University of Kentucky
College of Agriculture, Food and Environment
Cooperative Extension Service

Cooperative Extension Service
Boyd County
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Agriculture and Natural Resources Newsletter

Boyd County Cooperative Extension Service

As we hit the heart of summer, things are heating up both in the fields and in the community! July is a busy and rewarding time for producers—hay is being baled, gardens are in full swing, and livestock are feeling the heat. It's also the time we see the results of all the hard work that's gone into the growing season so far.

At the Extension office, we're here to help you make the most of your summer. Whether you need help managing pasture through dry spells, identifying pests, or preparing for fall crop decisions, don't hesitate to reach out.

Stay safe, stay cool, and thank you for letting us be part of your farm, garden, or backyard this summer.

Meredith Hall
Boyd County Extension Agent
For Agriculture and Natural Resources

In This Issue

Cooperative Extension Service **AREAS 7/8**

2025 TRACTOR DRIVING COMPETITION

Date: July 18 @ 11:00AM

Rain Date: July 22nd

Location: Elliott Co. Extension Office

2944 S Ky 7 , Sandy Hook, KY

Participants will compete in a written test in addition to the safety & skills portion

Age Divisions:	Deadline to Register	Questions?:
Junior (9-13) Senior (14-18) All ages as of January 1, 2025	July 16 by contacting your local extension office	Please contact the Elliott County Extension Office @ 606-738-6400

Follow us on our Facebook pages!

Boyd County Agriculture

https://www.facebook.com/BoydCountyAgriculture/

Boyd County Cooperative Extension Service

https://www.facebook.com/BoydCountyCES/

Upcoming Events

***Denotes where preregistration is Required**

⇒ **CAIP Applications**

The Boyd County Conservation District will soon be accepting applications!

⇒ *** Yak N Learn— July 15**

4:30 pm Grayson Lake Clifty Ramp

See flyer for details.

⇒ *** Areas 7/8 Tractor Driving Competition—July 18**

11:00 a.m. @ Elliott County Extension Office

See flyer for details.

⇒ **Boyd County Framers Market— June—October**

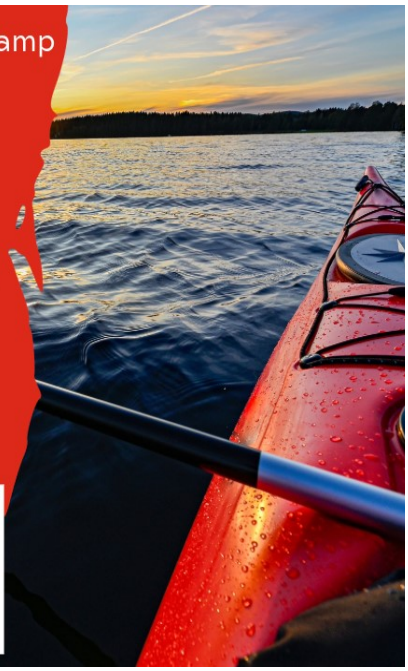
See flyer for details

July 15 @ 5:00- Grayson Lake Clifty Ramp

YAK & LEARN

As we paddle toward the breathtaking Grotto Falls, we'll uncover fascinating water quality facts that will deepen your appreciation for the natural beauty around us.

Please arrive by 4:30 to unload your kayak.
Life jackets must be worn at all times.



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Registration required!

Scan here to register.

Managing your herd's pinkeye long before the first 'bad eye' of the season

Source: Michelle Arnold, DVM (University of Kentucky Ruminant Extension Veterinarian, Martin-Gatton College of Agriculture, Food and Environment Veterinary Diagnostic Laboratory)

Pinkeye, or Infectious Bovine Keratoconjunctivitis (IBK), is one of the most frustrating and costly diseases beef producers face. It negatively affects weaning weights, increases treatment costs and leads to discounts at sale due to corneal scarring. While it spreads quickly once it starts, the key to managing pinkeye lies in reducing risk—long before the first bad eye of the season.

Understanding the Disease

Pinkeye is caused by a complex mix of bacteria, most notably *Moraxella bovis*, *Moraxella bovoculi*, and *Mycoplasma bovoculi*. These organisms can live harmlessly in the eye until certain conditions—like eye injury or irritation—trigger them to become aggressive. *M. bovis*, for example, uses hairlike pili to attach to damaged corneas and releases toxins that destroy corneal tissue — leading to painful ulcers.

New research shows that pinkeye involves more than just one bacterium, making vaccine development difficult. Some strains are considered harmless, while others are highly virulent and resistant to antibiotics.

Reducing Risk Starts Early

Reducing the risk of pinkeye begins with strengthening your herd's natural defenses. Good nutrition, especially adequate levels of trace minerals like selenium and copper, is essential. Clean, cool water helps maintain hydration and tear production, which protects the eye. Avoid stagnant water sources and regularly clean automatic waterers.

Environmental irritants are major contributors. Dust, ultraviolet (UV) rays, tall weeds and seed heads can all damage the eye, making it possible for bacteria to take hold. White-faced breeds like Herefords are more susceptible due to increased UV reflection to the eye's surface. Providing shade and mowing pastures can help reduce these risks.

Face Fly Control

Face flies are the primary transmitters of pinkeye bacteria. They feed on eye secretions and can spread infection from animal to animal. Unlike horn flies, face flies aren't affected by systemic insecticides. Instead, use a combination of feed-through insect growth regulators (IGRs), insecticide ear tags, dust bags and back rubbers strategically placed in high-traffic areas.

Start IGRs in mid-spring, about 30 days before fly season, and continue until 30 days after it ends. Rotate insecticide products annually, based on mode of action (MOA), to prevent resistance. Aim to keep face fly numbers below 10 per head.

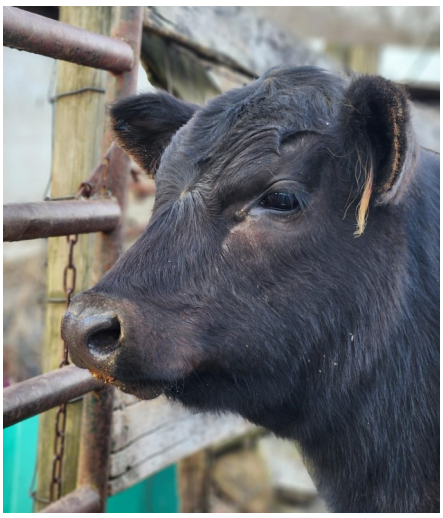
Recognizing Symptoms and Acting Fast

Early signs of pinkeye may include excessive tearing, squinting and blinking. Prompt treatment is critical to prevent spread and minimize damage. Long-acting injectable antibiotics like oxytetracycline (LA-300®) or tulathromycin (Draxxin®) are effective and labeled for pinkeye treatment. In severe cases, eye patches or surgical procedures may be needed to protect the cornea.

Topical fly repellents and isolating affected animals can also help reduce transmission. Always consult your veterinarian for treatment decisions and prescriptions.

The Role of Vaccines

Vaccines can reduce the number and severity of cases but aren't foolproof. Commercial vaccines work best when the strain in the vaccine matches the strain in your herd. When they don't, custom-made (autogenous) vaccines may be more effective.

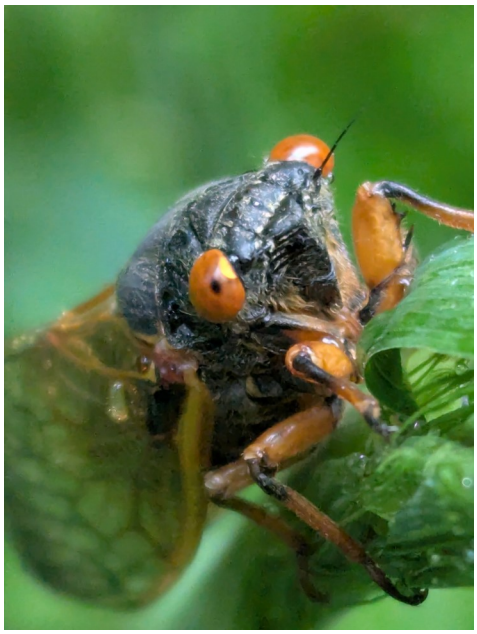


Timing is key—start vaccinations 4–6 weeks before pinkeye season and follow up with a booster for full protection.

Pinkeye is a complex disease, but control is possible with a proactive approach. Focus on nutrition, clean water, fly control and minimizing eye irritants. Work closely with your veterinarian to develop a treatment and vaccination plan tailored to your herd. With early action and consistent management, you can reduce the impact of pinkeye and keep your cattle healthy and productive.

Contact your local Boyd Extension office or veterinarian for more information on how to address pinkeye in cattle.

Periodical Cicadas!



Periodical cicadas have been in the news again in 2025 as we are going to see Brood 14 (aka Brook XIV) emerge across much of central and Eastern Kentucky. The insects people will encounter this summer were born back in 2008 and are just now coming above ground to sing and mate.

What is a periodical cicada?

These unique insects are seven different species of cicadas. There are three different species that live for 17 years belowground and four that do so for 13 years. They usually emerge in May or June (right around the time that your irises are in bloom) and are black with bright red eyes and orange-tinged wings. They are distinct from the annual cicadas we hear singing every summer and autumn. Those species are larger, emerge later in the year, are usually a mixture of green, black, and brown, and take 2-3 years to develop belowground.

Once they are above ground, periodical cicadas will fly to trees where males will begin to sing. First, they recruit other males to join their band and then they start to jam together, singing at levels that can rival the decibels of power tools and more. Females will then fly to the trees where they will pair with males that sing a courtship song to them. After mating, males will usually perish while females will begin laying their eggs in the twigs of trees.

Some answers to other commonly asked questions about periodical cicadas:

· They emerge in large numbers as a strategy of predator satiation. They come out in waves, many of the insects in the first wave will be eaten by things like birds, snakes, dogs, and numerous other animals. Eventually, everyone gets tired of cicada lunches and the remaining insects get to survive.

· They can detect the ebb and flow of tree sap in tree roots as they feed below ground. This cue tells them when 13 or 17 years have passed. As for why 13 or 17 years, developing on these prime number lines helps prevent predators or parasitoids from specializing on periodical cicadas.

· Yes, you can eat them. Though we stress caution for those with shellfish allergies and highlight that you should cook them and consume them in moderation.

What will we see in Kentucky?

Historically, Kentucky is one of about a dozen states that Brood 14 calls home. Most modern maps seem to show that Kentucky has the most widespread population of this brood by county. According to Cicada Mania (https://www.cicadamania.com/) in the last emergence of Brood 14, Anderson, Barren, Bath, Bell, Bourbon, Boyd, Bracken, Campbell, Carter, Clinton, Edmonson, Fayette, Franklin, Floyd, Gallatin, Grant, Hardin, Harrison, Henderson, LaRue, Laurel, Leslie, Logan, Madison, McCreary, Montgomery, Nelson, Nicholas, Pendleton, Pike, Pulaski, Rowan, Scott, Shelby, and Whitley Counties all saw cicadas. If you would like to participate in a periodical cicada citizen science project, you can download the app “Cicada Safari” to submit photos of cicadas you find to help update maps with new and better information!

Cicada-Human Interactions

thiis is truly one of most amazing natural phenomena you can experience- a huge macabre Mardi Gras of insect song and mating and death. These are some of the longest-lived insects in the world and can only be seen in the United States. It is understandable that some people don't like the idea of being around so many insects or like to listen to the cacophony that they produce but luckily, they are transient. They will be gone before you know it. They do not sting or bite and can be avoided by not going to wooded areas.

Periodical cicadas can cause damage to newly transplanted ornamental trees in the landscape. This is a result of egg laying by the female who cuts slits into thin twigs to insert her eggs. Their preferred hosts include oak, maple, and hickory as well as fruit trees like apple and pear. Large mature trees can handle egg laying but young small trees may suffer. Protecting these smaller trees can be done with "cicada netting" which is netting that has smaller gauge than bird netting. This would be placed on the tree when the males start to sing and removed by mid-June. Some people report success with wrapping tin foil around the trunks of small trees or using sticky tape to catch cicadas as they crawl up.

Recipes from the 2024 Food and Nutrition
Recipe Calendar

Cooperative Extension Service

Quick Couscous Salad

USDA Supplemental Nutrition Assistance Program
SNAP — Putting Healthy Food Within Reach

This institution is an equal opportunity provider. This material was partially funded by USDA's Supplemental Nutrition Assistance Program — SNAP.

- 1 box (5.8 ounces) roasted garlic and olive oil flavored couscous
- 1 cup halved grape tomatoes or 1 large tomato, diced
- 1/2 large cucumber or 2 small, diced
- 1 small red onion, diced
- 3 tablespoons olive oil
- 2 tablespoons lemon juice
- 1 teaspoon garlic powder
- 1/2 teaspoon black pepper
- 1/4 cup grated parmesan cheese
- 1/3 cup chopped fresh parsley (optional)

1. Wash hands with warm water and soap, scrubbing at least 20 seconds.
2. Prepare the couscous according to package directions. Set aside.
3. Wash fresh produce under cool running water, using a vegetable brush to scrub veggies with a firm surface. Dry and cut to prepare for this recipe.
4. In a large bowl, mix olive oil, lemon juice, garlic powder, and black pepper.
5. Add prepared couscous, tomatoes, cucumber, onion, cheese, and parsley if using. Toss ingredients to coat with dressing.
6. If time allows, refrigerate for a few hours to allow the flavors to develop or serve immediately.
7. Refrigerate leftovers within 2 hours.

Makes 7 servings
Serving size: 2/3 cup
Cost per recipe: $6.27
Cost per serving: $0.90

Nutrition facts per serving:
160 calories; 7g total fat; 2g saturated fat; 0g trans fat; 5mg cholesterol; 280mg sodium; 20g total carbohydrate; 2g dietary fiber; 2g total sugars; 0g added sugars; 5g protein; 0% Daily Value of vitamin D; 4% Daily Value of calcium; 6% Daily Value of iron; 2% Daily Value of potassium.

Source:
Brooke Jenkins, Extension Specialist, University of Kentucky Cooperative Extension Service

Preventing spontaneous hay fires

Source: Ray Smith, UK forage specialist

Spontaneous combustion hay fires have caused loss of life and valuable nutrition for livestock, but you can prevent them if you keep a watchful eye and know the signs of a problem.

Baling hay at appropriate moistures and monitoring the temperature of recently baled hay are your best tools. Generally, hay will go through a heating phase within one to two weeks after baling. During this time, monitor the hay to make sure it doesn't reach temperatures that can damage the hay or lead to spontaneous combustion.

It is not unusual for the temperature within a bale of hay to reach 100 degrees Fahrenheit, and it may go as high as 130 degrees before beginning to decline. If the temperature peaks below 130 degrees, you may lose some quality but you won't have a danger of fire. With free air circulation around a bale, both heat and moisture can dissipate. A single bale rarely heats enough to catch on fire, but when you place bales close together or stack with other bales that are also heating, it is much more difficult for the heat to escape. A good practice is to leave bales scattered in the barn for three to four weeks before placing them in a stack.

If the bales are wetter than they should be, the temperatures can easily rise above 130 degrees. At 140 to 150 degrees, more microbial growth and chemical reactions within the hay cause it to generate heat at an increasingly rapid rate.

If hay temperatures reach 150 degrees, you need to move bales to allow for better air circulation and frequently check the temperature. At 180 degrees, fire is imminent, and at 200 degrees, it is likely present. In either case, you need to notify the fire department. It is best to wait for them to arrive before removing the hay from the stack in case of a flare up.

Smoke from hay treated with an acid preservative may contain toxic fumes, so keep people away from the smoke and inform the firefighters of any treatments you applied.

To check hay temperature, you may use several types of thermometers. Find one that is durable, easy to use and will measure up to 200 degrees.

Attaching a string or a thin wire and lowering or pushing it into a probe that has been inserted into the hay is one way to use a simple glass thermometer. Do not insert them directly into the hay because they easily break. It is best to use only spirit-filled glass thermometers to prevent accidentally contaminating hay with mercury from a broken thermometer.

You can use electronic thermometers with remote sensors and a digital readout. Avoid LED displays as they are often hard to read in bright light. An LCD is a better choice. Some electronic moisture meters also measure temperature.

Long-stem thermometers, commonly called compost thermometers, are probably the most rugged and reliable. With these types, the price increases with the dial size and length of the stem. It may be tempting to stick these directly into a hay bale, but the stem can be easily bent and the accuracy or operation of the thermometer could be destroyed.

It is best and necessary in most cases to use some kind of hay probe. You can make one for yourself using steel pipe or electrical conduit or you can purchase commercial probes.

Measure the wettest hay first. Probe square bales from the side, round bales from the end. Insert the probe near the center of the bale. In round bales, if the core is loosely formed, probe 6 to 12 inches away from the center where the hay will be more tightly packed.

In large stacks, it may be difficult to reach the center, but it is important to get at least 5 to 10 feet down from the top or in from the side. The most critical factor is to reach where the wettest hay is stored. It is best to probe at several locations and at different depths within a stack to locate the warmest spot.

For more information on hay production contact the Boyd County Extension office.