CUMBERLAND COUNTY

AGRICULTURE & NATURAL RESOURCES NEWSLETTER

Vol. 9 Issue 1 · January 2024

Upcoming Events -

- **Cumberland County Gardeners:** Meet the fourth Thursday of each month at 10am at the Cumberland County Extension Office
- **Cumberland County Beekeepers Group:** Meet the second Tuesday of each month at 5pm at the Cumberland County Extension Office
- **Wicking Raised Beds:** February 20th, 2024 at 1pm at the Cumberland County Extension Office. Instructor: Steve Higgins
- **Master Logger:** February 27th, 2024 at 8am-3pm CT at the Cumberland County Extension Office. Must pre-register online.
- **Spring/Summer Gardening:** March 4th, 2024 at 9am-11am at the Cumberland County Extension Office. Pre-registration required, call the Extension Office at (270) 433-7700.

Cooperative Extension Service

FARMERS' DINNER *theater*

Cooperative Extension Service

with guest speakers

JARO HUURMAN,
GARY WHITE, &
CHRIS ALEXANDER

FEBRUARY 22ND, 2024 5:30PM
at the Cumberland County Extension Office

Farmers' Dinner Theater is a unique program that uses drama to convey important messages to the agriculture community. The theme of the program focuses on farm safety and wellbeing and the important role it plays within our families and the community. Enjoy a meal while members of your farming community entertain you in this educational, but hilarious production!

Tickets

$10 Available for purchase at the Cumberland County Extension Office.

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

Winter and Early Spring River Flooding

Source: Jane Marie Wix - National Weather Service Jackson, KY

I came across an interesting quote recently from a man named Dean Acheson that said, “You can’t argue with a river - it is going to flow. You can dam it up, put it to useful purposes, you can deflect it, but you can’t argue with it.” As we head into the winter months, rivers seem to become more “argumentative” as they swell and flood.So why do we typically see most of our river flooding in the winter and early spring here in Kentucky?

There are several factors…

1. During the winter months, the lack of vegetation, and the cold and occasionally frozen ground make it unable to absorb as much water. This creates more runoff into area creeks and streams, and eventually into the riverways.
2. The winter also tends to bring more amplified/stronger storm systems, which can result in more widespread significant precipitation. Typically in the spring and summertime, heavy precipitation associated with storms is more localized, while in the winter, it can cover vast expanses, leading to more impacts on the rivers.
3. Jam - it isn’t just for bread! Ice floating down the river can get backed up and dam up the waterway, known as an ice jam. The water behind the jam will rise and flow out of the banks, leading to areal flooding. Subsequently, the jam will eventually release, sending large chunks of ice down the river, and leading to potential damage downstream as well. This is more typical farther north than Kentucky, where rivers are more likely to freeze over.
4. As we head into the early spring months, or even a warm spell after a large winter event, rising temperatures begin to melt away at the snow and ice on the ground. If too much ice or snow melts at once, this creates a large amount of runoff into the waterways, leading to significant river rises. This gets amplified when heavy rains also fall on top of the melting ice and snow.
5. According to FEMA and the National Inventory of Dams (2007), there are more than 80,000 dams in the United States. Dam failure or levee breaches can occur with little warning. Failures and breaches can be slow, lasting from days to weeks, or can be very abrupt with profound impacts to locations downstream. Causes of dam failure vary from natural causes such as prolonged rainfall, landslides, earthquakes, or erosion - to human causes such as improper maintenance and design, and negligent operation.

Know your risk… Is your home, business, or school near a river or stream? Are you in the flat land adjacent to that river or stream? More than likely if you answered yes, you are located in a floodplain. Floodplains are the natural overflow for rising waters in these streams and rivers, and were formed/flattened by repeated flooding and water flows. Where is water likely to collect on the roadways you most often travel? What is the fastest way to get to higher ground? Knowing the answers to these questions ahead of time can save your life.

Clay City, KY. Persistent heavy rain causes major flooding across east Kentucky February 27-March 1, 2021 (NWS Jackson)

Six Easy Steps to Maximize Your Pasture Success with Clover Frost Seeding

Source: Jimmy Henning, plant and soil science professor

Kentucky's weather conditions are predictably unpredictable. During the Kentucky Forage and Grassland Council assembly in November, board members discussed a possible shift in optimal timing for frost seeding clover -- broadcasting red clover into winter wheat just before green-up -- due to the increasingly milder winters. With that said, be careful when making statements about Kentucky weather as weather variation complicates predicting the optimum period for frost seeding clovers.

As legumes, clovers are an essential part of a strong and healthy nitrogen cycle in grasslands. Distributing six pounds of red clover and one to two pounds of white clover over a grassy area with some bare soil in the later part of winter, combined with minimal competition control, can develop high-quality pasture.

The advantages of cultivating clover are substantial, encompassing natural nitrogen fixation, and enhanced forage quality and yield. Particularly noteworthy is recent U.S. Department of Agriculture research indicating that red clover can significantly mitigate the vasoconstrictive effects of toxic endophyte tall fescue, making it an exceptionally valuable crop.

Frost seeding is a preferred establishment method due to its minimal equipment requirements. Typically, a small spinner seeder attached to a tractor or four-wheeler is all you would need for seed distribution. Red and/or white clover are well-suited for frost seeding as they exhibit rapid germination, shade tolerance, and vigorous root and shoot development in their seedling stages. Their small, smooth seeds are readily incorporated into the top quarter inch of soil through natural weather patterns or animal movement.

Despite the numerous advantageous clover traits are for establishment, it is crucial to adhere to the fundamental requirements of forage establishment, even in low-input methods like frost seeding. These essentials include:

1. Conduct soil analysis and apply necessary nutrients. Clovers thrive in soil with a pH of 6.5 to 7 and medium to high levels of phosphorus and potassium. Nitrogen should only be added when diammonium phosphate is required for phosphorus provision.
2. Choose a high-quality variety. Opt for an improved variety with established performance and genetics. Selecting a superior red clover variety can yield up to three tons more hay per acre and extend the stand's lifespan compared to common, unclassified seeds. The University of Kentucky provides extensive yield data and persistence of white and red clover varieties for hay and pasture, available at http://forages.ca.uky.edu/variety_trials. It is advisable to check with seed suppliers to see if your favorite variety is available.
3. Apply an adequate quantity of seed. Typical seeding rates range from 8 to 12 pounds of red clover and one to two pounds of white/ladino clover per acre. A reduced rate, such as six pounds of red and one pound of white clover, still results in over 55 seeds per square foot (37 red and 18 white).
4. Ensure seed contact with bare soil. Removing excess grass or thatch, revealing bare ground, is imperative before overseeding. A major cause of frost seeding failures is excessive ground cover. Farmers can achieve bare soil exposure through controlled cattle movement or mechanically using a chain harrow.
5. Achieve optimal seed-soil contact. Frost seedings rely on precipitation and the freeze-thaw cycle to integrate clover seeds into the top quarter inch of soil. Utilizing a corrugated roller post-seeding can further enhance soil contact.
6. Manage competition the following spring. Avoid additional nitrogen application on overseeded fields. Be prepared for timely mowing to control grass or weed overgrowth above the clover. Although clover seeds are inherently vigorous, controlling competition can expedite and improve establishment.

With careful attention to soil fertility, variety selection, seeding rate, seed placement and competition management, clover can be successfully frost seeded into existing grass pastures.

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

2024 IPM Training School
March 18th, 2024

Program

8: 00 AM Registration

Field Crops

8:25 AM	Herbicide Resistance Screening in the Commonwealth of Kentucky	*Dr. Samuel Revolinski*
8:50 AM	Herbicide Resistant Weed Control	*Dr. Travis Legleiter*
9:15 AM	Cover Crops	*Dr. Lloyd Murdock*
9:40 AM	Keeping Cover Crops from Becoming a Pest Problem	*Dr. Chad Lee*
10:05 AM	Break	
10:20 AM	Management of Important Soilborne Diseases of Soybean	*Dr. Carl Bradley*
10:45 AM	Efficacy of Insecticides in Bt-and non-Bt field Corn and Problems Capturing Pest Moths	*Drs. Ric Bessin Raul T. Villanueva*
11:10 AM	The Agronomics and Economics of Various Nutrient Sources for Crop Production	*Dr. Edwin Ritchey*
11:35 AM	Application of Low-Cost GPS Technologies to Improve Input Use	*Dr. Chris Teutsch*

Horticulture

1:00 PM	Understanding the Mildews – Downy versus Powdery	*Dr. Nicole Gauthier*
1:25 PM	Greenhouse Disease Management	*Ms. Arundathi Sharma*
1:50 PM	Cover Cropping in Vegetable Production Systems: Benefits, Challenges, and Considerations	*Dr. Rachel Rudolph*
2:15 PM	Break	
2:30 PM	Everything Old is New Again	*Dr. Shawn Wright*
2:55 PM	Impact of Invasive Species on IPM	*Dr. Jonathan Larson*
3:20 PM	Current and Future Wildlife Management Conflicts for the Mid-South	*Dr. Matt Springer*

To attend in person or online, please click to register

	Pesticide Applicators CEUs	Certified Crop Adviser CEUs
Field Crops	Category 1A: 4	Soil & Water Management: 1 IPM: 2 Crop Management: 1
Horticulture	Category 1A: 3	IPM: 2 Crop Management: 1

Location	Contacts	
Warren County Extension Office 5162 Russellville Rd. Bowling Green, KY 42101	Zenaida Viloria zenaida.viloria@uky.edu (270) 365-7541 Ext. 21336	Ric Bessin r.bessin@uky.edu (859) 323-1120

MISSIPPI POT ROAST

Source: KEntucky Beef Council

A slow cooked Southern favorite! Easy, tender ranch flavored beef combined with tangy pepperoncinis.

- 1 boneless beef Chuck Arm Roast (arm, shoulder, or blade), about 2-1/2 pounds
- 1 packet ranch dressing mix
- 1 packet dry onion soup mix
- 1 teaspoon freshly ground black pepper
- 2 teaspoon granulated garlic
- 4 to 6 pickled pepperoncinis
- 1 cup water

COOKING:

1. Place beef Chuck Arm Roast in a 4-1/2 to 5-1/2-quart slow cooker. Add ranch dressing mix, onion soup mix, black pepper, garlic, pepperoncinis and water. Cover and cook on HIGH 6 to 7 hours or on LOW 7 to 8 hours or until beef is fork-tender. (No stirring is necessary during cooking.)
2. Turn off slow cooker and remove roast. Shred roast and return to slow cooker; combine. Serve warm over couscous, mashed potatoes or noodles.

Servings: 8

Nutrition information per serving, 3 oz: 321 Calories; 180 Calories from fat; 20g Total Fat (7.6 g Saturated Fat; 0 g Trans Fat; 0.7 g Polyunsaturated Fat; 8.2 g Monounsaturated Fat;) 117 mg Cholesterol; 406 mg Sodium; 4 g Total Carbohydrate; 0.1 g Dietary Fiber; 0 g Total Sugars; 29.3 g Protein; 0 g Added Sugars; 28.9 mg Calcium; 2.5 mg Iron; 246 mg Potassium; 8.1 mcg Vitamin D; 0.2 mg Riboflavin; 7.4 mg NE Niacin; 0.3 mg Vitamin B6; 2.1 mcg Vitamin B12; 179 mg Phosphorus; 6.7 mg Zinc; 27.4 mcg Selenium; 111.5 mg Choline.

This recipe is an excellent source of Protein, Vitamin D, Niacin, Vitamin B12, Zinc, Selenium, and Choline; and a good source of Iron, Riboflavin, Vitamin B6, and Phosphorus.

Nuisance Weed Spraying Program

This program consists of weed spraying demonstration plots. The department will provide the sprayer and enough chemical for the treatment of 10 acres of agricultural land or 100 gallons of spot spraying mix to be used on agricultural land. The department's representative will demonstrate proper mixing and application techniques. A number of nuisance weeds can be treated under this program depending on the needs of the participant. This program is limited to broadleaf weeds.

Broadcast Spraying demonstration plots consist of:

- 10 acres of agricultural land will be treated with chemical provided by the department
- Application is performed with a two-wheeled trailer type sprayer equipped with boomless nozzles
- If additional chemical is provided by the participant, an additional 10 acres can be treated

Spot Spraying demonstration plots consist of:

- 100 gallons of broadleaf chemical mix which is applied until sprayer is empty
- Application is performed with a two-wheeled trailer type sprayer equipped with a handheld spray wand used by the tractor operator
- If additional chemical is provided by the participant, an additional 100 gallons can be sprayed

For each demonstration:

- The participant must provide water source
- The participant must provide tractor and operator
- All chemical products must be labeled and the product label will be strictly followed
- A maximum of 7 participants per county

This program is designed to target weeds that have a negative impact on the participant's agricultural production. There will be an annual online application period to participate in this program. If you would like to sign up for this program, please call the Cumberland County Extension Office from February 1 to February 29, 2024.

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