

Catch The Buzz

Memphis Area Beekeepers Association

P.O. Box 38028, Germantown, TN 38183

www.memphisareabeekeepers.com

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

Meeting Date & Time October 12th at 7pm

Preparing for the November Honey Show

Buy ticket(s) for the Christmas Dinner and end of season celebration.

Things to do for the beekeeper: Although the work load is lessening, the work you do this month is critical. Check that your hives have enough honey stores to survive the winter; you need 60-100lbs of honey for your colony to survive. Check your hive by carefully lifting from the bottom back of the landing board; if the hive feels heavy and you can barely move it, you should be fine. If the hive moves easily and feels light, start emergency feeding so that the bees can store the food for winter use. Remember that winter feed is different from spring feed in that it is a 2:1 ratio (sugar/water). Feed until the first hard frost when the bees form a cluster or until they stop taking the feed, whichever comes first.

Take steps to prevent mice from getting into your hives, mouse guards or entrance reducers should do the trick. Add a windbreak to protect your hives if they are located in an area where winter winds are prevalent.

Ensure that the bees do have some ventilation at the top of the hive for the release of the moisture produced throughout the winter - if the moisture does not leave the hive, it will collect on the inside of the cover/inner cover where it will condense, chill and drip on the cluster causing sudden drops in temperature and will cause the bees to struggle.

Another affect of poor ventilation is mildewing and molding on the frames which can sour the honey and give the bees nosema (dysentery) which can destroy a hive quickly.

Again: Check the hive's honey stores, watch out for robbing. Configure the hive for winter, with attention to ventilation and moisture control. Install mouse guard at entrance of hive. Finish winter feeding. Attend bee club meetings.

The Bees. The bees are busy gathering the last bits of nectar and pollen they can find. There are a few late blooming flowers that provide both of these (asters, rabbit brush etc) to help the hive prepare for the coming winter. They are also busy gathering propolis to seal the hive against drafts which can harm the colony while in cluster formation, drafts/cracks allow cold air to blow into the hive and can chill and kill the outer cluster bees and reduce the overall population which keeps the queen and colony warm.

The workers are now starting to kick out almost all of the drones to help reserve the honey stores for those bees that will actually help the colony survive. A few drones may be retained throughout the winter for reasons not completely understood so if you see them flying on warm days don't be concerned (unless you see lots of them, then you could have a drone laying queen or an egg laying worker).

Biology Technical Note No. 78, 2nd Ed. May 2015

Using 2014 Farm Bill Programs for Pollinator Conservation

Between 2006 and 2014, approximately one in three managed honey bee hives were lost each winter (<http://beeinformed.org/>). Planting wildflowers, native grasses and cover crops like buckwheat, mustard, clover and sunflowers provides high value food for honey bees. Cover crops also increase soil nutrients, break pest cycles and increase organic matter in the soil. NRCS also works with landowners to ensure pasturelands and rangelands include a good variety of legumes, forbs and shrubs that also provide pollen and nectar.

These conservation improvements not only benefit the bees, they also strengthen agricultural operations, support other beneficial insects and wildlife, and improve other natural resources. Appropriate cover crops and better rangeland and pasture management reduce erosion, increase soil health, inhibit the expansion of invasive species and provide food and habitat for insects and wildlife. The 2014 Farm Bill's Environmental Quality Incentives Program (EQIP) program provides funding for this work. NRCS accepts EQIP applications on a continuous basis. Landowners interested in participating should contact their local USDA service center to learn more.

Landowners not in this region are also eligible for assistance to make conservation improvements to their land that benefit honey bees and many other pollinators, such as monarch butterflies and native bees. More than three dozen conservation practices offered by NRCS can provide benefits to pollinators.

Learn more about the work to help honey bees and other pollinators and NRCS's key role in the National Strategy to Promote the Health of Honey Bees and Other Pollinators . For more on technical assistance and financial resources available through NRCS conservation programs, visit www.nrcs.usda.gov/GetStarted or a local USDA service center Read more at: <http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=37370.wba>

Oxalic Acid is Finally Approved The Georgia Bee Letter, Volume 26, Number 1 August 2015 Jennifer Berry,

Research Professional III, Editor

Varroa mites aren't going away, and, without every safe and effective

remedy at our disposal, our bees are suffering. The latest research suggests the economic threshold for varroa is now 3 mites per 100 bees. In the old days, before the recently introduced viruses, small hive beetles, rising stresses from limited nutrition and growing toxin levels in the environment, upwards to 15 mites per 100 bees was considered tolerable. There are risks involved if you plan to use oxalic acid. Given its caustic effect on the eyes, skin and respiratory system, it's labeled with the highest degree of toxicity, "Category 1." So, as with all pesticides, caution must be taken when handling it.

How can oxalic be applied? Oxalic can be applied several ways: drip (trickle), vaporization and spraying. It can be used on existing colonies, packages or swarms. The two most popular are the trickle and vaporization method. The trickle or solution method is taking the acid and mixing it with a warm 1:1 sugar-to-water solution. Next, the solution is drawn into a syringe and 5 ml is trickled (scientific term for "dribbly drop") down the seam between each frame and directly onto the bees; the maximum dose is 50 ml per colony (5mls per seam). It doesn't matter whether it is a nuc or a hive with a single or multiple brood chamber, but reduction in dosage for smaller colonies obviously.

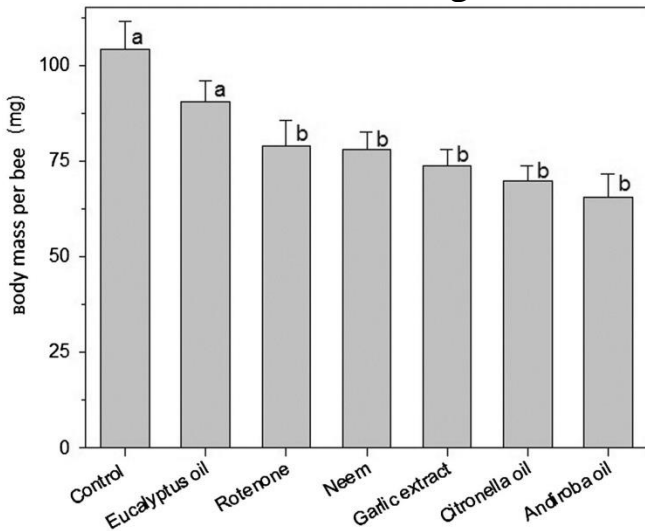
The vaporizer method is only to be used on colonies outdoors. And, whatever you do, do not inhale the vapor! Basically, you use a vaporizer, which is a metal wand with a plate at one end and a cord which connects to a battery at the other end. One gram of oxalic acid is placed on the metal plate. The plate is then slide into the entrance of the colony. The entrance opening and any other cracks and crevices are then sealed with the vaporizer in place to avoid the gas from escaping. Once connected to a battery, the heat from the plate causes the oxalic crystals to turn into a gas (sublime). The vapor will permeate the hive. When it contacts the mites, it kills them. Each vaporizer is different. Some take only a few minutes to activate the acid, while others take a little longer. Since you don't have to open the colony in order to treat, this seems to be the easier of the two methods to implement, especially on cold, rainy days. You can also spray (mist) packages or swarms. Over the last few years, we've followed this protocol to ensure that we're starting our research projects with mite-free bees. Once the packages arrived, we placed them in a cool, dark location in the lab for 24 hours to cluster the bees. Several hours prior to applying the oxalic solution, we spray the bees with a 1:1 sugar solution to fill their honey stomachs and reduce ingestion of the upcoming oxalic treatment. Next, we mix the oxalic acid in a 1:1 sugar water solution and evenly apply the solution to the bees.

Why use oxalic? It works. It has been used for years in Europe. According to numerous studies, it's 90-99% effective at killing the mites with minimal damage to the bees and brood. Does trickle or vaporization work better? A recent study at Sussex University examined the effectiveness of different doses and application methods on mite and bee mortality. The experiment involved 110 hives. The results showed sublimation (vaporization) was far better at reducing mite populations and showed no increase in bee mortality.

Is Oxalic perfect? No. It only works on phoretic mites, i.e., those mites crawling around on the frames or adult bees. The mites breeding under the cappings of the brood cells are unaffected by oxalic administrations, as well as most other miticide products. Therefore, applications are most effective when no brood is present. At beekeeping meetings, when chatting about this product to others, I've heard folks say that they are applying oxalic once-a-week for three weeks during the summer months. This isn't really advisable since it's not very effective and can be detrimental to the bees. But there may be a way to still treat during the summer months.

Brushy Mountain Bee Farm has been authorized by the EPA to be the sole distributor of oxalic acid for use as a miticide on honey bees. What does this mean? Well, in order for any application of oxalic (in beehives) to be legal, it must have the EPA approval label on it; Brushy is the only distributor registered to use the EPA label. It may seem silly, but it really is there for a reason. If you start searching the internet for oxalic acid application in bees, there's a broad range of information out there for recipes for taking straight oxalic acid (wood bleach) down to the 2 or 3% (recommended) application concentrations. Some internet guidance may be sound, but others can be reckless – and even dangerous – for you and your bees. How can you know the difference? Certainly, you don't want to risk getting hurt or inflicting undue stress on your bees. An EPA label assures you of what you are receiving and gives you the applicable instructions to follow; so, you can avoid any gamble from following unsubstantiated YouTube videos. For example, the oxalic acid purchased at your local hardware store is only 95% pure oxalic acid. The material sold through Brushy Mountain Bee Farm is 99% pure.

CATCH THE BUZZ – Organic Pesticides Still Kill Bees



Apis mellifera L. is the main pollinator of cultivated plants. With the increased emphasis on organic agriculture, the use of botanical insecticides has also increased. However, the effects of these products on bees remain to be determined. In this study, we aimed at assessing the acute toxicity and sublethal behavioral effects of botanical insecticides such as andiroba oil, citronella oil, eucalyptus oil, garlic extract, neem oil, and rotenone on honey bees, *A. mellifera*. Only andiroba oil demonstrated no lethality to *A. mellifera* adult workers. However, andiroba oil, garlic extract, and neem oil demonstrated an acute toxicity to bee larvae. Except for eucalyptus oil, larvae fed with syrup containing the other insecticides led to the development of lower body mass in adult workers.

All these botanical insecticides were repellent to *A. mellifera* adult workers. In addition, the eucalyptus oil, garlic extract, neem oil, and rotenone decreased the rate of walking activity in adult workers. Our results demonstrate the potential acute toxicity and sublethal effects of botanical insecticides on honey bees and, thereby, provide evidence of the importance of assessing the risks of the side effects of biopesticides, often touted as environmentally friendly, to nontarget organisms such as pollinators.

,,, In addition to causing an acute toxicity to the bees, the eucalyptus oil, garlic extract, neem oil, and rotenone also decreased the walking activities of *A. mellifera* adult workers. These lower walking activities might result in greater contact with toxic pesticide residues, further increasing their toxic effects because the lethal effect of a substance is proportional to its amount and the time of contact with the body (Corso and Gazzoni 1998). Another consequence of the walking behavioral change of adult workers is the impairment of activities both inside the hive and during foraging (Tomé et al. 2012).

In conclusion, we demonstrated that several botanical insecticides, which are often touted as safe and environmentally friendly, might generate acute toxicity and sublethal effects on honey bees. The garlic extract and neem oil showed an acute toxicity to both adult and larva workers. Instead, the other insecticides showed an acute toxicity to either adults or larvae of *A. mellifera*. All the botanical insecticides changed the foraging behavior by being repellent to adult workers. In addition, the eucalyptus oil, garlic extract, neem oil, and rotenone decreased the rate of walking activity of adult workers. Therefore, the use of botanical insecticides for controlling insect pests on crops should be exercised with caution. Likewise, the potential risks of the side effects of these pesticides to nontarget organisms such as pollinators should be evaluated.

CATCH THE BUZZ – Boots To Bees Project In WV And UT Taking Off!

From

WTRF, Chanel 7, WHEELING, West Virginia.

Two groups of living beings. Both struggling, both in crisis and through a new project about to be launched here in the Ohio Valley in WV, they can each help the other. Those groups are honey bees and military veterans.

Veterans have a 20 percent unemployment rate and thanks to PTSD and other debilitating mental illnesses, veteran suicide rates are escalating, now at a rate of one every 65 minutes. That's over 8,000 per year. Meanwhile, honey bees aren't doing so well either because of mites, pesticides and loss of forage.

The Boots to Bees project would give veterans a job, selling, setting up and maintaining healthy beehives.

Homeowners who like the idea of having a beehive in the backyard, but don't have the skills or desire to be hands-on with bees, can turn to the veterans in this program for help. "So if we can bring the veterans in to help homeowners, then they can have the job of helping the homeowner tend the bees and everybody wins," said Delia Wach. The project is being kicked off in Utah and in the Ohio Valley in West Virginia simultaneously. If you live in an area served by this program, are a veteran in need of a job or a homeowner who would like to have a beehive on your property, the number to call is (347) 210-0797.

Their goal is to have a beehive in every backyard.

September and October Unit Honey Prices by Month

Retail \$6.63 – \$6.69 avg price per pound for Average Wholesale Case Price Per Pound \$4.95 – \$5.09

Data from Bee Culture magazine used by permission. Based upon average price across all reporting regions. Assumes various sizes sold at the same rate.

Fall In Love with Honey! *(Courtesy of the National Honey Board)*

Can you believe that it's already October? Where has the time gone? Here at the National Honey Board we just wrapped up National Honey Month, but the fun is far from over! As we transition into the new season, we have compiled our list of favorite recipes for celebrating the beginning of fall.

What's not to love about fall? The changing leaves are beautiful, the weather is crisp, it smells fantastic, and some of the best flavors find their way into the spotlight – apples, pumpkin, cinnamon, caramel, pear, squash and sweet potato. Honey is great in fall recipes, not only because of its beautiful amber colors, but because it helps to highlight the flavor profiles of our favorite fall ingredients. As we enter into the season of baking and slow cooker dishes, show your menu some sweet love with honey!

Honey Pumpkin Muffins

Ingredients

1-1/2 cups - all-purpose flour	1-1/2 teaspoons - baking powder	1 teaspoon - baking soda
1/4 teaspoon – salt	1-1/2 teaspoons - ground cinnamon	1/2 teaspoon - ground ginger
1/4 teaspoon - ground nutmeg	3/4 cup – honey	1 – egg
1 cup - solid-pack pumpkin	1 cup - chopped toasted walnuts	
1/4 cup (1/2 stick) - butter or margarine, softened		

Directions

In medium bowl, combine flour, baking powder, baking soda, salt, cinnamon, ginger and nutmeg; set aside. Using an electric mixer, beat butter until light; beat in honey, egg and pumpkin. Gradually add flour mixture, mixing until just blended; stir in walnuts. Spoon into 12 greased or paper-lined 2-1/2 inch muffin cups. Bake at 350°F for 25 to 30 minutes, or until toothpick inserted in center comes out clean. Remove muffins from pan to wire rack. Serve warm or at room temperature.

Roasted Acorn Squash

Ingredients

2 - acorn squashes	1 cup plus 1 tablespoon – water	1/4 cup – honey	1/2 teaspoon - kosher salt
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For Honey Butter: 1/2 cup - unsalted butter 1/2 cup - honey

2 tablespoons - fresh sage leaves, chopped

Fleur de Sel or Maldon salt, to taste

Directions

Preheat the oven to 350 degrees.

Cut each acorn squash in half lengthwise and, using a metal spoon, scoop out and discard the seeds and any pulp. Pour 1 cup of water into a 4-inch deep ovenproof pan; arrange each squash, cut side up, snugly on top.

In a small bowl stir together 1/4 cup sage honey, 1 tablespoon of water and salt; brush the cut side of each squash with the honey solution, making sure that all of the honey solution is used. Cover the pan tightly with foil and bake for 30 minutes.

While the squash is cooking, make the honey butter. Heat a 6-inch sauté pan over medium heat until hot; add the butter and swirl until foaming; cook until nutty brown in color. Remove from the heat and immediately add 1/2 cup honey and the sage leaves, stirring well. Set aside.

Remove the foil from the squash and bake for another 15 minutes or until golden and tender when tested with the tip of a knife.

Transfer the squash to a serving platter and spoon the sage-honey butter on top, then sprinkle with Fleur de Sel or Maldon salt.