



Tropical Pasture Guide Edition 2

Grow with
Confidence



 **BARENBRUG**

Introduction

At Barenbrug we specialise in the highest quality pastures, forages and field crops. We offer an extensive range of seed species and varieties to help our customers grow highly productive pastures to maximise their output from the furthest reaches of northern Australia to the colder temperates of Tasmania and west across the country.

With a commitment to research and innovation, Barenbrug strives for continuous improvement of our product range in facilities and testing sites throughout Victoria, New South Wales and Queensland. We take a collaborative approach with leading agricultural plant breeding and research organisations to ensure our proprietary varieties meet the demands of our challenging industry.

Our highly experienced and knowledgeable team of territory managers can offer valuable and timely advice to guide farmers and retailers to make informed decisions that suits their local environments.

With a focus on research, Barenbrug strives to improve the range of tropical grasses and legumes to provide the highest quality pastures for the industry with best practice management. Farmers can be confident that Barenbrug seed has optimised pasture performance for grazing livestock while maintaining the health of the soil.

Developing an improved pasture in the tropics and sub-tropics is no easy task. It can require a substantial investment of time, planning and management to achieve a successful result.

Barenbrug can make this task a lot easier with a group of dedicated and experienced territory managers providing advice on a range of improved pasture products, backed by services that are second to none with ongoing support to ensure continued improved pasture success.

Our seed treatments - **AgriCote™**, **OptiCOTE™** and **OptiSelect™** - provide improved pest protection and greater success rate in pasture establishment through improved seed quality, allowing you to grow with confidence.

Our commitment to Australian agriculture

Our significant investment into R&D at Barenbrug and breeding programs across temperate and tropical species within Australia enables us to develop, evaluate and bring new varieties to market providing added value to our end users.

With dedicated research and testing sites across Queensland, New South Wales and Victoria, Barenbrug collaborates with industry organisations such as SARDI, government Primary Industry departments and evaluation programs including PVT, NVT and FVI to bring quality seeds so that our farmers can grow with confidence.





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Legend



Rainfall



pH balance



Soil type



% Mix



Treatment



Plant Breeders Rights



Tropical Grasses and Legumes for improved pasture

Australia's northern country offers wide expanses for grazing on native grasses with periods of extremes in weather and climates. Much of our meat and wool industry is largely based in these areas and exported across the world and is well respected for its quality.

To support production, livestock need consistent, nutritive pasture. Barenbrug offers the cropper and grazier a range of tropical crops to work in synergy with native grasses to provide the nutrition for crop production, herd support and backgrounding.

Improvements to native pastures can provide:

- More feed, with better quality and reliable production
- Higher carrying capacity
- Increased weight gains, wool clip or milk production
- Improve calving and lambing birth rates
- Finish stock in less time
- Increase farm profitability
- Improve ground cover, soil fertility and structure
- Less erosion and fewer weeds
- Restore degraded land, salty areas and hardpans
- Improve pasture diversity



Warm season grasses are more efficient users of water and nitrogen.



Warm season grasses are more drought and heat tolerant.



On most northern soils, young palatable native grass has a limited window of quality feed (usually 4-6 weeks) after the start of the wet season. During this time, the plant's store of nitrogen and phosphorus depletes, particularly once flowering commences, and new growth is unlikely to occur. Grass that is still green may be too low in protein to support grazing livestock.

To support the needs of livestock and soil fertility, pasture improvement can be achieved to extend grazing into Autumn with legumes sown into the existing pasture. Barenbrug has a range of grasses and legumes that will naturalise and spread across the paddocks, that are suited to a range of different soil types. On very large properties in northern Australia, the benefit of planting legumes can have a large impact on livestock turn-off.

Improved tropical grasses can tolerate heavier grazing, maintain their quality over a longer period of the growing season and respond to good conditions. However, even under higher soil fertility conditions like brigalow soils, the productivity of improved species such as buffel or panic grass declines as soil nitrogen availability declines. Long term soil nitrogen depletion results in soil condition pasture run-down. Add to this, the digestibility and protein level of summer growing

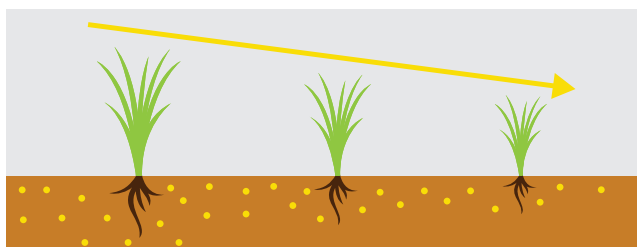
tropical grasses declines as plants mature and remains low during the autumn and winter months.

Legumes with their high protein content are an excellent source of nutrition for stock and maintain their levels of protein longer than grasses and improve the quality of livestock diet, especially in the later months of the growing season. This allows stock to make better use of ageing grass. Livestock continue to grow into autumn and maintain their weight over winter.

Many legumes have deep taproots and can access moisture and nutrients deep in the soil profile. Under good summer conditions, legumes planted with companion grass species can provide an extra 0.1–0.2kg per head per day of weight gain in cattle. Compared to grasses, legumes retain their digestibility for a longer period of time.

Legumes are often sown with grass species as part of a pasture mix as they form a symbiotic relationship with rhizobia, which in turn fixes atmospheric nitrogen and makes it available to the legume plant. Including a legume with a grass based pasture therefore reduces the need for nitrogen fertiliser and has shown to increase total forage yield, seasonal growth and quality.

Declining pasture DM and available soil nitrogen

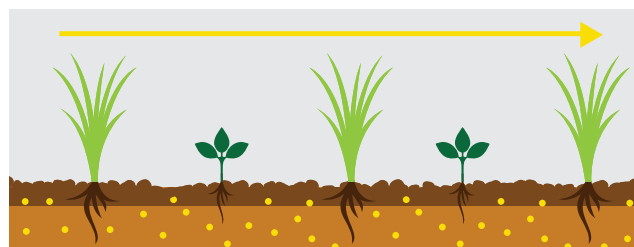


 = Available soil nitrogen

Grass only pasture

- Declining soil fertility with long-term grazing
- Declining paddock protein over time with a sharp decline through drought and winter months
- Declining carrying capacity and liveweight gains over time.

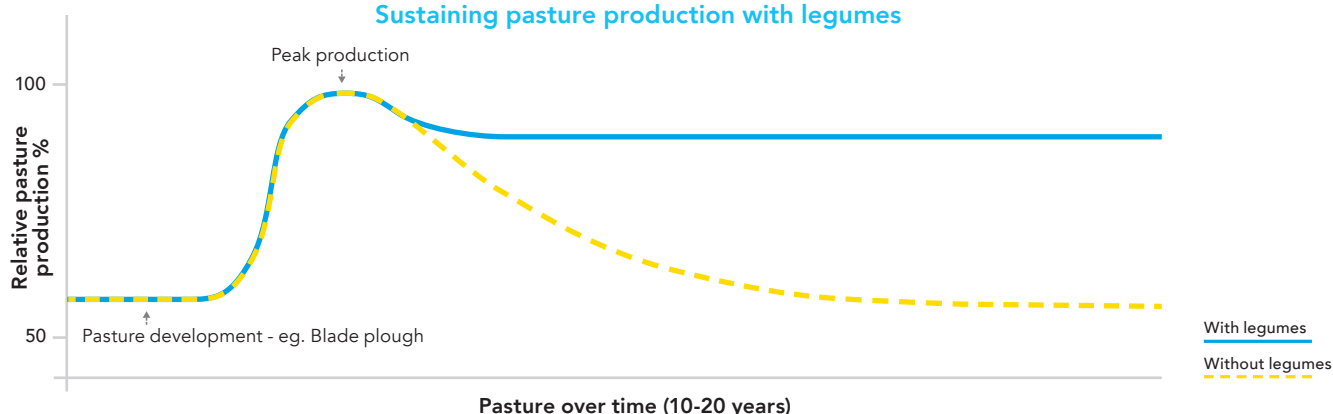
Sustained pasture DM and soil nitrogen



Grass and legume pasture

- Increased nitrogen from legumes
- Legumes provide increased paddock protein and maintain protein in drier and/or colder months
- Pasture will sustain higher stocking numbers and/or liveweight gains.

Sustaining pasture production with legumes





Paddock selection

The best country for over sowing tropical legumes will have soil with a loose surface of at least 4ppm of available soil phosphorous. Sowing a few seeds of tropical legumes across thousands of hectares is unlikely to give any noticeable improvement for stock for many years. Instead, choose a small area within a paddock to be the pilot or mother plot so improvements can be seen and expanded over time. Implementing a planned pasture improvement in a smaller area will provide more cost-effective results. Livestock may also help spread seed out from the focus plot into surrounding areas.

It is important to select paddocks well in advance and where possible, reduce weed competition prior to the pasture being established. It is recommended that sowing seed take place after one to two good germinations of weeds have been controlled pre-planting.

A full moisture profile stored in the paddocks can greatly enhance the success of pasture establishment. For paddocks with high weed pressure, an establishment plan can be developed to capitalise on the benefits of short-term grazing crop rotations that utilise selective, in-crop weed control applications.

Paddock preparation

To prepare for sowing a pilot plot, fence off a corner of a paddock to enclose a few hundred hectares. Clean up any woody weeds and cultivate (with discs or chisel plough) if possible to check the existing native grasses and to provide a better seedbed for both legumes and any grasses to be sown at the same time.

On harder-setting soils, a level of cultivation is required, especially when sowing an improved grass species. Sow the legume seed at a solid planting rate and check for phosphorous deficiency. To provide a quick feed and green cover just before rain or the start of the wet season, consider a faster growing improved grass species such as Sabi grass.

Ensure livestock are kept out until seedlings are well established and allow them to set seed. Stock can resume grazing when the legume seed is set allowing animals to graze back to the main paddock to spread seed in their dung. Stock will always prefer to graze the improved area especially if some phosphorus has been applied. Gradually destock, as some grazing can help with existing native grasses competition.

Through the process of grazing, livestock faeces and urine recycling, and mineralisation of old legume roots and shoots, the nitrogen is then released to the grass pasture, promoting growth and increasing protein content. Legumes can readily supply 16–18Kg of fixed nitrogen per tonne of dry matter produced, which is the equivalent of 150–200 units of N/Ha/year or approximately 300–400Kg/Ha of urea fertiliser.



Tackling pasture rundown

Pasture grasses are very productive in the beginning when planted after clearing or placed into previously cropped soils of high fertility. However, their productivity generally declines over time. Pasture rundown is caused by a lack of plant-available nutrients, mainly soil nitrogen.

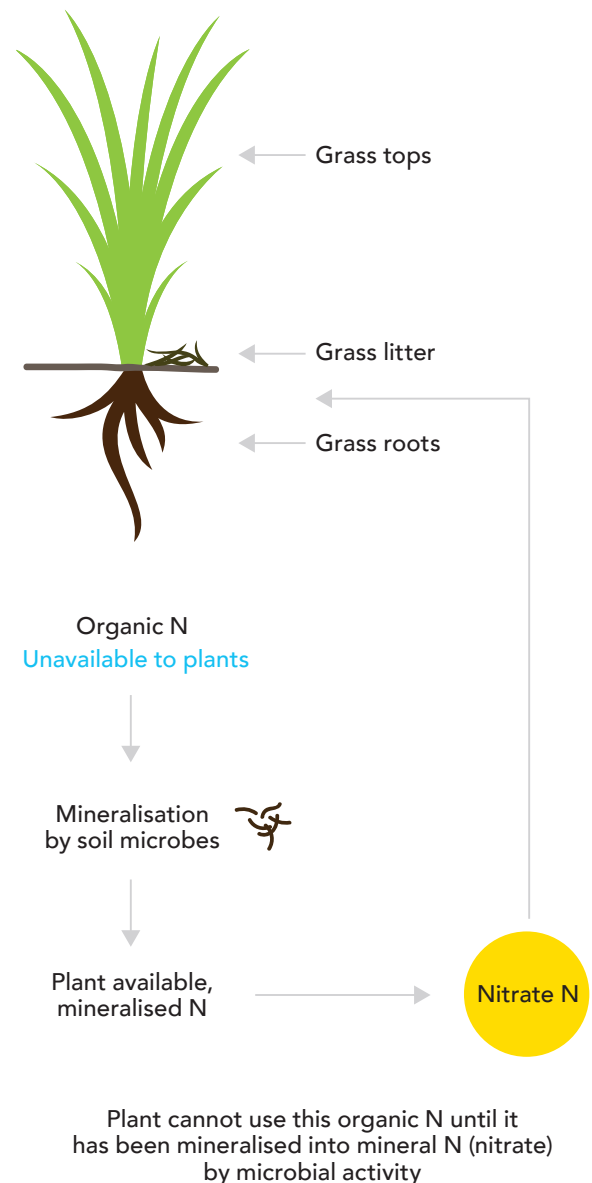
Rundown can result in reduced grass growth by up to 50% and the flow-on effect can see similar losses in carrying capacity and livestock weight gain.

In a rundown pasture, the nitrogen is still present but cannot be used by plants until it is mineralised.

Pasture improvement activities can help tackle rundown. Adding fertiliser or, even better, the addition of tropical legumes into the pasture can provide plant available nitrogen into the system.

Tropical legumes freely fix plant available nitrogen in the soil and this can become a longer term solution.

Management activities such as cultivation or blade ploughing can increase nitrogen cycling that promotes the release of unavailable nitrogen in organic matter. Short term fallows or crop and pasture rotations can also aid in inorganic nitrogen release.



Pasture Establishment

The main reasons pastures fail is due to weather, weed competition during establishment and poor management. These key guidelines can help in getting the best results from planting a new improved tropical pasture.

Pre-sowing

It is important to select paddocks well in advance and where possible, reduce weed competition prior to the pasture being established. For paddocks with high weed pressure, an establishment plan can be developed to capitalise on the benefits of short-term grazing crop rotations that utilise selective, in-crop weed control applications.

Variety Selection

Choose the right species for the right situation.

The area of adaptability of each tropical and sub-tropical species will be essential to ensuring successful establishment and long-term persistence. Some species will be better adapted to lighter soils, while others will perform best on heavier soils. Similarly, the ability of tropical species to handle environmental factors such as waterlogging, frost or even drought will vary greatly.

Pasture selection should generally be based on consideration of factors such as soil type, frost tolerance and rainfall. Aim for a mix of perennial grasses and legumes in an improved pasture where possible.

Use the tropical sowing guide on pages 16-19 to determine the ideal species for your area.





Seed Quality and Treatment

The quality of the seed may have an impact on purity and germination, increasing the risk for a successful outcome. A seed test report will indicate the purity and germination analysis for any seed under consideration for planting.

Tailored seed coatings are primarily used to enhance seed establishment, the delivery of rhizobia for legume inoculation and to improve handling and ballistics properties for aerial seeding. Barenbrug offers a range of seed technology options that have been developed for specific plant species.

There are generally two types of coatings available:

- **Lime-based coating:** Typically used for legumes and tropical grasses (resulting in a more uniform seed shape and weight)
- **Film-coating:** Typically used for grasses or field crops to deliver a chemical seed coating (negligible weight gain for the seed).

AgriCote®

Barenbrug's premium seed coating technology AgriCote™, is available for pasture legumes, tropical grasses and forage herb species. It is designed to deliver significant advantages for plant establishment through insect protection, fungicide protection, inoculant bacteria (on most legumes) and micro-nutrients. This coating technology significantly improves the handling aspects of some seeds, enabling more efficient distribution across the paddock, which is particularly important for aerial application of some tropical species.

Gauche® film coat

A film-coat of Gauche insecticide is designed to protect seedlings from biting and sucking insects (including red-legged earth mites) for up to four weeks during establishment. Gauche Film Coat offers 'stress shield' benefits, which help to protect treated plants during extended dry periods. Gauche Film Coat also includes a fungicide which protects the seed against fungal diseases.

OptiCote™

Offers both fungicide and insecticide protection for sorghum and corn crops. A film coating of Vitavax® and Gauche is used on corn. Thiram and Gauche/Cruiser® are used for sorghum.

Poncho® film coat

Poncho Plus insecticide is designed to protect seedlings from chewing, biting and sucking insects for up to four weeks during establishment. It includes the active ingredient in Gauche Film Coat that offers 'stress shield' benefits, which help to protect treated plants during extended dry periods. Poncho Film Coat also includes a fungicide which protects the seed against fungal diseases.

OptiCote PLUS™

Consists of the ingredients of OptiCote and Concept II® seed safener, for the use of Dual Gold herbicide in sorghum.

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®Gauche is a registered trademark of the Bayer Group.

®Poncho Plus is a registered trademark of BASF.

®Concept II, Cruiser and Dual Gold are registered trademarks of Syngenta.

®Vitavax is a registered trademark of Crompton.



Seed Bed

Seed bed requirements will vary with soil type, climate and the pasture species being planted – evaluation is essential to determine the most appropriate seed bed preparation. Small-seeded varieties generally benefit from a finer tilth seed bed. Heavier clay soils that form a crust benefit from a deeper, rougher working. Where possible, plant into a fresh seed bed that has not been impacted by wind, rain and/or compacted by machinery or livestock.

If the ground is disturbed from events such as clearing fence lines, revegetation work or extensive ripping activities, aim to seed at the time of working to gain the best response. Pre-seeding areas such as standing timber should also be considered. Avoid overworking soils that produce a very fine, powdery seedbed.

Lighter/Loamier Soils

These soil types are generally much easier to work and establish. Lighter soils suit surface sowing from both ground and aerial application methods, as their loose nature will normally provide adequate cover and seed to soil contact.

Heavy/Clay Soils

These soils can be hard to establish due to the surface crusting; a deeper working to leave a rougher seed bed may overcome this, as can incorporating pre-rolling for fine, cultivated soils.

Planting

Planting Rate

Adopting the correct planting rate takes the guesswork out of establishing an improved pasture. Lower planting rates can increase the likelihood of competition from weeds, increase the time it takes for a new pasture to become fully established and, in some cases, increase the risk of establishment failure.

Establishment delays from low planting rates significantly reduce the carrying capacity and production performance of the pasture. The planting rate selected should consider factors such as seed quality, environmental conditions including rainfall, the species being planted, sole or mixed species planting and targeted plant population. Recommended planting rates for coated seed consider these factors to ensure the targeted plant population is achieved. Higher planting rates are normally selected for higher rainfall areas like coastal regions and those under irrigation. Lower planting rates are usually an option for more marginal dryland scenarios.

Planting Depth

Most tropical species have a small seed size and prefer to be shallow planted with a light soil covering of approximately 0.50–1.0cm. Larger seed sizes can grow from a greater depth, though ideally not deeper than 2.0cm. Planting deeper will significantly reduce establishment in small-seeded tropical species.

Sowing Application Method

The method of sowing should be the one that suits the circumstances, and one that best delivers an even flow of seed to the correct sowing depth. Aerial and ground seeding techniques both give good results. Even seed distribution at a consistent sowing depth provides the best results every time. Where possible, plant seed on the surface, followed by a light harrow to cover and/or the use of a rubber type roller to ensure good seed to soil contact (Note that this is not recommended for crusting soils). Coated seed can be spread using a rolling drum seeder; fertiliser spreader; combine drill with the seed hoses removed or adopting precision planting equipment.

Other options are full cultivation, sod-seeding, band seeding and using a crocodile seeder. Tropical legumes such as Burgundy Bean, Stylo and Wynn Cassia can be mixed into feeding supplements and spread via livestock, establishing successfully in dung.

Timing

Deciding when to plant is usually one of the most difficult decisions in establishing a new pasture as during the warmer months it is hot and dry after planting. Tropical pastures are normally planted from August until March and early or late plantings are usually the best option. Avoid sowing when the seasonal risk of frost, drought or heat is likely to cause mortality of establishing seedlings. Pre-ordered seed with timely seed bed preparation, is essential to ensure planting at the ideal sowing window.

Target sowing times to maximise potential rainfall opportunities and weather events conducive to establishment success. Warm, moist seasonal conditions are ideal. The seed zone needs to be moist for three to four days for germination to occur. Along with surface moisture, pasture establishment relies on deeper, sub-soil moisture.

First Grazing

Ideally, newly sown tropical pasture should be well fenced and lightly grazed in the first season, allowing for some annual seed set to occur to aid in long-term establishment. Tropical pastures will respond best to short-term rotational grazing that allows for annual seed set, without overgrazing.

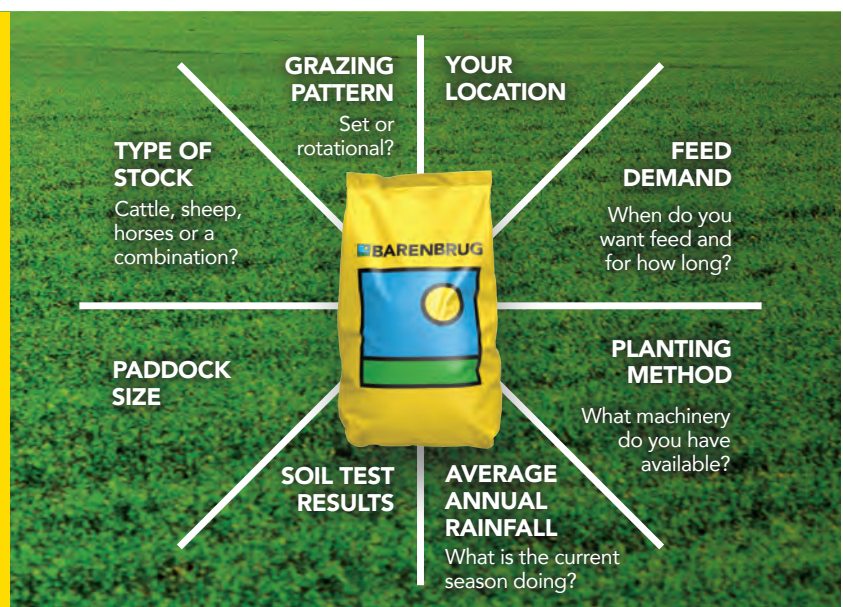
Grazing lightly encourages tillering and root development. However, care must be taken to ensure the newly sown pasture has had ample time to develop a strong root system and reach an approximate minimum height of 30cm. This is usually aided by follow-up rain, post sowing. Fires should be avoided until the new pasture is well established.

Overgrazing can severely reduce dry matter response, reduce plant recovery, cause plant population losses and may also allow the opportunity for weed invasion. The best grazing system will involve a combination of set-stocking when production is high and some form of rotational grazing to ensure the pasture gets enough 'rest'. Spelling the pasture in late summer each year will allow species to set seed and will increase the life of the pasture. Hay cutting is not recommended in the first year.

Single species or mix

How do I choose the right custom mix?

Use this diagram to ask the questions you should be considering when working out the custom mix you need.



Tropical Mixes

Meatmaster pasture seed blends are 'ready to sow', offering the latest pasture technology and best seed varieties. Choose between short term and permanent pasture for rainfall zone, paddock conditions and desired outcome.

Meatmaster Prime Pasture

Variety	Species	%
Endura™	Rhodes grass	30
Megamax™059	Panic grass	20
Bambatsii	Panic grass	20
SARDI-Grazer	Lucerne	10
Medic Mix	Medic	10
Presto	Burgundy bean	10



This mix is suited to the heavier black, self-mulching and grey-cracking flood plain soil types. The productivity of Endura Rhodes®, Bambatsii and Megamax®059 is enhanced by the adaptation to the soil type. The late season of the grasses is complemented by a legume component to keep protein in the pasture and nitrogen cycling. This is a very productive mix for finishing cattle in summer, whilst building a large volume of good standover feed for the winter months.

Meatmaster Big Beef Blend

Variety	Species	%
Endura™	Rhodes grass	30
Megamax™059	Panic grass	25
Bisset/Hatch	Bluegrass	15
SARDI-Grazer	Lucerne	20
Presto	Burgundy bean	10



The productivity of Endura Rhodes® and Megamax®059 is enhanced by creeping bluegrass, with its stoloniferous growth pattern allowing good ground cover and moisture holding capacity is ideal for medium black to red chocolate soils. The mix of both winter and summer active legumes enables the feed gap to be filled over winter.

Meatmaster Premium Coastal

Variety	Species	%
Mariner	Rhodes grass	45
Splenda	Setaria	20
Signal Grass	Brachiaria	20
Garnet	Burgundy bean	10
Greenleaf	Desmodium	5



This coastal mix has the highest quality tropical grasses together with productive tropical legumes, suited perfectly to high rainfall zones in south east Queensland and northern New South Wales. Mariner provides the high dry matter yields of a diploid rhodes but maintains its quality throughout the season making it ideal for highly productive coastal regions.

Meatmaster Western Light Soil

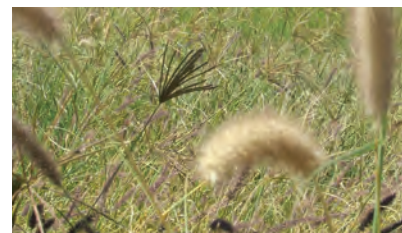
Variety	Species	%
USA	Buffel grass	30
Gayndah	Buffel grass	30
Presto	Burgundy bean	10
Mega Stylo Mix	Stylo	15
Sabi Grass	Urochloa	15



A blend of USA buffel for lighter country and Gayndah buffel for the red/grey loams, this mix will cover lighter soils encountered in the western Queensland area in the 350–450 mm rainfall category. The use of Sabi grass for vigorous establishment plus Stylos and burgundy bean complement the mix, enabling protein levels to be maintained in the dry winter.

Meatmaster Western Heavy Soil

Variety	Species	%
Bambatsii	Panic grass	25
Endura™	Rhodes grass	25
Biloela	Buffel grass	25
Presto	Burgundy bean	15
Ray Desmanthus™	Desmanthus	10



Developed for medium to heavy textured clay soils such as brigalow clays, open downs and heavier alluvial soils. This mix contains species that are tolerant of sodic and alkaline soil conditions commonly found in heavy soil types. The addition of tropical legumes suitable for heavier soils helps to supply companion grasses with nitrogen and improve the feed quality of the improved pasture.

Meatmaster Light Soil

Variety	Species	%
Endura™	Rhodes grass	20
Premier	Digit grass	45
Megamax™059	Panic grass	25
SARDI 7 Series 2	Lucerne	10



Suited to the red loam to harder cropped out soils of northern New South Wales and Queensland. Combining productivity, persistence and late season stay-green of Premier digit grass with green leafy growth of Gatton panic and the ground cover on harder scald areas of Rhodes grass. Ideally sown in spring after a cereal grazing crop or direct drilled into a weed-free paddock. The addition of SARDI 7 Series 2 as a legume component, helps to provide nitrogen to companion grasses and improve feed quality of the pasture.

Meatmaster North Western

Variety	Species	%
Buffel Mix	Cenchrus ciliaris	30
Jarra	Finger grass	20
Mega Stylo	Stylo blend	20
Sabi Grass	Urochola	15
Silk Sorghum	Sorghum	10
Wynn	Cassia	5



Specifically developed for extensive grazing systems across the western districts of northern Australia, typically with marginal rainfall and summer dominant monsoonal rain patterns. This blend is an excellent option for graziers looking to add improved pasture species and tropical legumes into their existing native grass stands or to renovate new or existing ground with persistent, perennial improved pasture species. A blend of USA buffel for lighter country and Gayndah buffel for the red/grey loams. The use of silk sorghum and Sabi grass for vigorous establishment and provision of fast green feed cover, while slower developing buffel varieties establish. The addition of two tropical legume species suitable for marginal rainfall situations to supply companion grasses with nitrogen and improve the feed quality of the improved pasture. Barenbrug Mega Stylo blend provides three stylo varieties (Amiga, Seca and Siran) for greater disease resistance, persistence and soil type adaptability, while Wynn Cassia provides late season legume rich feed heading into winter and surviving in the harshest of conditions.

Meatmaster Slopes and Plains Mix

Variety	Species	%
Endura™	Rhodes grass	15
Premier	Digit grass	30
Megamax™059	Panic grass	20
Bambatsii	Panic grass	25
Presto	Burgundy bean	10



Developed for the medium black to red chocolate soils of New South Wales slopes and plains, it contains Bambatsii and Megamax 059® for soft leafy productivity, with Premier digit grass and Endura Rhodes grass to cope with both heavy and lighter soils. Presto as a legume component provides nitrogen to companion grasses and improve feed quality and persistence of the pasture.

Meatmaster Floodplain Soils

Variety	Species	%
Endura™	Rhodes grass	25
Bambatsii	Panic grass	35
Floren	Bluegrass	30
Presto	Burgundy bean	10



This blend is suited to heavier, black self-mulching and grey-cracking flood plain country. The productivity of Endura Rhodes™ and Bambatsii is enhanced by the black soil adaptation of Floren bluegrass, increasing persistence and ground cover in very wet or dry conditions. The addition of Presto as a legume helps to provide nitrogen to companion grasses and improve feed quality and persistence of the pasture. A productive mix for finishing cattle in summer or building a large volume of standover feed.

Meatmaster Acid Soils

Variety	Species	%
Premier	Digit grass	40
Sabi Grass	Urochloa	30
Consul	Love grass	15
Presto	Burgundy bean	10
Wynn	Cassia	5



Specifically developed for soils with a lower pH and those that present challenges establishing improved pastures in acid soil conditions. The productivity and adaptability of Premier digit grass to acid soils, combined with the persistence of Consul love grass provides a wider feed window in challenging conditions. The addition of Sabi grass provides vigorous establishment, plus Presto burgundy bean and Wynn cassia complement the mix, enabling protein levels to be maintained.

Allgrass Mixes

Meatmaster Allgrass mixes have been formulated for various soil types where there is a good legume background, or for spring sowing where winter annual legumes will be broadcast in autumn. Allgrass mixes can be sown alone if there summer broadleaf weeds that are difficult to control. Allgrass will benefit from the application of nitrogen during the summer rainfall period to maintain productivity if no legumes are present in the mixes.

Meatmaster Light Soil Allgrass

Variety	Species	%
Endura™	Rhodes grass	25
Premier	Digit grass	45
Megamax™059	Panic grass	30



This mix is suited to the red loam and harder cropped out soils of northern New South Wales and Queensland. Combining productivity, persistence and late season stay-green of Premier digit grass with green leafy growth of Megamax®059 and the ground cover on harder scald areas of Rhodes grass. Ideally sown in spring after a cereal grazing crop or direct drilled into a weed-free paddock.

Meatmaster Slopes and Plains Allgrass

Variety	Species	%
Endura™	Rhodes grass	15
Premier	Digit grass	40
Bambatsii	Panic grass	25
Megamax™059	Panic grass	20



Developed for the medium black to red chocolate soils of the New South Wales slopes and plains. Bambatsii and Megamax®059 combine for soft, leafy productivity on the heavier soils, with Premier digit grass and Endura Rhodes® performing and persisting on the lighter soil.

Meatmaster Acid Soils Allgrass

Variety	Species	%
Premier	Digit grass	45
Sabi Grass	Urochloa	35
Consul	Love grass	20



Specifically developed for soils with a lower pH and those that present challenges establishing improved pastures in acid soil conditions. The productivity and adaptability of Premier digit grass to acid soils, combined with the persistence of Consul lovegrass provides a wider feed window in challenging conditions. The addition of sabi grass provides vigorous establishment and quick feed in the short to medium-term.

Meatmaster Floodplain Allgrass

Variety	Species	%
Endura™	Rhodes grass	30
Bambatsii	Panic grass	40
Floren	Bluegrass	30



This blend is suited to the heavier, black self-mulching and grey-cracking flood plain country. The productivity of Endura Rhodes® and panic grasses is enhanced by the black soil adaptation of Floren bluegrass, increasing persistence and ground cover in very wet or dry conditions. A very productive mix for finishing cattle in summer or building a large volume of good standover feed.

Equimaster Premium Horse Blend

Variety	Species	%
Mariner/Endura™	Rhodes grass	40
Bisset/Hatch	Bluegrass	15
Premier	Digit grass	15
SARDI-Grazer	Lucerne	10
Presto	Burgundy bean	10
Shirohie	Millet	10



Equimaster is designed specifically for horses as all grasses are low in oxalate and can handle grazing pressure. The use of both tufted and stoloniferous grass species allows the pastures to fill in quickly, producing a large ground cover. The legume component consists of lucerne and burgundy bean for both summer and winter production. The millet will help with quick ground cover and protect juvenile plants from heat stress and frost or cold shock. The choice of Mariner (coastal) or Endura Rhodes™ (western) ensures the right grass for the right region.

Long term pastures

	Enterprise		Region			Typical Annual Rainfall Range				
	Intensive	Extensives	Sub-Tropical	Dry Tropics	Wet Tropics	350 - 500mm	500 - 700mm	700 - 800mm	800 - 1000mm	1000+ mm
Prime Pasture										
Big Beef Blend										
Premium Coastal										
Western Light Soil										
Western Heavy Soil										
Light Soil										
Light Soil Allgrass										
North Western										
Slopes & Plains										
Slopes & Plains Allgrass										
Floodplains										
Floodplains Allgrass										
Acid Soils										
Acid Soils Allgrass										
Equine										

= Suitable
 = Suitable in some cases
 = Not recommended



Soil Texture

[illegible]

Soil pH






[illegible]

Notes

Legumes become more sensitive as pH drops
Blue grasses & Lucerne will suffer at lowering pH
Setaria & Desmodium sensitive to less than 5 & higher than 7 pH
Buffel susceptible to low pH. Seca/Siran stylo susceptible to high pH
Buffel, Bambatsi & Desmanthus susceptible to low pH
Lucerne sensitive to less than 5 & more than 7 pH
Digit & Panic sensitive to less than 5 & higher than 7 pH also
Seca/Siran & Wynn susceptible to high pH. Buffel susceptible to low pH
Bambatsi not suited for low pH
Bambatsi not suited for low pH
Bambatsi & Floren susceptible to low pH
Bambatsi & Floren susceptible to low pH
Consul, Sabi, Digit, Wynn susceptible to high pH
Consul, Sabi, Digit, susceptible to high pH
Creeping bluegrasses, lucerne susceptible to low pH. Lucerne susceptible to high pH

Mega Stylo Mix

The Mega Stylo Mix is a high protein source that provides a balanced combination of Caribbean and Shrubby stylo species that provide disease and environmental adaptability. Barenbrug's stylo mix of Amiga, Siran and Seca ensures performance and persistence in a tropical pasture for the long term.

	Amiga	Seca	Siran
	400+mm	400+mm	400+mm
	4.5 - 8.0	4.5 - 8.0	4.5 - 7.0
	Many soil types	Many soil types	Many soil types
	AgriCote™	AgriCote™	AgriCote™
	20	40	40

Amiga Stylo

Amiga extends the area of adaption of Caribbean stylo into harsher (drier) and cooler (higher altitude) environments.

- Highly palatable
- Resistance to anthracnose
- High altitude, low temperature tolerance
- Longer persistence
- Abundance of seed



Seca Stylo

Seca is late flowering and suited to lower altitudes but can flower in spring in sub-tropical areas.

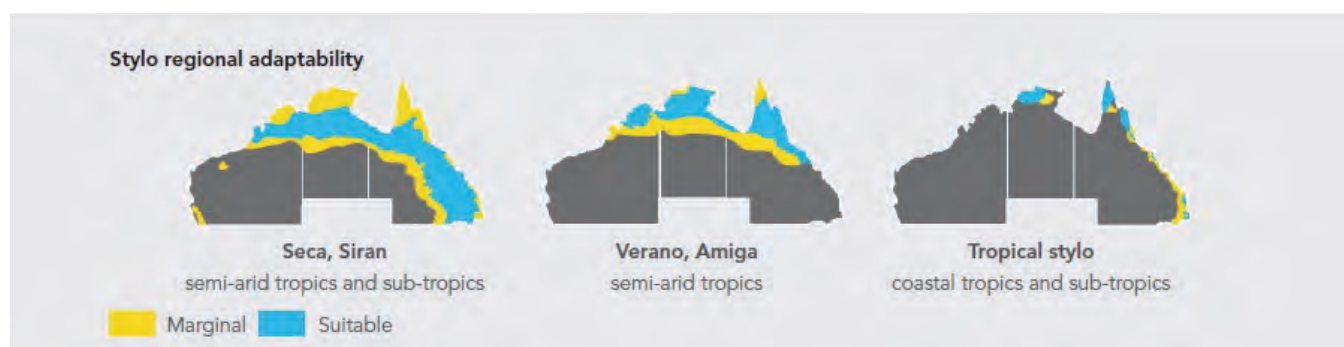
- Leafier
- Resistant to common anthracnose (single gene)



Siran Stylo

Siran is a shrubby type of stylo with good tolerance to anthracnose, and highly adaptable to a variety of conditions.

- Highly nutritious
- Adaptable to range of conditions and soil types
- 2m height growth
- Resistant to common anthracnose (multi-gene)



Tropical Legumes



Presto Burgundy Bean



400mm+



4.5 – 8.0



Light to heavy



AgriCote™



The Presto Burgundy Bean legume is deep rooted and extremely drought tolerant and an ideal choice for animal production systems as a monoculture or in mixes.

- Hardy, non-bloating tropical and sub-tropical legume
- Earlier maturing variety selected for shorter growing seasons
- Recruits readily from seed and regenerates from the crown
- Highly palatable – live weight gains of up to 1.0kg/head/day +
- Drought and cold tolerant



Garnet Burgundy Bean



550mm+



4.5 – 8.0



Light to heavy



AgriCote™



Garnet is a tropical legume that gives high yields and highly palatable. Suited to monoculture or in mixes, it is well adapted to grazing and hay production and regenerates well from new seedlings and existing plants.

- Hardy, non-bloating tropical legume
- Later maturing variety selected for longer growing seasons
- Recruits readily from seed and regenerates from the crown
- Highly palatable – live weight gains of up to 1.0kg/head/day+
- Drought and cold tolerant



Ray Desmanthus™ Desmanthus



400mm+



6.5 – 9.0



Medium to heavy



AgriCote™



Ray Desmanthus™ is a productive and persistent, drought tolerant legume well suited to alkaline soils and heavy clays such as brigalow. Tolerant of low rainfall, it has a wide area of adaptability from central NSW to the dry tropic zones across northern Australia.

- Highly palatable, non-toxic tropical legume (no mimosine)
- Exceptional persistence – recruits readily from seed and regenerates from the crown
- Drought tolerant – deep tap rooted perennial able to access moisture
- Tolerant to frost and heavy grazing



Tropical Legumes cont.

Milgarra Butterfly Pea

 500mm - 1500mm

 4.5 – 8.7

 Many soil types

 AgriCote™

Butterfly Pea is strongly perennial with exceptional persistence and can tolerate short term waterlogging, performing at its best in heavy clay alkaline soils. It is best suited to spell grazing systems that allows seed set or used in tropical mixes.

- Easy to establish and persistent non-bloating tropical legume
- High palatability, digestibility and protein content
- High forage and seed production ability



Cavalcade Centro

 700mm - 1500mm

 5.0 – 8.5

 Many soil types

Centro regenerates readily and competes well with grasses. It is well suited for higher rainfall and monsoonal areas of northern Australia with an extended wet season.

- Fast growing, twining, climbing annual
- High forage and seed yields
- High quality feed and high palatability
- Suitable in pastures for grazing and hay production



Glycine Tinaroo/Cooper

 700mm - 1000mm

 6.0+

 Medium to heavy

 AgriCote™

The Cooper variety of Glycine is better suited to inland conditions, performing well on more fertile soils in higher rainfall. It has larger, coarser leaves and longer internodes. Tinaroo is a semi-erect variety flowering around 4-6 weeks after Cooper in mid June. It is useful in humid regions with a longer growing season.

- Productive, palatable and persistent climbing deep rooted legume
- Tinaroo pushes longer into cooler months but is slower to establish
- Cooper is faster to establish and tolerates drought and waterlogging better than Tinaroo
- Combines well with creeping and tussock grasses.





Greenleaf *Desmodium*



900mm+



5.0+



Many
soil types



AgriCote™

The trailing habit of Greenleaf makes it a useful plant for weed suppression, and commonly used for long-term pasture in coastal and higher rainfall regions. Combined with tall or dominant grasses and twining tropical legumes it creates bulk high quality feed for the warmer months.

- Perennial legume with a strong taproot
- Good early and late season growth
- Shade and frost tolerant
- Combines well with both creeping and tussock grasses



Leucaena



650mm -
1500mm



7.0 – 8.5



Well
drained



AgriCote™

Leucaena is a deep-rooted perennial species with the highest digestibility of all tropical legumes, commonly planted in rows with grasses such as Panic or Rhodes grasses.

- Highly productive with high nutritive quality
- Extremely drought tolerant
- Retains leaf during dry periods
- Combines well with tropical grasses



Siratro (Aztec Atro)



700mm -
1500mm



6.5 – 8.0



Many
soil types



AgriCote™




Siratro is a hardy, drought tolerant, deep rooted perennial legume suited to a wide range of well drained soils.

- Drought hardy, non-bloating, highly palatable
- Highly productive and persistent with ideal grazing management
- Widely adapted to soils of different textures and pH levels, including saline soils
- Intolerant of flooding or waterlogging
- Aztec variety has improved rust resistance



Stylo – Amiga, Siran, Seca, Fine Stem, Beefmaker

The Stylo family of legumes provide a valuable source of protein to provide the weight gain and growth rates for northern grazing cattle.

	Amiga	Seca	Siran	Fine Stem	Beefmaker
	400+mm	450 - 500mm	350+mm	450 - 1500+mm	850+mm
	5.4 - 8.0	4.5 - 8.0	4.5 - 8.0	5.0 - 8.0	4.0 - 8.3
	Light, well drained	Many soil types	Many soil types	Light, well drained	Light, well drained
Zone	Tropics	Tropics/Sub-tropics	Wet-dry	Sub-tropics	Tropics/coastal
Anthraxnose	Resistant	Resistant	Resistant	Resistant	Resistant

Amiga is a persistent pasture legume providing a more robust performance, used primarily for permanent pasture. Easy to establish is suited to cooler arid regions producing green feed or hay if it is cut dry season leaf fall when plants become increasingly stemmy. Can also be used as a ley in cropping systems.

Siran stylo is a leafier variety and a composite of 3 bred or selected lines ('Jecuipe', 'Recife', 'Feira') to provide multiple-gene resistance to anthracnose. Siran is adapted to a wider variety of conditions and produces a large quantity of highly nutritious feed for the dry season. Used in perennial pasture, in grassland or open woodland. Well adapted to infertile, acid, friable or hard-setting, sandy-surfaced soil. Siran is a shrubby legume that can grow to 2m tall, and a taproot to 4m. Under heavy grazing, plants can adopt a low, almost prostrate growth habit, to 5-10cm high.

Seca is used as a perennial pasture for grassland areas, producing a large quantity of highly nutritious feed for the dry season. Well adapted to infertile, acid, friable or hard-setting, sandy-surfaced soil. A shrubby legume, that can grow up to 2m tall. Under heavy grazing, plants can adopt a low, almost prostrate growth habit, to 5 to 10cm high. Siran has a large tap root to 4m deep.

Fine Stem (*Stylosanthes guianensis* var *intermedia*) is suited the sub-tropics and exhibits a tolerance to cooler temperatures. It prefers free draining soils and thrives under heavy grazing.

Beefmaker (*Stylosanthes guianensis* var *guianensis*) is bred for tropical hay production and grazing. A broad range of environments from the tropics, dry topics to the coastal regions. It is late flowering, which maximises protein content. High yield and a tall variety that grows to 1.8m giving high quality forage, while still maintaining leaf retention.





Shaw Creeping Vigna



1100mm+



4.5 - 7.0



Sandy -
light clay



AgriCote™

Shaw Creeping Vigna is a highly digestible productive perennial that tolerates shade and compatible with vigorous and tall tropical grasses. It is well adapted to acid soils, red clays and low fertility especially on slopes. Sensitive to frost but will regrow from the crown.

- Palatable and highly digestible
- Requires rainfall above 1100mm
- Persist on poor, low fertility soils
- Persistent under heavy grazing
- Shade tolerant



Joint Vetch



1000mm+



5.5+



Sandy loams
- fertile clay



AgriCote™

Joint Vetch is a hardy, small legume that persists under heavy grazing, adopting a low rosette growth habit, producing sufficient seed to allow spread and persistence. It is primarily used as a semi-permanent or regenerative legume in mixed pasture.

- Palatable and highly digestible
- Nutritious legume
- Persist on poor, low fertility soils
- Good nitrogen fixing
- Tolerant of water logging
- Compatible with creeping tropical grasses
- Can be cut for hay



Wynn Cassia



450mm -
1500mm



4.5 - 7.0



Sands to
sandy loam



AgriCote™





Wynn Cassia is a hardy, non-bloating, herbaceous legume that grows as a perennial in higher rainfall regions, and as an annual in lower rainfall. Rapid establishment and heavy seeder and easily spread by livestock. Sensitive to frost, cassia will re-sprout from buds with warmer conditions.

- Hardy, persistent tropical legume
- Tolerates heavy grazing
- Grows in soils of low fertility
- High seed producer
- Adapted to acid soils



Tropical Grasses

Rhodes Grasses

	Endura	Mariner	Katambora	Callide	Tolgar
	500mm+	600mm+	500mm+	650mm+	500mm+
	5.0 - 8.0	5.0 - 8.0	5.5 - 8.0	5.5 - 8.0	5.5 - 8.0
	Light to heavy	Light to heavy	Light to heavy	Light to heavy	Light to heavy
	AgriCote™	AgriCote™	AgriCote™	AgriCote™	AgriCote™
Ploidy	⊕ diploid	⊕ tetraploid	diploid	tetraploid	diploid

Endura Rhodes® Grass is well suited to tropical and sub-tropical production zones and will adapt to a wide range of soil types. With multiple tillering giving a high leaf to stem ratio, Endura Rhodes® grass provides extensive consumable dry matter for high quality hay, with conditioning and drying down traits significantly improved. Maturity evenness provides high levels of protein later in the season. It has an aggressive, spreading, stoloniferous growth habit and is nematode resistant.

Mariner Rhodes Grass is specifically selected for superior growth characteristics including increased production, persistence and greater forage. Leaf blades are large to give a high ratio to stems with multiple tillering and late flowering. It is highly suited to grazing and hay making. It has an aggressive, spreading, stoloniferous growth habit.

Katambora Rhodes Grass is a leafy, densely growing diploid, with long, relatively thin vigorous stolons and late maturing. Selected for its drought tolerance and very rapid growth rates and high spring and summer yields; showing excellent persistent under grazing systems. Katambora is suitable for hay production, establishes and covers rapidly and persists well, even at low fertility.

Tolgar® Rhodes Grass is a Katambora type diploid Rhodes grass (*Chloris gayana*) with superior growth characteristics including increased production, persistence, greater forage quality, aggressive growth habit and higher salt tolerance. Leaf blades are thin, resulting in fine textured vegetative growth. The multiple tillering characteristics produces a high leaf to stem ratio, which provides more consumable dry matter. Maturity evenness of this variety provides higher protein feed late in the season. It has exceptional recovery after grazing or cutting. Later flowering gives it the ability to maintain feed quality and yield longer.

Callide Rhodes Grass can be used as permanent or as a short- to medium-term pasture ley to restore soil structure, improve organic matter levels and reduce nematode numbers. Can also be under sown into maize. Cutting before very early flowering produces quality hay, however, it is generally not suitable for silage. Provides fair standover roughage when mature, due to its greater cold resistance and lower loss of dry leaves. Develops good ground cover and effectively controls erosion once established. It is well suited to companion legumes.





Buffel Grass - Lakota, Biloela, Gayndah, USA

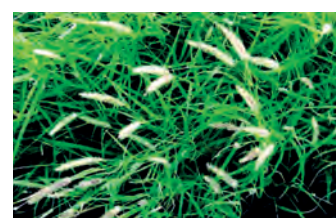
	☼ Lakota	Biloela	Gayndah	USA
☼	350mm+	350mm+	350mm+	350mm+
pH	5.5 - 8.0	5.5 - 8.0	5.5 - 8.0	5.5 - 8.0
☼	Light to heavy	Medium to heavy	Light to medium	Light to medium
☼	AgriCote™	AgriCote™	AgriCote™	AgriCote™
Features	Cold tolerant, medium height, Buffel leaf blight resistant	Well suited to heavy soil types, tall	Fast establishment, medium height	Well suited to light soil, short-medium height

Lakota is a tetraploid hybrid giving a high forage yield from a high leaf to stem ratio that is highly productive in a range of soil types. For the western regions, it is cold and frost tolerant and bounces back after winter giving a longer growing season.

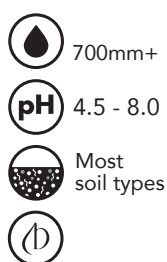
Biloela is taller and later maturing growing to 1.5m tall, and more suited to heavier soils. It is sown in areas receiving an annual rainfall of between 350 and 1000mm, giving it a good drought tolerance. It is fairly salt tolerant but not to waterlogging.

Gayndah is a medium height variety and is more prostrate but more densely tillered. It grows to about 1m high, but with a more dense root system. It is less vigorous but is often preferred by stock. Gayndah Buffel has much of the same climatic adaptation as Biloela and other tall cultivars but because of its lower height and greater leafiness it is favoured for sheep pastures. It is a deep rooted summer growing perennial with drought resistance and tolerant to heavy grazing. Gayndah Buffel grass can respond quickly to any drought breaking rains. It will flower early but whilst flowering will continue to produce extra leaf and new shoots.

USA is a medium height variety that has the fine stems and dense foliage of Gayndah, but it flowers a little earlier and the seed heads are purple in colour. USA is early maturing, suitable for light to medium textured soils. USA has better seedling survival on acid soils than other cultivars. Selected for drought tolerance and forage production. This cultivar is very similar to Gayndah in characteristics and performance but is shorter and the leaves are laxer and narrower. It is a deep rooted summer growing perennial with drought resistance and tolerant to heavy grazing or burning. USA buffel grass has the ability to respond quickly to any drought breaking rains.



Hybrid Brachiaria





Interspecific Brachiaria hybrids that are well suited to tropical, sub-tropical and warm temperate coastal regions, preferring well drained soils. They are a short to medium height, leafy perennial grass that establishes within two months of planting and tolerates heavy grazing once established.

- Well adapted to acid soils and high aluminium levels
- Tolerant of short term flooding
- Maintains high nutrition in seasonal dry periods
- High yield and productive ideal for high stocking rates
- Suitable for direct grazing, cut-and-carry methods, bailing and silage



Bluegrass – Bisset/Hatch (Creeping), Floren (Angleton)

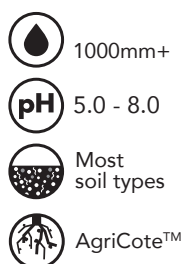
	Creeping	Floren
	600mm+	550mm+
	5.0 - 8.0	5.0 - 8.0
	Wide Range	Basalt clay
	AgriCote™	AgriCote™

Floren Bluegrass thrives on heavy soils and periodic flooding. It forms large tussocks that will compete with weeds once established. It is highly palatable.

Bisset was released after Hatch and is typically more palatable with finer stems and later maturity. Bisset is also more tolerant of rust and more stoloniferous than Hatch.



Humidicola – Tully grass



Tully grass is suited to tropical lowland environments and temperatures between 30 – 35°C. Its dense matting growth habit makes it ideal for heavy grazing, providing bulk low quality herbage.

- Highly stoloniferous growth habit
- Tolerate prolonged waterlogging
- Vigorous and dense mat forming growth habit
- Withstands heavy grazing with minimal weed invasion



Consol – Lovegrass



350mm+



4.5 - 8.0



Light



AgriCote™

Consol lovegrass is highly persistent on light, sandy soils. It is tolerant to low pH and high aluminium exchange in soils and requires intensive grazing management to maintain feed quality.

- Highly persistent on light sandy soils
- Tolerant of low pH and high exchangeable aluminium
- Requires intensive grazing management to maintain feed quality



Panic Grasses – Bambatsii, Gatton, Green, Megamax®049, Megamax®059

Panicum maximum species are widely adapted from high rainfall, coastal environments through to marginal inland regions. With rapid response to rainfall and fertility they are highly productive. As a perennial clumping grass, it is a great companion for creeping grasses or climbing legumes.

Panicum coloratum species (Bambatsii) suits the heavier, self-mulching soils that are seasonally flooded. Can also withstand long periods of dry weather and palatable under grazing.

	Bambatsii (Coloratum)	Gatton	Green	Megamax® 059	Megamax® 049
	500mm+	650mm+	500mm+	550mm+	450mm+
	5.0 - 8.0	5.0 - 8.0	5.5 - 8.0	5.0 - 8.0	5.5 - 8.0
	Clay loams	Fertile/light	Fertile/light	Wide Range	Deep fertile loams
	AgriCote™	AgriCote™	AgriCote™	AgriCote™	AgriCote™

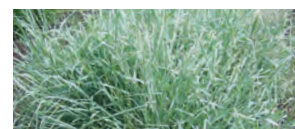
Bambatsii is a summer perennial suited to higher fertile, self-mulching clay soils. Drought tolerant, it will withstand waterlogged conditions for a period of time and has good salt tolerance. An erect leafy grass with tussocks spreading by short rhizomes to more than 90cm in diameter with a height to 1m and 1.5m when in flower. It is distinguished by its distinctly bluish leaves with a prominent white mid-rib.

Gatton Panic Grass is a summer growing perennial grass that is used widely in cattle grazing systems. Gatton is a highly palatable plant with good forage quality when green. This variety has a tussocky growth habit and grows in clumps with broad green leaves. Suited to sub-tropical areas with fertile, well drained soils, it has the ability to grow longer into the season.

Green Panic Grass is a summer growing perennial used widely in lighter cattle grazing systems. The variety is tolerant of shady conditions and one of the most palatable of the tropical species. It is suited to higher rainfall regions with fertile well drained soils.




Megamax® 059 Panic Grass is a new breed of perennial grasses suited to sub-tropical and tropical environments. It has superior growth characteristics for production, persistence and strong tillering. It exhibits grazing tolerance and cooler seasons, with improved forage quality.

Megamax® 049 Panic Grass is a perennial Panic grass suited to cooler southern regions of Australia and bounces back from frost to exhibit good spring growth that is well suited to long term pasture. Its high biomass production is suited to grazing or cutting.



Paspalum – Dilatatum, Wettsteinii

Paspalum grasses are palatable, productive perennials, suited to fertile soils with frost tolerance. Wettsteinii has a stoloniferous habit and grows well in shady conditions and useful as pasture or parklands where it is difficult to establish under trees. Paspalum responds well to moisture and fertiliser, and gives a quick return after grazing.

	Dilatatum	Wettsteinii
	750mm+	750mm+
	4.5 - 8.0	4.5 - 8.0
	Fertile	Fertile



Dilatatum provides a quick return after grazing and is highly palatable. Growing as a tufted perennial grass is best suited to higher fertility soils, exhibiting moderate frost tolerance.

Wettsteinii has a stoloniferous habit that is a highly productive, palatable perennial. It is tolerant of a wide range of soils including those exhibiting poor drainage and copes with flooding. It is frost and shade tolerant.

Premier Digitaria



500mm+



5.5 - 8.0



Light



AgriCote™

Digit grass is a highly productive, robust tufted perennial well adapted to inland environments with low rainfall and winter frosts. Will grow well on a range of soil types and co-exists well with legumes. Suitable for livestock and horses.

- Highly productive, robust tufted perennial that is palatable and persistent
- Well adapted to inland regions with lower rainfall and has some frost tolerance
- Drought, fire and cold tolerance
- Low in oxalate



Splenda Setaria



800mm+



5.0 - 7.0



Most soil types



AgriCote™

Splenda setaria is a hardy, palatable, high-yielding and later-maturing variety suited to the sub-tropical regions. Splenda is very palatable to stock and the stems are readily grazed up to, and after, flowering. After grazing, stem nodes may sprout aerial tillers and these may root and establish if the stems are trampled into the soil. Splenda may be heavily grazed without the risk of plant death. Suited to most soil types, it is relatively frost tolerant and is very tolerant of water-logging.

- Hardy, high yield
- Late maturing
- Highly palatable and will tolerate heavy grazing
- Frost tolerant and will withstand some waterlogging





Signal Grass



800mm+



4.5 - 7.0



Most soil types

Signal grass is an aggressive tropical plant, with the ability to grow in a wide range of soil and moisture conditions. It is often used in revegetation applications mixed with a legume to maintain a sustainable cover.

- Forms a dense, high yielding sward
- Tolerates heavy grazing
- Stoloniferous growth habit
- Tolerates high soil aluminium
- Persistent under seasonally dry conditions



Sabi Grass



500mm+



5.0 - 8.0



Most soil types



AgriCote™

Sabi grass is a loosely tufted perennial grass and used primarily for permanent pasture, with the possibility of hay. An effective grass for erosion control or application where rapid establishment and ground cover are required.

- Palatable, hardy and quick to establish perennial tropical grass
- Well suited to the dry tropics
- Responds well to rainfall and grows in a range of well drained soil types



Mitchell Grass



250mm - 550mm



7.0 - 8.5



Cracking clays



AgriCote™

Mitchell grass is used as a permanent pasture option in alkaline clay soils. A valuable source of feed in tough conditions, it produces good dry matter as well as warm season leaf growth. A useful 'standing hay' for the winter with no rainfall and low humidity.

- Fast responsiveness to rainfall following heavy grazing
- Tolerant of heavy grazing
- Hardy – excellent drought tolerance for marginal country
- Drought dormancy allows survival in extended dry periods



Purple Pigeon Grass



500mm - 1200mm



5.5 - 8.5



Fertile loams to heavy clay



AgriCote™

Purple Pigeon grass is a larger seeded member of the Setaria family that is well suited to heavier clay soils. The large seed size allows easier establishment of this species into heavy, black cracking clay soils. Very tolerant of both drought and waterlogging, Purple Pigeon display vigorous seedlings and high growth rates early in the season. It requires higher soil fertility and strict management to prevent feed from going 'rank'.

- Large, vigorous seed with excellent establishment
- Easy to establish on heavy, black cracking-clay soils
- Drought tolerant
- High growth rate



Tropical Sowing Guide

Variety	Rainfall (mm)	Preferred Soil Type	Waterlogging	Frost	Drought
Bambatsii Panic	500	Clay loams	Good	Good	V.Good
Buffel Grass - USA, Gayndah, Biloela, Lakota	350	Light to medium soil types, however, Biloela tolerates heavier soil types	Poor	Poor to Fair	V.Good
Consol Lovegrass	350	Light soils	Poor	Fair	Good
Creeping Bluegrass - Bissett - Hatch	600	Wide ranging, tolerates lower fertility	Poor	Fair	Fair
Floren Bluegrass	550	Basaltic clays and heavy alluvial soil	Good	Fair	Fair
Humidicola - Tully Grass	1000	Varying, tolerates lower fertility	Good	Poor	Fair
Indian Bluegrass - Keppel	500	Varying	Poor	Fair	V.Good
Mitchell Grass - Curly	250	Alkaline, cracking, poor clays	Poor	Poor	V.Good
Panic Grass - Megamax™ 059, 049	450	Deep fertile, loams	Poor	Fair	Fair
Panic Grass - Green - Gatton	650	Fertile and lighter	Poor	Fair	Fair
Paspalum* - Dilatatum - Wettsteinii	750	Fertile soil types	Good	Good	Fair
Premier Digitaria	500	Lighter soil types	Poor	Fair	V.Good
Purple Pigeon Grass	600	Self-mulching clays	Good	Good	V.Good
Rhodes Grass - Katambora, Callide, Endura Rhodes®, Mariner	650	A wider range of light to medium soil types	Fair	Fair	Fair
Setaria Grass - Splenda Narok, Solander, Kazungula	800	Varying	V.Good	Good	Fair
Signal Grass*	800	Varying	Fair	Poor	Good
Urochloa - Sabi Grass	500	Varying	Fair	Poor	Good

*Available as bare seed only

Legume Over-sowing	Minimum Rainfall (mm)	Drought Tolerance	Frost Tolerance
Burgundy Bean (Presto/Garnet)	400	Good	Fair
Centro (Cavalcade)	800	Good	Poor
Desmanthus - Ray Desmanthus™, Marc	400	Good	Fair
Glycine (Tinaroo/Cooper)	700-1000	Good	Fair
Greenleaf Desmodium	500	Poor	Fair
Joint Vetch (Glenn/Lee)	1200	Poor	Poor
Leucaena (Cunningham)	600	V.Good	Fair
Milgarra Butterfly Pea	550	Good	Poor
Shaw Creeping Vigna	1200	Poor	Poor
Siratiro (Aztec Atro)	700	Good	Poor
Stylo Caribbean (Verano/Amiga) – Hamata type	400	Good	Fair
Stylo Fine Stem	700–900	V.Good	Fair
Stylo Guianensis - Beefmaker™	850	Fair	Poor
Stylo Shrubby (Seca/Siran) – Scabra type	350	V.Good	Poor
Wynn Cassia	400	V.Good	Fair

Marginal Dryland: 6–8 kg/Ha • Good Dryland: 10–12 kg/Ha • Irrigated: 22–25 kg/Ha



Planting Rate (kg/Ha) AgriCote			Comments
Marginal Dryland	Good Dryland	Irrigated	
3–5	8–12	12–15	Cool season greenness, tolerates heavy grazing, heavy black soils, periodic waterlogging and saline areas.
4–6	8–12	12–15	Most widely planted sub-tropical grass in northern Australia, hardy and productive with high fertility.
4–6	8–12	12–15	Highly persistent on light, sandy soils. Not highly palatable.
6–8	10–12	12–15	A hardy grass that will invade speargrass and establish on clays. Bisset is finer leafed and roots down more strongly than Hatch. Good for erosion control.
2–3	6–8	10–12	Used to re-grass flood plains colonised by Lippia.
4–6	8–12	12–15	Adapted better to wetter, lower lying areas than signal grass. Will invade and outcompete giant rats tail grass.
4–6	8–12	12–15	A hardy, free seeding plant spread widely throughout Northern Qld and Central Qld.
3–6	8–10	12–15	Most palatable Mitchell grass variety. Summer rainfall dominant species tolerant of heavy grazing. Excellent option to provide bulk during the dry (non-growing) winter season.
3–6	10–12	12–15	Improved persistence over other panic grasses with increased forage quality and cool season growth.
3–6	10–12	12–15	Grows best on high fertility soils. Gatton panic grass tolerates textured soil types and shade, but can be preferentially grazed. Green panic grass is more tolerant of shade.
2–5	8–12	12–15	Palatable, tufted, grazing tolerant perennial grass best suited to higher fertility, high rainfall areas.
4–6	8–12	12–15	Perennial tufted grass suited to acidic, sandy soils of low fertility.
4–6	8–12	12–15	Medium term perennial suited to self-mulching clays.
5–7	8–12	15–20	Katambora is a productive diploid, highly stoloniferous grass, suitable for erosion control. Callide is a productive tetraploid, palatable grass suited to fertile soils and higher rainfall environments. NB: All Rhodes grasses are quick to establish and have moderate salt tolerance.
2–6	8–12	12–15	Hardy and palatable coastal grass well suited to sub-tropical regions.
2–6	8–10	12–15	Valuable grass in the wet tropics, when nitrogen fertilised.
2–6	8–10	12–15	Low growing, tufted, stoloniferous, perennial grass with a creeping growth habit. Used in tropical cattle grazing systems, roadside stabilisation, erosion control and mine rehabilitation.

Waterlogging	Preferred Soil Type	Planting Rate (kg/Ha) AgriCote OVERSOW	Planting Time
Fair	Light-Heavy	3–4	Spring/Summer
V.Good	Fertile soil types	3–8	Spring/Summer
Poor	Medium-Heavy	2–4	Spring/Summer
Poor	Medium-Heavy	3–8	Spring/Summer
Good	Light-Medium	2–4	Spring/Summer
V.Good	Light-Heavy	2–4	Spring/Summer
Poor	Well drained, fertile	4–6	Spring/Summer
Fair	Medium-Heavy	4	Spring/Summer
Good	Medium-Heavy	1–2	Spring/Summer
Fair	Medium-Heavy	3–8	Spring/Summer
Fair	Light	1–5	Spring/Summer
Poor	Light-Medium	2–5	Spring/Summer
Fair	Light well drained	2–5	Spring/Summer
Fair	Light	1–5	Spring/Summer
Poor	Light-Medium	2–5	Spring/Summer

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