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### Annual Conference & Trade Show



December 4 - 7, 2023

Monday - Thursday

Marriott Mission Valley Hotel

### **CDSOA/Byrd Amendment Information**

Opportunity for AHPA Members to Receive Dumping and
Countervailing Duties Collected on
Honey Imports from China and Argentina

In the fall of each year, the federal government distributes to eligible domestic producers the duties the government has assessed and collected on certain imports that are subject to antidumping ("AD") and countervailing duty ("CVD") orders. For purposes relevant to

China and Argentina that was imported into the United States between December 2001 and September 2007, the period during which the so-called "Byrd Amendment" was in effect.

We do not yet know how much money will be distributed this year under the China and Argentina Honey Orders. U.S. Customs and Border Protection ("CBP") recently stated in its annual "preliminary amounts available" report that it did not collect any duties or related interest under those Orders for the first seven months of FY 2023 (Oct. 2022 - Apr. 2023). Nevertheless, CBP may well collect some small or large amount of duties and interest under the Orders during the last five months of FY 2023 (May – Sept. 2023). If it does, the agency will include those funds in this year's distribution in November.

Each AHPA member that meets all four of the following requirements is eligible to apply for a "distribution" of the duties collected during FY 2023:

- (1) The member was an AHPA member in good standing (including having fully paid its dues) in 2000, when the Petition requesting the AD/CVD honey trade investigations was filed:
- (2) The member has fully paid <u>all</u> of its membership dues for <u>each year</u> from <u>2000 to</u> 2023:
- (3) The member has continuously produced and sold raw honey from 2000 to 2023; and
- (4) The member is <u>not</u> a member of Sioux Honey Association ("SHA") or, if it is an SHA member, the member will not receive any part of distributions SHA will receive for FY 2023.

The AHPA will soon submit to the federal government an updated AHPA membership list that will include only those members that meet the first three of these four requirements. Any AHPA member that has not paid its dues through 2023 will not be included on the list the AHPA provides to the government and thus will not be eligible to receive a distribution of the duties collected during FY 2023.

In order to receive a distribution of the collected duties, qualifying AHPA members (i.e., those that meet the four requirements above) must submit to CBP a certification making claims for a distribution under the three AD and CVD trade orders on honey imports from China and Argentina.

Any certification received by CBP after that date will not be considered. In addition, to the extent you submit your certification to CBP in hard copy, you need to submit three copies of the certification.

Please note: if you are a member of the Sioux Honey Association ("SHA"), you do not need to file - <u>and you should not file</u> - any Byrd Amendment application, because SHA, as a cooperative, is filing on behalf of all of its members.

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## Research seeks insights on honeybee diets for healthier hives

Texas A&M AgriLife scientists examine sustainable beekeeping, agriculture and urban development

July 12, 2023

By Adam Russell

The old health idiom "you are what you eat" also applies to honeybees.

<u>Texas A&M AgriLife Research</u> scientists are studying how pollen diversity affects the nutritional quality of honeybee diets, including asking foundational questions about how nutrition can sustain healthier colonies.

The four-year study is funded by a \$750,000 grant from the <u>U.S. Department of Agriculture</u> <u>National Institute of Food and Agriculture</u>. It will be conducted by co-principal investigators <u>Juliana Rangel, Ph.D.</u>, and <u>Spencer Behmer, Ph.D.</u>, both professors in the <u>Department of Entomology</u> within the Texas A&M <u>College of Agriculture and Life Sciences</u>.

The project is exploring honeybee nutrition across multiple landscapes and will provide a multidimensional analysis of pollen as a nutritional resource. It will also examine how bees regulate the collection and consumption of pollen.

The research could provide insights that will guide beekeepers, traditional agricultural methods, and urban/suburban development planning in ways that impact food production, ecosystem health and overall sustainability.

Rangel and Behmer bring together expertise in honeybee biology and insect nutritional physiology, respectively, to investigate the complex relationship between diet and nutrition in honeybees. Their collaboration will analyze how honeybees make decisions when presented with

"Our research focuses on understanding how honeybees choose the best possible combinations of nutrients when given choices between different food resources," Rangel said. "We are particularly interested in their preferences for pollen, which is their main source of dietary protein, and lipids, plus other essential micronutrients."

### Nutrition's role in honeybee and hive health

Poor nutrition and landscape changes are two major contributors to losses of over 40% of managed honeybees in the U.S. annually, according to the <u>Bee Informed Partnership</u>. However, the definition of "poor nutrition" for honeybees remains unclear, Behmer said, and the characterization of available nutritional resources across various landscapes is also insufficient.

Behmer said nutritional deficiencies can have negative cascading effects on bees and colonies. Much of the impact of poor nutrition begins in brood food, a milky substance produced by nurse bees to feed bee larvae. Deficiencies of key nutritional components in brood food, especially protein and key lipids, can lead to poor physiological development that can cause undersized adults, deformities and compromise the immune system.

Rangel said preliminary work suggests honeybees tightly regulate their protein and lipid intake, and the fatty acid composition of lipids could play an important role in the bees' nutritional preferences.

"Honeybees balance their protein-lipid intake, ensuring they do not overconsume either nutrient beyond what is required," Rangel said. "This balanced approach ultimately contributes to their overall health and well-being."

### Answering fundamental questions about honeybee diets

The researchers' overarching hypothesis is that honeybees tightly regulate their intake of multiple nutrients using a two-level process. First, foragers selectively collect pollen based on its nutritional content. Next, nurse bees selectively feed on stored pollen, or bee bread, to balance their nutrient intake, which optimizes their performance and the brood food they produce for larvae.

Rangel and Behmer suspect the nutritional content of pollen varies across landscapes and seasons, but that both foragers and nurse bees can assess the variability and respond appropriately.

### The study has three objectives to answer their research questions.

First, researchers will conduct a comprehensive nutrient analysis of pollen, examining the

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and rural – while considering seasonal variations.

Second, they plan to perform a multidimensional nutrient analysis of bee bread to gain insights into the role of predigestive pollen processing. This will reveal how nutritional inputs change as pollen is turned into bee bread.

Lastly, the study will characterize the connection between the fatty acid composition of bee bread, nurse bee feeding behavior and physiology, and the overall performance of the colony. The data generated through these objectives will equip beekeepers with valuable insights, enabling them to provide necessary dietary supplementation and improve the health

of their colonies.

"Protein has typically been viewed as the key dietary currency, but our feeding experiments with nurse bees suggest that lipids are also really important," Behmer said. "Lipids, besides providing energy, are important structural components in cellular membranes and as precursors for molecules linked to immunity. We are realizing that honeybee diets are multidimensional and are foundational to their ability to meet challenges and deal with stress."

### Understanding what bees eat is important

The researchers are also interested in understanding whether honeybees make forage and dietary choices based on the colony's nutritional needs or if they collect food at random or based on availability. Behmer and Rangel believe the honeybees make purposeful decisions based on the nutritional requirements of the colony when available.

But forage diversity may not always be available in environments such as urban/suburban or agricultural production areas.

Urban/suburban development can strip a landscape of native pollinator plants, while traditional agricultural production consists of large monoculture crops, many of which rely on bees to pollinate, Behmer said. The lack of forage diversity may lead to nutrient deficiencies in honeybee

Subscribe Past Issues health of the hive.

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Behmer is interested in the macronutrients that bees prefer and need at the various stages of their 30-50-day lives as they take on a series of roles within the hive.

Bees are social insects, Rangel said, and they divide labor within the hive. They also have different nutritional needs as they age.

The first assignment for adult honeybee workers is as cell cleaners before they undergo a physiological change to become nurse bees around four to 10 days into their lives. Nurse bees are the main consumers of bee bread made from collected pollen. They consume the bee bread to transform it inside their bodies to produce brood food for the larvae.

The nurses then become middle-aged workers that perform centralized tasks around the hive until they are 20-21 days old when they become foragers. Forager bees collect pollen for the hive until they die.

Behmer said researchers want to better understand how foragers go about their duties and what range of plant varieties provide balanced nutrition for bees of all ages within a healthy colony.

The understanding could provide beekeepers, agricultural production or urban development managers with prescribed guidelines for managing crops and landscapes to help honeybees, which are critical contributors to both healthy ecosystems and food production.

"Honeybees are important to humans, but they also impact wildlife and the entire food chain more broadly," Behmer said. "If we understand how to maintain a richer nutritional environment for honeybees, we can take management steps that make the entire system healthier and sustainable."

https://agrilifetoday.tamu.edu/2023/07/12/honeybee-diets/



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### HOIH pesticiues actually work?

by Entomological Society of America



Responsible use of pesticides includes striving to avoid negative effects on the environment, often with an emphasis on protecting bees and other pollinators. A new study, however, finds that many common methods for minimizing pesticides' impact on bees—even some recommendations on product labels—are backed by minimal scientific evidence.

The researchers behind the study say stronger testing is needed to evaluate which beeprotection measures are truly effective and which ones may be too reliant on conventional wisdom. They share their analysis in a report published in the Journal of Economic Entomology.

Growers are urged to follow a variety of "mitigation measures" meant to protect bees during <u>pesticide applications</u>, such as spraying at night, using specific nozzles on sprayers, or maintaining buffer zones.

"It takes time, money, and effort to follow these rules, so if they are not actually helpful, they are a waste of time," says Edward Straw, Ph.D., a postdoctoral researcher in the School of Agriculture and Food Science at University College Dublin (UCD) in Ireland and lead author on the study. "If they are helpful, though, they could be applied more widely, to protect bees further."

Straw and colleague Dara Stanley, Ph.D., assistant professor in applied entomology at UCD, combed published, peer-reviewed research for studies that evaluated the effectiveness of any kind of mitigation measure in reducing a pesticide's impact on bees. Just 34 studies matched

Subscribe Past Issues a wide range of measures—but largely focused on just one Translate ▼

"Almost all research was centered around protecting honey bees. However, honey bees are a managed species that is not endangered," Straw says. "When we try to protect bees, we really want to be protecting wild, unmanaged bee species, as these are the species which are in decline."

Few mitigation measures had more than one or two studies evaluating their effectiveness, and methods of testing varied. For instance, some studies tested for direct overspray while others tested for longer-term pesticide residues. And just three studies among Straw and Stanley's review evaluated measures frequently found on pesticide labels.

"Least researched was testing on how you time a pesticide spray, be that time of day or time of year," Straw says. "There's good reason to believe that if you change when you spray, you could avoid peaks in bee activity. Yet surprisingly no one has really researched if this idea works. This is odd, as it's a very common mitigation measure and not overly hard to test."

Other mitigation measures tested in existing studies included how pesticides are applied (e.g., spray parameters or planting methods for pesticide-coated seeds), <u>buffer zones</u>, removing flowering weeds before spraying, direct interventions for managed bees (e.g., moving or covering colonies), and applying pesticides only in certain weather conditions or during certain crop stages.

A newer method had the most studies (12) investigating its potential: repellent additives to pesticide sprays, which encourage bees to avoid a recently sprayed crop. Several compounds have shown promise in lab testing, but all 12 studies tested repellency for honey bees only, and none were tested in formulation with a pesticide—only on their own.

"It is an interesting idea, but it is not yet ready to be used," says Straw. "It would need to be tested on a diversity of bee and insect species, as if it is only repellent to one or two species, all the other <u>bees</u> would still be exposed to the pesticide."

In sum, Straw and Stanley say too much hinges on bee-protective measures for them to be weakly supported. Bees play a critical role in both <u>natural ecosystems</u> and agriculture, and the presumption that mitigation measures are effective can be factored into decisions to authorize pesticides for use. Rigorous scientific evaluation of these measures is imperative, they say.

"The main limitation is that these studies need to be big, well-funded pieces of research. To test changes to how a pesticide is applied to a crop, you need to have a crop, a pesticide sprayer,

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But, if such research can be generated, there's reason to believe it will have immediate positive impacts. In related research Straw and Stanely published earlier this year, compliance with pesticide regulations and guidelines among farmers in an anonymous survey was high. "We know that these mitigation measures are being followed," says Straw. "We just do not know if they are helpful yet."

https://phys.org/news/2023-07-common-methods-bees-pesticides.html



# International research team studies honey bees in canola

It is estimated honey 70 per cent of the honey produced in Western Canada comes from canola.

Calvin Daniels

Jul 18, 2023 2:00 PM



YORKTON - Canola is the key crop in terms of farm returns in Saskatchewan.

To attain a good crop though the flowers need to be pollinated and that work is typically carried out by the humble honey bee.

"There's a relationship between honey bees and canola. A very good relationship," said Marcelo Camilli, a Brazilian researcher currently in Saskatchewan studying the relationship.

"What we see here is bees flourish in canola."

Camilli said it is estimated honey 70 per cent of the honey produced in Western Canada comes

And the pollinating service by honey bees can increase the canola yield by an estimated \$1.5 billion.

But what happens when farmers need to apply pesticides to their canola? Does it impact the health of honey bee hives? Does it impact the honey produced?

"What is the safe dose range for honey bees?" asked Camilli.

At present Camilli said there simply isn't the research to know for sure.

"We don't have large scale data," he told Yorkton This Week.

Answers to such questions are what a team of international researchers are looking for in a three-year study initiated this summer.

The study is being carried out with bees established at 20 sites across Saskatchewan, 15 in canola stands and five in boreal forest sites, the latter as a control. Sites include five that spread from Grenfell to Kamsack in east central Saskatchewan.

"It's the largest project in all of Canada," said Camilli, during a recent stopover in Springside. The team is staying with Kenn and Nancy Wood as they work in the local area.

The canola fields, provided in cooperation with producers, will be managed normally, said Camilli, so should a crop protection product need to be applied it can be as normal, although farmers are asked to complete a questionnaire covering variety grown, seed treatments used, and chemicals applied.

Camilli explained the researchers will be measuring the levels of pesticide residue in the bees themselves, the pollen they collect, the honey produced and in the soil of the fields.

While the main focus is the honey bee, the project will also be monitoring native, wild pollinators as well. While currently there does not seem to be great concern with pesticide application impacting honey bees from apiarists, the study will provide some much-needed data. "We've come to see the real situation," said Serbian researcher Uros Glavinic.

The international team including USask students Erin Baril and Debby Peng was drawn together because of a common interest in the honey bee.

Subscribe Past Issues | s quite small, and people know each other," said Glavinic. | Translate ▼

Each person brings their own skill set to the project.

"All of us have some special side," said Glavinic, who is focused on bee genetics.

Each has practical beekeeping experience too.

For example Camilli began beekeeping with his grandfather, which inspired him to pursue biology, and researching honeybees was a natural extension of his interests. As a result, he completed his Masters and PhD, both focused on honeybees.

Dr. Sarah Wood, who grew up in Yorkton, oversees the project. Wood holds the position of USask Pollinator Health Research Chair at the Western College of Veterinary Medicine (WCVM). She is also an associate professor in the WCVM's Department of Veterinary Pathology and is board certified with the American College of Veterinary Pathologists (ACVP). Wood's research interests include infectious diseases of honey bees, pesticide risk assessment for pollinators, quantifying pollinator contributions to agricultural productivity, and developing honey bees as experimental models for human and animal disease.

The team is expecting to release primary data after this year's cycle is complete, and then in each subsequent year of the project.

The large scale, multi-year project is possible through a number of funding and co-operating groups, said Camilli, including BASF SaskCanola, Saskatchewan Beekeepers Development Commission, Mitacs a non-profit national research organization, and the University of Saskatchewan.

https://www.sasktoday.ca/central/agriculture/international-research-team-studies-honey-bees-in-canola-7286453



# Bees make decisions better and faster than we do, for the things that matter to them

Honey bees have to balance effort, risk and reward, making rapid and accurate assessments of

Subscribe Past Issues likely to offer food for their hive. Research published in the journal of the Translate ▼

decisions and reduce risk.

The study enhances our understanding of insect brains, how our own brains evolved, and how to design better robots.

The paper presents a model of decision-making in bees and outlines the paths in their brains that enable fast decision-making. The study was led by Professor Andrew Barron from Macquarie University in Sydney, and Dr HaDi MaBouDi, Neville Dearden and Professor James Marshall from the University of Sheffield.

"Decision-making is at the core of cognition," says Professor Barron. "It's the result of an evaluation of possible outcomes, and animal lives are full of decisions. A honey bee has a brain smaller than a sesame seed. And yet she can make decisions faster and more accurately than we can. A robot programmed to do a bee's job would need the back up of a supercomputer.

"Today's autonomous robots largely work with the support of remote computing," Professor Barron continues. "Drones are relatively brainless, they have to be in wireless communication with a data centre. This technology path will never allow a drone to truly explore Mars solo -- NASA's amazing rovers on Mars have travelled about 75 kilometres in years of exploration."

Bees need to work quickly and efficiently, finding nectar and returning it to the hive, while avoiding predators. They need to make decisions. Which flower will have nectar? While they're flying, they're only prone to aerial attack. When they land to feed, they're vulnerable to spiders and other predators, some of which use camouflage to look like flowers.

"We trained 20 bees to recognise five different coloured 'flower disks'. Blue flowers always had sugar syrup," says Dr MaBouDi. "Green flowers always had quinine [tonic water] with a bitter taste for bees. Other colours sometimes had glucose."

"Then we introduced each bee to a 'garden' where the 'flowers' just had distilled water. We filmed each bee then watched more than 40 hours of video, tracking the path of the bees and timing how long it took them to make a decision.

"If the bees were confident that a flower would have food, then they quickly decided to land on it taking an average of 0.6 seconds)," says Dr MaBouDi. "If they were confident that a flower would not have food, they made a decision just as quickly."

If they were unsure, then they took much more time -- on average 1.4 seconds -- and the time

The team then built a computer model from first principles aiming to replicate the bees' decision-making process. They found the structure of their computer model looked very similar to the physical layout of a bee brain.

"Our study has demonstrated complex autonomous decision-making with minimal neural circuitry," says Professor Marshall. "Now we know how bees make such smart decisions, we are studying how they are so fast at gathering and sampling information. We think bees are using their flight movements to enhance their visual system to make them better at detecting the best flowers."

Al researchers can learn much from insects and other 'simple' animals. Millions of years of evolution has led to incredibly efficient brains with very low power requirements. The future of Al in industry will be inspired by biology, says Professor Marshall, who co-founded Opteran, a company that reverse-engineers insect brain algorithms to enable machines to move autonomously, like nature.

https://www.sciencedaily.com/releases/2023/07/230710113824.htm



# 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)

### 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/gry\_publication\_loglist.asp.

### UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, DC 20436

4/10/24, 12:46 PM

### **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:

Subscribe	Type of investigation: Final antidumping duty investigations.	Translate ▼
		Letor 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/er0511II1935.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.

281-900-9740

Or donate on our secure website: <a href="https://www.ahpanet.com/donations-1">https://www.ahpanet.com/donations-1</a>



## **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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