

Growing & Feeding BMR Sorghum

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Whether it is a situation of double cropping, a choice to fill the gap of a summer pasture slump, or needing a lower protein forage for young stock; BMR sorghum or BMR sorghum-sudan grass crosses are getting more consideration. But what are some of the management considerations for growing this forage? What kind of yields can you expect? What is the feed value of BMR compared to regular sorghum?

If planting sorghum or sorghum-sudan, remember it is a warm season crop needing warm soil (65°F to germinate) and weather. Growth slows in September and will not survive a frost.

The other major issue with sorghums is the issue of prussic acid poisoning after a frost or in a drought. The danger of prussic acid poisoning is greatest when livestock graze forage sorghum varieties and crosses, less when grazing sorghum-sudangrass crosses, and least when grazing sudangrasses. The amount of prussic acid is also affected by soil fertility. Soils high in available nitrogen and low in phosphorus increase the potential of prussic acid.

The greatest livestock losses occur when grazing after a period of drought or a series of frosts. Also, young regrowth forage, especially sorghum and sorghum-sudangrass crosses, can be very toxic. The young, dark green growth or regrowth is potentially dangerous to livestock. Shortly after frost, the potential release of prussic acid increases slightly. It can, however, be safely grazed a few weeks after freezing if there is no substantial regrowth.

As plants mature and plant height increases, the risk of prussic acid poisoning is reduced. Only during times of stress, such as drought or frost, will toxicity remain high in maturing plants.

Seed is planted with a drill about an inch deep with seeding rates typically ranging from 25-35 lbs/ac. As with any seeding, good soil to seed contact in a firm seed bed is important. However, it may be more important when seeding sorghums and sorghum-sudan because the weather can be hotter and drier when planted.

Another aspect often overlooked with sorghum and crosses is the need for fertility. A good rule of thumb for application of N,P,K, and S in sorghum-sudan or sorghum is about half to two-thirds of that which would be used for a good corn crop.

Crude protein value will be higher in sorghum-sudan crosses than corn silage. They are also lower in starch, which makes it an appealing feed for dry cows and heifers. While the energy is

comparable, it comes from fiber digestion and not starch, like in corn silage. The higher NDF level can also limit intake, which is why we can feed it to animals not requiring maximum intake like milking cows do. Because of the higher NDF level, it is extremely important to use a BMR variety to improve NDF digestibility. Brown mid-rib varieties are naturally lower in lignin, which is an indigestible fiber component inhibiting NDF digestibility. Regular varieties do not have that gene and are much lower in digestibility and feed value.

Dry matter yields of sorghum and sorghum-sudan crosses will be lower than for corn silage; but this is dependent on the harvest strategy utilized. The best quality and yield is obtained by multiple harvests at a height of 36". While it is difficult to dry, full width swaths and conditioning will enable silage or baleage to be made in reasonable time. Both methods of storage are good options.

Both BMR sorghum-sudan grass and dwarf forage sorghum are reasonable forages to consider in your budgets offering several options for additional forage, whether harvested or grazed. Following best management practices and avoiding situations for prussic acid poisoning will result in the successful use of these forages. ☞

Table 1: Feeding value of BMR sorghum or BMR sorghum-sudan.

	Corn Silage	Sweet Corn Silage	Small Grain Forage	BMR Sorghum/Sudan	Corn Stover
Item	-----%-----				
CP	8.5	9	16	14	5
NDF	45	55	50	55	65
TDN	70	67	65	70	45

Table 2: Dry matter yields of sorghum and sorghum-sudan crosses.

Type	DM kg/ac	Tons/ac	CP	NDF	LIGNIN	TDN
BMR dwarf sorghum	6580	7.23	14.34%	53.65%	2.84%	62.18%
Sorghum x sudan	5797	6.38	10.90%	56.10%	3.32%	58.37%
Graze corn	9130	10.00	13.37%	32.70%	3.34%	48.38%
Rox Cane	3066	3.37	12.69%	51.25%	3.02%	63.18%