

PLOWING AHEAD

AGRICULTURE & NATURAL RESOURCES



Cooperative Extension Service
Madison County
230 Duncannon Lane
Richmond, KY 40475
(859) 623-4072
Fax: (859) 624-9510
<http://extension.ca.uky.edu>

UPCOMING EVENTS

These events are CAIP Education Credit Eligible

February 6th at 6 pm

Pasture & Hayfield Weed Management

Presented by Rachel Walker, Corteva Agriscience

Location: Madison County Extension Office

Call 859-623-4072 to register

February 17th at 6 pm

KY Farmland Transition Initiative

Presented by Aleta Botts, Kentucky Farm Bureau

Location: Madison County Extension Office

Call 859-623-4072 to register

March 18th at 6 pm

*Beef Cattle Market Update
and Stocking Rate Economics*

Presented by Dr. Kenny Burdine and

Dr. Greg Halich, UK Ag Economics Specialists

Location: Madison County Extension Office

Call 859-623-4072 to register

***Watch this newsletter for more information.**

BEEF MANAGEMENT 101

Managing your cattle this winter: Health, Reproduction, Genetics, Nutrition, and Pasture Management

Presented by: Animal Science Students from the University of Kentucky and Dr. Darrh Bullock, Extension Beef Specialist

When: Wednesday December 11th, starting at 6:00 pm

Where: 230 Duncannon Lane, Richmond, KY (Madison County Extension Office)

A meal will be served. Call ahead 859-623-4072 by Monday, December 9th.

**** This is a CAIP Education Credit Eligible Meeting ****



Brandon Sears

County Extension Agent for Agriculture & Natural Resources
859-623-4072 or e-mail brandon.sears@uky.edu

UPCOMING AUCTIONS

Madison County Fair Board Annual Equipment Consignment Auction set for Saturday January 4, 2025.

Auction will begin at 10 am, Saturday January 4, at the Madison County Fairgrounds. For more information, visit www.themadisoncountyfair.com online.

Hay Auction set for Saturday January 11, 2025.

Mark your calendar for Saturday January 11th at 10 am for our annual hay auction at the Madison County Fairgrounds. All types and sizes of hay offered. The sale will take place rain or shine.



WINTER FEEDING CHECK-UP & USING THE UK BEEF COW FORAGE SUPPLEMENT TOOL

Kevin Laurent, Extension Specialist, University of Kentucky

Winter feeding is in full swing and for operations in the drier regions of the state, hay feeding has been going on for quite some time. Depending on your situation, now is a good time to and fine tune your winter feeding program.

1. Inventory your feed resources. By now you should have an idea of how readily cows are consuming the hay you have offered. With roughly 120 days of feeding left to go, take inventory of hay on hand, and determine if supplies will be adequate. It would be better to purchase hay now than in late winter when you are down to your last rolls. Remember that in most cases, stockpiled fescue holds its nutritive value well throughout the winter and will usually meet the needs of a lactating cow. Spring calving herds may choose to defer grazing on stockpiled pasture until February or March and utilize these acres for a calving pasture or for new pairs. Fall calving herds will want to graze these pastures now since cows are lactating and being bred.

2. Test your hay, weigh a few rolls, and use the UK Beef Cow Forage Supplement Tool Beef Forage Supplement Tool (uky.edu) (<http://forage-supplement-tool.ca.uky.edu/>). It is not too late to test your hay. With winter feed costs accounting for most of the cow-calf budget, knowing the nutritive value of your hay and how to

adequately supplement is imperative. Hay analysis results can be entered in the UK Beef Cow Forage Supplement Tool which is a web-based app that can be loaded on a smart phone. The app uses dry matter, crude protein, neutral detergent fiber (NDF), and total digestible nutrients (TDN) to estimate intake and supplementation needs for cows in three stages of production (mid-gestation, late gestation, lactation). Calculations are based on a 1250 lb. cow in a body condition score of 5. An example of the input and output screens are shown here. Notice hay in this example would not need supplementation for a cow in late gestation.

There is a difference between hay consumption and hay disappearance. Knowing what your hay weighs and accounting for feeding waste is essential to estimating intake. Weigh a few rolls over truck scales to get an idea of bale weight. In most cases we tend to overestimate what round bales weigh.

Once you have an idea of hay consumption, you can adjust the NDF number on the app to match what the cattle are consuming. A lower NDF value will estimate a higher hay intake and a higher NDF value will estimate a lower intake. Knowing the actual hay intake will enable you adjust supplement rates for a more accurate diet.

3. Monitor body condition. Even the best planned feeding program can be affected by adverse weather or other environmental issues. When we see cattle daily, we may become “barn blind” and not be able to see gradual changes in body condition. Monitor conditions by taking smart phone pictures every 2-3 weeks of certain cows or groups. This makes it easier to detect changes in condition and adjust feeding. The goal is body condition score of 5-6 at calving (no backbone, no middle ribs, no sharp hooks) and maintain this condition from calving to breeding.

We are currently in a unique situation with higher than average cattle prices coupled with higher input costs. The successful producers will be the ones that can adequately feed the cowherd to maintain reproductive performance while also keeping a handle on feed and input costs. Here’s to a winter of little mud and favorable weather.

Late Gestation
Crude Protein: 9%
NDF: 60%
TDN: 57%
Expected daily intake of this forage for a 1250 lb cow is 2% of body weight, or 25 lbs on a dry matter basis, or 28 lbs on an as fed basis.

Protein	Supplement	Recommended Amount
8.5%	Corn (6 lbs max)	None
11%	Soyhull (16 lbs max)	None
13.75%	75% Soyhull / 25% Gluten (16 lbs max)	None
13.85%	85% Soyhull / 15% DDGS (16 lbs max)	None
14.6%	67% Soyhull / 33% Gluten (16 lbs max)	None
14.8%	80% Soyhull / 20% DDGS (16 lbs max)	None
15.75%	75% Soyhull / 25% DDGS (16 lbs max)	None
16.5%	50% Soyhull / 50% Gluten (16 lbs max)	None
22%	Corn Gluten Feed (Gluten) (8 lbs max)	None
30%	Distillers Dried Grains w/solubles (DDGS) (8 lbs max)	None
50%	Soybean Meal (4 lbs max)	None



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

Join us for an evening of all things hay!

CENTRAL KENTUCKY HAY PROGRAM

PROGRAM FEATURES:

- ✓ Central KY Hay Contest Awards
- ✓ Understanding your forage test results
-Dr. Jimmy Henning, UK Extension Forage Specialist
- ✓ Determining quality horse hay
-Dr. Bob Coleman UK Extension Equine Specialist
- ✓ How I make quality hay: Tips for Success
-Producer panel



When: Monday, December 16th, 2024

Where: Fayette County Extension Office,
1140 Harry Sykes Way, Lexington, KY 40504

Time: 6:00 – 8:00pm

Dinner will be served so please RSVP to the Fayette County Extension Office at 859-257-5582 or fayette.ext@uky.edu before December 9th!

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.

RETHINKING HIGH-RISK STOCKER CALF MANAGEMENT

Dr. Michelle Arnold - DVM, MPH UK Ruminant Extension Veterinarian

Bovine Respiratory Disease (“BRD”) or “shipping fever”, also known as bronchopneumonia, continues to be the most common cause of illness and death in postweaned (stocker) calves despite significant improvements in the vaccines and antibiotics available today. Traditionally, disease prevention through vaccination was thought to be the answer to improving stocker health outcomes but the current vaccination recommendations are not meeting the challenge as morbidity and mortality rates continue to rise.

There is an increasing amount of research focusing on the importance of the normal, healthy “microbiota” (bacterial population) in the upper respiratory tract to maintain calf health and improve immunity. This normal microbial population modulates, or controls, host immune defenses through several mechanisms including 1) competition with the pathogenic organisms (the bad bugs) for nutrients, 2) through production of compounds toxic to the pathogens, 3) through recruitment of white blood cells to defend the lung tissue, and 4) by stimulating antibody production, specifically IgA, to protect the mucosal surface of the respiratory tract. However, cattle diagnosed with BRD have a significantly disrupted microbiota that instead allows pathogenic bacteria to flourish.

Examining ways to preserve the normal microbiota while stimulating the immune system is the new frontier currently under exploration to reduce sickness, death loss and antimicrobial use, especially in the stocker calf sector. Is it time to limit the management procedures and treatments that have a profound influence on the respiratory microbiota to better the health of high-risk stocker calves? The stocker industry is vital to the economic success of cow/calf operations in KY. Calves marketed off the farm through the sale barn are generally in no way, shape, or form ready to enter feed lots to be fed to slaughter weight. These calves often arrive to the yards in small groups, sometimes 10 or fewer calves, that were weaned on the trailer on the way to the sale. Many calves are lightweight (<400#) and in poor nutritional and trace mineral status, unvaccinated, males are intact bulls, and a portion of the heifer calves are pregnant.

On arrival at the yards, the calves are commingled with calves from multiple sources, most with unknown vaccination and deworming history, then are weighed, sold and eventually transported to a stocker or backgrounder operation. Either before leaving the yards or on arrival at the stocker facility, calves are administered a modified-live (MLV) respiratory vaccine, a blackleg vaccine, dewormed, and implanted. Additionally, calves commonly receive a long-acting antibiotic to prevent bronchopneumonia, a practice known as “metaphylaxis”. The time it takes to move through this critical transition period, from when the calf leaves the farm of origin to arrival at the stocker/backgrounder operation, can vary greatly depending on how long they stand at the yards before *and after* the sale and the distances they are transported. The longer calves stand without rest and with limited access to feed and clean water, the more likely they will arrive at their new facility dehydrated and in a negative energy balance.

These stocker procurement decisions to buy unweaned, unvaccinated, intact calves at the sale and then add stress through weaning, transport, commingling and diet change, administration of MLV vaccines and metaphylaxis, profoundly change the normal respiratory microbiota (Figure 1) and set the stage perfectly for shipping fever pneumonia.

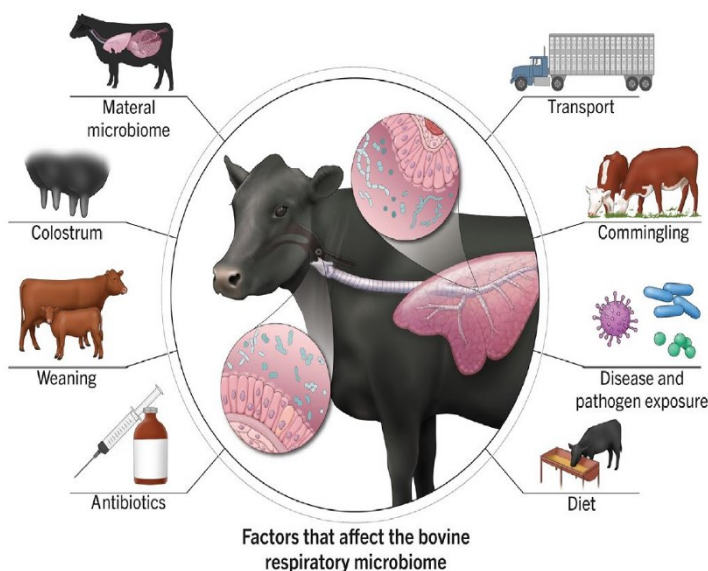


Figure 1: Photo from “High-Risk Cattle Management and Stocker Calf Health”, by Brent Credille, DVM, PhD. (Veterinary Clinics of North America, Food Animal Practice vol 38 (2022) page 235).

Continued next page...

RETHINKING HIGH-RISK STOCKER CALF MANAGEMENT

Continued from previous page...

We have known for a long time that “stress” weakens the calf immune system, allowing viruses to invade and compromise lung defenses, enabling bacterial pathogens to reach areas deep within the lungs and initiate bronchopneumonia. Stress also negatively affects vaccine effectiveness in the field. But is all stress the same? “Acute” or short-term stress that lasts 24 hours or less affects the immune system differently than chronic stress that may last for days up to weeks. A good example of acute stress is vaccinating calves prior to weaning as part of a preconditioning program. Calves experience a short-term stress from being worked through the chute and given the MLV vaccine, but the immune system responds as it should to the challenge and there is adequate time for protection to develop prior to weaning. Chronically stressed calves, on the other hand, administered MLV vaccine have too much immune system suppression from cortisol (the stress-induced hormone), that can result in replication and nasal shedding of vaccine virus, more symptoms of BRD and more antibiotic treatment. Killed respiratory virus vaccines do not have enough antigens to stimulate a timely protective response in stressed calves. So, what is the answer to prevent disease if vaccines cannot do it alone?

To maintain health, the focus should shift towards preservation of beneficial microbiota during the critical transition from the home farm to the stocker operation through stress reduction, nutritional management, strategic vaccine use, and limiting antibiotic therapy to only the individuals that need treatment. Stress reduction and nutritional management at the cow-calf level may be in the form of preconditioning programs that require pre-weaning vaccinations, castrations, weaning, then feeding on the farm for a 45-60 day period to prepare them for sale. At the yards, stress reduction may include allowing calves access to good grass hay and clean water while at the facility, periodically wetting the ground if dust is an issue, not overcrowding pens, regularly cleaning pens and alleyways, and facilitating quick and easy loadout after calves are sold. Strategic vaccine use may be delaying the 5-way modified live respiratory vaccination up to 21-30 days post-arrival at the stocker facility to give high-risk cattle the opportunity to overcome stress-induced immune dysfunction. The impact of chronic stress, dehydration, and lack of energy experienced on arrival at stocker operations has a known, profoundly negative effect on immune function, vaccine effectiveness, and overall health. Similarly, metaphylaxis (administering long-acting antibiotics to calves upon arrival at the stocker facility) disrupts the beneficial bacteria in the upper respiratory tract, resulting in greater colonization of the lungs by bacterial pathogens, namely *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni*, and *Mycoplasma bovis*, as well as increasing resistance in those bad bugs to antibiotic therapy. Limiting treatment to calves showing signs of BRD (depression, off-feed, fever > 104 degrees, increased respiratory rate) will preserve the efficacy of antibiotics when they are truly needed for survival.

The importance of the stocker/backgrounder sector to the vitality of the KY cow/calf industry cannot be overstated. These operations provide western feedlots a year-round, steady supply of calves ready to be fed to slaughter weight. Acknowledging the importance of preserving the normal microbiota through stress reduction, better nutritional management, strategic vaccine use, and limited antibiotic use throughout the transition from farm to stocker facility could significantly reduce sickness, death loss and antimicrobial use in KY calves. Talk with your veterinarian about where your operation fits in the beef cattle production system and how you can contribute to calf health and productivity.

And a Partridge in a Pear Tree!

Learn more about winter birds and make an ornament for your feathered friend!

Wednesday December 4, 2024 - 10:00 am to 11:30 am

Madison County Extension Office, 230 Duncannon Lane, Richmond, KY 40475

We may not have partridges in our pear trees here in Madison County, but there are still plenty of birds to enjoy this time of year!

If you are interested in attending this class, let us know by calling 859-623-4072 or email amanda.sears@uky.edu.



ARE GROWTH PROMOTING TECHNOLOGIES BECOMING A LOST ART FOR THE COW-CALF SECTOR?

Dr. Katie VanValin, Assistant Extension Professor, University of Kentucky

Growth promoting technologies, when used correctly, are valuable tools that improve efficiency and increase weight gain in growing cattle. In the cow-calf sector, these include ionophores and implants. Although “technology” often implies new, these tools have been in the beef industry for decades. Yet, adoption seems to be stagnant or even declining – why?

Ionophores

Ionophores are antimicrobial feed additives, including monensin (Rumensin), lasoligid (Bovatec), and laidomycin propionate (CATTLYST). While ionophores are antibiotic-like, they are not considered medically important for humans, so they do not require a veterinary feed directive (VFD) this means ionophores do not fall under the veterinary feed directive (VFD) and can be purchased without a prescription. However, as they are classified as a medication, they must be bought premixed from a feed dealer. The rumen hosts a multitude of microorganisms that digest feed and produce volatile fatty acids (VFAs), which the animal uses for energy. Acetate is the most common VFA, but propionate is more energetically efficient. Feeding ionophores shifts production towards propionate, leading to increased average daily gains, improved feed efficiency, and reduced methane production! Ionophores also help prevent bloat, acidosis, and coccidiosis! It is no surprise that ~90% of cattle on feed in the United States consume ionophores.

While ionophores are typically used for growing cattle, they can benefit replacement heifers and cows by decreasing the age of puberty, and shortening the post-partum interval, thus benefiting reproductive performance. Ionophores can be mixed into feed, and there are also some pre-mixed products like free-choice minerals and tubs. Always read and follow all label directions, as toxicity can occur when feeding at high levels. Horses are particularly sensitive to ionophores, so avoid accidental feeding.

Implants

Implants are small pellets containing hormones, that are inserted into the back of the ear. Over time the implant is absorbed and utilized to increase the secretion of growth hormone, promote protein synthesis, and decrease protein degradation, resulting in increased average daily gain. Implants have been around for decades and are arguably one of the most consistent practices we have in all of agriculture. Suckling calves implanted at around 90 days old often have weaning weights 10-20+ lbs higher compared to non-implanted calves. However, a recent survey of Kentucky beef producers noted that only 21% implant their calves. This means potential revenue is left on the table. My rule of thumb is that unless we receive a premium that covers the money we are leaving on the table, we should absolutely be implanting calves.

Implanting is quick, taking less than 1 minute. With calves at \$2.70/lb. and an added 20 lbs. from implanting, a 500 lb. calf is worth \$1,350 vs. a 520 lb. calf \$1,404. The cost of calf-hood implants is less than \$2.00 per head. For a 30 head herd, an extra half hour of work yields an additional \$1,600.

Implanting suckling steer calves can also lead to similar gains as an intact bull calf, allowing for early castration without growth and avoiding discounts from the sale of bulls. Research shows that early castration is less stressful vs. castration at or after weaning. Implants are an effective strategy to capture growth, but also reduce stress on the animal.

For heifers, timing is key. Some research shows that implants negatively impact fertility, depending on when they are administered. The general recommendation is not to implant replacement heifers; however, heifers marketed as feeders can and do benefit from implants.

Be mindful of the implants pay out period- or the time it is effective. To get the full benefit be sure that implants are administered far enough in advance to capture the full pay out period. For example, if an implant has a payout period of 100 days, implant at least 100 days prior to marketing.

If ionophores and implants are not part of your management, consider how they could benefit your operation. If you are not using ionophores or implants as part of your management strategy. Regardless of market conditions, these technologies are safe, proven, and effective ways to increase revenue in the cow-calf sector.

FIRST HERBICIDE REGISTERED SAFE FOR WHITE CLOVER

Corteva just announced that the U.S. Environmental Protection Agency (EPA) has approved the registration of NovaGraz herbicide, the only pasture herbicide in the U.S. that offers broad-spectrum weed control while preserving white clover and annual lespedeza for grazing. NovaGraz herbicide was previously referred to in technical communications as ProClova. NovaGraz will be available for the 2025 application season, pending state registrations. In the meantime, visit NovaGraz.us and NovaGraz.us/bythenumbers to learn more about this exciting new solution that cattle producers have been needing and asking for. Look for additional information from Corteva Range & Pasture on NovaGraz in the coming weeks.

CHANGES TO CAIP BEEF BULL COST-SHARE PROGRAM

Dr. Darrh Bullock, University of Kentucky, Extension Professor

Significant changes to the CAIP Beef Bull Cost-share program have been approved for 2025. Both Kentucky and Tennessee have similar programs but have traditionally had different Expected Progeny Differences (EPD) requirements. The guidelines committees of the two states met and came to consensus on a set of guidelines that are now uniform across the state line. Some of the major changes are highlighted in this article, however, pay close attention to the full requirements before purchasing a bull for cost-share funding.

- The number of bull categories has been reduced to 3; Balanced Trait/Maternal, Terminal Sire and Carcass Merit. There is no longer a Heifer Acceptable category, however, recommended minimal Calving Ease Direct or Birth Weight EPDs are provided for those that plan to breed the bull to heifers.
- There are only EPD requirements for CED/BW and Growth traits OR CED/BW and an appropriate Economic Selection Index value depending on the breed. There is no longer a milk requirement for Balanced Trait/Maternal, however a range is recommended for producers to consider staying within. There are also recommendations for maximum Mature Weight EPDs and minimum Docility EPDs.
- The formatting has changed. Instead of all breeds' requirements being listed in a table for each bull category, they are now listed by breed with the requirements and recommendations for each category.
- All bulls will still be required to be genomically tested and have Genomically Enhanced EPDs! Contact your breed association for more information on how to accomplish this.

These new requirements will be implemented starting January 1, 2025. Please bear with us as we make this transition, we will try to work through any issues that arise. In the long run this will simplify bull purchases across the KY/TN state line and will improve the program overall.

Non-Discrimination Policy:

The Martin-Gatton College of Agriculture, Food and Environment is an Equal Opportunity Organization with respect to education and employment and authorization to provide research, education information and other services only to individuals and institutions that function without regard to 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.

Inquiries regarding compliance with Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments, Section 504 of the Rehabilitation Act and other related matter should be directed to

Equal Opportunity Office, Martin-Gatton College of Agriculture, Food and Environment,
University of Kentucky, Room S-105, Agriculture Science Building, North Lexington, Kentucky 40546,

the UK Office of Equal Opportunity, 13 Main Building,
University of Kentucky, Lexington, KY 40506-0032 or

US Department of Agriculture, Office of the Assistant Secretary for Civil Rights,
1400 Independence Avenue, SW, Washington, D.C. 20250-9410.

MADISON COUNTY BEEKEEPERS

ASSOCIATION Madison County Beekeepers Association will not meet in December. The next meeting is Jan 27, 2025, 6:00 pm, Madison County Extension Office. For more information call Kent, 859-623-3576 or Paul, 859-582-6172.

Madison County Extension Office Closing Schedule

With the end of the year also comes the holiday closing at our office. The Madison County Extension Office will be closed December 25, 2024, until Thursday, Jan 2, 2025, opening at 8 am.

PLATE IT UP! KENTUCKY PROUD!

Whether it's spring, summer, fall or winter, you can Plate It Up with delicious recipes your favorite Kentucky Proud foods. Visit <http://fcs-hes.ca.uky.edu/piukp-recipes> to find all the Plate It Up recipes using Kentucky Proud products.



Venison Sloppy Joes

Venison Sloppy Joes

- 1 pound ground venison
- 1 onion, chopped
- 1 green bell pepper, chopped
- 2 stalks celery, chopped
- 2 tablespoons brown sugar
- ¼ cup water
- ¼ cup vinegar
- 2 tablespoons lemon juice
- 8 ounces low-sodium condensed tomato soup
- 1 tablespoon Worcestershire sauce
- 1 tablespoon prepared mustard

Mix all ingredients in a medium saucepan. Cook over medium heat for approximately 30 minutes. Serve on whole grain bun.

Yield: 6 servings

Adapted from Wild Game: From Field to Table, Sandra Bastin, PhD, RD, Extension Food and Nutrition Specialist. Revised July 2007

Nutrition Facts	
6 servings per container	
Serving size 1 cup, 1 bun (225g)	
Amount per serving	
Calories 180	
% Daily Value*	
Total Fat 3g	4%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 65mg	22%
Sodium 160mg	8%
Total Carbohydrate 17g	6%
Dietary Fiber 1g	4%
Total Sugars 10g	
Includes 4g Added Sugars	8%
Protein 20g	
Vitamin D 0mcg	0%
Calcium 50mg	4%
Iron 3mg	15%
Potassium 331mg	8%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



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



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

Find this Cook Wild Kentucky recipe and others for Fish, Venison, Rabbit, Dove, Frog Legs, and more at: <https://www.planeatmove.com/recipes/>, then Browse by Category, and choose Cook Wild Kentucky.

From my family to yours,
**Have a Happy Holiday and a
 Happy New Year!**

Brandon Sears
 County Extension Agent for Agriculture & Natural Resources
 859-623-4072 or brandon.sears@uky.edu

