



ARE GREENS GOOD FOR YOU?

August 2018 – Hay & Forage Grower

Taylor Denman
Research Professional
The University of Georgia

Dennis Hancock, PhD
Professor and State Forage Extension Specialist
The University of Georgia

Not everyone has had the blessing of having a Southern momma (bless their hearts!). Those of us who did know one of their favorite suppertime sayings is “Eat your greens! They’re good for you.”

In the past few years, many have been proclaiming the benefits of greens for our pastures, as well. Turnips, kale, swedes, and several hybrids of these members of the Brassica genus have the potential to produce large amounts of forage. Even after one considers that these are often more than 80% water, the yield produced by the forage type-brassicacans can be greater than 4000 dry lbs/acre within a few weeks of planting. In the Southeast, these forage brassicas are often planted in late summer or early fall to provide forage that fills the lull in forage production in the fall of the year. If planted between August 15 and September 15, the hybrid forage turnips can often be grazed within 60-75 days after planting (Fig. 1).

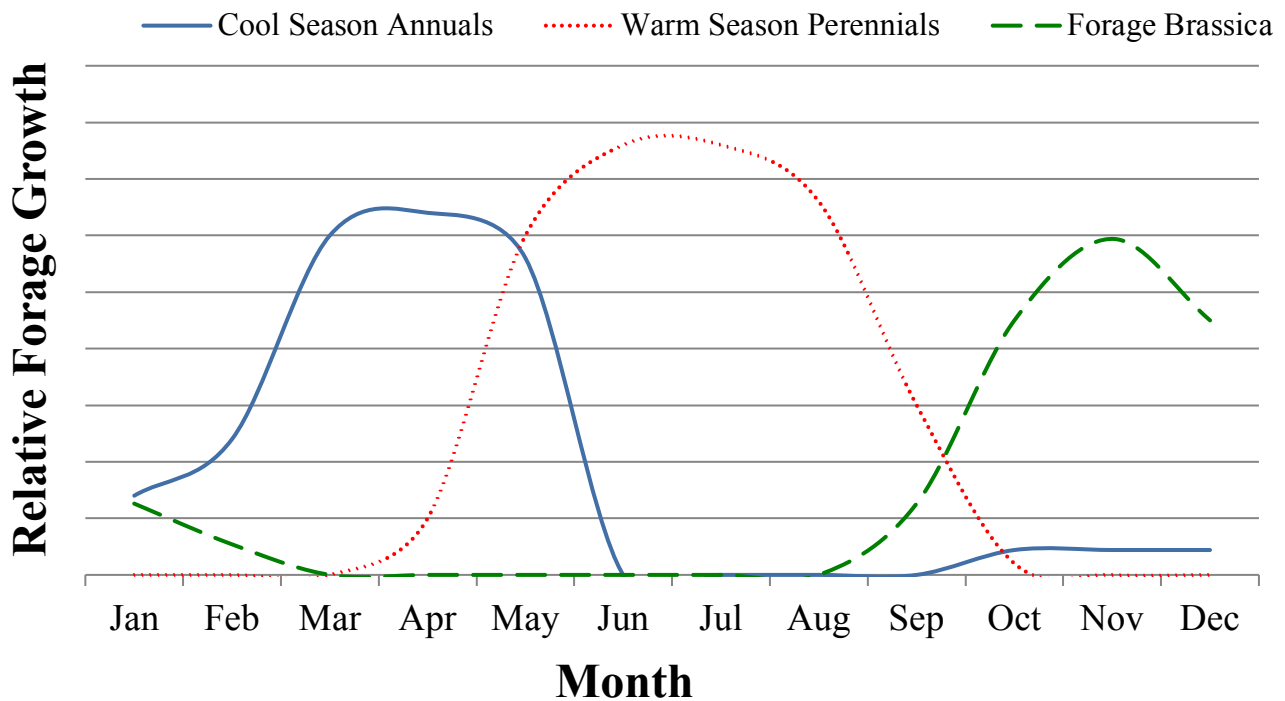


Figure 1. Using cool season annual pastures can complement the forage distribution from warm season perennial grass pastures by providing good grazing in late winter and early spring, but having forage brassica pastures provides a substantial amount of forage in late fall.

In addition to producing high yields, forage brassicas have a high nutritive value. Research and on-farm observations have shown brassicas be 18% or more crude protein (CP) and have levels of total digestible nutrients (TDN) equal to or greater than 70%. In fact, it may be too good. The combination of a forage with high digestibility and high moisture content results in a passage rate through the digestive tract that is very fast. Consequently, brassica should not be more than 75% of their diet. Livestock will often self-select more fibrous forage to pair with the brassicas to help regulate their digestive system. Feeding a high fiber forage with the brassicas will slow down the passage rate and increase the absorption of the nutrients.

Ironically, livestock that have never been fed forage brassicas may take some time to accept them. Grazing behavior and selectivity is learned from their mothers, so livestock may need to be introduced to the brassica a little at a time. For the most efficient use of brassicas, it is best to utilize a strip or forward grazing system that allow livestock to only access small portions of the pasture at a time. This gives them a chance to “taste test” the forage, but also helps prevent the brassicas from being trampled.

Take Care During Establishment

Brassica seeds are very small and should be planted at a rate of 1 – 3 lbs per acre. Because the seeds are so small, they will germinate quickly, as long as enough sunlight reaches the soil surface. This makes it imperative that brassicas are planted into either a prepared seedbed or no till drilled into dedicated annual pastures that have been terminated and have a minimal amount of residue. Brassicas **DO NOT** establish well when interseeded into perennial species.

To further understand the establishment challenges of brassicas especially in the Southeast, a research trial was conducted to evaluate the effects of planting date and land preparation strategies. The results of the study

concluded that the combination of planting brassicas in the late summer (September 1st and September 15th) into either a prepared seedbed or land that has been physically burned will produce the highest forage yields. Planting later (Fig. 2) or into sites where any residue shaded the furrows results in poor establishment and reduced forage yields of brassica (Fig. 3).

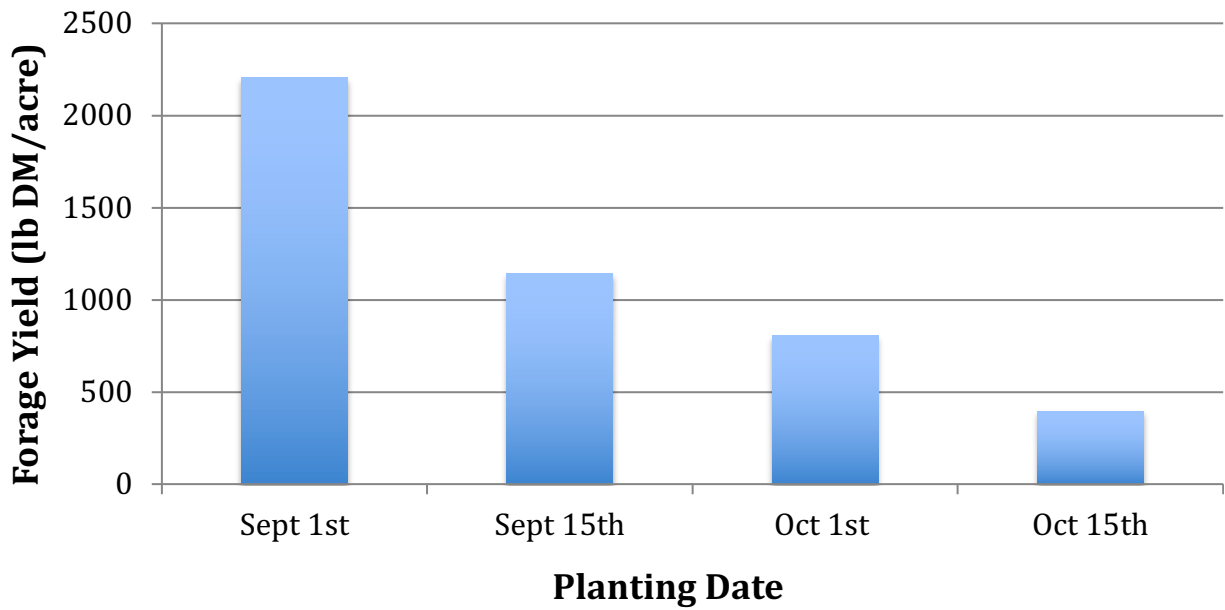


Figure 2. Forage yield of brassica at 90 days after planting was highest when planted September 1st followed by September 15th, October 1st, and October 15th. This shows that total forage yields, regardless of land preparation method decreased as planting date was delayed.

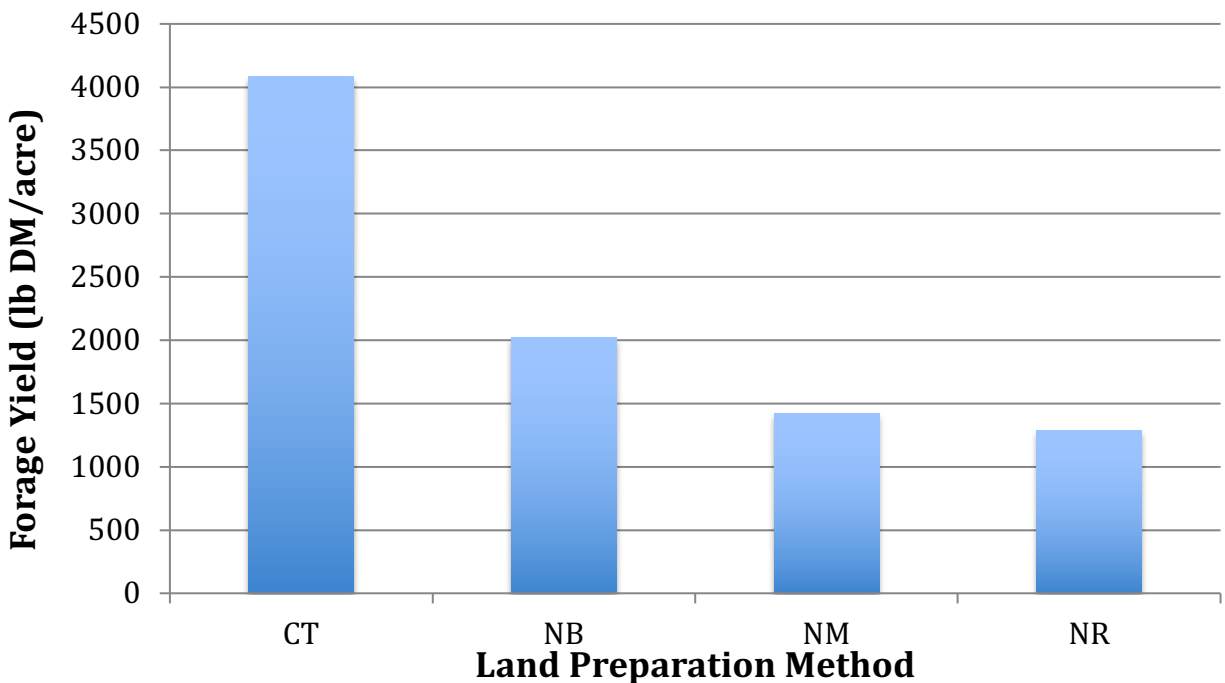


Figure 3. When looking at the September 1st planting date, plots that were conventionally tilled (CT) produced the highest forage yields followed by, no till with physical burning (NB). The no till with close mowing and no till with 12 inches of residue remaining (NR) had the lowest forage yields.

Overall, brassicas can be a useful tool to have in the toolbox, since they can help fill the fall forage gap and extend the grazing season. Their high nutritive value makes them ideal for livestock with high nutrient demands such as lactating beef cattle or stocker calves looking to gain 2.5 lb/hd/day. However, the high moisture content along with the high nutritive value makes it pass through their gut very quickly. To mitigate this, supplement brassicas with a high fiber roughage source such as a low-quality hay. Brassicas can be picky in their establishment, so care should be taken to ensure that brassicas reach their full potential. To ensure these greens are good for you, plant the brassicas in the late summer and into as little residue as possible to give brassica a chance.