



Catch The Buzz

**MA
BA**

Memphis Area Beekeepers Association www.memphisbeekeepers.com

P.O. Box 38028, Germantown, TN 38183

Meeting Location: 7777 Walnut Grove Rd # C, Memphis, TN 38120

MEETING DATE & TIME: June 10, 2019 at 7 pm – Dr. Jeffrey Harris, Mississippi State University Associate Extension/Research Professor, will return to MABA for a practical, fact-filled presentation for beekeepers of all experience levels. You'll be sorry if you miss this meeting!

JUNE AND THE BEES

- Colonies that did not swarm will be filled with bees and the bees will be foraging for nectar and pollen as they fill HONEY SUPERS.
- Give the bees space by adding Honey Supers. The main honey flow should be happening this month.
- The queen's rate of egg laying may drop a bit this month.

JUNE AND THE BEEKEEPER

- Inspect the hive weekly to make certain the hive is healthy and the queen is present.
- Add honey supers as needed.
- Keep up swarm inspections
- Attend bee club meetings and workshops.
- Time Spent: Estimate 4-5 hours.
- Equipment, bees will need honey supers, that is where they store the honey that the beekeeper can harvest when it is capped.

5/29/2019 National Honey Board Report: <https://www.ams.usda.gov/mnreports/fvmhoney.pdf>

TENNESSEE: Honey production in Tennessee is in full swing. Black Locust, Tulip Poplar and clover are in full bloom. The weather has been warm with some rains across the state. Overwinter losses averaged around 40% statewide with the highest losses in the eastern region of the state.

ARKANSAS: No report issued.

MISSISSIPPI: The privet hedge is in abundance and the bees are out foraging and doing well at this time. The wildflowers and other plants are coming along, the beekeepers are expecting a good flow and honey supply if the weather continues to be favorable



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IMPORTANTLY, from Mike Studer, TN State Apiarist: for everyone with Registered or unregistered apiaries in the following counties: **Weakley, Stewart, Obion, Dyer, Henry, Gibson, Carrol, Benton, Humphreys, Houston, or Montgomery**. Tests confirmed 11 colonies in 3 apiaries were positive for American Foulbrood. These colonies were in Weakley and Stewart counties. Those colonies have been destroyed. We will be notifying all registered beekeepers within the affected area and inspecting all apiaries within the affected area in the next few weeks. Any beekeeper that thinks they may have AFB should send an e-mail to mike.studer@tn.gov ASAP. Anyone that knowingly has American Foulbrood and does not report it is subject to a \$500.00 fine. Please be careful moving colonies within these counties get your local area inspectors to come out and inspect before you move anything. Anyone moving colonies out of these counties or within these counties without a health certificate is subject to a \$500.00 fine. Please everyone be diligent about hygiene when going from one apiary to the other. Designate a hive tool for each apiary or burn them between apiaries. Use disposable gloves when inspecting hives in these counties.

BEEKEEPING READING LIST

[ROUND UP – COULD THIS COMMONLY USED HERBICIDE COULD ALSO BE HAVING ADVERSE EFFECTS ON THE HEALTH AND BEHAVIOR OF HONEY BEES](#)

Is one of the world's most widely used herbicides a danger not only to annoying weeds, but also to honeybees? While debates rage over whether certain powerful insecticides are responsible for so-called colony collapse disorder — or even whether bee populations are declining at all — recent research suggests that glyphosate, the active ingredient in weed killers such as Monsanto's Roundup, could be having subtle effects on bee health.

Glyphosate has been in the news in recent months, but not for its possible harm to bees. Rather, some studies have suggested an association between exposure to glyphosate and higher risk of non-Hodgkin lymphoma (NHL), a cancer of the white blood cells. Glyphosate garnered headlines last August when a jury in California awarded groundskeeper DeWayne Johnson a massive judgement against Monsanto's parent company, the German pharmaceutical giant Bayer. Johnson, along with more than 13,000 other plaintiffs, alleges that glyphosate caused his case of NHL.

But concerns about glyphosate are not limited to humans. Researchers have been accumulating evidence that glyphosphate may also be having deleterious effects on the environment and be harmful to fish, crustaceans, and amphibians, as well as to beneficial bacteria and other microorganisms in soil and water.

In recent years, a number of studies have concluded that glyphosate could also be hazardous to bees. Although the herbicide does not appear as toxic to bees as some other pesticides (notably neurotoxins known as neonicotinoids), researchers have found that glyphosate may impact bees in more subtle ways — for example, impeding the growth of bee larvae, diminishing bees' navigational skills, altering their foraging behavior, or even disrupting their gut microorganisms, known as the microbiome.



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The research is controversial because defenders of glyphosate use have long argued that it is benign in the environment. The herbicide is uniquely designed to target an enzyme that plants need to grow. That enzyme is essential to the so-called shikimate pathway, a metabolic process required for the production of certain essential amino acids and other plant compounds. However, the shikimate pathway is also used by some bacteria and other microorganisms, raising the possibility that glyphosate could have widespread and unexpected effects on a variety of natural organisms.

In a September study in the Proceedings of the National Academy of Sciences, Nancy Moran, an evolutionary biologist and entomologist at the University of Texas, Austin, and her coworkers found evidence that glyphosate disrupts microorganisms found in bees' guts.

Mature bees have eight dominant gut bacterial species. Those strains are responsible for such benefits as promoting weight gain and providing resistance to harmful pathogens. The University of Texas team found almost all of them declined when the bees were exposed to concentrations of glyphosate commonly found in the environment. Young worker bees exposed to glyphosate were more susceptible to dying from infections. Moreover, the gut bacteria were more sensitive to the effects of glyphosate if the bacteria possessed an enzyme known to play a key role in the shikimate pathway.

Bayer disputes research findings suggesting Roundup or glyphosate is hazardous to bees. Utz Klages, Bayer's head of external communications, says the "good news is that honeybee colonies are not in decline and rumors of their demise are greatly exaggerated." Klages notes that regulatory authorities in a number of countries, including the United States, Canada, and the nations of the European Union, "have determined that glyphosate is safe when used as directed."

A number of studies have suggested that glyphosate is not highly toxic to bees, including research performed by Monsanto and several other agrochemical companies. That research considered the "realistic worst-case" exposures to the herbicide and found no significant effect on bee mortality. Similarly, a series of studies led by Yu Cheng Zhu, a research entomologist at the U.S. Department of Agriculture, concluded that glyphosate did not seem to kill bees outright. "We did not find an unusual number of dead bees after spraying a bee yard with Roundup a few times each year," Zhu said.

But Walter Farina, a researcher at the University of Buenos Aires in Argentina, says that the very fact that glyphosate is not immediately toxic to bees facilitates the harm it does. "Since glyphosate does not cause lethal effects, it can enter the colony and [be] assimilated by the younger individuals," Farina says. "The negative effects of [glyphosate] are worse for younger bees, promoting an increased disorganization of the collective task within the hives."

Farina and his team have looked at some of these effects in Argentina, where glyphosate is intensively used in agriculture. In a 2014 study, published in *The Journal of Experimental Biology*, they found that the "appetitive behavior" of honeybees — including how well they could detect sucrose and their ability to learn and remember where food sources were located — was significantly diminished after exposure to doses of glyphosate commonly found in farmlands.



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In a second study, published in 2015 in the same journal, Farina’s team used harmonic radar to track how long it took honeybees to find their way back to their hives. They found that exposure to relatively low doses of glyphosate appeared to hinder the bees’ ability to navigate back to the hive, and concluded that glyphosate “impairs the cognitive capacities needed to retrieve and integrate spatial information for a successful return.”

In other research, scientists have found that glyphosate appears to interfere with the growth and survival of honeybee larvae. For example, in a study published last year in the Journal of Agricultural and Food Chemistry, Pingli Dai of the Institute of Apicultural Research in Beijing, China, and his colleagues found that elevated exposures to glyphosate can lower both the weight of bee larvae and the larval survival rate. This study also showed that glyphosate markedly decreased the diversity and richness of bacteria in the larvae’s intestines, indicators of reduced resilience.

As concerns about how glyphosate may be affecting honeybees mount, researchers are getting a boost from funding agencies that see this as an important research avenue. In March, the National Science Foundation awarded nearly \$1 million in grant money to researchers at Virginia Tech and Eastern Washington University to further study the honeybee microbiome.

Read or heard of good, science-based beekeeping articles? Please let us know, we will get them into the MABA newsletter.

UNIT HONEY PRICES BY MONTH

Retail-Average Retail Price per Pound across all reporting regions - Data from <https://www.honey.com/honey-industry/statistics/retail-honey-price> used with permission. Based upon average price across all reporting regions. Assumes various sizes sold at the same rate.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	\$7.28	\$7.54	\$7.86	\$7.66	\$7.66							
2018	\$7.57	\$7.22	\$7.34	\$7.28	\$7.03	\$7.23	\$7.37	\$7.41	\$7.17	\$7.34	\$7.51	\$7.46

Average Wholesale Case Price Per Pound across All Reporting Regions. Data from <https://www.honey.com/honey-industry/statistics/wholesale-honey-price> used with permission. Based upon average price across all reporting regions. Assumes various sizes sold at the same rate.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	\$4.16	\$4.32	\$4.33	\$4.41	\$4.41							
2018	\$5.30	\$5.18	\$5.22	\$5.31	\$5.21	\$5.31	\$5.12	\$5.42	\$5.24	\$5.26	\$5.42	\$5.44

To subscribe to the National Honey board newsletter visit: <https://www.honey.com/signup>



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UT Extension Master Beekeeping Program Schedule – 2019

Basic – http://tiny.utk.edu/mbp_basic

Advanced – http://tiny.utk.edu/mbp_adv

July 8, 2019 – MABA July 2019 Meeting – Van Power will present The Art of Honey Extraction. Many of you are seeing the bees cap the honey in your supers, so this is a timely subject for many. You will not want to miss this!

July 10-12, 2019 – [Heartland Apicultural Society 2019](#) meeting in Bowling Green, KY! HAS 2019 will be hosted by Western Kentucky University. With 6 [keynote speakers](#) and 24 more great speakers this meeting will have everything you need at any level of beekeeping. Registration and more details forthcoming.

August 12, 2019 – [MABA August 2019 Meeting](#) – Kent Williams is a EAS Certified Master Beekeeper. He has been keeping bees for about 30 years. He manages 800 or so colonies in western Kentucky, and is based in Wingo, KY. We have linked to Kent's Facebook page over the years, as he presents the yearly [Kent Williams Bee School](#) each April, along with the Lake Barkley Beekeepers Association. Come ready with your questions, he might just have an answer!

September 8-12, 2019 – [Apimondia 2019](#) – The 46th Apimondia International Apicultural Congress is in Montreal, Quebec, Canada this year, the first and last time in North America for several years. This is the place to be to learn about international beekeeping challenges and practices! Let us know if you plan on attending!

September 9, 2019 – MABA September 2019 Meeting – Mike Studer, Tennessee State Apiarist, will present the state of beekeeping in TN and how to keep our bees healthy and thriving. You will want to attend this meeting! If there is enough interest Mr. Studer will hold a TN Apiary Inspector Course. Please let Bob if you are interested in this class!

The [2019 Tennessee Beekeepers Association Fall Conference](#) will be held October 11 and 12th at the [Hyder Burks Pavilion at Tennessee Tech](#) in Cookeville, TN.

Confirmed speakers include our keynote presenter, [Dr. Leo Sharashkin](#). He is a proponent of natural beekeeping with extensive experience in horizontal hives. Other confirmed speakers include Gene Armstrong, Dennis Barry, Dr. Clarence Collison, Sue Dickhaus, Sterling Earhart, Jim Gentry, Joel Hausser, David Hughes, Dale McCleskey, Judy O'Dell, Charlie Parton, Lynda Rizzardi, Mike Studer, Mike Torda, Jennifer Tsuruda, Susan Welchance, Joel White, Jay Williams, Kent Williams, and Mike Wilson.

Need containers? If you need glass jars or plastic honey bears please contact Robert Hodum, 901-603-6492.

To learn more about beekeeping in Tennessee visit the Tennessee Beekeepers Association website at: <http://www.tnbeekeepers.org/>



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HONEY-BASED RECIPES

1. TROPICAL SMOOTHIE BOWL: Makes 2 servings

INGREDIENTS	DIRECTIONS
<p>For Smoothie:</p> <ul style="list-style-type: none">1 - banana, cut into large chunks, frozen1/2 cup - frozen pineapple chunks1 cup - plain Greek yogurt1 cup - coconut milk1/4 cup - honey <p>Toppings:</p> <ul style="list-style-type: none">1/2 cup - fresh pineapple, diced1 - mango, sliced1/4 cup - toasted coconut2 T - macadamia nuts, toasted and chopped2 tsp. - chia seeds	<p>Blend the frozen fruit, yogurt, coconut milk and honey until smooth and divide between two bowls.</p> <p>Top each bowl with the fresh fruit, toasted coconut, macadamia nuts and chia seeds, eat immediately</p> <p>TIP</p> <p>You can add a scoop of protein powder to the blender to keep the hunger cravings at bay even longer.</p>

SEE YOU AT THE JUNE MABA MEETING, PLEASE VISIT WITH YOUR MENTOR.

It's getting hot out there, drink plenty of water when you are working your bees!