Union County ANR Newsletter

July/August 2025

Martin-Gatton College of Agriculture, Food and Environment

Union County
Cooperative Extension Service
1938 US HWY 60W
Morganfield Ky 42437
270-389-1400

UK Corn, Soybean & Tobacco Field Day

July 22, 2025

Registration begins: 7:00 CT
8:00 am-12:00 pm CT

UKREC FARM,
300 EXTENSION FARM RD.,
PRINCETON, KY 42445

TOPICS include:

AGRONOMICS AND ECONOMICS

- Economic Update
- Round Bale Economic Discussions
- Weed Science Update 2025
- Corn Needs for Nitrogen and Sulfur Following Cover Crops
- Foliar Fertilizer Rarely Increase Yield in Soybean Across the U.S

IPM

- Corn Disease Concerns for 2025
- Familiar and New Soybean Diseases to Look Out for in 2025
- Emerging Mollusk Pests & Insect Threats in Field Crops in Kentucky

Grain and Forage Center of Excellence

SOILS

- NRCS Soil Health Updates
- Agr-1 Update: Corn N Rate Recommendations
- The Current Status of Sulfur Fertility for Row Crop Production

TOBACCO

- Red Leaf Burley Demonstration and UKREC Tobacco Research Update
- UT Tobacco Research Update
- Optimizing Plant Populations for Burley Tobacco
- Assessing Quadris Effectiveness in Target Spot Populations

Educational Credits:

CCA CEUs

GC IPM/Soils : Nutrient Mgmt (1.0), IPM (1.0)
GC Agronomics/Economics: Crop Mgmt. (1.5)
Tobacco: Crop Mgmt. (1.0), IPM (1.0)

Pesticide CEUs:

IPM/Soils: 1 CEU for Cat 1a, 1 CEU for Cat

Altria Client Services

KYCORN

Kentucky Soybean Board

Martin-Gatton College of Agriculture, Food and Environment

Beef and Forage Field Day

Tuesday, July 22, 2025 @ 12 p.m. CT
UKREC at Princeton – 300 Extension Farm Rd.
Immediately following the Corn, Soybean & Tobacco Field Day

Lunch & Registration - 12:00 – 1:30 PM

- Visit with UK specialists, sponsors, and exhibitors
- Remarks from Dean Laura Stephenson, Vice President for Land Grant Engagement and Dean of Martin-Gatton College of Agriculture, Food and Environment

Field Program

Part 1: Forage Plot Tours - 1:30 – 2:30 PM

Speakers: Dr. Raul Villanueva: Extension Entomologist, Dr. Chris Teutsch: Extension Forage Specialist, Mr. Johnathon Stephens: M.S. Graduate student.

- *Fall Armyworm Update & Alfalfa Weevil Resistance*
- *Red Clover for Mitigating Tall Fescue Toxicosis*
- *Summer Annual Mixtures and Variety Trials*

Transport to Beef Facilities - 2:35 – 2:50 PM

Part 2: Innovative Beef Feeding Strategies - 2:50 – 3:45 PM

Speakers: Dr. Katie VanValin, Extension Beef Specialist

- *Mineral Feeder Design: Does It Matter?*
- *Smart Scales for Smart Decisions*
- *Winter Feeding Systems: Bale Grazing vs. Bunk Feeding – What Does It Look Like Now?*

Transport Back & Program Wrap-Up - 3:45 PM – 4:00 PM

- Turn in evaluations
- Connect with UK Extension specialists
- Adjourn

UKREC 100 YEARS PRINCETON, KY

UKREC is celebrating 100 years of serving Western Kentucky, the Commonwealth and beyond. Join us and see how much has been rebuilt to help us serve modern agriculture and future generations.

Field Day Sponsors

KADF Kentucky Agricultural Development Fund

Kentucky Forage and Grassland Council

KBN Kentucky Beef Network

Tracking Important Corn Diseases

Dr. Kiersten Wise, UKY Extension Plant Pathologist

On July 10, southern rust was confirmed in Crittenden County at low levels. Southern rust typically arrives in Kentucky in mid-July, and whether a fungicide will be needed to manage southern rust will depend on the crop growth stage at the time it is detected in an area. Fungicide applications may be needed to manage southern rust through the milk (R3) growth stage, **although if corn receives a fungicide application at VT/R1, it is less likely to need additional applications if southern rust arrives after VT/R1.** Southern rust can be tracked on a map on the Crop Protection Network. On the map, red counties/parishes indicate that southern rust has been confirmed by university/Extension personnel.

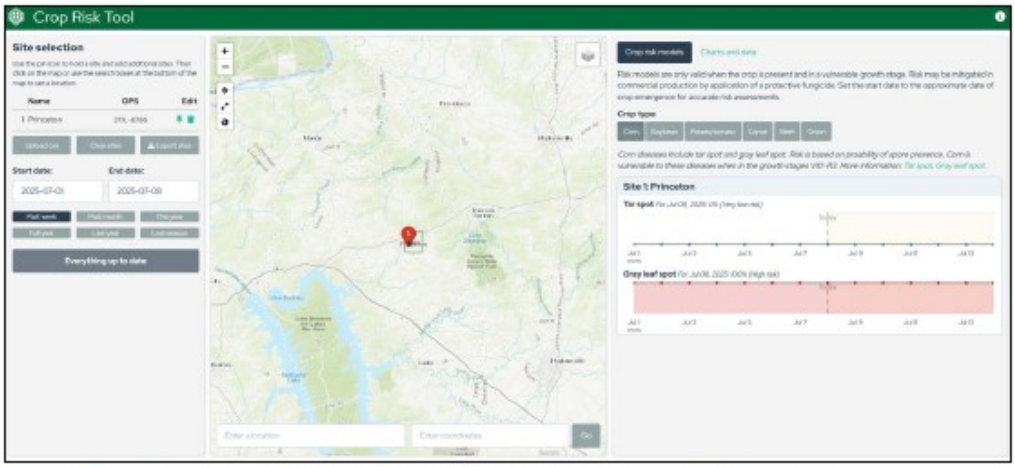

Figure 1. Example of Crop Risk Tool model prediction for gray leaf spot and tar spot risk for Princeton, KY from July 7-13, 2025.

Tar spot has been found across the Midwest but not yet confirmed in Kentucky. Even if tar spot is detected in the state, we would not expect the disease to develop quickly, because risk of disease development is very low, according to the new Crop Risk Tool, that can forecast disease risk for tar spot and gray leaf spot for corn that is between growth stages V10 and R3. **Model predictions for multiple areas in western Kentucky for July 6 through July 13 indicate that corn at V10 or later is at very low risk for tar spot development** (Figure 1). This is not surprising with the high humidity and high temperatures, which are not conducive for the tar spot fungus. Risk for gray leaf spot development is uniformly high across most of Kentucky. In most cases, applying a foliar fungicide once at tasseling/silking (VT/R1) is the most effective way to prevent yield loss from foliar diseases like tar spot and gray leaf spot and offers the greatest potential for a positive return on investment (ROI).

Tar spot can be easily confused with insect frass, which is plentiful in corn at this time of year. Tar spot lesions are raised and feel bumpy on the leaf surface and often are surrounded by a small brown or tan halo (Fig. 2). Insect frass will not have a halo or margin surrounding the lesion, and should wash off with water. Always submit suspected tar spot samples to your County Agent for submission to the Plant Disease Diagnostic Laboratory for confirmation

Figure 2. Tar spot lesions (left) and insect frass (right) on corn leaves (Photos: Kiersten Wise).

CAIP INFORMATIONAL SESSION

July 28 at 5:00PM
Union County Extension Office

This session will include information on The County Agricultural Investment Program (CAIP) that provide Kentucky agricultural producers cost-share assistance on practices that increase net farm income and opportunities to try new/innovative technologies or systems that improve farm efficiency and productivity.

Applications will be available at the meeting.

Applications cannot be picked up before July 28,2025 and are due no later than August 25,2025.

For more information contact
Union Co Conservation District (Debbie Eubank): 270-389-2393
or
Union Co Extension Office (Katie Hughes): 270-389-1400

Martin-Gatton College of Agriculture, Food and Environment
Cooperative Extension Service
UNION
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Agriculture and Natural Resources
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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.

Union County Conservation District

MONEY FOR FARM IMPROVEMENTS

KADF
KENTUCKY AGRICULTURAL DEVELOPMENT FUND

Eligible Incentive Areas:

Agricultural Diversification
AgTech & Leadership Development
Large Animal - Small Animal
Farm Infrastructure
Fencing & On-Farm Water
Forage & Grain Improvement
Innovative Ag. Systems
On-Farm Energy
Poultry & Other Fowl
Value Added & Marketing

Administered by
Union County Conservation District
719 US HWY 60E
Morganfield, KY 42437
(270) 389-2393
debbie.eubank@ky.nacdnet.net

COUNTY AGRICULTURAL INCENTIVES PROGRAM (CAIP)

Applications are available for Union County's CAIP to assist farmers in making important farm improvements.

Application Period:
July 28-August 25, 2025

No applications will be accepted before July 28,2025 or after August 25,2025

Application Availability /Return Completed Application To:
Union County Conservation District Office
Monday – Friday (8:00 a.m. – 4:00 p.m.)

For More Information:
Contact Debbie Eubank at 270-389-2393

All applications are scored, based on the scoring criteria set by the Kentucky Agricultural Development Board.

Time for Change

Dr. Les Anderson, UKY Extension Specialist

Times are good, finally, if you are in the cow-calf industry. Input costs (feed, etc.), although still high have held steady while feeder calf prices reach all-time highs and profits are finally obtainable for many. It might seem odd but now is the perfect time to evaluate your production system and make necessary changes to prepare for when, inevitably, the market declines.

To determine what factors to adjust, producers first need to determine if they are marketing efficiently by producing a product that fits the intended market. The best example of this is a producer that wants to market feeder calves (400-600 pounds) at the stockyards, yet this producer does not control the calving season and has calves born throughout the entire year. The most inefficient method to market feeder calves is to sell "singles" meaning to sell each calf individually. Research from the UK AgEcon group has shown that singles are about $12/cwt less valuable than similar calves sold in a group of five or more. So, this producer loses $60 per head (five weight calf) on average simply because the production system does not match the market strategy. This loss ($60 per head) may not seem like much today but is often the difference between profit and loss in smaller operations, particularly in a down market. The easiest fix to the above problem is to enroll the calves in a CPH -like feeder calf marketing program. Multiple value-added sales like CPH occur throughout the year. These sales are designed to help producers capture value in their calves by marketing them in larger groups. Another solution is to gain control of the calving season. Identify the month(s) you want to market in and the desired weight of your calves at marketing. So, if you want to market eight weights in June, you will want to calve from early September until the middle of October. If the calving season is currently year-round, shifting to this calving season will take some planning. The University of Kentucky has a couple of publications that can assist (https://afs.ca.uky.edu/beef/publications/reproductive-management).

The benefits of a controlled calving season reach far beyond simply increasing market value. Short calving seasons reduce labor inputs and costs and increases the efficiency of most systems by increasing weaning weights and decreasing inputs costs. Research on 394 ranches in the southwest indicated that year-round calvers sell 46 fewer pounds per year while spending $70 more to get their 500-pound calves to market. Less product to market at a higher cost is typically not an ideal for most small businesses.

Another factor to consider is the overall fitness of the herd. Fitness refers to age, temperament, physical characteristics such as feet/leg and udder soundness, and producing ability (is she weaning a profitable calf?). Another "fitness" factor to consider is expected calving date. If you have cows that are not going to calve in your profit window, consider selling them and increasing your replacement rate. Cull cows are high and now is the perfect time to improve the fitness of your herd. Gradually getting the cow herd younger and more fit during a high market is a great strategy to prepare for future profitability.

Producers should consider a few other things when profits are high. After the bills are paid, investing into your small business (cattle operation) may pay dividends later. Do you need to improve your handling facilities? Quicker, easier, stress-free handling is best for both the cattle and the handlers. Does the grazing and pasture management system maximize your grazing days to reduce feed costs? Now is the ideal time to evaluate your operation. Contact your local ANR Agent and KBN facilitator if you need another "set of eyes" on your production system.

Sustainability has been a buzz word in the industry talks a quite a bit about sustainability especially sustainability of the small farm. Small farm sustainability revolves around financial stability and optimizing profits during high and low market scenarios. Every cow-calf producer should be making money now, but can cow-calf producers maintain this when calf prices fall? If the answer is yes, then the production and marketing systems are in sync and the cow-calf operation can be sustainable. If the answer is no, then let's make some changes. The industry needs our small operations to stick around!

Postharvest Management of Canola and Wheat

Dr. Sam McNeill, UKY Extension Agricultural Engineer

Canola and wheat are mostly harvested across Kentucky, so now is a good time to review some of the physical properties of these crops in order to maintain their quality during storage. An important consideration is how these grains interact with air to control biological activity that can potentially cause spoilage and a loss in value. This article focuses on the factors that determine the storability of these crops, namely grain moisture, temperature, and initial condition after harvest (amount of trash and broken grain); and the specific airflow requirements for drying and conditioning these small seeds. Keeping grain in good condition during storage prevents clumps from forming in a bin and the safety risks associated with entering one altogether.

Table 1. Equilibrium moisture content of soft red winter wheat (%wb) at different temperature and relative humidity levels. Source: ASAE Data D245.6.

	Relative Humidity (%)								
Temp.	20	30	40	50	60	65	70	80	90
F	Equilibrium moisture content, %wb								
35	8.9	10.2	11.3	12.3	13.4	14.0	14.7	16.1	18.2
40	8.7	10.0	11.1	12.1	13.2	13.8	14.4	15.9	18.0
50	8.4	9.6	10.7	11.8	12.9	13.4	14.1	15.5	17.6
60	8.1	9.3	10.4	11.4	12.5	13.1	13.7	15.1	17.2
70	7.8	9.0	10.1	11.1	12.2	12.8	13.4	14.8	16.9
80	7.5	8.7	9.8	10.6	11.9	12.5	13.1	14.5	16.6
90	7.3	8.5	9.6	10.6	11.6	12.2	12.8	14.2	16.3

Equilibrium moisture represents the point when there is no exchange of water vapor between seed and the surrounding air and establishes the grain-specific limits of drying and storage. This occurs after sufficient exposure time in the field or in bin dryers with little or no heat added. Tables 1 and 2 show the equilibrium properties for wheat and canola, respectively, for specific temperature and relative humidity conditions. Keep in mind that molds begin to grow when the relative humidity is above 65% (highlighted column in both tables) and that the average monthly temperature in Kentucky during July and August is about 80 degrees. Thus, the recommended storage moisture for soft red winter wheat is 12.5%. For canola at 40% oil content, the seed should be 8.2% moisture for safe storage. However, canola seeds with 50% oil should be stored at a lower moisture of 6.5% to preserve seed quality.

All stored grain should be cooled to 60 degrees as soon as possible in late summer or early fall to control insect activity as well. Tables 1 and 2 also show that at this temperature, soft red winter wheat at 12.5% creates a relative humidity in the bin of about 60%, which adds further protection to hold mold growth in check. Similarly, canola seeds with an oil content of 40% and 8.2% moisture will create an RH of about 62%.

Drying time will depend on the weather conditions and airflow rate through grain, which in turn depends on the depth. The minimum airflow rate for natural air and low-temperature drying is 1 cubic feet per minute/bushel, which can require considerable fan power and severely limit the depth of small grains in most farm bins. The airflow rate in an existing bin can quickly be estimated by a decision tool from the University of Minnesota. By entering the bin diameter, wall height, desired airflow rate, grain and floor type, the number of bushels, static pressure and airflow rate per bushel are calculated in 2-4 feet intervals, depending on the eave height.

Table 2. Equilibrium moisture content of canola (%wb) with 40% oil content at different temperature and relative humidity levels. Source: ASAE Data D245.6.

	Relative Humidity (%)								
Temp.	20	30	40	50	60	65	70	80	90
F	Equilibrium moisture content, %wb								
30	4.5	5.9	7.4	8.8	10.3	11.2	12.1	14.2	17.2
40	4.1	5.5	6.8	8.1	9.6	10.4	11.2	13.2	16.0
50	3.8	5.1	6.3	7.6	9.0	9.8	10.5	12.3	15.0
60	3.6	4.8	6.0	7.1	8.4	9.2	10.0	11.6	14.2
70	3.4	4.5	5.6	6.8	8.0	8.4	9.3	11.0	13.5
80	3.2	4.3	5.3	6.4	7.6	8.2	8.9	10.5	12.8
90	3.0	4.1	5.0	6.1	7.2	7.9	8.6	10.0	12.2

Postharvest Management of Canola and Wheat, Continued;

An example for canola and wheat in a 30 ft diameter bin with a 30 ft eave height and a typical 3 hp centrifugal fan that can deliver 2500 cfm at 5.0 inches of static pressure is shown in Table 3. Keep in mind that the program extrapolates values slightly beyond the fan data and the calculated resistance to airflow (static pressure, shown as inches of water) generated at a specific depth can exceed the capability of the fan. In this example, the selected fan will perform well for wheat but exceeds its limit for canola above 21 feet (as shown in the highlighted values). Note that other recommended airflow rates can also be evaluated by this program including 0.5 cfm/bu for cooling hot grain from a dryer and 0.1-0.2 cfm/bu for aeration. In this example, the minimum airflow rate for drying limits the depth to about 8 feet for canola and 9 feet for wheat.

Table 3. Airflow rates with a 3 hp centrifugal fan for canola and wheat in a 30-ft diameter bin filled to a depth of up to 30 feet. Source: Fan selection software from the University of Minnesota Department of Bioproducts and Bioengineering https://bbefans.cfans.umn.edu/

Depth		Canola			Wheat		
		S.P.	Airflow		S.P.	Airflow	
ft	Bushels	in. water	cfm	cfm/bu	in. water	cfm	cfm/bu
3	1,696	1.7	5,170	3.1	0.8	5,600	3.3
6	3,393	2.9	4,555	1.3	1.5	5,260	1.6
9	5,089	3.8	4,080	0.8	2.1	4,960	1.0
12	6,786	4.3	3,500	0.5	2.6	4,700	0.7
15	8,482	4.7	3,030	0.4	3.1	4,460	0.5
18	10,179	4.9	2,680	0.3	3.5	2,250	0.4
21	11,875	5.0	2,400	0.2	3.9	4,060	0.3
24	13,572	5.1	2,133	0.2	4.1	3,800	0.3
27	15,568	5.2	1,930	0.1	4.3	3,545	0.2
30	16,965	5.3	1,760	0.1	4.5	3,320	0.2

Also, when cooling hot grain from a dryer, the depth for canola and wheat should be limited to about 12 feet and 15 feet, respectively. Lastly, the rule of thumb for estimating the number of hours for aerating clean grain is easily calculated by dividing 15 by the airflow rate. So, 75 hours of total fan operation are needed when the bin is full (0.2 cfm/bu), whereas only 15 hours are needed at 1 cfm/bu.

More information on handling, drying and storing canola, wheat and other small grains is available in the references provided as well as your county extension office or by contacting the author.

Hay Testing Even More Important in 2025

Dr. Chris Teutsch, UKY Forage Specialist

In many parts of Kentucky first cutting hay was delayed. Although yields were good, forage quality is another story. As the grass plant reaches maturity (gets mature seed) yield goes up, but quality decreases (Figure 1). This year we were on the right side of this figure, good yield but lower quality. We have already got our hay testing results back from the lab for our first cutting and that is exactly what they show (Table 1). I wish we could have been more timely in our hay harvest this spring but weather conditions were just not conducive to dry hay harvest. In fact, weather records indicate that we are seeing a trend toward fewer baling days in May (baling day = 3 curing days + 1 harvest day). It is just getting tougher to be timely with our first cutting harvested as dry hay. So, the question becomes what do we do? The list of practical solutions is short; in fact, there is really one viable alternative and that is baleage. High quality baleage can be made with a curing window as short as 2 days (one day to mow and wilt and a second day to bale and wrap). This provides more opportunities to harvest at the correct stage of maturity (late boot to early head).

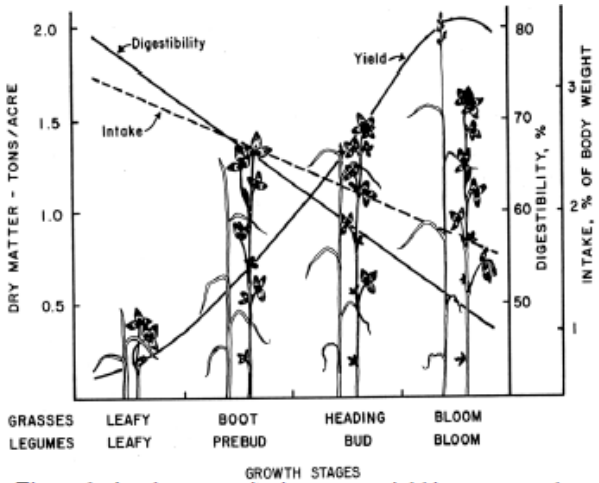


Figure 1. As plant maturity increases, yield increases and forage quality (digestibility and crude protein) decreases. The single most important factor impacting forage quality is stage of maturity at harvest.

Forage Timely Tips: July

- ✓ Make plans to attend summer field days.
- ✓ Clip Pastures to remove weed seeds and release vegetative growth
- ✓ Slow rotational grazing to allow a longer recovery period
- ✓ Begin making plans for which pasture to stockpile for winter grazing
- ✓ Begin making plans for pastures and hayfields that need overseeding/reseeding in September

Upcoming Events

2025 CPH60 Sale Dates
Aug 14, Dec 4

State Fair
Aug 14-24,2025

BSE Clinic
Nov 2025
Union Co Extension Office
More Information to Come

Calving School
Dec 2025
Union Co Extension Office
More Information to Come

Hay Testing Even More Important in 2025, Continued;

Field	CP†	ADF	NDF	TDN	Meet CP Requirements		Meet TDN Requirements	
	%	%	%	%	Dry	Lactating	Dry	Lactating
1	8.9	40.1	59.1	55.5	yes	no	yes	no
2	9.9	39.4	60.0	56.2	yes	no	yes	no
3	8.2	41.6	67.2	53.8	yes	no	yes	no
4	10.6	41.0	64.5	54.5	yes	yes	yes	no
5	8.3	40.7	65.6	54.8	yes	no	yes	no
Avg	**9.2**	**40.6**	**63.3**	**55.0**	**yes**	**no**	**yes**	**no**

Table 1. Forage quality of 2025 first harvest hay at UK Research and Education Center in Princeton. †CP, crude protein, ADF, acid detergent fiber, NDF, neutral detergent fiber, TDN, total digestible nutrients.

Hay Testing Even More Important in Wet Years

In years like this one, hay testing becomes even more important. Since most of Kentucky's first cutting hay was put up at an advanced stage of maturity, testing is going to be a critical part of making sure that we meet the nutrient requirements of our cows this winter. The single most important factor impacting rebreeding in cow herds is body condition at calving. To design an effective supplementation program for our lower quality hay we must know what the quality it. If you have never tested your hay, this is the year to start!

FORAGE MANAGEMENT TIPS

✓	Test first cutting hay and use the results to develop a supplementation strategy for this winter.
✓	Graze summer annuals pastures and fertilize with 40-60 lb N/A if regrowth is desired.
✓	Identify pastures to stockpile for winter grazing. Pastures should be well drained and have a strong sod. Limit summer grazing so that they are ready to grow as conditions cool and rain comes in late summer.
✓	Do NOT mow hayfields or graze pastures closer than 4-5 inches.
✓	Soil test pastures to determine nutrient needs.
✓	Use UKY variety testing results to select varieties that will be planted in the fall.
✓	If drought occurs, confine animals to one pasture and feed hay.

July Garden Calendar

Reena Martin and Jamie Dockery , Fayette Co Horticulture Extension Agent

- Now is the time to plan and plant a fall garden. Most plants with shorter growing seasons can be grown in the fall and often produce better results. Allow a little more time to mature than the seed package says as cooler nights will slow growth somewhat.
- Clean and replenish hummingbird feeders regularly. The nectar will readily spoil in hot weather.
- Check on newly planted trees and shrubs often. Plants can take a minimum of two years or more to establish into the landscape. Water as needed to assist with transplant shock.
- When watering, try to avoid wetting foliage or watering late in the evening as both can promote disease.
- Garden ponds will need to be topped off regularly in the heat. Make sure to use a de-chlorinator every time to protect your fish.
- Water lilies will benefit from regular feeding. If you aren't getting many blooms feeding may help.
- Do not spray chemicals in the heat of the day. Many plants can be damaged. Spray in the early morning or late evening when temperatures are cooler.
- Monitor evergreens for spider mite damage. Drought stressed plants are particularly at risk. If you see signs of browning shake the branch over a white surface, if you see tiny moving red specks, you likely have mites. Minor infestations can be treated with a daily spray from the hose. Larger problems may need chemical control.
- Remove spent blooms from flowering annuals and perennials to promote more bloom.
- If your late blooming perennials (Asters, Goldenrod, Butterfly bush, Mums, etc.) are already tall and threatening to flop, prune them back to 1' in height. This will result in a fuller, sturdier plant that will bloom slightly later than normal.

2025 Union Co Hay Show

Class A Alfalfa	RFV %
Dallas Shepherd	202
Cailey Divine	166
Carrie Divine	162
Bailyn Shepherd	160
Stone Shepherd	153
Coy Divine	119
Curt Divine	106
Chett Jenkin	99

Class B Grass	RFV%
Cailey Divine	118
Sloan Joiner	108
Stone Shepherd	102
Donald Thomas	95
Coy Divine	85
Zane Shepherd	77
Samuel Wells	69

Class C Red Clover	RFV%
Walker Hardesty	92
Hayden Hardesty	86

Class D Small Grain	RFV%
Jake Mason	101
Ava Turley	95
Caleb Henshaw	78
Mason Turley	72

Class E Grass Less 10%	RFV%
Jaxon Hardesty	101
Ava Turley	101
Emalyne Davis	99
Lauren Turley	99
Maggie Robinson	98
Emmett Davis	98
Laurie Babbs	92
Mason Turley	90
Flint Jenkin	90
Cason Hardesty	89
Brody Joiner	89
Kinsley Jenkin	87
Barrett Jenkin	86
Selah Jenkin	85
Lawson Shepherd	85
Zane Shepherd	83
Piper Jenkin	83
Harper Jenkin	83
Baylin Shepherd	81
Lawson Shepherd	79
Brian Babbs	68

Class F Grass 30%	RFV %
Cailey Divine	108
Lauren Turley	89

46 samples total

Know Your Ratios

Kara Schlinke, KFBM Extension Specialist

Farming is more than planting, growing, and harvesting—it's running a business. And like any business, understanding your financial health is crucial for long-term success. That's where financial ratios come in. Think of them as vital signs for your farm's finances. Just like a doctor checks your blood pressure or heart rate, these ratios help you assess if your farm is thriving, surviving, or heading for trouble.

Whether you're talking to a lender, planning an expansion, or just trying to get a grip on your cash flow, knowing your ratios can give you the clarity you need to make better decisions. And the best part? You don't need a finance degree to understand them—you just need a little guidance. So, let's break them down in a way that makes sense for everyday farm life.

1. Liquidity: Liquidity is all about short-term survival. It answers the question: If the bills came due tomorrow, could you cover them with what's in the bank and what's easily sold or collected?

- **Current Ratio** = Current Assets ÷ Current Liabilities This tells you how many dollars of liquid stuff (like cash, feed, or accounts receivable) you have for every dollar you owe soon.
  Benchmarks:
  > 2.0: Strong
  1.3–2.0: Caution
  < 1.3: Vulnerable

- **Working Capital** = Current Assets − Current Liabilities This is the actual dollar buffer between what you have and what you owe in the short run. Bigger is better, it means you have room to maneuver.
- **Working Capital to Gross Revenues** = Working Capital ÷ Gross Farm Income This puts your working capital in perspective. A high ratio here means your cushion is strong relative to the size of your business.
  Benchmarks:

  > 30%: Strong
  10–30%: Caution
  < 10%: Vulnerable

  2. Solvency: Measures your long-term strength. It's like checking the foundation of your house—how much of your farm is financed by debt versus owned outright.

- **Debt-to-Asset Ratio** = Total Liabilities ÷ Total Assets This shows what portion of your assets is financed by debt. A low percentage means you're less reliant on borrowed money.
  Benchmarks:
  < 30%: Strong
  30–60%: Caution
  > 60%: Vulnerable

- **Equity-to-Asset Ratio** = Equity ÷ Total Assets This is your ownership stake. A high ratio means you own more of the farm—great news for stability and borrowing power.
  Benchmarks:
  > 70%: Strong
  40–70%: Caution
  < 40%: Vulnerable

- **Debt-to-Equity Ratio** = Total Liabilities ÷ Equity This compares what you owe to what you own. Lower values mean you're in a healthier position if things go sideways.
  Benchmarks:
  0.43: Strong
  0.43–1.5: Caution
  1.5: Vulnerable

  3. Profitability: This goes beyond cash flow, it shows whether your operation is generating a solid return on what you've invested.

- **Rate of Return on Assets (ROA)** and **Rate of Return on Equity (ROE)**ROA: Profit generated per dollar of asset. Are you getting bang for your buck from your land, equipment, and inventory? Higher ROA means you're using resources efficiently.
  ROE: Profit generated per dollar of owner equity. This focuses on what you, as the owner, are earning from your investment in the business.
  Benchmarks:

  ROA: 8% or higher

  ROE: 10% or higher

- **Operating Profit Margin** = Operating Profit ÷ Gross Revenues This is the share of revenue left after covering operating costs. After covering operating costs, how much is left over? A higher margin gives you more room to weather tough years.
  Benchmarks:
  < 25%: Strong
  15–25%: Caution
  > 15%: Vulnerable

Know Your Ratios, Continued;

4. Repayment Capacity: Assesses the ability to meet debt servicing (principal + interest). Even profitable farms can get squeezed if debt payments are too high. This ratio looks at whether you have enough income to meet loan obligations.

- **Debt Coverage Ratio** = Net Farm Income + Non-Farm Income + Depreciation + Interest on Term Debt – Family Living Withdraws – Income Taxes divided by Scheduled Principal Payments on Term Debt + Interest on Term Debt This shows if net income or cash flow can cover necessary debt payments. It tells you how comfortably your income (farm and non-farm) can cover debt payments. Lenders love this one.
  Benchmarks:
  > 1.75: Strong
  1.25-1.75: Caution
  < 1.25: Vulnerable

5. Financial Efficiency: Efficiency ratios show how well your farm converts inputs into income. They point out areas where you might be overspending—or operating at peak performance.

- **Asset Turnover** = Gross Revenues ÷ Total Assets Measures how effectively your assets generate revenue. More turnover = better use of resources.
  Benchmarks:
  < 45%: Strong
  30–45%: Caution
  > 30%: Vulnerable

- **Operating Expense Ratio** = Operating Expenses ÷ Gross Income This is the percentage of income spent just to operate. It shows how much of your income goes straight to operating costs. Lower is better—it means you're keeping more of what you earn.
  Benchmarks:
  < 60%: Strong
  60–80%: Caution
  > 80%: Vulnerable

- **Interest Expense Ratio** = Interest Paid ÷ Gross Income
  These reveal how much you're spending on financing and replacing assets. High percentages here can eat into profits.

  Benchmarks:
  < 5%: Strong
  5–10%: Caution
  > 10%: Vulnerable

- **Depreciation & Amortization Expense Ratio** = Depreciation ÷ Gross Income This reflects capital replacement costs.
  Benchmarks:
  < 5%: Strong
  5–10%: Caution
  > 10%: Vulnerable

- **Income from Operations Ratio** = Income After Ops, Interest & Depreciation ÷ Gross Income This is your "net" after covering everything. It's what's left to support your family and reinvest in your farm.
  Benchmark:

  > 20%: Strong
  10–20%: Caution
  < 10%: Vulnerable

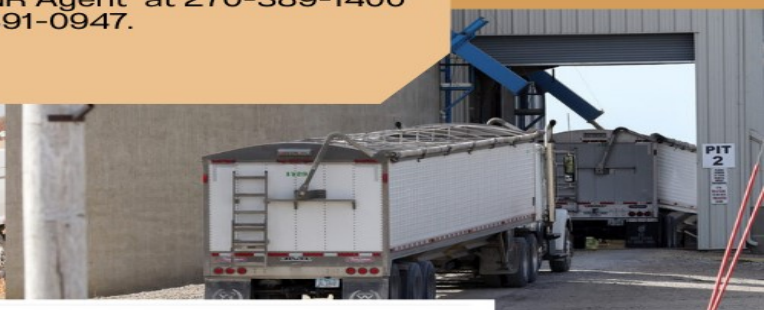
Summary

- Healthy liquidity means you can cover expenses and debt on time.
- Solid solvency shows you're less reliant on debt and own more of your farm.
- Strong profitability ensures you're making a return on assets and equity.
- Good repayment capacity means you can manage debt responsibly.
- Efficient operations leave room for owner income and reinvestment.

Understanding these ratios is like reading your farm's health records. When you track them year after year, patterns emerge, and those patterns help you make smarter decisions. Whether it's reducing debt, improving efficiency, or planning for the future, knowing your ratios gives you the tools to farm not just with hard work, but with confidence.

Wishing All A Good & Safe Harvest Season!

For any farmers that would like to enter the Union County Yield Contest,
Contact Katie Hughes, ANR Agent at 270-389-1400 or 217-891-0947.



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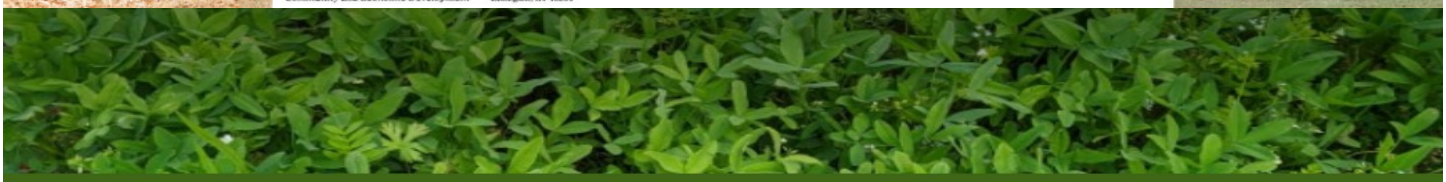

SUMMER COVER CROPS FOR PREVENTED PLANTING

Check Herbicide History

Ensure no residual herbicides will harm your cover crop.

Invest in Quality Seed

High-quality seed ensures good establishment and ground cover.

Prevent Seed Set

Terminate cover crops before they go to seed to avoid future weed issues.

Choose Monoculture or Mix

Monocultures allow selective herbicide use; mixes offer diverse benefits but limit herbicide options.

Select Species Wisely:

- **Grasses**: Sorghum sudangrass and pearl millet for biomass; foxtail millet for less bulk.
- **Legumes**: Cowpea and sunn hemp for nitrogen; annual lespedeza for lower biomass.
- **Others**: Radish and sunflower work well in mixes.

Contact your local county extension office for more information.

Source: UK Grain Crops, Chad Lee

Poison Ivy

Dr. Shawn Wright, UKY Extension Specialist

Poison ivy is a common perennial plant notorious for causing itchy rashes and allergic reactions in humans. It can be challenging to control due to its ability to spread rapidly and its resilience in various environments. With proper knowledge and effective strategies, you can manage and control poison ivy. Learn how to identify poison ivy. It is a deciduous vining ground cover that typically grows in clusters of three leaflets, although leaf count may vary. Its leaves are glossy, oval-shaped, and may have serrated or smooth edges. The plant's color ranges from light green to reddish orange, depending on age and time of year. The pesky plant poses health risks through its oily resin called urushiol, which causes allergic reactions. Direct contact with any part of the plant—leaves, stems, roots or even the smoke from burning it—can trigger a rash, accompanied by itching, redness, swelling and blisters. The oil can remain on clothing, pets, or tools that touch it. Avoid unprotected contact with poison ivy and take necessary precautions when attempting to control it. Reponses may range from mild to severe depending on the person, the amount of oil contacted, the method of contact (touching, inhalation from burning, etc.) and the time of year.

Here are some effective strategies for controlling poison ivy growth: 1.Wear protective clothing. When dealing with poison ivy, wear long sleeves, long pants, gloves and closed-toe shoes to minimize skin exposure. Eye protection and a hat may be necessary. Use disposable gloves and turn them inside out when removing them. You may need to use disposable garment such as those used by pesticide applicators, or make sure to wash clothing separately from other items to prevent urushiol transfer. 2.You can manually remove small infestations of poison ivy by digging up the roots with a garden trowel or gloved hands. Ensure you remove the entire plant, including the roots, to prevent regrowth. 3.For larger infestations or difficult-to-reach areas, you may find herbicides effective. These herbicides can be selective to broadleaf plants, typically marketed as a “poison ivy killer.” Always, always, always carefully read and follow the instructions on the product label. 4.Don’t be afraid to call in a professional. In severe cases, or if you are unsure about dealing with poison ivy yourself, consider seeking professional help from landscapers or pest control services experienced in poison ivy removal. 5.Dispose of poison ivy in the general trash waste bin.

Please do not put poison ivy in your yard waste collection. Controlling poison ivy requires a combination of identification, protective measures, and effective removal strategies. By understanding the plant's characteristics and using appropriate methods, you can minimize the risks associated with poison ivy and regain control over your environment. Remember to prioritize safety and, when in doubt, seek professional assistance to ensure effective and long-lasting control.

Congratulations to the Union County Bull Sale and the Union County ANR Agent

The Union County Bull Sale won a communication award from the Kentucky Association of County Agricultural Agents. This award was the event promotional package for using three different methods of advertising/ promoting the Union County Bull Sale. (Save the date, Videos and Sale Catalog)

Union County ANR Katie Hughes, received her National Achievement Award from the National Association of County Agricultural Agents. This award is given to agents that have 3-10 years of service in cooperative extension service and have been selected by their peers for excellence in their field of professionalism. This year's 67 recipients join 2,623 Achievement Award winners who have been recognized since this program started. Photo from NACAA

Extension Office will be Closed:

Sept 1,2025

Katie Hughes

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