



Mark your calendars now!

- ▶ **Eden Shale Open House**
October 19, 2024 · 10am
Eden Shale Farm - Owenton, KY
- ▶ **Kentucky Beef Conference**
October 24, 2024 · 10am
Fayette County Extension Office
- ▶ **Volunteer Day: Honeysuckle Removal**
October 24, 2024 · 1pm
Boone County Extension
Environmental & Nature Center
- ▶ **Homesteading Conference**
October 26, 2024 · 8am
Boone County Extension
Enrichment Center
- ▶ **Master Cattlemen**
Starts **November 4, 2024**
Details on Page 3.
- ▶ **Election Day ♦ BCES Closed**
November 5, 2024



Return of the Fall Armyworm?

In 2021, Kentucky was one of many states that were impacted by a historic outbreak of fall armyworms. That year marked perhaps the worst year for the pest since the 1970's and has inspired fear and dread about these hungry, hungry caterpillars rearing their head again. In the past week, reports from western and central Kentucky have indicated that some folks are seeing egg masses and fall armyworms in turfgrass areas. The sudden onset of fall armyworm in 2021 created temporary shortages of effective insecticidal remedies. Reports from



Figure 1. Typical fall armyworm damage in a young orchard grass stand.

UKY entomologists indicate we are not at the same levels as in 2021 but it is prudent to review how this pest works and what can be done about it.

Fall Armyworm and Kentucky

Fall armyworms do not overwinter in this state. They are a tropical species, and they typically overwinter in southern Florida and southern Texas. These spots stay warm enough for them to persist and then mate to start the generations that will migrate

(Continued on next page)

PO Box 876 · 6028 Camp Ernst Road | Burlington, KY 41005 | P: 859-586-6101 | F: 859-586-6107 | boone.ca.uky.edu



northward as moths. They usually move from these warmer states into states like Mississippi and Alabama in April and May, arriving next in Tennessee by May or June. Typically, they start to appear in Kentucky by June.

In the bluegrass state, fall armyworms are usually associated with issues in pastures and crops (Figure 1). In this state and others, they will cross over into the home landscape to feed on turf in lawns. Initially when they feed, the tips of the blades of grass will have windowpane-like damage. As the caterpillars grow, they will progress into consuming whole blades of grass. The term "armyworm" also comes from the fact that these pests move in a group across the grass, creating a distinct line of damage opposed to undamaged grass. Newly planted sod is more susceptible to being killed by these pests than established turf areas.

What should you do now?

Keep a close watch on your pastures/hayfields for egg masses and armyworms over the next few weeks. Egg masses may be laid on any outdoor surface and have a fuzzy covering. The eggs themselves are small and round, less than 1/8 inch in diameter.

If you have 2-3 caterpillars per square foot or more, then you should consider spraying. In other words, these numbers

will likely mean you will have considerable damage to late summer/fall growth in your pastures and hayfields. Fall armyworms have a characteristic inverted 'Y' on their headcap (Figure 2).

Fall armyworm is a sporadic late summer fall pest of alfalfa and mixed stand pastures. Best time to scout for this pest is in the early morning as they hide from the sun at mid-day. Soapy water drenches can be used to flush larvae from the soil at any time. Control should be considered if 2 to 4 larvae per square foot are found.

A potential alternative to insecticide application for hay crops near harvest stage, is to mow the crop IMMEDIATELY. Unfortunately, waiting 2 or 3 days for good curing conditions is not an option since armyworm defoliation is so rapid. Once cut, the conditions in the mowed forage become less conducive for the armyworm.

Check with your ag supplier about their current availability of insecticides. A copy of the labelled insecticides is found in Figure 3. Pyrethroids such as Warrior work best on small larvae (less than 3/4 inch), while diamides such as chlorantraniliprole works better on larger ones. Always be sure that the crop to be protected is on the label of the pesticide to be used.

In terms of the future, fall armyworm will remain a threat until the first frosts of the fall. Cold weather in the fall and winter kills this insect. It can only overwinter in the extreme southern parts of the United States and re-infests the state each summer.

Watch for updates on this developing pest situation in notices from your Cooperative Extension Office, this publication, in UKY Pest News Alert (<https://plantpathology.ca.uky.edu/extension/kpn>) and UKY Forage News (<https://kyforagenews.wordpress.com/>).

Note: Jonathan Larson and Ric Bessin, both UKY entomologists, contributed significantly to this article.



Figure 2. Two large fall armyworm larvae forced out of the ground by a soapy water drench. Note the inverted 'Y' on the headcap of the larvae on the right.

(Continued on next page)

Fall Armyworm Insecticides	MOA Group	Graze/harvest – Pre Harvest Interval (days)
carbaryl - Sevin XLR, Sevin 4F, etc.	1A	7 for alfalfa (May temporarily bleach tender foliage) 14 days for pasture and grasses for hay
methomyl - Lannate	1A	7 days for grazing or hay (alfalfa)
bifenthrin – Brigade 2E	3A	Not for use on alfalfa 30 days for forage and hay
<i>b</i> -cyfluthrin - Baythroid XL (1 st and 2 nd instars only)	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)
<i>g</i> -cyhalothrin – Declare, Proaxis EC	3A	1 day forage 7 days for hay (alfalfa) 0 day forage 7 days for hay (pasture grass)
<i>l</i> -cyhalothrin – Warrior II	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)
<i>α</i> -cypermethrin – Fastac EC	3A	3 days for cutting or grazing (alfalfa)
<i>z</i> -cypermethrin – Mustang Maxx	3A	3 days for cutting or grazing (alfalfa) 0 days for cutting or grazing (grass forage and hay)
permethrin – Ambush, Permethin 3.2 AG	3A	0 or 14 days depending on rate used (alfalfa only)
pyrethrins - PyGanic	3A	0 day forage/harvest
Spinosad - Entrust	5	0 days for forage, 3 days for hay
Bt products - Agree WG, Biobit HP, DipelDF, Javelin	11	0 days
methoxyfenozide – Intrepid 2 F	18	0 day forage, 3 days for hay (alfalfa) 0 day forage, 7 days for hay (Grass forage, fodder and hay)
chlorantraniliprole – Coragen, Prevathon, Vantacor	28	0 day alfalfa 0 day for grasses grazing or hay

Figure 3. Fall armyworm insecticides, their mode of action (MOA) and the graze/harvest-preharvest interval (days). From ENT-17, UK



Martin-Gatton
College of Agriculture,
Food and Environment
University of Kentucky.

MASTER CATTLEMEN 2024

BECOME A MASTER CATTLEMEN . . . The Master Cattlemen Program was created to give beef producers an in-depth educational course on beef cattle management. Producers completing the program will acquire knowledge that will help them make informed economic management decisions in the beef operations.

Location: Boone County Enrichment Center | 1824 Patrick Drive, Burlington, KY 41005
Participant must complete all six (6) three-hour sessions to become certified.

<p>November 4 6:30 p.m. Dr. Katie Vanvalin Assistant Extension Professor Extension Beef Specialist Nutrition</p>	<p>November 11 6:30 p.m. Kevin Laurent Senior Agriculture Extension Specialist Marketing & Profitability</p>	<p>November 18 6:30 p.m. Darrh Bullock Extension Professor Animal & Food Sciences Genetics</p>
<p>November 25 6:30 p.m. Les Anderson Extension Professor Animal & Food Sciences Reproduction & Record Keeping</p>	<p>December 2 6:30 p.m. Dr. Morgan Hayes Assistant Extension Professor Josh Jackson Ag Engineering Specialists Facilities & Winter Feeding</p>	<p>December 9 6:30 p.m. Dr. Michelle Arnold UK Ruminant Extension Veterinarian Animal Health</p>



**Call your County Extension
Office or Scan the
QR Code to register.**

\$125 Registration due at 1st session
Includes all meals, class materials and farm sign
Cash or check only!

BOONE 859-586-6101
CAMPBELL 859-572-2600
CARROLL 502-732-7030
GALLATIN 859-567-5481
GRANT 859-824-3355
KENTON 859-356-3155
PENDLETON 859-654-3395
OWEN 502-484-5703

Preparing Your Farm for Winter

As autumn settles in and the days grow shorter, farmers must turn their attention to preparing for the winter months ahead. Proper preparation not only protects crops and livestock but also ensures the longevity of your equipment and the overall health of your farm. Here's a detailed guide to winterizing your farm effectively.

1. Assess Your Crop Situation

The first step in winter preparation is evaluating your remaining crops. Depending on your region, you may still have late-season vegetables or grains that need to be harvested.

- **Harvest Timing:** Prioritize harvesting crops that are sensitive to frost. These include tomatoes, peppers, and squash. Ensure they are picked at their peak for the best quality.
- **Cover Crops:** If you have fields that are not planted for winter, consider sowing cover crops such as clover or rye. These plants help prevent soil erosion, improve soil health, and suppress weeds.

2. Protect Livestock

Livestock care is crucial during winter. Cold temperatures can stress animals and lead to health issues if not managed properly.

- **Shelter:** Ensure that your barns and animal shelters are well-insulated and free from drafts. Proper bedding—like straw or wood shavings—can provide warmth and comfort.
- **Feeding:** Increase the nutritional content of your animals' diets as they will need extra energy to maintain their body heat. Consult a veterinarian for specific dietary recommendations tailored to your livestock.
- **Water Access:** Keep water sources from freezing. Consider using heated water troughs or regularly checking and replenishing water supplies to ensure animals stay hydrated.



3. Winterize Equipment

Winter can take a toll on farm equipment if it's not properly cared for.

- **Maintenance Checks:** Before winter hits, conduct a thorough inspection of your machinery. Change the oil, check the battery, and replace any worn-out parts. Clean off any residue or dirt that may have accumulated.
- **Storage:** Store equipment in a dry, protected area to prevent rust and damage. If possible, cover machinery with tarps or plastic sheeting to provide an additional layer of protection against the elements.

4. Manage Soil and Fields

The state of your soil is vital for the next growing season. Taking steps to manage it over winter will pay off in the spring.

- **Soil Testing:** Conduct a soil test to determine nutrient levels and pH. This information is essential for planning spring fertilization and amendments.
- **Tillage:** If appropriate for your farm, consider no-till practices, which can help maintain soil structure and prevent erosion during winter months.

(Continued on next page)

- **Mulching:** Apply mulch in areas that are prone to erosion or where you have perennial crops. This can help protect the soil and maintain moisture levels.

5. Pest and Disease Management

Winter can bring a host of pests and diseases that can affect your farm's health in the spring.

- **Clean Up:** Remove any leftover plant debris from fields and gardens. This helps eliminate overwintering sites for pests and diseases.
- **Rodent Control:** Ensure that feed and seed storage areas are rodent-proof. Consider using traps and bait stations strategically placed around your farm.

6. Plan for Snow and Ice

In regions where snow and ice are prevalent, having a plan in place is essential for farm operations.

- **Access Routes:** Ensure that driveways and access roads are clear for easy travel, even in snowy conditions. Consider investing in snow removal equipment or hiring services as needed.
- **Livestock Movement:** Create safe paths for moving livestock during winter weather. This can help reduce stress on both animals and handlers.

7. Financial and Logistical Preparations

Lastly, take time to assess your financial and logistical needs as winter approaches.

- **Budgeting:** Review your budget for the upcoming months. Account for additional feed costs, heating, and potential repairs that may arise during winter.
- **Emergency Plans:** Develop contingency plans for winter emergencies, such as severe weather events or equipment breakdowns. Stock up on essential supplies, such as feed, bedding, and fuel.

Conclusion

Preparing your farm for winter involves careful planning and proactive measures. By assessing crops, protecting livestock, winterizing equipment, managing soil health, controlling pests, and planning for snow, farmers can ensure that their operations remain efficient and effective throughout the colder months. This groundwork not only protects your investment but also sets the stage for a successful spring planting season. Embrace the seasonality of farming, and take the necessary steps to safeguard your land and livelihood.



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

"Today's Challenges, Tomorrow's Opportunities"



Kentucky Beef Conference

October 24, 2024

<p>Fayette County Extension Office 1140 Harry Sykes Way Lexington, Kentucky 40504</p> <p style="text-align: center;">9:00—10:00 Registration, visit sponsors</p> <p style="text-align: center;">\$10 registration fee</p> <p style="text-align: center;">RSVP by October 22nd to Fayette County Extension Office 859.257.5582</p>	<p>10:00—Welcome & Sponsor Recognition Beau Neal, Woodford County Agriculture & Natural Resources Extension Agent</p> <p>University of KY Remarks & Welcome Dr. Laura Stephenson, UK Director of Extension</p> <p>Genomics Technology Dr. Troy Rowan, University of Tennessee Institute of Agriculture Beef Genetics Extension Specialist</p> <p>11:00— Marketing Update & Outlook Dr. Kenny Burdine, UK Beef Economic Extension Specialist</p> <p>12:00 Lunch</p> <p>1:00— Animal Tagging Update Dr. Michelle Arnold, UK Extension Ruminant Veterinarian</p> <p>1:30— KY Beef Cattle Health Update Dr. Steve Velasco, KY Department of Agriculture State Veterinarian</p> <p>2:00—Adjourn</p>
---	--

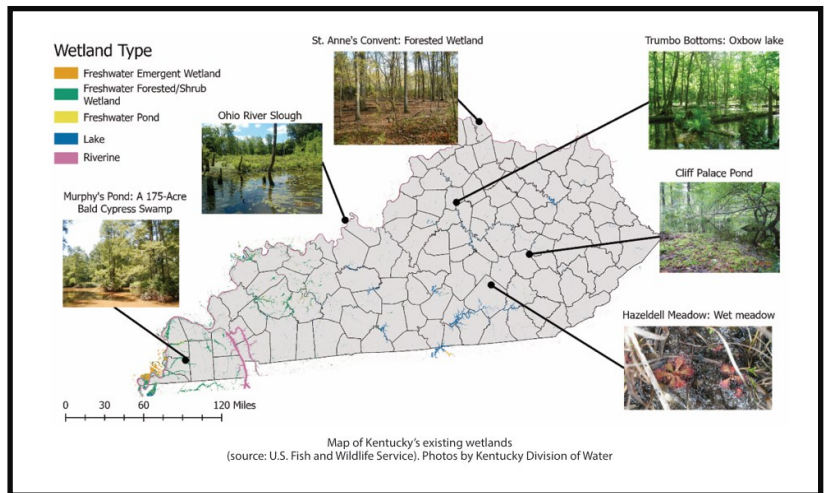
Understanding and Protecting Kentucky Wetlands

What are Wetlands?

Wetlands are areas where water either covers the soil or soil is saturated permanently or seasonally. Wetlands have soils that have developed anaerobic (lacking oxygen) conditions in the upper part of the soil layer, known as hydric soils. Plant species that have adapted to survive in these conditions are known as hydrophytes. Since water is essential for almost everything on earth, wetlands are one of the most biologically productive ecosystems on the planet and are home to plants, mammals, birds, reptiles, amphibians, and fish that are uncommon in other ecosystems. Geographically, wetlands are typically located between areas of higher elevation and aquatic systems such as oceans and rivers. However, they are also found in topographically low-lying regions or depressions and can be found across the United States, whether along the coast or throughout Appalachia.

Where are Wetlands?

Before the colonization of Kentucky, wetlands made up 6 percent of the Commonwealth; however, by the 1990s, 80 percent of these original wetlands were removed. Wetland loss in the state is mainly attributed to land management activities and land conversion from logging, the addition of cropland and pasturelands, and stream channelization. Highway construction, coal mining, and industrial and commercial activities also have contributed to wetland loss and degradation. There are approximately 360,000 acres classified as wetlands in Kentucky today. While many of these wetlands occur in the western portion of the state, a variety of wetlands exist in all 120 counties. Most are privately owned and can be characterized as riverain systems, lakes, and ponds. Other common types of natural wetlands in Kentucky include freshwater forested wetlands, such as cypress swamps and bottomland hardwood forests, and freshwater emergent wetlands.



Where are Wetlands in Kentucky?

Wetlands can occur naturally in the environment, have historically gone by a variety of names, and come in various forms. Typically, wetlands have been defined based on the source of water entering the wetlands (e.g., runoff, rainfall, groundwater); how long the soil is inundated or saturated to the surface (e.g., part of the year, most of the year, all year long); and the type of plants present (e.g., emergent vegetation, floating vegetation). Some common examples of natural wetlands include:

- **Bogs.** Wetlands that have peat deposits, acidic waters, and moss that cover the land surface are known as bogs. Bogs receive most of their water from rainfall events, as compared to surface runoff or groundwater.
- **Fens.** Peat-forming wetlands that receive their water from runoff and groundwater are called fens. Fens can support many diverse plant and animal species and contain grasses, sedges, rushes, and wildflowers.
- **Vernal pools.** Vernal pools are seasonal depressional wetlands that may be covered in shallow water during winter and spring but completely dry during the summer and fall. These types of wetlands are home to plants and animals that spend the dry season as seeds or eggs and then grow and reproduce during the wet season, such as wood frogs.
- **Swamps.** Any wetland that is dominated by woody plants is classified as

(Continued on next page)

a swamp. Swamps can be defined as either forested or shrub swamps and can be home to a variety of species such as the wood duck, cottonmouth snake, river otters, American crocodile, and many types of amphibians. • Marshes. Marshes are wetlands that are continually flooded with water and have emergent soft-stemmed vegetation. Marshes can appear near the coast or inland. • Floodplains. These wetlands exist next to a stream or river and are prone to flooding. These types of wetlands may also be referred to as bottomland hardwood forests. • Wet meadows. This type of wetland resembles grasslands that are typically drier than marshes and are without standing water for most of the year.

Why are Wetlands Important to Kentucky?

Kentucky's wetlands provide the Commonwealth with many services, such as tupelo honey tracts in the western forested wetlands, endangered species habitat, and recreational opportunities, in addition to saving Kentucky millions of dollars annually by reducing flood damage and trapping and transforming common pollutants found in surface and groundwater. In fact, wetlands are often referred to as nature's kidneys because of two key benefits:

- the ability to break down contaminants in the environment such as pesticides, fertilizers, metals, and sediment; and
- the capacity to store billions of gallons of water.

How Can I Help Protect Wetlands?

Wetland loss and degradation have limited the function and broad applicability of the services that wetlands provide. Protection of existing wetlands and construction of new wetlands are viable options to help mitigate the loss of services. Steps to protect wetlands have been established through the federal and state governments and nonprofit organizations.

Wetlands also provide a variety of other services:

- Flood control
- Erosion control and land stabilization
- Drought mitigation
- Groundwater recharge
- Trapping sediment
- Nutrient filtering
- Carbon sequestration
- Habitat and food for animals such as ducks, bald eagles, swamp rabbits, wood frogs, blue catfish, and many more
- Fiber and fuel from logs, peat, and fodder
- Land beautification
- Recreational space for hunting, fishing, kayaking, bird watching, and hiking
- Educational opportunities

Kentucky Resources

- Kentucky has also put in place programs to help protect wetlands at the state level. To learn more about this program and what Kentucky is doing to protect its wetlands, go to [https:// eec.ky.gov/ Environmental-Protection/Water/Protection/Pages/ Wetlands.aspx](https://eec.ky.gov/Environmental-Protection/Water/Protection/Pages/Wetlands.aspx).
- The Kentucky Energy and Environment Cabinet established the Kentucky Wetlands Rapid Assessment Method in 2010. This was put in place to better manage and protect Kentucky's wetlands.
- The Kentucky Department of Fish and Wildlife Resources has also worked to help promote and protect wetlands within the Commonwealth through technical guidance provided to landowners and developers when identifying wetlands and creating a restoration plan. The Kentucky Department of Fish and Wildlife also manages 39,000 acres of wetlands in Kentucky to protect waterfowl habitat.
- The Kentucky Office of Nature Preserves works to protect and manage wetlands by locating significant natural areas that should be dedicated as state nature preserves. Management and restoration activities are then dedicated to restoring the site to its prior condition, before human influences. The Mississippi River wetlands located in western Kentucky are an example of an area managed by the Kentucky Office of Nature Preserves.

Excerpt from Understanding and Protecting Kentucky Wetlands by Emily Nottingham, Biosystems and Agricultural Engineering; Amanda Gumbert, Agriculture and Natural Resources Extension; and Tiffany Messer, Biosystems and Agricultural Engineering

For the complete publication visit: [ID-279: Understanding and Protecting Kentucky Wetlands \(uky.edu\)](https://www.uky.edu/ID-279/Understanding-and-Protecting-Kentucky-Wetlands)

1ST ANNUAL
TRI-STATE
Est. 2024
HOMESTEADING
CONFERENCE
Saturday, October 26
at Boone County
Enrichment Center
8:00am - 4:00pm

Cost: \$40 Registration Fee includes lunch & refreshments
Register Here:
<https://tinyurl.com/tristatehomestead>

Featuring
Keynote Speaker:
The Lean Farmer,
Ben Hartman

OTHER TOPICS:
Beefin' Up Your Homestead
Butchering Basics
Honey & The Bee
Mushroomin' 101
Tapping into Sweetness: Maple Syrup
Extending the Growing Season
Cultivating Healthy Soil

& Much more as we help you
homestead one acre at a time...

THE OHIO STATE UNIVERSITY EXTENSION
Cooperative Extension Service
PURDUE UNIVERSITY Extension

Conference Location: Boone County Extension Enrichment Center • 1824 Patrick Drive • Burlington, KY 41005



Let Us Know...
How can we best serve you? If you would like to opt out of future mailings or receive this newsletter electronically, email us at boone.ext@uky.edu or give us a call at 859-586-6101.

EDEN SHALE OPEN HOUSE

WINTER FEEDING STRATEGIES
RAINWATER COLLECTION CONCEPTS
CATTLE FACILITIES

Call 859-278-0899 to register or scan QR above to register online.

OCTOBER 19

Tour begins at 10 AM ET • Lunch at Noon
400 Eden Shale Road, Owenton Kentucky



College of Agriculture,
Food and Environment
Cooperative Extension Service

Gary Stockton,
Boone County Extension Agent
for Agriculture
gary.stockton@uky.edu

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