



PIONEER
BRAND • SEEDS

VICTORIA AND TASMANIA
SUMMER FORAGE GROWING GUIDE

PLANT, GROW & GRAZE & GRAZE & GRAZE & GRAZE & GRAZE & GRAZE




SuperSweet
Sudan®

WITH YOU
FROM
THE WORD

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PIONEER® BRAND

SUPER SWEET SUDAN

Studies have shown that sudan poses a lower risk of prussic acid toxicity than sorghum type forages.

A unique Australian product, bred for Australian conditions.

NEXT GENERATION HYBRID:

Pioneer® brand hybrid Super Sweet Sudan (SSS) is quick to graze and sustains multiple and intensive grazing. SSS produces high quality hay and round bale silage suitable for sheep and cattle. Adaptable for early or late planting.

PRIMARY USE:

Cattle and sheep plus intensive or non intensive grazing produces highly palatable hay plus round bale silage.

KEY FEATURES

- **Grow more with less** – High quality, smaller seed means you plant more hectares with less kilograms
- **Wide area adaption**
- **Very fast growth and regrowth**
- **Prolific tillering habit**
- **Superfine stems**
- **Super sweet and leafy**
- **Super high-quality hay**
- **Highly palatable** at all stages of maturity and growth
- **Suited for dryland situations** and intensive irrigation

PLANT TYPE AND PLANTING INFORMATION				
	Genetic type hybrid	Approximate time to flower	Soil temperature required for sowing	Seed count (seeds/kgs)
SSS	sweet sudan x sudan	60-66	15°C+	77,500 to 96,000 seeds/kg

PLANTING RATES		FEED QUALITY	
Dryland	Irrigated	Initial grazing height	Regrowth grazing
4-5 kg/ha	8-15 kg/ha	50-120 cm	50-80 cm

SSS has been developed in Australia for local conditions. It is the only true super sweet sudan-by-sudan hybrid forage on the market in Australia. This unique product has proven since 2012 that it has wide area adaptability and flexibility due to the highly palatable sweet stems and excellent leaf mass at all stages of maturity. This feature gives you grazing and haymaking flexibility that other summer forages will struggle to match.

Studies have shown that sudan-type forages pose a lower risk of prussic acid toxicity to livestock than sorghum or sorghum-cross type forages giving even more flexibility to your grazing or haymaking operations.

With SSS requiring soil temperatures at planting of 15°C and rising, it is an excellent early plant option. Quick early growth means fast to graze and regrowth will provide multiple sweet fine-stemmed tillers. SSS has the ability to maintain multiple grazings for sheep and cattle while also providing the opportunity to make high quality hay. For best weight gains SSS should be initially grazed at 50 cm tall. Either stock with high animal numbers or strip-graze the paddock for best results. Unlike many other summer forages, if you do find yourself in the position where a field is going to head due to an unforeseen delay in grazing, the SSS is usually still very palatable due to the super sweet fine stems.

THE SECRET TO SUCCESS WITH SSS

SSS – Paddock Preparation Timeline



Operation	Deep rip or work the paddock to break hard pan	Spray non-selective herbicide for initial ryegrass and broadleaf weed control. Apply second spray in August, if needed	Spray atrazine and chlorpyrifos and incorporate by seeding	Sow SSS
Month	May/June	June/July	September – end of January (when soil temperatures allow – see section 5)	

1. Herbicide carryover

Paddocks with high carryover from sulfonylurea herbicides, such as Glean[®], Ally[®], Spinnaker[®], On Duty[®] and Logran[®] dramatically affect the performance of Super Sweet Sudan, leading to poor yield response and even death of the crop. Check the plant-back period on the herbicide label.

2. Hard pan restrictions

There have been some spectacular commercial and trial results from deep ripping paddocks. In most cases growers are ripping down to almost 400 mm, which can allow the plant to double its production over the season. Ripping needs to take place early in the season to allow moisture penetration and weed seeds to germinate as part of the clean-up phase.

3. Crop rotations for ryegrass and broadleaf weed control

Once the paddock has been worked use a non-selective herbicide for early autumn and mid-winter ryegrass control. This can be followed up with atrazine before sowing SSS to pick up late weed germinations. The use of atrazine will also control summer-germinating weeds, such as fat hen, potato weed and paddy melons. The change in chemical use and crop rotations can reduce resistant ryegrass numbers. For best results using SSS in a rotation for ryegrass control, remember that preparation of paddocks in early autumn is essential.

4. Water quality

Studies have shown sudan grass should be capable of growing with irrigation water salinity as high as 2.7 to 6.35 deci Siemens per metre (source: agri.wa.gov.au). There is no doubt that the better the water quality, the higher the performance of the crop. This has been demonstrated in irrigated crops where natural rainfall has given the crop a tremendous production boost.

5. Soil temperatures

The soil temperature needs to be around 15°C and rising for a minimum of three days before planting. If planted too early, low soil temperatures will result in slow seedling growth and expose the emerging seedlings to increased risk of disease and insect attack. Most cases of poor forage crop establishment can be traced back to either low soil temperatures or marginal soil moisture at planting. Ideally delay planting until soil temperatures are around 15°C and there is good soil moisture for rapid crop establishment and growth. SSS should not be planted after the end of January.

6. Seeding equipment

When planting SSS the use of either a combine or air seeder is recommended. Planting into dryland situations with stored soil moisture requires minimal soil disturbance and the best option is a no till or minimum till seeder unit. It is recommended that press wheels are used or else roll the paddock after seeding, as long as the ground is not prone to sealing over. Try to retain as much stubble as possible on the soil surface before planting. This stubble is critical to retaining the moisture level around the seed.

7. Row spacings

Planting rows of approximately seven-inch spacings for grazing, export and domestic hay is recommended. 18cm row spacings alleviates the issue of tyne removal that is necessary for grain crops such as corn, grain sorghum and sunflowers.

8. Seeding rates

PLANTING SITUATION	GRAZING OR DOMESTIC HAY
Dryland	4-5 kg/ha
Irrigation	8-15 kg/ha

9. Seeding depth

Sow at **3cm into moisture with press wheels** or you may have staggered germination. The depth of seeding is critical for good establishment. It is essential that the seed goes into good soil moisture or you will suffer high plant losses if the crop does not receive follow up rainfall within the following two weeks.

10. Insect control

Soil insects such as false wireworm, cutworm, armyworm and earwigs need to be prevented from damaging seed and seedlings. Chlorpyrifos can be applied to soil in furrows at planting or spread over the soil surface after seeding.

Insect control is critical when sowing SSS into old pasture paddocks where build up from soil pests will be high.

11. Nutrition

Dryland SSS works on a similar fertiliser program as a wheat crop:

One tonne of dry matter will remove approximately the following amounts of nutrients:

Nitrogen	28 kg	Sulphur	2.5 kg
Phosphorus	3.5 kg	Calcium	3 kg
Potassium	20 kg	Magnesium	3 kg

The general rule is to apply 100 kg per hectare of DAP (18:20:0) and 50 kg per hectare of urea (46:0:0) at seeding with applications of 50 kg/ha per hectare of urea per cut or grazing.

For irrigated crops work on 120 kg per hectare of DAP (18:20:0) and 100 kg per hectare of urea (46:0:0) at seeding with applications of 50-100 kg per hectare of urea per cut or graze. In high pH soils there are often deficiencies of zinc and manganese. These elements can be applied to the crop via foliar or fertigation applications. Many growers are finding applications of these trace elements are dramatically improving their crops.

Note - Before planting SSS into any paddock it is best practice to get a soil test completed. This will give your agronomist a picture of soil fertility. Also focus on the use of (K) potassium-based fertilisers in soil types with deficiencies of this nutrient. Optimum potassium nutrition allows the plant to use moisture more efficiently. SSS is a grass crop so will require a high base of fertility to maximise production. Failure of any of the major or trace elements will result in poor crop performance.

12. Weed control

During the establishment stage of the crop, all forages are sensitive to competition from fat hen, potato weed and any other aggressive weed species that competes for soil moisture. High weed populations will significantly reduce forage yields, especially the first cut, and may even result in crop failure. It is recommended that growers use pre-emergent herbicides (eg. atrazine) and post-emergent phenoxy sprays to control weeds - use these herbicides in the appropriate manner and at the correct growth stage as indicated on the herbicide label.

Pre-sowing & post-sowing /pre-emergent	Atrazine
Post-emergent	Atrazine 2,4-D Amine (Consult your agronomist)

13. First cut or graze

Take the first cut or graze early on in the crop's life ("the leveller"). This allows removal of weeds and levels the crop. This should be done when plants are 50 cm high. The best option is to first graze with high stocking rates and then to take the second cut as silage or hay.

14. Sheep and cattle grazing

The plant has fine regrowth stems and is capable of carry in very high stocking numbers. When grazing lambs and sheep, introduce them to the paddock when the plant reaches 50 cm. If possible, avoid allowing the crop to get too tall; if this occurs the feed value of the crop reduces dramatically. So be aggressive with your grazing management. Another great option is to run two separate paddocks so you can rotationally graze. This allows the regrowth to get up to 50 cm again before restocking. An extremely heavy grazing will help SSS express its fine tillering characteristics. This will encourage plants with three to five tillers to quickly generate multiple tillers. The quicker you can get the crop to this stage, the higher the stock-carrying capacity will be.

15. SSS has very low prussic acid (LPA) potential

Let's set the record straight. Prussic acid is found in all forage sorghums. Prussic acid, also known as, hydrogen cyanide or hydrocyanic acid (HCN), can cause stock mortality if levels are high. Signs of poisoning will occur within an hour of stock grazing the forage. The normal symptoms are rapid and laboured breathing and staggering.

The potential level of prussic acid within a forage is influenced by the parentage of the forage hybrid. The highest level is associated with grain sorghum hybrids while full Sudan Grass hybrids have a lower level of natural prussic acid production. SSS is a Sudan by Sudan hybrid, which means it has low potential for prussic acid production.

Grower management of the forage crop is actually the greatest influence on prussic acid levels. Managed correctly, most forage crops can be grazed or cut for hay without any real risk of prussic acid being a problem.

16. Animal husbandry:

- Avoid introducing stock when they are hungry/always prefeed
- Introduce stock when the plant is 50 cm high
- Offer stock an optional feed source such as a roll of hay or stubble
- The use of sulfur lick-blocks is encouraged
- Avoid grazing stock on stressed or blue plants
- **When using green summer forage crops for grazing, it is recommended to include animal lick blocks that have a mixed trace element range. In soils deficient in cobalt, it is advisable to use lick blocks that also contain cobalt and/ or supplement stock with cobalt bullets. Also include selenium in lick blocks if there are soil deficiencies of this element. Please contact your local vet to discuss potential trace element deficiencies in your area.**

17. Cutting for hay

Cut the plant as low as possible (approximately 15-20 mm off the ground). This will promote aggressive tillering. The use of a squeezer or super conditioner will aid in the drying process.

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INOCULANTS

To maximize your investment in ensiled summer forage products make sure you are using Pioneer brand inoculants with Rapid React technology for fast fodder in just 7 days.

11CFT WITH NUTRIVAIL® FEED TECHNOLOGY

Contains live lactic acid-producing bacteria specifically selected to assist in the production of high quality corn silage

Corn Silage Specific

- Corn specific
- Improves fermentation & fibre digestibility
- Increases dry matter recovery & animal performance
- Reduces heating (aerobic spoilage)
- Feed out one day in advance
- Maximise return on silage

PRODUCT	11CFT
Crop	Corn
Fully researched and proven	✓
Improved fermentation	✓
Aerobic stability	✓
Improved fibre digestibility	✓

Recommended

11C33 WITH RAPID REACT™ AEROBIC STABILITY

Dual purpose inoculant with live lactic acid producing bacteria

Corn Silage Specific

- Corn specific
- Improves fermentation
- Increases dry matter recovery & animal performance
- Reduces heating (aerobic spoilage)
- Feed out one day in advance
- Maximise return on silage
- Easily manage large pitface
- Feed out in 7 days

PRODUCT	11C33
Crop	Corn
Fully researched and proven	✓
Improved fermentation	✓
Aerobic stability	✓
Improved fibre digestibility	

Recommended

11G22 WITH RAPID REACT™ AEROBIC STABILITY

Dual Purpose Inoculant

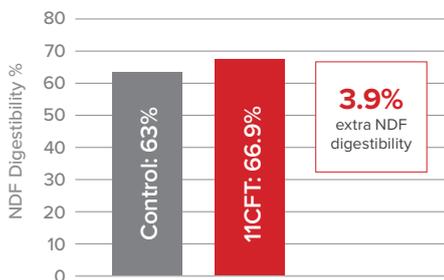
Grass / Cereal Silage Specific

- Grass / Cereal specific
- Improves fermentation
- Increases dry matter recovery & animal performance
- Reduces heating (aerobic spoilage)
- Feed out one day in advance
- Maximise return on silage
- Easily manage large pitface
- Feed out in 7 days

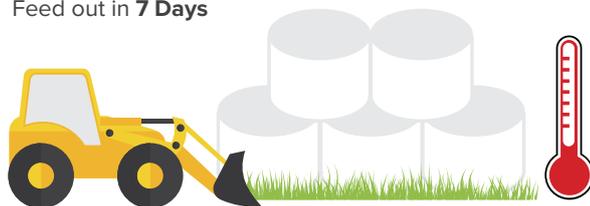
PRODUCT	11G22
Crop	Grass & cereal
Fully researched and proven	✓
Improved fermentation	✓
Aerobic stability	✓
Improved fibre digestibility	

Recommended

Improved NDF digestibility with 11CFT



Feed out in 7 Days



1127

Pasture specific bacteria

Pasture Silage Specific

- Improves the feed value of pasture silage
- Improves fermentation process to retain nutrient content and enhance digestibility of pasture silage

PRODUCT	1127
Crop	Pasture & cereal
Fully researched and proven	✓
Improved fermentation	✓
Aerobic stability	
Improved fibre digestibility	

Recommended

1174

Designed for all forages

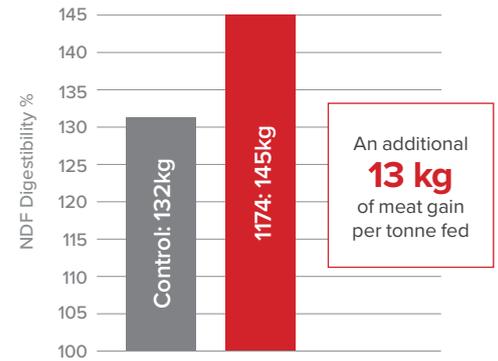
Multi-Crop

- Multi-crop use
- Improves fermentation
- Increases dry matter recovery & animal performance
- Low cost inoculant solution

PRODUCT	1174
Crop	Multi-crop
Fully researched and proven	✓
Improved fermentation	✓
Aerobic stability	
Improved fibre digestibility	

Recommended

Australian Beef Feeding Trial



Australian beef feeding trial conducted at NSW Agriculture's Research Centre at Wagga Wagga. An extra 13kg of beef per tonne of corn silage fed when treated with 1174 compared to untreated. Kaiser and Piltz 1998.



"I found SSS on the Pioneer Seeds Facebook site and I thought it sounded good. It has low prussic acid and I thought I'd have a crack at it. My reservations were just the prussic acid levels. I've never done a crop in my life, so this was all brand new to me. SSS ticked all the boxes. I was surprised it actually came up. Especially in the heavy black clay flats. Usually nothing grows in them and this stuff has grown like it was normal sandy soil. It was very impressive, and the cows absolutely love it. They chewed it right down to the ground and two months down the track it's grown back. It has worked well and this will be our renovation crop going forward. With minimal rainfall over summer if you can get a few grazings off it and lift your milk production, it is well worth doing."

Paul Riches
The Sisters, VIC

"It's peace of mind. I like to have heaps of silage available in case of bad weather. It yielded 7.5 tonnes per hectare of dry matter with just one irrigation. We were then able to direct-drill wheat into the area. If you mow and condition, chop and also inoculate the forage, the cattle do really well on it."

Rob Terry
Dairy Plains, TAS



MORE SUMMER FORAGE HYBRIDS

PIONEER® BRAND

BETTA GRAZE

Cold start	9
Beef grazing	8
Dairy grazing	9
Sheep grazing	7
Hay making	8
Fast feed	9
Late Summer/carry over feed	3
Pit silage	3
Round bale silage	9

RATING: 1 = poor 9 = excellent

FIRST TO PLANT, FIRST TO FEED.

Excellent recovery from grazing or cutting, the fast growing nature of Betta Graze and its cold tolerance, means it is the first forage sorghum you can plant and the first you can feed to any type of livestock. Betta Graze is highly palatable and is highly suited to general grazing, hay production and round bale silage.

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MEGA SWEET

Cold start	5
Beef grazing	9
Dairy grazing	6
Sheep grazing	4
Hay making	5
Fast feed	5
Late Summer/carry over feed	9
Pit silage	9
Round bale silage	6

RATING: 1 = poor 9 = excellent

THE FLEXIBLE FORAGE SORGHUM.

Mega Sweet is attractive to stock at any stage of growth and increases its feed value and sweetness as it matures. Mega Sweet can be planted early in the season, mid season or late season for late Summer and carry-over feed. Mega Sweet can be used for grazing or quality silage production but should be your first choice for grazing cattle. It is especially suited to beef enterprises and can give exceptional weight gains.

PIONEER® BRAND

GRAZE-N-SILE

Cold start	5
Beef grazing	5
Dairy grazing	4
Sheep grazing	4
Hay making	5
Fast feed	4
Late Summer/carry over feed	5
Pit silage	9
Round bale silage	6

RATING: 1 = poor 9 = excellent

THE BEST CHOICE FOR PIT SILAGE PRODUCTION.

Graze-N-Sile is a tall, grain-bearing forage sorghum hybrid. These unique attributes mean Graze-N-Sile produces high quantities of silage with high energy content. Graze-N-Sile is the ideal substitute for corn silage in dryland areas or in limited irrigation situations.

FOR MORE INFORMATION, CONTACT YOUR LOCAL AREA SALES MANAGER OR FARM SERVICES CONSULTANT

Henk Vrolijk

Area Sales Manager
Western VIC

m 0428 886 099

e henk.vrolijk@gentechseeds.com

Tim Lovell

Area Sales Manager
Eastern Victoria & Tasmania

m 0427 342 188

e tim.lovell@gentechseeds.com

David Hogan

Farm Services Consultant
Wimmera Market

m 0428 853 115

David Smyth

Farm Services Consultant
Central Victoria

m 0418 837 423

Simon Tayler

Farm Services Consultant
Western Districts

m 0409 954 554

1800 PIONEER
pioneerseeds.com.au

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