



[Mark your calendars now!](#)

- ▶ **Beekeeping 101**
February 15th, 9AM-2PM
Boone County Extension -
Enrichment Center

- ▶ **2025 KY Alfalfa and Stored
Forage Conference**
February 25th, 8AM-3:30PM
Details on page 3

- ▶ **Ohio River Valley Invasive
Species Conference**
March 19th & 20th
Details on 8

- ▶ **Ohio River Valley Woodlands
Workshop**
March 22nd, Time TBD

- ▶ **KY Master Naturalist Program
Begins May 16th**
Details on page 5

Protecting Animals From Cold Weather

There's no doubt about it, we are feeling the winter chill with this early January cold snap.

University of Kentucky agricultural meteorologist Matt Dixon explained that the combination of cold air and winds creates dangerous and emergency-category periods of livestock cold stress.

Livestock producers should make sure animals have adequate shelter, water, dry bedding and feed to make it through cold spells. Pet owners should bring pets indoors.

UK livestock specialists said animals have a higher requirement for energy in the colder months, so producers should have high-quality grains and forages on hand to meet their needs.

"The average horse, with a lower activity level, should eat between 1.5 and 2% of its body weight in feed per day to maintain its weight," said Bob Coleman, equine extension specialist in the UK College of Agriculture, Food and Environment. "That feed requirement goes up in the winter as the horse uses more calories to keep warm."

He recommended providing extra hay and making sure horses have shelter to get out of windy, damp weather. It's important for horses and all livestock to have access to clean, unfrozen water.

Ambient temperatures can impact the amount of dry matter cattle eat, providing an opportunity to compensate for increased maintenance energy needs. Producers either need to increase their animals' feed intake or increase the energy density of the diet by feeding higher quality hay or adding more grain or fat to the grain mix, said UK beef specialist Jeff Lehmkuhler.

Lehmkuhler recommended that producers continue to monitor

(Continued on next page)

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cows during the wintertime and make sure to maintain a healthy body condition. Poor quality hay may not provide adequate energy to maintain gestating cows that are entering the third trimester. Consider having hay tested to determine if you need to supplement during times of possible cold stress, especially for enduring cold spells.

Consider separating younger and thinner cows that may not have the same internal insulation as conditioned older cows and supplement them accordingly or offer them higher quality forage if available. Horse owners can employ similar strategies and separate animals according to body condition score.

"Producers should move cows to fields with natural windbreaks or provide man-made windbreaks, which are not the same as a barn," Lehmkuhler suggested. "Poorly managed barns combined with poor ventilation may actually hamper efforts to improve the environmental conditions. Lastly, remember it is energy or calories that are really needed. If the protein level in the forage is adequate, do not make supplement decisions based on protein level; rather purchase the most affordable calories."

The lower critical temperature value for cattle is the lowest temperature or wind chill at which no additional energy is required to maintain core body temperature. As the temperature declines below this lower critical value, the maintenance energy value for the animal is increased to maintain core body temperature.

Animals maintain core body temperature by increasing their metabolism resulting in greater heat production, as well as other heat conservation strategies such as reducing blood flow to the extremities, shivering and increased intake.

Lehmkuhler said several things can influence lower critical temperature value. "Both external and internal insulation influence the lower critical temperature. External insulation is basically the depth and thickness of the hair coat, condition of the hair coat and thickness of the hide," he said. "Thin-hided breeds such as dairy breeds tend to have a lower insulating factor than thick-hided breeds like Herefords."



The hair coat acts as insulation much like home attic insulation that traps air, enhancing the insulating value. If the hair is wet and full of mud, air is excluded, reducing the insulating value and increasing heat loss from the skin.

Hair coat characteristics, such as density and moisture level, impact the temperatures at which cold stress is considered mild, moderate or severe. As little as 0.1 inch of rain can immediately impact cold stress severity by matting the hair down reducing its insulating ability.

Acclimation time, hide thickness, fat cover and other factors also will influence the degree of cold stress that animals experience.

For dairy animals, producers should make sure teats are dry before turning animals out when temperatures fall below 25 degrees. Treat signs of frostbite immediately, since damage to the teat ends can quickly lead to damage of the keratin seal. That can, in turn, allow mastitis-causing bacteria to enter the udder.

The key is to give animals a draft-free place to get out of the wind during extreme wind chill conditions. It's important to make that space available and still provide enough ventilation to allow fresh air to circulate.

Dry bedding also is very important. If cows, goats or sheep lie in wet bedding, frostbite is a big risk. Producers also need to make sure the animals' hair coats are kept dry and as clean as possible.

It also is important for producers to take care of themselves during extremely cold temperatures. You can't take proper care of your animals if anything happens to you. It's a good idea to keep an extra set of clothes and a blanket in the truck. An extra pair of dry boots is a great plan as well.

By Ashley Norton, Jan 14, 2025. From The News-Enterprise, <https://www.thenewsenterprise.com/news/business/protecting-animals-from-cold-weather>

Don't Get Burnt, Because Not All Firewood Is Created Equal

Fires in the fireplace or outside in the fire pit are intrinsically connected to our visions of nestling in for a long, comfy winter. Outside, let the winter bring its ice and snow if it wants. Inside, we could have a fire to snuggle up to. But not all firewood is created equal. There are some important things to know before lighting, igniting just any old wood.

Different species of trees provide different amounts of heat. Wood is made up of air and wood fiber, or cellulose. Since the cellulose burns, but not the air, look for the heaviest or densest firewood per unit volume. The best woods would be oak, hickory and black locust. Yellow-poplar, silver and red maple are not as dense and will provide much less heat. On the other hand, they are great woods for starting a fire.

Freshly cut wood contains a lot of water. Seasoned wood refers to wood that has been given the time for some or all of that water to evaporate. It usually takes between six and 12 months for wood to cure. If you burn it too soon, when it's still green, most of the heat generated will go into evaporating that water, rather than heating your room.

Burning unseasoned wood can also be dangerous. Generated smoldering fire can cause a creosote buildup in your chimney. Burning pine logs, with their heavy resin, can result in the same problem. Over time, that buildup can lead to a chimney fire.

If you're seasoning your own wood, cut it first to a length that fits your fireplace, remove the bark, and split the logs for faster drying. Stack it off the ground in an open area with good airflow. Pallets make a good base for this. Air dry it for a minimum of six months.

If you are buying your wood from a vendor, ask what tree species the wood comes from and how long it has been seasoned. Wood that has been properly seasoned has a gray, weathered appearance and large cracks in the ends of the logs. Even if you've bought seasoned wood, storing it correctly—stacked off the ground and covered with a tarp to protect it from rain—will prevent the wood from reabsorbing water.

Be aware, too, of unwanted visitors that can hitch a ride on your firewood. Buy firewood near the location where you plan to burn it. Moving infected firewood long distances (especially ash) can spread invasive species, such as the emerald ash borer, a destructive species that originated in Asia. You likely won't see the adult borers, which are three-eighths to one-half-inch long and very narrow. But larva and eggs could be out of sight inside the logs.

However you plan to enjoy utilizing firewood this season, stay safe and enjoy their embers. Contact your local Boone County Extension office for more resources, tips and information.

Source: Laurie Taylor Thomas, University of Kentucky extension forester at Martin-Gatton College of Agriculture, Food and Environment

2025 KY Alfalfa and Stored Forage Conference

February 25, 2025 8AM - 3:30PM EST

Fayette County Extension Office
1140 Harry Sykes Way
Lexington, KY 40504

Registration:
General \$45; Students \$15
(Sponsorship: \$250 and \$500)

Register online at:
<https://KYAlfalfa2025.eventbrite.com> *or*
mail a check payable to:

KFGC to Krista Lea
N222 Agriculture North,
Univ. of Kentucky,
Lexington, KY 40546-0091

Timely Tips - Spring Calving Cow Herd

Dr. Les Anderson, Beef Extension Professor, University of Kentucky

- Study the performance of last year's calf crop and plan for improvement. Plan your breeding program and consider a better herd sire(s). Select herd sires which will allow you to meet your goals and be willing to pay for superior animals.
- Consider vaccinating the cows to help prevent calf scours.
- Keep replacement heifers gaining to increase the probability of puberty occurring before the start of the spring breeding season.
- Start cows on the high magnesium mineral supplement soon. Consider protein supplementation if hay is less than 10% crude protein. If cows are thin, begin energy (grain) supplementation now. Cows must reach a body condition score of 5 before calving to maximize their opportunity for reproductive success. Supplementation now allows adequate time for cows to calving in adequate body condition score.
- Get ready for the calving season! See that all equipment and materials are ready, including obstetrical equipment, record forms or booklets, ear tags, scales for obtaining birthweights, etc. Prepare a calving area where assistance can be provided easily if needed. Purchase ear tags for calves and number them ahead of time if possible. Plan for enough labor to watch/assist during the calving period.
- Move early-calving heifers and cows to pastures that are relatively small and easily accessible to facilities in case calving assistance is needed. Keep them in good condition but don't overfeed them at this time. Increase their nutrient intake after they calve.
- Feed hay in areas where mud is less of a problem. Consider preparing a feeding area with gravel over geotextile fabric or maybe a concrete feeding pad. Bale grazing is an option for producers to help control mud while spreading nutrients across pastures.
- Increase feed as the temperature drops, especially when the weather is extremely cold and damp. When temperature drops to 15°F, cattle need access to windbreaks.
- Provide water at all times. Cattle need 5 to 11 gallons per head daily even in the coldest weather. Be aware of frozen pond hazards. Keep ice "broken" so that cattle won't walk out on the pond trying to get water. Automatic waterers, even the "frost-free" or "energy-free" waterers can freeze up in extremely cold weather. Watch closely.
- Consider renovating and improving pastures with legumes, especially if they have poor stands of grass or if they contain high levels of the fescue endophyte. Purchase seed and get equipment ready this month.

Novel Endophyte Tall Fescue Renovation

March 6, 2025

Grayson County Cooperative Extension Service
64 Quarry Road Leitchfield, KY 42754

Toxic tall fescue reduces livestock weight gains and lowers reproductive performance. This one day workshop focuses on managing tall fescue toxicity and integrating novel tall fescue varieties into a grazing system. Speakers include local producers, company representatives and extension specialists and researchers from across the country.

Advanced Registration required
\$40, includes lunch and educational materials
Register online or scan the QR code.
[https:// NETFWorkshopKY25.eventbrite.com](https://NETFWorkshopKY25.eventbrite.com)



New Field Guide Offers Tools to Combat Kentucky's Invasive Plants

The University of Kentucky Department of Forestry and Natural Resources has released a Field Guide to Kentucky's Invasive Plants, a comprehensive resource aimed at helping landowners, conservationists and forestry professionals identify and manage invasive plant species across the state.

This guide provides detailed profiles of the most prevalent invasive trees, shrubs, vines, grasses and herbaceous plants that threaten Kentucky's ecosystems. Each species is presented with full-color photographs, information about its origins, distribution, threats to native biodiversity and effective control methods. From the hardy callery pear to the pervasive kudzu vine, the guide highlights the threats these species pose to forests, fields and waterways.

The book also emphasizes practical management techniques, offering guidance on hand removal, herbicide application and integrated approaches tailored to site-specific conditions. Special attention is given to balancing ecological health with practical land management goals, ensuring that users can address invasive species responsibly and effectively.

The Field Guide draws on a wealth of expertise from contributors across specific regions, including the board members of the Kentucky Invasive Plant Council. It builds on an earlier pocket guide with updated content and new species profiles, reflecting the evolving landscape of invasive plant management.

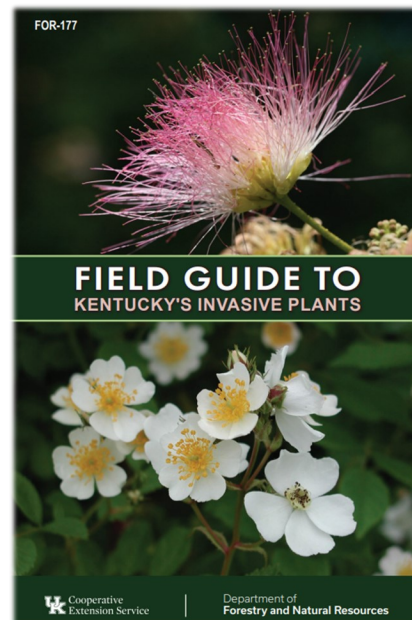
Key features include:

- Species profiles: Clear descriptions and images to help with identification.
- Control strategies: Step-by-step recommendations, from manual removal to chemical treatments.
- Regional relevance: Focused on the invasive plants most common to Kentucky and neighboring states.

Whether you're a landowner grappling with autumn olive or a forest manager tackling multiflora rose, this guide serves as a practical reference for maintaining healthy ecosystems. As invasive plants spread, these resources are critical in equipping communities with the knowledge and tools to protect their natural heritage.

To obtain your field guide visit <https://forestry.ca.uky.edu/articles/for177-field-guide-kentuckys-invasive-plants> or contact your local Boone County Extension office.

Source: Ellen Crocker, Department of Forestry and Natural Resources assistant professor



KY Master Naturalist Program

Program begins Friday, May 16 - Boone County Extension

This 10-12 week program will teach participants a wide range of topics about their environment including wilderness safety, water quality, wildlife, plants, geology, and more.

Applications are due by April 18th.

For more information contact Lacey Kessell:
Lacey.laudick@uky.edu 859-586-6101



BIRD FLU H5N1 – IS THERE A RISK TO PUBLIC HEALTH?

Situation:

On January 7, 2025, the first human patient diagnosed with H5N1 died, raising concerns for the general public. The patient was confirmed infected on December 18, 2024, through routine surveillance when they were hospitalized with severe respiratory illness. The patient was 65 years old with underlying health conditions and appeared to have been infected from exposure to backyard poultry and wild birds. First, the CDC still maintains that the risk to the general public remains low. They do, however, caution those that come into contact with wild birds, poultry, or dairy cows that they are at a higher risk. The CDC is providing information for those potentially exposed to H5N1 birds - <https://www.cdc.gov/bird-flu/prevention/farm-workers.html>. For such people Personal Protection Equipment (PPE) is recommended. The CDC also provides flyers on the proper use of PPE, found at the same website. The information is available in both English and Spanish.

Background material:

H5N1 is an influenza virus that primarily affects birds but in the last couple of years has started to affect mammals, including dairy cows. In 2024 there were 66 confirmed human cases of H5N1 in the USA, although there have been many more globally. Of these 66 cases, 40 were work-related to exposure (to dairy cows). The highest incidence of human infections has been confirmed in California (37), Washington (11), and Colorado (10). There have also been two confirmed cases in Michigan and one each in Iowa, Louisiana, Missouri, Oregon, Texas, and Wisconsin.



Symptoms of H5N1:

A December 2024 article from the New England Journal of Medicine¹ described 46 human cases of H5N1 confirmed between March through October 2024. The cases were primarily due to exposure to infected poultry (20) or infected dairy cows (25). One had no identified exposure and was hospitalized with non-respiratory systems and the H5N1 confirmed through routine surveillance. None of the other patients were hospitalized. Of these, 93% had conjunctivitis (pinkeye), 49% had a fever, and 36% had respiratory symptoms only. The median duration of the illness for which they have data (16 patients) was 4 days. Most patients (87%) received oseltamivir (Tamiflu). There has been no known person-to-person transmission.

From the CDC - symptoms can include:

- Eye redness and irritation (conjunctivitis)
- Fever (temperature of 100°F [37.8°C] or greater) or feeling feverish
- Cough
- Sore throat
- Runny or stuffy nose
- Muscle or body aches
- Headaches
- Fatigue
- Shortness of breath or difficulty breathing
- Less common signs and symptoms include diarrhea, nausea, vomiting, or seizures.

Should there be a concern?

While the Louisiana patient is the only severe case of H5N1 in the USA, a Canadian case occurred in November 2024. The case involved a 13-year-old girl who was overweight and had mild asthma. She went to the hospital with a case of conjunctivitis in both eyes and a day-old fever. She was discharged without treatment but returned a few days later with a cough, vomiting and diarrhea and was in respiratory distress and acute kidney injury. She was treated with oseltamivir and recovered. Genomic testing of the H5N1 virus obtained from both patients showed important mutations that lead to the respiratory symptoms. The mutation in the H5 hemagglutinin (the 'H' in the H5N1 designation) gene resulted in increased binding to a receptor that facilitates virus entry into cells in the human respiratory tract and enabled viral replication. The pre-mutation virus was not able to enter cells in the human respiratory tract. The mutation occurred in the patient, but no person-to-person transmission was observed.

As a follow up to the previous articles, an editorial published in The New England Journal of Medicine³ concluded that the CDC still designates the public risk of H5N1 is low and we have candidate vaccines and antivirals available to try to mitigate severe influenza in the case of wider spread. The influenza A virus is highly susceptible to mutations. There is concern for changes to the HA gene resulting in increased binding to the human airway receptors and a need for increased gene testing during surveillance has been recommended.

Conclusions:

Anyone who comes into contact with wild birds, poultry, dairy cows and other mammals should use proper personal protection equipment – gloves and mask at a minimum. Report any sick or dead wild birds using the Kentucky Department of Fish and Wildlife. Call 1-800-858-1549 from 8:00 AM to 4:30 PM (Eastern) on weekdays. Poultry owners who think their birds are sick please immediately call the Kentucky Sick Bird Hotline at 866-536-7593. This hotline is available for bird owners in Kentucky who are dealing with unusual signs of illness or increased mortality in their flock or livestock.

Additional resources:

- KDA's Factsheet: Avian Influenza in Kentucky – Information for bird owners - https://www.kyagr.com/statevet/documents/HPAI_Avian_Influenza_HANDOUT.pdf
- KY Fish and Wildlife avian influenza webpage - <https://fw.ky.gov/Wildlife/Pages/AvianInfluenza.aspx>

Contact: Dr. Jacquie Jacob, PhD; University of Kentucky; Jacquie.jacob@uky.edu

Getting Started With Composting

Composting is a great way to add valuable organic matter to your soil while reducing the amount of yard and food waste that ends up in landfills. It's also something that is remarkably easy to do.

Compost is the result of a natural process where decaying organic substances, such as plants, are broken down by microorganisms. This produces a nutrient-rich, organic material that you can apply to your lawn or garden, much like you would a commercial fertilizer.

You can start a compost bin or pile in your backyard. You can purchase a bin or make one using inexpensive, leftover materials like pallets or chicken wire. The bin can be as big or small as you want, but for most rapid composting, a pile that is at least one yard tall, one yard wide and one yard long is best. Make sure to place your compost in an area that is flat and well-drained.

When the compost area is ready, collect yard waste and food scraps. Yard waste can include twigs, shrub trimmings, grass clippings, leftover straw and leaves. Most fruit, vegetable and grain scraps are compostable as are coffee grounds, herbs, nuts and egg shells. Avoid meat scraps, oils and dairy products. You need to have a mixture of "brown" material (dried leaves, straw, twigs, coffee grounds, even

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cardboard) and “green” materials (fresh grass clippings, vegetable scraps, other fresh plant materials) for the composting process to work.

Mix or turn the pile once a week to help speed the breakdown of organic materials. If the compost pile is extremely damp, turn it more often. If it is dry, add some water or fresh plant material. It can take four to six months to complete the composting process. You will know it’s finished when the compost is dark brown, crumbly and smells like soil.

Compost can be used in the vegetable garden or spread around ornamental plants in the landscape, but be careful not to use too much. A one-inch layer of compost, worked into the top few inches of soil, will feed plants for several months.

More information on composting or other gardening tips is available at the Boone County Extension office of the University of Kentucky Cooperative Extension Service.

Ohio River Valley Invasive Species Conference

MARCH 19TH - 20TH, 2025
Boone County Extension
Enrichment Center

This conference will bring together professionals and concerned citizens who work on, and care about, the issue of invasive species in the lower Midwest. Our goals are to strengthen awareness of invasive species issues and to facilitate innovative and practical solutions for prevention and management. There is a fee.

To learn more and register, visit:
<https://mipnconference.weebly.com/>

Lacey Kessell,
Boone County Extension Agent
for Natural Resource &
Environmental Education
lacey.laudick@uky.edu

Kentucky Rabbit Stew

Servings: 12 Serving Size: 1.5 cups

A hearty rabbit stew with potatoes, mushrooms, carrots, and celery makes a complete meal.

Ingredients:

- 1 rabbit (3 pounds) cut into pieces
- ¾ cup all-purpose flour, divided
- 3 tablespoons vegetable oil
- 5 stalks celery, chopped
- 2 medium onions, thinly sliced
- 1 ½ teaspoons salt-free zesty herb blend
- ½ teaspoon salt
- ¼ teaspoon black pepper
- ½ teaspoon rosemary
- ½ teaspoon ground sage
- 1 bay leaf
- 4 cups water
- 4 cups low-sodium chicken broth
- 2 cups diced carrots
- 4 medium potatoes, peeled and diced
- 4 ounces mushrooms, sliced
- cup cold water

Directions:

Coat rabbit pieces in ½ cup flour. Heat oil in a large covered pan over medium heat. Brown rabbit pieces on all sides in oil. Add celery, onion, zesty herb blend, salt, pepper, rosemary, sage, bay leaf, water, and broth. Bring to a boil. Reduce heat to simmer. Cover and simmer for 2 hours. Lift rabbit pieces out of broth and remove bones, if desired. Return meat to pan. Add carrots, potatoes, and mushrooms. Cook for an additional 30 minutes or until vegetables are tender. Combine remaining ¼ cup of flour with cup cold water. Stir until well-blended with no lumps. Stir flour mixture into broth. Cook and stir until broth has thickened. Remove bay leaf before serving.

Source: Adapted from “Kentucky Rabbit Stew” by Martha Yount, Regional Specialist for Nutrition Education

Nutrition facts per serving: 260 calories; 6g total fat; 1.5g saturated fat; 0g trans fat; 90mg cholesterol; 350mg sodium; 22g carbohydrate; 2g fiber; 4g sugars; 28g protein; 0% Daily Value of vitamin D; 4% Daily Value of Calcium; 30% Daily Value of Iron; 20% Daily value of Potassium