For the past three years, our forage systems group has been working on a cow-calf study with the main objective to increase grazing days and reduce feed supplementation to the cow herd. One method we use is stockpiling bermudagrass for deferred grazing after frost.

WHAT IS STOCKPILING?
Stockpiling refers to the practice of deferring a forage from grazing to allow it to accumulate forage mass for grazing during fall and winter. Almost any forage can be stockpiled but there are differences among them in the amount of mass they will accumulate, the forage nutritive value and how well they will hold up to decay after frost.

The queen of stockpiled forage is tall fescue. Tall fescue, a cool-season perennial, grows well in the fall with cooler temperatures, responds well to fertilizer, produces high quality forage, and has a waxy cuticle coating on its leaves that helps it maintain its grazing value through the winter. Tall fescue is routinely stockpiled east of Interstate 35 and has saved producers countless dollars in feed cost over the years. Unfortunately, along the Interstate 35 corridor and west, continental-type tall fescue (summer-active tall fescue) does not persist well and is not an option. In the southern Plains region, where warm-season perennials dominate, we have to take advantage of what we have and work with it. Our cow-calf study is bermudagrass-based, so that is what we stockpile.

START WITH STOCKING RATE
To make any stockpile system work, you have to make it part of a total forage management plan that begins with stocking rate. Matching the amount of forage your land area can produce to animal demand is critical.

In our cow-calf system, we allocate 1 acre per cow for stockpiling. We also want to accumulate fresh forage growth so the nutritive value will be high. To accomplish this, we use the cow herd as a tool to graze down the area we want to stockpile to remove growth that accumulated in spring in order for fresh fall growth to occur.

Stocking rate comes into play at this point. You will need enough available pasture for the cow herd to graze until the stockpile becomes available sometime after frost. If the land area is overstocked,
available forage may not be in substantial quantities to bridge this gap and nothing will have been gained. In our studies, we sometimes have enough residual pasture that we do not have to turn cattle out onto our stockpile until December.

IMPROVE FORAGE QUALITY THROUGH VARIETY SELECTION, FERTILIZATION

Another part of our bermudagrass stockpile system is forage quality.

In our study, we stockpile a hybrid variety of bermudagrass called Midland. Hybrid bermudagrass varieties tend to work better in stockpile because of their higher yield potential compared to common bermudagrass. A recent stockpile study from Mississippi showed no difference in bermudagrass yield in two out of three years between a named seeded bermudagrass and common bermudagrass (Rushing et al., 2019).

For forage mass accumulation and to obtain good nutritive value, we apply 50 pounds of nitrogen (N) per acre in late August or early September. You can see the nutritive values of stockpile bermudagrass in our cow-calf study in a previous Noble News and Views article, “Offsetting Winter Supplementation With Pasture,” available at www.noble.org/winter-pasture-offset.

The Mississippi study by Rushing et al. evaluated stockpile quality of two bermudagrass varieties (common and Cheyenne II) and two varieties of bahiagrass (Pensacola and Argentine) under four nitrogen treatments (0, 25, 50 and 75 pounds N per acre). Nutritive value differed by year and species, but bermudagrass crude protein values ranged from 12.8%-9.2%, depending on year. This is very similar to what we have seen in our study. Surprisingly, crude protein of Pensacola bahiagrass ranged from 15.2%-8.0% compared to Argentine bahiagrass, which ranged from 13.9%-6.8%. While bahiagrass is not prevalent along Interstate 35, it has been encroaching into sandy soils in East Texas, western Arkansas and eastern Oklahoma. Bahiagrass, where it is available, can be used as a stockpile forage.

MANAGE WEATHER WITH TIMING

Weather, something we cannot control, is a critical factor in the success of our stockpile system.

Rainfall and favorable growing conditions allow forage mass to accumulate. With the nitrogen rates that we apply (50 pounds N per acre), we are targeting a dry matter accumulation of 1 ton per acre. We hit that target some years on some pastures, and other years we don’t. Even if we don’t and have carryover N in those paddocks, the carryover tends to aid our cool-season annual forage production and helps kick off our spring bermudagrass growth.

A management strategy that can help the weather variation is time focused. Manage so that you give yourself as much time and growing days as possible for stockpile growth to occur. Planning to begin stockpiling in October will not work when the first frost occurs in mid- November.

MANAGE GRAZING ON STOCKPILED FORAGE

The most common question I’m asked is, “How do you get your cows to eat stockpiled forage?” The answer: We really don’t do anything special to get our cows to graze the bermudagrass stockpile. We simply open the gate and let them eat. However, there are several things that help us be successful and can help you, too:

• First, have quality standing, leafy forage that is not matted to the ground. The cow herd can come in and start grazing from the top and work their way down through the canopy.

• Second, have adequate stocking rate to meet the cow herd’s forage demand. We do not have to feed anything prior to going onto the stockpile, so cows are used to grazing.

• Third, have well drained stockpile pastures that won’t damage from grazing in wet conditions.

We also watch forage availability and test the quality of stockpile as we go through the fall and winter grazing periods. When will feel that our forage quantity and quality has been depleted, we pull the cows off the stockpile and move to supplementation or another forage source such as interseeded cool-season annuals, if available.

Strip grazing is another method of utilizing stockpile forage. In this method, an area of forage allocation is sectioned off using temporary fencing, which is moved across the pasture to new grazing areas as needed. Strip grazing will improve utilization and distribution of urine and feces, but it increases labor and water source planning.

This just illustrates that there is more than one way to successfully utilize bermudagrass stockpile. The main point is to keep those cows grazing. Also keep in mind that several other forages — including native grasses, bahiagrass, tall fescue and crabgrass — can also be successfully stockpiled. However, they are not all equal in the amount of forage mass they will accumulate, the quality of the forage they stockpile and how well it will maintain quality following frost.