



Sorghum-Sudan Grass

Sorghum-Sudan grass is a good emergency forage during summer. The feed quality can be variable, depending on harvest maturity and fertility making it more suited to low producers, dry cows, heifer replacements and beef cattle. It provides an alternative feed source during the summer months when existing pastures may be producing less, or may be a valuable feed supplement until other forages are ready. It should be used during times of feed shortages, winterkill of forages, or in delayed planting scenarios where other crops cannot be planted in a timely manner.

Feed Quality and Nutritional Value

Sorghum-Sudan grass is thick-stemmed and hard to dry for hay but can supply ample yields of silage, green chop and pasture when perennial grasses are slowing down or going dormant. Once it begins to head out, the quality and feeding value drop drastically.

As the crop matures, protein content drops rapidly and fibre levels increase. This decreases the feed energy value and rumen digestibility. High NDF1 levels dramatically reduce dry matter intake potential. A comparison of nutrient value of Sorghum-Sudan grass with the more common forages is shown in the following table. Sorghum-Sudan grass can contain as much protein as mature alfalfa, but only if harvested at the vegetative stage. Energy levels in vegetative material can be similar to corn and higher than alfalfa.

Brown Midrib (BMR) Sorghum-Sudan Grass

BMR provides improved forage quality with up to:

- 28% lower lignin
- 17% higher TDN
- 27% higher per ton
- 14% higher per acre

(Miller and Stroup, 2003)

For both BMR and non-BMR Sorghum-Sudan grass, be sure to fertilize according to soil test. Typically, 90 to 110 lbs of nitrogen should be applied at planting, with 45 lbs/acre of nitrogen added after each cut.

**Suggested Sorghum-Sudan Grass Seeding Rate:
30 to 45 lbs/ac**

FORAGE	% CP ¹	%ADF ¹	%NDF ¹	NE _l ¹ Mcal/kg	NE _m ¹ Mcal/kg	NE _g ¹ Mcal/kg	%TDN ¹
ALFALFA							
Bud	20	29	40	1.42	1.41	0.83	63
Full Bloom	15	37	50	1.23	1.14	0.58	55
SORGHUM-SUDAN GRASS							
Vegetative	17	29	55	1.60	1.63	1.03	70
Headed	8	42	68	1.30	1.18	0.62	56
CORN SILAGE							
Few ears	8.5	30	53	1.40	1.38	0.80	62
Well eared	8	28	51	1.60	1.63	1.03	70

¹CP is crude protein, ADF is acid detergent fibre, NDF is neutral detergent fibre, NE_l is net energy of lactation, NE_m is net energy of maintenance, NE_g is net energy of gain, TDN is total digestible nutrients. Analysis is on a dry matter basis. Source: Nutrient Requirements of Dairy Cattle, 1989.

Animal Health Advisory

Prussic acid poisoning is a concern in feeding Sorghum-Sudan grass, which can contain varying amounts of cyanogenic glucosides. In the rumen, these compounds are converted into prussic acid, which is readily absorbed into the blood. High blood levels of prussic acid interfere with respiration and cattle can soon die. Horses should not be allowed to graze these plants as they may develop cystitis syndromewhich can be fatal. However, the Sorghum-Sudan grass cross offers a lower potential risk to Prussic Acid poisoning compared to pure sorghum grasses.

The management practices below can reduce risk of prussic acid poisoning:

- Graze or green chop only when forage is greater than 22 inches
- Don't graze plants:
 - during or immediately after a drought, or under conditions where growth has been reduced
 - after a killing frost, or until the plant is dry and brown
 - after a non-killing frost ,or until regrowth is at least 18 inches
- Don't green chop or ensile the forage for 3 to 5 days after a killing frost
- Allow forage to ensile for at least 3 weeks before feeding

Credit:

Adapted from OMAFRA Factsheet 98-043

<http://www.omafra.gov.on.ca/english/crops/facts/98-043.htm>

