Register for 2019 Kentucky Fencing School in Russellville on May 30th.

Presenters will offer the newest fencing methods and sound fencing construction with classroom and hands-on learning. The first half of the day is spent in a classroom reviewing fence construction basics, Kentucky fencing laws, and electric fencing basics. After a catered lunch, participants will venture to a local farm and install two types of fences: fixed knot high tensile woven wire fencing and electrified smooth high tensile fencing. Sponsors include the Gallagher North American, Stay-Tuff Fencing, UK Master Grazer Program, Kentucky Agricultural Development Fund, and the Kentucky Beef Network.

For more info, visit https://forages.ca.uky.edu/events or call Rehanon Pampell at 270-365-7541.

Publications of the Month: Crabgrass (AGR-232); Sudangrass and Sorghum-sudangrass Hybrids (AGR-234)

Crabgrass possesses significant potential for supplying high quality summer forage although it is considered a weed by many. A primary advantage of crabgrass is that it is well adapted to Kentucky and occurs naturally in most summer pastures, especially those that have been overgrazed. It is also highly palatable and a prolific re-seeder. Planting an improved variety of crabgrass is recommended because the production of naturally-occurring ecotypes varies greatly.

Sudangrass is best utilized by grazing.

Sudangrass is a rapidly growing summer annual grass in the sorghum family. It is medium yielding and well suited for grazing. Sudangrass regrows quickly after harvest and can be grazed several times during summer and early fall. This grass has finer stems than most other summer annuals which makes it better suited for hay production.

Sorghum-Sudangrass is a hybrid between sudangrass and forage sorghum. It combines the benefit of both forages with the regrowth of sudangrass and the high yield of forage sorghum. It is most often used for grazing or baleage production, but the larger stem limits it's use for hay production. With both sudangrass and sorghum-sudangrass, new BMR types combine good forage yield with improved forage quality.

These new publications provide a full description of these forages and detailed establishment and management information. Find them at the UK forage website under the Forage Species tab or look under the Variety Trials tab and download the 2018 Annual Grass Report to determine the best varieties to plant.

Things in the Hay Production Book We Missed

`The book’ is very clear about when to cut hay – when the forage crop is just beginning to head out or make a flower. Yet we consistently suffer with overmature and low quality hay. When forage testing is mentioned, producers tend to change the subject. Inwardly, I believe they are thinking something like “I know my hay is bad. Why would I pay somebody to tell me it is bad.”

Before you stop reading – hear me out. The point is not to restate the optimum stage to cut hay, but to get you to cut earlier than last year. And to test hay!

To make the case to cut earlier, we often use Table 1 from the UK College of Ag publication ‘Quality hay production’ (AGR-62) that shows the impact that stage of harvest has on forage hay quality and animal gain. I had seen it and used it for decades before realizing the insights below. These insights were ‘in the book’ but I missed them. I think you may find them compelling.

This Tennessee research compared three fescue hays cut May 3, May 14 and May 25. These dates corresponded to late boot/early head, early bloom, and early milk stage/seed forming, respectively. These hays were then fed to 500 lb. holstein heifers. Take a look at what the data shows.

- The latest cutting date, May 25, is not that late compared to most fescue cut in KY. Based only on date of cutting, this hay is better than most.
- The heifers ate more of the early cut hay, 13 lb/day compared to 11.7 and 8.6 for later cut hay.
- Early cut hay had the highest digestibility and crude protein. The drop in digestibility was small between May 3 and May 14, but much larger over the next 11-

Forage Timely Tips: May

- Start hay harvests for quality forage. Consider making baleage to facilitate timely cutting.
- Seed warm season grasses for supplemental forage once soil temperature is at 60 F.
- Clip, graze, or make hay to prevent seedhead formation.
- Rotate pastures as based in height rather than time.
- Consider temporary electric fencing to subdivide larger pastures and exclude areas for mechanical harvesting.
- Scout pastures for summer annual weeds and control when small.
day period. Crude protein dropped about the same (about 3%) for each 11-day delay.

- Gain per day dropped from 1.39 to 0.42 lb/day for the three hays. The earliest cut hay supported the best gains, as expected. The decline in average daily gain was about the same for each 11-day delay in cutting.
- Maturity decreased gains per day more than forage digestibility. A delay of 22 days dropped digestibility by 17% (68 to 56%). Over this same period, daily gain dropped by 70% (1.39 to 0.42 lb/day). Small changes in quality made big differences in gain.
- The highest quality hay did have the lowest yield per acre. Delaying cutting will increase yields and this may be fine for mature cows with low needs.
- Curiously, gain per acre was almost equal for each of the three hays (yield per acre divided by lb of hay per pound of gain), 132, 136, and 125 lb, respectively. If you calculate how long it would take to get that gain on each hay, you arrive at 95, 140 and 298 days respectively. Hay cut on May 25 could produce the same gain as hay cut on May 3 but it would take twice as much hay and three times as long!
- The May 3 cutting also had the added benefit of 22 extra days of forage growth compared to the May 25 hay cutting – extra growth that could further improve the argument for making an early first cutting. Cutting hay early pays, especially for growing cattle. Small differences in maturity can make big differences in gain and your bottom line. Try to cut earlier than last year. And get your hay tested for forage quality. ~Jimmy Henning, excerpted from Insure High Quality Forage: Make Baleage.

The ability to harvest moist forage as hay gives Kentucky producers many advantages, including timely harvest, higher forage quality, and less weathering loss over hay systems. The baleage system allows producers to utilize commonly available forage equipment (mowers, rakes, balers) rather than requiring choppers and sile structures or bags. A two year survey of haylage in Kentucky revealed some important considerations for making high quality haylage. To make high quality baleage, producers should:
- Cut at the proper stage of maturity. The fermentation process is driven by the soluble carbohydrates present at cutting. Early cut forage has higher carbohydrates. All forages, cut at boot to early head (for grasses) and bud to early bloom for legumes will ensile.
- Bale when the wilted forage is between 40 and 65% moisture content (MC). In this study, only excessively wet (75-80% moisture, basically unwilted) forage had an ‘off’ fermentation profile with excessive butyric acid.
- Bales should be as tight as possible to help exclude oxygen and accelerate the ensiling process.
- Wrap bales within 24 hours, and ideally the same day. Delaying to the next day allows heating to begin in bales.
- Move bales to the wrapping/storage site.
- Wrap bales with six to eight layers of UV-stabilized, stretch wrap plastic. Early literature indicated that as few as four layers could work. However, top producers have not been happy with fewer than six layers, and UK research has shown clear feeding preferences for bales with six or more layers of coverage.
- Periodically check the wrapped bales and tape any holes present in the bales with UV-stabilized tape (not duct tape).

The ensiling process is complete within four weeks, but bales may be fed at any time after wrapping. Bales that have not had time for complete fermentation should be fed so that they are eaten quickly (within 48 hours). ~Jimmy Henning, excerpted from Proceedings of the 2019 KY Alfalfa and Stored Forage Conference, available online.

Optimizing Production from Perennial Cool-Season Hayfields

How we manage hayfields this spring can have a major impact on both yield and nutritive value. Fertilization and timely cutting are even more critical when we need to refill hay barns after a hard winter. The following tips will help you to optimize hay production this spring from cool-season hayfields.

- Fertilize and lime according to soil test. A balanced fertility program is essential for optimizing hay production. Phosphorus, potassium, and lime should be applied according to soil test results. Avoid using “complete” fertilizers such as 19-19-19. These fertilizers commonly over apply P and under apply K when harvesting hay.
- Apply nitrogen early to promote rapid spring growth. Applying 60-80 lb N/A in mid- to late March will promote early growth in hay fields, resulting in higher first harvest yields. Continued on page 3...
• Harvest at the boot stage. Hayfields should be mowed as soon as the grass reaches the boot-stage. By making the first cutting in a timely manner, there will be time for a leafy second cutting just prior to the summer heat. Do not cut close. If not properly adjusted, disc mowers cut very close to the soil surface and this causes significant damage to cool-season grass stands. Do NOT mow perennial cool-season grass stands closer than 3-4 inches.

• Apply nitrogen following the first cutting. Following a timely first harvest, apply 40-60 lb N/A to stimulate regrowth. With adequate rainfall, a second harvest can be made approximately 30 days after the first harvest.

• Allow hayfields to go into summer with some regrowth. Make sure allow cool-season hayfields to go into the summer months with at least 5-6 inches of regrowth. This will shade the crown of the plant, shade the soil inhibiting annual grass weeds, reduce soil temperature, and reduce soil moisture losses.

• Apply nitrogen in late summer. As temperatures moderate in late summer and early fall, apply 50-60 lb N/A to stimulate fall growth. This growth can be grazed or harvested as needed.

• Allow plants time to replenish carbohydrates in the fall. Make sure and time fall hay cuttings to allow stand to regrow and replenish their carbohydrates prior to winter dormancy.


UK Equine Farm and Facilities Expo — May 30

UK Ag Equine Programs will host its annual Farm and Facilities Expo from 3:30 - 8 p.m. EDT Thursday, May 30th, at Olive Hill Sporthorses, 4746 Huffman Mill Pike, Lexington, Kentucky. The event is free and open to the public. A meal will be provided for those in attendance. Farm managers and horse owners alike will have the opportunity explore visitor booths and see displays for every aspect of horse farm management. Speakers will provide educational talks about harnessing on-farm solar potential, overseeding damaged pasture, weed control on horse farms and utilizing hay feeders to reduce waste. “With all of the rain in 2018 and early 2019, many pastures are thin and damaged. Part of this program will be focused on how to help pastures recover and prevent that type of damage in the future,” Ray Smith, UK forage extension specialist.

“Brian and Diana have a unique facility that horse owners of all types will enjoy seeing,” said Krista Lea, research analyst and coordinator of the UK Horse Pasture Evaluation Program. Please RSVP. Email DL_CES_Fayette@email.uky.edu or call the Fayette Extension Office at 859-257-5582 to register. Olive Hill Sporthorses offers a sales and training program and is owned/operated by UK College of Ag alums Brian and Diana Conlon and hosts the UK Equestrian Team, hunt seat division. ~ Holly Wiemers, UK Ag. Equine Programs

Purdue Extension Hosts Educational Events This Summer—June 21 and 22

Benefits of Using Native Warm-Season Grasses in a Grazing System is a 1/2 day program to show the most up-to-date methods for reliable native grass establishment and grazing management. Topics include: Why use native warm-season grasses in your grazing system, Animal performance and economics, Native warm-season grass establishment overview, How to manage native warm-season grass forages.

Grazing 102 is a program designed to help producers understand important concepts needed to make a management-intensive grazing program work for their own operation. Topics include: Understanding plant growth and development, Fencing systems, Soil fertility, Forage identification and use, Watering systems, Forage economics, Extending the grazing season, and Determining forage needs. There will also be hands-on activities, pasture walks and field tours.

There is no fee for the warm-season workshop, held on June 21st from 8:30–12:00 at the Southern Indiana Purdue Agricultural Center. Grazing 102 will follow on June 21st and 22nd; $60 registration fee will include all materials and lunches. For more information or to register, contact Jason Tower at towerj@purdue.edu or 812-678-4427.

Quote of the Month: Lignin Matters

A number of varieties of commercially available summer annual grasses (including sudangrass, sorghum-sudangrass hybrids and pearl millet) contain what is referred to as a brown midrib or “BMR” gene. In addition to making the midrib brown instead of white, plants having this gene are more digestible than non-BMR plants. This is because these plants produce less lignin, which is not digestible. The result is that animal performance is improved. Whether or not a summer annual grass is a BMR type is an important consideration for these grasses. In addition, in recent years, reduced-lignin alfalfa varieties have become commercially available. This is not a midrib phenomenon, but is consistent with the idea that reducing lignin improves plant digestibility. Forage-Livestock Quotes and Concepts, Vol. 2 is available online at foragequotebook.com.

Tariffs, water reshuffled the hay export deck

Albeit delayed, the USDA Foreign Agricultural Service (FAS) recently posted the U.S. hay export totals for 2018. For exporters, the news wasn’t particularly good, but it could have been much worse.

Total exports of alfalfa and other hay (think grass) dropped from the record 4.2 million metric tons (MT) in 2017 to 3.9 million MT in 2018, a 7.2 percent reduction. The last time the U.S. had a year-over-year drop in hay exports was 2014, which was precipitated by a West Coast dockworkers strike. ~ Mike Rankin, from Hay and Forage Grower, March 26, 2019.