

PULASKI COUNTY AGRICULTURE NEWSLETTER

January 2022

T.J. Adkins, Ag & Natural Resource Agent

UPCOMING EVENTS:

- **January 5th**—Ag Council Meeting; 7:30 am
Extension office
- **January 11th**—Kentucky Women in Ag
District meeting. 6:00 pm @ Suites-Us-Farms
- **January 12th**- Pesticide Training; 9:00 am-
12:00 pm. Extension office
- **January 13th and 14th**- KCA State
Convention- Lexington, KY. Registration at
kycattle.org
- **March 22nd**- Adapting your nutrient
management plan for fertilizer prices with Dr.
Josh McGrath. Hal Rogers training center; 6:00
pm
- **January 25th**—Winter Feeding strategies
With Dr. Steve Higgins and Tarter Gate
Company. Hal Rogers Training Center; 6:00 pm
- **January 31st**- PREPPER Meeting
- **February 2nd**- Ag Council Meeting; 7:30 am;
Extension Office
- **February 8th**- Pesticide training; 6:00 pm at
Woodstock Community Center
- **February 17th**- Winter Cattlemen's meeting
with Purina Animal Nutrition. Hal Rogers
Training Center; 6:00 pm
- **February 22nd**—Cattle Handling and BQCA
Training with Dr. Morgan and Tarter Gate
Company; 6:00 pm at Casey County Ag Expo
- **February 28th**- Tick Program at Hal Rogers
Training Center; 6:00 pm

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Producers Association
Annual Meeting

****Always call to RSVP as
sometimes room
and resources are
limited****

*"The secret of change is to focus all
your energy, not fighting the old, but
on building the new."*

- Socrates

FROST SEEDING- IT'S THAT TIME OF YEAR!

Chris Teutsch, Extension Professor, Forage Specialist, UKREC at Princeton

Since last month, nitrogen price has continued to increase. In the past 12 months nitrogen cost has more than doubled (Figure 1). Currently, urea is priced at \$750 /ton or \$0.82/lb N. Even so, nitrogen remains an important part of grassland ecosystems and is closely related to both dry matter yield and crude protein concentrations in grasses and non-leguminous forbs. Since nitrogen is highly mobile in the soil, soil testing is not commonly used to make nitrogen fertilization recommendations. Recommendations are based on research trials conducted over multiple years and locations.

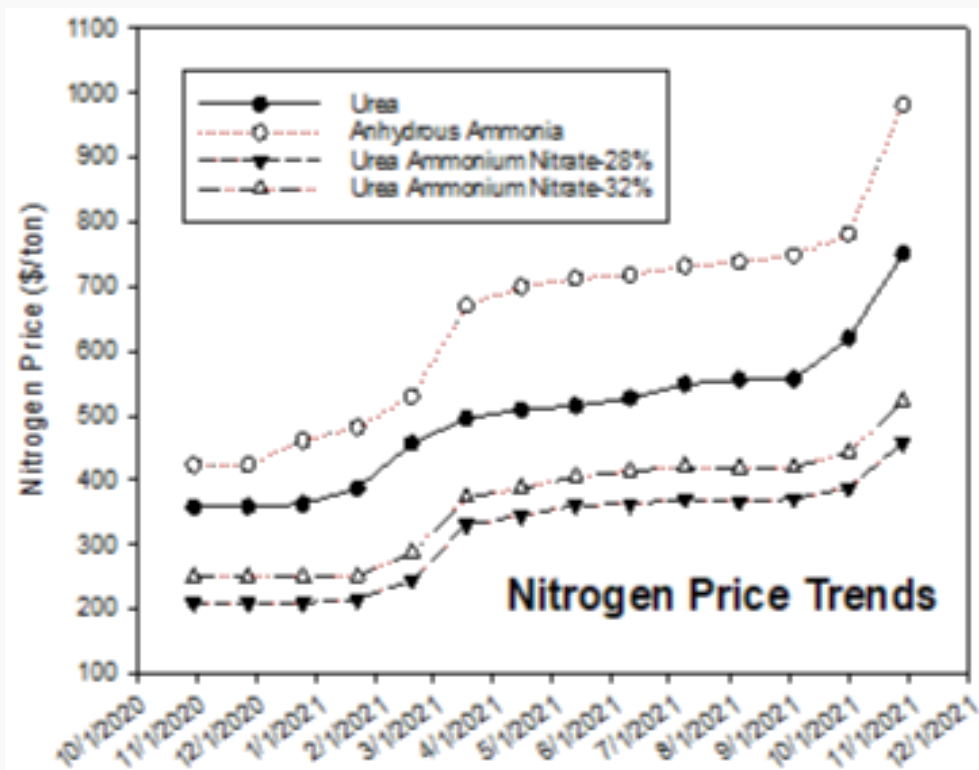


Figure 1. Nitrogen price trends over the last 12 months. Data are from DTN and available at <https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/11/03/nitrogen-fertilizer-prices-close>.

Nitrogen Cycling in Grassland Ecosystems.

So here is some good news...in well managed grasslands strong nitrogen cycles can be developed over time. Nitrogen enters these systems in the form atmospheric deposition (minor amounts), feed and supplements brought into the system, and nitrogen fixed by legumes.

These cycles can reduce or in some cases even eliminate the need for nitrogen fertilizer. It is important to realize that these cycles take time to develop require good grazing and feed management. A key component of these cycles is the use of legumes such as red and white clover and alfalfa (Figure 2).

Legumes fix nitrogen in the air to a plant available form. The importance of legumes in grasslands has long been recognized. They bring nitrogen into grassland ecosystems via symbiotic nitrogen fixation, improve forage quality and animal performance, and dilute the toxic effects of the endophyte found in tall fescue. It is estimated that commonly used pasture legumes will fix between 50 and 250 lb of nitrogen per acre per year (Table 1). At current prices, the value of this nitrogen is between \$40 and \$200 per acre per year.

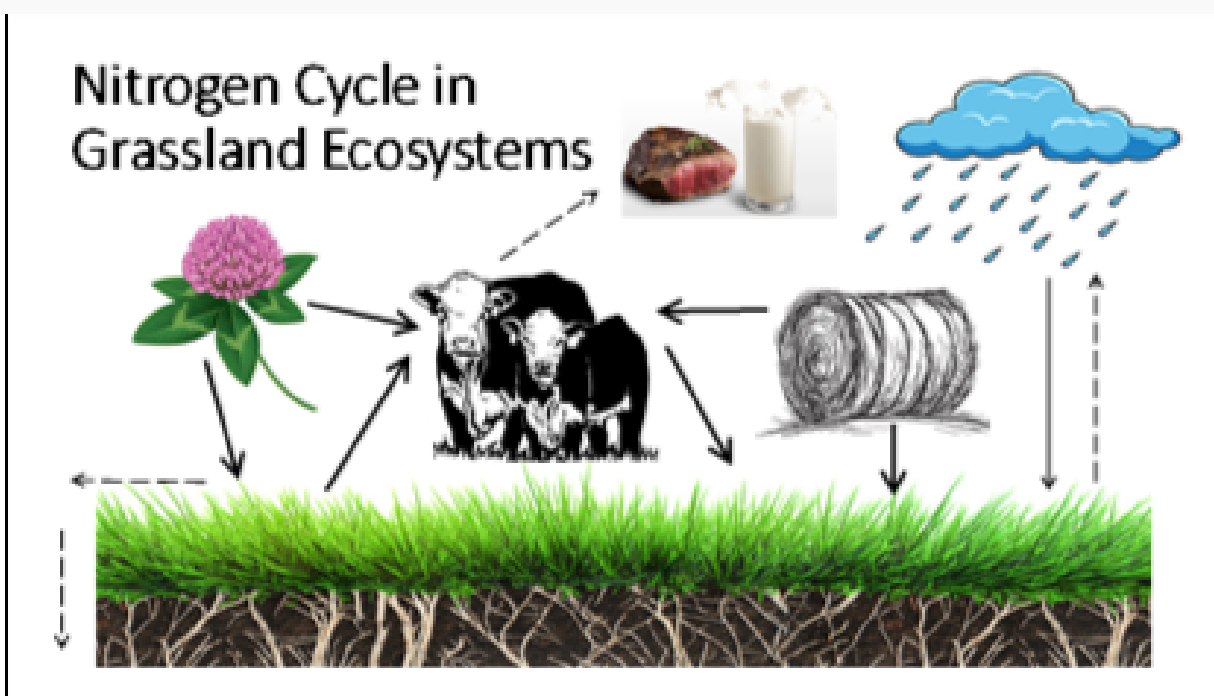


Figure 2. Strong nitrogen cycles can develop in well managed grassland ecosystems. Nitrogen enters the system via imported hay and supplements, nitrogen fixation in legumes and atmospheric deposition (minor amounts). Nitrogen leaves the system via volatilization, denitrification, leaching runoff, and animal products removed. A cow-calf pair will consume approximately 280 lb N/year of which 200 lb is retained in the grassland ecosystem.

Legumes share nitrogen with grass indirectly. Nitrogen is transferred to grass grown in association with legumes through the ingestion of legumes and subsequent deposition of dung and urine by grazing animals (Figure 2), death and decomposition of above and below ground plant parts including roots, shoots, and nodules, and to a lesser extent direct legume to grass transfer.

Overseeding legumes is not the same as applying commercial nitrogen fertilizer. Mixed stands of grasses and legumes may yield as much or more than grass monocultures fertilized with moderate rates of nitrogen, but a significant proportion of that yield will be made up of the legumes. In other words, legumes not only increase grass growth by supplying nitrogen, but also compensate for lower grass production in mixed swards.

Applying nitrogen fertilizer to mixed stands sifts botanical composition. The addition of nitrogen fertilizer to grass-legumes mixtures tends to sift the composition of the mixture toward grasses. Nitrogen fertilizer also reduces nitrogen fixation in the legumes since energetics favor uptake of nitrogen in the soil rather than biological fixation.

Improved legumes require good soil fertility to be productive and persistent. Improved legumes such as red and white clover and alfalfa require relatively high soil fertility and pH's above 6.0 to be productive. This means that an initial investment in potash, phosphorus, and lime must be made. These applications need to be based on a recent soil test.

Legumes are most productive when rotationally stocked. Like other forages legumes respond well to improved grazing management. Resting pastures allows leaf area to regrow and carbohydrate reserves to be stored up. In general, tall growing legumes like alfalfa and red clover are more dependent on stored energy for regrowth. This means that they need time to rest and replenish their stored carbohydrates between grazing events. That is the reason that alfalfa does not persist well in continuous grazing systems. Even white clover that tolerates close grazing very well benefits from rest.

Rotational stocking is a tool to manage botanical composition. How we graze our pastures has a profound impact on botanical composition. In grasses, energy for regrowth is dependent on leaf area remaining after grazing. The remaining leaf area is like a solar panel that captures sunlight and converts it into energy (sugars and carbohydrates) that the plant can use to fuel regrowth. The more leaf area we leave, the larger the solar panel, the faster pastures will regrow, and the more competitive the grass will be the tall growing legumes. If we graze closely with a rest period between grazings, we will tend to favor tall growing legumes in the sward since they are more dependent on stored carbohydrates for regrowth.

Mixed stands can be stockpiled for winter grazing. Grass-legumes mixtures can be stockpiled for winter grazing, but they need to be used first since legumes tend to deteriorate before grasses. Save pure stands of grass that were fertilized with nitrogen for late winter grazing.

Overseed when needed to introduce and maintain improved legumes. Approximately 25 to 30% of the pasture on a dry matter basis should be made up of clover or other legumes. Even improved red clover varieties only last two to three years. Annual lespedeza will sometimes reseed itself, but as a general rule this is not dependable. A good general mix for overseeding pastures in Kentucky is 6-8 lb medium red clover, 1-2 lb of ladino or grazing type white clover, and in some cases 10 lb of annual lespedeza per acre.

Always use improved clover varieties. Work done at the University of Kentucky shows that improved red clover varieties will last 1-2 years longer than common medium red clover. Using certified seed guarantees that you are getting the genetics that you are paying for. More information on the best adapted clover varieties can be found by going to the UK Forages Website and clicking on the “Variety Trial” icon.

Always inoculate or use pre-inoculated seed. Since legumes fix nitrogen from the air by forming a symbiotic relationship with *Rhizobium* bacteria, inoculating seed with the proper strain of nitrogen fixing bacteria prior to planting is the best way to ensure optimal fixation.

Sometimes we need to be reminded about the importance of legumes in grazing systems. I cannot think of a better reminder than \$0.75 nitrogen. Clover seed prices will likely be higher in the spring and availability may be limited. So, now is the time to make plans and gather supplies for frost seeding in February!

Table 1. The amount and value of nitrogen fixed by commonly used pasture legumes.

Legume	Nitrogen Fixed lb/A/yr	Value of Fixed Nitrogen (\$/A/year)		
		N cost=\$0.25/lb	N cost=\$0.50/lb	N cost=\$0.75/lb
Alfalfa	150-250	40-65	80-130	120-195
Red Clover	75-200	20-50	40-100	60-150
Ladino Clover	75-150	20-40	40-80	60-120
Annual Lespedeza	50-150	15-40	30-80	45-120

Adapted from *Southern Forages, Fourth Edition.*

Mid-South Stocker Conference Online in 2022

Dr. Jeff Lehmkuhler, Extension Professor, University of Kentucky

Due to continued high infection rates of COVID, the 2022 Mid-South Stocker Conference will once again be offered free of charge as an online program. Last year the conference was held online with good attendance and the decision was made due to uncertainties in meeting restrictions to hold the program online again this year.

The conference will be held on February 23, 2022 beginning at 12:00 pm EST. Topics to be covered this year include baleage production, grazing management, new research on respiratory disease, and a 2022 market outlook. The Mid-South Stocker Conference is a joint effort between University of Tennessee, University of Kentucky, and industry to offer an educational program for the stocker and backgrounding sector of the industry.

To register for the conference, the following online link will be available during the week of January 11th. The link is <https://tiny.utk.edu/22MSSC> for registering. Once registered, an email will be sent to participants to join the Zoom program prior to the event. For additional information go to <https://midsouthstockerconference.utk.edu/> or contact your local county Extension office or email jeff.lehmkuhler@uky.edu. We hope you will join us on February 23 to from a great line-up of speakers.

Tri-County Livestock Education Series

Sponsored by Tarter Farm and Ranch Equipment

RSVP

LIMITED SPACE

Winter Hay Feeding - Dr. Steve Higgins
January 25th at 6:00pm EST
Hal Rogers Regional Fire Training Center
Somerset, KY

Cattle Handling Facilities - Dr. Morgan Hayes
February 22nd at 6:00pm EST
Central KY Ag Expo Center
Liberty, KY
BQCA Certification Offered

Small Ruminant Handling Facilities - Dr. Beth Johnson
March 22nd at 6:00pm EST
Russell County Fairgrounds
Russell Springs, KY

All demonstration equipment will be provided by Tarter Farm & Ranch Equipment.

T.J. Adkins
Pulaski County
606-679-6361

Jonathan Oakes
Russell County
270-866-4477

Kelsey Woodrum
Casey County
606-787-7384



Southeast Kentucky Sheep Producers Association

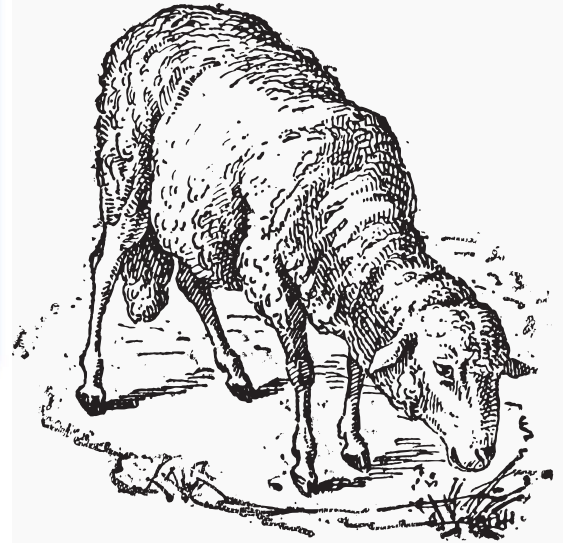
2022 Annual Meeting and Lamb Dinner

Laurel County Extension Office
200 County Extension Road, London, Kentucky 40741
Saturday, January 29th 10 AM - 2:10 PM

Please join us for our annual meeting and lamb dinner, including programming with valuable information about sheep production. Our Keynote Speaker will be Commissioner Ryan Quarles with the Kentucky Department of Agriculture. Sheep and marketing experts from the University of Kentucky and the American Sheep Industry Institute in Washington DC will be presenters. Join us for fellowship, food, door prizes and fun!

REGISTRATION IS REQUIRED. PLEASE REGISTER BY CALLING 606-864-4167 TO CONFIRM YOUR PARTICIPATION AND THE NUMBER IN YOUR PARTY

All COVID restrictions have been lifted in Kentucky. More information about SEKSPA's annual meeting can be found at sekspa.com. Have questions? Call us at 606-312-5264



UTILITY-SCALE SOLAR FARMING

JANUARY 18TH - MCCrackEN COUNTY EXTENSION OFFICE
JANUARY 19TH - CHRISTIAN COUNTY EXTENSION OFFICE
JANUARY 20TH - HARDIN COUNTY EXTENSION OFFICE
JANUARY 26TH - FAYETTE COUNTY EXTENSION OFFICE

ALL START TIMES 6PM LOCAL TIME

American Farmland Trust is partnering with the UK's College of Agriculture, Food and Environment to hold public forums across the Commonwealth. In these conversations, there will be a discussion of the various benefits, and drawbacks of solar energy deployment.



Please call to reserve your spot as space is limited

606-679-6361

Pulaski Co Extension office
28 Parkway Dr, Somerset 42503



The Four Pillars Of Modern Preparedness

Pulaski Co Extension Office
Somerset Ky

January 31st

5:30 pm

Every year there are more and more people turning to modern preparedness and self-sufficiency. Most are full of questions, so we have compiled a course to help ease the transition from an average person to someone who can weather anything that comes their family's way.

Bring pen and paper.

Program will begin promptly at 5:30pm on January 31, 2022



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



Disabilities
accommodated
with prior notification.



Kentucky Maple Day is a celebration and educational event all rolled into one. The 2022 Kentucky Maple Day is scheduled for February 5, 2022. For more information visit: <https://ky-maplesyrup.ca.uky.edu/ky-maple-day>

Winter Wheat Meeting: **Date Change**



The University of Kentucky Wheat Science Group has moved its annual Winter Wheat Meeting to 9 a.m.-3 p.m. CST Feb. 8 at the Bruce Convention Center in Hopkinsville.

The date change allows more time for producers and UK specialists to recover from the Dec. 10 tornado that devastated much of Western Kentucky.



CONSIDERATIONS for Kentucky Farmers

Test Your
Soil
Early!!!!



DUE TO THE DEVESTATION OF UK'S PRINCETON LAB, WE STRONGLY ENCOURAGE YOU TO TEST AS SOON AS POSSIBLE IN ORDER TO ALLOW AMPLE TIME FOR RESULTS.

Lunch Provided
MARCH 9, 2022
11AM - 2PM

This session will provide an overview of the available labor options that a farm may utilize and discuss the legal and liability implications of each choice. Participants will receive a basic overview of regulations, required documents and record-keeping. Resources and follow-up education opportunities will be available.

RSVP to Natalie Gupton,
Natalie@AgSafe.org or Call 606-307-7723

28 Parkway Drive, Somerset, KY 42503

AgSafe FOOD & FARMS
SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION
Cooperative Extension Service
Pulaski County
University of Kentucky
College of Agriculture,
Food and Environment

USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

This material is based upon work supported by USDA/NIFA under Award Number 2018-70027-28585

51A800 (4-21)
Commonwealth of Kentucky
DEPARTMENT OF REVENUE

APPLICATION FOR AGRICULTURE EXEMPTION NUMBER



This application should be filed only by persons regularly engaged in the occupation of tilling and cultivating the soil for the production of crops as a business, regularly engaged in the occupation of raising and feeding livestock of a kind the products of which constitute food for human consumption, raising and feeding poultry, producing milk for sale or regularly engaged in raising ratite birds, llamas, alpacas, buffalos, cervids, or aquatic organisms as an agricultural pursuit.

➤ See additional information on the reverse side.

Have you taken care of your	
Name	Enter Legal Name of Farm or Farm Entity
Mailing Address	Phone Number

tax exempt benefits?



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

Agriculture and Natural Resources

Pulaski County Extension Office

P.O. Box 720

Somerset, KY 42502

606-679-6361

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PERMIT #5



This institution is an equal opportunity provider. This material was partially funded by USDA's Supplemental Nutrition Assistance Program - SNAP.



Squirrel Pot Pie

- 2 squirrels, cut in half
- 3 cups chicken stock
- 4 tablespoons flour
- ½ cup sliced mushrooms, about 2 ounces
- ½ cup chopped celery, about 1 rib
- 1 small onion, diced
- 1 cup frozen mixed vegetables
- ½ teaspoon garlic powder
- ½ teaspoon salt
- ½ teaspoon pepper
- 1 refrigerated pie crust
- 1 tablespoon milk

1. Wash hands with warm water and soap, scrubbing for at least 20 seconds.
2. Place squirrels in large stockpot. Add chicken stock and cover. Bring to a boil over medium-high heat. Reduce heat and simmer 1 hour.
3. Wash mushrooms, celery, and

onion with a clean vegetable, brush under running water before preparing.

4. Preheat oven to 400 degrees F.
5. Remove pot with squirrels from heat and let sit 10 to 15 minutes or until meat is cool enough to handle. Use tongs to remove meat and bones from broth. Separate and discard all bones and cartilage. Chop any large pieces of meat.
6. Place a colander over a large bowl and strain broth to remove any additional bones. In a small bowl, stir cooled broth, 1 tablespoon at a time, into flour until a smooth liquid is achieved.
7. Return remaining broth to pot. Stir flour mixture into broth and heat, stirring, until broth comes to a boil and has thickened.

8. Add meat, all vegetables, and seasonings to broth, and stir to mix.
9. Pour mixture into a deep-dish pie plate or baking dish.
10. Cover squirrel mixture with premade pie crust. Slit crust to vent.
11. Brush top of crust with milk.
12. Bake 40 minutes or until golden brown.
13. Serve immediately. Store leftovers in the refrigerator within 2 hours.

Yield: 6 servings
Serving Size: 1/6 pie

Nutrition facts per serving:
390 calories; 18g total fat; 3.5g saturated fat; 2.5g trans fat; 65mg cholesterol; 580mg sodium; 32g total carbohydrate; 1g dietary fiber; 4g sugars; 0g added sugars; 23g protein; 0% Daily Value of vitamin D; 2% Daily Value of calcium; 30% Daily Value of iron; 8% Daily Value of potassium.

