





#### **Blue Ribbon Seeds**

#### **Company Profile**

Blue Ribbon Seeds was created by Stephen Donnelly, who has been working in the seed trade since 1987. During this period he has been heavily involved in sales, marketing and product development. He is an active member of industry associations, giving him a wide range of industry contacts, both nationally and internationally.

Blue Ribbon Seeds extensive range of products and services, coupled with industry-leading and exclusive proprietary varieties, puts us at the forefront of seed and associated technologies. Our product range includes a host of pasture grass and legume species, along with amenity and reclamation varieties.

Blue Ribbon Seeds in conjunction with our domestic company, Australian Premium Seeds, offer the very best products from Australia. Our recently acquired company, Zimseeds in Harare, gives us access to the best quality Zimbabwean Rhodes Grass seed and the ability to process and package at our own facility.

Through strategic alliances, coupled with the advanced seed coating technologies of *Premium*COTE™ veneered seed, Blue Ribbon is able to offer our customers one of the most advanced seed coats available.

Blue Ribbon has a progressive research and development program breeding new and unique varieties for our customer's requirements.

We have also implemented a quality management system to oversee all stages of our business. This cover our breeding program, growing & inspecting seed crops, cleaning and packaging, even through to the logistics process of getting product to your door.







## **BeefMaker™Stylo**

BeefMaker™ Stylo is a highly productive stylo new to the market.



It has been selected for premium quality tropical hay production, but is also very suitable for grazing and is a useful component in a mixed pasture.

- Later flowering
- High yielding, tall growing, excellent forage yields.
- Crude protein content up to 20%.
- Excellent leaf retention very late maturity.
- Min rainfall 500mm / yr for maximum productivity.
- Excellent seedling vigour.
- High forage quality
- Disease tolerant
- Suited to tropical and sub-tropical regions.
- Suited to monsoonal conditions





### Black Stallion TM is a new dual-purpose forage and grain cowpea variety.

- Suited to a wide range of tropical, sub-tropical and temperate growing regions
- Offers the benefit of nitrogen fixation.
- Tolerance to drought, heat and moisture stress.
- Exceptional forage and high grain yields
- Stem / Phytophthora Root Rot tolerant.
- · Low bloat risk.
- Produces good quality silage.
- Later flowering with a longer production season, giving much more feed.
- Excellent seedling vigour, fast establishment and speed to first grazing.
- Multi-grazing ability has a fast 'bounce back' following each grazing.
- Aggressive growth habit making it an ideal companion crop with forage sorghum or millet.
- Has dense, dark green high quality, protein rich, extremely palatable feed.
- Is an excellent seed producer and protein levels of the grain can easily range from 22-24%.
- Suited to a wide range of soils types from heavy alluvial soils right through to lighter sandy soils.





### **G2** Panic

#### G2 Panic is a new Panic variety with superior cold tolerance.

It provides an abundance of bulky, lush feed, ideal for high quality, high production enterprises. It is well suited to a wide variety of situations and environments.

- Selected for an abundance of bulky, soft leaves.
- Good frost tolerance.
- · Large, aggressive crown.
- Good fit into rotational grazing systems.
- Excellent cold tolerance at all growth stages
- Suits tropical, sub-tropical and some temperate regions.
   Performs best where minimum rainfall is 500mm
- · Is a later maturing variety.

- · Hardy and robust, while maintaining feed quality.
- Good drought tolerance has a deep fibrous root system.
- · Good shade tolerance.
- Flexible enough for either grazing or hay production.
- Complements Leucaena very well.
- - · Adapted to a wide range of soil types.



### Maxa Millet<sub>TM</sub>

### Big yielding millet for grazing, silage or haymaking

Maxa Millet is a multi-cut, high performance and high yielding millet, very suitable for haymaking, grazing or silage.

- · Pearl type millet.
- · High yielding
- Late flowering, producing top quality feed later
- Tolerates heavy stocking.
- Fast recovery after cutting or grazing.
- Suited to tropical, sub-tropical and temperate regions.
- Adapted to a wide range of soil types.

- · No prussic acid poisoning risk.
- High palatability has a very fine stem and larger leaf.
- Excellent heat and drought tolerance once established.
- Makes exceptional hay and silage.
- Highly compatible with companion legume crops.
- Maxa Millet is a late maturing variety.







### **SABRE Rhodes Grass**

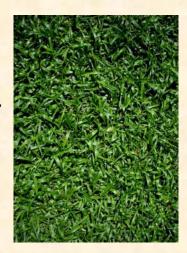
SABRE Rhodes Grass is a new Callide type variety, bred specifically for high yield, high quality hay and forage combined with exceptional salt tolerance. Bred especially for the Middle East conditions.

- Perennial, summer growing, tetraploid grass species with self anchoring runners (stolons).
- Early, more even flowering, providing quick, plentiful soft feed.
- High leaf to stem ratio compared to Callide.
- Shows fantastic persistence
- Tremendous salt tolerance at all growth stages.
- High yielding, high quality for hay production.
- Minimum rainfall requirement of 650mm+.
- Will respond to higher inputs (fertiliser/irrigation)

- Highly palatable with a much finer stem.
- Aggressive growth habit.
- Good water use efficiency and disease tolerance.
- Suits tropical, sub-tropical and warm temperate regions.
- · Suitable for higher rainfall / irrigation areas.
- SABRE is an early maturing variety.

### ShadeGro

ShadeGro is a new lawn grass which thrives under low-light conditions. It produces a dense coverage of bright, dark green leaves which requires little mowing or maintenance.





- Extremely shade tolerant withstands shade levels down to 10-15% sunlight.
- Frost tolerant.
- Ease of management
- High water use efficiency.
- Tolerates wear from traffic very well.
- An excellent self-seeder.
- Suited to sub-tropical and temperate regions.
- Good resistance to lawn grubs.
- Requires very little mowing.
- · Will tolerate excessive moisture well.
- Not a heavy fertiliser user.
- Easy to replant into an existing lawn.



## **TORO Rhodes Grass**

More leaf ... more beef

... no bull!



TORO RHODES grass is an improved Callide type, bred specifically for producers looking for high quality feed.

It has a broader leaf and finer stem than Callide with increased tolerance of saline conditions.

- Warm season tetraploid grass species.
- · Later and more even flowering than Callide.
- Outstanding yield and quality for hay production.
- · Fantastic persistence under intensive grazing.
- · Exceptional salt tolerance at all growth stages,
- Minimum rainfall requirement of 650mm+.

- Perennial, summer growing with self anchoring runners
- · High leaf to stem ratio.
- Highly palatable and digestible leaf and stem.
- Aggressive growth habit.
- · Good water use efficiency and disease tolerance.
- Better suited to higher rainfall / irrigation access.
- · Well suited to the tropical, sub-tropical and some temperate regions of Australia.



### TOLGAR Rhodes Grass Improved Katambora type

TOLGAR is the first multi-use Rhodes Grass cultivar to be bred for high quality forage and hay production as well as amenity, revegetation and soil conservation purposes.

It is a Katambora type with finer leaf, finer stem as well as excellent tolerance to saline soil conditions.

- Perennial, summer growing, diploid grass.
- · Aggressive creeping growth habit.
- Fine textured vegetative growth.
- Fantastic persistence.
- · Moderate frost tolerance.

- · Highly stoloniferous.
- High leaf to stem ratio with a much finer stem.
- · Late flowering.
- Drought and salt tolerant.
- Suited to the tropical, sub-tropical and some temperate regions

# Premium COTE TM

### **Performance Enhanced**

Utilising state of the art equipment and innovative seed coating technology, Blue Ribbon's *Premium*COTE™ coated seed is a market leader in both coating quality and performance.

We have the ability to produce a coating tailored to meet your specific requirements with respect to seed weight increase, Insecticide, Fungicide, Fertiliser and Rhizobia applications.

#### Benefits of *Premium*COTE™ coated seed:

More uniform plant stands and synchronised germination resulting in improved establishment, seedling vigour and overall productivity.

Ease of handling and ability to plant seed at accurate rates results in desired plant populations.

Enhanced establishment through the addition of insecticides and fungicides which targets undesirable pests and diseases.

Pre-applied Fertiliser improves plant establishment through the development of a strong root system.

Pre-applied Inoculant, using state of the art equipment to ensure uniform Rhizobia application.

Superior seed coat quality reduces dust problems for end users.

**Ongoing Research and Development ensures that** PremiumCOTE™ coated seed is market leading in





#### Tropical and Sub-Tropical Range (Contact us for our full range)

#### Buffel (Cenchrus ciliaris)

Buffel Grass is a deep-rooting, summer growing, erect tussocky grass. It is the most important sown species in the 400-800mm rainfall zone of QLD. Buffel persists well because of its excellent drought and grazing tolerance. It responds quickly to rainfall and will grow on a range of soil types. Buffel does not tolerate waterlogging or flooding conditions. It is also high in oxalate.

#### Biloela

Biloela is a taller, more robust Buffel with a deep root system and greater drought tolerance. It is more suited to heavier soil types, higher rainfall and cattle production.

#### Gayndah & USA

Gayndah and USA Buffels are finer, medium height varieties that establish readily. They are more suited to lighter soils, lower rainfall and for sheep production. They are however less vigorous than *Biloela*.





#### Creeping Bluegrass (Bothriochloa insculpta)

Creeping Bluegrass is a summer growing tufted perennial with creeping (highly stoloniferous) stems that rapidly cover bare ground. It can be slow to establish but produces leafy, good quality feed in summer and autumn, carrying through into winter until frosted. *Hatch* was the original commercial variety that has bluish green leaves, with purple coloured stems and although the crowns send out long runners, they do not readily take root from the nodes to make new plants. Suited to a wide range of soil types.

#### **Bisset**

Bisset is the newer variety that has much finer, greener coloured leaves and stems with reddish colourings, establishes faster, more stoloniferous and flowers two weeks later than *Hatch* (later maturity). It will suit a wide range of soils and tolerate lower fertility, while being more drought tolerant.



#### Guinea Grass (Megathyrsus maximus)

Guinea Grass is a clump-forming perennial which grows best in warm frost free areas receiving more than 900mm rainfall. The deep, dense fibrous root system allows it survive long drought periods, but it performs best on well-drained soils of good fertility in high rainfall regions (tropics). Can tolerate heavy grazing.

#### Hamil

Hamil is a very tall variety, robust, smoother and grows to 3.0-3.5 metres. The leaves are darker green, stem nodes hairless and will grow on more poorly drained soils and seeds more freely. It is well accepted by cattle and its tall growth makes it attractive in tropical country where most fodder is cut rather than grazed.



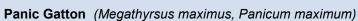
#### Humidicola - Tully Grass (Urochloa humidicola)

Humidicola, otherwise known as Tully Grass is a highly stoloniferous perennial grass with the ability to withstand prolonged waterlogging, more so than *Signal Grass*. It will grow as far south as Brisbane; however it is not frost hardy and its cool season growth is lower than that of *Signal Grass*. It will establish in low fertility soils and tolerate very acid soils. Humidicola has a vigorous and dense mat forming growth habit that can withstand heavy grazing with minimum weed invasion, which reduces its compatibility with twining legumes. Requires minimum 1000mm annual rainfall.

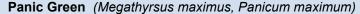


#### Panic Bambatsi (Panicum coloratum var. makarikariense)

Bambatsi is a perennial summer growing grass that is well adapted to medium to heavy cracking clay soils where the average rainfall is greater than 600mm/year. It is a high yielding, very palatable grass easily distinguished by its bluish leaves with prominent white mid rib. Bambatsi can tolerate waterlogging, drought, frost and saline soils. It performs well on melon hole (gilgai) soils in brigalow lands, but is unsuited to sandy and loamy soils of lower fertility.



Gatton Panic is more suited to the sub-tropical regions of Australia. It is a tall, tufted, summer growing perennial that is often regarded as being more vigorous, palatable and drought tolerant than *Green Panic*. It prefers fertile, well drained soils and has good shade tolerance. Gatton Panic can be distinguished from *Green Panic* by its longer, broader, hairless, greener leaves. Of the two, Gatton Panic is far superior on low fertility soils and establishes more readily.



Green Panic is a tufted summer growing perennial species that persists best on high fertility, softwood scrub loams and light clays, disliking sands, hard setting soils and heavy black clays. It is intolerant of waterlogging, very shade tolerant, more so than *Gatton Panic* and is one of the most palatable tropical species available. It has a moderate drought tolerance and a remarkable ability to yield green pick if mild weather follows winter rainfall.



G2 Panic is an imporved Gatton selection. It produces an abundance of bulky, lush feed, has a large crown, excellent cold tolerance at all growth stages, quick regrowth and suited to a variety of soils.







#### **Paspalum Dilatatum**

Paspalum dilatatum is a palatable, tufted perennial grass. It responds well to moisture and fertiliser and has a good tolerance to grazing, with a quick 'bounce back' of new growth following. It can grow in a wide range of soil types, but is best suited to higher fertility soils.

#### Paspalum Wettsteinii

Paspalum wettsteinii otherwise known as 'Broadleaf Paspalum' is a semi-prostrate, clumped perennial species with a wide crown spreading by means of short stolons. It grows well wherever Paspalum species would normally be grown and is more tolerant of poorer soils. It can withstand waterlogging, recovers well from fire, very shade tolerant and combines well with other grasses and tropical legumes.



#### Premier Digitaria (Digitaria smutsii)

Premier Digitaria or Digit grass is a tufted, robust and highly productive perennial grass that is palatable and highly persistent. Premier will grow on a wide range of soils and is even suitable for infertile soils, including the traprock soils of southern QLD. It can be slow to establish to a full sward, but once established it is very persistent under heavy grazing. Its open sward makes it very compatible with legumes. It is well adapted to inland environments with low rainfall and winter frosts, has good drought, cold and fire tolerance and is also suitable for horses (has low oxalate content).

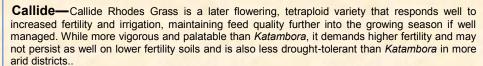


#### Rhodes Grass (Chloris gayana)

Rhodes Grass is a summer active, stoloniferous perennial, whose runners provide good soil cover for erosion control. Rhodes grass is adapted to a wide range of soil types from infertile sands to fertile brigalow clays. These grasses combine well with legumes and have good salt and frost tolerance, while being quick to establish. Low oxalates make Rhodes grass a valuable pasture grass for horses.

**Katambora** - Katambora is a diploid, mid-late flowering type and is characterised by strong stolon development, heavy seeding and drought tolerance. In Queensland, it is more persistent on low fertility soils than other Rhodes grass cultivars. With a finer leaf, it remains productive into autumn, as well and being cold tolerant.

**Tolgar\*** - Tolgar\* is a multi-use Katambora- type Rhodes grass cultivar bred for first class forage and hay production as well as amenity, revegetation and soil conservation purposes. It is fine-leafed with an aggressive creeping growth habit and has excellent drought and salt tolerance. It is later flowering than Katambora.



**Toro\*** - Toro\* is a new improved Callide- type Rhodes grass variety. It is later flowering with a later maturity and has exceptional salt tolerance at all growth stages, with the ability to dispose excess salts onto basal growth. Toro\* is high yielding, exhibiting fine, very palatable even growth. It shows fantastic persistence under intensive grazing with an aggressive growth habit, good water use efficiency and good disease tolerance.

**Sabre\*** - is a new Callide type variety, bred specifically for high yield, high quality hay and forage combined with exceptional salt tolerance bred especially for the Middle East conditions. It is a perennial, summer growing, tetraploid grass species with self anchoring runners (stolons). Sabre is early and more even flowering, while providing quick but plentiful soft feed.







#### Setaria (Setaria sphacelata)

The Setarias are amongst the most cold tolerant of the tropical grasses, commonly grown in the higher rainfall districts of the sub-tropics. Well accepted by cattle, it is a tufted grass that combines well with twining legumes and can grow up to a height of over 2 metres. They require reasonable fertility, but are fairly tolerant of short-term waterlogging. Setaria species have low sodium content but high oxalate content, especially if fertilised with nitrogen. Commercial cultivars include *Kazungula, Narok*, Nandi, *Solander* and the later maturing *Splenda*.



#### Signal Grass - Brachi (Brachiaria decumbens)

Signal Grass is a low growing, decumbent perennial, with trailing stems and an aggressive stoloniferous root system that roots down at the nodes. Signal Grass is well adapted to a wide range of soils in the humid and sub-humid tropics, but also grows well in the coastal subtropics, showing some drought and cold tolerance; however it cannot tolerate extended waterlogging. It tolerates heavy grazing, responds to good fertility or nitrogen applications, but can be difficult to combine with legumes. A dense mat of signal grass can give good weed control, while Signal Grass seedlings are also tolerant to a pre-emergent application of atrazine.

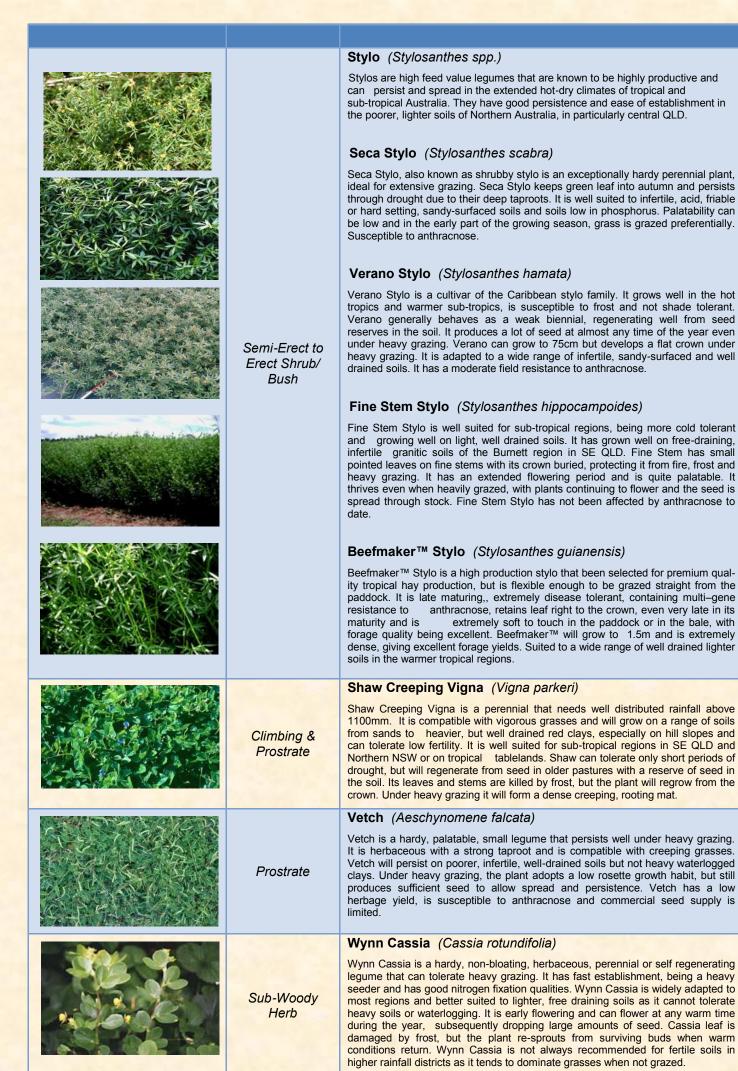


#### Urochloa - Sabi Grass (Urochloa mosambicensis)

Urochloa, also known as Sabi Grass, is a perennial grass either tufted or creeping with short stolons, giving it a low growth habit. It is palatable, hardy, quick to establish and is suited to the dry tropics, responding well to rainfall, good fertility and growing in a wide range of well-drained soils. Urochloa should not be confused with liverseed grass (*Urochloa panicoides*). The leaves of Urochloa are longer and more erect, having straight margins, whereas the leaves of liverseed grass are crinkled along the margins.



Tropical and Sub-Tropical Legumes (Contact us for Burgundy Bean* (Macroptilium bracteatum)	or our full range)	
A summer growing perennial legume suited to climates ranging from central QLD to central NSW. It is a drought tolerant, deep-rooted plant that regenerates well from high seed yields. It has a fair tolerance to cold conditions. Burgundy Bean* has good leaf coverage, thick stems and long runners. It can be a good alternative to Butterfly Pea in sub-tropical regions because of its greater tolerance to colder temperatures.	Erect & Trailing	
Butterfly Pea (Clitoria ternatea)		
Butterfly Pea is a vigorous, perennial plant with fine twining stems. A high protein egume, it grows well on medium to heavy clay soils with reasonable fertility and rainfall, showing remarkable persistence and can tolerate short-term waterlogging. It is susceptible to heavy grazing and therefore performs best in a spell grazing system that allows seed set. Being very palatable, with high digestibility, Butterfly Pea is excellent for tropical hay production.	Climbing Vine	
Centro (Centro pubescens)		
Centro is an annual that can root from the nodes under moist conditions. It is suited for higher rainfall and monsoonal areas of North QLD and NT with an extended wet season. Centro regenerates aggressively and competes well with grasses. <i>Bundey</i> and <i>Cavalcade</i> are fast growing cultivars that are heavy seeders, very palatable and good nitrogen fixers. <i>Cavalcade</i> is suited to better soil types with a short wet season and tolerates some waterlogging and coastal flooding. <i>Bundey</i> is better suited to seasonal flooding conditions in the NT and a longer growing season. <i>Bundey</i> has smaller seeds, hairy stems and petioles.	Twining	
Glycine (Neonotonia wightii)		
Glycine is a deep-rooting perennial plant, producing long, slender, branched stems that root down at the nodes. It is suited to well drained, heavier, more fertile soils in cooler regions of the sub-tropics. It is more drought tolerant than <i>Centro</i> or Desmodium, but cannot tolerate very acid soils or waterlogging. Glycine also has a nigher demand for nutrients than other tropical legumes. It combines well with tall grasses such as Panic.  Cooper—As it holds its leaf better in cool conditions, Cooper can be grown fur-	Trailing/Climbing	
ther inland, and has performed well on more fertile soils in higher rainfall sub- coastal areas of southern QLD. It has larger, coarser leaves and longer internodes, with a dull green colour.  Tinaroo—This variety has grown well on scrub soils of south eastern QLD. It gives the best autumn-early winter growth as it flowers very late (mid-June). It is therefore used in more humid areas with a longer growing season. It has soft, thin eaves, which are bright green.		
Greenleaf Desmodium (Desmodium intortum)		
This perennial legume has a strong taproot and long trailing stems that can root at the nodes if in contact with moist soil. It is commonly used for long-term pastures although it rarely persists permanently. It will tolerate lower temperatures than other tropical legumes and will grow on a wide range of soils, from light sands, loams and medium clays, but prefers moderate fertility and a pH above 5.0. It will not tolerate salinity, high levels of Al and Mn or heavy grazing. It is also susceptible to insect attack.	Trailing & Scrambling	
Leucaena (Leucaena leucocephala)		H. To No.
Leucaena is a deep-rooted and drought tolerant perennial that has the highest digestibility of all tropical legumes. It is best suited to well drained fertile soils of neutral to high pH. Leucaena is commonly planted in rows with nitrogen-loving grasses such as Panic or Rhodes planted in the inter-rows. Its leaf is killed by frost, but its height protects it from ground frosts and it shoots again with warm weather. Young Leucaena leaflets contain mimosine, which in abundance can cause loss of weight and hair. The main cultivars have been <i>Peru</i> and <i>Cunningham</i> with <i>Cunningham</i> being slightly more vigorous, but a new cultivar <i>Tarramba</i> (a more tree type) is more productive and will grow in cooler regions.	Shrub/Tree	
Lotononis (Lotononis bainesii)  Lotononis cv. Miles is the most frost resistant of all the commercially available cropical legumes and grows well in most sub-tropical climates of northern NSW and southern QLD. It is a soft, slender, smooth plant with low stems which root at the oints. Lotononis prefers sandy soils, but is found on heavier textured soils, while being tolerant of frost, poor drainage and acidity. It is very palatable and can require heavy grazing to persist.	Stoloniferous	
Siratro (Macroptilium atropurpureum)		
Siratro is a perennial, deep rooted legume that is suited to a wide range of drained, reasonable soils. It combines well with tall grasses, but not tolerant of constant neavy grazing, is also easily frosted and susceptible to leaf diseases (rust). The Aztec* variety is rust resistant. Siratro is highly palatable, grows well in moist sub-tropical and tropical regions and is a highly productive species able to fix large amounts of nitrogen and pass this to any companion grasses. It grows best and is	Twining Vine	



# Pasture Seed Sowing Guide

Variativ	Min. Rainfall	Desferred Call Tomas	Waterlogging	Frost	Drought	
Variety	Requirement (mm)	Preferred Soil Types	Tolerance	Tolerance	Tolerance	
Bahia Grass	700	Light, sandy soils	Good	Fair	Fair	
Bambatsi Panic	500	Clay loams to heavy black soils	Good	Good	Very Good	
Buffel - American, Gayndah, Biloela	300	Light to medium soil types	Poor to Fair	Fair	Excellent	
Burgundy Bean*	700	Medium to heavy soil types	Fair	Fair	Very Good	
Butterfly Pea – Milgarra	550	Medium to heavy textured clays	Poor	Fair	Good	
Centro - Cavalcade	800	Fertile soil types	Very Good	Poor	Good	
Clover— Berseem - Memphis* Persian - Turbo* White - Haifa	600 600 600	Neutral to alkaline soils Alkaline heavy soils Versatile – ranging soil types	Very Good Very Good Very Good	Very Good Very Good Very Good	Poor Poor Poor	
Creeping Bluegrass - Bisset, Hatch	600	Wide ranging soil types	Fair	Fair	Good	
Digitaria – Premier	500	Lighter soil types	Poor	Fair	Fair	
Gatton/Green Panic	550	Fertile and lighter	Poor	Fair	Fair	
Glycine – Tinaroo, Cooper	700	Medium to heavy	Poor	Fair	Good	
Guinea Grass – Hamil	1000	Deep fertile soils	Poor	Poor	Fair	
Humidicola (Tully Grass)	1000	Varying, can tolerate low fertility	Good	Poor	Fair	
Indian Blue Grass	500	Varying	Poor	Poor	Very Good	
Kikuyu – Whittet	700	Red basaltic loams or friable clays	Fair	Good	Fair	
Leucaena – Cunningham, Peruvian	600	Well drained, fertile soils	Poor	Fair	Very Good	
Lucerne	400	Slightly acidic to alkaline soils of varying texture and type	Poor	Very Good	Very Good	
Medic – Barrel, Burr, Snail, Strand	250	Light to medium textured soils	Fair	Very Good	Good	
Paspalum – Dilatatum, Wettsteinii	750	Fertile soil types	Good	Good	Fair	
Purple Pigeon Grass	600	Self mulching clays	Good	Poor	Very Good	
Rhodes Grass— Katambora , Tolgar*	650	Versatile – from light sandy soils to medium loams and clays.	Fair	Fair	Good	
Callide, Toro*, Sabre*						
Sabi Grass (Urochloa mosambicensis)	500	Varying	Poor	Poor	Very Good	
Shaw Creeping Vigna	1200	Versatile – so long as soil holds moisture	Fair	Poor	Poor	
<b>Setaria</b> – Narok, Kazungula, Splenda* Nandi, Solander	800	Varying, very versatile	Very Good	Poor	Fair	
Signal Grass – (Brachiaria decumbens)	800	Versatile	Good	Fair	Fair	
Siratro – Siratro, Aztec*	700	Versatile, sandy loams to heavy clays	Fair	Fair	Very Good	
<b>Stylo—</b> Seca, Fine Stem, Verano, Amiga, Beefmaker™	500	Versatile, sandy loams to heavy clays	Fair	Poor	Very Good	
Vetch –Glen Joint, Lee Joint	700	Free draining sandy to light clays	Fair	Good	Good	
Vetch – Namoi Woolly Pod, Popany	650	Versatile, sands, loams and clay soils	Fair	Very Good	Fair	
Wynn Cassia	600	Light to medium	Poor	Fair	Very Good	

Sowing	Sowing Ra	ate kg/ha (coa	ated seed)					
Rate kg/ha (bare seed)	Marginal Dryland	Good Dryland	Irrigated	Comments				
2-4	3-7	8-12	12-15	Deep-rooted perennial grass that spreads by short, thick rhizomes. Forms a dense mat, shade tolerant.				
2-4	3-5	8-12	12-15	Highly palatable, drought tolerant perennial grass. Tolerates periodic waterlogging and heavy grazing.				
1-4	4-6	8-12	12-15	Best suited to the better soils of brigalow and gidgee country. Biloela can tolerate heavier soil types. Hardy summer growing, tussocky perennial well suited for tropical and sub-tropical areas.				
3-5		4-8		A hardy, adaptable legume displaying good cold and drought tolerance over a wide range of soil types.				
4-8			100	Sown as a sward for short term phases or in long term grass-legume pastures.				
2-4		3-6		Highly palatable legume used for grazing and hay production.				
3-15 1-5 1-5		5-25 2-10 2-10	724	Suited for rotational grazing, tolerant to waterlogging and cold winter temperatures. Outstanding nutritional value for high animal production.				
1-4	6-8	10-12	12-15	Drought and grazing tolerant, stoloniferous grass suited to lower fertility soils. Aggressive growth habit, running along closer to the ground rather than erect, suitable for erosion control. Very palatable.				
1-4	4-6	8-12	12-15	Perennial, tufted grass suited to acidic, sandy soils of low fertility.				
1-4	3-6	10-12	12-15	Tall, tufted, palatable perennial grass, good shade tolerance, will compete well with weeds and climbing legumes. Suited to well drained soils.				
2-4		3-8		Twining perennial legume with the ability to root down at the nodes. Combines well with Panic and Setaria. Suited to higher fertility better draining soils. Provides good protein for livestock.				
3-6		4-10		Grass suited more to the wet tropics. Requires good soil fertility and has strong regrowth ability.				
2-4				Highly stoloniferous perennial with the ability to establish in low fertility soils and withstand heavy grazing and prolonged waterlogging.				
1-4	4-6	8-12	12-15	Very drought hardy, low production perennial grass. Highly suitable for land reclamation and horse pastures. Adapted to a wide range of soils.				
1-4	1-3	4-8	8-10	Stoloniferous and rhizomatous grass suited to higher rainfall, fertile soils. Can withstand heavy grazing, has vigorous growth but requires good fertility.				
4-6				Perennial shrubby legume, deep-rooted, drought tolerant, suited to warmer regions, high digestibility.				
1-6 (dryland) 18-25 (irrigated)	3-8	10-18	18-25	Extremely deep rooted perennial legume grown in temperate, sub-tropical and tropical areas. Fast establishing with the ability to provide year round quality forage production.				
1-5	1-5	1-5	5-12	Self regenerating, temperate annual legume suited to dry areas with winter rainfall.				
1-4	2-5	8-12	12-15	Palatable, tufted, grazing tolerant perennial grass suited to higher fertility soils.				
2-4		4-8		Easy to establish grass with fair drought tolerance. Poor palatability as a mature plant.				
2-4	5-7	8-12	15-20	Tufted summer growing perennial, adapted to a wide range of soils. Combines well with legumes. All Rhodes grasses display salt and frost tolerance, while being quick to establish.  Katambora: hardy cultivar, stoloniferous, suits grazing, hay & erosion control. Very drought tolerant.  Tolgar* is later flowering, fine leaf, highly palatable, aggressive creeping growth habit, widely suited.  Callide: more palatable and productive but requires higher rainfall and suited to better fertile soils.  Toro* is later flowering, high yielding grazing and hay production, good water use & disease tolerance.  Sabre* was bred especially for high yield, high quality hay and forage combined with salt tolerance.				
1-4	2-6	3-8	8-12	Creeping, stoloniferous grass that is hardy, persistent and suited to marginal rainfall areas.				
1-4				Perennial legume that spreads well under and tolerates heavy grazing. Combines well with kikuyu.				
2-4	4-	-8	8-12	Highly productive, palatable, free seeding grass best suited to sub-tropical regions. This tussocky perennial combines well with siratro, glycine, and lotononis. Contains oxalates (caution for horse use).				
2-4	2-6	6-8	8-10	Can withstand heavy grazing/trampling. Difficult to combine with legumes, can suppress legume species. Seed remains dormant for months after harvest.				
2-4		3-8		Deep rooted vine type perennial legume. Suits Rhodes, Panic, Setaria. Aztec* has greater rust resistance.				
2-6		3-10		Annual to short-lived perennial legume suited to a wide range of soils. High levels of hard seed. Seca: Hardy, perennial shrubby legume. Widely adapted. Verano: Short-lived perennial, best suited to the warmer coastal regions of Northern Australia. Beefmaker™: Excellent disease tolerance, early flowering suited to grazing or opportune hay production.				
2-4				Persistent, easily spread and palatable legume that grows on poorer soils. Susceptible to anthracnose.				
6-10			Hard seeded, regenerating annual legume. Tolerates heavy grazing in acidic or alkaline soils.					
1-4		2-8		Hardy, non-bloating, herbaceous perennial or self-generating legume. Tolerates heavy grazing well.  Displays stages of low palatability. Widely adapted to most regions. Best on lighter soils.				

### Planting Guide - Rainfall Range

Grasses		<600mm	1	60	0 - 1000r	mm	>1000mm		
Glasses	Clay	Loam	Sandy	Clay	Loam	Sandy	Clay	Loam	Sandy
Bahia Grass				*	4	*	*	1	*
Bambatsi Panic	1			*	4		*		
Buffel Grass	1	*	4	*	1	1			
Creeping Bluegrass		1		*	1	1			*
Digit Grass					1	1		*	4
Gamba Grass					1	1		1	1
Guinea Grass							*	1	
Humidicola							*	*	*
Kikuyu				*	1		*	1	
Panic Grasses	1	1		*	1				
Para Grass							1	1	
Paspalum				*	1		1	1	
Purple Pigeon Grass	1	1		1	1				
Rhodes Grass	1	1		*	1	1	*	4	1
Sabi Grass		1	1						
Setaria					1		*	1	
Signal Grass	753						*	1	1
Legumes	01	<600mm		600 - 1000mm			>1000mm		
Butterfly Pea	Clay	Loam	Sandy	Clay	Loam	Sandy	Clay	Loam	Sandy
Cassia	_	_			. 4	. 4		. 4	
Centro						1			
Desmanthus	1	4	1			•	_		_
Desmodium (Green							1		
Glycine								1	
Joint Vetch									
Lab Lab				1			1	1	
Leucaena				1	1		1	1	
Lucerne					1				
Lotononis					1	1		1	1
Siratro				1	1	1	4	1	4
Stylo (Fine Stemmed)		*	1		1	1		1	1
Stylo (Shrubby)		1			4	4			1

### Forage Planting Guide

	Cultivar	Seeding Rate	Seeding Rate Required Tolerance to					
Variety		Kg/Ha	Rainfall	Drought	Frost	Water	Low Fertility	
			(mm)			Logging	Soils	
Barley	Various	30-50	>500	Good	Good	Fair	Fair	
Chicory	Punter	1-Apr	>450	Good	Good	Good	Fair	
Cowpea	Black Stallion* Red Caloona	15-20	>650	Good	Fair	Very Poor	Good	
Forage Sorghum	Sugar Drip Silk Black & White	3-Oct	>550	Good	Fair	Poor	Poor	
Lab Lab	Highworth Rongai	Oct-30	>650	Good	Fair	Poor	Good	
Millet	Jap Shirohie	Jun-15	>550	Good	Fair	Good	Good	
Millet	Maxa* Siberian	Jun-15	>600	Good	Fair	Poor	Good	
Oats	Various	30-60	>500	Good	Good	Fair	Fair	

## Lawn Grass Guide

Species	Preferred	Planting Rate	Establish- ment	Mowing	Mowing	Shade	Salt	Traffic	Drought	Nitrogen
	Climate		Rate	Height	Frequency	Tolerance	Tolerance	Tolerance	Tolerance	Requirement
Bahia	Tropical	1 -2kg / 100m2	Slow		Low - Medium	Good		Very Good	Excellent	Medium
Carpet Grass	Tropical	1 -2kg / 100m2	Medium	2 - 6cm	Medium	Medium	Medium	Good	Good	Low
Couch - Hulled	Tropical	1kg / 100m2	Slow	1.5 - 3cm	Medium	Poor	Medium	Very Good	Good	Low
Couch - Unhulled	Tropical	1.5 kg / 100m2	Slow	1.5 - 3cm	Medium	Poor	Medium	Very Good	Good	Low
Creeping Bentgrass	Temperate	1 - 2kg / 100m2	Fast	1.5 - 2 cm	Low - Medium	Fair	Good - Med.	Good	Poor - Fair	Low - Medium
Creeping Fescue	Temperate	2 - 3kg / 100m2	Medium		Low - Medium	Good	Low	Poor	Good	Low - Medium
Fine Leaf Ryegrass	Temperate	3 - 4kg / 100m2	Very Fast	.5 - 2 cm	High	Fair - Good		Excellent	Good	Medium - High
Hard Fescue	Temperate	2 -3kg / 100m2	Medium	1.5 - 3 cm	Low	Very Good	Low - Med.	Good	Excellent	Low
Kentucky Bluegrass	Temperate	2 - 3kg / 100m2	Slow - Medium	2 - 4 cm	Low - Medium	Fair		Good	Very Good	Medium
Kikuyu	Tropical	1 kg / 100m2	Slow - Medium	2 - 4cm	Low	Poor	Very Good	Excellent	Excellent	High
Siro Shadegro	Sub Tropical / Tropical	2 kg / 100m2	Very Slow	1.5 - 3cm	Very Low	Excellent	Medium	Very Good	Good	Medium
Tall Fescue	Temperate	4 -5 kg / 100m2	Medium	2.5 - 5 cm	Medium	Good	High	Very Good	Excellent	Medium
Qld Blue Couch	Sub Tropi- cal	1 - 2 kg / 100m2	Slow	1.5 - 3cm	Medium	Poor	Very Good	Good	Excellent	Medium



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