The March/April 2024 Edition of:

Nikki's Newsletter

Marshall County's Agriculture & Natural Resources Update

University of Kentucky
College of Agriculture, Food and Environment

Cooperative Extension
University of Kentucky
Marshall County
1933 Mayfield Highway
Benton, KY 42025
(270) 527-3285
extension.ca.uky.edu

Hello all, it's that time of year. Daffodils, hyacinth and forsythia are delighting us with some of the first blooms of the season. These beautiful blooms mark a great time of year to spray for some of our peskiest weeds but before we talk weeds, I would like to recommend another wonderful early bloomer. If, like me, you don't want to wait for daffodils to see blooms every year, you might consider adding **hellebores** (aka Lenten Rose) to your garden. This hardy shade loving perennial blooms in the dead of winter. It comes in a variety of colors and is, in my opinion, perfectly prolific. It drops seeds below its canopy every year and later new seedlings emerge. It doesn't creep and the seedlings don't show up everywhere you don't want them. You can easily share the babies with friends or just let them grow and watch your hellebore patch grow little by little.

In **lawns**, it's time to spread **crabgrass** post emergent herbicides. These chemicals kill the weeds as the seed tries to germinate.

In **pastures** it's time to think about weeds like **buttercup** (before its too late.) 2,4-D does a good job of controlling buttercups if sprayed in the early spring before flowers are observed and when plants are still small and actively growing. For best herbicide activity, wait until daytime air temperatures are greater than 50 degrees for two or three consecutive days.

*As always, consult the herbicide label for further information on grazing restrictions, precautions, rates and other valuable information. Remember, the label is the law.

Switching topics, March is often thought of as the offseason for grain producers but **wheat farmers** have many decisions and tasks on their plate:

- Wrapping up late nitrogen applications
- Deciding whether to spray a plant growth regulator if there is a risk of lodging
- Scouting for aphids and disease and spraying where necessary.

Switching topics yet again, I would like to give you all a quick update on the remodel of the new building. The remodel process continues and we are projected to inhabit the new building this summer. The current building is for sale and would make a fantastic location for many types of businesses/entities. Please share the word.

I hope everyone has a happy Easter and safe planting season! Thanks for your continued support. As always, you know where to find me.

Marshall County ANR Agent

IN THIS ISSUE:

8th Warmest Winter Ever Recorded

Matt Dixon, Meteorologist

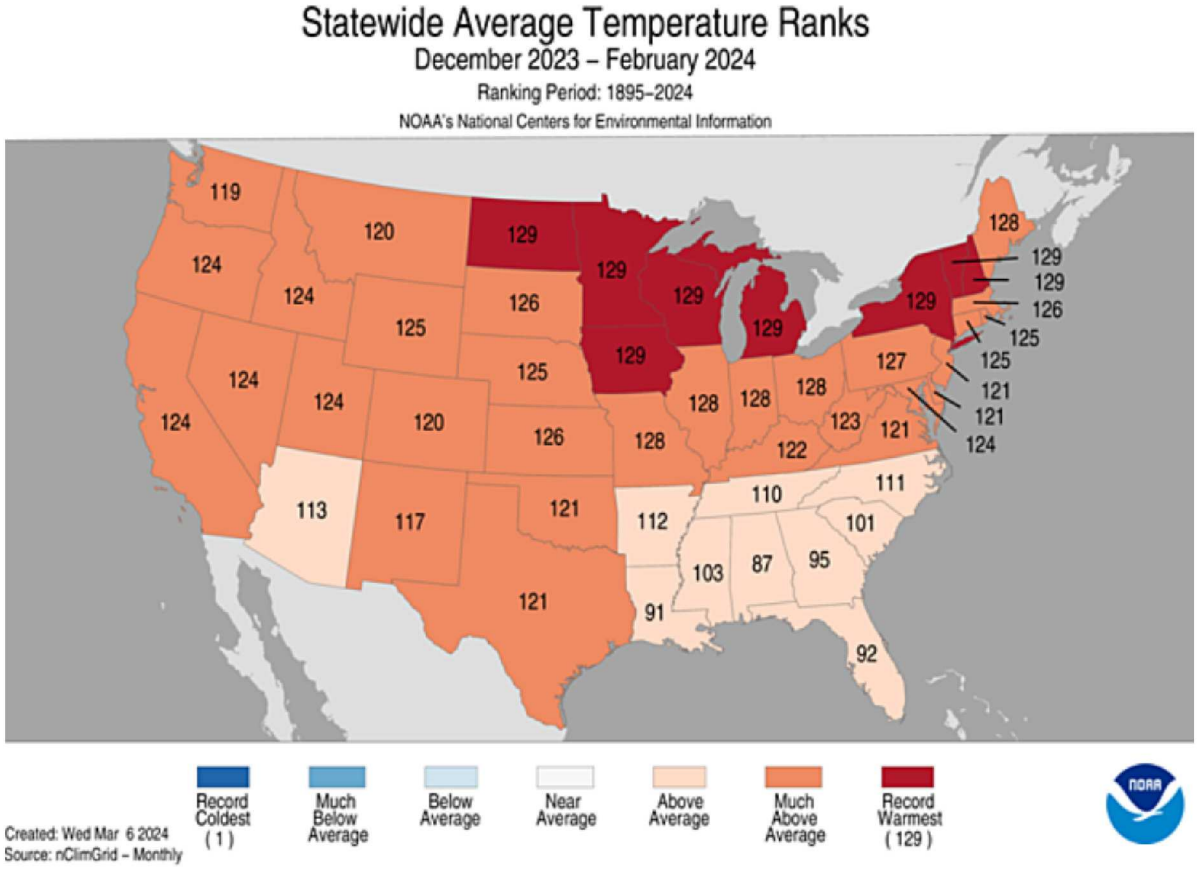
Meteorological winter is officially in the rearview mirror! Looking at the data, if you thought it was a warm one, you're correct! Overall, it was the 8th warmest winter in Kentucky history (data back to 1895), bookended by the 11th warmest December and 4th warmest February ever recorded. We weren't alone either. Looking at the map below of statewide temperature ranks, absent from the southeast, nearly everyone across the U.S. landed in the top-10, which resulted in the warmest winter ever recorded for the continental United States.

These warm winters have been nothing new to the Bluegrass State. In fact, seven of the past ten winter seasons have run above normal in Kentucky. The more eye-opening stat is that all seven are among the top-20 warmest winters ever recorded. Six of the those are in the top-10 (see table)! Bottom-line, our climate is definitely trending warmer. As I've been telling folks in presentations across the state, we all need to take a step back and think about how warmer winters will impact your own operation in the future. We're all weather nerds, but we need to be climate nerds, too, and think long-term!

Kentucky Top-10 Warmest Winters on Record (December - February)(1895 - 2024)

Rank	Year	Avg.	Normal	Dep.
1	1931-1932	44.2	36.9	7.3
2	2022-2023	42	36.9	5.1
3	2016-2017	41.4	36.9	4.5
4	1948-1949	41	36.9	4.1
5	1949-1950	40.8	36.9	3.9
6	2019-2020	40.7	36.9	3.8
7	2011-2012	40.3	36.9	3.4
8	2023-2024	40.2	36.9	3.3
9	1997-1998	39.9	36.9	3
9	1998-1999	39.9	36.9	3
10	2015-2016	39.7	36.9	2.8

Data Courtesy: Midwestern Regional Climate Center cli-MATE toolkit: *https://mrcc.purdue.edu/CLIMATE/*



Three Sisters Vegetable Gardening

Johnnie Davis, Marshall Master Gardener

Whether you are homeschooling, involved in Junior Master Gardeners, or just want to introduce a young person in your life to gardening, the old method of Three Sisters companion planting may be just what you are looking for.

Three Sisters planting is an ancient technique that maximizes space, integrates preservation and uses functional methods to produce food. Native Americans taught early settlers this way of gardening that uses heirloom seeds.

Typically, a circular mound is formed that is about four feet in diameter. Mounds are placed about one step apart. When the time is right to plant corn, it is planted in the center of the mound in holes about six inches apart, two kernels per hole. Once the corn is up and about a hand high, heirloom climbing beans are planted in a circle around the corn. A variety such as Scarlet Runner is a good one to try. Once the beans are up, they are trained to climb the corn stalk and about 5 squash plants are put into the ground on the outer edge of the mound.

Natives thought of this growing system as the way a family should work, nurturing each other. The oldest sister, corn with its dense roots, is supportive of the beans which capture nitrogen from the air to feed her sisters. Squash with it's big dense leaves prevents the ground from losing moisture, prevents the growth of weeds and grass, and with its prickly leaves, protects the corn and beans from predators. Some gardeners who use this method also plant floral pollinator plants between the mounds.

If you take a closer look, this companion planting provides carbs and fiber from corn, amino acids and other nutrients from beans, and antioxidants and vitamins from squash for the diet. The corn and beans were usually left standing until they dried out, making them available to store through winter to add to soups.

As a learning opportunity, Three Sisters planting may be used to bring history, science and health into time in the outdoors for your student. This planting event may be given a ceremonial closing as part of the teaching opportunity by offering thanks to those plants that are sustainers of life.

Fencing & Grazing Schools

UK Forage Team

2024 Spring Fencing Schools
Hands on school focusing on the installation of fixed knot woven wire fence and electrified smooth high tensile fence.
April 23 in Morehead, KY
April 25 in Mayfield, KY

2024 Beginning Grazing School
Not sure where to start? This school is designed to provide you with the tools needed to establish a profitable and sustainable grazing system.
April 30-May 1 in Princeton, KY

Photo by UK Forage Team at the UK Fencing School in 2019

Electric Fence Troubleshooting School
This school is designed to provide students with tips on installation of new and troubleshooting of existing electric fencing.
June 12 in Morgantown, KY

Marshall County Farmers Market

Martin-Gatton College of Agriculture, Food and Environment

Vender Meeting

April 1st
5:30pm
Marshall County Extension Office
1933 Mayfield Hwy.
Benton, KY 42025

This mandatory meeting will discuss the changes being made to the farmers market. New venders, location, rules, and more! Please make every effort to attend!

Plant Sale

Marshall Master Gardener Association

The Marshall Master Gardener Association invites you to the 8th annual MMGA Plant Sale & the opening day of the Marshall County Farmers Market!

Affordable trees, shrubs, vines, vegetables, fruit, herbs, bulbs, seeds, annuals, perennials, succulents, houseplants, compost, planters & more!

Free:
Kids activities, gardening advise, publications, recipes and more!

Saturday, May 18th

8:00am-Noon

Please use the address below and look for directional signs when close!

1933 Mayfield Hwy., Benton KY, 42025

Martin-Gatton College of Agriculture, Food and Environment

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

Lunch Break Gardening Series

Martin-Gatton College of Agriculture, Food and Environment

Join Horticulture Agent, Macy Fawns, as she shares how to grow your own microgreens!

Join us during your lunch break for a gardening workshop!

$12
Includes a boxed lunch from a local restaurant

1st Wednesday Monthly
12:15-12:45pm
at the Marshall County Extension Office

RSVP by March 29th
Call 270-527-3285

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

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.

Cooperative Extension Service
Marshall County Office

Lunch Break Gardening Series

Martin-Gatton College of Agriculture, Food and Environment

Join Agriculture Agent, Matt Chadwick, as he shares some of his favorite tips and tricks for making successful landscape designs!

Join us during your lunch break for a gardening workshop!

$12
Includes a lunch from a local restaurant

1st Wednesday Monthly
12:15-12:45pm
at the Marshall County Extension Office

RSVP by April 26th
Call 270-527-3285

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

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.

Cooperative Extension Service
Marshall County Office

Optimizing Baleage Quality: A Guide for Kentucky Forage Producers

Jimmy Henning, Plant and Soil Science Professor

Round-baled silage has emerged as a preferred method for preserving high-quality forage in Kentucky, offering numerous advantages for livestock feeding. However, this technique presents unique challenges. Notably, achieving the ideal moisture content (MC) of 40-60% and ensuring the forage is adequately oxygen-free when wrapped in plastic.

A fermentation report helps producers evaluate the quality of their baleage and assess potential feeding risks. Poorly fermented baleage can lead to clostridrial bacterial growth, and even botulism.

Here are some ways to optimize your baleage quality:

pH and its Importance: Ensiling lowers bale pH through the production of lactic acid. A pH of 5.0 or lower inhibits clostridial bacteria growth. The target pH varies with forage type and moisture content. For example, legume baleage is stable at a higher pH than grasses.

Moisture Content and Dry Matter: Achieving a MC within the 40-60% range is essential for effective fermentation. The sweet spot for fermentation is between 50-60% MC, fostering robust lactic acid production and maintaining a pH below 5.0, thereby inhibiting harmful clostridial bacteria. Baleage with MC lower than 50% may have restricted lactic acid production and elevated pH levels, potentially affecting fermentation. However, bales kept anaerobic by at least six layers of UV-resistant plastic can remain valuable feed, even if not fully fermented.

Crude Protein: The forage's crude protein content, determined by its nitrogen content multiplied by 6.25, is a key indicator of fermentation potential. Early-cut forages, which usually have higher crude protein levels, also possess more fermentable carbohydrates, crucial for a successful fermentation process.

Lactic and Acetic Acids: Lactic acid, the primary product of anaerobic fermentation, is pivotal in reducing pH and stabilizing baleage. Desired lactic acid levels are above 3% on a dry matter basis. However, levels often fall below this target, especially when MC is under 50%. These lower levels are not overly concerning if the bales are wrapped in plastic which remains intact until feeding. Acetic acid, vital for preventing yeast and mold growth once bales are exposed to oxygen, should ideally be between 1-4% (DM basis). Excessive acetic acid may signal issues like high moisture content or clostridial fermentations.

Propionic and Butyric Acids: These acids should be minimized, with propionic acid below 1% and butyric acid under 0.5% (DM basis). Elevated levels indicate possible fermentation problems, such as insufficient sugars for fermentation or secondary fermentation by clostridial bacteria, potentially affecting livestock health.

Ammonia and Ash Content: Ammonia, measured as a percentage of total nitrogen or as a crude protein equivalent, indicates the extent of clostridial fermentation. Ammonia-N levels exceeding 15% suggest significant clostridial activity. Ash content can reveal soil contamination; levels above 11% often mean dirt intrusion, a primary pathway for clostridial bacteria into baleage.

Physical Observation: Evaluating baleage's physical attributes, such as odor, bale shape and effluent presence, is also crucial. A pleasant smell, the absence of seepage and intact plastic wrapping are good indicators of successful fermentation.
For more information on practical solutions for forage storage, contact the Marshall County Extension office.

Cooperative Extension Service

SUSTAINABLE GARDENING

Join us for a wonderful educational presentation by Dr. Krista Jacobsen from the Dept. of Horticulture at the University of Kentucky.

MAY 2ND, 2024 @ 5:30PM

Calloway County Extension Campus
93 Extension Way
Murray, KY 42071

WORKSHOP HIGHLIGHTS :

- SUSTAINABLE GARDEN TECHNIQUES
- COVER CROP USAGE
- INCORPORATING ORGANIC GARDENING TECHNIQUES

Martin-Gatton College of Agriculture, Food and Environment

The Marshall County Extension Service Presents a:

Tabletop Mushroom Workshop

Learn to Grow Your Own Mushrooms!

April 2nd at 5:30pm

Join Horticulture Agent, Macy Fawns, as she leads a hands-on workshop on how to grow tabletop mushrooms! Each participant/family will construct one table-top oyster mushroom kit to enjoy at home!

$20

per person/family

RSVP by calling 270-527-3285

(space is limited)

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

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.

Recipe of the Month

Cajun Beaver Gumbo

Ingredients:

2 1/4 pounds cubed beaver meat-
1/2 teaspoon black pepper
1 1/2 teaspoons garlic powder, divided
1/2 cup canola oil, divided
1 cup all-purpose flour
2 bell peppers, diced
2 ribs celery, diced
2 medium white onions, diced
12 ounces turkey smoked sausage, sliced
1 tablespoon Creole seasoning
2 bay leaves
1 6-ounce can no-salt added tomato paste
1 quart reduced-sodium chicken stock
2 quarts water

Tips: Serve over cooked rice.

1.) Wash hands with warm water and soap, scrubbing for at least 20 seconds, especially after handling raw meat.
2.) Wash peppers, celery, and onion under running water before cutting.
3.) Season beaver meat with pepper and ½ teaspoon garlic powder.
4.) Heat ¼ cup oil in a 6-quart nonstick or well-seasoned cast iron pot over medium-high heat. Brown the beaver meat in batches, turning to brown all sides. Add the remaining oil as needed to prevent the meat from sticking to the pot.
5.) Remove beaver from the pot and-set-aside. Leave any remaining oil in the pot.
6.) Reduce heat to medium. Add any remaining oil and the flour to the pot, stirring well with a wooden spoon. Cook and stir until the mixture is about the color of peanut butter, about 10 to 15 minutes. Reduce heat if needed to prevent burning the flour mixture.
7.) Add peppers, celery, and onion to the pot, and stir until the vegetables begin to soften.
8.) Return cooked beaver to the pot.
9.) Add remaining ingredients. Cover and simmer for 2 hours.
10.) Serve immediately. Store leftovers in the refrigerator or freezer within 2 hours. Divide leftovers into smaller containers to allow quick cooling.

270 calories; 14g total fat; l.5g saturated fat; Og trans fat; 20mg cholesterol; 260mg sodium; 13g total carbohydrate; 2g dietary fiber; 4g sugars; Og added sugars; 23g protein; 0% Daily Value of vitamin D; 4% Daily Value of calcium; 35% Daily Value of iron; 10% Daily Value of potassium.

Source: Cook Wild Kentucky Project

Follow on

Facebook
@marshallcountyanr

Online
marshall.ca.uky.edu/anr

Marshall County ANR Agent

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