



Grazing Forage Sorghums and Sorghum-sudangrass Hybrids

Volume 9, Issue 6

Rocky Lemus
 Extension Forage Specialist

June 2016

Visit us at: <http://mississippiforages.com>

Summer annual forage crops such as forage sorghums, sudangrass, sorghum-sudangrass hybrids and millets can provide valuable, high-quality forage during the summer and complement your summer perennial grass pastures. They can be used for grazing, silage or baleage. Due to the higher input cost in establishing summer annual grass every year, there is a need for producers to be very efficient on using them. That means that they could be of higher value for producers that are finishing cattle on pasture or running stockers where they expect to generate a higher gain and net return.

Choice of annual forage must be adapted to the type of hardware you are planning for your farm. One of the things that will capture that making sure they are planted at the proper seeding depth and maturity. Planting summer annual crops should be done between April and late May, depending on the location. It is important to plant the whole area once because the major challenge that summer annuals can have is a growth potential in hot summer months. If rain is not available, they can



Figure 1. Utilization of a sorghum-sudan hybrid for summer grazing: (a) planting following three annual ryegrass systems (50 lb N/ac, 25 lbN /ac + bermseem clover, and bermseem clover), (b) 600-lb weight steers grazing Green Grazer V sorghum-sudan hybrid, (c) using a strip grazing system to improve grazing efficiency, and (d) residual biomass or sorghum-sudan grass after strip grazing. Source: Lemus and White, 2015.

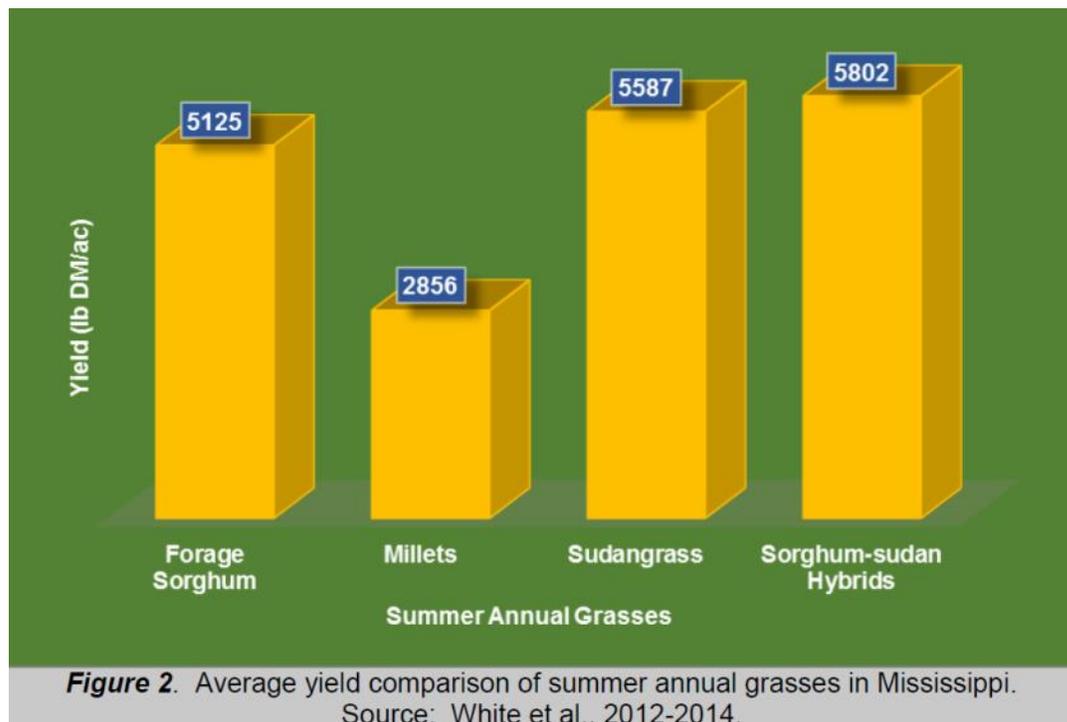
summer annuals based on what you have and what you need for your strategy. The return is that they are at the proper time, proper the optimal date. In most summer forage be established between late May and early June. It is not to plant the whole area all at once because the length is annuals rapid growth in conditions. abundant, grow very

fast and the crop can get away fairly quick. Subdividing the pasture on two or three sections and staggering your planting at least one to two weeks apart might be a good idea to reduce the possibility of all the forage crop maturing at once and losing quality. Fertilization is also very important and should follow soil test recommendations for lime, phosphorus and potassium. Applications of 40-50 lbs N/acre will increase with biomass production. Nitrogen application should occur after emergence and when plants are 2-3 inches tall.

As a general rule, grazing of most of these forage crops should start when they are between 18 and 36 inches tall. The reason for this is because in the early growth stages, sorghum and sorghum-sudangrass hybrids can accumulate high levels of prussic acid. Prussic acid is a precursor of cyanide and can be deadly to livestock. Keep in mind that millets

are prussic acid free. The same happens with nitrate accumulation which usually will occur in the lower part of the plant (higher concentrations can be found in the lower six inches of the plant). A low-level of nitrates and prussic acid is always present in sorghum sudangrass, and sorghum-sudangrass hybrids, but they do not become a problem until they are stressed. Factors such as drought, frost, disease pressure and herbicide injury can lead to toxicity. However, pearl millet does not contain the prussic acid and can be safely grazed at any stage of growth and during droughts that increase the risk associated with prussic acid when grazing forage sorghum or sorghum-sudangrass hybrids.

The use of controlled grazing may also help to capture the return on investment by increasing grazing efficiency and stretching the forage supply. A way to achieve that is by using a strip grazing system and allocating areas that can be moved every 3 to 5 days (Fig. 1). If these warm-season annuals are let to get taller than the livestock, there is an opportunity for a significant drop in grazing efficiency. If these grazing strategies are implemented, some of these annual forage crops can support a much higher stocking rate than our traditional perennial pastures (bahiagrass and bermudagrass). A grazing demonstration was conducted at Mississippi State University in 2015 (Lemus and White, 2015). Green Grazer V sorghum-sudangrass hybrid was planted in four acres at 25 lb/ac following annual ryegrass and fertilized with 50 lb N/ac after emergence. Ten steers averaging 560-lb body-weight were grazed for 56 days (June 23 to August 18) using a strip grazing system. The average daily gain was 1.23 lbs/head and the total gain was 172 lbs/acre.



In the last decade, there are a large number of summer annual forage crop varieties that have come on the market. Some of those varieties have been evaluated at Mississippi State University in the Forage Variety Testing Program from one to several years (Fig. 2). When selecting a variety for your area, it will be beneficial to compare the performance of the available varieties against each other and against the state wide mean. Published data can be found in the MAFES variety testing page at <http://mafes.msstate.edu/variety-trials/forage.asp>. It is important to note that in most cases there could be year-to-year variability among summer annual species and varieties within species ranging from 10 to 40%.

Summary – Summer annuals can be used to supplement permanent pastures, thus enabling better management of perennial pastures. If a producer is going to invest in establishing and growing annual forage crops, I would recommend to spend a little more time to manage and graze it more efficiently.

Upcoming Events

June 17, 2016—Clay Co. Forage Field Day, West Point, MS

June 28, 2016—Warm-season Forage Field Day, Starkville, MS—**CANCELED**

For detailed information related to upcoming forage events please visit:

<http://forages.pss.msstate.edu/events.html>

Find Your Place in the World of Forages at Mississippi State University

Cooperative Extension Service • Mississippi State University

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.