

**CARTER COUNTY**  
**AGRICULTURE &**  
**NATURAL RESOURCES**  
**NEWSLETTER**

Carter County

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[extension.ca.uky.edu](http://extension.ca.uky.edu)

[facebook.com/CCESAG](https://facebook.com/CCESAG)

[Rebecca.k@uky.edu](mailto:Rebecca.k@uky.edu)

**February 2025**

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**Highlights:**

⇒ Don't forget to register for the Bull Value Assessment Program.

⇒ Berry Plant Orders are due by February 10th. Order forms are available at <https://carter.ca.uky.edu/berry2025>.



## **CHOOSING HEALTHY TRANSPLANTS**

- Look for compact plants with short distances between leaves, thick stems, and dark green, upright leaves.
- Avoid plants showing signs of flowering or fruiting early on. It may take longer to establish compared to those grown in containers.
- Be wary of plants clipped before shipping, as this can cause stress and spread disease.
- Ensure plants have been hardened off (gradually acclimated to outdoor conditions) before planting.



# Upcoming Events

\*Denotes events where preregistration is required. Call 474-6686 or email [Rebecca.k@uky.edu](mailto:Rebecca.k@uky.edu) to register.\*

## Little Sandy Beekeepers Association

Tue, Feb 4 2025, 6:30pm Carter County Extension Office

### \*Private Pesticide Applicator Training

Thu, Feb 6 2025, 9:00am - 12:00pm Carter County Extension Office

## Berry Plant Orders Due

Mon, Feb 10 2025, 4:30pm Carter County Extension Office

### \*Bull Value Assessment Program

Thu, Feb 13 2025, 6:00pm Carter County Extension Office

### \*Bull Value Assessment Program

Thu, Feb 27 2025, 6 - 8pm Carter County Extension Office

## Little Sandy Beekeepers Association

Tue, Mar 4 2025, 6:30pm Carter County Extension Office

### \*Beef Quality & Care Assurance (BQCA) Training

Fri, Mar 7 2025, 10 :00- 11:45am Carter County Extension Office

### \*Private Pesticide Applicator Training

Mon, Mar 10 2025, 5:30 - 8:30pm Carter County Extension Office

### \*Beef Palpation Clinic

Fri, Mar 14 2025, 10:00am - 3:00pm Carter County Extension Office

## Northeast Area Livestock Association Meeting

Tue, Mar 25 2025, 6:00pm Carter County Extension Office

Topic: 2025 Eastern Kentucky Hay Contest...Developing a Strategy to Win!

Speaker: Dr. Christ Teutsch, UK Extension Forage Specialist

# Beef Palpation Clinic

**March 14<sup>th</sup> @ 10:00 AM**

**Carter County Extension Office**

**Call 474-6686 to register.**

**Space is limited.**

**Come join us to learn how to pregnancy  
check cattle via rectal palpation.**



**Agenda:**

**10:00—Meet at Extension Office for Instructions**

**11:15—Lunch**

**11:45—Travel to Farm for Hands-on Experience**

***\*\*Palpation (and any other veterinary practice or diagnosis) may only be performed on your own farm with your own animals without a veterinary license.\*\****



University of  
Kentucky  
Biosystems &  
Agriculture  
Engineering  
will be  
working with  
KDA again to  
offer free  
hearing tests  
in the West  
Wing during  
the National  
Farm  
Machinery  
show from  
February  
12-15.



**ATTENTION  
BUYERS AND  
SELLERS**

**1st Annual KENTUCKY COOPERATIVE EXTENSION**



UK MARTIN GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT  
KSU COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES

**East KY  
HAY**

**AUCTION  
5:00pm**

**February 26th**

**at The Robinson Research Station**

**130 Robinson Road  
Jackson, KY 41339**

**Accepting Hay**

**February 18th-25th by appointment  
8:00am -4:30pm**

- **NO BUYERS PREMIUM**
- **10% CONSIGNMENT FEE**
- **WEIGHT AS RECEIVED**

**Call 606-666-2438  
to  
schedule your  
drop-off**

**Nutrient analysis and average  
bale weight will be listed for each  
lot prior to sale.**

**Reed Graham  
Breathitt County ANR Agent  
606-666-8812**



**Auctioneer:  
Jonathan Montgomery  
with Montgomery Auction  
Company  
606-496-6530**

### **NUISANCE WEED SPRAYING PROGRAM**

This program consists of weed spraying demonstration plots. The KY Department of Agriculture will provide the sprayer and enough chemical for the treatment of 10 acres of agricultural land or 100 gallons of spot spraying mix to be used on agricultural land. The department's representative will demonstrate proper mixing and application techniques. A number of nuisance weeds can be treated under this program depending on the needs of the participant. This program is limited to broadleaf weeds.

There is a maximum of 7 participants per county. There will be an annual online application period to participate in this program. You may submit an application using our on-line services from February 1 to February 28 of each year. Apply online at [www.kyagr.com/consumer/nuisance-weed-spraying-program-application.aspx](http://www.kyagr.com/consumer/nuisance-weed-spraying-program-application.aspx).



Boyd County Extension Presents:

# HORSES & HORSEMEN



- 3/11 -  
EQUINE NUTRITION

- 3/18 -  
PASTURE MANGAGEMENT

- 3/25 -  
HOOF CARE

- 4/1 -  
COMMON EQUINE DISEASES  
AND PREVENTION

All Sessions are from 6-8pm  
At the Franks Building  
1758 Addington Rd.  
Ashland, KY 41102

Questions?

Call our office at (606)738-5184



Boyd County Extension Agent for Agriculture

Cooperative  
Extension Service

1900 North Third Street  
P.O. Box 10300  
Lexington, KY 40501-0300  
Phone: (606) 258-5800

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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Website: [www.uk.edu/extension](http://www.uk.edu/extension)



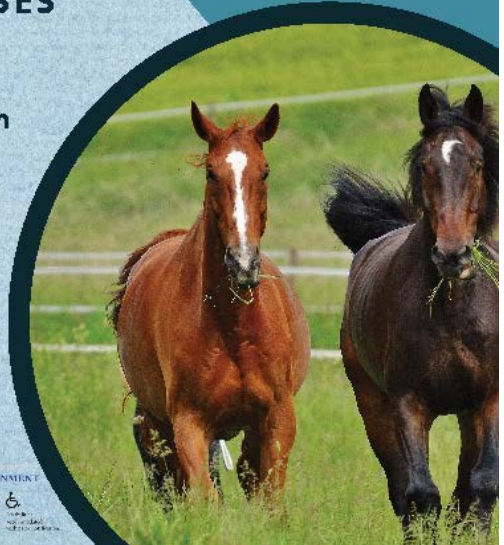
**\$10 registration Fee**  
Includes  
All 4 Sessions & Dinner

Payment can be brought  
in person or mailed to  
**Boyd County Extension Office**  
2420 Center St  
Catlettsburg, KY 41129

Registration and Payment

Due by Feb 28

Scan Here to Register:



**It's time to soil sample!** Soil probes will be dropped off soon at Globe Farm Store, Stephens Farm Store & Gilliam's Farm Supply. You can pick up basic instructions when you check out the probe at the farm store and then bring your soil to the Extension Office to send off for testing. It takes about 3 weeks to get recommendations back. Soil probes are also available for checkout from Kee's Farm Service & the Carter Co Extension Office.

# Keep Them Fit!

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

While reading some industry information, I was reminded about an article Dr. Burriss wrote for Cow Country News a few years ago. The focus of his article was to treat your herd bulls like an athlete; keep them fit and in great working shape. As always, it was a super article and is still relevant. Recently, more research has been done on bull fitness and fertility that is quite interesting.

We have known for years that over-conditioning bulls is detrimental to their fertility. When bulls are over fed and their body condition score get excessive ( $> 7$ ), fat begins to build up in the scrotum and in the spermatic cord. Fat is an excellent insulator and this buildup of fat in the neck of the scrotum leads to an increase in scrotal temperature. For optimum sperm production, the testis needs to be about two degrees cooler than body temperature and this buildup of fat especially in the neck of the testis (around the spermatic cord) can lead to abnormal sperm development. When these fatter bulls are subjected to a breeding soundness exam, they are more likely to fail due to an increase in abnormalities with sperm morphology and motility. More work from Dr. Pedro Fontes at the University of Georgia also indicated that bulls with more backfat were more likely have defects in the development of sperm and to fail a breeding soundness exam.

Dr. Fontes has completed some fascinating work extending our knowledge on the impact of bull condition on fertility. He recently used IVF to exam the ability of sperm from moderately- and over-conditioned bulls to fertilize an oocyte resulting in the proper development of an embryo. His research demonstrated that if an oocyte was fertilized by an over-conditioned bull the resulting embryo was less likely to continue to develop. His work suggests that bull diet and condition can negatively impact the ability of an embryo to grow and may lead to increases in early embryonic mortality. His studies examined both mature and young, developing bulls and the results did not vary. Interestingly, in this work



sperm morphology and motility were similar between over-conditioned bulls and moderately-conditioned bulls suggesting the reduced embryonic survival may run deeper than simple changes in sperm development. Truly fascinating work.

Over-conditioning not only impacts sperm production, but it also reduces the bull's interest in breeding cows. Research from Australia indicated that over-conditioned bulls also have lower libido, and their serving capacity was significantly lower than moderately-conditioned bulls.

Research from Canada clinched the nail on the head. The goal of this research was to identify factors associated with the male that impacts pregnancy in pasture situations. Considerable data on the bulls was collected including scrotal circumference, a wide variety of sperm traits, and back fat thickness. These 277 bulls of British and Continental breeds were turned out with over 9,000 cows and pregnancy was assessed after the end of a 70-day breeding season. Of all the measurements taken, backfat thickness of the bull had the highest significant correlation with failure to breed. Basically, fatter bulls got fewer cows pregnant.

So, as Dr. Burriss advised years ago, keep your bulls fit and think of them like athletes. Also, we are entering bull buying season so find bulls that not only meet your herds genetic needs but also are in proper body condition. If a bull's BCS exceeds 6, check to see if his scrotum looks blocky and full of fat and avoid purchasing him. Once you get your bull home, manage his diet and exercise to keep him in a BCS of 5-6. The pregnancy rate of your herd may depend on it!



U.S. DEPARTMENT OF AGRICULTURE



## Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC)

Sign up from Jan. 21 - April 15, 2025

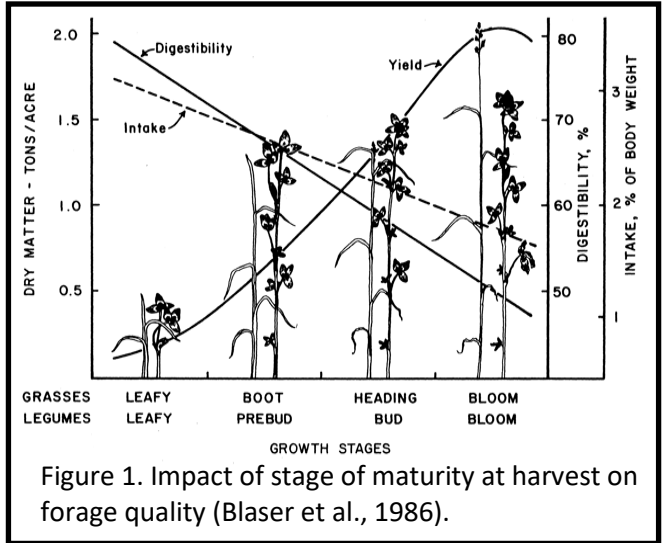
Contact the Farm Service Agency to sign up for ARC & PLC.

# Hay Quality Lower in 2024

Dr. Chris Teutsch, Forage Extension, UK Grain and Forage Center of Excellence at Princeton

Last fall we analyzed 1,127 hay samples as part of the Eastern, Central, and South-Central Kentucky Hay Contests. A summary of the results can be found in Table 1. Nutrient requirements of various livestock classes can be found in Table 2. So here is what we found:

- Crude protein (4.6 to 26.7%) and total digestible nutrients (39 to 76%) varied widely
- 3% of the hay samples contained less than 50% TDN
- 1.4% of the hay samples contained less than 8% crude protein
- 283 samples or 25% contained enough energy to meet the requirements of a beef cow at peak lactation
- 777 samples or 69% would meet the protein requirements of a beef cow at peak lactation
- 1111 samples or 99% contained enough protein to meet the needs of a dry pregnant cow
- 1091 samples or 97% contained enough energy to meet the requirements of a dry pregnant cow



In general, a higher percentage of hay samples required supplementation to meet the energy needs of a lactating beef cow (75% in 2024 versus 40% in 2023). This was most likely due to rain delays in harvest, allowing forages to become more mature and therefore lower in forage quality (Figure 1). I guess the biggest take home from the 2024 samples is that we still have a way to go in terms of improving hay quality!

So, what don't these results tell us? Since there is still wide variation in both crude protein and energy for the hay samples in this dataset, the



average or median of the results CANNOT be used to make recommendations on what or how much to supplement. To make this type of recommendation, you will need to sample individual hay lots (one cutting from one field) that you will be feeding ([see AGR-257 Hay Sampling Strategies for Getting a Good Sample](#)). Once you have the results in hand, then a supplementation strategy can be designed by either working your local extension agent, nutritionist or veterinarian or by using the [UK Beef Cow Forage Supplementation Tool](#).

## NEW YEAR'S RESOLUTION: Improve Hay Quality in 2025

A good New Years's Resolution for 2025 would be to improve hay quality! Making just a few small tweaks to your hay production program can make a big difference in hay quality. Below is a short list of things that you can implement to improve hay quality and production on your farm.

- *Fertilize and lime according to soil test.* A balanced fertility program is essential for optimizing hay yield and quality. Phosphorus, potassium, and lime should be applied according to soil test results. Avoid using "complete" fertilizers such as 10-10-10. These fertilizers commonly over apply phosphorus and under apply potash.
- *Apply nitrogen early to promote rapid spring growth.* Applying 80 lb N/A in mid- to late March will promote early growth in hay meadows, resulting in higher first harvest yields with improved crude protein values. Recent research at the University of Kentucky has shown that fall nitrogen fertilization promotes hay growth in the spring. In fact, 80 lb N/A applied in the fall was equivalent to more than 100 lb N/A applied in the spring.
- *Harvest at the boot stage.* The single most important factor impacting forage quality is stage of maturity at harvest. Hayfields should be mowed as soon as the grass reaches the late boot-stage. The boot stage occurs when the sheath of the flag leaf swells just prior to the emergence of the seed head. By making the first cutting in a timely manner, we will have time to make a leafy second cutting just prior to the summer months.
- *Mow early in day.* Some studies have shown that sugars tend to highest in late afternoon, making this the optimal time of day to cut. However, in high rainfall environment like Kentucky, maximizing curing time is the highest priority. Therefore, hay should be mowed in mid to late morning after the dew has dried off.

- *Use mower-conditioner.* Conditioning the stems allows moisture to escape at a faster rate. This shortens curing time and improves your chances of avoiding rain. Conditioning is especially important for first cutting grasses, summer annual grasses, and legumes, all of which tend to have larger stems.
- *Set swath on mower-conditioner to the widest possible setting.* Maximizing the swath width decreases curing or wilting time by exposing a larger portion of the forage to direct sunlight.
- *Rake or ted at 40-50% moisture content.* Raking and tedding the forage while it is still pliable helps to reduce leaf loss and maintain forage quality. Once the moisture content is below 40%, leaf loss increases, especially in legumes such as alfalfa and clover.
- *Bale at 18-20% moisture.* Baling in this moisture range inhibits mold growth and reduces heating. Avoid baling hay that is excessively dry due to high levels of leaf loss and hay that is above 20% moisture due to heating and potential hay fires.
- *Store dry hay under cover and off the ground.* Protecting hay from weathering helps to reduce dry matter losses and maintain forage quality. Much of the weathering damage is a result of the hay bale wicking moisture up from the ground. So, storing hay off the ground can greatly reduce deterioration.
- *Consider using baleage.* The biggest advantage of baleage is the shortened period between mowing and baling. In many cases, hay can be mowed one day and baled the next. This facilitates harvesting hay at the correct stage of growth, the NUMBER ONE factor impacting forage quality. To learn more about baleage see [AGR-235 Baleage: Frequently Asked Questions](#).

If you need help with hay sampling or interpreting your hay testing results, make sure and contact your local extension agent.

Forage testing is available from several commercial labs and the Kentucky Department of Agriculture. The Kentucky Department of Agriculture offers a standard forage analysis to Kentucky producers for a reduced cost. More information on this program can be found at <http://www.kyagr.com/marketing/forage-program.html>. Make sure and use a lab that has been certified for accuracy and precision by the National Forage Testing Association. A list of certified labs can be found at NFTA Certified Labs.

Table 1. Summary of 2024 Hay Contest forage quality results. Samples (n=1127) were collected by extension agents, dried in a forced air oven, ground to pass through a 1 mm screen, and predicted using a near infrared spectroscopy.

Constituent	Min	Max	Average	Median	Standard Deviation	Constituent Description
Crude Protein (%)	4.6	26.7	12.9	12.0	3.4	Estimate of protein calculated by Total N x 6.25.
Acid Detergent Fiber (%)	19.9	54.8	38.3	38.7	4.2	Chemical estimate of forage digestibility. Used to calculate energy.
Neutral Detergent Fiber (%)	23.2	82.0	58.0	59.6	7.9	Chemical estimate of indigestible and slowly digestible fiber. Used to estimate DM intake.
Ash (%)	2.1	20.2	7.3	7.3	1.5	Measure of total mineral content. Used as an indicator of soil contamination.
IVTDMD-48 Hr (%)	48.8	90.9	71.6	71.2	5.3	Amount of forage material digested after 30-hours in ruminal fluid.
NDFD-48 hr (%)	22.8	76.7	51.7	50.8	7.1	Digestible fraction of NDF expressed as percentage of Neutral Detergent Fiber.
Total Digestible Nutrients (%) - based on ADF	39.0	76.9	57.5	57.1	4.5	Estimate of energy. Calculated using ADF. Used to balance rations.
Total Digestible Nutrients (%) - based on fiber digestibility	41.9	73.7	60.0	59.9	4.5	Estimate of energy. Calculated using SUMMATIVE equation. Based on actual fiber digestibility.
Relative Forage Quality (%)	39	343	126	124	26	Relative comparison of forage quality to alfalfa harvested at full bloom. RFQ is a better ranking tool for grass than RFV.
Dry Matter Intake-NDF (% Body Wt)	1.5	5.2	2.1	2.0	0.4	Estimate of how much of given forage can be consumed. Based on neutral detergent fiber.
Dry Matter Intake-Fiber Digestibility (% Body Wt)	1.1	5.7	2.6	2.5	0.3	Estimate of how much of given forage can be consumed. Based on ACTUAL fiber digestibility.

Table 2. Nutritional requirements of various livestock classes. Adapted from Southern Forages, Fifth Edition.

Animal Class	Total Digestible Nutrients (%)	Crude Protein (%)
Growing steer @ 1.5 lb/day	65	12
Growing steer @ 1.7 lb/day	68	11
Lactating beef cow	60	11
Dry beef cow	50	8
Lamb finishing	70	12
Lactating ewe	65	13
Dry ewe	55	9

**Dr. Teutsch will be discussing this topic further during the March 25<sup>th</sup> Northeast Area Livestock Association meeting!**



**KENTUCKY 0000 A FARM**

# BLUEGRASS BEGINNINGS BOUNDLESS FUTURES

Your \$10 Ag Tag Donation Grows Agriculture & Local Leaders  
In 2024, Carter County Farmers donated \$9,730 through the Ag Tag Program.

### Kentucky Ag Tag

Your Ag Tag grows agriculture & youth in your community. Contributions are divided equally between Kentucky Proud, Kentucky 4-H and Kentucky FFA. Local 4-H Clubs & FFA Chapters receive half of those funds.

### Carter County Clerk

Mike Johnston  
(606) 474-5188  
300 West Main Street, Room 232,  
Grayson, KY 41143



# What Should My CPA Know That I Am Not Telling Them?

By Laura Powers | KFBM Area Extension Specialist

As a new year begins, we cannot fully close out the previous year until income tax returns have been filed and paid. I'm not sure which meeting is looked upon less favorably... a visit to the tax office or a visit to the dentist. No offense to the dental profession intended. However, much like going to the dentist, an open and honest conversation is critical with the tax preparer to make sure the process is done cleanly and accurately and to minimize future discomfort.

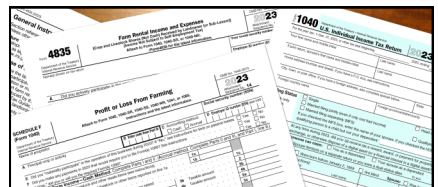
If a farm has been in business for a few years, the farmer will have a general understanding of what the conversation with their tax preparer will be like. They will discuss crop and livestock sales, farm business expenses, and the recently purchased tractor or bull. The goal on both sides is to make sure the income tax payment accurately reflects the amount of tax due based on net farm income for the year. However, there may be some items of income or expense that may be inadvertently missed without a thorough conversation. Below are a few items that can easily be missed during the tax preparation process.

*I traded equipment without cash down-payment.* Rarely does a year go by that a farmer does not purchase or trade equipment. These equipment trades are an important subject to discuss with the tax preparer. Hopefully, the tax preparer has access to the farm's financial information through a system supported by reconciled bank statements, such as computer software, spreadsheets, record books, or just a check-book register. These systems provide a listing of farm transactions during the year. Most equipment purchases or trade-ins will appear on such statements because there will have been a payment made for either the full purchase price or a downpayment accompanied by a loan for the remainder. However, there are times that the only downpayment made is the piece (or pieces) of equipment traded in. The remainder due is financed. In this scenario, there will be no check to appear on a bank statement, thus nothing to note the transaction in the recordkeeping system. Still, the equipment purchase (and any trade-in) needs to be included in the tax return for the year the transaction occurred, and the new piece of equipment was placed in service.

*I bought land with depreciable assets.* Although land itself is not a depreciable asset, there could be assets included in a land purchase that could be depreciated. Barns, grain bins, ground tile, fencing, perhaps even lime or fertilizer applied in the previous year, could all have a basis assigned to them and thus depreciated and expensed over their appropriate life. Care must be given as to the allocation among the assets purchased. If an appraisal was completed at the time of sale, it should list all the assets purchased and can be used as a guide in allocating basis.

*My neighbor did custom work for me, and I gave her leftover soybean seed.* Bartering transactions are common on farms. A neighboring farm may help you bale hay, and you may return the favor by giving them some remaining bags of soybean seed. Even though both parties agree that it is an even trade, there still should be a transaction in the farm records (and then on the tax return), reporting the Fair Market Value of the income and expense associated with the trade. In this example, there would be an added expense for the custom work done (hay baling) and a reduced seed expense (seed paid for but given to someone else). Such a transaction also helps on the farm management side of the business. If, in the above scenario, the farm gave away seed that they had purchased without also showing a reduction of the expense, then the total seed expense would be overstated.

*My farm income will be higher (or lower) than normal next year.* Most farmers pay taxes on a cash basis; meaning, within some parameters, they record income in the year it is collected and expenses in the year they are paid. Being a cash-based taxpayer allows farmers to try to balance taxable income from one year to the next, while not distorting taxable income. While there is an inclination to want to defer as much income as possible to the following year, it may not always be best to do so. If there is a known (or at least a well-educated guess) that net income in the next year will differ substantially from net income in the current year, the tax preparer can employ certain tactics to help smooth net farm income between years. The tax preparer may discuss options such as depreciation choices, deferment of crop insurance, net operating loss elections, or treatment of CCC loans, for example that will not only impact the current tax year but can assist in planning for the future tax years.



*I collected crop insurance last year that was deferred to this year.* If a farmer receives a crop insurance payment because of yield loss and they normally defer the sale of that crop to the following year, they will have an option to also defer reporting that crop insurance income to the next year. If you have the same tax preparer as the previous year, then it is likely that deferment will be recorded in the software. However, if you have switched tax preparers for the year of deferment, then they need to be made aware of the crop insurance deferment. The IRS will know that it was deferred as it was reported as such on the previous year's return. Not reporting the income in the following year will likely result in receiving a letter from the IRS asking why you underreported income and asking for payment of not only additional tax, but penalties and interest as well.

*I am retiring next year.* As previously mentioned, farmers have the option to file taxes on a cash basis. Over the course of time, many farmers end up deferring income and prepaying expenses to manage their tax liability. Most of the time, that plan works reasonably well. That is until the farmer is ready to retire. Farmers that have deferred income and have prepaid expenses (and fully depreciated equipment purchases) for several consecutive years can potentially create a substantial tax issue for the first year of retirement. Without planning, a farmer could find themselves having a full year's worth of income (or more), but very few expenses to offset that income. Not to mention that they may also be selling equipment the year after retirement, further increasing taxable income. Talking with your tax preparer at least three to four years before retirement can aid in managing the tax issues that may arise when closing out the farm business.

There is a well-known adage that reminds us that one of the two certainties of life is paying taxes. Paying taxes can be a good thing, especially when you consider that taxes are only owed when there is positive income, and farming is supposed to be a for-profit venture. Farmers are fortunate in the fact that they have many options available to manage their tax liability, within reason. The tax preparer should be considered a member of the farm advisory team. Having an open dialog with their tax preparer both before year end and at preparation time will allow both parties the ability to consider all options and make the process flow smoothly from one year to the next.



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

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Carter County  
 94 Fairground Drive  
 Grayson, KY 41143

RETURN SERVICE REQUESTED

# CARTER COUNTY AGRICULTURE & NATURAL RESOURCES NEWSLETTER



Enjoy your newsletter,

*Rebecca Konopka*

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