Eastern Tent Caterpillar Hatch

Eastern tent caterpillars have begun to hatch, with the first instances being seen in Lexington on March 24, according to Daniel Potter, professor of entomology, University of Kentucky College of Agriculture, Food and Environment.

According to Potter, after spending about nine months as eggs in masses on twigs of wild cherry and related trees, the first tiny eastern tent caterpillars of the season are now leaving their eggs.

The larvae are among the first insects to become active in the spring and are well-equipped to cope with Kentucky’s erratic temperature swings.

According to UK’s entomology researchers, egg hatch occurs over several weeks in early spring. This increases the chance for survival in case of late freezes. The caterpillars grow and develop when the temperature is above 37 degrees F. Their preferred food plants are wild cherry, apple and crabapple, but they may be found on hawthorn, maple, cherry, peach, pear and plum as well.

When mature, the 2- to 2.5-inch long hairy caterpillars have a habit of wandering from their host trees to seek protected areas to spin their cocoons, or to seek additional food if their natal tree becomes defoliated. At such times, they may crawl along fence lines and into pastures.

Consumption of large numbers of caterpillars by pregnant mares caused staggering foal losses in the Mare Reproductive Loss Syndrome outbreak of 1999-2001. MRLS can cause early- and late-term foal losses or weak foals. UK researchers conducted studies that revealed horses will inadvertently eat the caterpillars, and the caterpillar hairs embed into the lining of the horse’s alimentary tract. Once that protective barrier is breached, normal alimentary tract bacteria may gain access to and reproduce in sites with reduced immunity, such as the fetus and placenta.

If practical, farm managers should move pregnant mares from areas where wild cherry trees are abundant to minimize the chance of caterpillar exposure. The threat is greatest when the mature caterpillars leave trees and wander to find places to pupate and transform to the moth stage.

Eastern tent caterpillars are also a nuisance to people living near heavily infested trees. The nests and defoliation are unsightly, and the caterpillars may wander hundreds of yards in search of protected sites to spin cocoons and pupate.

“Managing ETC in small ornamental trees, such as flowering crabapples, is easy. Just wear a pair of grocery store plastic bags like mittens, climb a stepladder, pull out the tents, turn the bags inside out to ‘bag’ the caterpillars and stomp them,” Potter said. “Pruning out nests in ornamental trees sounds great, but in reality, by the time they are noticed, they’re often in branch crotches where pruning will compromise the symmetry of the tree.

“Spraying the flowering fruit and decorative trees preferred by the caterpillars can be a bee hazard – and with some products, a label violation – because the trees are in bloom with bees visiting them at the same time eastern tent caterpillars are active,” he said.
“Except for bacillus thuringiensis, which is not all that effective once the ETC are about half-grown, the only spray product I know of that controls ETC and is bee-compatible is Acelepryn (chlorantraniliprole). That is available in a formulation used mainly by professional grounds managers and arborists, but has not yet found its way into homeowner spray products.”

According to Potter, caterpillar management around horse farm paddocks comes down to keeping pregnant mares away from infested trees and either removing or not planting preferred host trees near paddocks. In addition to those preventive measures, controlling the caterpillars with insecticides may be warranted in some settings. That may require treating tall trees that are difficult to spray.

For the latter scenario, professional arborists treat via trunk injection. Products labeled for eastern tent caterpillar control include Tree-äge (emamectin benzoate), Inject-A-Cide B (Bidrin), Abacide 2 (abamectin) and Lepitect (acephate). End users should read and follow all label instructions. All four of those injectable products are labeled for use on horse farms.

For more information about how to assess trees for egg masses, the UK Entomology publication, Checking Eastern Tent Caterpillar Egg Masses, is available at https://entomology.ca.uky.edu/ef449.

**HIGH TUNNEL WORKSHOP**

You are welcome to attend a High Tunnel Workshop on Tuesday, April 16, 2019, 5:30 p.m.

Rachel Rudolph, UK Extension Vegetable Specialist will speak at the Lee County Extension Service 259 Industrial Park Rd, Beattyville.

Topics Include – What is a High Tunnel? What are the Benefits of a High Tunnels? Challenges of a High Tunnels; Design Features; Different Structural Options; Site Selection; Basic Management. Call 606-464-2759 to pre-register.

**Seminar: Insect Pests in the Garden**

On Thursday, April 18th, I will be giving a presentation on insect pests in the garden. This meeting is in cooperation with the Four Seasons Garden Club, which will meet afterward. It will be held at the Extension office.

**Spring weather safety is important**

Even after a relatively mild winter, most Kentuckians welcome the transition into spring. Still, changeable weather is one of the harbingers of the season, and often it comes in the form of high winds and blustery conditions. Even though tornadoes can occur in any season, they are most common in spring, along with downbursts and windstorms.

A tornado is a violently rotating column of air that descends from a thunderstorm. These violent storms form thousands of feet above the earth’s surface usually during warm, humid, unsettled weather and typically in conjunction with a severe thunderstorm. Along with rain, dust and debris are sucked into the center of the air column and form the distinct funnel shape that identifies a tornado. Wind speeds, ranging from 40 mph to more than 300 mph, can be extremely destructive. A tornado can level a building, lift a railroad car off its tracks and strip asphalt from pavement.

Derecho windstorms and downbursts also come from thunderstorms. Derechos are rapidly moving, large-scale and long-lived wind events associated with bands of thunderstorms or showers. Winds ranging from 57 mph to more than 100 mph can topple tractor-trailers and blow down trees. Downbursts are much smaller and are formed by high winds that funnel down to the surface from the upper levels of thunderstorms. Both can cause serious damage and can be life threatening, so even when just a thunderstorm watch or warning has been issued, you should always be prepared.

Make a tornado emergency plan for both work and home. Keep a weather radio...
in good working condition with extra batteries. Make sure you and your family know what precautions to take in your home, a car, open country or other situations that you may find yourself in during severe weather. You also have many options for mobile weather apps on your smartphone or mobile device. It’s time to think about what you’ll do in case the weather turns wild.

In your home or any sturdy building, take shelter in the lowest level away from any windows, preferably under a sturdy object to protect yourself from falling debris.

In your car, you should attempt to drive to shelter. If this is not possible, exit the vehicle and take cover by laying down in a ditch or low-lying area with your hands over your head. If a low-lying area is not nearby or you cannot exit your vehicle, strap on your seat belt, cover your head and keep your body below window level.

In a mobile home, even if it is tied down, always evacuate and take cover in a low-lying area and cover your head.

Special considerations for livestock producers include moving livestock to high ground in case of heavy rain and potential flash flooding. If moving livestock is not possible, open gates so they can escape high water. You should take precautions against lightning strikes by preventing animals from herding under isolated trees and moving them away from other large conductors that may attract lightning.

**New Mandatory Paraquat Training Requirements for Applicators**

This fall, there will be new labeling on all paraquat products sold in the U.S. Paraquat is sold under the product names of Cyclone Star, Cyclone, Devour, Firestorm, Gramoxone, Helmquat, Para-shot, Paraquat, and Parazone. With these newly labeled products, certified applicators must now take a paraquat-specific training before use and applications “under the direct supervision” of a certified applicator will not be allowed. Paraquat-specific training must be repeated every 3 years. The Environmental Protection Agency (EPA) is allowing the sale of paraquat that is already in the pipeline, so some paraquat without the new labeling requiring the training may be sold this growing season. If the training requirement is on the label of the product to be used, applicators must complete the training before use. Growers that currently have a supply of paraquat that does not have the new labeling listing are not required to complete the training.

Besides the paraquat-specific training, the EPA is implementing other measures to help prevent poisonings, which includes:

Restricting the use (mixing, loading, application, and other pesticide-related activities, which may include but is not limited to: transporting and storing opened containers; cleaning equipment; and disposal of excess pesticides, spray mix, wash water, containers, or other materials) of all paraquat products to certified applicators only.

Clarifying toxicity on the label in English and Spanish Skull and crossbones symbol and “DANGER-ONE SIP CAN KILL” on the container.

A “product package safety requirements” sticker attached to the container.

A “counter card” summarizing the same important warning information that is to be distributed with every container.

Requirement for closed system transfer (“requiring closed-system packaging for all non-bulk (less than 120 gallon) end use product containers of paraquat”) is not going to be in place this growing season as the technology will not be available. Registrants will submit label changes and new product registrations for the closed system packaging by March, 2019, and will have 12 months...
from EPA’s label approval date to adopt the closed system packaging.

As with any pesticide application:

Read and follow all label directions

Keep the product in its original packaging, and

Never transfer the materials into any type of food container.

Poisonings have occurred because paraquat has been illegally transferred into drink containers. Since the year 2000, there have been 17 deaths due to paraquat poisoning; several of those resulted when this pesticide was transferred to beverage containers. A single sip can be fatal.

Paraquat-specific training is available for paraquat users at their convenience at How to Use and Handle Paraquat-Containing Products. Once the user successfully completes the training, a certificate will be automatically generated. Applicators are required to retain certificates of training completion.

**Farmer’s Market Association Meeting**

The Estill County Farmer’s Market Association will have their meeting Wednesday, April 24, 7:00 p.m. at the Extension office. If you need scales certified, bring them to the meeting.

If you are interested in selling produce at the farmer’s market, they are looking for new vendors to participate. Contact the Farmer’s Market president Hannah Eaton for details at 726-0679.

**Watch Vegetable Transplants for Bacterial Diseases**

With transplant season in full swing, producers should have their eyes peeled for symptoms of bacterial disease. Several aspects of transplant production systems lend themselves to developing bacterial disease problems.

Numerous vegetable bacterial diseases can be transmitted through infested seed. [e.g., spot, speck, and canker on tomato; spot on pepper; black rot on cole crops]

In some cases, infected transplants may not show symptoms (e.g., bacterial canker on tomato).

Most greenhouse transplants are watered over-the-top, which can worsen plant-to-plant spread if bacterial pathogens are present.

With unpredictable spring temperatures, greenhouse environments can become excessively hot, speeding the reproductive rate of bacteria.

Transplants that are “pushed” with high nitrogen fertility can also be very tender and more susceptible to bacterial diseases.

As producers become aware of these greenhouse-specific production factors, they can take steps to manage bacterial diseases in transplants. With relatively few effective chemical options in the field for bacterial diseases, the most effective approaches are proactive and preventative. These include:

- Purchase seed from a reputable source; or on a smaller scale, heat-treat seed prior to germination.
- Monitor the crop for any symptoms of bacterial disease, particularly when the canopy closes.
- When possible, use larger trays to improve leaf drying and airflow between transplants.
- Water transplants early in the day to facilitate faster leaf drying.
- Monitor greenhouse temperatures to prevent excessive heat. Use fans to improve circulation.
- Research how much fertility is in transplant media, and supplement only as plants require it.

There are few chemical options for transplant bacterial disease management, and their efficacy tends to be limited. Combining the above cultural practices is often all it takes to healthy transplant production. If the producer does choose to use chemicals on their greenhouse transplant crop, various streptomycin and copper products are labeled. Labels should thoroughly be read to increase the efficacy of applications, prevent phytotoxicity, and maintain applicator safety.

**Arboretum Celebrates Earth Month**

It’s Earth Month, a time to celebrate and honor the planet that sustains billions and billions of humans, animals and plants. Party for the Planet, The Arboretum’s annual rite of spring, will be “Spreading Roots” during a month of events that offers special workshops and activities focused on environmental
topics for adults and children.

The Spreading Roots workshops all occur from 6 to 7:30 p.m. Pre-registration is required, with a suggested donation of $3 per person or $5 per family. Each session is limited to 20 people, with the exception of the April 24 workshop, which is limited to 75 participants. Sessions include:

**April 11:** Guest Dave Leonard will lead Tracing Roots, during which he will wield his air knife to gently expose tree roots and explain how they grow and communicate with each other.

**April 18:** Arboretum curator Emily Ellingson will lead Discovering Roots. Ellingson will help participants uncover original plant collection maps, solve curatorial mysteries and learn about some of the historic trees in The Arboretum woods.

**April 24:** Rooted in Nature brings the series to a conclusion in a big way in the Kentucky Children’s Garden. Adina Cox, a nature play and learning expert from the University of Kentucky Department of Landscape Architecture, will lead a session on the benefits for young children when they connect with nature. Families will learn tips to use at home or during visits to the children’s garden.

Party for the Planet wraps up with Arbor Day at The Arboretum from 1-4 p.m. April 27. The ceremony will include Lexington’s Arbor Day Proclamation with Mayor Linda Gorton, the Arbor Day Tree Planting, tree giveaways, exhibitor tents and tours of the Bluegrass Region of the Walk Across Kentucky.

Call 859-257-6955 or email Arboretum@uky.edu to reserve a space in one of the workshops. More information about Party for the Planet and other Arboretum activities are online at [http://arboretum.ca.uky.edu/calendar](http://arboretum.ca.uky.edu/calendar).

The Arboretum, State Botanical Garden of Kentucky, began in 1991 as a joint effort between UK and the Lexington-Fayette Urban County Government. Housed in the UK College of Agriculture, Food and Environment, it is located at 500 Alumni Drive and offers more than 100 acres of native and horticultural plant collections, gardens, trails, waterways, a children’s garden and seasonal exhibits.

**HOMEBASED PROCESSOR LAW UPDATE**

I would like to update you on the new HB468 that was passed this legislative session.

Effective immediately, a homebased processor “means a person who in his or her home, produces or processes non-potentially hazardous foods including but not limited to dried herbs, spices, nuts, candy, dried grains, whole fruit and vegetables, mixed greens, jams, jellies, sweet sorghum syrup, preserves, fruit butter, bread, fruit pies, cakes or cookies and who has a gross income of no more than sixty thousand dollars ($60,000) annually from the sale of the products.” Homebased processors may sell their products directly to consumers within the state of Kentucky. This includes from their home whether by pick-up or delivery, at a farmers market, flea market, community event, fair, festival, and online. Homebased processor products may not be sold to restaurants, grocery stores, or wholesale distributors.

This year there is no registration process or fee associated with being a homebased processor. However, the Food Safety Branch will begin a registration process in 2020. More information will follow as the year goes on.

Homebased processors must label their products with the information below.

- The name and address of the homebased processing operation
- The common or usual name of the food product
- The ingredients of the food product, in descending order of predominance by weight
- The net weight and volume of the food product by standard measure or numerical count
• The following statement in ten (10) point type: “This product is home produced and processed.”
• The date the product was processed
• Allergen information as specified by federal labeling requirements (wheat, soy, milk, eggs, peanuts, tree nuts, fish, shellfish)

The following items are allowed to be manufactured by homebased processors
• Dried fruits and vegetables
• Dried herbs and spice mixes
• Mixed greens (this does not mean washed and bagged ready to eat salad mixes)
• Fruit jams, fruit jellies, fruit butters, and fruit preserves made with sugar (this does not include low sugar or no sugar versions)
• Sweet sorghum syrup
• Maple syrup
• Breads
• Cakes
• Cookies
• Fruit pies
• Candy (including candied nuts) that does not require refrigeration
• Fudge
• Bourbon balls
• Pecan pies

Washed and bagged ready to eat greens or salad mixes are not allowed. Individuals wanting to sell this type of product must obtain a commercial food manufacturing permit from the Food Safety Branch.

For detailed questions, contact the Extension office or Annhall Norris, Extension Associate Family and Consumer Science, at (859) 257-1812.

Grass-Fed and Finished Beef Production & Marketing OAK Field Day

You are invited to attend a field day on May 2, 2019, 1-4pm, at Elmwood Stock Farm in Georgetown, KY. At Elmwood Stock Farm, participants will learn about the farm’s strategies for raising certified organic, grass-fed, grass-finished beef, including their regenerative grazing and rotation practices, disciplined management of year-round forage, and an understanding of their animals’ development and genetics. Participants will learn about Elmwood’s approach to direct-marketing pure grass-finished beef to customers, including high-quality processing; selection and cooking preparation of meat cuts; and consumer education.

Elmwood Stock Farm is a 550-acre certified organic multi-generational family farm in Scott County, producing vegetables, beef, poultry, and lamb for local and regional markets. This Organic Association of Kentucky (OAK) Field Day is open to all; pre-registration is required. Cost is $5 for OAK members; $10 for non-members. Call 502-517-9629 to pre-register.

Think Ahead About Improving Pastures

By Jimmy Henning, UK Forage Extension specialist - Our Kentucky Forage and Grassland Council board met recently, and they challenged all of us in forage leadership to get as specific as possible about what producers should do about mud. What follows is a synthesis of thoughts about the path forward after what amounts to two years of incredibly wet winter weather.

Henry Ford said ‘Obstacles are those frightful things we see when we take our eyes off the goal. With that in mind, I am going to challenge us all to think beyond the short term problem of a pugged up field to the ultimate goal to be accomplished. We need to get a thick stand of grazing and traffic tolerant grass on these areas before going into the next winter feeding period.

So instead of thinking now about the next 60 days, let’s start with ways to get a thick stand of grass by fall of 2019. To do that, we need to have the damaged field in shape to seed to permanent cover by mid-August. I said ready to seed. Lord only knows what the summer will bring, assuming we get one. In terms of the type of grass to seed, I think the only hope for holding these feeding area fields together is tall fescue. The choice between a novel tall fescue variety or ordinary KY 31 is
perplexing, even for me. The novel fescues are clearly tough, and this is clearly an opportunity to upgrade a field.

No-till seeding will help preserve the soil structure that you build with interim forages (or weeds unfortunately) next summer. You will want to use seeding rates on the high side of the range (25 lb per acre or more) and you will want to drill in two directions with a half rate each time. Realistically, this strategy will only provide about 6 to 8 inches of growth going into fall, but it is permanent cover.

What you do just prior to the fall seeding window is flexible, much of it driven by when you can get animals off the damaged field, your need for forage from that field and how much smoothing that field needs. I am sure that you are thinking, “I’d get them off of there tomorrow if I had any other options.” That said, let’s say the best case scenario is you get access to the field early April. We routinely spring seed red clover in April and get 2 tons of dry matter and more. You are going to have to smooth up the field in order to get good seed-soil contact.

Red clover will not provide any hoof support but it is easily managed so fall seedings of grass are possible. We are putting out some demonstrations using a mix of crabgrass and red clover as well. Based on our goal of permanent grass cover, manage the vegetation present so the grass seeding has the advantage; that means you may want to use a non-selective herbicide to prepare for a fall seeding.

Summer annuals (sorghum-sudangrass, sudangrass, pearl millet) give us more time to get the ground smoothed, as they are usually seeded beginning in May depending on soil temperature. These grasses have the advantage of providing high yields as well as utilizing the nutrients provided from the manure and urine in hay feeding areas. Indications are that seed supplies of these products will be tight because of poor harvest conditions last year. So if that is your plan, book your seed early. Consult AGR-229, Warm Season Annual Grasses in Kentucky (Google AGR-229 UKY) to see which one is right for you.

Summarizing all of this, our goal is a good stand of permanent cover on our winter feeding areas. Everything we do has to work towards that goal. Happy foraging. (article published in Farmers Pride).

Preventing cedar rust disease on apple trees

With spring rain showers and warming weather, cedar rust galls are developing on cedar and other Juniper species. As galls swell, they produce spores that threaten apple (and sometimes crabapple and hawthorn). Galls indicate that rust pathogens are releasing or preparing to release infective spores.

There are three types of cedar rusts that affect apple: cedar-apple rust which produces large brown galls on cedar and other species of Juniperus, cedar-quince rust that produces orange swellings on twigs and fruit, and cedar-hawthorn rust that forms galls similar to cedar-apple rust, only smaller. All three fungi have similar life cycles.

Fungicides should be used as protectants to prevent rust pathogens from infecting. After symptoms develop on apple, it is often too late for control. Early protection of apples, crabapples, and hawthorns is important, as most infections occur within the first 30 days after bloom. Many general purpose fruit tree sprays may not control rusts. Homeowner fungicides available include products like Immunox and Mancozeb.

For detailed spray recommendations, backyard fruit growers should consult publication ID-21, “Disease and Insect Control Program for Home Grown Fruit in Kentucky.” For landscapes, consult UK Extension publication ID-88, “Woody Plant Disease Control Guide for Kentucky.” All three are available through the Cooperative Extension office.
June 7th-10th, 2019

Cost: $60
(includes $25 non-refundable application fee)

Covers all lodging, meals, tee-shirt, activities & class fees.

Location: J.M. Feltner 4-H Camp. London, KY

If you would like to receive an application for 4-H Summer Camp, fill in the information below and mail it back to the Estill County Extension office, or call 606-723-4557.

Yes, I would like to receive info on Summer Camp 2019!

<table>
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<tr>
<th>Youth Name:</th>
<th>Parent/Guardian Name:</th>
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Mailing Address: ____________________________

City: __________________ Zip Code: ______

Phone Number: ______________________

For more information, contact the Estill County Extension Office 606-723-4557

**Activities**


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**2019 Cloverbud Camp**

June 28th—30th

J.M. Feltner 4-H Camp

London, KY

Children Ages 6-8

Camp Cloverbud is specifically designed for campers (and parents) who are not yet ready for a full residential camping experience. The length of the stay is shorter and the staff to camper ratio is greater. Of course campers still participate in all the traditional camp activities offered at 4-H camp, including canoeing, swimming, archery, nature, and recreation, as well as a host of fun nighttime activities. This will be many campers first taste of an overnight camping experience so staff and leaders take great care to create a caring community in which a clover bud camper can grow in confidence and begin to enjoy the fun and camaraderie of summer camp!

- Ages 6-8
- Cost is $95.00 for Youth, $120.00 for Adults (if a parent chooses to attend, not required)
  * Includes meals, lodging, staff, supplies, & t-shirt
- Campers will rotate through each camp class, participate in evening activities & free swim
- Applications are available at:
  Estill County Extension Office
  76 Golden Court
  Irvine, KY 40336
- Application deadline: June 1, 2019
- Applications are accepted on a first-come, first-serve basis

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Estill County Extension
76 Golden Court
Irvine, KY 40336
606-723-4557

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Cooperative Extension Service
University of Kentucky, College of Agriculture, Food and Environment
Cooperative Extension Service of Kentucky, 4-H Youth Development
Cooperative Extension Service of Kentucky, Family & Consumer Sciences
Cooperative Extension Service of Kentucky, Community and Economic Development

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University of Kentucky
College of Agriculture, Food and Environment
Cooperative Extension Service
4-H Youth Development
Family and Consumer Sciences
Produce Best Practices Training (PBPT) April 30th

PBPT directly replaces the Good Agriculture Practices Training/Education (GAP) program introduced in 2008 that more than 5,000 KY producers have completed.

It was renamed to help alleviate confusion between GAP Certificates and Third Party GAP Audits and Tobacco GAP. It was revised to educate about Food Safety & Modernization Act requirements and the latest on produce safety.

PBPT is the new basic training requirement for Farmer’s Market All-Samples certificate from the Kentucky Department of Agriculture. It is also beneficial for anyone seeking a general overview of major produce food safety concerns.

There will be a PBPT training at the Estill County Extension office on Tuesday, April 30th, 6:30 p.m. Please call 723-4557 for details or to pre-register.
Asparagus Ham Quiche

Ingredients:
- 1 recipe cheddar cheese
- 1/4 pound (3 ounces) ground ham
- 1/4 pound (4 ounces) shredded cheddar cheese
- 2 cups shredded or cut fresh
- 1 egg
- 1/2 cup milk
- 1/2 cup cream
- 1/2 cup chopped or sliced fresh
- 1/4 teaspoon each: salt, pepper

Instructions:
1. Preheat oven to 400°F. Place asparagus in a separate bowl, beat eggs together, and add shredded cheese over the mixture in each cup. Sprinkle 1 cup between the 2. Spoon the ham, onion, and pepper into the cup. Add the cheese, dividing evenly between the cups. Place the cup in the mold and cook until the edges are firm but the middle is still a little runny. Add the remaining ham and onion to the mold. Place over the edges. Bake about 4-6 minutes. Serve and eat!