SUPER SWEET SUDAN (SSS)

Ideal for grazing new Super Sweet Sudan (SSS) has superfine stems and a prolific tillering habit. High quality small seed means you sow less kilograms on every hectare. Leaves are superfine and super sweet making SSS an excellent choice for silage or hay. Highly palatable at all stages of growth. Suitable for use in dairy, beef and sheep farm systems.

Bettagraze (Left) and SSS (Right)

SSS requires a minimum soil temperature of 18°C at 5cm depth for quick germination and establishment. Generally, sowing is not recommended before November

Site Selection:

SSS prefers a deep soil with good moisture holding capacity and a medium to high fertility status. The crop fits well into a pasture renewal programme. Forage sorghum and sudan grass hybrids may be susceptible to herbicide residues. Check with your local merchant or Pioneer Representative before establishing crops in paddocks which have been recently sprayed with products other than glyphosate.

Soil Fertility:

A soil test is recommended to identify nutrient status and any possible deficiencies. The levels of N and P are important and a specific fertiliser recommendation should be obtained from your local merchant, fertiliser representative or Pioneer representative, based on the results of the soil test and the requirements of the crop.

Ground Preparation:

Effective weed control is important for SSS establishment and yield. Currently there are no post-emergence herbicides registered for sorghum in New Zealand therefore it is critical to (1) ensure the seed bed is weed-free and (2) to plant when the soil temperatures are high enough to ensure rapid SSS establishment and growth. Pasture should be sprayed-out with glyphosate and then grazed hard three to five days later. The ground should be ready for cultivation 7 - 14 days after spraying. A fine and firm seedbed is essential to promote establishment and weed control.

Sowing Date:

SSS should be sown 35 - 45 days before it is required for silage or grazing, although not before the **soil temperature, at 5 cm depth, reaches 18oC** and is rising. In most areas and seasons this temperature will not be reached until November or December. SSS is an excellent crop to follow cereal silage or a late pasture silage cut in mid to late November.

SSS should be drilled and rolled into a fine moist seedbed at 15 - 25 kg/ha **to a depth of 2.5 – 3.5 cm**. Avoid planting deeply as the seed size is small. Crops planted at higher rates will have thinner stems and a higher yield potential.

Broadcast sowing is not recommended.

Timing of Utilisation:

SSS can be grazed or cut. Feed quality will be maximised when the crop reaches around 1 metre in height. SSS will become rank and lose quality if left too late before grazing or cutting.

Grazing:

SSS should be grazed by break feeding to stock. Back-fencing is essential to minimise plant damage and allow quick re-growth in the grazed portion of the crop and to avoid crop toxicity. For maximum re-growth potential aim to leave a grazing residual of 15 cm. The crop can be recut or grazed after 4 - 5 weeks when it is at least 0.8 m and no more than 1.2 m in height.

Feed Value:

The drymatter content of SSS that is 0.8 - 1.0 m in height is typically between 13 - 17% DM with 15% being a good average figure to use to determine cow crop allowance. Forage sorghum and sudan-grass products are bulk feeds with an average energy content of 9.0 - 10.0 MJME/kgDM depending on crop maturity at harvest time. A well-established crop that is between 0.8 - 1.0 m in height will have a drymatter yield of 3.5 - 4.5 tDM/ha per cut.

Silage:

SSS can be made into pit, bunker, or round bale silage. It is always recommended to cut using a mower-conditioner and wilt in the paddock for a maximum of 48 hours. SSS can be made into hay although it must be planted at high populations to ensure thin stems which will dry more quickly.

Horses:

Forage sorghum and sudan grass hybrids can cause major health problems for horses. They should not be grazed by horses or fed to them as hay or silage.

Autumn Management:

Frosted SSS can be toxic. **Always spray out SSS crops before autumn frosts and/or regrassing.**

Nitrates:

Any crop that grows rapidly has the potential to accumulate nitrates. Nitrate levels are higher in rapidly growing SSS crops that have been planted in high fertility paddocks. Nitrate levels also rise in crops that have been drought stressed or frosted. **SSS should be sampled and analysed before grazing or cutting**. If you suspect nitrate poisoning, contact your veterinarian immediately.

Feeding Guidelines for Crops:

The following guidelines for using sorghum crops as fodder can help reduce the risk of nitrate poisoning:

- avoid grazing stressed plants or when regrowth is sprouting
- delay grazing or cutting until plants are more than 80cm high.
- do not graze hungry stock. Animals are most likely to be poisoned if they eat large amounts in a short time
- watch your stock closely in the first hour and monitor at least twice a day for the first few days

Reference: Queensland Department of Primary Industries

Prussic Acid:

Sudan x sudan grass hybrids have lower levels of prussic acid than forage sorghum or forage sorghum x sudan grass hybrids. Prussic acid poisoning is rare in New Zealand. Sudan grass is always low in sulphur and feeding sulphur will reduce the risk of prussic acid problems. Aim for a dietary sulphur level of 0.2%. Supplementation of sulphur is recommended if the pasture sulphur is low (less than 0.25%) and/or you are feeding more than 50% of the diet as SSS To supplement sulphur feed 40 grams of either zinc sulphate or magnesium sulphate per cow per day (Table 1).

There is currently no acceptable method for testing for prussic acid in New Zealand. If you suspect that your crop has high levels of prussic acid, talk to your local veterinarian or local Pioneer representative before feeding it.

Table 1: Factors which increase the level of prussic acid include

Young Plants	Avoid grazing crops under 0.8m high
Drought	Severe moisture stress
Frost	Levels rise after light frosts. If crop is killed by frost, wait 5 days to graze
Nitrogen	High available soil nitrogen may lead to higher levels, as does large amounts applied
Low phosphorus	Inadequate or deficient soil phosphorus
Re-growth	Cutting or grazing is a stress on plants, wait until plants are at least 80cm high
Herbicides	Applying 2, 4-D may raise HCN level

SSS Economics:

The table below gives the estimated growing costs ($/ha) for SSS. All costs are estimates only. The costs and benefits of regrassing have not been included.

2025/2026 estimated costs (excl GST)	SSS Costs ($/ha)	My Costs ($/ha)
Spraying out pasture	$75	
Starter Fertiliser and Application	$420	
Cultivation	$520	
Planting	$220	
Pioneer® brand SSS @ 20 kg/ha	$305	
Total crop costs	**$1,540**	

	8	9	10	11	12	13	14
SSS DM cost (c/kgDM)	19.3	17.1	15.4	14.0	12.8	11.8	11.0