

# The FARMACY

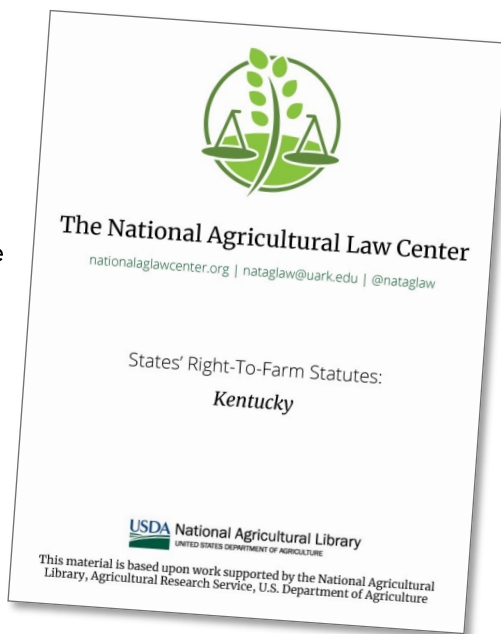
## What Are Right-to-Farm Laws?

*Paul Goeringer, University of Maryland, Department of Agricultural and Resource Economics, Senior Faculty Specialist*

**A**gricultural operations often cause dust and odors which could impact neighbors and bring nuisance claims. All 50 states have a right-to-farm law on the books, providing a nuisance defense for agricultural operations. This defense varies from state to state, but each state's law operates to provide a defense in situations when a party is claiming the farm is a nuisance.

What is a nuisance? A nuisance is a condition or situation impacting another person's use and enjoyment of property. Let's say, for example, that a grain producer applies nutrients to a field neighboring a residence. The neighbors might not be able to use their property immediately after the producer applies the nutrients due to the smell. This could be a potential nuisance because the neighbors have lost the use and enjoyment of their property.

A right-to-farm law operates to provide a defense to the agricultural operation when facing nuisance lawsuits. To use the defense, the agricultural operation must meet their state's statutory requirements, which vary from state to state. In several states, for example, the



farming operation would need to either preexist the non-agricultural uses in the area or at least be in operation for a set period. In many states, the operation must also comply with other federal, state, or even local laws, such as environmental laws or local zoning ordinances.

The right-to-farm law defense can be a powerful tool to protect a farming operation, but an operation needs to qualify for the defense. The National Ag Law Center has compiled all of the state right-to-farm laws: <https://nationalaglawcenter.org/state-compilations/right-to-farm/>

## Upcoming Dates:

**Field Day #2**  
**Beef Cattle**  
**Master Finisher**  
Program Field Day  
Thursday, May 5, 2022

Thursday, May 5, 2022 - 6:30 p.m.  
**Alan Ahrman Farm**  
661 Kenton Station Road, Alexandria, KY 41001  
Nutrition and Management Part 2

**Farming Operation Highlights:**

- Hay Sampling and Balancing Rations
- Weigh Calves on a Regular Basis
- Benefits of a good Vaccination Program
- Proper Facilities for Backgrounding and Finishing
- Use of Cameras to Monitor Herd during Calving Season
- Increased Production from Finishing 3 Beeves in a year, to 25 per year, in 3 years

**Registration is required**  
Call 859-472-2600 or online at <https://campbell.ca.uky.edu>

**May 5- 6:30 p.m.**  
**Master Finisher- Field Day**  
Alan Ahrman Farm, Alexandria, KY  
See flyer on page 16  
**Call to reserve your meal for this program.**

**May 23- 6:00 p.m.**  
**x10D Beef Cattle Program Sign-Up**  
Campbell County Cooperative Extension Highland Heights Office  
See flyer on page 7  
**Call to reserve your meal for this program.**

*Michelle Simon*

Michelle Simon  
Campbell County Extension Agent  
for Agriculture and  
Natural Resources

## Farm and Home Safety Tips for Stormy Weather

Sources: Matt Dixon, UK Agricultural Meteorologist; National Weather Service, National Oceanographic and Atmospheric Administration, National Ag Safety Database

It's that time of year when we get more thunderstorms. Weather patterns are more active, and storms thrive with the moisture and rapidly rising warm air that is very common during the transition to warmer seasons.

Stormy conditions also increase the potential for lightning to strike people at work or play outdoors and, possibly, while they're inside a building. Although thunderstorms are more common during the spring and summer, they can take place all year long and at all hours.

All thunderstorms produce lightning. Sometimes called "nature's fireworks," lightning is produced by the buildup and discharge of electrical energy between negatively and positively charged areas. An average lightning charge can provide enough energy to keep a 100-watt light bulb burning for more than three months.

Other dangers associated with thunderstorms are heavy rains that lead to flash floods, strong winds, hail and tornadoes. These weather conditions can injure or kill people and pets, as well as cause billions of dollars in crop and property damage.

Thunder is the result of a shock wave caused by rapid heating and cooling of air near the lightning channel.

If you want to estimate the miles between yourself and a lightning flash, simply count seconds between lightning and thunder and divide this time by five. Sound travels about a mile every five seconds. So if you count 30 seconds between lightning and thunder, lightning has flashed

within six miles of you. This puts you within lightning striking distance, according to scientific research.

The most important thunderstorm safety precaution is simply to be aware of an approaching thunderstorm and move to a safe shelter before the storm arrives in your area. If you see lightning, hear thunder, observe dark clouds, or your hair stands on end, immediately go inside a sturdy, completely enclosed building, home or a hard-top vehicle with closed windows. Avoid picnic shelters, sports dugouts, covered patios, carports and open garages. Small wooden, vinyl or metal sheds provide little to no protection.

Since metal conducts lightning, don't touch metal inside or outdoors; drop metal backpacks; release golf clubs, tennis rackets, fishing gear and tools, and get off bicycles and motorcycles.

Lightning can strike water and travel a long distance in it. So standing in water, even in rubber boots, isn't safe during a thunderstorm. It's also unsafe to go swimming, wading, snorkeling and scuba diving if lightning is present. If you're in a small boat during a storm, crouch in the middle and stay away from metal items and surfaces.

Crouch down in an open, exposed area and stay away from tall objects, such as trees. Remember to stay away from clotheslines, fences, exposed sheds and other elevated items that can conduct lightning.

If you're indoors, remember lightning can enter buildings as a direct strike, through pipes and wires extending outside, or through the ground.

Telephone use is a leading cause of indoor lightning injuries in America, because the charges can travel a long way in telephone and electrical wires, especially in rural areas.

Windows and doors provide a direct path for lightning to enter a building; so avoid them. During a thunderstorm, stay away from laundry appliances as they are connected to plumbing and electrical systems. Dryer vents offer a direct electrical pathway outdoors.

On the farm, ungrounded wire fences can put livestock at risk when lightning strikes. Surprisingly, lightning can travel almost two miles along an ungrounded fence.

According to the National Ag Safety Database, you can ground wooden or steel posts that are set in concrete by driving ½-inch or ¾ inch steel rods or pipes next to fence posts at least 5 feet into the ground, at intervals of no more than 150 feet along the fence. You should securely fasten the grounding rods so that all the fence wires come into contact with them. You can also substitute galvanized steel fence posts for wooden posts at intervals of no more than 150 feet. You should not however, ground electric fences in this manner, because they have a direct path to the ground in their circuitry. More tips for lightning protection on the farm are available on the National Ag Safety Database website, <http://nasdonline.org/1882/d001825/lightning-protection-for-farms.html>. Also remember pet safety. Lightning can easily strike animals chained to a tree or wire runner. Doghouses generally aren't protected against lightning strikes.

## Alfalfa Weevil Insecticide Resistance

By Ric Bessin, Entomology Extension Specialist, from Kentucky Pest News, April 5, 2022



single insecticide or a single insecticide mode of action (same IRAC insecticide group) used repeatedly over a number of years. A common characteristic in fields with insecticide failures for alfalfa weevil was exclusive use of an insecticide with the same mode of action for more than 15 years. However, this does not confirm insecticide resistance; follow up laboratory

**E**arly spring is the start of alfalfa weevil season, and treatments are beginning to be applied to control this pest. There have been reports of poor weevil control with pyrethroid insecticides in some fields. There can be several reasons why an insecticide application performs poorly, including incorrect rates due to improper calibration, the wrong type of pesticide was used, or the timing of application was off. But in these instances, the producers indicated they had used the same product for a number of years, and those products are not working like they had in the past.

### Ruling Out Resistance Failure

Before concluding insecticide resistance when an application fails, the first step is to rule out other potential causes of the failure. Make sure that the correct pesticide was used, confirm that the rate used was what was intended, and that the timing was correct to control the pest. With very high populations or larger stages of pests, it may take the highest labeled rate to get good control.

Once other potential causes of insecticide failure have been ruled out, begin to look at causes that can lead to development of insecticide resistance.

### Factors in Insecticide Resistance

Two factors are often associated with the development of insecticide resistance.

The first is over-reliance on insecticidal control of pests in place of other non-chemical tactics. In this situation, producers may be using calendar applications in place of pest monitoring and economic thresholds. Pest monitoring may reveal that the pest is not present at levels requiring chemical control or it may suggest delaying an application to allow natural enemies time to make a greater impact with biological control. Other non-chemical tactics should be considered in order to reduce the selection pressure that drives the development of insecticide resistance.

The other factor that favors the development of insecticide resistance is a field history of extensive use of a

single insecticide or a single insecticide mode of action (same IRAC insecticide group) used repeatedly over a number of years. In these instances, poor control was observed with pyrethroid insecticides for alfalfa weevil. If an insecticide is still warranted in these fields, an insecticide from another mode of action group must be used. Fortunately, we have alternative modes of action labeled for this pest on alfalfa.

Producers need to use this as a lesson so that they can avoid pesticide resistance in the future. First, relying on pest monitoring to make insecticide application decisions helps to reduce the selection pressure favoring development of resistance. When you do spray, you must switch to different modes of action (IRAC insecticide groups) with each subsequent application. Since alfalfa weevil has a single generation per year, this would mean changing insecticide modes of action each year. Ideally, you should use three insecticide modes of action in rotation. This will help to delay or prevent the development of insecticide resistance.

# Hiring during 'The Great Resignation'

Bob Milligan for Progressive Cattle

**A** job report at the beginning of 2022 estimated about 200,000 people found jobs – about half what we expected. At the same time, the unemployment rate fell. This result means fewer people are now working or looking for work. This unusual circumstance is being called “The Great Resignation.”

In this article, we seek to better understand what is happening in The Great Resignation, we focus on two key priorities in this time, and then offer some recruitment ideas.

## The current labor environment

The labor market has been tightening and thus more challenging to employers for the last decade or more. The baby boomers are retiring, and there are fewer young people entering the workforce because the young adults have been bearing fewer children and are waiting until they are older and have become established in their careers. The reality is: The period early in the pandemic when businesses were closed was the exception. We have now returned to that trend, accentuated by the factors discussed below.

The pandemic has led to great personal and societal changes. The stress of the pandemic caused many individuals and families to examine their priorities. Many found, through this examination plus being at home due to being unemployed or working from home, that their current or previous employment no longer was satisfactory. Some have left the workforce or moved to part-time work to have more family time exacerbated by the possibility of their children learning virtually. For

many, their expectation has changed from a career/life balance to a career/life integration.

Two events happening at the same time as the pandemic have heightened the job expectations of many, especially those in low-paying jobs. The first is the \$15 minimum wage movement; the second is the increased awareness of racial injustice created by the George Floyd murder.

Until recently, agriculture has been less impacted than most sectors because we had little loss of or change in employment, as our work



cannot be done virtually. Now and going forward, these trends may have even greater impacts for us. The work flexibility that is a key component of career/life integration is a huge challenge for us. A great dose of creativity will be required. Similarly, fewer workers will likely accept the days per week and hours per day expectations common in agriculture. Finally, we must work to overcome the poor image of agricultural firms as employers.

## Two key hiring priorities

You want your business to be a business employees will choose. Those businesses are often called preferred employers or employers of

choice. A farm or other business becomes a preferred employer in two ways. First, the farm or business must be a great place to work – one with engaged employees who will be ambassadors for your business. Second, the farm or other business must communicate that excellence to potential employees through networking in the community and with potential labor pools and through professional recruitment and selection processes.

The second priority is closely related to being a preferred employer. Increasingly successful recruitment uses the owners', employees' and farms' network. Many positions are filled with candidates who have already had contact with the farm or other business either by being at the farm, such as during a visit or an internship, or by connecting with the owners or other employees at events external to the farm. I believe that in many situations today, the network will be the primary or maybe only source of candidates.

You need to identify external opportunities to connect with potential candidates. You can fulfill this responsibility by attending events future employees attend or are a participant in. Examples could include school activities, FFA functions, job fairs, etc. Further, when you do have an open position, you must use every possible networking opportunity – brainstorm everyone you know who might have a connection to a good candidate.

## Professional recruitment required

The goal of recruiting is to reach and persuade qualified candidates to apply for open position. Recruiting

includes promoting the positive attributes of the farm and the available position and providing information about what will enable a potential candidate to succeed in the position.

Positive attributes are often sadly lacking in most recruitment materials I read. Recently, I was teaching a seminar for managers. They had a very difficult time moving past their concerns about offering competitive compensation. Compensation is important, but not nearly as important as most think. Did you become a farmer for the money? Take the time to brainstorm positives.

Your recruitment plan to reach great candidates and entice them to apply for your position can include informal word-of-mouth communications, want ads, job announcements, internet job announcements and formal job services.

Great recruitment – marketing – materials can be developed using the following seven steps:

- Lead with a positive statement or job characteristic that attracts attention.
- Give the job title.
- Say something positive about the business.
- Describe the job.
- Explain qualifications necessary for success in the position including the competencies.

- Provide information on wages and benefits, as appropriate.
- Say how to apply for the job.

The resulting recruitment materials can go on the internet – (Craigslist, internet job postings, etc.), in newspapers and in flyers that can be handed out and posted.

Recruitment is marketing. Today, the greatest recruitment tool you have is the job satisfaction of your workforce. You also must “get out there” by making recruitment a continuous process and using and expanding your network.

**COOPERATIVE EXTENSION**




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<https://campbell.ca.uky.edu/content/campbell-county-trail-passport>

**For more details...**

Visit the website above or scan this QR code.






**Send pictures and comments of your hike to: [djscully@uky.edu](mailto:djscully@uky.edu)**

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## Pesticide Safety in and around your Home

Source: Ric Bessin, UK Extension Entomologist

**O**ur homes are our private sanctuaries, where we can escape and unwind. We want to protect and preserve our homes and our privacy at all costs. When insect pests begin to appear in and around our home, they can breach or invade that privacy. Depending on the severity of the pest problem, some of us may have to use pesticides to regain control of our gardens, landscapes and homes. It is important that we practice wise, safe pesticide applications to protect ourselves and our families.

Here are some tips to minimize your and your families risks from improper pesticide use.

- Match the pesticide to the pest. Know what insect pest is causing the damage, health and safety risks or irritation. Only use pesticides labeled to control that insect. If you use the incorrect pesticide, not only will the problem pests not go away, but you have wasted money using the wrong pesticide and put you and your family at unnecessary risk to pesticide exposure. At the extension office, we can help you correctly identify insects and choose the right pesticide to treat your problem.
- Read pesticide labels and follow them. Pesticide labels are law, and you must follow them. The label

directions are for your safety. If its intended placement is not on the label, it may not be safe or legal to apply an insecticide in a certain location. Also, some pesticides are not approved to be use in or around homes. By reading and following the pesticide labels, you

the personal protective equipment that you should wear to apply the product, but some won't. At a minimum, you should wear plastic gloves, shoes, socks and long pants and long-sleeve T-shirts when applying a pesticide.

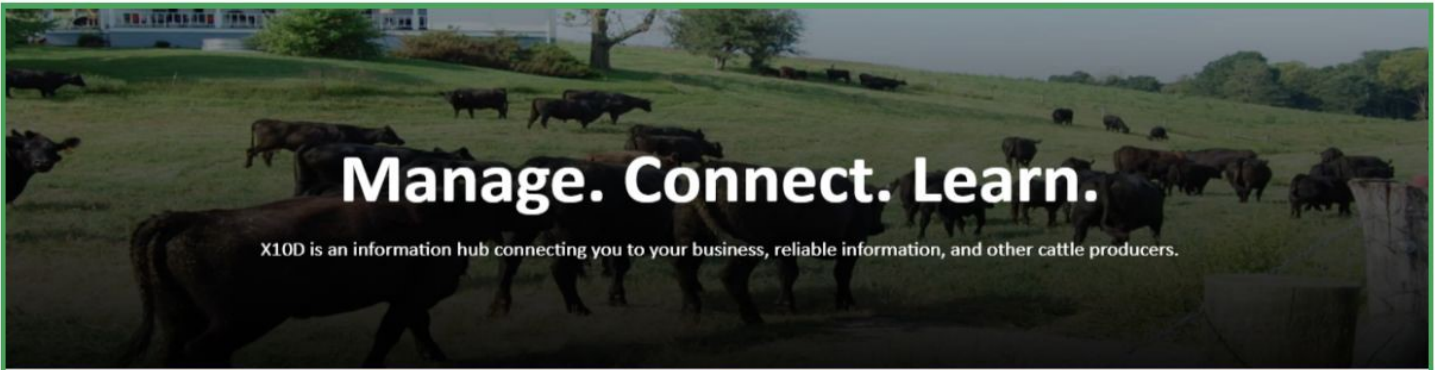


can have the confidence that the product was safely applied and will effectively manage problem pests.

- Do not mix pesticides and household items. Make sure the containers, spouts, funnels, wands and other items you plan to use to apply the pesticide are only used for that purpose. Do not reuse these items for other household reasons once you have applied pesticides in them. Only mix the exact amount of pesticide needed to control your problem. Do not pour unused pesticides down sinks or toilets.
- Dress for the job. By wearing the proper attire, you can reduce your pesticide exposure. Some pesticide labels will clearly state

- Remove children and pets from the area before applying pesticides and during application. Many labels will specify when it is safe for people and animals to return to the application area, but if not, at least keep them out of the space until the pesticide has had time to thoroughly dry.

- Clean up. Wash and rinse reusable PPE like gloves and goggles. Wash the clothes you were wearing separately from the rest of your family's clothes. Wash your face and hands, especially before eating, drinking or using tobacco products.
- Properly store pesticides. Most labels will say how to store the pesticide. At a minimum, make sure it is in a location that is out of reach from children or pets and stored at the correct temperature. Most pesticides should be stored in an area that is above 40 degrees F and out of extreme hot or cold temperatures.



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App to extend University of Kentucky beef resources, connect farmers

# X10D



College of Agriculture,  
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Cooperative Extension Service

## Join us May 23rd at 6:00 p.m.

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**Meal Reservation required: 859-572-2600**

**Guest Speaker: Dr. Les Anderson, Extension Professor, University of Kentucky**

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# BROODING POULTRY HATCHLINGS

*Written by: Dr. Jacquie Jacob, University of Kentucky*

To ensure that your new flock gets off to a good start it is important to have the appropriate equipment and knowledge of the needs of young birds.

## EQUIPMENT

- **Shelter:** It is important to provide a clean, dry area for your hatchlings that will protect them from predators, cold and rain, and hot sun. Almost any small building that meets the floor-space requirement for the size of the flock can be used. It is even possible to raise a small number of hatchlings in the corner of a garage.
- **Bedding Material:** Provide **bedding material**, or litter, for your hatchlings that will absorb moisture from the manure and keep the brooding area clean. A variety of materials can be used as bedding material, including wood shavings (most effective), ground corn cobs, peanut and rice hulls, and hay or straw that has been chopped into smaller pieces. Note that unchopped hay or straw is ineffective as a bedding material. Never place hatchlings on a slick surface such as cardboard, plastic, or newspaper; smooth surfaces can lead to leg problems. For more information about bedding, refer to the article "[Litter material for small and backyard poultry flocks.](#)"
- **Heat Source:** You must provide your hatchlings with a heat source, typically a **brooder** or a heat lamp because hatchlings are not able to regulate their own body temperature for

the first few weeks of life. There are many different heat sources that can be adapted for use in small flocks.

- Standard **hover brooders** can be used for a flock of up to 1,000 chicks.

For smaller flocks, an **infrared heat lamp** is more practical. Suspend the lamp with a chain or wire (do not use the electrical cord) so that the lamp is at least 18 in. above the bedding material. In winter, it is important to make sure space where you keep your hatchlings is insulated so that heat lamps can keep the area sufficiently warm. A two-lamp unit provides a backup in case one lamp burns out during cold weather. Before installing a heat lamp, make sure that you have porcelain sockets approved for these lamps, and be sure that the lamp cannot fall to the ground, where it could become a fire hazard.

**Brooder Guard:** For the first seven to ten days after hatching, use a circular barrier called a **brooder guard** to confine hatchlings. The brooder guard should be about 15 to 16 in. high. Most brooder guards are made of cardboard. The brooder guard prevents the hatchlings from wandering too far from the heat source and reduces drafts of cold air. The area surrounded by the brooder guard should be large enough for hatchlings to move toward or away from the heat source to find their temperature comfort zone. When the hatchlings are seven days old, the brooder guard can be removed.

## Feeding and Watering

**Equipment:** Young poultry require feeding and watering equipment designed to accommodate their small size.

- Hatchlings do not have an innate ability to recognize food. They will peck at small particles, nutritious or not. When hatchlings are raised with their mothers, their attention is directed towards nutritious items as they follow their mothers. Especially when raising hatchlings without their mothers, you must have feed readily available for young birds. For the first day or two after the hatchlings' arrival, put feed in a shallow pan or egg carton without a lid, which will make it easy for the hatchlings to find the food. As the hatchlings get older, provide bigger feeders.
- Chick **waterers** (also called **drinkers**) are available commercially and typically consist of a gallon or quart jar that you fill and then invert and screw onto a special base, which the hatchlings drink from. Consider the size of the young when selecting waterer bases. Small Bantam chicks and Bantam ducklings will be less likely to become soaked and chilled if waterer bases are the appropriate size for Bantams. The height of the waterers should be 2 inches shorter than the back height of the hatchlings. Make sure the hatchlings have continuous access to clean water.
- Most feeders and waterers designed for chickens can be used for ducks, as long as the size of



the duck's bill is taken into consideration.

## PREPARATION

Take the following actions to prepare the brooding area for hatchlings:

- Clean and disinfect the poultry house or brooding area, feeders, and waterers at least two weeks before hatchlings are due to arrive.
- Repair windows, doors, ventilators, or any part of the poultry house or brooding area that needs attention. Eliminate any drafts, especially those caused by cracks in the walls or poorly fitting doors and windows.
- Put down the bedding material two days before hatchlings are due to arrive.
- Turn on the heat lamp or brooder the day before hatchlings are due to arrive. This will give the brooding area time to warm up.

## WHEN HATCHLINGS ARRIVE

- The first thing that the birds will need when they arrive is water. Dip the beaks of the birds into the water source to teach them where the water is. This is particularly important for turkey poults.
- Fill the feeders to overflowing for the first two days after the hatchlings arrive. To prevent feed waste, reduce the level of feed as the birds get older.



by 5°F each week until supplemental heat is no longer required. The hatchlings themselves are the best indicators of their comfort. If the hatchlings crowd together under the brooder, they are cold, and you should increase the

- To give the birds time to find feeders and waterers, provide hatchlings with light around the clock for the first week after their arrival. After the first week, provide the number of hours of light per day that is appropriate for the type of bird you are raising. A 15 watt light bulb should be sufficient for each 200 sq. ft. of floor area.

## TEMPERATURE

Provide supplemental heat until the hatchlings are well feathered. Birds are more likely to develop respiratory problems if heat is removed too early. In winter, heat should be continued for the first six weeks after birds arrive, even if the birds are fully feathered, to prevent waterers from freezing. During summer brooding, take steps to keep the temperature below 95°F for hatchlings.

- When using a brooder, set the initial temperature at 90°F to 95°F, measuring the temperature 2 in. above the floor, under the edge of the hover. Reduce the temperature

heat. If the hatchlings try to get as far away from the brooder as possible, the heat needs to be reduced.

- When you use an infrared lamp, the chicks will tell you whether the temperature is appropriate by moving toward or away from the heat source. Because radiation from an infrared lamp does not warm the air but only the objects at which it is directed, measuring air temperature is not a good indication of bird comfort. If hatchlings require more warmth, increase the heat by lowering the lamp (no lower than 15 inches from the bedding material) or use additional lamps or lamps with higher wattages. To reduce the heat, turn off the lamp, use a smaller lamp, or raise the lamp to a maximum height of about 24 in. above the bedding material. Each week, decrease supplemental heat by raising the heat lamp 2 in. until it reaches a maximum height of 24 in.

## Reducing Unwanted Aquatic Plant and Algae Growth in Ponds

Source: Forrest Wynne, extension aquaculture specialist, Kentucky State University

**D**uring the spring and summer, we get a lot of questions at the extension office from pond owners about how to control unwanted aquatic plant and algae growth in their ponds. Here are some ideas to help reduce the amount of these unwanted plants in your pond.

Whether constructing a new pond or renovating an old one, minimize shallow areas of less than 2.5 or 3 feet around the shoreline to prevent unwanted plant growth.

Aquatic plant and algae typically establish first in these shallow areas before extending toward the center of the pond.

If you are installing a new pond, make sure it is located away from watershed runoff consisting of nutrients from fertilizers, manure and septic wastewater. These promote unwanted aquatic growth and may pose hazards to aquatic life.

If possible, construct a pond near a source of electricity. You may want to install electric surface aeration devices. You can install these in shallow ponds that are 10 feet or less in depth. Deeper ponds may benefit from the installation of a diffused aeration system. Air is pumped through hoses from a compressor on the pond bank to air stones located on the pond bottom.

Both surface aerator and diffused aeration systems help circulate pond nutrients and reduce stagnant water that often encourages plant or algae growth.



Adding agricultural limestone to ponds constructed in acidic soils will raise the pH of the bottom mud and free up phosphorus and other nutrients. These nutrients will encourage the development of beneficial plankton blooms and enhance fish growth. Pond soils may be submitted for pH testing and liming requirements. Use the same nutrient amounts recommended for alfalfa fields. Total alkalinity of pond water may be tested, and samples ranging between 50 - 100 mg/L are good for fish growth.

Aquatic dyes can be added to impart color to the pond water and help reduce sunlight penetration to the pond bottom. This may help control plant or algae growth. Unfortunately, aquatic dyes are not effective in controlling unwanted growth in shallow water. Dyes may best be

added to a pond when water retention time is greatest, often in the middle summer and early fall.

Triploid grass carp are legal to stock into private Kentucky ponds. They will control soft-stemmed plants and branched algae that are easily digested. The fish contain an extra set of chromosomes which makes them unable to reproduce. Grass carp 10 inches long or larger should be stocked into ponds

containing adult largemouth bass to avoid predation. Grass carp grow quickly and should be restocked every few years as younger, smaller fish control vegetation better than larger fish. Adult fish can grow up to 20 pounds or more. They are powerful and can be dangerous to handle.

Both liquid and granular algaecides and herbicides are available to temporarily control unwanted aquatic plant and algae growth. Aquatic plants and algae must be correctly identified before these chemicals are applied. Follow all label recommendations and observe all application restrictions.

## Hay Nets for Horses: Good or Bad?

NICOLE RAMBO, PH.D. *Tribute Equine Nutrition*

Opinions range from very positive to very negative on hay net use, depending on who you ask. Should you be using a hay net? The answer is, as with many things horse-related, "it depends".

Hay nets have been around for a long time and were originally designed to keep hay up off the ground to reduce waste. Traditionally, hay nets had very large openings that did not restrict the horse's rate of intake. More recently, slow-feed hay nets with openings as small as 1.25" have become popular. These serve to reduce waste but also slow down the horse's rate of hay intake.

Slowing down how quickly a horse consumes its hay is a great advantage when there is a necessity to limit hay. The horse's digestive system was designed for continuous grazing and as a result, the horse's stomach secretes acid continuously. Slowing down hay intake more closely mimics natural grazing behavior and prevents the horse from having an empty stomach for long periods of time. Spending long periods of time without forage increases ulcer risk. Stretching out the time it takes for a horse to eat its hay also keeps it busy for longer periods of time and horses that are busy eating are less likely to find

other troublesome ways to occupy themselves.

Hay nets aren't just for the easy-keeper. I have observed multiple harder-keeping, picky eaters who will eat more hay out of a net than they will off the ground. For these horses, we would choose a net with a moderate-sized hole - not the super tiny holes that we use for the fast eaters.

Hay nets, slow or regular, need to be hung at a height where a horse will not catch a shoe or leg when rolling. It is important to think about how far the hay net hangs down when both full and empty.



# Improving Cow Paths

Steve Higgins, Biosystems and Agricultural Engineering

**A** large animal can expend tremendous energy when traveling on a slope. To compensate, grazing animals create trails that run parallel to a slope. These trails allow animals to graze the upper slope while standing on flat ground, which provides energy and grazing efficiencies (Figure 1). When cattle do this, it is colloquially known as "cowntouring," because the trails resemble the practice of contour cropping and terracing.

A second type of trail created by grazing animals, the cow path, is also designed to save energy. At approximately 12 inches in width, these singular trails are the same width as grazing trails, but there are subtle differences between them.

Animals can be seen walking these trails in single file without grazing, typically using them to reach water, feed, or mineral sources efficiently. These trails may follow contours, but they may also be found on the crests of hills, in ravines, and crossing ravines to get from one hill slope to another. These trails can also be made around obstacles within a field. Common obstacles include internal corner posts, which may also demonstrate the severe erosion that can occur when grazing animals round corners (Figure 2).



**Figure 1.** One animal typically occupies a grazing trail. These trails allow the animals to graze the upper slope and provide grazing and energy efficiency.

Depending on the topography and weather, certain sections of these trails can become troughed or concave and may reach depths of 15 inches or more. Drainage water that collects in troughed sections of these trails can make travel difficult. Over time, certain sections of the trail may become less efficient, at which point animals will create a new path. In addition, the location of water sources or other features that animals want to reach may necessitate uphill and downhill travel on these paths. This can require a

tremendous amount of effort. It may be difficult to achieve in wet weather and can be problematic, as cattle do not like to traverse slopes greater than 30 percent, while the limit for horses is 50 percent. Installing an all-weather surface such as a Mechanical Concrete path can improve energy efficiency for animals traveling along a hill slope.

Mechanical Concrete is a building process that uses recycled tires and aggregate stone to create a strong and economical base. The sidewalls of used tires are first removed, leaving a tread cylinder. The ideal tread cylinder is one that has been created from a semitruck tire, because the constructed path requires a lift, or trench, of approximately eight inches. A trench depth of eight inches is needed to remove the topsoil layer and provide a rock depth suitable for supporting the weight of grazing animals. The trench can be created using a backhoe or track hoe with a 36-inch bucket (Figure 3).

An actual tire cylinder may be approximately 40 inches in diameter, but the removal of the tire sidewall will enable the tire cylinder to fit within a 36-inch-wide trench. Nonwoven geotextile fabric should be placed in the bottom of the trench (Figure 4). This material is needed to provide the drainage, reinforcement, friction, and separation necessary for structural integrity. The tread cylinders are then placed end to end, on top of the geotextile fabric (Figure 4). A suitable rock material, such as dense-grade aggregate (DGA), is then placed inside and around the tire voids (Figure 5). The top edge of the



**Figure 2.** Livestock commonly create paths around obstacles in a field, such as internal corner posts.



**Figure 3.** A backhoe creates a trench for the all-weather path.

tire cylinder should be at grade level or a little higher (Figure 6).

The effort required to install an all-weather surface trail for grazing animals will not be wasted. Grazing animals and their offspring can be seen using these trails during all times of the year (Figure 7). These trails provide energy efficiencies for animals, particularly during wet weather periods.

### Summary

Grazing animals will create efficient routes to acquire water, mineral, or feed. However, these trails may become difficult to travel during periods of wet weather.



**Figure 4.** Nonwoven geotextile fabric and tread cylinders are placed in a trench and backfilled with dense-grade aggregate (DGA).

Erosion of the trail could also expose clay subsoil, which can become slippery, plastic, and difficult to traverse. The energy expended and drudgery experienced by a large animal traveling on a slope can be tremendous. Producers interested in providing a more effective trail should consider implementing an all-weather surface application.



**Figure 5.** The tread cylinders are filled with rock.



**Figure 6.** A completed trail leads to a water source located on a hill with 30-percent slopes.



**Figure 7.** Cattle use an all-weather surface path to get to and from a water source.

CAMPBELL COUNTY

# FARMERS MARKET

**2022**

**UK** University of Kentucky  
College of Agriculture,  
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Cooperative Extension Service

Large variety of home grown produce, breads, honey and other KY Proud commodities. For more information, call 859-572-2600.



**Highland Heights\*— Tuesdays**

Senior Citizens Activity Center  
3504 Alexandria Pike  
**May 17 thru October 25**  
3:00 p.m. to 6:00 p.m.

**Fort Thomas\*\*— Wednesdays**

Mess Hall in Tower Park  
801 Cochran Avenue  
**March 23 thru December 14**  
3:00 p.m. to 6:00 p.m.  
*Hours extend to 7:00 p.m. June-September  
(Senior shopping begins at 2:45 p.m.)*

**Alexandria\*— Fridays**

Southern Lanes Sports Center  
7634 Alexandria Pike  
**May 20 thru October 28**  
3:00 p.m. to 6:00 p.m.

**Newport\*— Saturdays**

Next to Pepper Pod Restaurant  
709 Monmouth Street  
**May 21 thru October 29**  
9:00 a.m. to 12 noon

- \* Accepts WIC, SNAP and Senior Farmer's Market Nutrition Program
- \*\* Accepts SNAP only Supplemental Nutrition Assistance Program

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LEXINGTON, KY 40546





# Easy Meatloaf

**Servings: 8**

**Serving Size: 1/8 loaf**



## Ingredients:

- 2 pounds lean ground beef
- 2 eggs, beaten
- 1 sleeve saltine crackers, crushed
- 1 medium onion, chopped
- 2 cups salsa

## Nutrition facts per serving:

170 calories; 6g total fat; 2g saturated fat; 0.5g trans fat; 100mg cholesterol; 550g sodium; 5g carbohydrate; 2g fiber; 3g sugar; 24g protein; 10% Daily Value of vitamin A; 2% Daily Value of vitamin C; 0% Daily Value of calcium; 10% Daily Value of iron.

**Source:** Sarah Brandl, Extension Specialist,  
University of Kentucky Cooperative Extension  
Service

## Directions:

1. Preheat oven to 350 degrees F.
2. In a large bowl, mix the beef, eggs, crackers, onion and 1 cup of salsa.
3. Press into greased 2-quart casserole dish or 10-inch iron skillet.
4. Top with remaining salsa.
5. Bake for 1 hour.

## Make it a Meal

- Slow Cooker Meatloaf
- Steamed broccoli
- Baked sweet potato
- Whole grain roll
- Low-fat milk

## Tips

Drink water or unsweetened beverages instead of sugary drinks. Soda, energy drinks and sports drinks are a major source of added sugar and calories in American diets.

**Field Day #2**

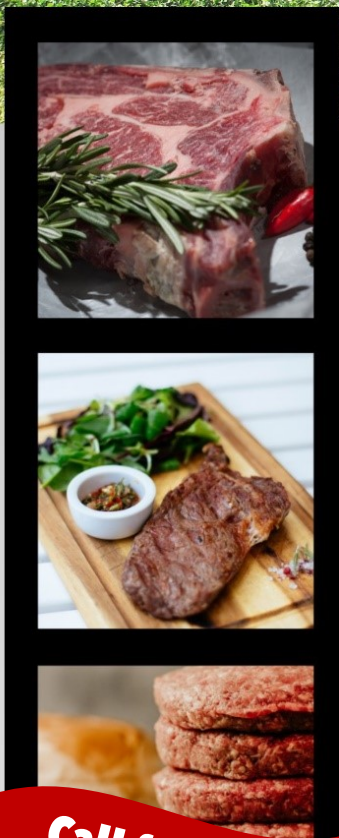
**Beef Cattle**



# Master Finisher

## Program Field Day

**Thursday, May 5, 2022**



**Thursday, May 5, 2022 - 6:30 p.m.**

**Alan Ahrman Farm**

661 Kenton Station Road, Alexandria, KY 41001

**Nutrition and Management Part 2**

**Farming Operation Highlights:**

- Hay Sampling and Balancing Rations
- Weigh Calves on a Regular Basis
- Benefits of a good Vaccination Program
- Proper Facilities for Backgrounding and Finishing
- Use of Cameras to Monitor Herd during Calving Season
- Increased Production from Finishing 3 Beeves in a year, to 25 per year, in 3 years

**Call for meal  
Reservation...**

**Registration is required**

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