Tropical and Sub-Tropical Legumes

Burgundy Bean* *(Macroptilium bracteatum)*

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 an ideal alternative for 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 twinning stems. A high protein legume, 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. *Bundey* and *Cavalcade* are fast growing cultivars that are heavy seeders, very palatable and good nitrogen fixers. *Cavalcade* is suited to better soil types with a short wet season and tolerates some waterlogging and coastal flooding. *Bundey* is better suited to seasonal flooding conditions in the NT and a longer growing season. *Bundey* 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 *Centro* or *Desmodiums*, but cannot tolerate very acid soils or waterlogging. Glycine also has a higher 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 further 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 leaves, which are bright green.

Trailing/Climbing

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)*

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 Grass 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 *Peru* and *Cunningham* with *Cunningham* being slightly more vigorous, but a new cultivar *Tarramba* (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 tropical 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 joints. 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 heavy 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 most productive in summer and early autumn.

Twining Vine

Semi-Erect to Erect Shrub/Bush

Stylo *(Stylosanthes spp.)*

Stylos are high feed value legumes that are known to be highly productive and can persist and spread in the extended hot-dry climates of tropical and sub-tropical Australia. They have good persistence and ease of establishment in the poorer, lighter soils of Northern Australia, in particularly Central QLD.

Seca Stylo *(Stylosanthes scabra)*

Seca Stylo, also known as shrubby stylo is an exceptionally hardy perennial plant, ideal for extensive grazing. Seca Stylo keeps green leaf into Autumn and persists through drought due to their deep taproots. They are well suited to infertile, acid, friable or hard setting, sandy-surfaced soils and soils low in phosphorus. Palatability can be low and in the early part of the growing season, grass is grazed preferentially. Susceptible to anthracnose.

Verano Stylo *(Stylosanthes hamata)*

Verano Stylo is a cultivar of the Caribbean stylo family. It grows well in the hot tropics and warmer sub-tropics, is susceptible to frost and not shade tolerant. Verano generally behaves as a weak biennial, regenerating well from seed reserves in the soil. It produces alot of seed at almost any time of the year even under heavy grazing. Verano can grow to 75cm but develops a flat crown under heavy grazing. It is adapted to a wide range of infertile, sandy-surfaced and well drained soils. It has a moderate field resistance to anthracnose.

Fine Stem Stylo *(Stylosanthes hippocampoides)*

Fine Stem Stylo is well suited for sub-tropical regions, being more cold tolerant and growing well on light, well drained soils. It has grown well on free-draining, infertile granitic soils of the Burnett region in SE QLD. Fine stem has small pointed leaves on fine stems with its crown buried, protecting it from fire, frost and heavy grazing. It has an extended flowering period and is quite palatable. Fine stem thrives even when heavily grazed, with plants continuing to flower and the seed is spread through stock. Fine Stem Stylo has not been affected by anthracnose to date.

Beefbuilder™ Stylo *(Stylosanthes guianensis var.)*

Beefbuiler™ Stylo is an early flowering variety, making it the preferred option for grazing or opportune hay production. It contains a multi-gene resistance to anthracnose, keeping the plant disease-free and maintaining feed quality at any growth stage. Beefbuilder™ shows excellent early seedling vigour and is quick to first grazing. It has an erect to semi-erect growth habit with excellent leaf retention and produces a bulk of extremely high quality forage under tropical conditions. Suited to a wide range of well drained lighter soils.

Beefmaker™ Stylo *(Stylosanthes guianensis var.)*

Beefmaker™ Stylo is a high production Stylo new to the Australian Market. It has been specifically bred for premium quality tropical hay production, but is flexible enough to be grazed straight from the paddock. It is late flowering, giving you a later maturity, extremely disease tolerant, containing a multi – gene resistance to anthracnose, retains leaf right to the crown, even very late in its maturity and is extremely soft to touch in the paddock or in the bale, with forage quality being excellent. Beefmaker™ will grow to heights of 1.5 metres and is extremely dense, giving excellent forage yields. Suited to a wide range of well drained lighter soils in the warmer tropical regions.

Climbing & Prostrate

Shaw Creeping Vigna *(Vigna parkeri)*

Shaw Creeping Vigna is a perennial that needs well distributed rainfall above 1100mm. It is compatible with vigorous grasses and will grow on a range of soils from sands to heavier, but well drained red clays, especially on hill slopes and can tolerate low fertility. It is well suited for sub-tropical regions in SE QLD and Northern NSW or on tropical tablelands. Shaw can tolerate only short periods of drought, but will regenerate from seed in older pastures with a reserve of seed in the soil. Its leaves and stems are killed by frost, but the plant will regrow from the crown. Under heavy grazing it will form a dense creeping, rooting mat.

Prostrate

Vetch *(Aeschynomene falcata)*

Vetch is a hardy, palatable, small legume that persists well under heavy grazing. It is herbaceous with a strong taproot and is compatible with creeping grasses. Vetch will persist on poorer, infertile, well-drained soils but not heavy waterlogged clays. Under heavy grazing, the plant adopts a low rosette growth habit, but still produces sufficient seed to allow spread and persistence. Vetch has a low herbage yield, is susceptible to anthracnose and commercial seed supply is limited.

Sub-Woody Herb

Wynn Cassia *(Cassia rotundifolia)*

Wynn Cassia is a hardy, non-bloating, herbaceous, perennial or self regenerating legume that can tolerate heavy grazing. It has fast establishment, being a heavy seeder and has good nitrogen fixation qualities. Wynn Cassia is widely adapted to most regions and better suited to lighter, free draining soils as it cannot tolerate heavy soils or waterlogging. It is early flowering and can flower at any warm time during the year, subsequently dropping large amounts of seed. Cassia leaf is damaged by frost, but the plant re-sprouts from surviving buds when warm conditions return. Wynn Cassia is not always recommended for fertile soils in higher rainfall districts as it tends to dominate grasses when not grazed.

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