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“Stocker Cents” article

Planning Summer Grazing

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The arrival of summer presents several challenges in forage-based livestock production. During summer, warm-season perennials such as bermudagrass and bahiagrass dominate our pasture base. While these grasses will yield very well during the summer, and are generally more than adequate to maintain cows that are dry or in mid to late lactation, the reduction in forage quality inherent in these grasses, combined with a reduction in voluntary feed intake caused by hotter weather, makes them unsuitable for growing young cattle. So, how can we develop a summer forage strategy that will allow us to grow young stocker animals through the summer months? There are essentially three areas that we can utilize to improve summer forage quality:

1. Adopt grazing management practices that optimize pasture quality
2. Improve the perennial warm-season pasture base with the addition of high quality forage species.
3. Integrate alternative forage crops into your forage program.

Grazing management to maintain pasture quality.

While the benefits of rotational grazing go well beyond maintenance of forage quality, this is certainly one of the great advantages. I have discussed the inverse relationship between plant maturity and forage quality in many previous articles (in summary, as the plant matures forage quality declines). Keeping our summer pastures in a green leafy state, i.e. not letting them get too mature, is the first step towards maintaining quality. In a continuously grazed pasture, control over plant maturity is nearly impossible given the fact that plant growth rate changes significantly month by month. In a rotational system it is easier to control grazing pressure (stocking rate x time spent in each paddock) and therefore how mature the plant gets. When pasture growth rate is high, a fast rotation can be employed to keep on top of excess growth. Rotation lengths during the spring and summer may be as short as 20-30 days (i.e. it takes 20-30 days to make one complete rotation of the farm). Even with a fast rotation it is often not possible to keep on top of the rapidly growing pasture. In this situation a paddock, or more if necessary, may need to be dropped out of the rotation and allowed to accumulate the excess growth on the farm. The excess built up in these ‘dropped’ paddocks can be made into hay or baleage while you concentrate on maintaining quality growth in the paddocks that remain in the grazing rotation. This method will help ensure quality forage is presented to your animals while making more efficient use of surplus forage production.

Care should also be taken not to overgraze pastures. The highest quality component of the plant is the leaf. When grazing animals are left to graze for too long they will remove all the leaf and be left with stem portions of the plant, which is of significant lower quality. In addition, overgrazing can cause stand loss in many forage species, which allows the invasion of unpalatable weed species into pastures. Table 1 outlines optimum grazing heights and rest times for common warm-season forage species used in Mississippi.

Table 1. Optimum grazing heights and rest time for common Mississippi forage species

	Begin Grazing	End Grazing	Rest Time*
Bahiagrass	6-10	1-2	10-20
Bermudagrass	4-8	1-2	7-15
Dallisgrass	6-8	3-4	7-15
Tall Fescue	4-8	2-3	15-30
Annual Ryegrass	6-12	3-4	7-15

Adapted from Southern Forages 3rd Edition 2002.

Improving the warm-season pasture base

Improving the quality of our warm-season pasture base can be achieved in two ways. The first is using improved varieties that were selected for better forage quality. The second is to add other forage species that are higher quality than the warm-season grasses to improve the overall nutritional value of the forage. We are somewhat limited in our choice for varieties of perennial warm season grasses that were specifically selected for forage quality. Most breeding programs have focused primarily on improved growth characteristics such as annual yield rather than the qualitative characteristics. However, the development of hybrid bermudagrass has offered some significant improvement in quality, as well as yield potential. In general, the hybrid bermudagrass varieties will be of better quality than common bermudagrass at similar yield levels. Having said this, any improvement in quality will be negated if the grazing management practices mentioned earlier are not employed. And it is true to say that even the hybrid bermudagrass varieties will not maintain quality through the summer to achieve good animal performance in your growing stock. Adding high quality species, such as legumes, to warm-season perennial pastures can add quality to these pastures during certain times of the year. The drawback of this method is that many of these high quality species are cool-season, and may not be present in the pasture throughout the entire summer season. However, there are some legumes and forage herbs, such as chicory, that have a growth season that will extend well into the summer and, under certain favorable conditions, may contribute significantly throughout the summer

Table 2. Seeding rates and season of production for some high quality forages

Clover Species	Seeding rate (time) Lbs/A	Production time
Legumes		
Arrowleaf (annual)	5-10 lb/A (Fall)	February-June
Berseem (annual)	10-15 lb/A (Fall)	November-June
Red (perennial)	6-8 lb/A (Fall/late Winter)	March-June
Forage Herbs		
Chicory	5-4-5 lb/A (Fall/Spring)	March-November

Using alternative forage crops

Alternative forage crops are generally annuals such as sorghum-sudangrass or pearl millet that are generally higher quality than the perennial warm season grasses. They typically have a short growing season during which they can achieve very high forage growth rates. This rapid growth often makes management of these crops difficult, as it can be hard to match grazing pressure with forage growth. These crops also typically have higher input requirements, such as nitrogen fertilizer, so can be relatively expensive to establish and maintain. Due to the higher input requirements of these crops, management should aim to maintain the productivity and quality of these crops by strip grazing with a back fence to allow regrowth.

Table 3. Alternative warm-season forage crops

Species	Seeding rate (lb/A)	Seeding Depth	Graze height	Residual	Grazing interval (days)
Sorghum-sudan	20-30	½-1"	20-24"	8-12"	10-20
Pearl Millet	20-30	0-1/2"	20-24"	8-12"	10-20

Figure 1. Strip grazing

