KSU assembling appearances for mobile sterilization unit

Kentucky State University (KSU) offers a large mobile autoclave to sterilize used bee equipment, announces operator John Haney. The autoclave is currently scheduling visits to bee schools across the Commonwealth, including the upcoming Kentucky State Beekeepers Association (KSBA) fall meeting (see opposite).

Sterilizing eliminates pathogens associated with bee diseases such as Nosema and American foulbrood, as well as pests common to bee colonies and equipment, including small hive beetles, wax moth larvae, and Varroa mites. The process also captures beeswax for re-use.

Frames, supers, deeps, covers, and bottom boards are sterilized at high temperature and pressure. Water heated to 250°F creates steam, while pressure is maintained at 40 pounds per square inch for about 20 minutes, Haney said. Each cycle requires up to an hour to complete, including loading, preparations, and unloading. Five cycles can be completed in a typical day.

For more information or to schedule an appearance:
John Haney, john.haney@kysu.edu;
Joni Nelson, joni.nelson@kysu.edu;
Thomas Webster, thomas.webster@kysu.edu.

Autoclave at fall KSBA meeting

KSBA fall meeting agenda

Friday, Nov. 8: KSBA Board meeting
6 p.m. EST. Holiday Inn Express, 365 Brenton Way, Hillview, (502) 955-4984

Associations, please send representatives
2020 budget and 2020 calendar will be discussed.

Saturday, Nov. 9: KSBA fall meeting
Bullitt Central High School, 1330 Hwy. 44-E, Shepherdsville
Free to members - join at the door

Agenda (Times EST)

7:30-8:30 a.m. Registration
8:30-9:00 Welcome
9:00-9:45 Leslie Cobb: Kentucky Department of Health, Food Safety Division
“The Buzz on Labeling Honey in Kentucky”

10:00-10:45 Breakout sessions
• Tammy Horn Potter: Apimondia 2019
• Leonard Davis: Oxalic Acid! Fall/Winter Treatment
• Curtis Simpson: Make Beekeeping a Career

11:00-11:45 Breakout sessions
• Chris Renfrow: Keep Bees and Make a Profit
• Kent Williams: Feeding Winter Bees
• Dorothea Morgan: Mite Resistant Queens

11:45 a.m.-12:45 p.m. Lunch (provided)
1:00-1:45 Sarah Preston: Update on Certified Kentucky Honey

2:00-2:45 Breakout sessions
• Kent Williams: Making Spring Splits
• Leonard Davis: Dealing with EFB and AFB
• Curtis Simpson: Using Bees for Pollination

3:00-4:00 KSBA meeting and closing

A block of rooms is reserved for Nov. 8 and 9 at $129.99 per night at the Holiday Inn Express, 365 Benton Way, Hillview, KY 40165. (502) 955-4984.

For what to know about the KSU autoclave, page 3.
Winter hive prep checklist
By Tammy Horn Potter, Kentucky State Apiarist

1. Reduce entrances to prevent mice and other critters from moving in (see photo).

2. Tilt the hives slightly so that any moisture that builds up inside the hive during the winter can drain out of the hive.

3. Because of September's drought, many beehives may be low on honey. Check to make sure that there are at least 60 pounds of honey (six "deep" frames filled with honey on both sides of the frame).

4. Remember that moisture inside the hive is the enemy during winter, so if you feed bees, switch to fondant (plain, white, unflavored).

5. Also, make sure to ventilate the hive so the gases generated when the bees consume honey can be released and will not build up inside the hive.

6. When hives are broodless (typically at the end of November or during December), you may treat with oxalic acid using one of two methods:
   - the vaporization method, using a special device called a vaporizer that “sublimates” or vaporizes the oxalic acid inside the hive around the winter cluster; or
   - the dribble method, in which a beekeeper dissolves oxalic acid according to label recommendations in warm sugar syrup and applies using a syringe inside the hive.

7. An old saying among beekeepers goes, “Take your losses in the fall, make splits in the spring.” If you have hives with small populations (you need to have at least 10 “deep” frames or 15 “medium” frames full of bees on both sides), the hives may fare better being combined with a stronger hive. You will need to make the difficult decision about removing the queen from the smaller hive 24-48 hours before combining with a stronger colony using the newspaper method.

8. The newspaper method is very simple: Take one layer of newspaper (do not use cardboard) and place it on top of the stronger hive's honey frames. Make “slits” in the newspaper before you place the weak colony on top of the newspaper. These slits will allow the bees of both hives to get used to each other's pheromones. Then place the smaller queenless hive on top of the stronger. Close the hive. Check again in about 4-5 days.

9. A typical winter cluster will “jog in place” from November to mid-February, depending on weather. Monitor the cluster’s “movement” inside the hive and rotate the hive itself if the sun strikes one side of the hive more than the other. This is so the winter cluster will not become “trapped” against one wall of the hive, separating it from the honey stores. I like to have a full frame of honey/pollen on the walls all during winter.

Award recipe of the month

Honey apple pie

A 2019 Kentucky State Fair award winner from Jeanne Kemper, Bagdad.

Pastry for double-crust pie:

1 c. honey
6 c. apples, peeled
2 T. flour and thinly sliced
1 t. cinnamon
1 T. lemon juice
1/4 t. nutmeg
2 T. butter

Combine honey, flour, cinnamon and nutmeg. Stir in apples until well coated with mixture. Pour into pastry-lined pie pan, sprinkle with lemon juice and dot with butter. Add top crust and slit for escape of steam. Bake in 400° oven for 30 to 40 minutes, or until golden brown.
What to know about using the Kentucky State University autoclave

- The service is provided to Kentucky beekeepers only.
- No type of plastic can be cycled through the autoclave due to the extreme temperatures.
- There will likely be some bubbling of paint due to moisture.
- The wax retrieved from use of the autoclave cannot be proportioned if individuals prefer to harvest and retain their wax. It will be combined with wax from multiple hives from multiple locations. If beekeepers prefer to reuse the wax, the operators will make beekeepers aware of what contaminants may be present in the wax.
- A maximum of five cycles can be performed per day, due to high temperatures causing expansion of the autoclave metal. Cycle time is about an hour including loading, cooling, and unloading.
- Each cycle can accommodate 24 deeps with frames, or 36 supers with frames, plus some additional equipment.
- At full capacity, assuming a load of 24 hive bodies or 36 honey supers containing frames, the autoclave can sterilize $2,200 worth of equipment with each completed cycle, based on the value of new, assembled equipment.
- The autoclave was custom-made by McGill Air-Clean of Columbus, Ohio, and was purchased with funds awarded by the Kentucky Agriculture Development Fund.

Protect your business in 2020 with FSA’s risk management programs

The United States Department of Agriculture (USDA) Farm Service Agency (FSA) is signing up producers through Nov. 20 for yield protection against 2020 natural disasters through the Noninsurable Crop Disaster Assistance Program (NAP).

“NAP is like crop insurance for honey yield,” said Lindsey New, county executive director of FSA’s Somerset regional office. It reduces financial losses when eligible natural disasters cause a loss of honey production. Optional coverage levels are 50 percent or 65 percent of losses.

In addition to enrolling by Nov. 20, participating Kentucky beekeepers must report their number of honey bee colonies annually on form FSA-578 to their local FSA office to be eligible for risk-management and/or disaster programs during 2020, New said.

Reporting deadlines are:

- Jan. 2, if you enrolled in NAP for the current year, or want to be eligible for ELAP (see below) in case of an eligible disaster-related loss in 2020. (July 15 is the reporting deadline if you are not in NAP/ELAP)
- Report within 30 days of the date colonies of bees are acquired, brought into, or removed from the county.

The Emergency Livestock Assistance Program (ELAP) provides financial assistance to eligible honey bee producers, among other certain producers of livestock, for losses due to disease, certain adverse weather events, blizzards, and wildfires, as determined by USDA.

Also, the enrollment period ends Nov. 15 for USDA’s Apiculture Pilot Insurance (API) Program policies for 2020, administered by the USDA Risk Management Agency and sold by crop insurance specialist agents.

API protects beekeepers’ primary income sources — honey, pollen collection, wax, and breeding stock — against losses from lack of precipitation. At the USDA website below, you may locate a crop insurance agent to assist in selecting the proper details of your coverage.

Find your local FSA office: www.farmers.gov.
**FALL/WINTER EVENTS**

- **Nov. 16. Queen and Drone Workshop.** Kentucky Queen Bee Breeders Association. Featured speaker: Purdue University entomologist **Brock Harpur, Ph.D.** Kentucky State University (KSU) research farm, 1525 Mills Lane, Frankfort. Lunch included. Certification test offered after the workshop. KSU’s autoclave will be available to sterilize hive equipment.

  Registration form and fees, back page.

**Bee Culture** editor Flottum honored in founding company’s 150th year

State apiarist Tammy Potter was among the speakers in attendance honoring the 150th anniversary of the A.I. Root Company, publisher of *Bee Culture* magazine, and its retiring editor, Kim Flottum.

The Root Company was launched by A.I. Root in 1869, as beekeeping in the U.S. was transitioning from a hobby to an industry. The company helped develop four key beekeeping inventions: the movable frame hive, the smoker, the honey extractor, and the wax foundation press.

Root started *Bee Culture* magazine when he recognized the need for beekeeping information to be compiled and distributed in a systemic manner, so he provided a forum for beekeepers to receive seasonal hive maintenance information as well as honey prices, hive losses, weather woes, and the newest innovations. The KDA *BeeLines* newsletter frequently exchanges information with *Bee Culture*.

![Candle photos by Karla Eisen](image)

In the late 1920s, the Root factory changed direction and began making beeswax candles. (Candle photos by Karla Eisen)


**Jan. 25, 2020.** Kentucky Queen Bee Breeders Association General Meet. Keynote speaker: **Larry Connor, Ph.D.** Kentucky State University Farm, 1525 Mills Lane, Frankfort.
Dr. Michael Hamm, retired Centre College professor and environment advocate, will address the next Henderson-area monarch pollinator protectors’ meeting Nov. 20 at 6 p.m. CST at the Audubon State Park Museum, 3100 U.S. Highway 41 North, Henderson.

Dr. Hamm will speak on the threatened monarch migration and his work with monarch overwintering sites in Michoacán, Mexico.

The public education outreach event is connected to the recent establishment of two five-acre pollinator plots adjacent to newly acquired Audubon State Park wetlands by the Friends of Audubon organization, said board member Robbie Williams, a Henderson farmer.

Williams said U.S. Fish & Wildlife Service Field Supervisor Lee Andrews suggested Dr. Hamm as discussion leader for the Nov. 20 meeting, which is free and open to the public.

Dr. Hamm will also conduct two sessions the next day for the benefit of AP environment classes from Owensboro Catholic and Henderson County high schools.

Williams said the educational outreach benefits from the help of the full-time staff of naturalists and educators on duty at Audubon.

Audubon naturalist Lisa Hoffman told BeeLines that Audubon has had an active monarch outreach program since 2001, capturing and tagging monarchs that sometimes are recaptured at their Mexico overwintering destination.

Audubon State Park and the University of Kentucky Cooperative Extension Service are co-sponsors of the event.

--- Story and photo: Robbie Williams

**KDA-KFW pollinator protector group absorbs history at Roundstone Seed**

The Kentucky Department of Agriculture (KDA) and Kentucky Department of Fish & Wildlife Resources (KFW) pollinator protection group held their fall meeting at Roundstone Native Seed Company in Upton.

The company has grown and supplied high-quality, regionally adapted native seeds to the eastern U.S. for over 20 years, growing from a small family-owned business to one of the largest seed providers in the East. Among the more than 300 seed mixes the company offers is a Pollinator and Honey Bee Mix.
One out of every three bites we eat, including almost all our almonds, apples, blueberries, cranberries, and other fruits, nuts, and vegetables, would not be available without pollination from honey bees transported to crop fields from distant locations.

Tens of billions of honey bees take part in this unique annual cross-country migration.

“The Pollinators,” a documentary by director and beekeeper Peter Nelson, follows migratory beekeepers and their truckloads of honey bees. Farmers, scientists, chefs, economists, and academics are also interviewed.

The film, released last March, has earned Best Documentary honors from seven of the 25 national and international film festivals at which it has been shown. The Vancouver International Film Festival commended the film’s “stunning landscapes and night photography” and “intimate close-ups of honey bees.” Nelson employed a special camera that slows bees’ flight down to wing-beat speed, for a unique portrayal.

The film also suggests ways individuals can have a positive influence, including planting pollinator-friendly gardens and working with local governments to limit spraying pesticides on roads.

Nelson calls the threats to honey bees and other pollinators “actionable,” saying “It’s a serious problem, but I don’t believe we’re going to starve, and everyone can do things to make it better.”

The Bowling Green showing Nov. 6 is one of several in a national day of screenings. The film was scheduled for these special showings through Demand Film, a company that brings live concerts, theatre, opera, and classic films to local theaters nationwide.

— Harris D. Overholt, Allen County B.A.
Fumagillin returned to market to combat Nosema disease

An effective treatment for Nosema, a deadly disease of honey bees, is now available again in Canada after intensive work by Vita Bee Health in conjunction with the Canadian Honey Council (CHC).

Fumagillin-B is a tried and tested preventive and curative antibiotic treatment for Nosema apis and Nosema ceranae. It first became available in the 1950s and was widely available in many countries until mid-2018, when the previous manufacturer, Medivet, ceased operations.

With the unavailability of fumagillin, beekeepers have been able to combat Nosema only by indirect methods such as protein feed supplements to boost immune defenses, effective Varroa mite control, and regular comb changes. These are not always effective under harsh winter conditions.

Because of the harsh Canadian winters, beehives have to be sealed and insulated from October to March – a long time for bees to be confined, and an ideal environment for Nosema to increase and spread through the colony.

Canadian beekeepers were expecting severe winter colony losses if Fumagilin-B remained unavailable for this fall treatment season. Now Canadian beekeepers again have access to fumagillin, manufactured in Canada and supplied by Vita Bee Health.

The treatment should be applied in fall and spring feeds as necessary, following label directions precisely.

Rod Scarlett, CHC executive director, welcomed the re-availability of Fumagilin-B, saying that, without fumagillin, beekeepers could have expected over-wintering colony losses of up to 50 percent.

“Cost-effective solution”

Max Watkins, CEO of Vita Bee Health, said, “Inevitably, Fumagillin-B is now more expensive than before, but beekeepers will quickly recognize that, set against colony losses, it is still a cost-effective solution.”

Nosema apis and Nosema ceranae are parasitic microsporidian fungal pathogens. They can be identified only by microscopic analysis of the honey bee’s mid-gut. The spores multiply rapidly in the gut and spread throughout the colony. Nosema apis often leaves tell-tale signs of dysentery inside and more visibly on the outside of the hive (especially noticeable in spring), but the strain Nosema ceranae that originated in Asia often leaves no such traits.

Research in Spain has shown that the disease can lead to a steady decline in bees over several months until the colony collapses. At that stage, other diseases such as chalkbrood and foulbrood may have become evident.

Vita Bee Health’s products include anti-Varroa acaricides Apistan and Apiguard; products for wax moth control; foulbrood diagnostic kits; health-promoting feeds VitaFeed Gold and VitaFeed Nutri; and traps for wasps, Asian hornets, small hive beetles and Varroa mites.

Reprinted with permission of Bee Culture magazine.

More on this and other apiculture topics at their website: beeculture.com/catch-the-buzz-whats-all-the-buzz-around-microbes-and-fumigillin-returns-to-combat-nosema-both-good-news/
Kentucky Queen Bee Breeders’ Association Inc.

QUEEN AND DRONE MANAGEMENT FOR SUCCESSFUL HONEY BEE COLONIES AND QUEEN PRODUCTION CERTIFICATION

November 16, 2019
Kentucky State University Research Farm
1525 Mills Lane, Frankfort, Ky.

PRE-REGISTRATION
(Registrations postmarked after November 9th are at walk-in rates)

Print names of attendees as you wish for them to appear on their badge

REGISTRATION FOR CLASSES ONLY

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KQBBAI/HHBBC Member $15.00 x ______ = ______
AFTER 11/9/19 $35.00 x ______ = ______
Non-member $35.00 x ______ = ______
AFTER 11/9/19 $45.00 x ______ = ______

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KQBBAI OR HHBBC member $0.00 x ______ = ______
Non-member $100.00 x ______ = ______

ADDRESS ___________________________ STATE __________ ZIP ______
TELEPHONE ___________ CELL __________
EMAIL ADDRESS _______________________

Registration fees: classes + certification= $ ________________

Make your check payable to KQBBAI and mail to:
KQBBAI
C/o Dorothy Morgan
544 West Farm Rd.
Nancy, KY 42544
606-871-7300 or Lavenderlanefarms@gmail.com