model organisms for research. Despite more than 600 million years of independent evolution, insects share more than 60% of their DNA with humans. For several decades it was mainly the fruit fly whose <u>genetic code</u> could be used to study biological processes.

Later, such research was expanded to other insects, with particularly promising results coming from the <u>honey bee</u>. Bees display complex <u>social behavior</u>—they perform sophisticated behaviors while employing orientation, communication, learning and memory abilities, which make them interesting subjects for research into the brain's function and

neural processing.

A team of researchers from the Universities in Düsseldorf, Frankfurt am Main, Paris-Saclay and Trento has now developed a method to enable direct observation of bee brains, a work which has now been published in PLOS Biology.

A <u>calcium sensor</u> was integrated into the neurons. Calcium plays an important role in nerve cell activity. "We modified the genetic code of honey bees to make their brain cells produce a fluorescent protein, a sort of sensor that allows us to monitor the areas that are activated in response to environmental stimuli. The intensity of the light emitted varies according to <u>neural activity</u>," explains Dr. Albrecht Haase, Professor of Neurophysics at the University of Trento.

Professor Beye indicates that "the realization of this 'sensor bee' was particularly challenging because we had to work on the DNA of queen bees. Unlike <u>fruit flies</u>, the queen bee cannot easily be maintained in the laboratory, because each one needs its own colony."

The research started with the inoculation of a specific genetic sequence into over 4,000 bee eggs. The protracted breeding, testing and selection process ultimately resulted in seven queens carrying the genetic sensor. When they reproduced in their own colony, the queens transmitted the gene to some of their offspring.

The sensor developed by the team of researchers was then used to study the bees' sense of smell and how the perception of smell is encoded in the neurons. Dr. Julie Carcaud, Assistant Professor at the University of Paris-Saclay and Dr. Jean-Christophe Sandoz, Research Director at CNRS in Paris, explain, "The insects were stimulated with various odors and observed with a high-resolution microscope. This made it possible to detect which brain cells are activated by these smells and how this information is distributed in the brain."

Dr. Marianne Otte, co-author of the study from Düsseldorf, says, "The recordings were performed in vivo using techniques which enabled us to look into the brains of the bees. The insects were fixed in a measuring stand and then presented with various odor stimuli." Professor Dr. Bernd Grünewald, from Goethe University Frankfurt am Main and Director of the Honeybee Research Center in Oberursel, says, "The new 'sensor bee' makes it possible to study how communication works within colonies and, more generally, how sociality affects the animals' brains."

https://phys.org/news/2023-03-fluorescent-protein-bee-brains.html



PLEASE REPORT!



There have been reports of bee shortages for almond pollination and above average bee losses in California

Please report any above average bee losses to USDA leadership. They have teams collecting samples in California over the next few weeks.

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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.
- 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



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.

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