

MARCH 2024



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

Nicholas County Extension Ag and Natural Resources Newsletter

Hello all, Spring is approaching us which means planting season will be in full swing before we know it. If you haven't started all ready be looking into getting your soil samples done and brought into the office so you don't have to wait long on getting your report back, the soil lab at UK will be getting backed up with samples which means turn around time be take a little longer. The Nicholas County Soil Conservation has agreed to pay for (5) samples per Nicholas County resident if you bring in more than (5), the samples are \$6, we can only take cash or check.

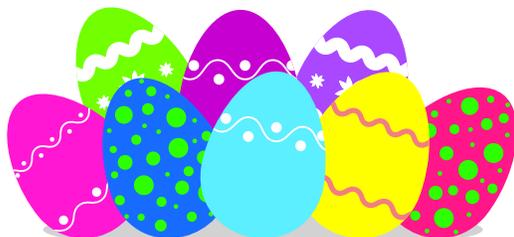
If you haven't already please make sure that you have your education component done for CAIP if you were approved. If you are doing anything with cattle make sure that you have an updated BQCA, if you do not have an updated BQCA I will be holding one more class on April 11th at 5PM at the office!

Upcoming Events:

- **April 11th @ 5PM BQCA Certification Training**
- **March 14th Cow-Calf Profitability Conference Madison Co.**
- **Master Cattlemen Sessions:**
 - **March 5th Harrison County**
 - **March 7th Harrison County**
 - **March 14th Nicholas County**
 - **March 19th Bourbon County**
 - **March 21st Nicholas County**
 - **March 28th Bourbon County**

Hope everyone has a great month!!

HAPPY ST. PATRICK'S DAY



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Cooperative Extension Service

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

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Lexington, KY 40506



Disabilities accommodated with prior notification.



BQCA Certification

At the Nicholas County Extension Office 368 East Main Street

- ~~January 22 @ 10AM~~
- ~~February 20 @ NOON~~
- April 11 @ 5PM

LAST CHANCE

Please call our office (859)289-2312 if you have any questions or would like to attend

Cost \$5 for in person classes
Make check payable to KBN

Friendly reminder; if you're planning on using CAIP funds for large animal and you do NOT have an updated BQCA you will have to have one before receiving funds and they do NOT count towards your educational component!

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Cow-Calf Profitability Conference

Cow-Calf Profitability Conferences are one day, intensive seminars focusing on key topics for beef producers. Conferences are funded by the Kentucky Agricultural Development Fund through the Kentucky Beef Network and delivered by UK Agricultural Economics' Kenny Burdine, Greg Halich and Jonathan Shepherd.

Thursday,
March 14, 2024

9:00 am – 4:00 pm

Madison County
Extension Office
230 Duncannon Lane
Richmond, KY 40475

Call
859-623-4072
to RSVP



Doors open at
8:00 AM
Sponsored Lunch
provided by

Martin-Gatton
College of Agriculture,
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- Topics**
- Key Profit Drivers
 - Managing Hay Production Costs
 - Breeding Stock Depreciation
 - Reducing Fertilizer Use
 - Keys to Cow Herd Management
 - Tax Management Strategies
 - Bale Grazing & Stocking Rates



Optimizing Baleage Quality

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 clostridial 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.



Simple Pruning tips for your fruit trees during the dormant season

All fruit trees must be pruned and trained to enhance fruit production, as the way the tree is shaped will impact fruit yield, fruit size and ripening. In Kentucky, the ideal time to prune fruit trees is in late winter or early spring.

Both newly planted and mature fruit trees must be pruned to maintain size and shape. Here are some easy tips:

- For young trees, pruning to a strong central leader with four to five lateral branches is most common.
- Heading cuts can be done on mature trees to control the tree's height; thinning cuts can open up the canopy and maximize sunlight and airflow. For older, overgrown trees that need heavier pruning, removing up to 1/3 of the larger branches over several years will help rejuvenate the tree.
- Pruning cuts should be made at the base of the branches, leaving a ¼" to ½" branch collar intact for proper healing. Dead and diseased shoots and limbs should be removed, as well as any shriveled or 'mummy' fruit remaining on the tree.
- Sharp pruners or loppers should be used to ensure clean cuts. Sanitize the tool blades between each cut with rubbing alcohol or a 10% bleach solution so as not to spread any disease that may be present.

For more information on pruning apple trees, visit the UK Martin-Gatton College of Agriculture, Food and Environment YouTube channel

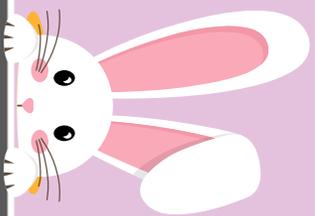
at <https://www.youtube.com/user/UKAgriculture>.

Pruning Central Leader Apple Trees (<https://bit.ly/48VR31Q>) discusses trees that are pruned to the classic pyramid or oval shape.

Pruning Tall Spindle Apple Trees (<https://bit.ly/4bh85JA>) focuses on the high-density supported training system with trees planted on dwarf rootstocks, producing a crop as little as a year after planting.

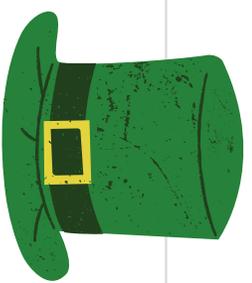
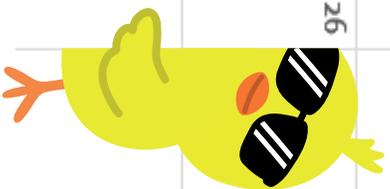
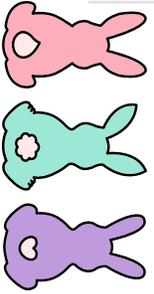


March



2024

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						KY Beef Expo	KY Beef Expo
	3	4	5	6	7	8	9
Daylight Savings	10	11	12	13	14	15	16
St. Patty's Day	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
Easter	31						





Chicken and Fried Cauliflower Rice

4 tablespoons olive oil, divided
1 diced red bell pepper
 $\frac{1}{2}$ medium diced onion
2 cups finely chopped carrots
3 cups chopped cabbage

1 small chopped zucchini
1 cubed skinless, boneless chicken breast
1 head of roughly chopped cauliflower
2 tablespoons minced garlic

2 tablespoons lower-sodium soy sauce
 $\frac{1}{4}$ **teaspoon** ground ginger
 $\frac{1}{4}$ **cup** chopped green onions
Salt and pepper to taste
 $\frac{1}{2}$ **teaspoon** crushed red pepper

Heat 2 tablespoons of olive oil in a large, lidded skillet or wok over medium-high heat. **Add** bell pepper, onion, and carrots.

Cook, stirring occasionally, until crisp-tender, about 5 minutes. **Add** cabbage and zucchini to pepper mix. **Cook**, stirring occasionally, about 5 minutes. **Heat** $\frac{1}{2}$ tablespoon of olive oil in a second large skillet over medium-high heat. **Add** chicken and cook, turning occasionally, until no longer pink, about 5 minutes. **Transfer** chicken to skillet with vegetable mixture.

Place cauliflower into a food processor.

Pulse until the mixture resembles rice. **Heat** $\frac{1}{2}$ tablespoon of olive oil in a skillet over

medium-high heat. **Add** garlic and cook about 15 seconds; add cauliflower. **Cook**, stirring occasionally, 2 minutes. **Transfer** to vegetable skillet, and **stir** to combine. In a small bowl, **combine** soy sauce, ginger, 1 tablespoon of olive oil, green onions, salt, pepper, and crushed red pepper. **Add** to cauliflower mixture. **Cook**, stirring until well mixed and heated through.

Yield: 6, 1-cup servings

Nutritional Analysis: 180 calories, 10 g fat, 1.5 g saturated fat, 15 mg cholesterol, 270 mg sodium, 16 g carbohydrate, 5 g fiber, 7 g sugars, 0 added sugars, 8 g protein