

Time to Make Hay

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

Hay, from whatever forage crop you choose to make it, is a necessary foundation of nutrition for cattle, horses and sheep. While we often think of hay as being made from alfalfa, brome grass or native grass, hay can literally be made from almost any plant that we grow. The nutritional quality will vary based on the plant composition, but it is still hay. One of the universal truths of hay making is that stage of growth of the plants will make a big difference on the nutritional value of that hay.

With hay you have two basic measures; quality and quantity. Quality is measured by values such as crude protein and digestibility. Many plant fiber components that are digestible in earlier growth stages turn in to lignin which adds rigidity to the plant stalk but is far less digestible. Quantity is measured by pounds or tons per acre. Quality of a forage is often highest early in the plant's growth stages and declines as the plants grow and reach maturity. Yield obviously starts off low as the plants start to grow and increase as they grow. This gives us an inverse relationship in that as one measure increases the other measure decreases. This results in forage producers trying to find that tipping point of balance. Sometimes it comes down to what is most important for that producer; yield or nutritional value. Sometimes there is just too much work to do at the same time and cutting/baling hay often takes a backseat to other operations such as planting or harvesting. Other times the weather just won't cooperate by giving us the weather we need to get the forage cut and dried down enough so that it won't become moldy in the bale.

One final consideration in the timing of making hay has to do with the ability of the plant to recover and be productive for a future harvest this year or next. If the forage is an annual plant, like forage sorghum or sudangrass, we know it's going to die at the end of the season so we don't have to worry about next year. But if the forage is a perennial, like alfalfa or native hay, we need to time that harvest so the plant has a chance to recover.

Regrowth after harvest begins with the plant using stored carbohydrates from the roots and crowns to initiate growth. This takes fuel out of the gas tank. After a couple of weeks of growth the plants have enough leaf area that they can produce enough food for continued growth and start to put some fuel back in the tank. We generally feel that it takes alfalfa three to four weeks to get that tank refilled. With native hay it's a little bit longer and we like to see six to eight weeks of growth to get that tank refilled. Which brings us to the point that it's time to make hay with our native hay meadows.

Researchers have found that we get the best tradeoff between yield and quality in the latter half of July or very early August. Once we start to see those native grass seed heads appear, protein is dropping rapidly which can result in low quality hay. Research at K-State has shown that a mid to late July cutting date isn't that much less in yield than cutting well into August and protein could be three to four percentage points higher. When you finish cutting by early August then the grasses have nearly two full months to regrow and get those carbohydrate reserves refreshed for good early season growth the following year. Native hay is a crucial forage for cattle producers. Let's harvest it in such a way as to maximize forage quality and protect future production from that hay meadow!