Kentucky Master Grazer Educational Program

2024 Kentucky Grazing Calendar

BETTER PASTURE & GRAZING MANAGEMENT

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Dedication

Dr. Don Ball

The 2024 Kentucky Grazing Calendar is dedicated to Dr. Don Ball, Emeritus Professor of Forage Crops at Auburn University.

Don grew up on a family farm in Daviess County Kentucky and received his B.S. in Agriculture and Biology from Western Kentucky University and a M.S. and Ph.D. in Agronomy from Auburn University. Don served 35 years as Extension Forage Crop Agronomist at Auburn where he was widely sought after as a speaker and as a collaborator on writing and applied research projects. Don is recognized literally around the world as an expert on the production and management of forage crops.

Don's advice to young Extension professionals gives keen insight into his success: "You can get more done by working with other people than you can get done working alone. People stimulate others to come up with creative ideas, and everyone is more likely to stay motivated when others are depending on them. Also, working together increases the likelihood that various people will have the opportunity to focus on tasks they can do well."

Ball is proudest of the book he co-authored with two colleagues from other universities, Southern Forages, which proved to be an important contribution to forage-livestock production. In addition to Southern Forages, he has authored numerous nationally recognized publications on topics such as extending the grazing season and understanding forage quality.

Following retirement from Extension, Ball continues to do professional agronomic work. Ball serves as a consultant to the Oregon Forage Seed Commissions (Clover, Ryegrass, Orchardgrass, and Tall Fescue) and serves as an Emeritus Professor at Auburn University. Don and his late wife Vonda were unofficial ambassadors for forages and traveled frequently to conferences and meetings across the country.

The editors of the 2024 Kentucky Grazing Calendar are deeply indebted to Don Ball for his countless contributions to better understanding of forage crops in Kentucky and literally around the world.

The Cattle Producer's Resource

Body Condition Scoring (BCS) Guidelines

	Condition Score								
	Too thin			Just Right			Too Fat		
Trait	1	2	3	4	5	6	7	8	9
Visible Ribs	All	All	Most	3-5	1-2	0	0	0	0
Visible Spine	++++	+++	+	+	No	No	No	No	No
Brisket Fat	No	No	No	No	No	+	++	+++	++++
Tail Head Fat (Pones)	No	No	No	No	No	No	+	++	+++
Muscle Loss	+++	++	+	No	No	No	No	No	No

- If cows are too thin (condition score of 4 or less), they are likely to have trouble re-breeding and probably need improved grazing or supplement.
- Cows with 5 BCS may need some supplement or high quality pasture.
- Cows scoring 6 or 7 need minimal fall adjustment in management
- Fat cows (8-9) often are not pregnant or skipped calving last year. If she has a good calf and is pregnant - keep her!

(++++ indicates an increase or decrease in the trait relative to a 5 BCS)

Depending on available forage and current herd requirements, diet supplementation may be required.

- Calculations are usually based on 2-4 ozs of mineral consumption.
- Mineral requirements change with available forage: forbs/ shrubs offer more minerals than grasses.
- Producers need to switch to a high magnesium mineral at least 60 days before the calving season.
- Sulfur is generally in excess in TN and can be antagonistic to copper, zinc, iron and manganese.

Recommended Minimum Levels for Beef Cattle

Element	Level
Calcium	10 to 24%
Phosphorus	5 to 12%
Magnesium	2%
Magnesium	10 to 16%
Sulfur	1%
Manganese	2000 ppm
Copper	1750 ppm
Zinc	3500 ppm
Cobalt	20 ppm
Iodine	50 ppm
Selenium	44 ppm

Gestation Table Based on 283 Days

(Noble Foundation)

Breeding Date	Calving Date	Breeding Date	Calving Date	Breeding Date	Calving Date
1-Jan	13-Oct	7-May	16-Feb	10-Sep	22-Jun
8-Jan	20-Oct	14-May	23-Feb	17-Sep	29-Jun
15-Jan	27-Oct	21-May	2-Mar	24-Sep	6-Jul
22-Jan	3-Nov	28-May	9-Mar	1-Oct	13-Jul
29-Jan	10-Nov	4-Jun	16-Mar	8-Oct	20-Jul
5-Feb	17-Nov	11-Jun	23-Mar	15-Oct	27-Jul
12-Feb	24-Nov	18-Jun	30-Mar	22-Oct	3-Aug
19-Feb	1-Dec	25-Jun	6-Apr	29-Oct	10-Aug
26-Feb	8-Dec	2-Jul	13-Apr	5-Nov	17-Aug
5-Mar	15-Dec	9-Jul	20-Apr	12-Nov	24-Aug
12-Mar	22-Dec	16-Jul	27-Apr	19-Nov	31-Aug
19-Mar	29-Dec	23-Jul	4-May	26-Nov	7-Sep
26-Mar	5-Jan	30-Jul	11-May	3-Dec	14-Sep
2-Apr	12-Jan	6-Aug	18-May	10-Dec	21-Sep
9-Apr	19-Jan	13-Aug	25-May	17-Dec	28-Sep
16-Apr	26-Jan	20-Aug	1-Jun	24-Dec	5-Oct
23-Apr	2-Feb	27-Aug	8-Jun	31-Dec	12-Oct
30-Apr	9-Feb	3-Sep	15-Jun		

January Monthly Tips

- Remove animals from very wet pastures to limit pugging and soil compaction.
- Feed best hay to animals with highest nutritional needs and supplement poor quality hay as indicated by forage testing.
- Feed hay in areas where mud is less of a problem.
- Feed hay in poor pastures to increase soil fertility and enhance organic matter.
- Consider "bale grazing" — set out hay when the ground is dry or frozen. Use temporary fencing to allocate bales as needed.
- Prepare for pasture renovation by purchasing improved varieties, inoculant, etc. and getting equipment ready.

Selecting an energizer. Energizers are the heart of electric fencing systems and are NOT a component that you should try to "save" money on. A low-cost energizer often costs more in future repairs and replacements. If electrical service is available, plug-in energizers are considerably more powerful and offer the best value in terms of cost to power ratio. For remote areas, solar or battery powered energizers are viable alternatives for smaller acreages. Power comparisons of energizers should be done using "stored energy" which is measured in joules.

Stockpiled tall fescue can maintain forage quality well into winter, even after snowfall and freezing weather. Tall fescue holds its protein and energy value in winter conditions better than other cool season grasses.

Photo by Chris Teutsch

JANUARY 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Dung and urine are valuable commodities in grazing systems. Well managed grazing systems remove very few nutrients from the overall system. However, poor grazing management can result in overconcentration of nutrients in areas where animals congregate. Implementing rotation stocking improves dung and urine distribution within grazing systems and strengthens nutrient cycling.					**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	DECEMBER 2023 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
31 New Year's Eve	1 New Year's Day	2	3	4	5	6
7	8	9	10	11	12	13
14	15 Martin Luther King Day	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1		FEBRUARY 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Notes:

February Monthly Tips

- Continue grazing stockpiled tall fescue if available.
- Begin frost seeding with 6-8 lb/A red and 1-2 lb/A ladino white clover on closely grazed pastures.
- On pastures with lower fertility, consider adding 10-15 lb/A annual lespedeza to the above recommendation.
- Consider applying 40-50 lb/A nitrogen in mid- to late-February on some pastures to promote early growth.
- Service and calibrate no-till drills. (see calibration procedure in back of calendar)
- Apply lime and fertilizer according to soil test if not done in fall.

Grounding system. For an electric fencing to work properly, current from the fence must travel though the animal into the ground and back to the energizer. The grounding system works as an "antenna" to collect this current and complete the circuit. Most of the problems associated with low voltage on an electric fence are caused by a poorly constructed grounding system. Grounding systems should have a minimum of 3 galvanized grounding rods, 10 feet apart, 6 feet in the ground, all connected with a single galvanized wire running from the energizer. For a very large energizers or very dry conditions more grounding rods may be needed.

Bale grazing is pre-placement of bales for winter feeding and then allocating them as needed using temporary electrified fence and ring feeders as shown here. Bale grazing saves time and reduces traffic damage from heavy equipment hauling round bales for feeding during the wet conditions of winter. In addition it recycles valuable fertilizer nutrients from the hay onto pasture fields.

Photo by Greg Halich

FEBRUARY 2024

Bonus Tip: Select improved varieties of red and white clover for frost seeding. The University of Kentucky has one of the most extensive variety testing programs in the United States. Choosing varieties that have performed well in these trials will ensure both productivity and persistence. See https://forages.ca.uky.edu for reports.

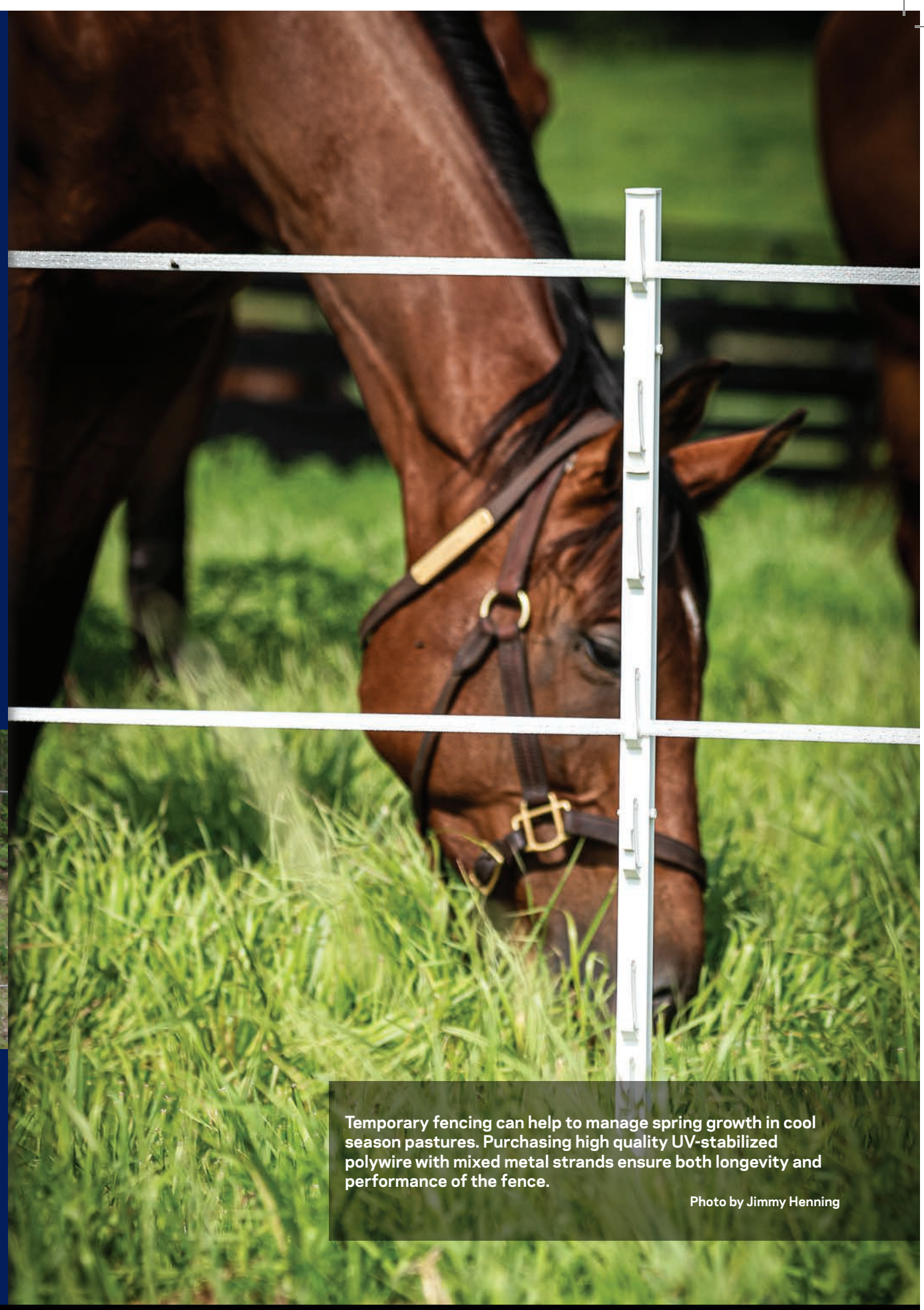
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				 PURPLE DEADNETTLE	 HENBIT	JANUARY 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
29  BIENNIAL THISTLES	 POISON HEMLOCK	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	31	1	2 Groundhog Day	3
4	5	6	7	8	9	10
11	12	13	14 Valentine's Day	15	16	17
18	19 President's Day	20	21	22	23	24
25	26	27	28	29	1	MARCH 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

March Monthly Tips

- Continue pasture renovation by no-tilling seeding legumes (1/4 to 1/2 inch seeding depth).
- Continue feeding hay until adequate forage exists in the pasture for grazing.
- Spring seeding of grasses should be done in early to mid-March (but fall is preferred)
- Begin smoothing and re-seeding hay feeding and heavy traffic areas.
- Graze pastures overseeded with clover to reduce competition from existing grasses; pull animals off as clover seedlings start to be grazed.
- Provide free choice high-magnesium mineral to prevent grass tetany on lush spring growth.

Connect wires in parallel at the end of runs. A good way to increase the ability of a fence to carry voltage is to connect all the wires at the beginning and end of runs of multi-wire fence. This allows the multiple strands of high tensile wire to function as one large wire that can carry higher levels of voltage.



Temporary fencing can help to manage spring growth in cool season pastures. Purchasing high quality UV-stabilized polywire with mixed metal strands ensure both longevity and performance of the fence.

Photo by Jimmy Henning

MARCH 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Fencing tune-up. Pasture growth goes from 0 to 60 in a matter of weeks. Being ready to utilize rapid spring growth is critical. March is a good month to check and repair fences. Clear limbs that may have fallen over the winter, check energizers and make sure that temporary fencing supplies are ready to go.		**FEBRUARY 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	28	29	1	2
3	4	5	6	7	8	9
10 Daylight Savings Begins	11	12	13	14	15	16
17 St. Patrick's Day	18	19 First Day of Spring	20	21	22	23
24	25	26	27	28	29 Good Friday	30
31 Easter	1	2			**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	**APRIL 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Notes:

April Monthly Tips

- Graze winter annuals that were planted last fall.
- As pasture growth begins, rotate through pastures quickly to keep up with rapid spring growth.
- Creep-graze calves and lambs, allowing them access to highest-quality pasture.
- As pasture growth exceeds the needs of the livestock, remove some fields from the rotation and allow growth to accumulate for hay or haylage.
- Determine need for supplemental warm season forages such as pearl millet or sudangrass.
- Flash graze pastures newly seeded with clovers to reduce grass competition.

Always use underground cable designed for electric fencing and place it in protective tubing. It is very important to only use underground cable that is designed for electric fence. Never use any product that is intended for residential use. Whenever a cable carrying current is run under the ground, always place it in some type of pipe or conduit that will protect it from future damage. Wires going under gates should be buried to a depth of approximately 1 foot.

The Kentucky Grazing School is a two day, hands-on workshop that provides graziers with the knowledge to plan and implement a rotational grazing system.
For more information on how to attend these schools please visit https://forages/ca.uky.edu/Events or search for UKY Grazing Schools in your internet browser.

Photo by Jimmy Henning

APRIL 2024

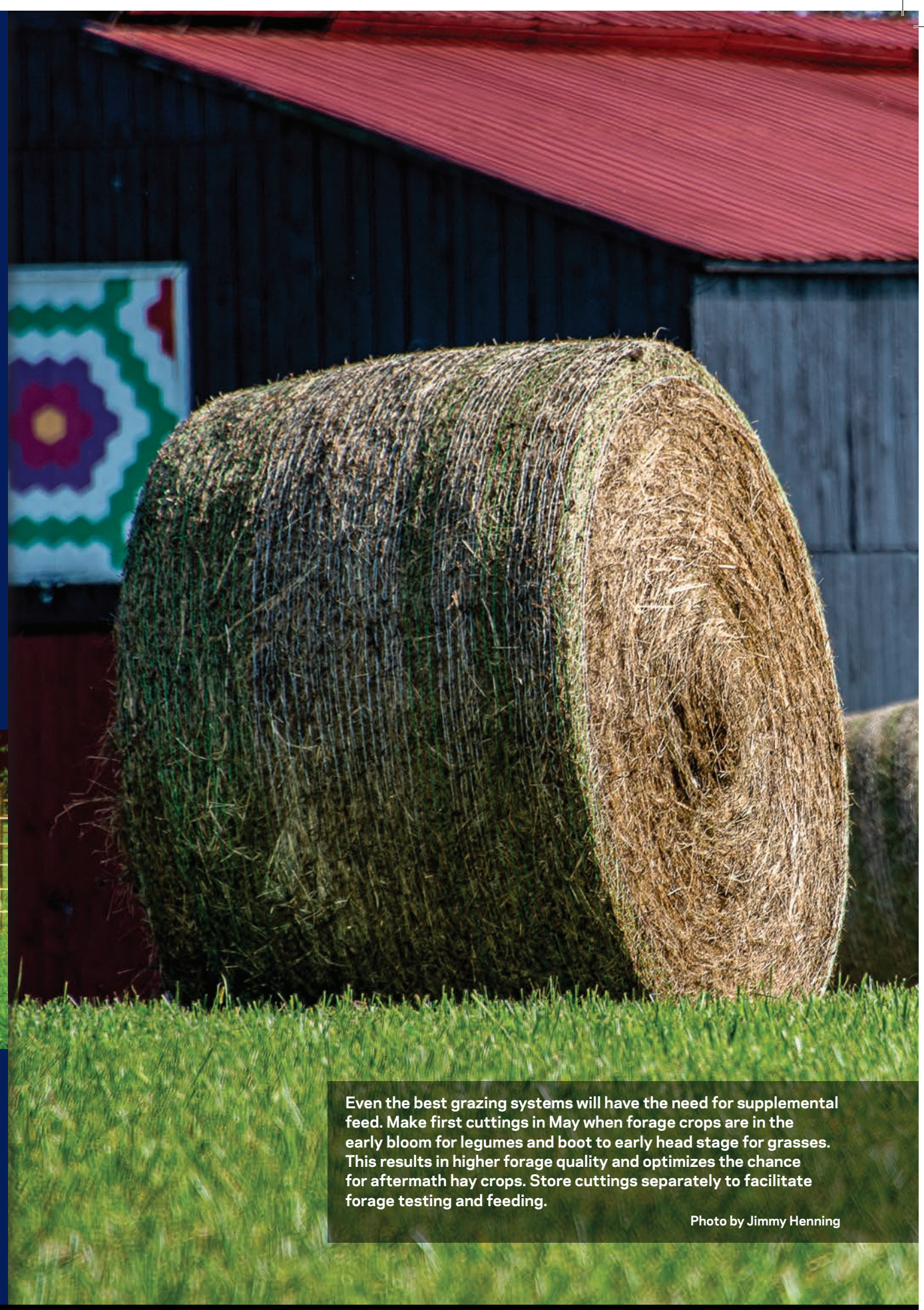
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Create a grazing wedge. A grazing wedge refers to staging pastures so that the growth ranges from those "just grazed" to those pastures "ready to graze". This is accomplished by moving livestock quickly in the spring since pastures are rapidly growing.		 COMMON COCKLEBUR	 SPINY PIGWEED	 DOCK	 RAGWEED	**MARCH 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22 Passover Begins Earth Day	23	24	25	26	27
28	29	30 Passover Ends	1	2	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	**MAY 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

May Monthly Tips

- Seed warm season annual grasses once soil temperature reaches 60 F.
- Clip, graze or make hay to prevent seedhead formation in cool season pastures.
- Rotate cool season pastures when residual is 3-4 inches.
- Consider temporary electric fencing to subdivide larger pastures and exclude areas for mechanical harvesting.
- Scout pastures for summer annual weeds and control when small.

Use offsets on existing fencing. A good way to protect new fencing or enhance existing fencing is to use an offset strand of electrified fencing. Installing a single strand of electric fence on the perimeter of pastures allows graziers to quickly and easily subdivide existing pastures with polywire and step in posts. There are several different styles of offsets including wire, plastic, pigtail, and fiberglass. All styles can work, but it is important that any plastic or fiberglass materials are UV stabilized and come with a warranty.



Even the best grazing systems will have the need for supplemental feed. Make first cuttings in May when forage crops are in the early bloom for legumes and boot to early head stage for grasses. This results in higher forage quality and optimizes the chance for aftermath hay crops. Store cuttings separately to facilitate forage testing and feeding.

Photo by Jimmy Henning

MAY 2024

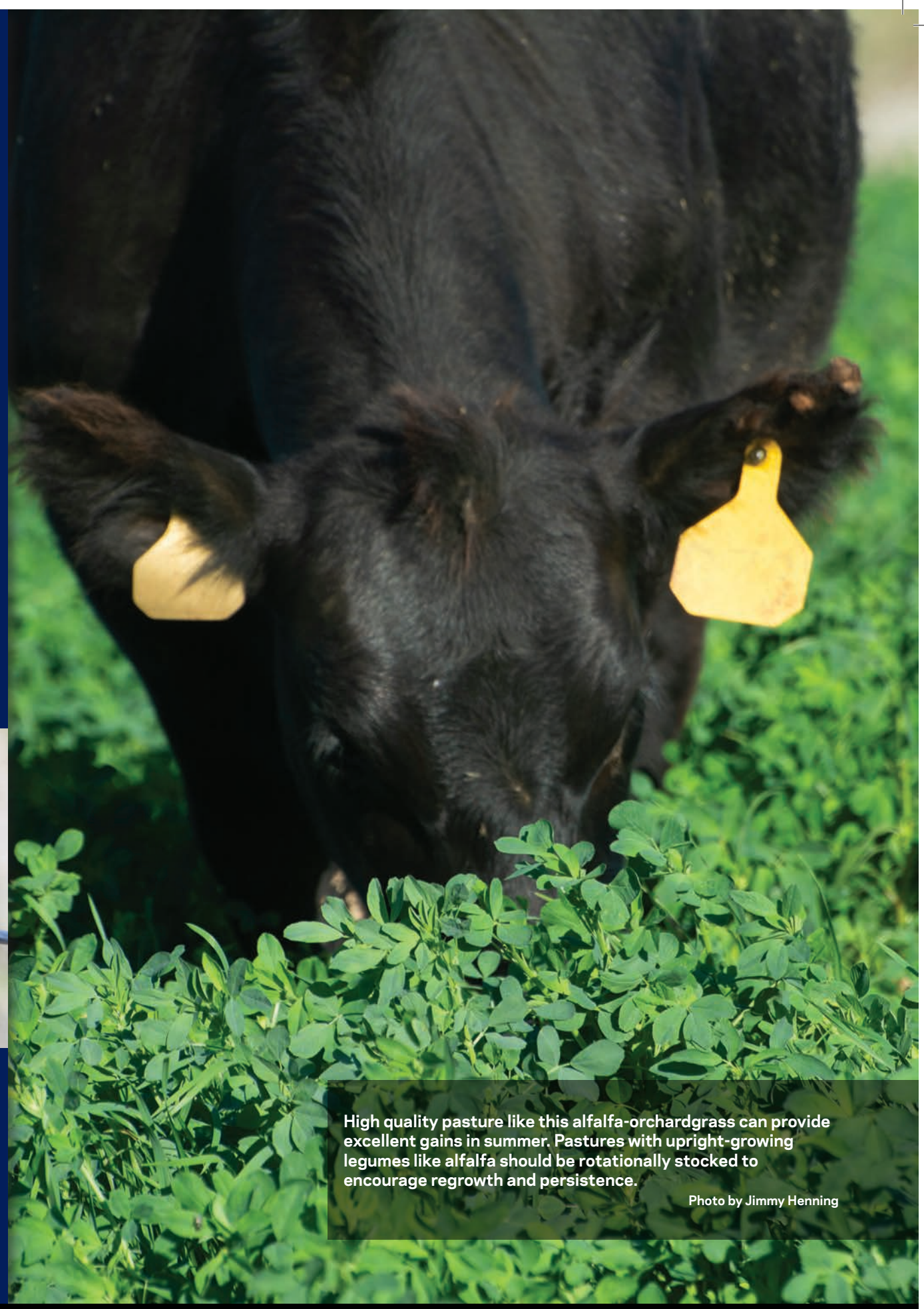
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Improve hay quality by cutting at the correct growth stage. Stage of maturity is the single most important factor impacting the nutritional value of hay. Grasses should be cut at the boot stage. Rainfall in the spring often delays harvest. Making baleage allows producers to cut hay one day and bale it the next.					**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	APRIL 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12 Mother's Day	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27 Memorial Day	28	29	30	31	JUNE 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Notes:

June Monthly Tips

- Make plans to attend the KFGC's Forage Tours.
- Clip pastures for weeds and seedheads as needed.
- Use portable fencing to increase paddock numbers to allow for longer recovery periods.
- When present, crabgrass and johnsongrass can provide high quality summer grazing.
- Begin grazing native and annual warm-season grasses. Start at 18-20" and stop at 8-10".

Always connect electrified wires with clamps. Loose connections result in loss of voltage. Connections should NOT be wrapped, but rather clamped together with a high-quality clamp that is designed for high tensile fencing. Never use clamps that are constructed of dissimilar metals. Although economy clamps constructed of cast metal are sometimes available, they often fail upon tightening. Saving a few cents on clamps often leads to exponential headaches in the future.



High quality pasture like this alfalfa-orchardgrass can provide excellent gains in summer. Pastures with upright-growing legumes like alfalfa should be rotationally stocked to encourage regrowth and persistence.

Photo by Jimmy Henning

JUNE 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Novel endophyte tall fescue. The toxic endophyte in tall fescue costs the livestock industry in the United States more than $1 billion annually. It is like a thief that you do not know is there, causing lower average daily gains and reduced conception rates. Tall fescue varieties infected with a novel endophyte have improved persistence and animal performance.		 BUTTERCUP	MAY 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16 Father's Day	17	18	19 Juneteenth	20 First Day of Summer	21	22
23	24	25	26	27	28	29
30	1	2	 RAGWEED	 SPINY PIGWEED	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	JULY 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

July Monthly Tips

- Continue grazing available summer annuals and apply 40-60 lb N/A to stimulate regrowth.
- Identify fescue pastures for stockpiling. Choose pastures that are well drained, have a strong sod and have not been overgrazed.
- Soil test pastures to determine fertility needs.
- Using UK variety trial results, select varieties to plant in the fall and order seed.
- If drought conditions limit pasture growth, close off pastures and feed hay in a sacrifice area.

Utilize new technologies to manage electric fencing systems. There are now several options that allow you to remotely manage electric fencing systems. These include remote controls that allow fences to be turned on and off when making fence repairs and phone apps that allow the fence to be monitored remotely.

Native warm season grasses like this big bluestem complement cool season grasses to provide high quality summer grazing. Stands of these upright grasses require rotational grazing to persist and with good management can live for decades.

Photo by Jimmy Henning

JULY 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Brown midrib trait. Summer annual grasses that have the BMR trait have increased digestibility resulting in improved animal performance. Whenever possible, select varieties that have the BMR trait.		 MARSHELDER	 COCKLEBURR	 MILKWEED	 HORSENETTLE	JUNE 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
30	1	2	3	4 Independence Day	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	AUGUST 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

August Monthly Tips

- Do NOT graze cool-season pastures closer than 3 to 4 inches. This will help to conserve soil moisture and prevent overheating of the crowns.
- Graze warm season annuals or perennials to allow cool season grasses to recover and to avoid endophyte-infected fescue.
- After the first good rain in August, seed winter annuals (such as small grains, ryegrass, crimson clover, and brassicas) for late fall and early spring grazing.
- Plant alfalfa after first good rain in August to allow sufficient size going into winter.
- In mid-August to early September, exclude livestock from pastures to be stockpiled and apply 60 lb N/A and any needed P and K.

Join polywire correctly. If you use polywire you will eventually have to repair breaks or join rolls. It is important to have good conductivity. Simply tying a knot is NOT sufficient. To ensure good conductivity, separate 2 inches of the metal strands from the poly material by melting plastic away with a lighter or match. Then tie the polywire together so that the exposed ends match up and twist them together. This will optimize conductivity and ensure maximum animal control.

Summer annual grasses like this crabgrass will provide high quality pasture throughout the summer. Unlike the sorghums, crabgrass does not have the potential to cause prussic acid toxicity.

Photo by Cody Rakes

AUGUST 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Weeds or wonders? Some summer grasses that are commonly considered weeds can actually provide high quality summer grazing when managed. These species include crabgrass, Johnsongrass and Bermudagrass.		JULY 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	29 	30 	31 	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	SEPTEMBER 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Notes:

September Monthly Tips

- If not already done, soil sample and apply lime and fertilizer as needed.
- Plant perennial grasses and legumes. Consider using a novel endophyte tall fescue.
- Harvest hay as needed. Do NOT harvest alfalfa after mid-September.
- Closely monitor livestock and do NOT overgraze. Pasture plants accumulate energy reserves in the fall that help them overwinter and regrow in the spring.
- Feed hay to allow pastures to stockpile for winter grazing.
- Rest native warm-season grass fields until after frost for better winter survival.

Use high quality temporary fencing. Temporary fencing comes in a number of styles including polywire, electric tape, electric braid, and polyrope. Electric tape should be used where high visibility is needed. Polywire is most commonly used by graziers since longer runs can be held on reels. When selecting polywire products, choose products that contain more strands of wire and for loner runs, choose products that contain wire made of mixed metals. Polywire containing mixed metals are about 40 times more conductive.

September is best time to seed many of our perennial forage crops especially cool season grasses. In addition, annual forages like annual ryegrass, wheat and cereal rye can also be established and will provide additional high quality pasture in late winter and early spring. Always calibrate the drill for best results.

Photo by Jimmy Henning

SEPTEMBER 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Consider buying hay. The cost of making hay is often higher than the cost of buying hay. When purchasing hay, you not only get the feed value of the hay, but also the fertilizer value of the nutrients that it contains.				AUGUST 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	30	31
1	2 Labor Day	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22 First Day of Fall	23	24	25	26	27	28
29	30	1	2		**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	OCTOBER 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

October Monthly Tips

- Feed hay to allow cool-season pastures to accumulate forage growth for winter grazing.
- Do NOT harvest or graze alfalfa fields.
- Inventory and test each hay lot for nutritive value and consult a nutritionist to design a supplementation program as needed.
- Remove livestock from pastures that contain sorghum species (sorghum-sudangrass, sudangrass, and johnsongrass) when frost is expected to prevent cyanide poisoning.
- Begin strip grazing early planted small grain and brassicas (turnips and rape) mixes by the end of this month.

Use a high-quality geared reel. High quality reels are an essential part of temporary fencing systems. They should be constructed of UV stabilized plastic, have insulated handles, and a positive locking mechanism. Geared reels are ideal since they make wire retrieval much faster. It is tempting to save a few dollars on "economy" reels, however, these reels rarely last more than a season or two.

October is a good time to pull soil samples for lime and fertilizer needs in pasture and hay fields. Developing a cost-effective fertilizer program starts with a current soil test.
Photo by Jimmy Henning

OCTOBER 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Feed hay in October and November. Feeding hay in October and November allows grass being stockpiled for winter grazing time to grow. In addition, conditions for hay feeding are often better in late fall than during the winter months.		 CHICORY	 BIENNIAL THISTLES	 NARROWLEAF PLANTAIN	**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	**SEPTEMBER 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
29	30	1	2	3	4	5
6	7 Indigenous Peoples' Day	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31 Halloween	1	**NOVEMBER 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Notes:

November Monthly Tips

- Apply 30-40 lb N/A to strengthen cool-season grass sods.
- Using a plate meter or grazing stick, estimate stockpile available for winter grazing.
- Adjust animal numbers or purchase additional hay to balance forage-feed supply to livestock needs.
- Graze crop residues and cover crops that will not overwinter.
- Graze winter annuals once they are 6-8 inches tall and are well anchored. Do NOT graze closer to 4 inches.
- Alkaloid content of tall fescue can be high in some years, but will begin decline after a hard freeze.

Use fault finder to monitor voltage and find shorts. For electric fencing to work properly, a voltage of approximately 5000 volts should be maintained at all times. Shorts in electric fences can cause reduced voltage and can often be difficult to find. A fault finder shows the direction and severity of the of the short. Purchasing a high-quality fault finder is money well spent!

Fall seeded forbs like these turnips can provide late winter and early spring grazing. Turnips and other brassicas will work as well. Because forbs and brassicas are high in moisture and low in fiber, it is suggested that this diet be supplemented with hay, stockpiled grasses, or another high fiber feed.

Photo by Jimmy Henning

NOVEMBER 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Strip graze stockpiled grass. Growing grass is one thing, but efficiently harvesting it is another. Strip grazing tall fescue can increase grazing days by more than 40%. This is almost like free money… for every 2 days of grazing, the third is free!		**OCTOBER 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	30	31	1	2
3 Daylight Savings Time Ends	4	5	6	7	8	9
10	11 Veterans Day	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28 Thanksgiving Day	29	30
1	2				**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	**DECEMBER 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

December Monthly Tips

- Begin utilizing stockpiled pastures. Graze pastures with orchardgrass and clovers first. Save tall fescue pastures for late winter grazing.
- Using polywire, strip graze stockpiled pastures to improve utilization. Start at the water source and allocate enough forage for 2-3 days. Back fencing is not necessary.
- Make plans to frost seed red and white clover onto closely grazed tall fescue pastures in February.
- Begin hay feeding as stockpiled forage is used up.
- Minimizing waste by utilizing ring feeders.

Train livestock to electric fencing. Since electric fencing is a psychological barrier rather than a physical barrier, livestock must be trained to respect it. Choose a well fenced holding paddock and install an offset wire about 30 inches above the ground. Make sure the energizer and grounding system are optimized to deliver a knee buckling and eye watering shock. Once animals are trained to the offset, set up a strand of polywire near the end of the paddock. Livestock should be fully trained within 48 hours. Animals that cannot be trained to respect electric fencing should be culled.

Stockpiled tall fescue can extend the grazing season into December and beyond. Strip grazing using temporary polywire fencing can extend grazing days by up to 40%.

Photo by Chris Teutsch

DECEMBER 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bonus Tip: Reflect and plan. December is a good time to look back over the last year and think about things that went right and things that didn't go as planned. It is also a good time to set goals and make plans for the upcoming grazing season. It is important to not only set long-term goals, but also more immediate objectives that can be achieved in the upcoming year. Make sure and write these goals down and hang them up where you will see them every day.				**NOVEMBER 2024** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	29	30
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21 First Day of Winter
22	23	24 Christmas Eve	25 Christmas Day Hanukkah Begins	26 Kwanzaa Begins	27	28
29	30	31 New Year's Eve	1 New Year's Day Kwanzaa Ends		**Broadleaf Weed Control Opportunities** See AGR-207 for more information.	**JANUARY 2025** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:

Don't Make a Mistake — Calibrate!!

College of Agriculture, Food and Environment
Grain and Forage Center of Excellence

www2.ca.uky.edu/grazer

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1) Read your drill's operators manual to learn where the adjustments for leveling, seed depth, and seeding rate are located.
2) Ensure that seed tubes are not blocked by spraying them out with an air hose and running a wire through them. DO NOT SKIP THIS STEP!!!
3) Use the "Seeding Rate Chart" on the drill to determine the initial drill setting and set the drill accordingly.
4) Select the proper gear box setting or drive gear for the desired target seeding rate based on the manual.
5) Place a small amount of seed above each opening in the drill box.
6) Lower the drill to engage the seeding mechanism.
7) If calibrating the drill in place, jack up the drive wheel just far enough off the ground so that it can be rotated.
8) Turn the seeding mechanism until seed comes out. Make sure that seed is coming out of each disk opener.
9) Disconnect three to five seed tubes from the disk openers.
10) Place and secure a collection container on each seed tube. A sandwich bag secured with a rubber band works well.
11) Pull the drill 150 feet OR turn the drive wheel the number of revolutions it would take to travel 150 feet.
    a. Revolutions can be determined by using the following formula: Number of Revolutions = 150 / (3.14 x Diameter of the Drive Wheel in feet).
12) Carefully remove collection containers.
13) Tare the scale for an empty collection container and then weigh and record in grams each collection container with the seed in it.
14) Add the seed weight for each collection container together and divide by the number of seed drop tubes collected to get the AVERAGE weight per disk opener.
15) Compare the AVERAGE weight per disk opener to the grams of seed/disk opener found in Table 1 for the desired seeding rate and row spacing.
    a. If the collected weight is within 10% of the target weight found in Table 1, then you are finished.
    b. If the collected weight is more than 10% different than the target weight found in Table 1, repeat steps 7 to 12 after adjusting seeding rate setting on drill.

Items Needed to Calibrate Drill:

1. Tape measure (150 feet)
2. Flags to mark stopping and starting points
3. Gram scale with 0.1-gram accuracy
4. Plastic sandwich bags
5. Rubber bands
6. Screwdriver and pliers

Table 1. Grams of seed to catch per disk opener in 150 feet for given combinations of disk opener width (inches) and seeding rate (pounds/acre).

	Seeding Rate in pounds/acre																					
Distance between Disk Openers	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**25**	**30**	**35**	**40**	**50**	**60**	**80**	**90**	**100**	**120**	**140**	**160**	**180**
inches	grams of seed/disk opener to catch in 150 feet																						
6	1.6	3.1	4.7	6.3	7.8	9.4	10.9	12.5	14.1	15.6	19.5	23.5	27.4	31.3	39.1	46.9	62.5	70.4	78.2	93.8	109.4	125.1	140.7
7	1.8	3.6	5.5	7.3	9.1	10.9	12.8	14.6	16.4	18.2	22.8	27.3	31.9	36.5	45.6	54.7	72.9	82.0	91.1	109.4	127.6	145.8	164.1
7.5	2.0	3.9	5.9	7.8	9.8	11.7	13.7	15.6	17.6	19.5	24.4	29.3	34.2	39.1	48.9	58.6	78.2	87.9	97.7	117.3	136.8	156.3	175.9
8	2.1	4.2	6.3	8.3	10.4	12.5	14.6	16.7	18.8	20.9	26.1	31.3	36.5	41.7	52.1	62.6	83.4	93.8	104.3	125.1	146.0	166.8	187.7

A YouTube video on grain drill calibration can be viewed on the KYForages YouTube Channel at https://www.youtube.com/c/KYForages

Forage Crop Guide for Kentucky

Uses	Seed Size: lbs./bu. or (seeds/lbs.)	Desired Plant Density	Seeding Rate/A	Seeding Depth (inches)	Seeding Date	First Harvest[1]	Annual Yield[2]	Comments
Alfalfa—*Medicago sativa*								
hay, silage, pasture	60 (227,000)	25-40 plants/sq. ft. seeding year	18-20 lbs.	1/4-1/2	*Primary:* Mar 15-May 1 *Secondary:* Aug 1-Sep 15	May 1-Sep 15	3-6 T	Correct soil acidity at least 4 months before seeding. Inoculate seed. Monitor alfalfa weevil and leafhopper, and spray as recommended. *Spring seeding*: seed after risk of killing frost. *Fall seeding*: seed early to reduce risk of Sclerotinia.
Bermudagrass, Seeded—*Cynodon dactylon*								
hay, pasture	40 (2,071,000)		5-10 lbs. (hulled seed)	1/4 (hulled seed)	Apr 15-Jun 1	May 15-Sep 15	2-6 T	Warm-season perennial. Harvest 5 times per season for hay. Seed after risk of frost. Ensure seeded variety is winter-hardy in Kentucky.
Bluestem, Big—*Andropogon gerardii*								
wildlife, hay, pasture	(165,000)		9-11 lbs. PLS[3]	1/4-1/2	Apr 15-Jun 1	Jun 15-Jul 15	21/2-31/2 T	Light, fluffy seed. Sensitive to overgrazing. Slow to establish. Seed after risk of frost.
Bluestem, Little—*Schizachyrium scoparium*								
wildlife, pasture	(260,000)		7-9 lbs. PLS[3]	1/4	Apr 15-Jun 1	Jun 15-Sep 15	11/2-2 T	Primarily used in native grass mixtures at rates of 1 to 2 lbs./A. Sensitive to overgrazing. Upright, bunchgrass similar in appearance to broom sedge. Slow to establish.
Clover, Crimson—*Trifolium incarnatum*								
hay, pasture	60 (150,000)		20-30 lbs.	1/4-1/2	Aug 1-Oct 15	May 1-May 15	1-21/2 T	Inoculate. Annual clover. Fall planted for spring forage production or as a plow-down crop. If possible, use "Kentucky Pride" due to it increased cold tolerance.
Clover, Red—*Trifolium pratense*								
hay, pasture	60 (272,000)		8-12 lbs.	1/4-1/2	*Primary:* Feb 1-Apr 15 *Secondary:* Aug 1- Sep 15	May 1-Sep 15	2-5 T	Inoculate. Do not graze or clip after Sept. 15 until after freeze. Use improved varieties for 2- to 3-year stands.
Clover, White (Ladino and Dutch or Common types)—*Trifolium repens*								
pasture	60 (768,000)		1-3 lbs.	1/4	Feb 1-Apr 15	Aug 1-Sep 10	1-3 T	Good for all permanent pasture mixtures. Inoculate. Use ladino type for higher forage yield.
Eastern Gamagrass—*Tripsacum dactyloides*								
grazing, hay			7-10 lbs.	1/2-1	Apr 15-Jun 15	Jun 1	4-6 T	Highest quality native warm-season perennial. Slow to establish.
Fescue, Tall—*Festuca arundinacea*								
hay, pasture	22 (227,000)		15-25 lbs.	1/4-1/2	*Primary:* Aug 20-Oct 1	May 1-20	2-4 T	KY31 variety contains fungal endophyte that causes toxicity in livestock. Use low-endophyte or novel-endophyte varieties.

Forage Crop Guide for Kentucky (continued)

Uses	Seed Size: lbs./bu. or (seeds/lbs.)	Desired Plant Density	Seeding Rate/A	Seeding Depth (inches)	Seeding Date	First Harvest[1]	Annual Yield[2]	Comments
					Secondary: Feb 15-Apr 15			
Indiangrass—*Sorghastrum nutans*								
hay, pasture, wildlife	(175,000)		9-11 lbs.	1/4-1/2	Apr 15-Jun 1	Jul 15-Sep 15	2-4 T	Light, fluffy seed. Needs special drills for no-till seeding. Latest maturity of native grasses. Sensitive to overgrazing and slow to establish.
Kentucky Bluegrass—*Poa pratensis*								
pasture	14 (1,400,000)		10-15 lbs.	1/4	*Primary:* Aug 15-Sep 15 *Secondary:* Feb 15-Apr 15	May 1-15	1-3 T	Tolerant to close grazing. Lower forage yield than other cool-season grasses.
Lespedeza, Annual—*Kummerowia stipulacea*—Korean; *K. striata*—Kobe or Striate types)								
pasture, hay	30 (240,000)		20-25 lbs.	1/4	Feb 15-Apr 1	Aug 15	1-21/2 T	Inoculate. Annual warm-season legume. Tolerant to low pH and low P.
Lespedeza, Sericea— *Lespedeza cuneata*								
hay, pasture	60 (372,000) hulled seed		35 (scarified) lbs.	1/4	Mar 15-Apr 15	Hay: May 15-Sep 15	1-3 T	Harvest at an immature stage of growth to maintain quality (12-14" high). Inoculate. Used mainly for soil conservation purposes.
Millet, Foxtail (German)—*Setaria italica*								
hay, pasture	50 (213,000)		20-30 lbs.	1/2-3/4	May 1-Aug 1	Aug 15-Oct 1	11/2-3 T	Used mainly for wildlife feed. Can be used as an emergency hay crop or pasture. Used as a smother crop when reestablishing pasture.
Millet, Pearl—*Pennisetum glaucum*								
pasture, silage	50 (82,000)		5-7 lbs. in rows, 15-25 broadcast	1/2-3/4	May 1-Aug 1	Jun 15-Oct 15	2-5 T	Good for summer pasture. Potential for nitrate problems (see ASC-57, *Cattle-Related Forage Disorders*, for more details).
Oats, Winter and Spring—*Avena sativa*								
hay, silage	32 (15,000)	25-30 plants/sq. ft.	2.5-3 bu. (forage)	1-2	Mar 1-Apr 1, Sep 15-30	May 20-Jun 10	4-9 T at 65% moisture	Spring oats are seeded as a grain crop or as emergency hay or silage. Winter oats are least winter-hardy of small grains. Preferred companion crop when seeding perennial forages since they are the least competitive small grain.
Orchardgrass—*Dactylis glomerata*								

Forage Crop Guide for Kentucky (continued)

Uses	Seed Size: lbs./bu. or (seeds/lbs.)	Desired Plant Density	Seeding Rate/A	Seeding Depth (inches)	Seeding Date	First Harvest[1]	Annual Yield[2]	Comments
hay, pasture	14 (416,000)		15-20 lbs.	1/4-1/2	*Primary:* Aug 20-Sep 20 *Secondary:* Feb 15-Apr 15	*Primary:* May 1-20 *Secondary:* Jul 1-15	2-4 T	High-quality, high-yielding cool-season grass. Preferred grass for mixtures with alfalfa. Can become clumpy over time.
Rye—*Secale cereale*								
pasture, silage	56 (18,000)	25-30 plants/sqft	1.5-2.5 bu. (forage)	1-2	Sep 1-Oct 15 (forage)	Apr 1-20	5-10 T at 65% moisture	Cut for silage in boot stage. Excellent for grazing and no-till mulch. Best small grain for fall grazing.
Ryegrass, Annual—*Lolium multiflorum*								
pasture, silage, hay	24 (224,000)		20-30 lbs.	1/4-1/2	Aug 15-Oct 1	Mar 15-May 15	11/2-3 T	Used mainly as cover crop or for grazing. Increased use for round bale silage.
Ryegrass, Perennial—*Lolium perenne*								
hay, pasture	24 (330,000)		15-25 lbs.	1/4-1/2	*Primary:* Aug 20-Oct 1 *Secondary:* Feb 1-Apr 15	Apr 20-May 10	2-4 T	Use winter-hardy varieties. Average stand length in Kentucky is 2 years. High fertility soils and/or irrigation can extend stand life.
Sorghum, Forage—*Sorghum bicolor*								
silage	56 (24,000)		15-20 lbs.	11/2	May 1-Jul 1	Aug 15-Sep 20	15-25 T at 65% moisture	Sorghum/sudangrass hybrid more commonly used for forage.
Soybean—*Glyine max*								
silage, hay	60 (2,500-3,500)	90,000-150,000 plants/A	1-1.5 bu. (forage)	1-2	May 1-Jun 10	Aug 1-Sep 30 (hay)	2-4 T	Seed size varies by variety. High end of seed rate range for narrow rows and late planting. Inoculate if field has been out of soybean for 3-5 years. Can be seeded as late as July 1 for double cropping. Maturity groups III to early V best suited for Kentucky.
Sudangrass and Sorghum x Sudan Hybrids (Sorghum bicolor)								
pasture, silage, hay	40 (35,000-43,000)		20-40 lbs.	1/2-2	May 10-Aug 1	Jun 15-Oct 15	2-5 T	Excellent warm-season annual pasture or silage crop. Smaller stemmed sudangrass preferred for hay production. Potential for prussic acid and nitrate problems.
Switchgrass—*Panicum virgatum*								
hay, pasture, wildlife	(389,000)		6-8 lbs.	1/4-1/2	Apr 15-May 1	Jun 1-Sep 15	3-5 T	Slick, free-flowing seed. Most tolerant of wet soils of all native grasses. Sensitive to overgrazing. Slow to establish.
Timothy—*Phleum pratense*								
hay	45		6-8 lbs.	1/4-1/2	Aug 20-Oct 1	May 20-Jun	1-3 T	Timothy is desired by some horse owners but is essentially a one-cut

Forage Crop Guide for Kentucky (continued)

Uses	Seed Size: lbs./bu. or (seeds/lbs.)	Desired Plant Density	Seeding Rate/A	Seeding Depth (inches)	Seeding Date	First Harvest[1]	Annual Yield[2]	Comments
	(1,152,000)					10		hay crop in Kentucky. Average stand length of 2-3 years.
Triticale—*Triticum x Secale*								
silage	50 (15,000)	25-30 plants/sq ft	2-2.5 bu. (forage)	1-2	Oct 1-30	May 10-Jun 1 (forage)	4-10 T at 65% moisture	Hybrid between wheat and rye. Cut for silage in boot stage. Use winter varieties. Newer varieties have comparable yields to wheat.
Turnips and related *brassicas—Brassica rapa, Brassica* spp.								
pasture	55		3-6 lbs.	1/4	Aug 1-Sep 1	Nov 15	2-4 T	Very high-quality pasture (85% digestibility). Often dry hay fed when grazing to add fiber or seeded in mixtures with small grains. New varieties show improved regrowth after grazing.
Wheat—*Triticum aestivum*								
grain, silage, cover crop	60 (11,000)	25-30 plants/ sq. ft.	2-2.5 bu. (forage)	1-2	Mid-Sep to Late Oct	May 10-Jun 1 (forage)	6-10 T at 65% moisture	Excellent quality silage or feed grain. Cut for silage shortly after heading. Seed size varies by variety. High-yielding grain varieties do not guarantee high-yielding forage or straw. Consult the University of Kentucky variety trials bulletin for specific yield information.

[1] *Approximate date.*
[2] *Approximate yield in units (tons, bushels, pounds, or gallons) per acre.*
[3] *PLS = pure live seed.*

Adapted from Grain and Forage Crop Guide for Kentucky, AGR-18P, University of Kentucky Cooperative Extension Services, Lexington, KY.

Typical First and Last Occurrences of 32°F in Kentucky

Typical First and Last Occurrences of 32°F in Kentucky

Location	Coordinates (°)	Date of First Fall Frost[a]						Date of Last Spring Frost[a,b]				
		Median	Early	10%	90%	Late		Median	Early	10%	90%	Late
Ashland	38.47N 82.63W	10/16	9/08	9/22	11/03	1/01		5/04	4/11	4/14	5/11	6/12
Berea	37.57N 84.31W	10/24	9/24	10/06	11/13	11/21		4/11	3/25	3/28	5/04	5/10
Bowling Green	36.98N 84.44W	10/22	10/03	10/08	11/08	11/13		4/11	3/21	3/26	4/25	5/05
Carrollton	38.65N 85.17W	10/19	10/03	10/06	11/02	11/08		4/21	4/03	4/08	5/05	5/10
Covington	39.01N 84.51W	10/19	10/02	10/04	11/02	11/08		4/21	3/26	4/10	5/06	5/10
Farmers	38.15N 83.54W	10/15	9/21	10/03	11/02	11/08		5/02	4/04	4/11	5/15	5/27
Hopkinsville	36.85N 87.46W	10/20	9/21	10/05	11/06	11/13		4/11	3/21	3/26	4/25	5/05
Leitchfield	37.46N 86.29W	10/18	10/03	10/05	11/06	11/08		4/19	3/22	4/04	5/08	5/11
Lexington	38.03N 84.44W	10/25	10/02	10/07	11/09	11/13		4/18	3/26	4/04	5/03	5/10
London	37.13N 84.07W	10/12	9/23	10/03	11/02	11/13		4/24	3/22	4/07	5/09	5/27
Mayfield	36.72N 88.64W	10/20	10/02	10/06	11/06	11/12		4/15	3/24	4/05	4/26	5/05
Maysville	38.61N 83.81W	10/21	10/03	10/04	11/03	11/08		4/24	3/27	4/02	5/09	5/27
Middlesboro	36.62N 83.73W	10/17	9/29	10/04	11/04	11/14		5/01	4/08	4/12	5/11	5/27
Monticello	36.85N 84.83W	10/17	10/03	10/04	11/05	11/13		4/25	4/03	4/08	5/08	5/27
Murray	36.62N 88.31W	10/30	10/03	10/14	11/18	11/21		4/04	3/18	3/20	4/15	4/20
Owensboro	37.77N 87.11W	10/20	10/03	10/06	11/07	11/13		4/10	3/21	3/25	4/24	5/05
Paducah	37.08N 88.62W	10/26	10/03	10/09	11/12	11/13		4/08	3/07	3/22	4/18	4/23
Princeton	37.09N 87.89W	10/20	10/03	10/06	11/06	11/13		4/10	3/21	3/26	4/21	3/26
Scottsville	36.74N 86.18W	10/24	10/07	10/10	11/14	11/21		4/10	3/21	3/27	4/27	5/27
Shelbyville	38.21N 85.21W	10/14	9/21	10/01	10/31	11/19		4/23	3/27	4/06	5/11	5/18
Somerset	37.08N 84.61W	10/13	10/03	10/04	10/31	11/05		4/22	3/22	4/07	5/10	5/27
West Liberty	37.91N 83.26W	10/09	9/15	9/24	10/17	11/04		5/05	3/29	4/17	5/21	5/27
Williamsburg[c]	36.74N 84.17W	10/19	9/26	10/04	11/07	11/13		4/22	4/04	4/08	5/10	5/27

[a] Temperatures are recorded by the University of Kentucky Agricultural Weather Service at 5 feet above ground and based on 30 years of data from 1961 to 1990.
[b] Median = date directly between the earliest and latest date of observed last occurrence; Early = earliest date recorded for last occurrence; 10% = date for last occurrence in one out of 10 years; 90% = date for last occurrence in nine out of 10 years; Late = latest date recorded for last occurrence.
[c] 28 years of data.
Source: University of Kentucky Agricultural Weather Center, Kentucky Climate Analysis, URL: http://wwwagwx.ca.uky.edu/analysis2/.

Additional Resources

UK Master Grazer Program
https://grazer.ca.uky.edu

University of Kentucky Cooperative Extension
https://extension.ca.uky.edu

UK Forage Extension
http://forages.ca.uky.edu

UK Forage News
https://kyforagenews.com

KYForages YouTube Channel
http://www.youtube.com/c/KYForages

Kentucky Forage and Grassland Council
https://kfgc.org

Kentucky Natural Resource Conservation Service
https://www.nrcs.usda.gov/wps/portal/nrcs/site/ky/home/

Kentucky Soil and Water Conservation districts
http://conservation.ky.gov/pages/conservationdistricts.aspx

Kentucky Cattlemen's Association
https://kycattle.org

Governor's Office of Agricultural Policy
https://agpolicy.ky.gov/funds/pages/default.aspx

American Forage and Grassland Council
https://www.afgc.org

Gallagher Power Fence Manual
https://www.gallagher.eu/media/wysiwyg/Powerfence_manual_basic_fencing_.pdf

Notes:

Special Thanks

2024 Kentucky Grazing Calendar

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