CENTRAL COAST BEEKEEPERS NEWSLETTER

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NEXT MEETING September 28, 2022

This Month: Guest Speaker Dr. Ramesh Sagili

This month Dr. Ramesh Sagili from OSU will join us to discuss the latest OSU research. He will also outline steps to get our bees ready to successfully overwinter. A profile of Ramesh by the National Institute of Food and Agriculture is below.

We will also be raffling off a free registration to the OSBA conference and deciding on our contribution to OSU research.

We will be meeting on September 28th at 6:00 pm at the Newport Extension office. **The LC Extension Office is at 1211 SE Bay Blvd., Newport, OR 97365**, on the Newport Bay front, just beyond the Embarcadero on the opposite side of the street.

PRESIDENT'S MESSAGE

By Pat Wackford

In August we did not have a regular meeting but held our Annual Picnic and bbq at my home. There was a good turnout. Club members told a little about themselves and their bees. Several new members had the opportunity to get information from those that have had bees for some time.

In contrast, the last two club meeting were not well attended and I was at a loss to why. Until I read Shelly Stewart's article in the American Bee Journal, September, 2022, "Bee Clubs, What Are They Good For? " She discussed issues with falling club attendance. I was optimistic our club members would be excited to return to in-person meetings again. Seems they were and then they weren't.

During the pandemic many people turned to their computers for information on Zoom, You Tube, and other social media. There are a number of websites now that still have virtual meetings, information to download and even bee supply companies that have webinars. You can sign up and attend a conference anywhere in the country with well-known speakers. So why attend a local meeting? First, there is a lot of misinformation on line, some videos are silly and just entertainment. Many, if not most of these videos are made by "beekeepers" that have never kept bees on or near the Oregon Coast. Our local club can provide information for new beekeepers and reliable options for keeping bees in our local area. How can you deal with moisture, get hives ready to overwinter, or where do you go to purchase locally raised bees and queens? Club meeting give you a place to ask questions about equipment, how and where to place your hives, when to harvest honey, and when to treat for mites and how often, and so much more. But, in my opinion, most importantly our local club provides an opportunity to meet new people with the same interest. Hope you can come to our next meeting on September 28th at 6 PM at the OSU Extension Office. We will have a speaker from the Oregon State University Bee Lab, Ramesh Sagili.

USDA's National Institute of Food and Agriculture (NIFA) highlights NIFA-funded researcher Dr. Ramesh Sagili, who serves as an associate professor at Oregon State University.

Dr. Ramesh Sagili serves as an associate professor at Oregon State University.
Image provided by Dr. Sagili.

Tell us your journey and how your interest in agriculture developed.

I am originally from India, which is highly dependent on agriculture. The agriculture sector provides more than 50% of jobs. My grandparents were farmers, and hence I had the opportunity to witness the challenges and plight of agriculture/farmers face since I was young. My formal interest in agriculture started after enrolling into a Bachelor of Science degree in an agriculture program in India. Entomology (especially apiculture) was my passion, while pursuing my bachelor's degree. I later enrolled at Texas A&M University to pursue my doctoral degree in entomology, focusing on honey bee research. After completing my Ph.D. and a short post-doctoral stint, I joined **Oregon State University** as an assistant professor in 2009. My current research program aims to address current and emerging problems pertaining to commercial beekeeping industry. The three focus areas of my research are honey bee nutrition, honey bee health, and pollination.

Describe your involvement with NIFA and your role.

I have been fortunate to receive a few research grants from NIFA over the past 12 years to conduct critical honey bee research. I have also had the opportunity to serve on NIFA grant panels.

Could you catch us up on one of your NIFA-funded projects? What is the goal of your project and what impact do you hope it has on your institution and trainees?

The most current NIFA-funded project is an exciting project with the long-term goal of improving bee nutrition by building a first-of-its-kind database of pollen nutritional compositions and understanding phytosterol requirements of bees. This pollen nutritional composition database will serve as robust tool for stakeholders (beekeepers, conservation groups, and growers) in selecting plants for developing bee habitats in a scientific way. Many citizen scientists from across the nation have expressed great interest in this project and agreed to volunteer and collect pollen for the project. We have also established several interdisciplinary collaborations at Oregon State University for this project. We are also providing training to graduate and undergraduate students who are involved in this unique research project. We hope that these trainees will have successful careers at research institutions soon. The post-doc (Dr. Chakrabarti) in my lab who is a co-project investigator on this project recently joined a faculty position at Mississippi State University (MSU) and is now collaborating on this project from MSU and is also training students at that university.

How has NIFA funding shaped your professional development as a scientist?

NIFA funding has not only helped me advance the body of knowledge in key areas of honey bee health and nutrition but has also been instrumental in fostering long-term productive interdisciplinary collaborations both at Oregon State University and across the nation. NIFA-funded research has yielded tangible solutions for our stakeholders, such as best management practices that have increased profitability and sustainability of their enterprises.

What advice do you have for current students who may be interested in pursuing a similar career path?

There are currently numerous challenges facing beekeepers, pollinators and broader agriculture; hence, there exist many opportunities to assist our agricultural stakeholders. Current students should pursue research that they are passionate about and be persistent in their endeavor. Many of the problems facing our stakeholders are complex and need interdisciplinary effort; hence, there is greater need for interdisciplinary collaborative research than before. The new researchers should be proactive and foster interdisciplinary collaborations to be successful in their careers and effectively serve stakeholders (beekeepers and farmers). You will derive immense satisfaction when you realize that your efforts have benefitted your stakeholders even on a small scale.

Photo: Dr. Sagili's current research program aims to address current and emerging problems pertaining to commercial beekeeping industry. Image provided by Dr. Sagili.

Oregon Label Requirements for Extracted Honey

Prepared by Judy Scher for Oregon Master Beekeepers. Checked by Jeff Green Oregon Department of Agriculture.

General Label Requirements (Federal and Oregon)

1. Product Identity: "HONEY" must be prominent and not less than 1/2 the size of the largest font used.

2. Net Weight in Avoirdupois and Metric must be in bottom 1/3 of the label Note: avoirdupois must be in ounces, metric weight is in (grams), use parens around the grams. One pound of honey would be labeled: 16 oz. (454 g)

3. If there are any added ingredients (for example flavoring), the jar no longer contains 100% Honey and an ingredient list must be provided. (see note 4)

4. Name and Address of Manufacturer Note: must be physical address or web site with street address, city, state and zip code - P.O. box is not allowed (see note 1).

5. Smallest print size: lower case "o" is equal to or greater than 1/16 inch.

6. A split label is acceptable. The principal display must contain, at minimum, the name of the product (honey) and the net weight. Other information may be placed on the back panel.

Farm Direct Marketed Honey – (ORS 616.680 and OAR 603-025-0215) "Honey which the beekeeper produces, extracts, and sells directly to retail customers ".

Farm Direct Venue Examples: Farmer's Markets, Buying Clubs, Roadside Stands, CSA organizations, Drop Sites, Church Bazars

Farm Direct Label Requirements

1. General Label Requirements (see above) as required under OAR 603-025-0265(3)

2. Address on the Farm Direct label must contain COUNTY.

3. "THIS PRODUCT IS NOT PREPARED IN AN INSPECTED FOOD ESTABLISHMENT."

4. "NOT FOR RESALE" (2. and 3. must be bold, in caps. Little "o" of the font used no less than 1/16 inch)

5. Producers with 20 hives or fewer are exempt from #2 - 4

Requirements For Type of Enterprise Specific label details are described in federal labeling law 21 CFR 101 (adopted under OAR 603-025-0190)

20 Hives or fewer (need exemption – link to form on p.2 of this document)

General Label Information No inspection required, no licensing required, no fees

May wholesale to retail stores (see note 2)

> 20 Hives and elects exemption from licensing and inspection (Farm Direct)

Farm Direct Label Requirements and general labeling requirements on label

No inspection required, no licensing required, no fees

May only sell direct to consumer in Farm Direct venues. (see note 3)

>20 hives (commercial honey producer)

Required Label Information,

Inspection required, licensing required, fees required.

May sell retail (consumer direct) and wholesale

Notes:

1) The street address (address, city, state and zip code) must be stated on the label or in a current directory. Many firms have placed their street address (which can be the manufacturing address, or separate physical office that is accessible to the public) on their website. The FDA does not currently recognize a website as a current directory. However, a firm may establish a profile on an Internet directory, such as www.dexknows.com, and list the manufacturer name and physical street address. If a physical office address is listed, it must include office hours.

2) Retail stores are wholesale accounts. Retail sales are only directly to the consumer, but exempt hobby producers (20 hives or less) may wholesale to stores.

3) May consign to other agricultural producers, not stores. Some produce stands would qualify as agricultural producers that can consign honey sales. Wholesale (greater than 20 hives) is prohibited unless licensed and inspected.

4) Honey in the comb, cut comb honey or chunk honey must include an ingredient list stating “honey and beeswax”.

Resources:

1) Honey Processors Exemption Form for beekeepers extracting from 20 or less hives: https://www.oregon.gov/ODA/shared/Documents/Publications/FoodSafety/HoneyProcessorsExemptionForm.pdf

2) FDA Food Labeling Guide (2014 draft) https://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/labelingnutrition/ucm2006828.htm

3) Honey.com (these may update) www.honey.com/honey-industry/honey-testing-and-regulations/honey-labeling

BASIC TREATMENT FOR STINGS

It may be sweet harvesting honey, but proximity to bees can lead to stings. Here are some ideas from Mountain Rose Herbs. If you have a special way of dealing with dealing with stings, please let us know! Ed.

1. **Remove the Stinger as Quickly as Possible**—The longer a stinger stays in the skin, the more venom it releases, which increases pain and swelling. *Don't* squeeze it with tweezers or your fingers to remove it as this pinch can push even more venom into your flesh. Instead, use a long fingernail, a credit card, a dull knife, or another blunt-edged object to gently scrape the stinger out. Note: if you were stung by a wasp or hornet, there may not be a stinger.
2. **Wash the Sting with Soap and Water**—If you are home or at a campsite and have soap and water available, quickly wash the sting well.
3. **Apply a Cold Pack to Reduce Swelling**—Apply cold to help reduce swelling and pain: for instance, an ice pack wrapped in thin cloth (ice should not directly touch the skin). Apply cold for 10 minutes, remove for ten minutes, and then repeat this on-off process as needed for 30-60 minutes.
4. **Keep Arms/Legs Elevated to Reduce Swelling**—If the sting is on an arm or leg, keep it elevated as much as possible to reduce swelling.
5. **Don't Scratch!**—Stings can be both painful and itchy, but don't scratch around the area because this will ultimately worsen the itching and swelling and increase your risk of infection.
6. **Watch for Signs of Allergic Reaction**—A normal sting site will swell and be red and hot to the touch. However, over the first couple of hours, watch for any signs of a more severe reaction. If the swelling moves to other parts of the body, if there is difficulty breathing, nausea, spreading hives, dizziness, throat irritation, etc. It is important to get medical care promptly in these situations!

TOPICAL TREATMENTS FOR BEE STING PAIN AND ITCHING

At Home Remedy -BAKING SODA OR BENTONITE CLAY POULTICE

The classic treatment to soothe bee sting pain and itching is a baking soda and water poultice. The **Centers for Disease Control and Prevention (CDC)** recommends this treatment for both bee stings and mosquito bites. It is believed that baking soda neutralizes the venom, which in turn reduces the pain and itching. Another excellent option is bentonite clay, which is believed to draw out venom from stings. You can use this poultice intermittently with applications of a cold pack, so: 10 minutes of cold pack, 10-15 minutes of poultice, 10 more minutes of cold pack, etc.

Directions

1. Mix a little baking soda or bentonite clay with just enough water to create a thick paste.
2. Apply the paste to the sting area.
3. Leave the paste in place at least 10-15 minutes and up to half an hour before washing off.
4. Repeat as needed.

HERBAL BEE STING POULTICE

There are a number of both wild and garden plants that can make a very helpful poultice for bee sting pain and itching if you aren't handily near baking soda or bentonite clay. Fresh plantain (*Plantago major*) is an age-old go-to choice, but many people also swear by the fresh leaves of lemon balm (*Melissa officinalis*), yarrow (*Achillea millefolium*), and both tulsi/holy basil (*Ocimum tenuiflorum*) or regular culinary basil (*Ocimum basilicum*). These botanicals are particularly helpful when you're out and about and need a poultice in a pinch. As with the baking soda or bentonite clay poultice, you can use an herbal poultice intermittently with applications of a cold pack.

Directions

1. Harvest 1-2 leaves.

2. Chew the leaves well to make a wet, spit-based poultice.
3. Apply the chewed poultice to the sting area.
4. Leave the paste in place at least 10-15 minutes and up to half an hour before washing off. You can wrap it with cloth or more plant leaves to hold it in place if necessary.
5. Wash well.
6. Repeat as needed.

Pro Tip: If you're closer to home or another spot where you can get raw apple cider vinegar, another way to make a botanical poultice is to smash the leaves to release some of their volatile oils and then wet them with just a little apple cider vinegar to make a thick, wet paste. The vinegar is also thought to neutralize the venom.

Need a Place for bees?

An individual in north Newport would like to host a beehive on her property. She doesn't want to buy one but would like to know if anyone would like to keep one there. Her name is Kate, and her email address is "kellykat777@gmail.com ".

Native Plant Picks for Bees
10 Native Plant Species to Support Wild Bees in Oregon

By Aaron Anderson, LeAnn Locher, Jen Hayes, Mallory Mead, Signe Danler, Diane Jones and Gail Langellotto

Excerpt from OSU Article

What is the native range of the recommended plants?

The Native Plant Picks for Bees (Figures 1 and 2) have distribution ranges that include Oregon's Willamette Valley; however, all have native ranges that extend beyond this region.

Some plants are widespread, with native ranges that include the entire United States, such as yarrow (*Achillea millefolium*) or Canada goldenrod (*Solidago canadensis*). Others are more narrowly distributed across the Western United States, such as globe gilia (*Gilia capitata*) or California poppy (*Eschscholzia californica*). Still others, such as farewell-to-spring (*Clarkia amoena*), are more restricted to the Pacific Northwest.

Figure 1. Bee abundance and diversity on Native Plant Picks for Bees

Credit: © Garden Ecology Lab, Oregon State University

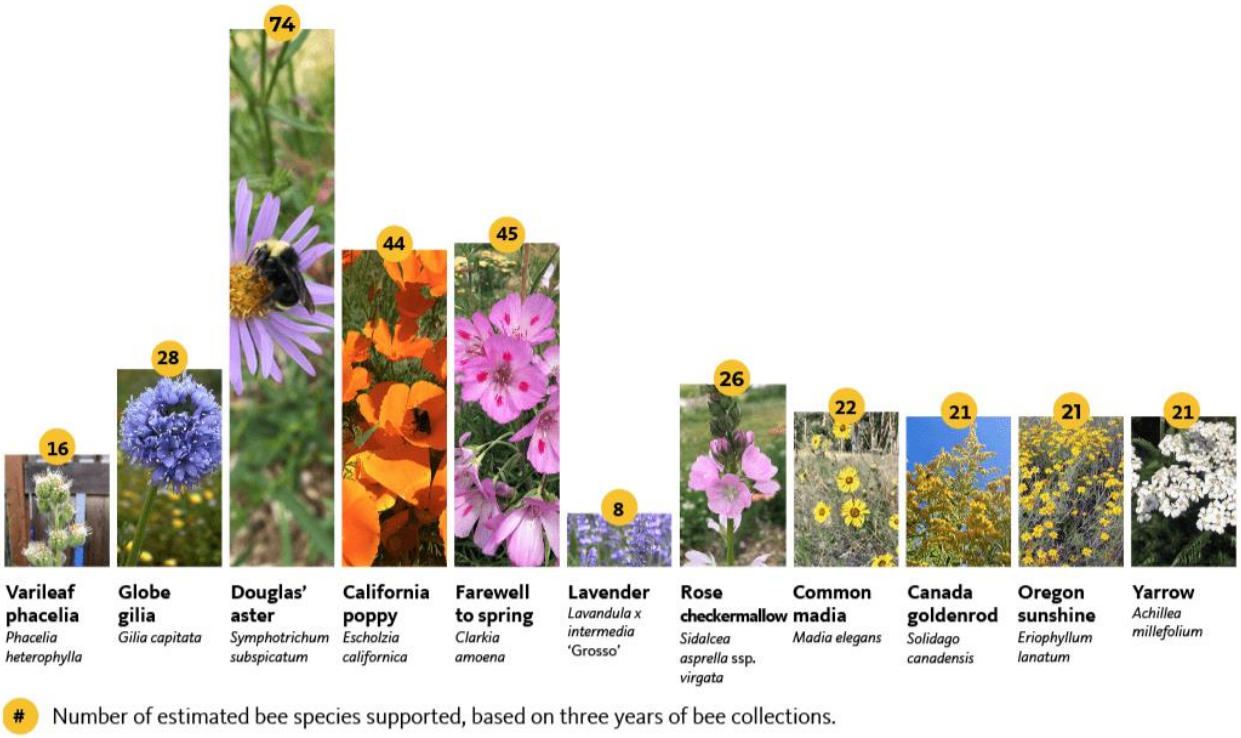

Figure 2. How does bee species richness stack up in comparison to lavender? Lavender is a popular plant with gardeners, in part because of its attractiveness to bees. The abundance of bees on lavender is comparable to or exceeds bee abundance on our Native Plant Picks for Bees. However, most of the bees that you see on lavender are non-native honey bees or common yellow-faced bumble bees. To truly support Oregon's wild and native bee communities, look beyond lavender.

Credit: © Garden Ecology Lab, Oregon State University

Honeybees Can't Walk Straight After Pesticide Exposure

They suffer damage to their nervous system after facing chemicals.

By Mary Jo DiLonardo

Kees Smans / Getty Images

After flitting about on pesticide-covered flowers, honeybees are so affected they can't move in a straight line. Researchers have found insecticides severely damage the insect's nervous system.

Exposure to many pesticides has been shown to negatively impact the behavior of honeybees and the toxic chemicals can lead to the death of individual bees or entire hives.[1]

In the new study, scientists examined the impact of insecticides like sulfoxaflor and imidacloprid, a neonicotinoid, and how they can impact a honeybee's ability to navigate easily.[1]

"My previous research showed that locusts exposed to insecticides do not steer or jump to avoid collisions and that this results from effects on their

ability to see object motion," lead author Rachel Parkinson, a scientist at the University of Oxford, tells Treehugger.

"I wanted to know if there were similar effects on wide-field motion in honeybees, as they use this type of visual information for flight stabilization and navigation. I hypothesize that this may be a contributing factor to colony collapse disorder by which bees exposed to pesticides have a hard time finding their way home."

Colony collapse disorder was first noted in the early 2000s with a dramatic drop in bee populations. Some beekeepers reported losses of 30 to 90% of their hives. The queen and young remained while many of the worker bees just disappeared. The colony is unable to survive without so many workers.[2]

Bees in Virtual Reality

A healthy bee has what is known as "optomotor response," which helps them turn back into a straight path when something works to veer off when they are flying or walking.[3]

"The optomotor response is a reflex-like behavior by which animals will instinctually turn to follow a rotating visual scene," Parkinson says. "Its purpose is to help the animal regain and maintain a stable orientation.

For their study, first, researchers exposed bees in a laboratory to various mixtures of insecticides mixed in sucrose for five days. Then they tested the insect's optomotor response by attempting to visually trick them as they walked.[3]

They played videos that showed vertical bars moving from side to side on two screens in front of the bees. The moving bars make the bee think it has been blown off course and needs to turn in order to get back on a straight path.[3]

"I tested the bees in a type of virtual reality, where they could walk on a ball treadmill while being shown wide field motion that looked like it was rotating around the bee," Parkinson says.

Bees that were not treated with pesticides performed well in the optomotor environment, reorienting themselves in a straight line. They righted themselves and flew or walked straight when exposed to different speeds.[3]

However, the bees that were exposed to pesticides didn't fare as well.

"Some bees responded to motion in one direction only, turning only one way and not switching direction when the motion switched direction, and other bees did not perform turning maneuvers at all," Parkinson says. "I was surprised by the severity of the effects, especially for the sulfoxaflor pesticide treatment group as the dose I used was a field-relevant concentration."

The results were published in the journal Frontiers in Insect Science.

Profound Sublethal Effects

Pesticides have long been shown to have a toxic effect on honeybees.

"There are many documented effects of pesticides on bees, ranging from effects on reproduction, learning, and memory, foraging efficiency, etc.," Parkinson points out. "Some studies have shown that exposed bees take longer to return to the hive when foraging, or when captured and released at a new location."

The new findings help researchers continue to understand the dangerous impacts of these chemicals, which could lead to better protection and conservation.[3]

"It's important to understand the range of sublethal effects of pesticides and mixtures, as often these happen at doses that are much lower than those required to directly cause death—the message is (not just from my study, but from many studies!) that sublethal effects can be profound and are likely to reduce the survival of bees overall," Parkinson says.

"It is, however, important to do more research to determine whether the effects I observed in walking bees would translate to flying bees."

Club Info

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