Cooperative Extension Service

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Robertson County Agriculture & Natural Resources **Newsletter** **May 2025**

When You're Hot, You're Hot!

Dr. Les Anderson, Beef Extension Professor, University of Kentucky

Last summer was a challenge for livestock. Kentucky recorded over 35 days with temperatures that exceeded 90ºF and our temperature-humidity index was in the dangerous category for livestock for most of June and July. The impact of heat stress on livestock has been extensively studied over the last several decades. Heat stress reduces growth rate, can shorten gestation, increase lameness, disease, and death rates. Perhaps the most dramatic impact of heat stress is the marked reduction in reproductive efficiency.

Now is the perfect time to start planning to overcome heat stress. When I first got to UK, our Angus cows were involved in a variety of trials examining the impact of consuming endophyte-infected fescue on reproductive rate. For several years, these cows were synchronized for AI around June 10 and then exposed to a bull for 70 days. Cows consuming only endophyte-infected fescue had 55-62% pregnancy rates at the end of the breeding season. Similarly, Dr. Burris at Princeton demonstrated that the conception rate of cows decreased from 70% in early spring (April 1 – June 1) to 35% in the summer (June 20 – August 1) resulting in a pregnancy rate decrease from 90% to 58%. Heat stress reduces pregnancy rate by increasing the abortion rate of young, developing embryos and fetuses. Extreme heat stress results in embryonic/fetal loss for at least the first 45 days of pregnancy. If you are a spring calver and your cattle are consuming endophyte-infected fescue, your cows may have struggled to get pregnant this spring/summer. Plan now to determine pregnancy and hope for the best. Fall-calving cows are not immune to issues with heat stress. Heat stress and consumption of endophyte-infected fescue can induce early parturition (30-40 days premature labor), increase the thickness of the placenta, and increases calf death loss.

How can we manage heat stress? Are there management protocols that can help? Understanding solutions begins with understanding the problem. Cattle have difficulty dissipating heat effectively because they don't sweat as well as other animals. Since they don't sweat well, cattle dissipate heat by increasing their respiration rate, decreasing their activity, dilating their blood vessels near their skin so they can more effectively radiate the heat from their body, and eating less. Eating and digestion generates heat so they intake less feed to reduce the internal blood temperature. In Kentucky, and the rest of the "fescue belt," heat stress is heightened by consuming endophyte-infected fescue. Endophyte is a fungus that grows in fescue plants and this fungus produces chemicals, generically called alkaloids, that have a variety of negative impacts on animals. One of the main impacts of consumption of endophyte-infected fescue is the alkaloids constrict the blood vessels of the animal which reduces the ability of the animal to dissipate heat via radiation. So, if we want to alleviate issues with heat stress, we need to find management protocols to help cattle dissipate heat.

Fortunately, we have options! Logically, the first place to start is simply do not graze endophyte-infected fescue during the summer but this is often not a viable option for many cattle producers. The breeding season can be shifted to earlier in the spring (April – June vs May – August) but this will lead to cows calving earlier in the winter, which may not be an acceptable option either. Cows supplemented with high fat supplements (ex. whole soybeans, liquid fats supplements, distiller's products) during heat stress can increase pregnancy rates in beef cows. Providing a complete mineral mix containing a blend of sodium selenite and selenium yeast, like the UK Beef IRM mineral has been shown to increase hormone concentrations necessary to support early gestation. Also, the USDA-ARS research group in Lexington has demonstrated that consumption of red clover can aid cattle during heat stress. Red clover leaves contain chemicals called isoflavones that dilate peripheral blood vessels, reduce heat stress, and can increase pregnancy rates. Most legumes have these isoflavones but the chemicals vary in the bioavailability and concentrations of the isoflavones. Whole soybeans and soyhulls also contain isoflavones and can be used to help reduce the impact of fescue toxicosis.

We cannot control the temperature, but we can plan to help our cattle withstand heat stress. Develop a heat mitigation plan by limiting cattle access to endophyte-infected fescue and/or providing access of cattle to supplements or pastures that contain fat or isoflavones. Contact your veterinarian and set dates to determine pregnancy in our herd. If you have several open cows, adding a short fall-calving season is an option. We can also use this experience to help develop a plan for heat stress in the future. This cattle market is hot, and producers need to maximize their pregnancy rates and heat stress is the main factor that reduces pregnancy especially in the summer. A little planning, a little tweak to your management plan will pay huge dividends.

Don’t Chase Price per Pound at the Expense of Value per Head

Dr. Kenny Burdine, University of Kentucky

Over the last few months, I have been able to talk with a lot of cattle producers at Extension programs. As you can imagine, the strength of the cattle market is almost always the first topic of discussion. We are seeing prices like we have never seen before for cattle of all types and weights. But my observation has been that producers tend to become a bit more enamored than they should with price per pound and sometimes don’t think as much as they should about value per head.

I see this play itself out in a couple ways. First, I hear some producers talk about selling cattle sooner to capture the higher prices. I don’t necessarily think that downside price risk is greater in high priced markets, but I think there is a perception among some that there may be “more to lose”. This perception lowers interest in adding value to cattle by taking them to higher weight before sale and leads to more calves being sold off the cow, as opposed to being weaned and reconditioned.

Secondly, I think people get too focused on price per pound differences across weight categories and don't make the mental adjustment to the new price environment. To illustrate this point, I am going to use Kentucky average auction prices from the last week of March. The table below shows the average price for medium / large frame #1-2 steers at 450 lbs, 550 lbs, and 650 lbs. For transparency, I am using the average prices for cattle without a description (not value-added or fancy), which represents most cattle being sold. Also, I am averaging the 50 lb weight ranges to arrive at my average price. In other words, the estimated price per lb for a 450 lb steer is the average of the 400 to 450 lb and 450 to 500 lb weight ranges.

Examine the average prices from Kentucky last week in the table for 450 and 550 lb steers. The price per pound drops by $0.50 on that 100 lb increase in weight. If one looks solely at price per lb, they may be tempted to sell calves sooner and avoid the $0.50 slide. However, in this cattle price environment, those 550 lb steers were still worth $113 per head more than the 450 lb steers. The relevant question becomes whether that difference justifies keeping those 450 lb steers longer. In many cases, the answer to that question may be yes, especially in the spring with pasture starting to grow.

To be fair, cattle prices are extremely high by historical standards. Price slides widen as the overall market gets higher and we have never seen a calf market this high. What may have seemed like a bizarre price slide a few years ago, may make perfect sense now. For example, if 450 lb steers were selling for $2 per lb and we applied the same $0.50 price slide for 550 lb steer, that 550 lb steer at $1.50 per lb is actually worth $75 less than the 450 lb steer at $2. But that is irrelevant in the current market.

The main point is that the spring 2025 feeder cattle price environment is like nothing we have seen before. Given that, we must be careful about using rules of thumb and simple approaches that may have worked in the past. Focusing on price per lb, without consideration of weight impacts, can be very misleading. And one needs to be careful they aren’t chasing price per lb at the expense of value per head!

Bourbon Street Chicken

Ingredients:

- 1 tablespoon olive oil
- 2 pounds boneless chicken, cut into bite-size pieces
- 2 teaspoons garlic powder
- ¼ teaspoon ginger
- ½ teaspoon crushed red pepper flakes
- ¼ cup applesauce
- ¼ cup light brown sugar
- 2 tablespoons ketchup
- 1 tablespoon apple cider vinegar
- ½ cup water
- 2 tablespoons Worcestershire sauce
- 1 (10-ounce) bag frozen stir-fry vegetables and rice

Directions:

1. Heat oil in large skillet over medium heat.
2. Add chicken pieces and cook until lightly browned.
3. Except for vegetables and rice, add the rest of ingredients to the skillet. Stir until well mixed.
4. Bring to a hard boil, reduce heat, and let simmer for 10 minutes. Meanwhile, cook vegetables and rice according to package instructions.
5. Serve chicken over vegetables and rice.

Proper Vegetable Garden Planning for Disease Prevention

Kim Leonberger, Plant Pathology Extension Associate, and Nicole Gauthier, Plant Pathology Extension Specialist for Vegetables

Warmer temperatures mean spring is right around the corner, and gardeners everywhere are ready to get plants in the ground. However, prior to planting, growers should develop a plan for this year's vegetable garden. A thoughtful approach to garden layout and preparation can influence disease pressure as well as the overall success of the crop. Here are few areas to consider to get ahead of diseases as you make your vegetable garden plans.

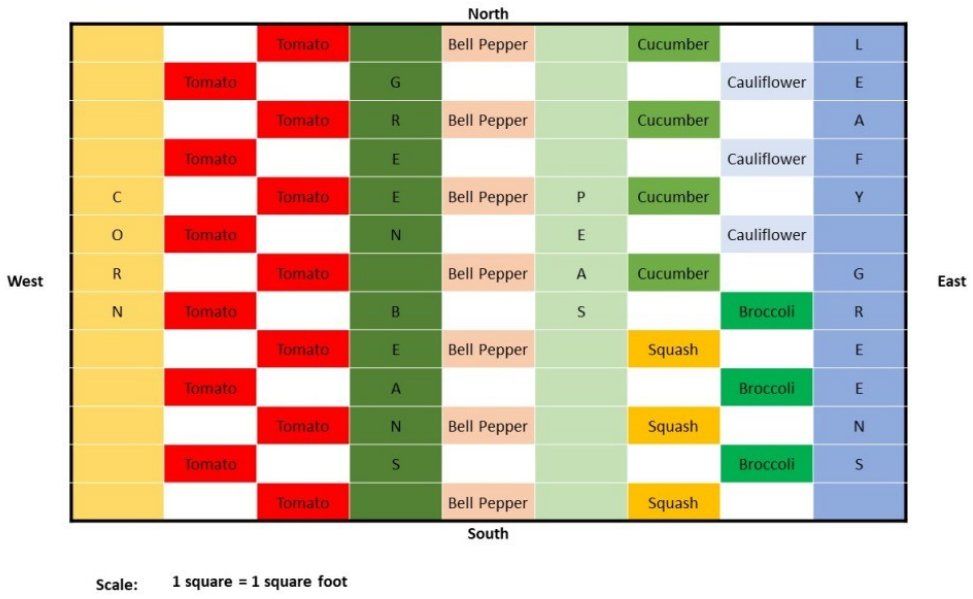
Planting Site

The best vegetable garden sites are sunny with adequate moisture and fertile, well-drained soil. Avoid low spots, which can worsen soilborne diseases, and shady locations, which can worsen foliar diseases. Prior to planting, it is advisable to draw a planting map. This allows consideration into site limitations and succession planting. Scale models of the garden space can be drawn on graph paper, made in Microsoft Excel, or designed using one of many available apps (Figure 1). Choose perennial locations carefully to make tilling more convenient. Taller crops, such as sweet corn or tomatoes, should be planted on the north or west side of the garden to avoid shading shorter plants. Retain these maps from year to year, and refer when planning next season.

Crop Rotation

If the same garden site is used each year, avoid planting the same or closely related crops in an identical place each year. A three-year rotation is recommended, however, even a year or two out of a certain plant family can be beneficial. Crop rotation prevents disease-causing pathogens from building up in soil. Multiple vegetable crops are closely related and are prone to many of the same disease issues. Closely related crops are listed below.

- Tomatoes, Peppers, Potatoes, and Eggplant
- Cucumbers, Pumpkins, Squash, Watermelons, and Muskmelons
- Peas, Broad Beans, Snap beans, and Lima Beans
- Cabbage, Cauliflower, Kale, Collards, Brussels Sprouts, Broccoli, Kohlrabi, Turnips, Rutabaga, Chinese Cabbage, and Mustard
- Lettuce, Endive, and Salsify
- Chives, Garlic, Leeks, Onions, and Shallots
- Beets, Swiss Chard, and Spinach
- Carrots, Parsley, Celery, Celeriac, and Parsnip



Compost Piles

Avoid composting diseased plants or produce, since home compost piles typically do not reach temperatures high enough to kill pathogens. Accelerate the rate of decomposition by turning compost piles at least once per month. Avoid adding fresh material to finished compost piles, as the new material will not break down in time for spring planting. Water should be added to very dry compost piles at turning to allow for more complete decomposition. For more information on composting for the garden, see Home Composting.

Keep Records

Each garden season is like a school year, with lessons to be learned. Whether by app or a physical garden journal, keep track of disease and pest issues as they occur, to help develop strategies to prevent or manage these issues. Also include details about cultivars and their performance, as well as, weather patterns.

DATE	PROGRAM	LOCATION
MAY 2	CAIP APPLICATION WINDOW CLOSES	
MAY 2	**CATTLEMEN'S MEETING** **6:00 PM**	**ROBERTSON CO. AG BARN**
MAY 9	HAY PRODUCTION FIELD DAY 9:00AM-3:00 PM	1965 MARTHA MILLS RD. FLEMINGSBURG, KY 41041
MAY 17	UP THE RIVER WITH A PADDLE 9:00 AM ****SPOTS LIMITED**** CALL 606-564-6808 TO REGISTER	BLUE LICKS STATE PARK
JUNE 7	SMALL RUMINANT WORKSHOP *SAVE THE DATE*	2496 TAYLOR MILL RD. FLEMINGSBURG, KY 41041

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As we head into the summer months, there are still several programs that are being offered! I encourage you to look at the flyers included in this newsletter and see if there is anything that interests you!

If you have an expired BQCA, do not worry! There will be more classes held throughout the year. If it is time sensitive, please reach out and we will get you scheduled.

Samantha Saunders

Samantha Saunders
Robertson County Agriculture & Natural Resources/
4-H Youth Development Agent

Inside this edition:

HELP!!

~FARM NEEDED~

If there is anyone who would be interested in hosting the Robertson County Beef Field Day this year, please let me know ASAP!

We will look at dates in September and October!

Need:

⇒ Plenty Room for Parking

⇒ Flat location for tables & chairs

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Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development
MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT
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