

CARTER COUNTY
AGRICULTURE & NATURAL RESOURCES
NEWSLETTER



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

Carter County
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extension.ca.uky.edu
facebook.com/CCESAG

December 2022 Upcoming Events

Denotes events where preregistration is required. Call 474-6686 or email Rebecca.k@uky.edu to register.

- December 1 @ 6:00 PM ***Estate Planning—Online***
- December 1 @ 6:00 PM **Farm & Forest Programs—What Can We Do For You? - Elliott County PAC**
- December 5 @ 6:00 PM **Ag Development Council Meeting—Carter County Extension Office**
- December 6 @ 6:00 PM ***Little Sandy Beekeepers—Carter County Extension Office***
- December 6 @ 6:30 PM **Insect Vectors of Cattle & Horses—Boyd Co. Extension Franks Building**
- December 8 @ 1:00 PM **Beef Quality Care & Assurance Training—Carter County Extension Office**
- December 8 @ 6:30 PM **Purchasing & Feeding Hay—Boyd Co. Extension Office (Catlettsburg)**
- December 13 @ 8:00 PM ***Beef Webinar (Packer and Consumer Trends & Holiday Beef Ideas) - Online***
- December 14 @ 12:00 PM ***Holiday Vases Workshop—Carter County Extension Office***
- December 15 @ 6:00 PM ***Estate Planning—Online***
- December 16 ***Mineral Order Pickup—Kee’s Farm Service***
- December 21 @ 9:00 AM **Extension District Board Meeting—Carter County Extension Office**
- December 21 @ 10:00 AM **Meet & Greet UK Extension Director, Dr. Laura Stephenson—Carter County Extension Office**
- December 26—January 2 **Merry Christmas & Happy New Year—Extension Office Closed**
- January 5-6 ***KY Cattlemen’s Convention—Lexington***
- January 10 @ 10:00 AM **Extension District Board Meeting—Carter County Extension Office**

Enjoy your newsletter,

Rebecca Konopka,
Carter County Extension Agent for Agriculture &
Natural Resources Education



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

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, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.
LEXINGTON, KY 40546



Disabilities
accommodated
with prior notification.

Little Sandy Beekeeper Meeting

December 6th @ 6:00 PM

Speaker: Dr. Tom Webster, KSU Entomologist

Topic: Digestive System of the Honey Bee

If you plan to attend the December meeting please let us know so we can plan accordingly for the meal.

After 12 years of service, LSBA president John Blasius will be stepping down. We will have officer elections at this meeting. Please consider running for office so that we can continue the Association.

KY Cattlemen's Association Convention

January 4th-6th—Lexington Convention Center

If you would be interested in riding in the Extension van and attending the Convention on January 5th please let me know by December 8th. Registration is \$60 and is due by the 8th.

Beef Quality & Care Assurance Trainings

The Beef Quality & Care Assurance (BQCA) Program's mission is to maximize consumer confidence in and acceptance of beef by focusing the producer's attention to daily production practices that influence the safety, wholesomeness and quality of beef and beef products through the use of science, research and education initiatives.

BQCA training is required for reimbursement in the large animal CAIP investment area.

Cost is \$5. Farm gate signs are an additional \$5.

Trainings will be offered on the following dates. Please preregister. Sessions will be canceled if there are no preregistrations.

December 8th @ 1:00 PM

January 19th @ 6:00 PM

February 2nd @ 10:00 AM

Training is also available online at kybeefnetwork.com.



INSECT VECTORS OF CATTLE AND HORSE DISEASES

How to ID and Deal with the Insects and their Diseases



Tuesday, December 6, 2022
6:30 p.m.

Franks Building at the Boyd County Extension Education Center

1758 Addington Road, Ashland KY 41102

This program will meet CAIP Education Requirements.

Drinks and snacks provided.

Presenters

Dr. Ric Bessin

UK Entomology Specialist

Dr. Michelle Arnold

UK Ruminant Extension Veterinarian

Dr. Emma Adams

Assistant Professor, Veterinary Medicine, Gluck Equine Center, DVM

Lynell Hamed
Lynell Hamed
County Extension Agent
for Agriculture and Natural Resources

Hosted by: Boyd County Cooperative Extension Office

Photos courtesy of USDA ARS

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

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, or physical or mental disability. UNIVERSITY OF KENTUCKY, KENTUCKY STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND KENTUCKY COUNTIES, COOPERATING.



Farm & Forest Programs!

What can we do for you?

Come learn about the programs available in your area!

See what you might qualify for!

Meet, Greet and Q&A with Program Representatives

Dec. 1st @
6pm
Elliott County
PAC

Guest Speakers:



Pam Williams



Bill Knott



Tony Burnett



Christin Herbst

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Holiday Vase Workshop

Wednesday, December 14 @ 12:00 PM

Carter County Extension Office

Cost – \$12

Space is limited. Preregistration & payment is required.

Registration opens December 1st. Call 474-6686.

Learn about different types of evergreens & make your own vase.

Designs will vary.



You're invited

Wednesday, December 21, 2022, Dr. Laura Stephenson, Associate Dean and Extension Director will be visiting our campus. We would like to extend an invitation to our clientele, community partners, city and county officials and community leaders to please join us in welcoming Dr. Stephenson to Carter County.

Our District Board will be meeting at 9:00 that morning. That meeting will be followed by an open "Meet & Greet" Brunch from 10:00-11:00am in our Educational Building.

We hope you can join us.

Thank you so much,
Carter County Cooperative Extension



www.FromTheWoodsToday.com

Wednesdays @ 11:00 AM

Upcoming Farm Service Agency Special Crop Reporting Deadlines

Christin Herbst, County Executive Director Grayson USDA Service Center

Producers and growers are encouraged to report general crops and forages to the Farm Service Agency Office each year, however, there are some special reporting deadlines for specific crops:

- December 15 – Fall-Seeded Small Grains
- December 15 – Cover Crops
- January 2 – Honeybee Colonies
- January 15 – Peaches

Filing a crop report helps verify production in the event of a natural disaster where Federal funds become available to assist. Contact the Grayson USDA Service Center, (606) 474-5183 for more information.

2023 Kentucky Agriculture Poster and Essay Contest

KY Agriculture & Environment in the Classroom

Kentucky students are invited to enter the Kentucky Department of Agriculture's (KDA) annual Poster and Essay Contest, Commissioner of Agriculture Dr. Ryan Quarles has announced.

The theme of the 2023 contest is "Kentucky Agriculture is Everywhere," encouraging contestants to illustrate in words or pictures how agriculture impacts their everyday world.

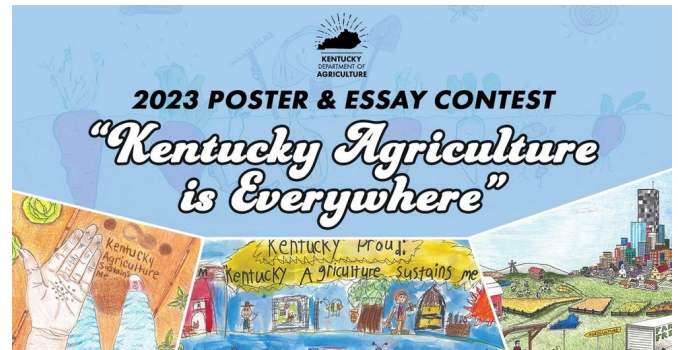
"Agriculture is everywhere. It's in the things we eat, the things we wear, the places we live," Commissioner Quarles said. "Emphasizing the importance agriculture plays in our everyday lives reveals its importance in all we do and have. This year's contest allows students to give that knowledge greater thought."

Students in grades K-12 may submit a poster, an essay of 500 words or less, or a digital entry, which may be photos or original digital artwork. Each entry must include the written theme and be postmarked by Friday, March 3, 2023.

Winners will be notified by Friday, April 14, 2023. Winners in the poster and essay competitions will be selected in each grade. One statewide winner will be selected for digital artwork. Each winner will receive a \$100 award from Kentucky Agriculture and Environment in the Classroom and will be recognized at the 2023 Poster and Essay Contest Awards Ceremony next year.

Winning entries will be displayed in Commissioner Quarles' Frankfort office and at the 2023 Kentucky State Fair in August in Louisville.

For entry information visit <https://www.kyagr.com/marketing/poster-essay-contest.html>.



Do Beef Prices Drive Consumption or Does Beef Consumption Drive Prices?

Kenny Burdine, University of Kentucky

I open a lot of my Extension programs by showing the retail price chart seen above and discussing general trends in production levels for our three main meats (beef, pork, and chicken). By the end of 2022, pork production is going to be down year-over-year and the increase in broiler production is going to be relatively small. Beef production will actually be a little bit higher than last year, primarily due to very high cow and heifer slaughter. However, that trend is likely to reverse in a big way for 2023 and we should see a reduction in beef production of 5% or more.

As I walk through this discussion, someone in the audience will sometimes ask something like, "given that retail beef prices are already very high, and production is likely to get even smaller next year, will retail beef prices get so high that consumers move away from purchasing beef at the grocery store?" When this comes up, the person asking the question is genuinely concerned that beef could price itself off the average plate. I thought this idea would be worth discussing in this week's article.

I want to begin by looking at this question from a slightly different angle. The question comes from the perspective that price is fixed and price is what determines consumption levels. At the individual household level, this is largely true. A consumer makes purchase decisions at a retail location based on the prices they see. If the beef product they wanted was higher than expected, and a better buy was perceived to be had on another product, that consumer may well choose to purchase a competing product. But, I like to think about this from more of a macro perspective.

Most economists would argue that consumption is primarily a measure of production levels, and those production levels are largely fixed in short run. The number of cattle on feed, and the eventual number that are

harvested, really determine beef production for a given time period. That level of production will either be consumed domestically or exported. So, beef production really ends up determining how much beef is consumed in a given period of time. If beef consumption isn't keeping pace with production, retailers and restaurants will adjust prices upward or downward such that the market clears.

If we go back to that individual at the grocery store, they may well purchase something different that week if they perceive beef prices to be too high relative to other products. If enough people do that, the retailer is sent a message and they have to adjust those prices in response. And this occurs at retail locations all across the county. Consumers send messages through their purchasing patterns. By looking at it this way, prices become a reflection of consumer willingness to pay for beef. If beef production increases, the additional beef will be consumed. The question really comes down to what price level is needed to absorb the additional production. And if beef production decreases, prices likely have to adjust upward to ration out the tighter supply levels.

I walked through this simply to say that I view price as the more fluid element of this discussion. If retail beef prices are high, it is likely a reflection of the relative value consumers place on beef. If retail beef prices get "too high" consumers will respond and the prices will adjust accordingly. While price may determine consumption at the household level, I would argue that consumption determines price at the overall market level.

Poinsettias are a Holiday Staple

With their bright red, pink or white leaves, poinsettias herald the approach of the holiday season. They are beautiful as stand-alone plants or as components of bigger holiday displays. In the United States, we grow poinsettias as indoor potted plants, most in heated greenhouses, but you might be surprised to know that in its native climate, this subtropical species can grow to more than 10 feet tall.

The person responsible for bringing poinsettias to the United States was Joel Roberts Poinsett, a botanist, physician and the first U.S. ambassador to Mexico. December 12 is officially Poinsettia Day and marks the 1851 death of Poinsett.

Growers cultivate more than 100 varieties of poinsettias, but the red leaf variety is the most popular. Contrary to popular belief, poinsettias are not poisonous. The plant was cleared of this charge by the National Poison Center and the American Medical Association. A study at Ohio State University found that a 50-pound child would have to eat more than 500 leaves to have any harmful effect. However, the leaves have an awful taste, so you probably don't want to make them part of your salad. It's still a good idea to keep pets away from the plants, because consuming them can cause digestive upset.

More than 34 million poinsettias are sold each year, accounting for about a quarter of the sales of all flowering potted plants. Even though that may seem like a big money-maker for growers, production is a high-risk venture that has significant start-up costs and requires demanding labor and management. Growers must have a heated greenhouse structure. You can use tobacco greenhouses, but poinsettia production in late summer can compete with labor for tobacco harvest, housing and stripping.

The profit margin for most poinsettia growers is very low because of the highly competitive marketing environment of wholesale and retail markets like local garden centers, florists and grocers, roadside stands, farmer's markets, fundraisers and direct sales from the farm. Another consideration is the short sale window of about six weeks beginning in early November. Still, growers see a value in producing a crop of poinsettias, because it allows for spreading capital investments over the whole year versus having the greenhouse sit idle during later summer and fall.

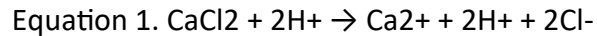
Growers who cultivate multiple varieties can distinguish themselves a bit from the competition and have a market advantage.



Calcium or Lime? Which Raises Soil pH? A Follow-up.

Drs. Edwin Ritchey, John Grove & Chris Teutsch; UK Extension Specialists

Earlier in the year we wrote a Corn & Soybean News article ([Calcium or Lime? Which Raises Soil pH?](#)) discussing the differences between calcium and lime and how they influence soil pH. A study stemmed from several agriculture extension agents and ag retailers receiving questions about a “liquid calcium” (Advanced-Cal, AgriTec International) product that claimed to adjust soil pH using a fraction of the ag lime rate. For example, claims were made that 2 to 4 gallons of Advanced-Cal per acre was more effective at adjusting soil pH than a ton or more of agricultural limestone per acre. The liquid calcium product is calcium chloride (CaCl₂) which has no liming ability (Equation 1).



To neutralize acidity, the proton (H⁺) must be consumed/neutralized. The neutralization reaction, when calcitic limestone is used, is shown in Equation 2.



The acidity, H⁺, in Equation 1 remains after the addition of CaCl₂, but in Equation 2 the proton (H⁺) is neutralized to form water by the carbonate present in the limestone. A liming product MUST contain carbonates (CO₃²⁻), hydroxides (OH⁻), or oxides (O²⁻). Carbonate forms (agricultural limestones) are the most common source used in agricultural production. The calcium, magnesium or other ions associated with limestone have nothing to do with the neutralizing reaction.

Field and lab incubation studies were established concurrently in the summer of 2021 and ended approximately one year later. The field study was at 16 locations with 3 reps and the laboratory incubation study, with 4 reps, was done at the UKREC. The same treatments were used for both studies: an untreated check (nothing applied), liquid calcium at 5 gal/acre, pelletized lime (RNV 83), and agricultural lime (RNV 79). Both pelletized and ag lime were applied at 2 ton RNV 100 equivalent lime/acre, adjusting the rate for the product RNV. Field study soil samples were collected prior to treatment application, again approximately 3 months later and again approximately 12 months later. The incubation study used a Crider silt loam soil with an initial pH of 5.2. Soils were placed in 4-oz specimen cups with small holes in the cap to allow for gas exchange. Cups were maintained at 80% water filled pore space by weight until just before the 6-month sample date, when the building was destroyed by the tornado. Samples were recovered but cup moisture wasn't maintained for the 12-month samples. Destructive sampling occurred at 1, 3, 6 and 12 months. Results for the field study are reported as the average soil pH across locations and as the change in soil pH due to the sites having different initial soil pH levels. Results for the incubation study are reported as average pH across the reps. Data was analyzed using SAS version 9.4 (Cary, NC).

The chemistry associated with the neutralization reaction in equation 2 was confirmed by the field and laboratory studies (Table 1 and Table 2). Further, the lack of pH change in the liquid calcium and check treatments in these experiments is due to the lack of proton (acidity) neutralization, as indicated in Equation 1. The soil pH 3 months after treatment application had increased with both agricultural and pelletized limestone application, but not in the untreated check and liquid calcium treatments. The lime materials increased soil pH by 0.30 to 0.43 pH units, while the check and liquid calcium amended soil pH decreased slightly during the first three months (Table 1). The lime materials had increased soil pH by 0.67 to 0.77 units approximately 12 months after treatment applications. The check and liquid calcium treated soils both exhibited slight increases in pH about one year after application, but this was not due to a treatment effect, but rather to an environmental effect. There can be seasonal variation in pH due to soil moisture levels, largely associated with soluble fertilizer salts remaining in the soil. The use of a salt solution to determine pH helps to reduce this variation but does not remove 100% of this variation. It is very apparent that liquid calcium was not effective in raising soil pH as compared to the lime materials. The full neutralization reaction of limestone takes between 2 to 3 years in field settings.

The laboratory incubation results support those found in the field experiment (Table 2). The lime materials increased soil pH after 1 month, relative to the check and liquid calcium treatments. These results were also

observed at 3, 6 and 12 months of incubation. Soil moisture was maintained at approximately 80% pore filled volume until shortly before the 6-month sampling, an F4 tornado destroyed the building where the incubating samples were stored. The samples were recovered but their 80% pore filled volume status was not maintained for the rest of the experiment. The drier soil conditions in the 12-month samples could explain why the lime material treatments showed a slight pH decrease over that time period. This does coincide with field observations over the same time period.

Soil acidity is neutralized by the consumption of protons, not the addition of calcium.

The results of this study support the chemistry in Equations 1 and 2. Liming acid soils should be based on products that contain carbonates, oxides or hydroxides, the associated RNV, and using an application rate based on soil pH and buffer pH - NOT the amount or form of calcium present in a product.

~~ Thanks to Matt & Tracy Prichard for allowing us to have a research plot on their farm for this study.~~

Table 1. Soil pH 0, 3 and 12 Months After Field Application. Data is averaged over 16 field sites.

| Treatment | Soil pH | | | Change in Soil pH | |
|-----------------|--------------------------|------------------------|-------------------------|-------------------------------------|--------------------------------------|
| | Initial soil pH (<0.854) | Soil pH (3 m) (<0.001) | Soil pH (12 m) (<0.001) | Change in 3 m ² (<0.001) | Change in 12 m ³ (<0.001) |
| Check | 5.76 a ¹ | 5.64 a | 5.87 a | -0.10 a | 0.11 a |
| Liquid Calcium | 5.76 a | 5.71 a | 5.83 a | -0.02 a | 0.08 a |
| Pelletized Lime | 5.82 a | 6.07 b | 6.48 b | 0.30 b | 0.67 b |
| Ag Lime | 5.76 a | 6.16 b | 6.51 b | 0.43 b | 0.77 b |

¹ Different letters within a column indicate significant differences at the 0.01 probability level.

² Change after 3 months (soil pH at 3 month - initial soil pH)

³ Change after 12 months (soil pH at 12 months - initial soil pH)

Table 2. Soil pH After 1, 3, 6 and 12 Months of Laboratory Incubation. Initial pH was 5.2.

| Treatment | Incubation Time in months and (Pr>F) | | | |
|-----------------|--------------------------------------|------------|------------|------------|
| | 1 (<0.001) | 3 (<0.001) | 6 (<0.001) | 12 (0.001) |
| Check | 5.20 a ¹ | 5.05 b | 4.99 a | 5.10 a |
| Liquid Calcium | 5.25 a | 5.00 a | 4.98 a | 4.98 a |
| Pelletized Lime | 5.93 b | 6.30 d | 6.45 b | 6.26 b |
| Ag Lime | 6.10 b | 6.20 c | 6.38 b | 6.20 b |

¹ Different letters within a column indicate significant differences at the 0.01 probability level.

Fescue Foot Can Flare in Cold Weather

Mike Rankin, Hay and Forage Grower (UK Forage News)

The symptoms of a bad case of fescue toxicity are well-documented. One symptom — fescue foot — can become more apparent when temperatures drop during the winter. “As the cold weather moves in, you are likely to notice some cows or yearlings on fescue pastures may be slow-moving early in the day,” notes Eldon Cole, a livestock specialist with the University of Missouri. “This might be an early warning sign of fescue foot,” he adds.

Toxic alkaloids in Kentucky 31 tall fescue cause the restriction of blood vessels. The animals’ extremities are especially susceptible to restricted blood flow such as ears, tails, and feet. Calves can lose the tips of their ears or switches from their tails which lowers market value.

“For affected cows, producers may notice slight swelling in the rear ankles and possible breaks in the skin from the top of the hoof to up above the dew claw,” Cole notes. “Early detection of limping is key. By the time hooves on hind feet show red, gangrene may have set in.” If a limping animal is detected, Cole suggests putting it in a chute and checking its lower leg. “If the animal’s leg feels cooler than the rest of the leg, move the affected animals from that toxic pasture and dry lot them or at least put them on a different pasture,” Cole recommends. The colder extremity is the result of a lack of blood flow.

Don’t graze toxic fescue pastures too short. Research shows that toxins stay in the lower 2 inches of the fescue plant during the fall. Intensive rotational grazing with frequent movement of cattle will help ensure plants are not grazed too short. Consider feeding stored hay during late fall and early winter cold spells. Toxin levels in stockpiled fescue pastures decline over time. Grazing these pastures in mid- to late winter is rarely a concern.

Cows that develop fescue foot have difficulty walking or grazing, which drastically impacts performance. While there is no cure for the condition, preventative measures such as planting a novel endophyte tall fescue variety can essentially eliminate the problem. Other strategies are also available for mitigating the disease, such as including legumes into a toxic tall fescue pasture.



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DECEMBER 2022

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East KY Hay Contest Winners

Tommy Marcum
 2nd Place Grass Hay
 2nd Place Mixed Grass / Legume Hay

Mick Franks
 3rd Place Grass Hay

Danny Carroll
 2nd Place Grass Baleage
 Carter County Top Forage Sample

County with the Most Samples
 Carter

