Readjustments necessary in an inconvenient season

“April is ‘go time’ for bees, and, while the seasons roll on a natural schedule, to have so much in the human world stop suddenly and indefinitely due to COVID-19 takes a beekeeper’s breath away,” State Apiarist Tammy Horn Potter said.

2020 president installs KSBA officers

Irregularities with nominations at the fall 2019 KSBA meeting led to the forming of a nominations committee in 2020. The committee reviewed candidates on behalf of president Mike Mabry. Their recommendations were to be presented at the spring KSBA meeting, but it was cancelled.

Mabry has exercised his executive discretion to install the unopposed slate of officers, asking Tom Ballinger from Butler County to serve as president-elect. 2020 officers are:

- President, Mike Mabry, Bullitt Co. B.A.;
- President-elect, Tom Ballinger, Butler Co. B.A.;
- Vice president, Joel Gonia, Oldham Co. B.A.;
- Secretary, Joe Chang, Hardin Co. B.A.;
- Treasurer, Wes Henry, Capital City B.A.;
- Assistant Treasurer, Jan Rafert, Fort Harrod B.A.;
- Kentucky Certified Honey Program, Sarah Preston, Anderson Co. B.A.;
- Tammy Potter, State Apiarist and multiple associations.

An electronic KSBA members’ meeting is set for 6 p.m. EST, April 18. In addition to Articles of Incorporation and Bylaws, the agenda will cover discussion of the Summer KSBA Field Day and the Kentucky State Fair.

Recent minutes, and information on joining the April 18 meeting: www.kybees.org.

COVID-19 closes Beltsville Bee Lab

A statement from Samuel K. Abban, bioscience technician at the Beltsville, Maryland Bee Disease Diagnostic Lab:

“The Lab has temporarily stopped processing samples until further notice. We are urging inspectors and beekeepers not to submit samples at this time. Any samples received during this time will be stored until we resume operation. Please continue to reach out with questions and concerns.”

Notes after catching the first Potter swarm of 2020

By Tammy Horn Potter, State Apiarist

- Full disclosure: My husband, Doug, caught the swarm.
- No swarm is worth more than $150, so don’t take safety shortcuts. Don’t take unnecessary risks; don’t climb higher than the third step on a stepladder.
- Swarms are not aggressive (typically), but wear a veil and jacket anyway when preparing to transfer a swarm to a hive (if a branch breaks, a car rear-ends you, or something else unexpected happens).
- Having a spray bottle with light sugar syrup to lightly spray the swarm helps keep the swarm together when preparing it to transfer.
- Having a frame of honey and drawn wax foundation is also enormously helpful for swarms to acclimate to the hive you provide them. The bees will need food.
- These weather "stress tests” can be periods when the bees are inside for days at a time, and when the sun finally appears, the bees will swarm. So have swarm traps out (I have hung out two with Doug).
The “why” of swarming

By Tammy Potter, State Apiarist

While many beekeepers inwardly groan when they see an overwintered hive swarm (there goes this year’s honey harvest, they think), the hive is, in fact, taking care of itself.

When a hive becomes too congested, the older queen will begin to lay eggs in queen cups that the workers will then feed royal jelly. Once these queen cells are nearly mature, the queen will “pipe” to her older worker bees, including the scout bees.

Having already “voted” on a new location, the scout bees will lead the swarm out of the colony to a pre-selected location. In the interim, new virgin queens emerge from their cells and determine which will become the queen.

It will take several days for this queen to be able to fly to a drone congregation area to mate, so the hive, in effect, is broodless.

Since Varroa mites mate in the brood cells, the “brood break” created when the swarm leaves the hive is a healthy step for the next generation of bees. On the one hand, it gives the young bees a break from both the Varroa mites and the viruses the mites vector. On the other hand, the break can make the hive vulnerable to small hive beetles, wax moths, and/or robber bees.

Beekeepers have to learn to walk a fine line between assisting a hive that has been swarmed by installing a mated queen if the young virgin queen does not come back (because she fell victim to a bird or dragonfly, for instance), and letting nature take its course.

Checking hives about every week and a half is a good course of action during the spring and summer.

By setting up field cameras, Doug and I have learned that swarms happen much earlier in the morning in our apiaries, and we have also had a peek at the raccoons, skunks and other animals that can become problems.

Only one in four swarms will survive in the wild, so we think catching swarms is a worthwhile endeavor, but safety and preparedness are key.

SWARM NOTES . . . from front page

• I maintain a swarm catchers list by district. To add your number to that list, send me the swarm catcher’s number and where the catcher lives.

• Swarm catchers need to consider liability and consider purchasing insurance. Establish that if you’re injured, the property owner will be paying for the ambulance call. (Bring this up while the swarm is still active and the owner may be more agreeable.)

• Beekeepers should always sterilize their hive tools if possible before working hives. I put my hive tool in the smoker a few minutes before using. I use hand sanitizer or rubbing alcohol (70 percent) to wash my hands before and after inspections.

• It is typically a poor idea to share or sell old equipment, because the equipment may be contaminated. Kentucky State University has an autoclave to disinfect bee equipment, but KSU is out for the foreseeable future.

• Some of the same basic hygiene practices in place for humans also aid honey bee hives:

  — Lots of space between hives helps reduce "bee drift" and reduces the spread of disease.

  — Culling old frames (five years or older) is always a good idea.

  — Replacing old drawn wax foundation with new wax foundation is a way to eliminate spores in the beeswax, also.

  — Communal feeders can promote disease and robbing, so individual feeders (especially internal individual feeders) are a better choice.

Honey light rolls

Good to pair with Easter ham!

½ c. milk 1 package dry yeast
2 T. butter 2½ T. warm water
2½ T. honey 2% to 2½ c. bread flour
½ t. salt 1 egg

Scald milk. Stir in next 3 ingredients. Soften yeast in warm water. Add the yeast, ½ c. of the flour, and the egg to milk mixture. Beat at medium speed until smooth, about 2 minutes. Gradually add enough flour to make a soft dough that leaves sides of bowl. Turn out on a floured surface and knead until smooth and satiny, about 10 minutes. Place dough in a greased bowl. Grease tops of dough. Cover and let rise until double, about 1 hour. Punch down. Pinch off into 18 equal pieces. Shape into balls and place in 9x13 inch greased pan. Cover and let rise till double, about 45 minutes. Bake at 350° about 12 minutes or until done. Brush with melted butter, turn out of pans to cool. Yield: 18 rolls.

— Jeanne Kemper, Bagdad

Updated information on COVID-19

Compiled and maintained by KDA
kyagr.com/covid19
Committee seeking support for Kentucky pollinator plate

Thomas Young, former president of Warren County Beekeepers Association, has launched a committee to determine interest in Kentucky for a bee specialty license tag similar to West Virginia, Georgia, and other states.

“His interest in doing this is not commercial, but rather social,” according to Holly Young, Thomas’s daughter. “It would be an easy way to network and bring awareness to the Kentucky honey bee industry.”

Young is especially interested in hearing from beekeepers who might not be reachable through social media.

He needs 900 indications of interest to move forward. Those interested will eventually pre-pay the specialty-plate cost. Further action cannot be taken before 2021.

Email Thomas Young at 3Ravensapiary@gmail.com. Take the survey at surveymonkey.com/r/PRTCGKY.

SPRING EVENTS - Reset

- **Postponed from April 4:** Honey Depot Beekeepers School. Cedar Ridge Retreat Center, Louisville. **Rescheduled for May 16.**

- **Postponed from April 9-11:** Lake Barkley Beekeepers School. Kent Williams residence, Wingo. Reschedule information: facebook.com/LakeBarkleyBeekeepers/


- **Postponed to June 30 (tentatively):** Pollinator Stakeholders’ meeting, Kentucky Dam Village State Resort Park, Gilbertsville.

- **Postponed:** State Apiarist Tammy Horn Potter’s USDA Honey Bee Health survey sampling will be on hold until the reopening of the University of Maryland lab that processes samples.

VIRUS . . . from front page

The lab previously advised beekeepers to freeze any already-sampled live bees. Live bee mailings will not survive. “If you have already collected live bees, write today’s date on the top of the box in permanent marker and put it in a freezer,” their statement says. A deep freezer is preferable, but a regular freezer will work. Once campus reopens, the Lab will furnish instructions on shipping frozen bee samples.

Email: Samuel.Abban@ars.usda.gov

Can honey bees catch coronavirus?

By Dr. Claire Rittschof, University of Kentucky entomologist

Corona virus infects a human’s lung and respiratory tissues (and enters the cells that make up those tissues). Honey bees do not have the same type of cells. So, I don’t think honey bees suffer from this particular virus.

Honey bees do suffer from 27 viruses. Not much can be done except to control the vector of the viruses, i.e., the Varroa mite, but in the U.S., the Varroa mite has altered the number and the severity of viruses impacting honey bees.

Viruses can jump hosts; the corona virus originated from a wild animal. However, it’s probably reasonable to assume that as you get farther away on the tree of life (especially all the way to insects), this possibility diminishes.

Insects of course transfer infectious agents, including viruses, but these pathogens are adapted specifically to both their insect and mammalian hosts, and they often do not impact both in the same way (bubonic plague provides an interesting bacterial example).

SEE PAGE 6: Dr. Rittschof offers FREE analysis of the viruses in your hives.
Nematode worms are a bio-control for small hive beetles

By Tammy Horn Potter, Kentucky State Apiarist

USDA agricultural economist Izzy Hill recently spoke in Kentucky on using entomopathogenic nematodes as a control for small hive beetles (SHB). An “entomopathogenic” organism kills or seriously injures insects through parasitic relationships.

In preparing for her demonstration here last July, Hill asked Phil Tedders of Southeastern Insectaries to send her a species of nematode native to North America, Heterorhabditis indica, five days beforehand.

The nematodes arrived in a gel that had to be placed in a refrigerator (not the freezer), preferably in the side door to prevent them from freezing.

Hill stressed repeatedly that the environment in which we were applying the nematodes was not ideal. The soil was (and remained) too hot, and the hives were surrounded by too much grass. The nematodes are most effective in bare-soil environments with soil temperatures between 68-75° F.

However, Hill demonstrated that, by simply mixing a measuring spoon of the gel-laden nematodes in water (preferably non-chlorinated) and then sprinkling them around the hive, beekeepers have another control in their toolboxes.

When nematodes attack

Nematodes attach themselves to a host (in this case, the SHB pupae), and enter through an opening (mouth, anus, or spiracles). H. indica has a mutualistic relationship with a symbiotic bacteria (Photorhabdus luminescens), which lives inside the nematode’s intestine.

How the P. luminescens bacteria works:

1) H. indica enters the host and releases the P. luminescens bacteria into the gut, which then begins to multiply;
2) the host is dead in 24-48 hours;
3) bacteria provide a defense inside the host by producing • antibiotics and nematocides,
   • warning colors to deter birds, and
   • compounds to deter scavenging insects.

Applying nematodes

Nematodes move via water film, but can die from anoxia if exposed to too much water. Your goal: The landscape needs to be moist, but not too moist.

Mix a portion of nematodes with 1/2 to 1 gallon of water. Use a sprinkling-head waterer (mine was $5 from Home Depot).

Apply one foot out in all directions from hive if screened bottom, or one foot out from the entrance if the hive sits on a solid bottom board.

See NEMATODES, next page

This is the month for action

Above: Uninfected (left) and infected SHB pupae.
The ideal time to apply nematodes to the soil is when soil temperature reaches approximately 70°F. Soil temperatures were getting close to 60°F in mid-March, so it may be warm enough to apply nematodes in April. Beekeepers can check soil temperatures at kymesonet.org/soil.html.
Indoor overwintering: A step to combat Varroa

Indoor overwintering is an old idea with new importance as the industry searches for ways to combat Varroa mites.

“To me, it is part of the future of beekeeping,” said Tammy Potter, state apiarist and board member of hive health organization Project Apis m (PAm).

Not just any building will serve for indoor overwintering. The building a beekeeper could use would have to feature temperature control and ventilation, and be capable of complete darkness, Potter said.

“When hives are brought in to a completely dark building with adequate ventilation, they go completely broodless,” Potter said. This then is an ideal time to treat hives for Varroa mites.

Potter said some treatments, such as Hopguard, are almost 95 percent effective when applied in this time frame.

Then, when the hives are brought outside for spring, they are healthy and ready to take advantage of the nectar flow.

“To me, it is part of the future of beekeeping, but it will involve infrastructure,” Potter said.

PAm has a free downloadable guide to overwintering hives indoors. You can also check out other aspects of the Healthy Hives 2020 campaign of PAm at the site below.

Loans finance new structures

To finance construction of such a specialized building, assistance is available from the Kentucky Agricultural Development Board (KADB) in the form of infrastructure loans.

To apply for such assistance, consult with your local banker who will make application to state government.

Your banker will prepare a loan application to the Kentucky Agricultural Finance Corporation (KAFC) under the Agricultural Infrastructure Loan Program, a program we also profiled in last month’s BeeLines.

You and your local lender will prepare your business plan and submit the details to KAFC. KAFC will review your costs and construction estimates and decide on assistance. KAFC’s monthly application deadline is each third Friday. Download the pictured free guide at projectapism.org/project-apis-m-blog/indoor-storage-of-honey-bees-a-guide-a-facility-and-bmps.

FACT SHEET
on USDA/FSA facility loans

See pages 7 - 8
Calling all Kentucky beekeepers: FREE honey bee virus testing!

Dr. Clare Rittschof is a scientist in the Entomology department at the University of Kentucky. She is conducting a study on honey bee viruses, and is looking for beekeepers to participate.

Project Goals

• Determine if supplemental nutrition helps honey bees fend off infection with common viruses
• Provide information to beekeepers that could improve hive management, survival and honey production

What do beekeepers get if they participate?

For each hive in the study, we will provide a free assessment of the viruses infecting the hive, as well as the degree of infection. This information usually costs several hundred dollars. The cost in this study is covered by the Kentucky Agricultural Development Fund. We will also provide an estimate of Varroa mite loads, and recommendations about ways to improve hive health.

What do beekeepers have to do?

Any beekeeper can participate, regardless of experience level or management approach. We will provide all of the information beekeepers need to be successful. Beekeepers need to:

1) Allow a member of our team to collect two samples of ~300 worker bees (~1/2 a cup) from a single hive, 1 month apart. This is the same amount of bees collected for a Varroa mite alcohol wash test. We will preserve the bees and take them to the lab for virus analysis.
2) Add and remove a pollen patty to a hive once a week for 4 weeks (our team will supply patties and provide instructions).
3) Answer some basic questions about hive management approaches and hive age and origin (see Page 2 for questions, all information is kept confidential and anonymous).

Interested beekeepers should contact Clare Rittschof (clare.rittschof@uky.edu) to schedule a time to collect bees, or to talk further about the project. We will conduct this study from May to October 2020.
OVERVIEW

Farm Storage Facility Loans (FSFLs) provide low-interest financing for producers to store, handle and/or transport eligible commodities they produce. This includes the following:

- Acquire, construct or upgrade new or used, portable or permanently affixed, on-farm storage and handling facilities;
- Acquire new or used storage and handling trucks; and
- Acquire portable or permanently affixed storage and handling equipment.

The program is administered by the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA).

A producer may borrow up to $500,000 per loan, with a minimum down payment of 15 percent. Loan terms are up to 12 years, depending on the amount of the loan. Producers must demonstrate storage needs based on three years of production history. FSA also provides a microloan option that, while available to all eligible farmers and ranchers, also should be of particular interest to new or small producers where there is a need for financing options for loans up to $50,000 at a lower down payment with reduced documentation.

Applicants for all loans will be charged a nonrefundable $100 application fee.

MICROLOANS

Producers who select the microloan option can borrow up to $50,000, with the minimum down payment reduced to 5 percent and shorter loan terms. Producers can self-certify the storage needs of the eligible commodity and are not required to demonstrate storage needs based on production history.

ELIGIBLE COMMODITIES

The following commodities are eligible:

- Corn, grain sorghum, rice, soybeans, oats, peanuts, wheat, barley or minor oilseeds harvested as whole grain;
- Corn, grain sorghum, wheat, oats or barley harvested as other-than-whole grain;
- Other grains (triticale, speltz and buckwheat);
- Pulse crops (lentils, chickpeas and dry peas);
- Hay;
- Honey;
- Renewable biomass;
- Fruits (includes nuts) and vegetables - cold storage facilities;
- Floriculture;
- Hops;
- Malted small grains;
- Maple sap;
- Maple syrup;
- Milk;
- Cheese;
- Butter;
- Yogurt;
- Eggs;
- Meat/poultry (unprocessed);
- Rye; and
- Aquaculture.

ENVIRONMENTAL EVALUATION REQUIREMENTS

These loans must be approved by the local FSA state or county committee before any site preparation and/or construction can be started.

All loan requests are subject to an environmental evaluation. Accepting delivery of equipment, starting any site preparation or construction before loan approval may impede the successful completion of an environmental evaluation and may adversely affect loan eligibility.

ELIGIBLE FACILITIES, EQUIPMENT AND UPGRADES

The following types of new/used facilities and upgrades are eligible and must have a useful life for at least the term of the loan:

- Conventional cribs or bins;
- Oxygen-limiting structures and remanufactured oxygen-limiting structures;
- Flat-type storage structures;
- Electrical equipment and handling equipment, excluding the installation of electrical service to the electrical meter;
- Safety equipment, such as interior and exterior ladders and lighting;
- Equipment to improve, maintain or monitor the quality of stored grain;
- Concrete foundations, aprons, pits and pads, including site preparation, off-farm labor and material, essential to the proper operation of the grain storage and handling equipment;
FACT SHEET
Farm Storage Facility Loans

November 2017

- Renovation of existing farm storage facilities, under certain circumstances, if the renovation is for maintaining or replacing items;
- Grain handling and grain drying equipment determined by the Commodity Credit Corporation to be needed and essential to the proper operation of a grain storage system (with or without a loan for the storage facility);
- Structures that are bunker-type, horizontal or open silo structures, with at least two concrete walls and a concrete floor;
- Structures suitable for storing hay built according to acceptable design guidelines;
- Structures suitable for storing renewable biomass;
- Bulk tanks for storing milk or maple sap;
- Cold storage buildings, including prefabricated buildings that are suitable for eligible commodities. Also may include cooling, circulating and monitoring equipment and electrical equipment, including labor and materials for installation of lights, motors and wiring integral to the proper operation of a cold storage facility; and
- Storage and handling trucks, including refrigerated trucks.

Other examples of equipment include but are not limited to the following:

<table>
<thead>
<tr>
<th>baggers</th>
<th>electrical equipment</th>
<th>safety equipment meeting</th>
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<tbody>
<tr>
<td>boxers</td>
<td>food safety-related equipment</td>
<td>Occupational Safety and Health Administration requirements</td>
</tr>
<tr>
<td>brush polishers</td>
<td>hoppers</td>
<td>sealants</td>
</tr>
<tr>
<td>bulk bin tippers</td>
<td>hydrocoolers</td>
<td>sizers</td>
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<td>case palletizers</td>
<td>ice machines</td>
<td>sorting bins and/or tables</td>
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<tr>
<td>cement flooring</td>
<td>quality graders</td>
<td>storage and handling trucks</td>
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<td>circulation fans</td>
<td>refrigeration units or systems</td>
<td>washers</td>
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<td>cold dip tanks</td>
<td>roller creepfeeders</td>
<td>waxers</td>
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<td>conveyors</td>
<td>roller spray units</td>
<td>weight graders</td>
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<td>drying tunnels</td>
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<td>dumpers</td>
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ELIGIBILITY REQUIREMENTS

An eligible borrower is any person who is a landowner, landlord, leaseholder, tenant or sharecropper. Eligible borrowers must be able to show repayment ability and meet other requirements to qualify for a loan. Contact an FSA office for more details.

WHERE TO FILE THE APPLICATION

Loan applications should be filed in the administrative FSA county office that maintains the farm’s records.

FOR MORE INFORMATION

This fact sheet is provided for informational purposes; other eligibility requirements or restrictions may apply. For more information about FSFLs, visit www.fsa.usda.gov/pricesupport or contact your local FSA office. To find your local FSA office, visit http://offices.usda.gov.

Notes:

- Eligible storage structures and handling equipment, having a useful life for the entire term of the loan, may be permanently affixed or portable.
- Facilities built for commercial purposes and not for the sole use of the borrower(s) are not eligible for financing.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by:
1) mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW Washington, D.C. 20250-9410;
2) fax: (202) 690-7442; or
3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.
Stay at Home
Beekeeping Series
Distance Learning for Beekeeping Clubs

Social distancing to resist COVID-19 doesn’t mean you need to stop learning about your favorite social insect!

We’re offering members of beekeeping clubs the chance to attend ‘remote’ meetings from the comfort of one’s own home using a computer or mobile device. Each event will bring participants up to date on timely beekeeping topics. Time for Q&A included.

ALL ARE WELCOME! IT’S FREE!

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Speaker</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 2</td>
<td>Ten mistakes beginners make, with Lonnie Funderburg</td>
<td>Blount Co. Beekeepers, AL</td>
<td>6:30 pm – 7:30 pm Central Time</td>
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<tr>
<td>Apr 7</td>
<td>Coping with pesticides, with Jack Rowe</td>
<td>Alabama Extension</td>
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<tr>
<td>Apr 16</td>
<td>Learning from pandemics, with Dr. Jennifer Tsuruda</td>
<td>University of Tennessee</td>
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<tr>
<td>Apr 30</td>
<td>Queen management essentials, with Dr. Juliana Rangel</td>
<td>Texas A&amp;M University</td>
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<tr>
<td>May 14</td>
<td>Bee and parasite biogeography, with Dr. Keith Delaplane</td>
<td>University of Georgia</td>
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<tr>
<td>May 28</td>
<td>What’s killing honey bees, with Dr. Jamie Ellis</td>
<td>University of Florida</td>
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Register at [http://www.aces.edu/go/1196](http://www.aces.edu/go/1196)
or watch live at: [https://www.facebook.com/LawrenceCountyextension/](https://www.facebook.com/LawrenceCountyextension/)

Questions? Email Allyson Shabel [ams0137@aces.edu](mailto:ams0137@aces.edu)