Ag & Natural Resources Of Cows and Plows

FRANKLIN COUNTY COOPERATIVE EXTENSION

MAY 2024 NEWSLETTER

Martin-Gatton College of Agriculture, Food and Environment

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IN THIS ISSUE

Adult armyworm, Photograph by John Capinera, University of Florida.

TRUE ARMYWORM MOTH CAPTURES INCREASING IN CENTRAL KENTUCKY

Ric Bessin, Entomology Extension Specialist

This past week, the numbers of true armyworm moths continued to increase in traps in Fayette County; the count reached 269 moths per trap for the week. This is a different species from the fall armyworm that had an outbreak in soybeans, alfalfa, and pastures in the fall of 2021. In general, true armyworm, also known just as armyworm, tends to be more of a spring pest of grasses, hay, and corn. Fall armyworm, as its name implies, is more of a late season pest beginning mid-July until frost.

Infestations usually first develop in fields of small grains or other grasses. In conventional tillage systems, partially grown larvae can migrate into corn fields from grassy waterways or wheat fields; damage is usually first noticeable around the field margins adjacent to these areas. The name armyworm derives from its behavior of migrating in large numbers into fields, similar to invading armies.

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Continued from pg. 1

In no-till or reduced tillage corn crops, infestation may cover the entire field. In these systems, eggs may be laid on grasses within the field prior to planting, and herbicides may force armyworms to feed on corn as the weeds or cover crop dies. Cool, wet, spring weather usually favors armyworm development.

Figure 1. *True armyworm characteristically feeds on leaf margins (Photo: Ric Bessin, UK)*

Description & Life Cycle

The armyworm has a greenish brown body with a thin stripe down the center and two orange stripes along each side. The head is brown with dark honeycombed markings. Armyworm overwinters as partially grown larvae in grasses or small grain fields in Kentucky. When warm spring temperatures return, armyworm feeding resumes. Armyworms may move onto corn during this period. When feeding is completed, larvae pupate just below the surface of the soil. Adults of the first generation emerge in April and May and feed on nectar for 7 to 10 days before beginning to lay eggs. There are three to four generations per year in Kentucky.

As with fall armyworm, true armyworm usually feeds at night, preferring to feed on the succulent leaves in the whorl first. During the day, armyworms are found in the soil or underneath ground cover. Ragged leaf feeding on leaf margins in the spring and early summer is consistent with armyworm feeding.

Management

In hay fields and pastures, treatment for armyworm is based on monitoring. True armyworm often hides under debris on sunny days, so monitoring is best done in the late afternoon or early evening. Use the same threshold for both true armyworm and fall armyworm: 2 to 3 per square foot. Materials listed for fall armyworm control in *Insecticide Recommendations for Alfalfa, Clover, and Pastures – 2022* (ENT-17) are also effective against true armyworm.

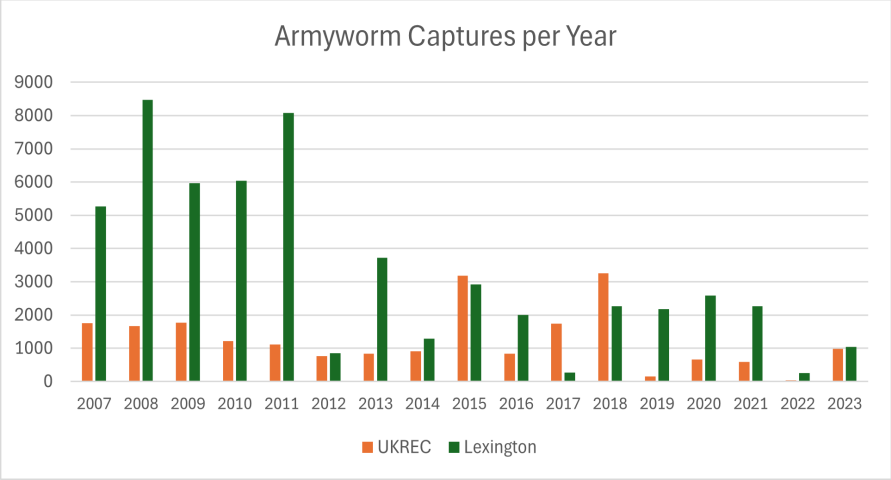

Figure 1. *Both 2008 and 2001 are considered outbreak years, but damage to individual fields is not uncommon in other years.*

COOPERATIVE EXTENSION

University of Kentucky

IMPROVE REPRODUCTIVE EFFICIENCY

Utilizing Technology on the Herd

Hands on Learning Experience Series at the Robinson Center

Estrus Synchronization

Join us as Dr. Anderson and Dr. Lehmkuhler demonstrate and explain estrus synchronization as well as the Cow Manager system.

May **1** NOON

Artificial Insemination

Join the specialist as they demonstrate and explain how to properly AI as well as the cost, discuss sexed semen benefits, and explore Stocket, the record keeping app.

May **9** NOON

Pregnancy Diagnosis

Join for the final meeting of the series as chute side pregnancy test kits are demonstrated. Final discussion of how cow manager has aided in this process for these heifers.

June **10** 8:30AM

130 Robinson Road | Jackson, KY

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Lexington, KY 40506

USDA PARTNERSHIPS FOR CLIMATE-SMART COMMODITIES

Speed Dating

FOR FARMERS INTERESTED IN CLIMATE-SMART AG. GRANTS IN KY

A series of match-making events focused on connecting historically underserved farmers with funding opportunities through the Partnership for Climate Smart Commodities grant initiative.

May 3
1:00 p.m. - 4:00 p.m.;
Madison Public Library,
507 West Main St
Richmond, KY 40475

REFRESHMENTS PROVIDED

May 24
Virtual

May 31
Time TBD; Location pending,
Western KY

REFRESHMENTS PROVIDED

- ***Learn about climate-smart farming practices and how you can access funding to implement them on your farm!***
- ***Engage directly with project leaders!***
- ***Find the best fit for your farm!***
- ***Network with like-minded individuals and forge new potential partnerships!***

COMMUNITY FARM ALLIANCE
www.cfaky.org

KENTUCKY BLACK FARMERS ASSOCIATION

KENTUCKY COOPERATIVE EXTENSION

ASC-261

Cooperative Extension Service

Going Green: Ten Fundamentals of Greenhouse Gas Emissions for Beef Systems

Alexander Altman, David Harmon, and Jeff Lehmkuhler, Animal and Food Sciences

Global warming has become a key focus of all agricultural sectors during the late 2010s and early 2020s. Discussion on identifying and increasing adoption of sustainable practices, shifting from gasoline to electric automotive engines, and producing alternative sources of energy continually permeate the airwaves. These various proposals are accompanied with new terminology and concepts that may not be fully defined for the audience. As a livestock producer, it is important to know and understand how new legislation for limiting greenhouse gas emissions in the agricultural sector could be directed toward the farm gate.

1. What are greenhouse gases?

Greenhouse gases (often abbreviated as GHGs) are defined by the U.S. Environmental Protection Agency as "gases that trap heat in the atmosphere." The four main greenhouse gases measured as a percentage of total 2020 U.S. emissions are carbon dioxide (CO_2) at 79 percent; methane (CH_4) at 11 percent; nitrous oxide (N_2O) at 7 percent; and fluorinated gases at 3 percent. Fluorinated gases are most often emitted from household, commercial, and industrial applications. The gases commonly associated with agriculture are CO_2, CH_4, and N_2O, as these are commonly derived from equipment exhaust (CO_2), microbial digestion (CH_4), and use of chemical fertilizers (N_2O).

However, simply knowing the overall concentrations of these GHGs is not informative when attempting to reduce overall emissions. Decision-makers must understand the extent to which these gases are emitted over an extended period and how these emissions relate to the formation and subsequent dissemination of various products, materials, or services, as the emission rates of GHGs are not uniform across all industries and products (Figure 1). Furthermore, attempting to calculate the given impact of an industry using individual values for each GHG can lead to confusing equations and potential errors in estimates. These estimates need to be relatable both within and across industries if effective recommendations for improvement are to be made. Thus, a more standardized approach is needed, which is where the concepts of lifecycle analyses, carbon footprints, and CO_2 equivalents come into focus.

2. What is a lifecycle analysis?

A lifecycle analysis (LCA) examines each stage of production of a commodity, from start to finish, to determine its overall impact on GHG emissions. However, LCAs differ among and within industries, as inputs and outputs vary based upon the end products. Additionally, the scope for determining what is and is not included in calculating GHG emissions generated by an industry can be subjective (e.g., do you only include emissions from the growing calf, or do you also account for the emissions associated with feeding the calf, transporting the calf from the farm to market, etc.). Currently, the livestock industry considers all contributing sources when calculating the LCA, not just those contributions from the animals themselves. To normalize the lifecycle development process across industries, the International Organization for Standardization developed criteria a LCA must include to be deemed interpretable. Lifecycle analyses are often quantified using what are known as carbon footprints.

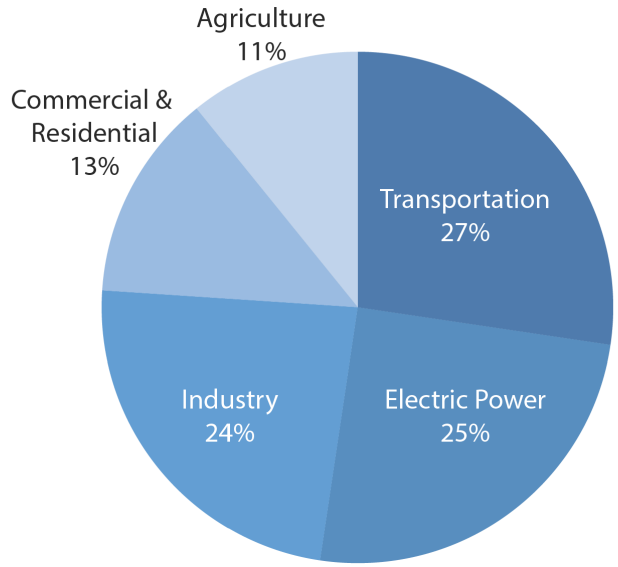

Figure 1. Percentage of total U.S. greenhouse gas emissions by economic sector in 2020.
Source: US Environmental Protection Agency (2022). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020 (https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks).

3. What is a carbon footprint?

The Food and Agriculture Organization of the United Nations defines the carbon footprint of a food product (e.g., cattle and other livestock species) as "the total amount of GHG emitted throughout its lifecycle, expressed in kilograms of CO_2 equivalents. GHG emissions of the production phase (including all agricultural inputs, machinery, livestock, and soils) and successive phases (such as processing, transportation, preparation of food, and waste disposal) are all included in this calculation." Thus, an LCA expresses the carbon footprint in units of CO_2 equivalents. However, the way this is estimated differs based on the industry due to differences in emission rates, activities, etc. As mentioned above, animal agriculture is associated with the release of three GHGs: methane, carbon dioxide, and nitrous oxide.

4. What is a CO_2 equivalent?

When a new program is introduced, the end user ultimately benefits when the system architects simplify procedures. The same is true with the proposed carbon credit system, which is based on estimating the emission rates of different gases and their effects on the environment. Rather than proposing a complex system of equations for estimating total pollution rate, the carbon credit system converts each gas into a CO_2 equivalent. This is accomplished through a system of values that equates one unit of CO_2 with a relative number of units of a given GHG. By placing everything in equal terms, the end user simply needs to sum all the CO_2 equivalents together to determine the GHG potential of the entire production system and the number of carbon credits used during a given period.

5. Where does CH_4 come from?

Methane gas is emitted from a variety of sources, including coastal wetlands, termites, natural gas leaks, and processes associated with the refinement of crude oil, to name a few. Within agriculture, methane is produced as an end product of microbial metabolism of feed in all livestock species and manure, which accounts for most of the methane produced by agricultural activities. The EPA estimated that approximately 27 percent of total 2020 U.S. methane emissions were attributed to enteric fermentation. Ruminants are the largest contributors of GHG emission from livestock because of the microbial contribution to digestion in the rumen that produces methane and CO_2. Methane represents a large source of energy loss by the animal, resulting in a decrease in potential growth efficiency. Therefore, minimization of methane formation is a common goal for producers and sustainability advocates. However, GHG emissions attributed to the livestock industry are also generated in manure (Figure 2). The storage pits and piles continue to release methane from microbial degradation of undigested feed. The EPA estimates that approximately 9 percent of livestock-related methane production is generated from manure systems. Such manure collection points are common in ruminant, poultry, swine, and equine industries.

6. What is carbon sequestration?

Carbon sequestration refers to proposed methods of storing carbon. There are two main types of carbon sequestration: geologic and biologic. According to the U.S. Geological Survey, a division of the U.S. Department of the Interior, geologic carbon sequestration requires carbon to be pressurized into liquid form. After the desired pressure is attained, the liquified carbon is then pumped into porous rock located in the geological basin for storage. By comparison, biologic carbon sequestration refers to methods of storing gaseous CO_2 in biological systems such as aquatic environments, soil organic matter, and woody products. Biologic sequestration is the most common of the two methods and can occur without human intervention. Specifically, trees and other vegetation use ambient CO_2 in their photosynthetic processes.

Sequestration methods may offer a viable means of offsetting excess GHG emissions. For example, the California Global Warming Solutions Act of 2006 encourages corporations with higher emissions to invest in U.S. and urban forests (i.e., biological sequestration potential) as options for offsetting the excess GHGs.

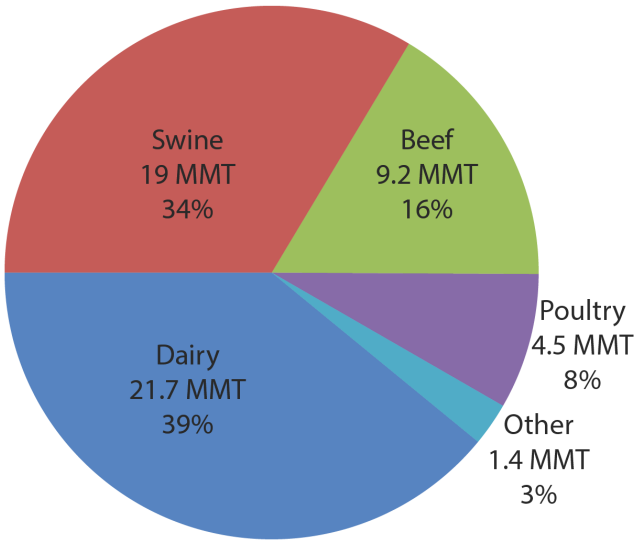

Figure 2. Total greenhouse gas emissions from manure management only by livestock category, as measured by million metric tons (MMT) of CO2 equivalents.
Source: Pork Production and Greenhouse Gas Emissions (https://porkgateway.org/resource/pork-production-and-greenhouse-gas-emissions/).

Such efforts form the backbone of the carbon credit system, which relies on entities seeking ways of achieving carbon neutrality.

7. What does it mean to be carbon neutral, carbon negative, or carbon compliant?

From a global perspective, GHGs can be evaluated on an individual company contributory basis. Such a view requires placing emission levels in terms that reference the overall effect of a company's carbon footprint on global net GHG concentrations. Thus, *carbon neutral* refers to net emission levels neither increasing or decreasing global GHG emissions, whereas *carbon negative* is when net GHGs are lowered by an entity's overall activities (i.e., carbon sequestration).

While achieving carbon neutral or carbon negative status is an end goal for many sustainability programs, improvement is often a gradual process. It would be impossible for today's society to smoothly transition from its current state to a thriving, highly sustainable world overnight. Therefore, it is important to have benchmarks in place that serve as short-term goals for individuals to reach as they continue to become more sustainable. In relation to GHGs, this means that set levels of permissible emissions over a defined period must be established (determined from LCA). However, to reach this level of *carbon compliance* may require the use of offsets in the form of purchased carbon credits. It is important to note that because permissible rates for GHGs are constantly changing with updated scientific estimates of current atmospheric concentrations of these gases, changes in emission rates must be viewed from the perspective of absolute reduction rather than as percentage of the total.

8. What are carbon credits?

One way to encourage participation in a new program is to provide incentives. For proponents of sustainability, carbon credits may afford this opportunity. The basic idea relies on a set limit for permissible GHG emissions during a given period. To incentivize continued improvements in sustainable practices, the program permits transfer of unused amounts, or credits, to others if the allotted quota of GHG is not produced. As an example, a row crop farm and a cattle farm might each be allowed 20 units of GHG emissions annually, but the cattle farm might only produce 15 units while the row crop farm produced 25 units. The cattle farm could sell its unused 5 credits to the row crop farm, thereby allowing both farms to remain within their given production limits (i.e., carbon compliance). Although these programs are not quite developed, producers should keep abreast of information regarding formation of carbon credit systems, particularly regarding the potential of using grasslands for carbon credit provisions.

9. CO_2 versus methane half-life: which is worse?

The amount of time it takes for the removal, through natural processes, of half the amount of a GHG released is referred to as its "half-life." Although there is some disagreement regarding what these values are for carbon dioxide and methane, the consensus among scientists is that CO_2 has a longer half-life than methane. Thus, when considered only from a duration standpoint, methane appears to be of less concern than CO_2. However, persistence is not the only determining factor for rating GHGs in terms of danger to the environment.

10. If CO_2 has a longer half-life, why are cattle operations drawing so much scrutiny?

When looking at potentially harmful effects of a GHG on the environment, it is important to consider the contributory effect of a given gas on the overall warming of the atmosphere, also known as its "global warming potential" (GWP). Although both methane and CO_2 emissions cause a rise in temperature, methane is reported by the University of California-Davis to have a GWP 28 times greater than an equivalent amount of CO_2 (reference gas for all GHG; GWP = 1) over a 100-year period. By comparison, N_2O has a GWP of 273 and chlorofluorocarbons have a GWP greater than 1,000 during the same time period, per the EPA. However, due to the differences in half-life, decreasing methane emissions is associated with an almost immediate decrease in ambient temperatures, whereas temperatures continue to increase with a similar decrease in CO_2. Thus, decreasing methane emissions is of two-fold benefit, as both the rate of global warming and overall ambient temperatures are expected to decrease much quicker with reduction of this GHG than with reduction of CO_2.

Conclusion

Sustainability is a very popular topic right now, with many companies seeking new product developments for use in animal agriculture. The key takeaway from these questions is to stay informed and updated on policy that may impact livestock production. Becoming familiar with these concepts now will help to ensure a better understanding of the necessary changes required by new sustainability regulations that may arise.

KYSES.ORG/SOLARIZE

SolarizeFrankfort@fastmail.org

Solarize Frankfort

The 2024 campaign is live!

FREE Solar 101 Workshops

Join us to learn more about going solar in Frankfort!

April 24 • 6-8PM at Paul Sawyier Public Library

May 8 • 6-8PM at Franklin County Extension Office

The *Kentucky Solar Energy Society* and local partners are organizing a group-purchasing campaign making it easier to go solar in the Frankfort area. Solarize Frankfort connects participants with pre-screened solar installers and provides access to bulk-purchase discounts (up to 15% off solar PV installations).

Go Solar!

- **Reduce your energy bill**
- **Lower your carbon footprint**
- **Help the City of Frankfort meet its goal of 100% renewables by 2030**

2024 SOLAR INSTALLATION PARTNERS

Daily Green Power
Residential and Commercial Solar Energy

PURE POWER SOLAR

KySES Kentucky Solar Energy Society

City of Frankfort Kentucky

Apogee Climate & Energy Transitions

Franklin County Kentucky

Kentucky State University Cooperative Extension Program

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

Solarize Frankfort applies not only to residences and businesses but farm structures as well! If you have a barn or outbuilding that already has electrical service, you can add solar under this program. Your project may also be eligible for REAP grants covering 50% of project cost as well as CAIP cost-share!

BEGINNING Farmer Bootcamp

COME JOIN US

KENTUCKY STATE UNIVERSITY
Cooperative Extension Program

Cooperative Extension Service

1 Record Keeping & Business Planning

KCARD will go over business planning and development as well as record keeping.
Date: April 18th
Place: KSU Farm, 1525 Mills Lane, Frankfort, KY
Time: 6:00pm

2 Legal and Tax Information

Join Clint Quarles and Jonathon Shepherd as they talk about legal and tax information.
Date: May 28th
Place: Scott County Extension Office, 1130 Cincinnati Rd. Georgetown, KY
Time: 6:00pm

CAIP Eligible

To RSVP call the Scott County Extension Office at 502-863-0984. RSVPs need to be made at least a week before the program! Supper will be provided.

Questions? Reach out to one of the following:

- brittany.brewer@uky.edu
- keenan.bishop@uky.edu
- nathaniel.colten@kysu.edu

Cooperative Extension Service
Agriculture and Natural Resources
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MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.

Lexington, KY 40506

Disabilities accommodated with prior notification.

Jr. Cattlemen's Corner

As you can see, the FCJCA have had a busy month!

On Monday, April 15, 2024, 19 FCJCA juniors along with Advisors Crystal Harrod, Ally Harrod and Susan Wise attended BQCA training taught by UK Extension Agent Keenan Bishop.

On Saturday, April 20, 2024, 15 junior cattlemen along with family and friends toured Chaney's Dairy Barn in Bowling Green, Kentucky. The juniors got to see the robotic milker in action and learn the process of how milk and ice cream is made from start to finish.

Calling all producers!

We want to hear from YOU!

We are getting ready to start planning programs for the next two years and we want to hear from you! What topics are you hoping to learn more about? Tell us be clicking on the link below or scan the QR Code!

https://uky.az1.qualtrics.com/jfe/form/SV_a2EnDlP3wpx6K1M

Save the Date!

Beef Cattle Meeting

~ Pasture Weed Control ~

May 23rd @ KSU Research Farm

6:00 pm

RSVP to Crystal @ 502-352-2701

Be Aware of Sweet Vernal Grass in your Tall Fescue Pastures

Sweet Vernal Grass is widely distributed across the tall fescue belt, but it is poorly understood by most farmers. It helps make up a green sod, but when present at a significant level it suggests that pastures are in low state of productivity and may be in need of renovation.

Sweet Vernal Grass, *Anthoxanthum odoratum*, came to the US from Europe as a forage crop. It is native to acidic pastures in southern Europe and northern Africa. It is a cool season perennial grass that puts up a seedhead very early, about three weeks or so earlier than tall fescue. Forage nutritive value is high, but it is very low yielding, so it is not desirable as a pasture crop in our environment.

Sweet vernal grass is on the increase because it is more tolerant of low soil fertility and pH than other common cool season grasses, and it does well in a mix with those grasses. Across the region hay fields that have been managed with low fertilizer and lime inputs show high levels of sweet vernal in the first cutting hay. This is the one time sweet vernal is often noticed, and the hay yields in these fields are often disappointing, earning it a local name of “cheat”.

Later in the year the plants “hide” among the tall fescue plants which it resembles, so that many farmers forget about it after that disappointing spring hay cutting. However, these pastures and hay fields also don’t produce nearly as much forage as they could if the stand was mostly more productive species.

Sweet vernal grass can often be detected in hay by it’s unique sweet smell. This is often described as “vanilla-like”, a smell that comes from a compound called cumerin. When cumarin is present in moldy hay it is converted to dicumarol which inhibits the action of Vitamin K in the blood clotting system, resulting in slow clotting times. This scenario is more commonly associated with “sweet clover poisoning”, a malady that causes uncontrolled hemorrhaging and death when animals consume moldy sweet clover hay.

Dairy Science researchers at the University of Wisconsin working with sweet clover poisoning discovered dicumarol, and created the rat poison “warfarin” from this compound. This work also led to the first human “blood thinner”, Coumadin. These are important products, but of course are not something you want in your hay! Sweet vernal grass is one of the only other plants that has the potential to cause this malady when it is present in moldy hay. Cases of slow clotting time in cattle have been investigated and traced to moldy hay containing sweet vernal grass.

Many of the low management hay fields and pastures that have sweet vernalgrass are also dominated by broom sedge (broom straw) in the fall. These fields that receive a low level of management could be much more productive if renovated to productive species, like a new novel endophyte tall fescue variety. Scout your pastures and make sure you understand the main species you are growing. If you find a lot of sweet vernal grass or other unproductive species, take steps to improve the productivity of your land. ~ excerpt from article by Dr. Matt Poore for the Alliance for Grassland Renewal. For the full article go April 2024 edition of Novel Notes at http://www.grasslandrenewal.org ;

Don't Get Burned by Fire Blight

By Kim Leonberger, Plant Pathology Extension Associate, and Nicole Gauthier, Plant Pathology Extension Specialist

Fire blight is an important disease of apple, crabapple, pear, and flowering pear in Kentucky. Symptoms are often not observed until late spring or early summer; however, initial infections occur at bloom. The pathogen survives winter in dead, dying, and diseased wood and in cankers. Removal of these pathogen sources can reduce spread of fire blight and should be completed in late winter while the pathogen is dormant.

Figure 1: *Apple flower clusters infected with fire blight. (Photo: Nicole Gauthier, UK)*

Fire Blight Facts

- Early symptoms include wilt of flower cluster and blossom death (Figure 1). Disease spreads to shoots or branches where tips wilt and rapidly die (blight) to form a characteristic 'shepherd's crook' (Figure 2). Dark brown, sunken cankers (stem lesions) develop and expand to girdle branches, resulting in branch death (Figure 3).
- Potential hosts include apples, pears, and several landscape woody ornamentals in the rose family.
- Primary infection occurs at bloom and may continue through petal fall or until shoot elongation ends.
- Rainy conditions, periods of high humidity, and temperatures between 65°F and 70°F favor disease development.
- Caused by the bacterium *Erwinia amylovora*.Bacterial cells overwinter in dead, dying, and diseased wood.

Figure 2: *Rapid shoot death from fire blight may result in a 'shepherd's crook' appearance. (Photo: Nicole Gauthier, UK)*

Management Options

- Select cultivars that are tolerant or resistant to fire blight.
- Maintain plant health with proper nutrition and irrigation practices.
- Prune to increase air flow through the plant canopy.
- Remove infected plant tissues during winter when plants and pathogens are dormant. Do not prune when trees are wet. Burn, bury, or otherwise dispose of diseased material.
- Bactericides should be applied preventatively. Once infection occurs, sprays are not effective. Homeowners can apply copper during dormancy to reduce overwintering inoculum. Additional bactericides available for commercial growers are presented in the *Commercial Fruit Pest Management Guide* (ID-232). Always follow label directions when utilizing bactericides.
- Fire blight risk throughout the season can be determined by the disease development models available through the UK Ag Weather Center website.

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Additional Information

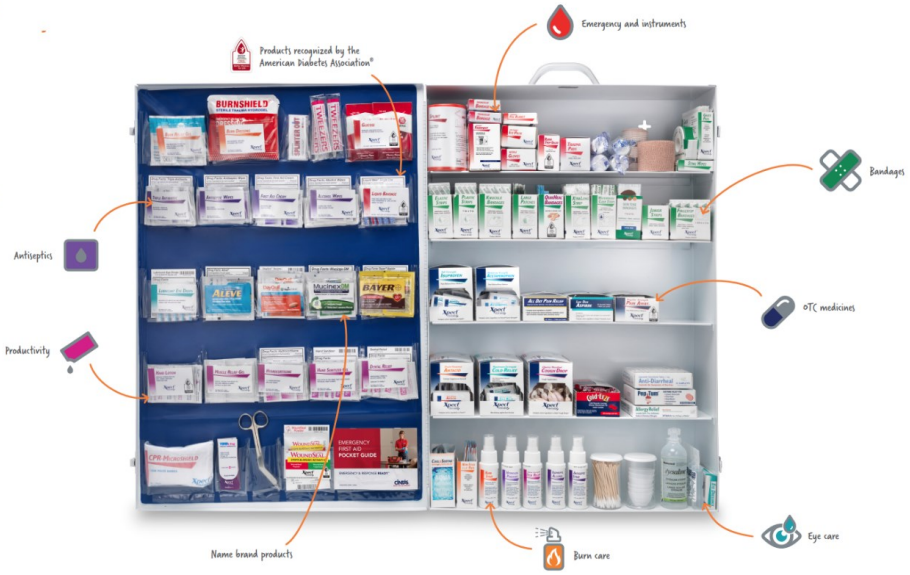
- Fire blight (PPFS-FR-T-12)
- Fruit, Orchard, and Vineyard Sanitation (PPFS-GEN-05)
- Backyard Apple Disease Management Using Cultural Practices (with Low Spray, No Spray & Organic Options) (PPFS-FR-T-21)
- Simplified Backyard Apple Spray Guides (PPFS-FR-T-18)
- Disease and Insect Control Programs for Homegrown Fruit in Kentucky including Organic Alternatives (ID-21)
- Commercial Midwest Fruit Pest Management Guide (ID-232)

Figure 3: *Dark brown, shrunken cankers develop and expand to girdle branches. (Photo: Nicole Gauthier, UK)*

At the Franklin County Extension Office, we prioritize your safety, which is why we have installed First Aid kits and an AED device on both levels of our facility.

An AED is a portable electronic device that can be used to treat sudden cardiac arrest (SCA) by delivering an electric shock to the heart, helping to restore a normal rhythm. These devices are designed to be used by non-medical personnel, making them accessible to bystanders in case of an emergency.

First aid kits play a crucial role in public safety and can significantly impact outcomes during emergencies, especially when professional medical services are not immediately available.



Franklin County High School FFA Drive Your Tractor to School Day

April 26th, 2024

Franklin County High School's FFA's Drive your Tractor to School day was April 26th! The students started at the Extension Office parking lot and with a police escort from the Sheriff's Office travel down Steadmantown Lane to Georgetown Road before arriving in the front of FCHS where the rest of the student body greets them. This year they welcomed Miss Kentucky to ride with them to the school! This is an excellent opportunity for the FFA students to interact with their school mates and educate them about the farming process and the machines required to get the work done! Checkout these pictures from Tractor Day 2024!

OAK Field Day:

Reduce Tillage, Cover Crops, & Crop Rotations on an Organic Vegetable Farm

June 4, 2024—1-4 p.m. E.T.

Dedicated to farming practices that are rooted in biological systems, Bryce Baumann and his Lazy Eight Stock Farm crew tend to more than 25 acres of certified organic vegetables using a standardized permanent bed system, intentional crop rotation, cover crops, minimal tillage and reduction of plastic mulch. Join this OAK Farmer Field Day to visit Lazy Eight's fields in multiple successions of late spring crops, observe demonstrations of reduced tillage and vegetable intercropping, explore cultivation equipment, learn about field production of cut flowers and view their ½-acre covered crop production*. Hear from Bryce, OAK staff and NRCS representatives how Lazy Eight is implementing conservation practices within their organic vegetable production that build soil health, increase conservation of the farm's natural resources, improve their climate resilience and earn financial assistance to sustain the farm and its community for future generations. As a Kentucky farm enrolled in OAK's USDA-supported Climate-Smart Project, Lazy Eight Stock Farm has committed to implementing climate-smart practices and assessing whole-farm sustainability. Learn more about OAK's project at https://www.oak-ky.org/climate-smart-project.
*Weather-dependent activities include a glimpse into field production of cut flowers and a chance to view Lazy Eight's ½-acre covered crop production.

Support for this project comes from the U.S. Department of Agriculture's Partnership for Climate Smart Commodities under agreement number NR233A750004G092.

Recipe

Lean Green Lettuce Tacos

8 large lettuce leaves
1½ cup cooked brown rice
¾ cup fresh corn kernels
1 cup canned black beans, drained and rinsed
1 tablespoon olive oil
¾ pound extra lean ground beef
1 small zucchini, chopped
1 ounce packet low-sodium taco seasoning
4 ounces low sodium tomato sauce
1 tablespoon finely chopped cilantro
1 teaspoon lime juice
1 tomato, chopped
1 small red onion, chopped

Wash and **dry** lettuce leaves. **Prepare** rice according package directions. **Cut** corn off cob. **Drain** and **rinse** black beans. In a skillet, **heat** the oil to medium; **add** ground beef and begin to **cook**. When beef begins to brown, **add** zucchini, corn and black beans to skillet. Continue to **cook** until vegetables are tender and beef is done. Do not overcook. **Add** in taco seasoning and tomato sauce and heat through. **Add** cilantro and lime juice to the cooked rice. **Place** equal amounts of rice mixture and taco mixture into lettuce leaves. **Top** each taco with chopped tomato and onion.

Yield: 8 servings

Nutritional Analysis: 180 calories, 4.5 g fat, 1 g saturated fat, 20 mg cholesterol, 350 mg sodium, 23 g carbohydrate, 4 g fiber, 5 g sugars, 12 g protein.

Martin-Gatton
College of Agriculture,
Food and Environment

Be sure to follow our Facebook page for all the up-to-date information and articles.
@FranklinCountyKyCooperativeExtension

SAVE THE DATES:

May 8	6:00– Solar 101 Workshop
May 11	Rabbit Show
May 16	Third Thursday Thing—Aquaculture—KSU Farm
May 23	Beef Cattle Meeting—KSU Farm
May 28	6:00- Beginning Farmer Bootcamp—KSU Farm
June 1	Bluegrass Inv. Kiko Goat Sale
June 8	Franklin Co. Dairy Show Inc.
June 15	Unity in the Community
June 20	Third Thursday Thing
July 16-20	Franklin County Fair

Keenan R Bishop

Keenan Bishop, County Extension Agent for Agriculture and Natural Resources Education

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development