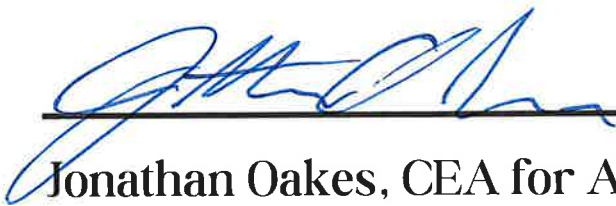


Russell County Agriculture and Natural Resources August 2024 Newsletter

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- Recipe: Blackberry and Cucumber Salad
- Upcoming Events and MORE!



Jonathan Oakes, CEA for Agriculture and Natural Resources

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OFF THE HOOF



Cooperative Extension Service
University of Kentucky
Beef IRM Team

KENTUCKY BEEF CATTLE NEWSLETTER JULY 1, 2024

Each article is peer-reviewed by UK Beef IRM Team and edited by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky

This month's newsletter includes:

Timely Tips – Anderson

Managing Nitrates and Prussic Acid in Forages – Teutsch

Animal Disease Traceability Rule Part 2: Eartags – Arnold

Timely Tips

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

Spring Calving Cow Herd

- Consider removing bulls from the cow herd by the end of the month and keep them away from the cows. A short calving season can concentrate labor during the calving season; group calves by age so that it is easier to find a convenient time to vaccinate, castrate, dehorn, etc.; and provide a more uniform group of calves at market time.
- Mid-July is a good time to deworm cattle, use a product that is effective against inhibited ostertagia. Re-implant calves which were implanted at birth if the type of implant and amount of time indicate. Calves which haven't been vaccinated for blackleg should be. Spraying or using a pour-on for flies while cattle are gathered can supplement other fly control methods. Remember to work cattle early in the morning when it is cool and handle them gently to minimize stress.
- Watch for pinkeye and treat if necessary. Minimize problems by clipping pastures, controlling face flies and providing shade. Monitor the bulls' activity and physical condition as the breeding season winds down.
- Fescue pastures tend to go dormant in July and August, so look for alternatives like warm season grasses during this period of time. Try to keep the young calves gaining weight. Go to pastures which have been cut for hay to have higher quality re-growth when it is available.
- Consider cutting warm season grass pastures for hay if reserves have not been restored yet.
- Heat stress can lead to low conception rates, low libido in bulls, and embryonic loss (abortion) between days 6 and 45 of pregnancy. Keep a close eye on your herd. Plan to diagnose your herd for pregnancy early this fall to identify open cows for future planning. Supplementation with red clover helps alleviate some of the issues with heat stress due to fescue toxicosis.

Fall-Calving Cow Herd

De-worm calves in mid-July with a product that is effective against inhibited ostertagia. Fall-calving cows should be dry and pregnant now. Their nutrient needs are minimal, and they can be maintained on poor pasture to avoid over fattening. Keep a good free-choice mineral mix

available at all times. You can use a lower phosphorus mineral supplement now, if you want to save a little money. These cows are regaining body condition after a long winter-feeding period. Get ready for fall calving and plan to have good pasture available at calving and through the breeding season.

Animal Disease Traceability Rule Part 2: Eartags

Dr. Michelle Arnold, Ruminant Extension Veterinarian, University of Kentucky

The new Animal Disease Traceability (ADT) rule, entitled “Use of Electronic Identification (EID) Eartags as Official Identification in Cattle and Bison”, was published in the Federal Register on 5/9/2024 and will be effective on 11/5/2024. This final rule, available at <https://www.regulations.gov/document/APHIS-2021-0020-2011> is an amendment to the animal disease traceability regulations already in place as of January 2013. One stipulation in the new rule requires eartags to be both visually and electronically readable to be recognized as official eartags for interstate travel for cattle and bison covered under the regulations. This final rule does not require exclusive use of eartags; the regulations continue to list eartags as one of several forms of authorized official identification, which also include tattoos and brands when accepted by State officials in the sending and receiving States. This article will address questions about eartag differences with regards to the new rule. For more in-depth information, there is a new guidance document entitled “OFFICIAL ANIMAL IDENTIFICATION NUMBER (AIN) DEVICES WITH THE “840” PREFIX”, published 5/14/2024, available at <https://www.aphis.usda.gov/media/document/64512/file> . What does it mean that an official tag must be “visually and electronically readable” for interstate travel? Are the RFID “button tags” considered visually readable or will flop tags/panel tags be required?

All tags must be readable in cattle, but USDA now has device readability standards, both electronic and visual standards, that must be met by tag manufacturers to obtain approval for official identification purposes that meet interstate travel requirements. In Version 3.0 of the ADT Device Standards, released 9/21/2023, the specifications are described in detail regarding readability:

- Electronic ID eartags are required to be visually readable for a person with 20/20 vision (arm’s length) viewing from two-and-a-half feet (30 inches). RFID button tags meet this standard, so a panel tag is not required in order to be “visual”.
- All official identification numbers must be imprinted at a minimum height of 5 mm (0.2 inches) on a bright, contrasting background. An exception may be made for small EID ear tags that do not allow the imprinting of the official identification number at 5 mm but are clearly read at the required distance.
- For 840 tags, a space must be inserted after each third digit of the animal identification number (AIN) imprinted on the tag (for example, 840 003 123 456 789).

- The font for all characters for required information imprinted on the tag must be Arial. APHIS must approve any different font.

Electronic ID eartags can also be read using an RFID reader. This reader sends a radio signal of a specific frequency to the eartag and records the number that comes back from the eartag. Once a signal is received from the reader, the eartag transmits the identity of an animal in the form of a unique 15-digit sequence of numbers. The 15-digit sequence begins with the country code (e.g., 840 for US born animals), followed by 003, then 9 unique digits. Official USDA-APHIS electronic eartags have no batteries or active transmission of information but are often categorized by the radio frequency range they use to communicate, either low (LF) or ultrahigh frequency (UHF). Low frequency tags have a shorter read range and only one tag can be read at a time. The transponders must be reliably machine read at a rate of 95 percent as cattle move by in a single file passage at 4 mph. UHF has an extended read range of up to 30 feet, faster data transfer, and is better suited to capturing load lots of cattle. UHF transponders must be reliably machine read at a rate of 95 percent at the read distance designated by the device manufacturer.

Why the push for both visually and electronically readable official tags?

Reading eartags electronically does not require restraint of animals because animal identification information is captured almost instantaneously by scanning the eartag with a reader. Once the tag is scanned, the tag number may be rapidly and accurately transmitted to a connected database. Electronic databases store only data associated with an eartag number that is necessary to perform traceability of animals; no business practices or other financial or competitive information is obtained or stored. Electronic eartags help animal health officials more quickly locate the records associated with an animal during a disease trace to identify the origin of the animal. If the animal was tagged with an electronic eartag, the tag distribution records are stored in APHIS' Animal Identification Number Management System database (AIMS), which is easily accessible to animal health officials and provides the starting point for the trace. However, if visual only tags have been used, the animal usually must be restrained to allow the eartag number to be read and recorded. Often, the eartag must be cleaned before the number can be read. The eartag number is then recorded on paper or manually entered in a database and errors can occur while reading, transcribing, or entering the ear tag numbers. If the animal was tagged with a visual (non-electronic) eartag, there is no centralized tag distribution database and obtaining records often requires a lengthier search and further verification.

This final rule does not require producers or livestock markets to have electronic reading equipment or additional data management systems, because the official electronic ID tags must be readable visually as well as electronically. It is important to remember that producers should not sell, loan, or give tags they have purchased to other producers, because all 840 ID tags they have purchased are recorded as being distributed to them using the location identification system (Premise ID) used by their State. APHIS maintains an Animal Disease Traceability webpage with direct access to the Final Rule, FAQs, how to obtain free electronic ID tags, and other resources at <https://www.aphis.usda.gov/livestock-poultry-disease/traceability>.

RFID tags were previously categorized as either "Low Frequency" (LF) or "Ultra-High Frequency" (UHF). This final rule now uses the acronym "EID" instead of "RFID" and refers to EID tags as "HDX" or "FDX". What happened?

The new rule refers to electronic identification (EID) tags rather than radio frequency identification (RFID) tags to recognize the possibility of other electronically readable technology that may become available in the future. Electronic eartag technology can be categorized by the way information is transferred between the tag and reader, either “Half Duplex” (HDX) or “Full Duplex” (FDX). HDX tags are heavier, they transmit information one way at a time, they are better able to transmit through interference such as metal objects, they have the strongest read range, and are slightly more expensive than FDX. FDX eartags are lighter in weight, they transmit information continuously but are more

	Half Duplex (HDX)	Full Duplex (FDX)
Type	Global RFID and USDA HAC	Global RFID and USDA HAC
Size	HDX Tag weight 3.8 grams	FDX Tag weight 3.4 grams
Color	White	Yellow
Tamperproof Cap	Yes - Tamperproof USA Cap provides ultimate security and retention	Yes - Tamperproof USA Cap provides ultimate security and retention
Button Back Included	Yes - Extended Main Button Back	Yes - Extended Main Button Back
Read Range	15' - 18' HDX technology optimizes signal transmission and provides greatest possible read distance	13' - 16' FDX technology is sufficient for capturing data if read target is not in issue
ISO Compliant	No	Yes
Matched Pair Option	Yes	Yes
RFID Reader	All ISO compliant readers including Allflex AWR200, R5400 UPR, and Top Tag RFID Readers	All ISO compliant readers including Allflex AWR200, R5400 UPR, and Top Tag RFID Readers
Allflex Application(s)	Universal Tag, Tagger, UT100, Seal Tagger Plus and 3-D UPR Restraintmate	Universal Tag, Tagger, UT100, Seal Tagger Plus and 3-D UPR Restraintmate
Comments	Works well in all conditions. Best and strongest read range	Works well in most operations. FDX tags are more susceptible to interference from metal and steel than HDX. Not as good in head gates, panels, and squeeze chutes as well as fluorescent lights.

Figure 1: A comparison of HDX and FDX tags, courtesy of Allflex. Accessed 6/6/2024 at <https://www.livestocktags.com/blogs/learning-center/allflex-electronic-id-tag-comparison>

susceptible to interference from metal objects and fluorescent lights, and they have a shorter read range. Both technologies work well and have similar qualities but have different strengths and capabilities so the choice depends on where and how it will be used (see Figure 1). Regardless of type, all electronic ID tags must be approved by USDA and meet standards for quality and performance, be tamper proof, contain a unique ID, the words “Unlawful to Remove” and display the U.S. official eartag shield. Both HDX and FDX tags follow the ISO standard and can be read by the same readers.

HDX tags talk to the reader like a 2-way radio; the reader sends out a signal then the tag replies. A half-duplex RFID reader generates short magnetic pulses that wirelessly charge a capacitor inside an HDX tag. When the charge field turns off, the tag uses the stored power to send the tag number back to the reader without interference from the reader. HDX uses Frequency Shift Keying (FM) which has better noise immunity and allows larger, simpler antennas. Since the charge field is

pulsed, HDX readers require less power. Half Duplex (HDX) tags are (generally) white in color. They are better suited to transmit through metal interference such as metal and steel objects. Typical read range on HDX tags ranges from 15" - 18".

FDX is like a phone conversation: as soon as the tag receives the reader signal both tag and reader talk simultaneously. A full duplex RFID reader generates a continuous magnetic field which powers the tag to respond immediately. Tags repeat their message while powered by the field, up to 30 times per second. FDX tags can be made very small and thin due to their simple construction of a coil, ferrite rod and a chip. Very small tags have a short read range and so are primarily used for hand scanning. FDX uses Amplitude Shift Keying (AM) and is susceptible to atmospheric noise which limits antenna sizes. Full Duplex (FDX) are (generally) yellow in color and are good when the read range is short (13" - 16"). FDX tags are more susceptible to interference from metal and steel objects such as head gates, panels, and squeeze chutes as well as fluorescent lights.

What is the difference in cost between HDX and FDX tags?

The cost of EID official identification tags varies by tag type and quantity purchased. USDA performed a market analysis in 2022 and found the cost per FDX tag ranged from \$2.00 for large quantities (5,000 more) to \$3.45 for smaller quantities (20 tags). The advertised retail price per HDX tag in August 2022 ranged from \$2.32 for large quantities (5,000 or more) to \$3.65 for small quantities (20 tags).

Depending on the tag type, many vendors that handle official ID tags offer volume discounts and free shipping for large orders.

When shopping for USDA-approved tags, manufacturers offer “visual tags”, “RFID tags” (FDX and HDX), and “RFID with visual matched (paired) sets”. Are “visual” tags with no electronic or RFID component still official?

The minimum identification standard in cattle is the visual 840 tag. For visual-only tags, the entire official identification number must be imprinted on the portion of the tag inside the animal’s ear. This will suffice *if the cattle never leave the state of origin within their lifetime*, however, interstate travel requires a tag with electronic capabilities. For electronic ID tags, the entire 15-digit official identification number beginning with 840 must be imprinted on the portion of the tag containing the transponder (see Figure 2). Be aware that manufacturers still sell tags beginning with 900 numbers used for in-herd data use only and cannot be used as Official ID.



Figure 2: Commerce Compliant ADT (Allflex). Accessed 6/6/2024 at https://www.allflex.global/na/wp-content/uploads/sites/7/2022/04/Commerce-Compliant-ADT_ADTP03_R6.pdf

Many of the new tags display a data matrix; what comes up when scanned with a cell phone?

The 2D Data Matrix that conforms with the ECC200 Data Matrix protocol must be imprinted on the portion of the tag that contains the transponder in a square approximately 5mm x 5mm and should be a two-dimensional representation of the official animal number imprinted on the tag. Readability (percent of data matrix read) on new tags being shipped from the manufacturing plant must be at 100 percent when read with a camera-based image reader (bar code reader).

Where should official electronic ID tags be placed?

Recommended EID Tag Placement



Application should be done in a well-ventilated area to avoid irritation of the animal's eyes. The tag should be placed in the middle of the ear, between the two cartilage ribs and 1/4 to 1/3 from the outside edge of the ear. It is best to have the head application tool deep in the ear to best recommend it.

1. The EID tag should be placed exactly in the middle of the ear, between the two cartilage ribs and 1/4 to 1/3 from the outside edge of the ear. It is best to have the head application tool deep in the ear to best recommend it.

2. The female portion of the tag should be on the inside of the ear with EID application. Note that this is a female part of the ear. Application may be more difficult than when applying a visual tag.

Accurate records of tags received and applied are required to be kept for a **minimum of 5 years** from the time the animal leaves off farm, changes ownership, or dies.

This record should include:

- Date and listing of tag numbers received
- Date tag was applied with description of animal (sex, breed, other ID, distinguishing marks, color)
- Date the animal moved off farm with movement documents, if needed
- Date animal sold along with name, address, and contact information of the buyer

Figure 3: Recommended Application Instructions for Allflex RFID Tags. Accessed 6/6/2024 at https://www.allflex.com/na/wp-content/uploads/sites/7/2022/04/Commerce-Compliant-ADT_ADTP03_R6.pdf

The EID tag may be placed in either ear although the left ear is preferred. The tag should be placed in the middle of the ear, approximately 1/4 to 1/3 the distance from the head to the outside tip of the ear and between the two cartilage ribs (see Figure 3). Make sure and record the date the tag was applied and a description of the animal. Accurate records of tags received and applied are required to be kept for a minimum of 5 years after the animal has been sold or dies.

Has anything changed with this new rule regarding which cattle are required to have “official identification” when moving interstate?

No changes have been made with this new rule. For cattle, the following animal classes must be identified with official ID eartags, both visually and electronically readable, beginning November 5, 2024, when moving interstate:

- All sexually intact cattle and bison 18 months of age or over.



Figure 4: For those producers nostalgic for metal tags, Shearwell Data Ltd is the first company in the world to offer an official metal EID tag for cattle, that combines the durability of a metal tag with the reliability and RFID capabilities of an EID tag. <https://shearwell.com/metal-tag-metal-cattle-rfid-tag-official/>

Economic & Policy Update

E-newsletter Volume 24, Issue 6

Editors: Will Snell & Nicole Atherton



Department of Agricultural Economics
University of Kentucky



Drivers of Commodity Prices: Seasonality

Author(s): Grant Gardner

Published: June 27, 2024

Since the onset of COVID, agricultural commodity charts have resembled the track of a roller coaster, with huge peaks and valleys. During the 2023/24 marketing year, commodity prices have transitioned downward. We can likely expect less volatile commodity prices as prices level out. In a less volatile price environment, marketing decisions are made easier by focusing on fundamental drivers of prices. In my first article on drivers of commodity prices, I focus on [exports](#). This article, the second in a Department of Agricultural Economics' *Economic and Policy Update* series, focuses on seasonality and how it can inform marketing decisions.

At its base, seasonality indicates that commodity prices are typically lower at harvest. Lower harvest time prices are typically caused by the large influx of supplies at harvest. In this article, I use average monthly price indexes to determine soybean seasonality for the 2010s, indicating that May, June, and July are often the best times to pre-market soybeans. I additionally compare May and October sales using November Soybean futures and suggest that a sale in May has returned \$1.15/bu more on average than an October (harvest time) sale.

As we move away from supply and demand shakeups such as COVID-19 and the Russia-Ukraine invasion, I expect seasonal prices to reflect those of the 2010s. Inspecting the seasonal average from 2010-2019 indicates that cash prices increased at harvest only 20% of the time. Figure 1 shows the average monthly price index of Kentucky soybean cash prices for 2010-2019 compared to 2010/11 and 2019/20, the only two years prices increased at harvest. As expected, the average index indicates prices increase through July before decreasing at new crop harvest. On average, the best time to sell soybeans is July; however, this is not always the case. For example, in five of ten years, the monthly index peaked in May or June, making those the better months to market soybeans than July in some years. In comparing seasonality in pre-harvest marketing, I compare November soybean

futures on May 15

and October 15. Results can be seen in Table 1. I chose May 15 because prices become more volatile in June and July due to weather challenges. Even though prices are higher on average these months, looking at the price for one day could be a poor indicator of price. Through the 2010s, futures prices were higher on May 15 60% of the time; however, through 2023, which includes COVID and the Russia-Ukraine invasion, prices were only higher in May 50% of the time. The more important part of this analysis indicates that price increases in May far outweigh declines in May. The average decline from May 15 to October 15, found by averaging the negative (red) numbers in column four of Table 1, results in an average loss of \$1.15 per bushel. The average increase, found by averaging the positive (black) numbers in column 4 of Table 1, is \$2.35, indicating an average gain of \$2.35

when prices increase. Thus, even though prices were higher on May 15 only 50% of the time, always marketing on May 15 would result in an average \$0.50/bushel gain.

Seasonality is a huge aspect of grain marketing and should inform all grain marketing decisions. As basic economics suggests, prices decline when supply is high, and in the United States, supply peaks at harvest. Seasonal averages indicate that the highest soybean prices typically occur in May, June, and July. These months are likely the time to lock in the highest prices when pre-harvest marketing soybeans.

Figure 1: Seasonal Patterns of Kentucky Cash Soybean Prices: 2010-2019 Average vs 2010/11 and 2019/20

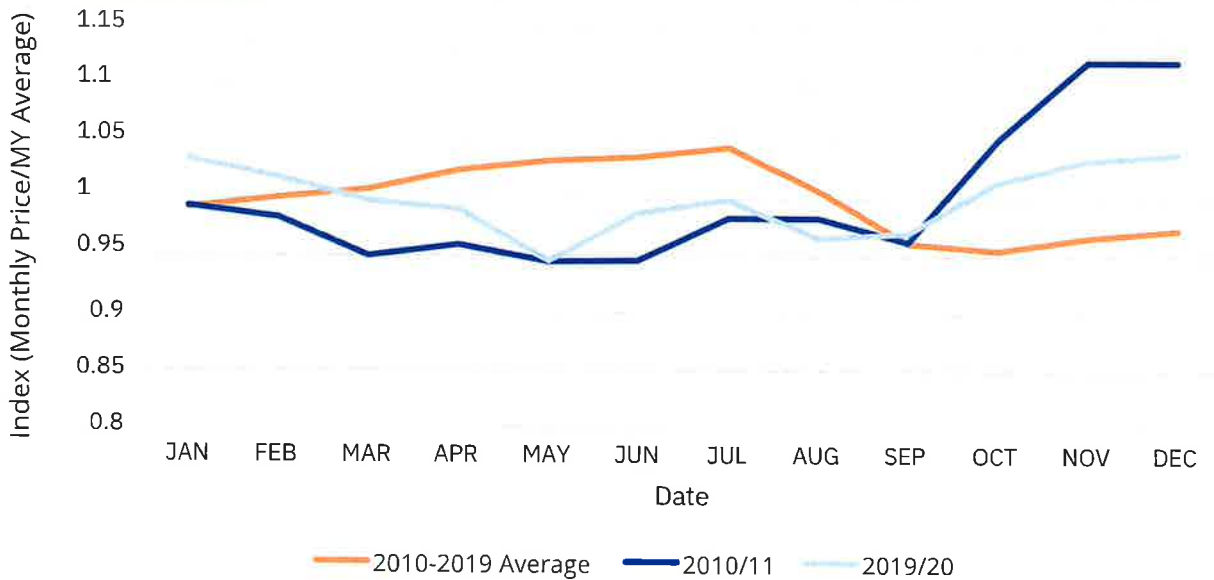


Figure 2: Comparison of May 15 and October 15 Futures

Year	May 15	October 15	Change
2010	\$9.25	\$11.52	-\$2.27
2011	\$13.90	\$12.42	\$1.48
2012	\$13.96	\$14.79	-\$0.83
2013	\$15.70	\$12.63	\$3.07
2014	\$14.82	\$9.31	\$5.51
2015	\$9.48	\$8.86	\$0.62
2016	\$10.32	\$9.30	\$1.02
2017	\$9.28	\$9.48	-\$0.20
2018	\$9.82	\$8.24	\$1.58
2019	\$8.59	\$9.34	-\$0.75
2020	\$8.45	\$10.62	-\$2.17
2021	\$14.00	\$12.17	\$1.83
2022	\$15.12	\$13.83	-\$1.29
2023	\$12.31	\$12.86	-\$0.55

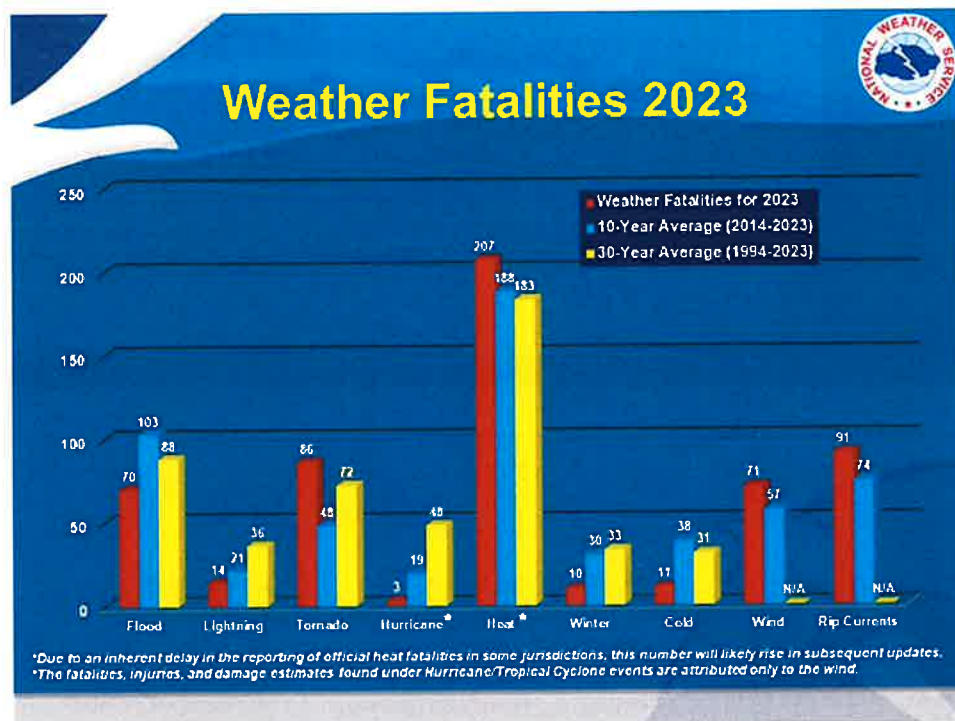


Summer Heat Safety

By Jane Marie Wix - National Weather Service Jackson, KY

Summer heat arrived with a bang in mid-June across Kentucky! Unfortunately, we are only getting started with the summer season - there will most certainly be several months of hot weather ahead. Summer is also the season when everyone wants to be outside, either working or having fun. As much as we love this time of year, it is also a very dangerous season.

Heat continues to be the deadliest form of weather across the country. Higher than flooding, tornadoes, and hurricanes. Sadly, statistics for last year showed a higher-than-average fatality rate. Heat related deaths have been creeping up every year for the last few years.



During excessive heat, avoid heavy activity and direct sunlight. Stay hydrated, find a cool indoor place, and check on children, the elderly, and pets. Protect yourself outside by wearing light, loose-fitting clothes, stay hydrated, and spend time in the shade. Also, never leave anyone (or pets) alone in a locked car, even in the winter, as death can occur in as little as 10 minutes.

Know the signs:

- **Heat Exhaustion:** Becoming faint or dizzy, excessive sweating, cool/clammy skin, nausea, rapid/weak pulse, muscle cramps.
- **Heat Stroke:** Throbbing headache, no sweating, red/hot/dry skin, nausea, rapid/strong pulse, possible loss of consciousness.

If someone experiences these symptoms, get them to a cooler place and try to cool the body (loosen clothing, drink cool water, etc.). If it's a heat stroke, call 911 IMMEDIATELY.



Blackberry and Cucumber Salad

2 tablespoons extra-virgin olive oil	Kosher salt, to taste Black pepper, to taste	2 cucumbers , peeled and seeds scraped out, cut into 1-inch pieces on a diagonal
2 tablespoons apple cider vinegar	4 cups spring mix	1 cup mint, chopped
1 teaspoon honey	3 heaping cups blackberries	¼ cup chopped pecans

In a small bowl, **whisk** together oil, vinegar, honey and salt and pepper. **Combine** spring mix, blackberries, cucumbers, mint, and pecans in a large serving bowl. **Toss** with dressing.

Serves: 4-6, 4 ounce servings

Nutritional Analysis:

180 calories, 12 g fat, 1.5 g saturated fat, 0 mg cholesterol, 160 mg sodium, 18 g carbohydrate, 8 g fiber, 8 g sugar, 4 g protein

Kentucky Blackberries

SEASON: June to September

NUTRITION FACTS: A one-half cup serving of raw berries contains 35 calories, has zero fat, and is a good source of potassium, vitamin C, and fiber.

SELECTION: Look for plump fruit that is uniform in color and appears fresh. Berries should be free of stems or leaves. Avoid fruit that is moldy, crushed, bruised, or contains extra moisture.

STORAGE: Store unwashed and covered berries in the refrigerator. Use within two days.

PREPARATION: Handle all berries gently. Wash berries by covering them with water and gently lifting the berries out. Remove any stems and drain on a single layer of paper towels. Blackberries are delicious cooked, which intensifies the flavor, or eaten fresh as a snack or in a salad.

PRESERVING: Berries may be preserved by canning or freezing, or made into jellies or jam. For more information, contact your local County Extension Office.

BLACKBERRIES

Kentucky Proud Project

County Extension Agents for Family and Consumer Sciences

University of Kentucky, Dietsetics and Human Nutrition students

February 2017

Source: www.fruitsandveggiesmatter.gov

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

Upcoming Events

Lunch n' Learn: Crystal Clear: Water Quality Matters!

Date & Time: Tuesday, August 13th, 2024 | 12:00 Noon - 1:00 PM CST

Location: Russell County Public Library
535 N. Main Street, Jamestown KY, 42629

Homesteading Series:

Topic: Sausage Making

Date and Time: Thursday, August 1st, 2024 | 5:00 PM CST

Topic: Sourdough Bread

Date and Time: Thursday, August 8th, 2024 | 5:00 PM CST

Topic: Rain Barrels

Date and Time: Thursday, August 15th, 2024
10:00 AM & 5:00 PM

CLASS SIZE LIMITED

Topic: Meat Canning

Date and Time: Thursday, August 22nd, 2024 | 5:00 PM CST

Topic: Herb Gardening

Date and Time: Thursday, August 29th, 2024 | 5:00 PM CST

**Each class in the Homesteading Series will be held at the Russell County Extension Office.
2688 S. HWY 127, Russell Springs, KY 42642**

2024 SOUTH-CENTRAL KENTUCKY HAY CONTEST



The South-Central KY Area Hay Contest is offered to all individuals raising hay in Adair, Casey, Clinton, Cumberland, Green, Marion, McCreary, Pulaski, Rockcastle, Russell, Taylor, Washington, and Wayne counties.

This program aims to provide producers with free hay analysis results to aid in educating producers on raising higher quality forages and meeting livestock needs. Producers may submit multiple samples in each contest area to their county agriculture agent. This is a free service, regardless of the number of samples submitted. Your county agent or assistant to the agent will take these samples for you. Please contact your local extension office to schedule a sampling.

Samples must be submitted no later than September 30th, 2024.

Basic analysis results will be sent to producers by November 1st, 2024. Results will include crude protein, DM, TDN, RFV, ADF, and NDF. Producers may be provided with livestock ration recommendations in addition to their results upon request. After completion of the program, an area-wide event will be held to provide an educational overview of the program and present awards to contest winners. There will be one winner selected for the entire area for each hay class. Please reach out to your county agriculture agent for further information.



Join us for

Lunch n' Learn

AT THE RUSSELL COUNTY PUBLIC
LIBRARY

TOPIC:

CRYSTAL CLEAR: WATER QUALITY MATTERS!

Learn the signs of poor water quality and how the quality of water for home and garden use can affect your everyday life.

Lunch will be provided on a first-come, first-serve basis.

WHEN: Tuesday, August 13th | 12:00 - 1:00 pm

WHERE: Russell County Public Library
535 N. Main Street
Jamestown, KY 42629

Cooperative
Extension Service

Agriculture and Natural Resources
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Disabilities accommodated with prior notification



JOIN US FOR OUR
Homesteading
SERIES

DATES & TOPICS:

August 1st: Making Sausage

Register by Thursday, July 25th

August 8th: Breadmaking: Sourdough

Register by Thursday, August 1st

August 15th: Rain Barrels | 10 AM CST & 5 PM CST

Register by Thursday, August 8th

August 22nd: Canning Meat

Register by Thursday, August 15th

August 29th: Herb Gardening

Register by Thursday, August 22nd

Where:

Russell County Extension Office

2688 S. HWY 127, Russell Springs, KY 42642

Call 270 - 866 - 4477 to register!

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

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