CROP VARIETY GUIDE

SUMMER 2016-2017

PIONEER®
BRAND · SEEDS

TECHNOLOGY THAT **YIELDS**®

PIONEER LONG LOOK

> We strive to produce the best products on the market.

> We deal honestly and fairly with customers, employees and business associates.

> We vigorously market our products, but without misrepresentation.

> We provide helpful management information to assist customers in making optimum profits from our products.

SEED360

SERVICE, QUALITY AND STEWARDSHIP

SEED 360 REPRESENTS THE GENTECH SEEDS COMMITMENT TO ENHANCE THE SUSTAINABILITY AND PROFITABILITY OF AUSTRALIAN FARMERS AND THOSE WHO SERVICE AND SUPPORT THEM.

We are dedicated to providing our customers with high-yielding quality seed and great supply. SEED 360 also focuses on providing valuable advice, tools and stewardship to support your crop from the ground up.

CONTENTS

CORN / MAIZE

PLANTING HIGH QUALITY SEED INTO A GOOD SEED BED WHEN SOIL TEMPERATURES ARE ABOVE 12°C AND RISING WILL HELP MINIMISE THE POTENTIAL FOR EARLY SEASON ESTABLISHMENT ISSUES

TRAIT CHARACTERISTICS NOTES

> **GRAIN YIELD FOR MATURITY**
Valid to compare hybrids of a similar maturity (CRM). (+ or – 4 CRM)
9 = High grain yield for the CRM

> **HUSK COVER**
Measures the length and tightness of the husk cover.
9 = Complete coverage of grain through to harvest

> **PLANT HEIGHT**
9 = Tall 1 = Short

> **COB ROT RESISTANCE**
9 = Shows very high resistance to cob rot

> **DROUGHT TOLERANCE**
9 = Ability to handle hot dry stress conditions

> **NORTHERN LEAF BLIGHT**
9 = Completely free of NLB (very high resistance)

> **SILAGE YIELD FOR MATURITY**
Valid to compare hybrids of a similar maturity (CRM). (+ or – 4 CRM)
9 = High silage yield for maturity

> **STAYGREEN**
9 = Excellent ability to maintain green leaves during grain fill and good late season plant health.

> **WHOLE PLANT DIGESTIBILITY**
Whole plant digestibility percentage (DM basis) as predicted by NIR.
9 = Very high whole plant digestibility.

REGION	OPTIMUM PLANTING TIMES	
1. North Australia (includes North QLD, NT and WA)	Mar to July	Nov to late-Jan
2. Central QLD	Aug to mid-Sept	Mid-Jan to late-Feb
3. Wide Bay and Burnett	Late-Aug to Oct	Late-Nov to mid-Jan
4. Darling Downs and Western Downs	Late-Aug to Oct	Dec to mid-Jan
5. South East QLD and North Coast NSW	Sept to Oct	Dec to early-Jan
6. Border Rivers and Northern NSW	Mid-Aug to late-Sept	Dec to early-Jan
7. Liverpool Plains	Mid-Sept to mid-Nov	
8. Central West NSW	Sept to Oct	Dec to early-Jan
9. Riverina	Late September to November	
10. Northern VIC and Southern NSW	Oct to Nov (grain)	Oct to Dec (silage)
11. Hunter Valley, Sydney Basin and Central and Southern coast of NSW	Oct to Dec	
12. South East of SA	Mid-October to mid-December	
13. Western Districts of VIC	Oct to Dec	
14. Gippsland	Oct to Dec	
15. Northern TAS	Oct to Dec	

FULL SEASON
P1756
CRM 117

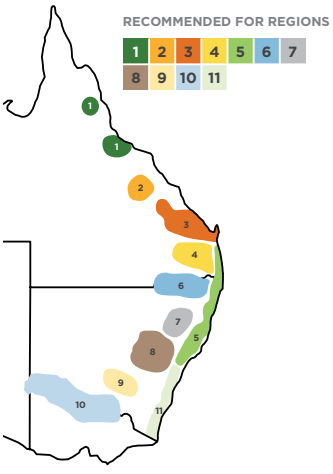
Grain yield for maturity	9
Husk cover	7
Plant height	6
Cob rot resistance	7
Drought tolerance	8
Northern Leaf Blight	6
Silage yield for maturity	8
Staygreen	7
Whole plant digestibility	8

RATING: 1 = poor 9 = excellent

THE NEXT GENERATION PIONEER® BRAND GRITTING HYBRID. TRIALS HAVE PROVEN IT IS THE HIGHEST YIELDING PROCESSING HYBRID IN AUSTRALIA.

Best uses: Processing hybrid (grit, feed, silage)

- A unique Australian-bred corn developed for processing markets
- Suitable for irrigation or dryland
- Good disease tolerance
- Excellent stalk strength
- High quality grain
- Suited for early or late plant in most regions



COMMENTS

RECOMMENDED ☐

FULL SEASON
P2307
CRM 123

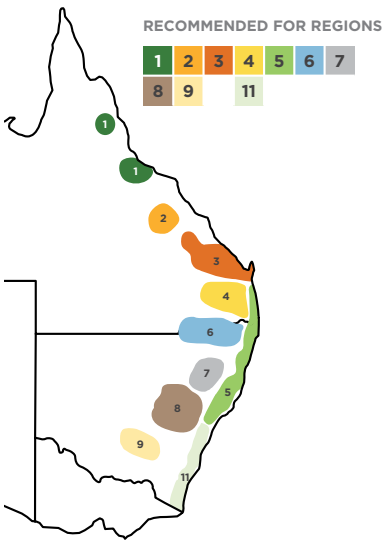
Grain yield for maturity	7
Husk cover	9
Plant height	9
Cob rot resistance	7
Drought tolerance	7
Northern Leaf Blight	9
Silage yield for maturity	9
Staygreen	9
Whole plant digestibility	7

RATING: 1 = poor 9 = excellent

FULL SEASON SILAGE AND COASTAL GRAIN SPECIALIST

Best uses: Silage and grain

- A tall plant with excellent silage yield
- High tolerance to Northern Leaf Blight
- Exceptional late season plant health
- Suitable for all planting times
- Hard textured, flinty grain
- Ideal for coastal and northern regions as well as high yielding silage production areas



COMMENTS

RECOMMENDED ☐

FULL SEASON
P1813-IT
CRM 118

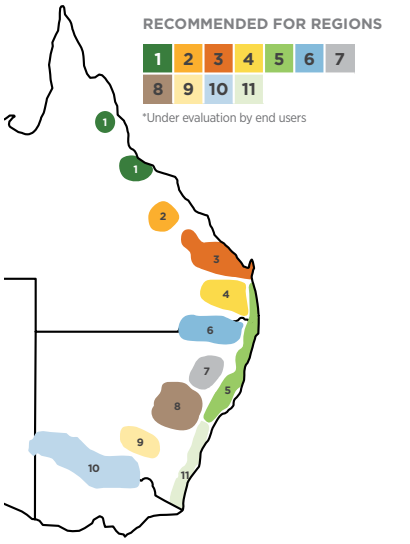
Grain yield for maturity	8
Husk cover	7
Plant height	7
Cob rot resistance	7
Drought tolerance	8
Northern Leaf Blight	7
Silage yield for maturity	8
Staygreen	8
Whole plant digestibility	8

RATING: 1 = poor 9 = excellent

TOP END YIELD FROM AN IT HYBRID

Feed grain, silage and export potential

- Immidazolinone-tolerant (IT) hybrid with excellent yield for maturity
- Widely adapted to a range of growing conditions
- Suited to irrigated and dryland
- Excellent stress tolerance
- Good disease resistance against Northern Leaf Blight and cob rots



COMMENTS

RECOMMENDED ☐

MID SEASON

P1414

CRM 114

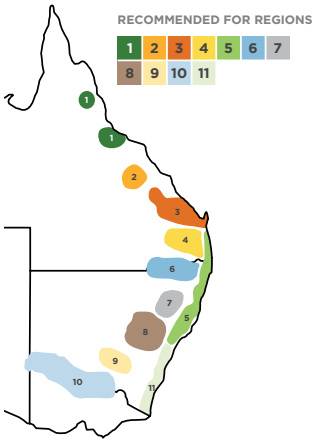
Grain yield for maturity	9
Husk cover	7
Plant height	7
Cob rot resistance	7
Drought tolerance	8
Northern Leaf Blight	7
Silage yield for maturity	8
Staygreen	8
Whole plant digestibility	8

RATING: **1** = poor **9** = excellent

HIGH YIELDING HYBRID FOR PROCESSING, FEED GRAIN OR SILAGE

Best uses: Processing, export feed grain and silage

- A unique Australian-bred hybrid developed for the processing market (milling, grits and corn chips)
- High yielding: Trials have proven this out-yields all other mid-season processing hybrids currently available
- Suitable for irrigation and dryland
- Very good resistance to Fusarium Ear Rot
- Combination of stalk strength, staygreen, leaf disease resistance and drought tolerance makes P1414 ideal for early or late planting



RECOMMENDED ☐

MID SEASON

P1467

CRM 114

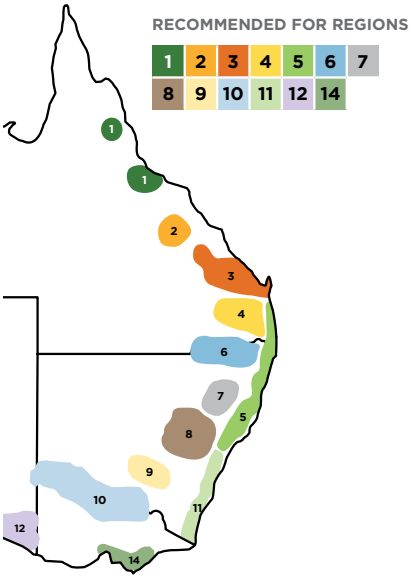
Grain yield for maturity	9
Husk cover	7
Plant height	8
Cob rot resistance	7
Drought tolerance	8
Northern Leaf Blight	6
Silage yield for maturity	9
Staygreen	7
Whole plant digestibility	8

RATING: **1** = poor **9** = excellent

BENCHMARK SILAGE HYBRID ACROSS ALL REGIONS WITH OUTSTANDING SILAGE YIELD

Best uses: Feed grain and silage

- Pioneer's highest yielding feed grain hybrid
- A strong trait combination of stalk strength, drought tolerance, staygreen and cob rot resistance
- High silage yield while still maintaining high quality.



RECOMMENDED ☐

MID SEASON

P1070

CRM 110

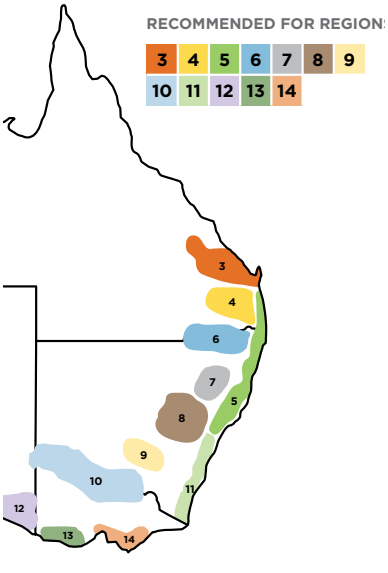
Grain yield for maturity	9
Husk cover	6
Plant height	7
Cob rot resistance	7
Drought tolerance	8
Northern Leaf Blight	6
Silage yield for maturity	9
Staygreen	6
Whole plant digestibility	8

RATING: **1** = poor **9** = excellent

YIELD FOR QUICKER MATURITY

Best uses: Feed and grain silage

- Dual purpose grain and silage hybrid
- Strong cob rot resistance and drought tolerance
- Excellent top end grain yield for maturity
- Ideal silage option with excellent silage yield combined with high silage quality.



RECOMMENDED ☐

COMMENTS

COMMENTS

SHORT SEASON

P0021

CRM 100

Grain yield for maturity	9
Husk cover	6
Plant height	5
Cob rot resistance	6
Drought tolerance	6
Northern Leaf Blight	7
Silage yield for maturity	9
Staygreen	7
Whole plant digestibility	9

RATING: 1 = poor **9** = excellent

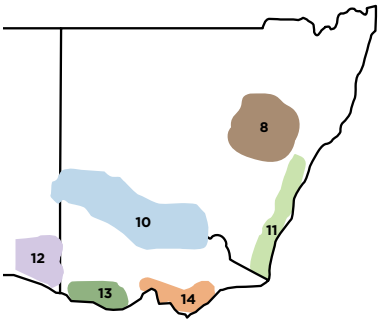
A DUAL PURPOSE HYBRID

Best uses: Feed and grain silage

- Outstanding grain and silage yield
- Excellent silage quality with superior energy and digestibility
- Good early growth
- Early maturity grain option
- Late season silage option

RECOMMENDED FOR REGIONS

8 10 11 12 13 14



COMMENTS

RECOMMENDED ☐

SHORT SEASON

P9400

CRM 94

Grain yield for maturity	9
Husk cover	5
Plant height	8
Cob rot resistance	6
Drought tolerance	7
Northern Leaf Blight	7
Silage yield for maturity	9
Staygreen	6
Whole plant digestibility	8

RATING: 1 = poor **9** = excellent

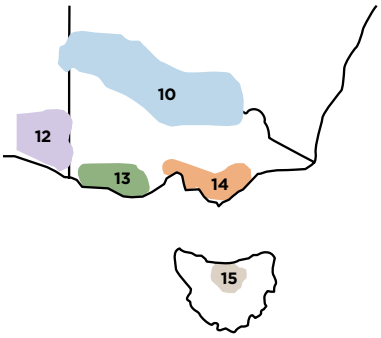
OUTSTANDING QUICK HYBRID

Best uses: Feed and grain silage

- Excellent agronomic profile
- Strong early growth and good stress tolerance
- Excellent quality silage with high grain content
- Outstanding grain yield for maturity

RECOMMENDED FOR REGIONS

10 12 13 14 15



COMMENTS

RECOMMENDED ☐

WHITE

33V62

CRM 114

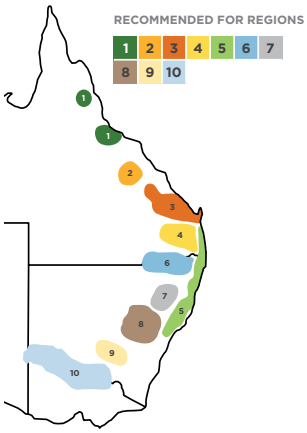
Grain yield for maturity	9
Husk cover	5
Plant height	7
Staygreen	6
Cob rot resistance	9
Drought tolerance	7
Northern Leaf Blight	5
Silage yield for maturity	**9**

RATING: 1 = poor **9** = excellent

EXCITING HIGH YIELDING WHITE HYBRID

Poultry, dairy and piggery markets, export opportunities, high moisture grain markets and silage

- Crop isolation is critical
- Highly sort after grain by the stockfeed sector
- High level of interest in the high moisture (25%-35% moisture grain) grain market for the beef industry.
- The only commercially available white corn variety in Australia*
  * Gives growers direct access to Asian export markets
- **Contact GenTech Seeds or Lachlan Commodities (02 6851 2077) for contracting options**



COMMENTS

RECOMMENDED ☐

WAXY

P1545E

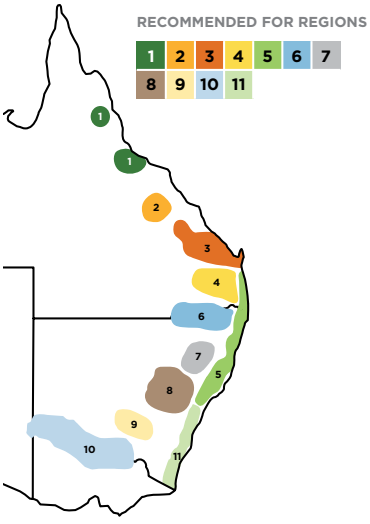
CRM 115

Grain yield for maturity	9
Husk cover	6
Plant height	6
Staygreen	6
Cob rot resistance	6
Drought tolerance	6
Northern Leaf Blight	7

RATING: 1 = poor **9** = excellent

BEST USE WAXY CONTRACTS HIGH YIELDING, QUICK WAXY HYBRID

- High yield potential – ideal for irrigation
- High yield for maturity
- Short plant stature
- Good husk cover
- Waxy contract option
- Requires crop isolation to ensure grain purity



COMMENTS

RECOMMENDED ☐

PIONEER®
BRAND • SEEDS

SECURE YOUR HOMEGROWN FEED SUPPLY WITH PIONEER® CORN SILAGE

HYBRID
P1467

BENCHMARK SILAGE HYBRID ACROSS ALL REGIONS WITH OUTSTANDING SILAGE YIELD

Silage yield for maturity
EXCELLENT

Staygreen	Grain yield for maturity	Cob rot resistance
7	9	7

NEW HYBRID
P1070

YIELD FOR QUICKER MATURITY

Silage yield for maturity
EXCELLENT

Staygreen	Grain yield for maturity	Cob rot resistance
6	9	7

HYBRID
P0021

A DUAL PURPOSE HYBRID

Silage yield for maturity
EXCELLENT

Staygreen	Grain yield for maturity	Cob rot resistance
7	9	6

RATING: 1 = poor **9** = excellent

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Exclusive producer distributor of Pioneer® brand products

CORN YIELDS KEEP INCREASING ON DALBY PROPERTY

YIELDS FROM CORN HAVE CONTINUED TO INCREASE OVER THE YEARS AT THE HAYLLOR ENTERPRISE IN DALBY, ON THE DARLING DOWNS, IN QUEENSLAND.

James Hayllor said they used corn, in rotation with cotton, and had worked to improve the yields of the crop in recent seasons.

Over the past two seasons high yields have been achieved with Pioneer® hybrid P1756 and the corn will be grown next year as well.

"P1756 - because it yielded well last year and it's been outstanding this year," Mr Hayllor said.

"It was amazing. We averaged about fifteen and a half tonnes per hectare across the paddock but then we did a yield trial for a full half a hectare and got 17.38 tonnes to the hectare. We were pretty chuffed with that - just over seven tonnes to the acre. We've been trying to push the yields and we've gone up every year, the last three years, by over a tonne to the hectare."

The previous season (2014/15) the yield trial was 16.18 tonnes per hectare with a paddock average of 14.3 tonnes per hectare.

An emphasis on striving for higher yields with corn has produced excellent gross margins and allowed the crop to be a successful rotational tool with cotton.

"We like cotton but we like corn too," Mr Hayllor said. "We use it for the rotation. We grow forty hectares a year just to improve our cotton yield and we are seeing between half to three-quarters, sometimes up to a bale, increased production in the cotton."

He said the yields from corn last season and the strong price for grain at the time also meant it produced an excellent gross margin.

"At the yields we've got this year, it is going to be quite interesting to see the bottom line. I'm thinking it's comparable."

"We've tried to push the boat out, tried to get the maximum production out of this corn and we're very, very happy. Some of the indications Pioneer were giving us out of their small plot STRIKE trial are amazing for the future. We are very excited for corn and once you start getting those yields, it does start competing with cotton."

"We're keen to see what sort of yields we might get in a La Nina year. We have been achieving these current yields in hotter conditions and it will be very interesting to see what happens when we get some cooler, wetter conditions. We'll see if we can push this yield out even more yet. It is very exciting."

Last season P1756 was sown on September 20 at 80,000 seeds per hectare and established particularly well.

It was harvested in February so worked in well with the cotton with the earlier plant and harvest and water use.

"We plant earlier and it enables us to get the water on and off quicker and then it is done by January," Mr Hayllor said. "It is one paddock out of the way, and it makes the rest of the farm easier to manage."

He said an emphasis on water use was a key to achieving the higher yields, with moisture probes used in the paddock and the irrigation tailored to the needs of the plant.

"WE'VE BEEN TRYING TO PUSH THE YIELDS AND WE'VE GONE UP EVERY YEAR, THE LAST THREE YEARS, BY OVER A TONNE TO THE HECTARE."

**JAMES HAYLLOR,
DALBY, QUEENSLAND**

Dan and James Hayllor, of Dalby, QLD, increased their average yields by one tonne per hectare with P1756 corn.

FIRST YEAR SUCCESS WITH MAIZE SILAGE AT LEITCHVILLE

THE FIRST YEAR OF GROWING MAIZE FOR SILAGE PROVED VERY SUCCESSFUL FOR DAIRY FARMER SCOTT LUMSDEN, AT LEITCHVILLE, IN NORTHERN VICTORIA.

Mr Lumsden planted 33 hectares of Pioneer® hybrid P1467 maize in early December 2014 and produced an average yield in excess of 22 dry matter tonnes per hectare when it was harvested in April of 2015.

He said it worked out at $170 per dry tonne harvested and in the pit which compared very favourably to other feed options available.

"Even at $190 to $200 it is still worth it. Hay was more expensive."

The decision to grow maize last season was helped by good advice from his local agronomist and the urging of his nutritionist who was keen on the crop.

"Our nutritionist really espouses its virtues, he loves it," Mr Lumsden said.

A trip to California a number of years ago also demonstrated the benefits of maize in the dairy.

"The dairies over there all ran on maize and lucerne hay. We could physically see how the Americans ran their mixed rations."

He said it was an interesting process looking at growing maize and the help of a passionate local agronomist made the decision to plant a lot easier.

"I was told maize had a recipe and you follow that recipe."

A paddock was chosen for the crop and the maize planted on December 1 following the harvest of a cereal silage crop.

Long-life urea was applied prior to sowing and DAP was also used in the initial periods. There wasn't any need to add urea throughout the season which made it a relatively easy crop to manage.

Mr Lumsden said the paddock preparation for maize was also not that difficult with just three passes needed to get the harvested cereal paddock ready for the summer crop.

He said they initially relied on natural rainfall for the establishment of the crop, although there was a need to water up the area in the subsequent weeks because of a lack of follow-up rainfall.

With very little rainfall occurring across the summer period the crop was irrigated and used approximately 7.5 megalitres per hectare through to the finish.

"It was chopped at milk line 3.5 to 4.0 and it looked really good going into the pit. Our nutritionist looked at it and was very happy with it," Mr Lumsden said.

The prospect of having in excess of 700 tonnes of maize silage to help feed the 750 milk cows is one that is quite pleasing.

"Having big pits filled with maize gives you peace of mind. To have it up your sleeve, it provides us with different options through the year."

He said the maize will be utilised through a mixer wagon in conjunction with protein hay, grain and a protein mix.

"We will need to have less grain in the bale and it is a cheaper option than hay."

Other advantages of maize such as herd health, assistance in joining and the ability to fill feed gaps through the year will also be realised.

Mr Lumsden said the maize crop was rotated into an oats/vetch crop shortly after harvest.

"IT WAS CHOPPED AT MILK LINE 3.5 TO 4.0 AND IT LOOKED REALLY GOOD GOING INTO THE PIT. OUR NUTRITIONIST LOOKED AT IT AND WAS VERY HAPPY WITH IT."

SCOTT LUMSDEN
LEITCHVILLE,
NORTHERN VICTORIA

Scott Lumsden, of Leitchville, VIC, produced yields in excess of 22 tonnes per hectare in his first year of growing maize silage.

SORGHUM

G Series Grain Sorghum

SUPERIOR HYBRID
MEDIUM MATURITY
G44

MIDGE 4 TESTED

Head type: Semi-open
Plant height: Short

General appearance	7.5
Head exertion	7
Height uniformity	8
Head fusarium	7
Stress lodging	8.5
Tillering	6
Early spring plant vigour	8

RATING: 1 = poor **9** = excellent

KEY FEATURES

> **RECOMMENDED ESTABLISHED PLANT POPULATION**
Marginal dryland 35,000 to 55,000
Favorable dryland 55,000 to 88,000
Irrigation 88,000 to 135,000

> **PRODUCT STRENGTHS**
Strong stress tolerance, inherent stalk strength, reliable yielding, short-statured plant with large grain size.

> **MANAGEMENT TIPS**
Keep the plant population up in better growing conditions as this is a medium tillering hybrid.

> **WHERE TO USE**
Well suited to all sorghum growing areas. G44 has the potential to flex its maturity according to environmental conditions.

> **WHEN TO PLANT**
Excellent early spring vigor, so well suited to early and late plantings.

MANAGEMENT COMMENTS

Tough all-rounder with good yield potential.

Strong stress tolerance, inherent stalk strength along with very good yield potential means this hybrid is well suited to all sorghum growing areas in Australia. A shorter-statured plant with good grain size will ensure a high potential for harvestable yield under most growing conditions.
Pioneer® brand hybrid G44 has the potential to flex its maturity according to environmental conditions.
This attribute rounds off the Pioneer grain sorghum package perfectly giving farmers flexibility. G44 also has excellent early spring vigour, so it is well suited to early and late plantings.

COMMENTS

RECOMMENDED ☐

MEDIUM MATURITY

G22

General appearance	8
Head exertion	6.5
Height uniformity	8.5
Head fusarium	6.5
Stress lodging	8
Tillering	6.5
Early spring plant vigour	8

RATING: 1 = poor **9** = excellent

AN EVEN HYBRID WITH HIGH PERFORMANCE

- Suitable for all growing districts dryland and irrigation
- Excellent height uniformity
- Very good head length
- A good option for cool starts
- Low to moderate staygreen
- Very attractive bright orange grain
- Excellent standability
- Good grain size
- Sought after by the bird seed market

COMMENTS

RECOMMENDED ☐

MEDIUM-QUICK MATURITY

G33

General appearance	8
Head exertion	6.5
Height uniformity	8.5
Head fusarium	6.5
Stress lodging	8.5
Tillering	6
Early spring plant vigour	7

RATING: 1 = poor **9** = excellent

HIGH YIELD FOR QUICKER MATURITY

- A good option for cool starts
- Mid/quick flowering with excellent yield for maturity
- Low staygreen for quick harvest dry down
- Very good grain size
- Red grain colour
- Short plant stature with a semi-open head type
- High top-end yield with excellent standability
- Standard spray-out management applies
- Irrigated or dryland

COMMENTS

RECOMMENDED ☐

DEFENSIVE TRAIT COMPARISON TABLE FOR SORGHUM HYBRIDS

AGRONOMIC DESCRIPTION	G33	G22	G44
MATURITY	M-Q	M	M
GENERAL APPEARANCE	8.0	8.0	7.5
HEAD EXERTION	6.5	6.5	7
HEIGHT UNIFORMITY	8.5	8.5	8
HEAD FUSARIUM	6.5	6.5	7
STRESS LODGING	8.5	8.0	8.5
MIDGE RESISTANCE	6	4	4
STAYGREEN	low	low-moderate	moderate
TILLERS	moderate	moderate	moderate
GRAIN SIZE	very good	good	very good
EARLY SPRING PLANT VIGOUR	7	8	8

RATING: 1 = low/poor observation of trait **9** = high/strong observation of trait

SUPERIOR PIONEER BRAND G44 BRED TO YIELD IN AUSTRALIAN CONDITIONS

PIONEER® BRAND · SEEDS

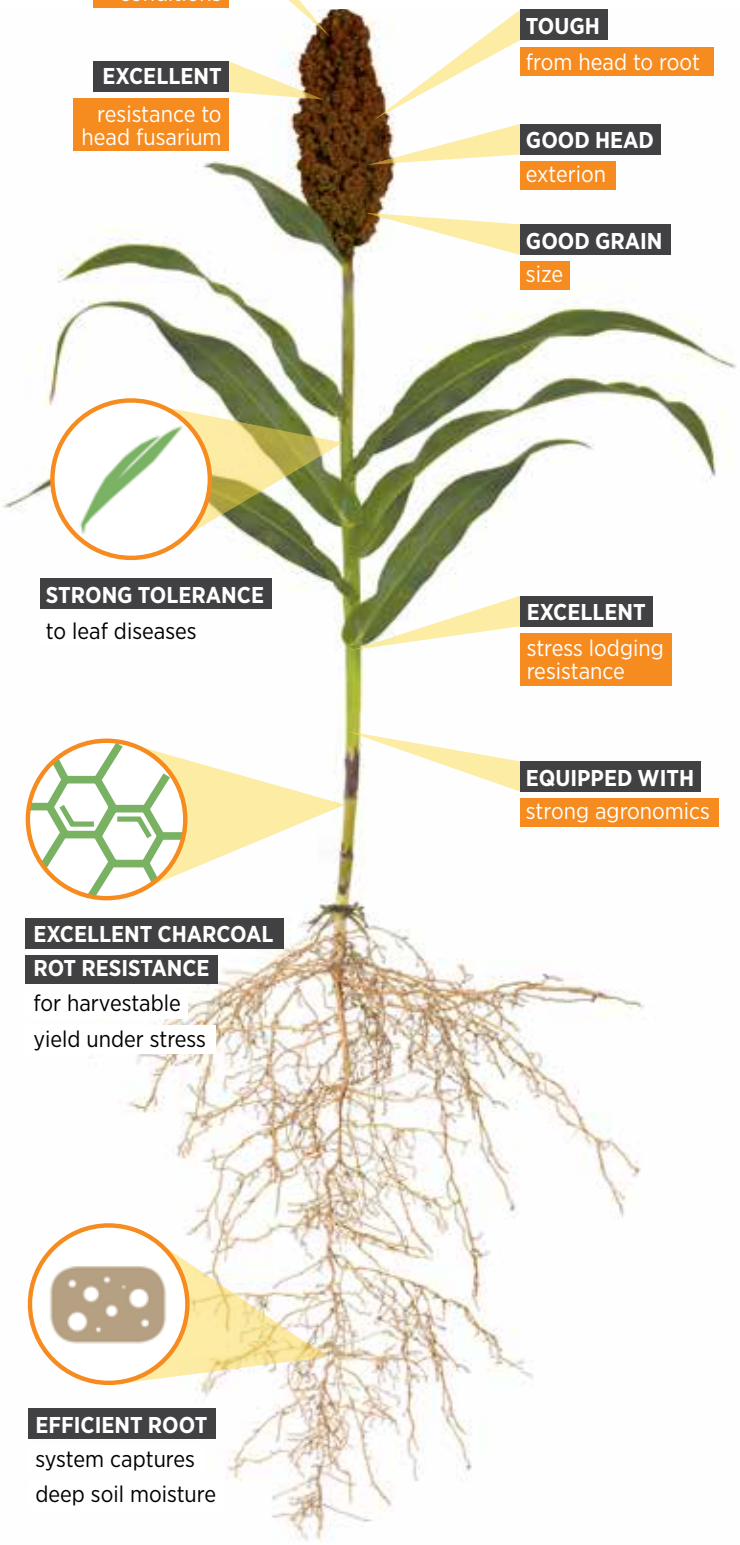
HIGH POLLEN PRODUCTION
under stress conditions

EXCELLENT
resistance to head fusarium

TOUGH
from head to root

GOOD HEAD
exterion

GOOD GRAIN
size



STRONG TOLERANCE
to leaf diseases

EXCELLENT
stress lodging resistance

EQUIPPED WITH
strong agronomics

EXCELLENT CHARCOAL ROT RESISTANCE
for harvestable yield under stress

EFFICIENT ROOT
system captures deep soil moisture

1800 PIONEER

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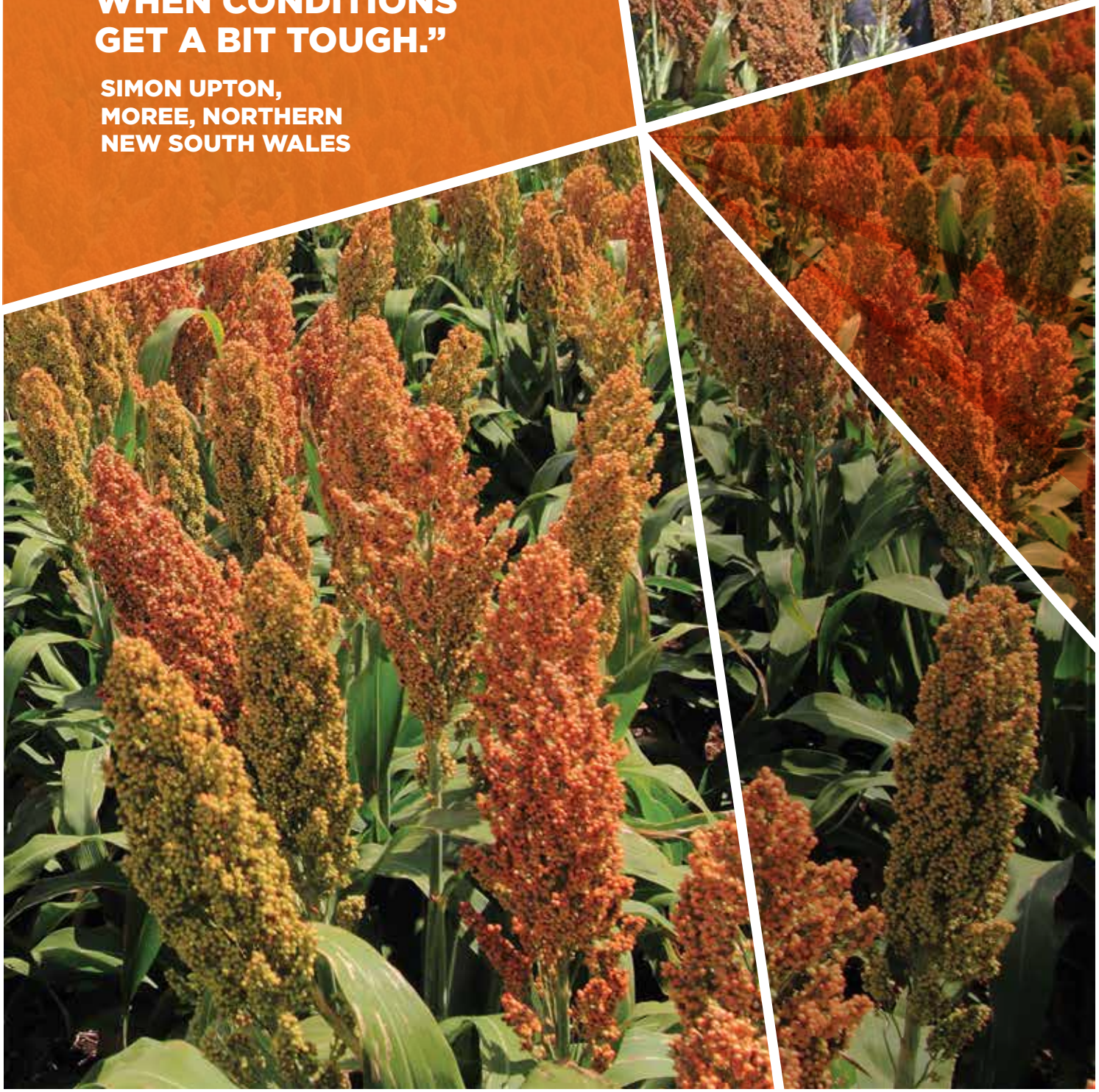
Exclusive producer distributor of Pioneer® brand products

"WE'VE MADE A CONSCIOUS DECISION THAT FROM NOW ON WHEN WE GROW SORGHUM IT WILL ONLY BE G33, AS WE KNOW IT'S GOT THE ABILITY TO HANG ON WHEN CONDITIONS GET A BIT TOUGH."

SIMON UPTON, MOREE, NORTHERN NEW SOUTH WALES



SORGHUM DELIVERS FOR CHINESE MARKET

WITH AN AIM TO CAPTURE OPPORTUNITIES IN THE CHINESE MARKET, FARMER SIMON UPTON WAS AFTER A SORGHUM VARIETY WITH A BRIGHT COLOUR.

The reason is that bright red sorghum grain is coveted by the Chinese market, and meeting this requirement would allow him to capatilise on the growing opportunities there.

Mr Upton is farm manager for Unibale, which is owned by a Chinese company and situated west of Moree in Northern NSW.

He ran a 220-hectare sorghum trial over the 2015/16 summer to assess four varieties, a third of which was Pioneer® brand hybrid G33 sorghum.

"The ground was watered up and we planted into a full profile in early September 2015 at a rate of 2.5 kg/ha - emergence was excellent across all the varieties, with plants coming up within seven days.

"We put down about 250 units of nitrogen just prior to planting and watering up, while weed control consisted of Dual Gold® and atrazine, with no need for any other sprays throughout the season," he reports.

The trial received no significant in-crop rain, although G33 was amongst part of the trial that got a second watering at the boot stage.

Mr Upton said at that point it was obvious the G33 grain fill was progressing well, meaning its yield potential was high.

"As we got closer to harvest, when we were comparing the G33 to the other varieties in the trial, you could tell it had the better potential due to the size of the heads and grain.

"That was confirmed when we harvested and got our grain weights back, which were up to 85 kg per hectalitre," he says.

With no lodging issues in the variety, Mr Upton was pleased with how the G33 harvest progressed.

"The colour of the G33 was great and it yielded around 7t/ha, which was a fantastic result.

"We've made a conscious decision that from now on when we grow sorghum it will only be G33, as we know it's got the ability to hang on when conditions get a bit tough.

"After I sat down and worked out the return on the crop, it was pleasing to see that if you've got water, and you don't need as much as you do for cotton, and you can get these kinds of yields, it's a pretty handy return," he concludes.

NEW SORGHUM THE TOP PERFORMER ON NORTHERN NSW PROPERTY

A NEW SORGHUM WAS THE HIGHEST YIELDING HYBRID ON THE WOODS PROPERTY SOUTH OF BOGGABILLA, IN NORTHERN NEW SOUTH WALES LAST SEASON.

Robert Woods said it was the first time they had grown Pioneer® hybrid G44 on the property and the result was well above expectations.

Excellent yields and positive agronomic traits made it a good option.

"G44 was fantastic," Mr Woods said. "It was strong out of the ground and performed well. We gave it a fair bit of testing with heat tolerance. It was forty degrees when it was coming into boot and it didn't seem to worry it."

"After that, the season did get a bit better with some good finishing rain and it averaged 4.8 tonnes per hectare. It was the highest yielder and well in front of the next best. We will put a fair area in next year."

The result was approximately 600 kilograms per hectare ahead of the next best hybrid which was MR Bazley.

Mr Woods said G44 was good to harvest, with good strong stalks with a nice big open head which was well above the flag.

"It also had the biggest test weight we've ever had," he said.

The test weight varied from 78 to 79 kilograms per hectolitre in an excellent result which demonstrated the hybrid's ability to take advantage of the late-season rain.

All of the sorghum last season was planted into paddocks that had been fallowed through from the previous year's winter crop.

Most of the area had been fallowed through from barley and it was all sown in the first week of September.

"I like to go as early in September as we can," Mr Woods said.

The sorghum was sown into one and a half metre row spacings and at a rate of 55,000 seeds per hectare, with an estimated establishment of 48,000 to 50,000 plants per hectare.

G44 germinated well in the favourable conditions and made the most of the varied seasonal conditions.

Mr Woods said it was good to see a new sorghum hybrid performing so well and allowed them to move away from some of the older options they had been using.

"Most of the new ones we bring in, they don't perform as well as the old ones and they go out again."

Sorghum harvest was completed by the middle of February and the good moisture received late meant the majority of country will be double-cropped into a winter option such as chickpeas.

"G44 WAS FANTASTIC, IT WAS STRONG OUT OF THE GROUND AND PERFORMED WELL. WE GAVE IT A FAIR BIT OF TESTING WITH HEAT TOLERANCE."

ROBERT WOODS
SOUTH OF BOGGABILLA,
NORTHERN NEW SOUTH WALES

FORAGE SORGHUM

SuperSweet Sudan®

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

RATING: 1 = poor **9** = excellent

A UNIQUE AUSTRALIAN PRODUCT, BRED FOR AUSTRALIAN CONDITIONS.

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

- Wide area adaption
- Very fast growth and regrowth
- Prolific tillering habit
- Superfine stems
- Super sweet and leafy
- High quality, very palatable hay at all stages of maturity and growth
- Suited for dryland situations and intensive irrigation

STUDIES HAVE SHOWN SUDANS POSE A LOWER RISK OF PRUSSIC ACID TOXICITY THAN SORGHUM TYPE FORAGES

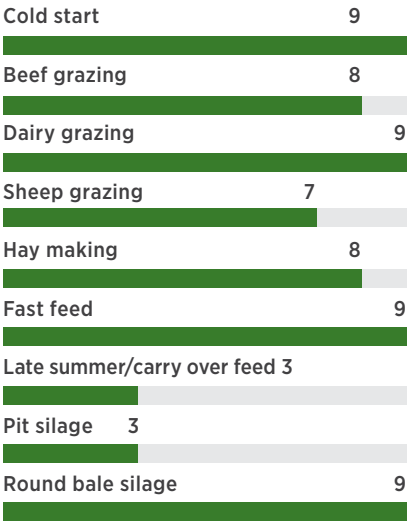
COMMENTS

RECOMMENDED ☐

MANAGEMENT TABLE FOR FORAGE SORGHUM HYBRIDS

HYBRID		HYBRID SSS SUPER SWEET SUDAN	BETTA GRAZE	MEGA SWEET	GRAZE-N-SILE
SPECIAL COMMENTS		Quick to feed with super sweet fine stems.	Best cold tolerance – first to plant.	Grain-bearing: Feed value increases with maturity.	For pit silage.
PLANTING RATE	MARGINAL DRYLAND	2.5 -5 kg/ha	2 to 10 kg/ha	2 to 4 kg/ha	50-70,000 seeds/ha
	GOOD DRYLAND	6-12 kg/ha	5 to 25 kg/ha	5 to 6 kg/ha	75-100,000 seeds/ha
	IRRIGATION AND COASTAL	12-16 kg/ha	10 to 30 kg/ha	8 to 12 kg/ha	100-150,000 seeds/ha
HYBRID MANAGEMENT	LEVEL OF REQUIRED MANAGEMENT	Plant 2.5-3 cm deep into moisture. Best results when using a planter with press wheels or followed by a roller to improve seed soil contact. Best quality feed when grazed or cut on a regular basis.	Strict management is required to realise full genetic potential and quality. Graze early and often.	Most flexible. Maintains maximum quality and is attractive to stock at any growth stage either early, mid or late season, as well as going into winter.	Precise management required for silage production in areas where corn is not an option. Similar management to growing grain sorghum.
	GRAZING TIPS	Super sweet fine stems produce excellent palatability and quality. Initial grazing between 70 cm and 120 cm tall and follow up grazing between 50 cm and 120 cm tall.	High sugars, fine stems and higher digestibility allows for greater intake and better crop area utilisation – commitment to graze early and often (at 1 to 1.5 metres in plant height).	Good quality at any stage of growth, with feed value increasing with maturity. Ideal for grazing at any growth stage, especially late. Mega Sweet will set grain.	From broadacre to 75 cm.
	ROW SPACINGS	Narrow spacing (10-30 cm) is preferred for maximum yield and quality. Wider spacing's (30 cm+) in more marginal dryland areas is also common for grazing purposes.	From broadacre to 75 cm.	10 to 100 cm rows suit crop and grain development.	10 to 100 cm.

BETTA GRAZE



RATING: 1 = poor **9** = excellent

FIRST TO PLANT, FIRST TO FEED

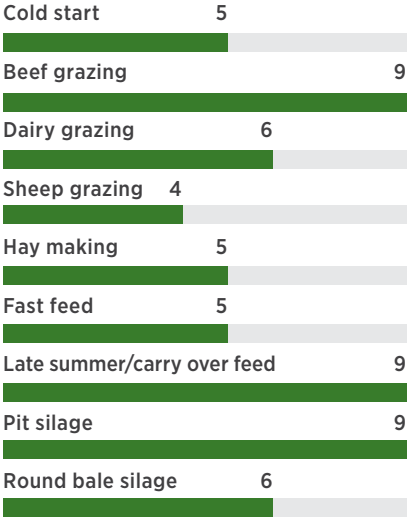
Excellent recovery from grazing or cutting, the fast growing nature of Betta Graze and its cold tolerance, mean it is the first forage sorghum you can plant and the first you can feed to any type of livestock. Betta Graze is highly palatable and is highly suited to general grazing, hay production and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

- Sorghum x Sudan grass
- Cold tolerant means fast early growth
- Responds well to heavy grazing or cutting with quick growth and an abundance of tillers
- High sugar content
- Fine stems and disease-free leaves

COMMENTS

RECOMMENDED ☐

MEGA SWEET



RATING: 1 = poor **9** = excellent

THE FLEXIBLE FORAGE SORGHUM

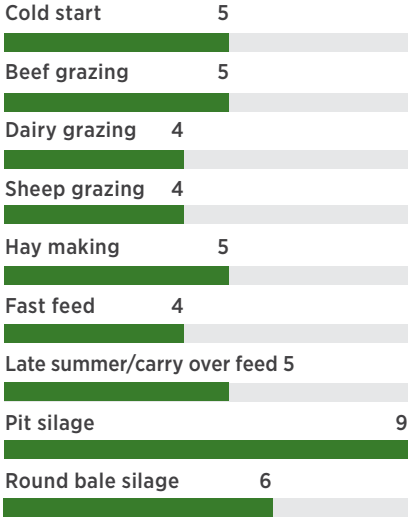
Mega Sweet is attractive to stock at any stage of growth and increases its feed value and sweetness as it matures. Mega Sweet can be planted early in the season, mid season or late season for late summer and carry-over feed. Mega Sweet can be used for grazing or quality silage production but should be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

- Sweet sorghum x grain sorghum hybrid
- Grain-bearing
- High sugar content
- Feed value increases with maturity
- Highly flexible: Can be planted early, mid-season or late season

COMMENTS

RECOMMENDED ☐

GRAZE -N-SILE



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 maize silage in dryland areas or in limited irrigation situations.

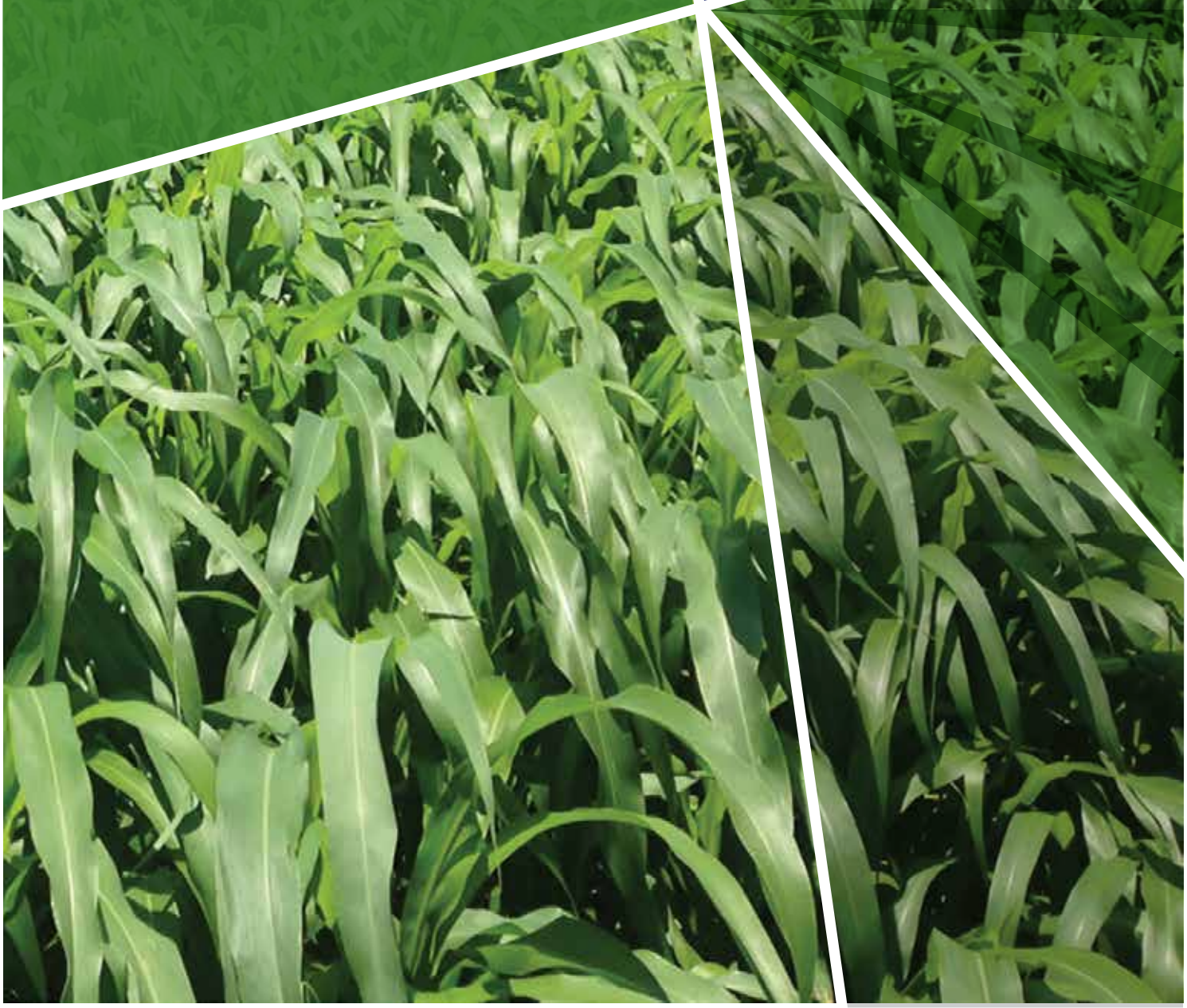
- Sorghum x sorghum hybrid
- Ideal for pit silage
- More water efficient than corn
- Grain yields similar to grain sorghum hybrids (do not direct harvest like grain sorghum)
- White grain type

COMMENTS

RECOMMENDED ☐

"A PLOT OF SSS WE PUT IN YIELDED MAGNIFICENTLY – WE WERE VERY IMPRESSED WITH THE FINE STEM, IT WAS VERY EASY TO MAKE HAY OUT OF AND VERY PALATABLE."

PETER HARRIS, INVERELL, NORTHERN NEW SOUTH WALES



HYBRID SUDAN PERFECT FIT IN UNIQUE SITUATION

PETER HARRIS ADMITS HE IS FARMING IN UNUSUAL CIRCUMSTANCES, WITH AN AIM TO CROP '365 DAYS OF THE YEAR' TO USE UP EXCESS WATER AND NUTRIENTS.

The excess of resources comes because, as farm manager at Bindaree Beef at Inverell, he is able to access water, rich with nitrogen, from the company's on-site abattoir.

Mr Harris has been growing Pioneer® hybrid Super Sweet Sudan (SSS) for three years now, originally to feed a biodigester purchased by Bindaree Beef to produce electricity from waste.

"At that stage we had to grow extra crops to feed the digester to produce methane, so we conducted extensive summer crop trial plots to evaluate what would be most suitable.

"A one-hectare plot of SSS we put in yielded magnificently - we were very impressed with the fine stem, it was very easy to make hay out of and very palatable," he explains.

While the Bindaree farming operation uses waste water from the abattoir 365 days of the year, they now don't need to supply the biodigester.

"Waste water from the abattoir goes to the farm to be used on the crops, we turn it into hay, and then that gets fed back to the cattle waiting for slaughter, so it's a way of controlling our nutrient load because our water carries quite a bit of nutrient.

"SSS is a brilliant way of using up the water and nitrogen because of the tonnages that we are taking off, the figures are quite unreal.

"This season we took 470 bales off a 13-hectare paddock, which equals 36 bales to the hectare, or 12 tonne dry matter per hectare off only one cut, so I thought the performance was unbelievable!" Mr Harris says.

In total, 150 hectares of SSS is sown on the property, with an average over the whole program of 30 bales per hectare, equating to 10 tonne dry matter per hectare.

"The quality of the hay itself is brilliant, we feed it back to the cattle and they do not leave one straw - the SSS with its very fine stem is very easy to make hay out of, so moving forward we'll stick with it, it will be SSS every year.

"We're in a very unique situation where we're under sowing wheat under the SSS now and just waiting for the frost to kill the forage off, because in our situation we must crop 365 days of the year.

"We endeavor to keep our paddocks green at all times because we need to use the water and the nutrient up," he says.

INOCULANTS

11CFT

PRODUCT	11CFT
Crop	Maize
Fully researched and proven	✔
ISO 9002 accredited	✔
Improved fermentation	✔
Aerobic stability	✔
Improved fibre digestibility	✔

REVOLUTIONARY TRIPLE-STACK INOCULANT

Use: Maize silage specific

> Reduces dry matter loss resulting from front end fermentation losses and back end feed out losses

> Improves digestibility. An excellent option for high producing herds fed high levels of forage

> Allows for reduction in concentrate and protein supplementation to reduce total feed costs

> Enables silage to be fed out up to one day in advance

COMMENTS

RECOMMENDED ☐

11C33

PRODUCT	11C33
Crop	Maize
Fully researched and proven	✔
ISO 9002 accredited	✔
Improved fermentation	✔
Aerobic stability	✔
Improved fibre digestibility	

DUAL PURPOSE INOCULANT

Use: Maize silage specific

> Improves silage quality providing a low final pH and a desirable silage fermentation acid profile

> Reduces heating, decreases feed-out losses

> Enables silage to be fed out one day in advance

COMMENTS

RECOMMENDED ☐

1127

PRODUCT	1127
Crop	Pasture & cereal
Fully researched and proven	✔
ISO 9002 accredited	✔
Improved fermentation	✔
Aerobic stability	
Improved fibre digestibility	

PASTURE SPECIFIC BACTERIA

Use: Pasture and cereal silage

> Improves fermentation, retains nutrient content and enhance digestibility of pasture silage

> Improves the feed value of milk or meat production of pasture silage

COMMENTS

RECOMMENDED ☐

11G22

PRODUCT	11G22
Crop	Pasture & cereal
Fully researched and proven	✔
ISO 9002 accredited	✔
Improved fermentation	✔
Aerobic stability	✔
Improved fibre digestibility	

DUAL PURPOSE INOCULANT

Use: Pasture and cereal silage

- Contains pasture specific bacteria and *L.buchneri*
- Improves fermentation
- Reduces heating in the pit and during feed out

COMMENTS

RECOMMENDED ☐

1174

PRODUCT	1174
Crop	Multi-crop
Fully researched and proven	✔
ISO 9002 accredited	✔
Improved fermentation	✔
Aerobic stability	
Improved fibre digestibility	

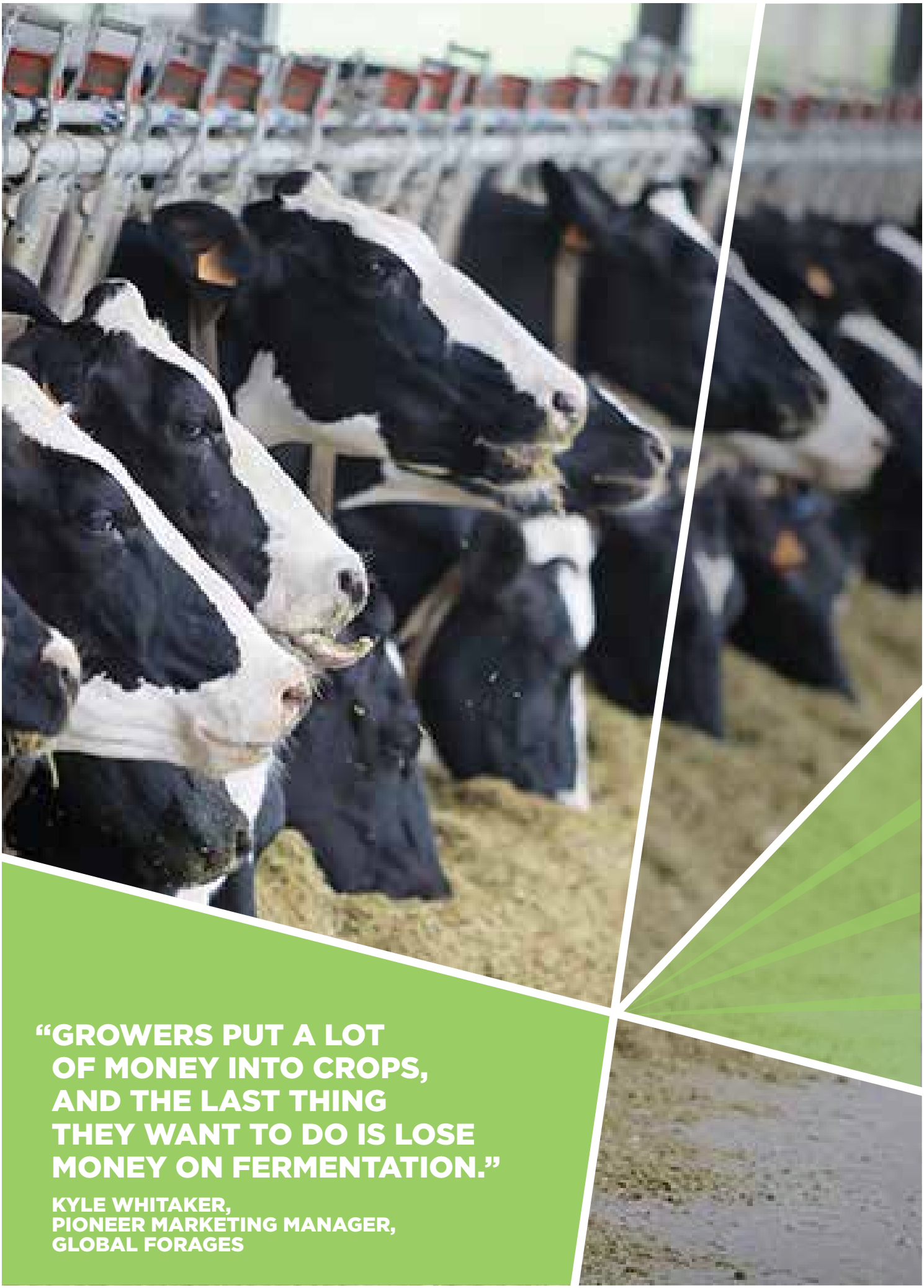
PROVEN INOCULANT*

Uses: Multi-crop Inoculant

- Ideal for cereal, legume, pasture and corn silage
- Helps improve fermentation, retain nutrient content and enhance digestibility of ensiled forages

COMMENTS

RECOMMENDED ☐



“GROWERS PUT A LOT OF MONEY INTO CROPS, AND THE LAST THING THEY WANT TO DO IS LOSE MONEY ON FERMENTATION.”

KYLE WHITAKER,
PIONEER MARKETING MANAGER,
GLOBAL FORAGES

WHAT INOCULANTS DO FOR YOUR FORAGE

WITH THE HIGH COST OF FEED, MANAGING YOUR SILAGE QUALITY HAS NEVER BEEN MORE IMPORTANT. ALONG WITH GOOD BUNKER MANAGEMENT, INOCULANTS CAN HELP PRESERVE VALUABLE NUTRIENTS.

INOCULATION IS IMPORTANT TO PRESERVING QUALITY

1. IMPROVED FERMENTATION

The basic function of an inoculant is to provide a fast, more efficient fermentation of silage. Fast fermentation preserves silage. An inoculant helps livestock operators maintain a high level of quality.

Research shows crops have specific moulds and bacteria, causing them to ferment differently. Pioneer has a diverse line up of crop-specific inoculants to help with dry matter preservation. Each Pioneer® brand inoculant contains unique bacterial strains, just as each corn hybrid contains unique genetics. This helps prevent spoilage based on the crop's unique fermentation process. Having crop-specific products makes a difference in performance whether it's corn, lucerne or pasture silage.

"Growers put a lot of money into crops, and the last thing they want to do is lose money on fermentation," Kyle Whitaker, Pioneer Marketing Manager – Global Forages says. "We want them to get as much nutritional benefit as possible."

2. GREATER AEROBIC STABILITY

Some Pioneer inoculants also offer aerobic stability. Packing removes oxygen, which is the fuel moulds and bacteria use to grow and consume silage nutrients. At feedout, the face of the silage bunker is again exposed to oxygen. This starts the fermentation process all over. Certain Pioneer inoculants contain Lactobacillus Buchneri, a bacterium that keeps the silo face cool, slowing secondary fermentation.

Keeping silage stable in the bunk and maintaining aerobic stability on the back end can add up to improved palatability and feed consumption.

The latest generation of Pioneer inoculants produce an enzyme that helps break down fibre in the silage, making it more digestible. The enzyme breaks down the lignin in the stalk, helping cows digest and use more of the available nutrients.

By getting more from your silage, you can rely less on supplemental feed, resulting in cost savings.

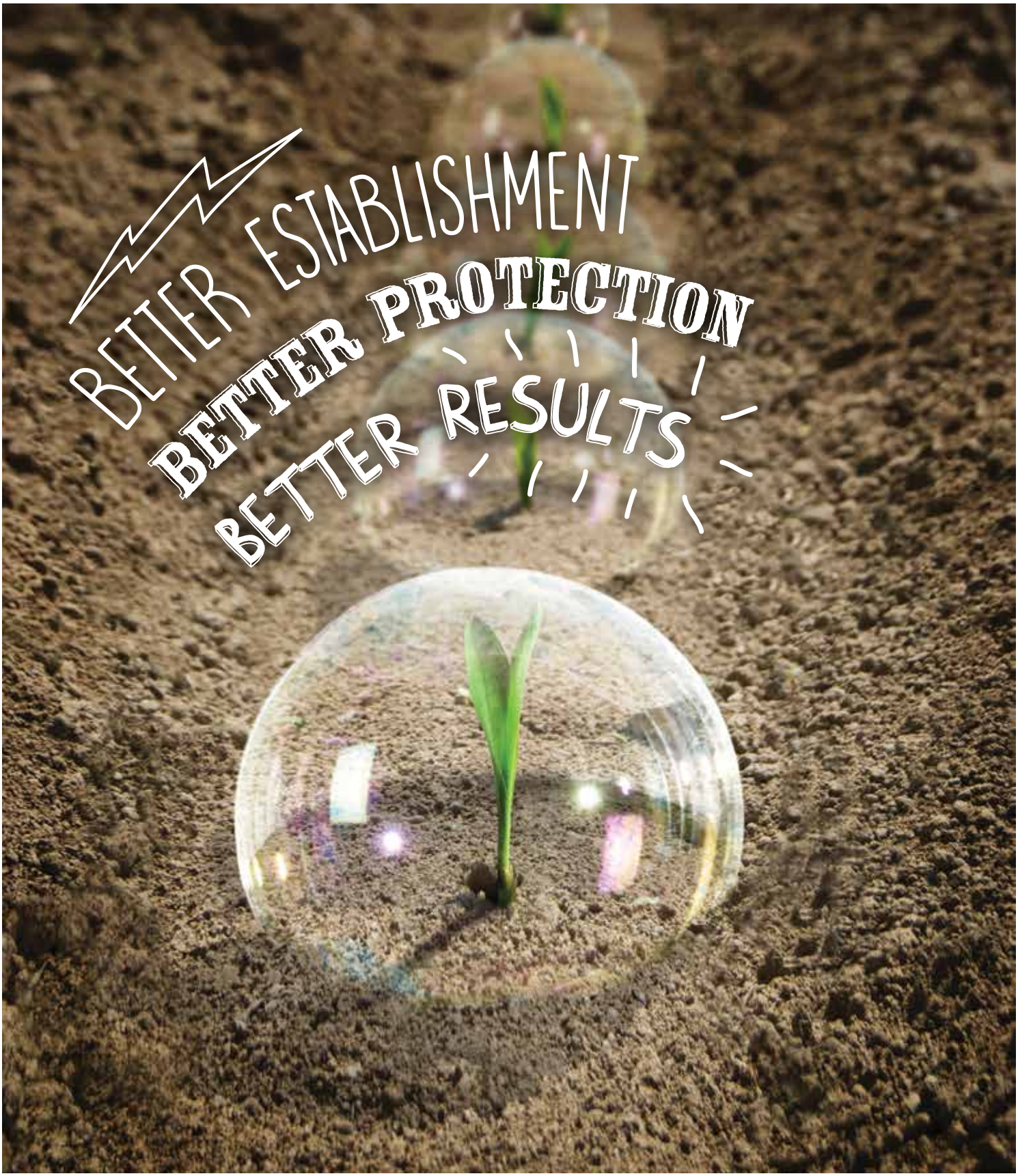
3. NUTRITIONAL GAINS

Inoculants also help limit the loss of important nutrients from the diet.

"You can lose some sugars, organic acids and maybe even some starch right from the beginning," Robert Larmer, Pioneer dairy specialist points out. "On the front end, the dry matter you save is loaded with high-energy nutrients."

By preserving these high-energy nutrients, you can increase the bite-for-bite value of your ensiled forage.

"The most valuable portion lost is that high-energy component," notes Larmer. "Inoculants make it possible to preserve those parts better."



UNIFORM HEALTHY STANDS | IMPROVED YIELD ADVANTAGE | EARLY SEASON INSECT CONTROL | ENHANCED PLANT VIGOR

BETTA® STRIKE
SEED PROTECTION

1800 PIONEER

GenTech Seeds
Exclusive producer distributor of Pioneer® brand products

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