

PLANTING GUIDE TO PASTURES FOR THE SUBTROPICS AND TROPICS

TROPICAL GRASSES								
Species & Cultivars	Seeding Rate (kg/ha) (Low rates for good seedbeds)	Inoculum Group (Legume only)	Adaptation					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Atra paspalum (<i>Paspalum atratum</i>) cv. Hi-gane	2-4	–	Poor	Poor	Very Good	1200	Coastal loams of moderate to high fertility in wet subtropics and tropics	<ul style="list-style-type: none"> • Has a wide soil pH range. • Responds well to N fertiliser. • Good shade and cold tolerance. • Limited quantities of seed.
Bahia grass (<i>Paspalum notatum</i>) cvv. Competidor, Argentine, Pensacola	2-3	–	Good	Fair	Good	700	Light sandy and loamy soils in subtropics	<ul style="list-style-type: none"> • Mat forming and shade tolerant. • Useful for soil conservation. • Pensacola unpalatable and not recommended for grazing. • Sporadic seed supply.
Bambatsi panic or Makari kari grass (<i>Panicum coloratum</i>) cv. Bambatsi	2-4	–	Good	Very Good	Very Good	600	Self mulching heavy clay soils in subtropics	<ul style="list-style-type: none"> • The outstanding grass for the heavy soils of the grain belt. • Moderate salt tolerance. • Very waterlogging tolerant. • Seed is readily available.
Brunswick grass (<i>Paspalum nicorae</i>) cv. Blue Dawn	2-3	–	Good	Fair	Fair	700	Light, friable sandy and loamy soils in subtropics	<ul style="list-style-type: none"> • Very competitive, useful on granite sands. • Persists well under heavy grazing. • Seed availability is improving.

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Buffel grass (<i>Cenchrus ciliaris</i>) cvv. Biloela, Gayndah, American, Nunbank	1-4	–	Fair	Very Good	Poor	300	Prefers light to medium texture but will grow on friable clays in inland subtropics and tropics	<ul style="list-style-type: none"> • Hardy, productive, widely naturalised and most widely planted grass in Queensland. • Beware of potential oxalate problems. • Tall cultivars are best on fertile soils, shorter cultivars adapted to poorer soils. • Seed is readily available.
Creeping bluegrass (<i>Bothriochloa inscupta</i>) cvv. Hatch, Bisset	1-4	–	Fair	Fair	Poor	650	Loamy, clay-loam and light clay soils in subtropics and tropics	<ul style="list-style-type: none"> • Well adapted to subcoastal and some inland forest soils. • Will invade spear grass. • Bisset is a better coloniser than Hatch. • Seed of both varieties is readily available.
Digit grass (<i>Digitaria eriantha</i> ssp. <i>eriantha</i>) cv. Premier	1-3	–	Poor	Very Good	Poor	550	Light textured sandy, loamy and clay loam soils in subtropics	<ul style="list-style-type: none"> • A hardy grass, widely adapted to infertile soils. • Excellent drought tolerance. • Excellent spring growth. • Some salt tolerance. • Seed is available.

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Floren bluegrass (<i>Dichanthium aristatum</i>) cv. Floren	2-3	–	Fair	Fair	Very Good	625	Basaltic clays and heavy alluvial soils in subtropics and tropics	<ul style="list-style-type: none"> Used to re-grass flood plains colonised by lippia. Colonises heavy soils Seed supply and demand are increasing.
Forest bluegrass (<i>Bothriochloa bladhii</i> ssp. <i>glabra</i>) cv. Swann	2-3	–	Fair	Good	Poor	600	Loamy, hard setting forest soils of low to moderate fertility in subtropics	<ul style="list-style-type: none"> Particularly well adapted to subtropical coastal forest soils and traprock soils. Used for mine waste reclamation. Seed supply is limited but expected to increase.
Gamba grass (<i>Andropogon gayanus</i>) cv. Kent	1-4	–	Poor	Poor	Good	1000	Wide range of soils in tropics	<ul style="list-style-type: none"> Adapted to higher rainfall seasonally dry tropics. May pose an environmental threat.
Guinea grass or Hamil grass (<i>Panicum maximum</i>) cvv. Hamil, Common	2-6	–	Poor	Good	Poor	1000	Fertile loamy soils in tropics	<ul style="list-style-type: none"> A most important grass for the wet tropics. Responds well to N. Seed of both cultivars is available.
Humidicola or koronivia grass (<i>Brachiaria humidicola</i>) cv. Tully	2-4	–	Poor	Fair	Good	1000	Wide range of soils in tropics	<ul style="list-style-type: none"> Adapted to wetter, lower areas than signal grass Shorter growing season than signal grass. Seed, which is freely available, is dormant for 6-12 months after harvest.

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Indian bluegrass or Indian couch (<i>Bothriochloa pertusa</i>) cvv. Keppel, Medway, Bowen	1-2	–	Fair	Good	Poor	500	Wide range of soils in tropics and to a lesser extent the subtropics	<ul style="list-style-type: none"> • Hardy, free seeding grass. • Has spread widely through spear grass lands in north Queensland. • Seed light, fluffy, hard to harvest and sow. • Seed of Bowen and Keppel are readily available
Kikuyu (<i>Pennisetum clandestinum</i>) cvv. Whittet, Noonan)	1-2	–	Good	Fair	Good	700	Red basaltic loams, friable basaltic clays in subtropics and tropics	<ul style="list-style-type: none"> • Whittet does best on fertile soils in cool moist areas. • Noonan is better on lower slopes. • Has a high fertility requirement. • Seed is usually available from specialist farmers in NSW.
Panic (<i>Panicum maximum</i>) cvv. Petrie (green panic) and Gatton (Gatton panic)	1-4	–	Fair	Fair	Poor	650	Fertile, well drained clayey and loamy soils in subtropics	<ul style="list-style-type: none"> • Green panic is outstanding on fertile vine-scrub soils. • It is shade tolerant.. • Gatton panic is adapted to less fertile, friable clay and loamy soils. • Seed that is freely available is dormant for a few months after harvest.

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Paspalum (<i>Paspalum dilatatum</i>) cv. Common	2-4	–	Good	Fair	Very Good	800	Alluvial flats that receive runoff or irrigation in subtropics	<ul style="list-style-type: none"> • Grows well on lower slopes that receive runoff in drier rainfall areas. • Good early spring growth. • Demand limited; seed is available from southern Australia.
Purple Pigeon grass (<i>Setaria incrassata</i>) cv. Inverell	2-4	–	Fair	Good	Poor	600	Heavy self-mulching clay soils in subtropics	<ul style="list-style-type: none"> • Easiest grass to establish on the heavy clay soils of the grain belt. • Not suited to coastal areas. • Seed, which is readily available, is dormant for 6-9 months after harvest.
Rhodes grass (<i>Chloris gayana</i>) cvv. Katambora, Callide, Finecut, Topcut, Nemkat, Pioneer	1-3	–	Fair	Fair	Poor	650	Versatile — from light sandy soils to medium clays In subtropics	<ul style="list-style-type: none"> • Katambora and Finecut are hardy cultivars. • Callide is more palatable, but requires higher rainfall. • Moderate salt tolerance. • Seed is readily available.
Sabi grass (<i>Urochloa mosambicensis</i>) cv. Nixon, Saraji.	1-4	–	Poor	Good	Poor	500	Versatile —loams to heavy clays. Prefers alkaline soils in subtropics and tropics	<ul style="list-style-type: none"> • Useful in dry tropics. • Saraji is stoloniferous, has salt tolerance and is used in mine waste reclamation. • Seed of both is available with Saraji increasing. • Nixon seed is dormant.

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Setaria (<i>Setaria sphacelata</i>) cvv. Kazungula, Narok, Solander, Splenda	2-4	–	Good	Poor	Very Good	1000	Wide range of soils in subtropics and higher altitude tropics	<ul style="list-style-type: none"> • Mainly coastal grasses. • Narok and Solander have good frost tolerance. • Be aware of potential oxalate problems. • Seed readily available.
Signal grass (<i>Brachiaria decumbens</i>) cv. Basilisk	2-4	–	Poor	Good	Fair	1000	Wide range of soils in tropics	<ul style="list-style-type: none"> • Valuable when fertilised with nitrogen in wet tropics. • Can suppress legumes. • Seed that is freely available is dormant for a few months after harvest.
Tall finger grass (<i>Digitaria milanjana</i>) cvv. Strickland, Jarra	1-3	–	Poor	Very good	Poor	550	Light textured loams and clay-loams in subtropics and tropics	<ul style="list-style-type: none"> • Jarra is best for tropics, Strickland for the subtropics. • Some salt tolerance. • Seed is available.

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American jointvetch (<i>Aeschynomene americana</i>) cv. Glenn, Lee	2-4	Jointvetch	Poor	Poor	Very Good	1200	Wide range of soils in tropics	<ul style="list-style-type: none"> Tall growing, self-regenerating annual (Glenn) or short-term perennial (Lee). Will grow in standing water. Seed is usually available.
Burgundy bean (<i>Macroptilium bracteatum</i>) cvv. Juanita and Cadarga	5-10	Burgundy Bean	Poor	Good	Fair	625	Loams to heavy clays in subtropics	<ul style="list-style-type: none"> Short-term, perennial, ley species for the grain belt. Good drought tolerance on a range of soils. Seed is moderately hard and supplies are small but increasing.
Butterfly pea (<i>Clitoria ternatea</i>) cv. Milgarra	5-10	M	Poor	Good	Fair	700	Heavy clays and loams in tropics, and in the subtropics north of the Great Divide	<ul style="list-style-type: none"> Successful perennial ley legume for heavy clay soils in central Qld. Avoid heavy grazing in wet season. Seed readily available.
Caatinga stylo (<i>Stylosanthes seabrana</i>) cv. Unica and Primar	2-4	Caatinga Stylo	Poor	Good	Poor	600	Loams to moderate clays in subtropics	<ul style="list-style-type: none"> Perennial stylo for friable clay and loamy soils. Best stylo for the inland subtropics. Seed supplies increasing, moderately hard seed. Inoculant specific.
Caribbean stylo	2-4	Verano	Poor	Good	Poor	600	Infertile, well	<ul style="list-style-type: none"> Short-lived perennial for

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(<i>Stylosanthes hamata</i>) cvv. Verano, Amiga		Stylo						drained sandy soils of low fertility in tropics	<ul style="list-style-type: none"> the inland tropics. Amiga is drought tolerant. Species is not as drought tolerant as shrubby stylo. Seed available, high levels of hard seed.
Centro (<i>Centrosema pubescens</i>) cv. Cardillo	3-5	Centro	Poor	Fair	Very Good	1200		Fertile alluvial and basaltic soils in tropics	<ul style="list-style-type: none"> Twining perennial for wet tropical lowlands. Roots at the nodes. Seed is available.
Centurion (<i>Centrosema pascuorum</i>) cvv. Cavalcade, Bunday	2-4	Centro	Poor	Good	Very Good	800		Wide range of soils in tropics	<ul style="list-style-type: none"> Summer annual for the monsoonal tropics. Heat loving, tolerates a long dry season. Seed is available.

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Creeping vigna (<i>Vigna parkeri</i>) cv. Shaw	2-4	I	Poor	Poor	Good	1200	Wide range of soils in wet subtropics and tropics	<ul style="list-style-type: none"> • Perennial that spreads well under heavy grazing. • Combines well with kikuyu. • Limited seed production.
Desmanthus (<i>Desmanthus</i> spp) cvv. Marc, Bayamo, Uman (sold as a mixture, cv. Jaribu)	2-4	Desmanthus	Fair	Good	Poor	600	Alkaline loams to heavy clays in subtropics	<ul style="list-style-type: none"> • Shrubby perennial for the grain belt. • Slow to establish. • Limited seed available. • Inoculant specific.
Fine stem stylo (<i>Stylosanthes hippocampoides</i>) cv. Oxley	2-4	Stylo	Good	Good	Poor	700	Deep, sandy soils in subtropics	<ul style="list-style-type: none"> • Self-regenerating annual, for deep sandy soils. • Stands heavy grazing, frost, drought and fire well. • Limited seed available.
Forage rhizoma peanut (<i>Arachis glabrata</i>) cv. Prine	Vegetative	P	Fair	Fair	Poor	1100	Moist, well drained, fertile soils in subtropics and tropics	<ul style="list-style-type: none"> • Mat-forming tap-rooted perennial, rhizomatous. • Sown vegetatively. • Compete well with grasses under heavy grazing.
Glycine (<i>Neonotonia wightii</i>) cvv. Tinaroo, Cooper	2-4	M	Fair	Good	Poor	850	Well drained, fertile red or alluvial basaltic soils in subtropics and tropics	<ul style="list-style-type: none"> • Perennial, twining legume that prefers cool, elevated areas. • Has a high molybdenum requirement. • Seed is available.
Greenleaf desmodium (<i>Desmodium intortum</i>) cv.	1-2	Desmodium	Fair	Poor	Good	1200	Wide range of soils in wet	<ul style="list-style-type: none"> • Perennial, twining legume for cooler moist tropical

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Greenleaf								subtropics and tropics <ul style="list-style-type: none"> and subtropical areas. Seed is available.
Leucaena (<i>Leucaena leucocephala</i>) cvv. Peruvian, Cunningham and Taramba	4-6	Leucaena	Fair	Good	Poor	750	Well drained, alkaline, clay or clay-loam soils in tropics or subtropics north of the Great Divide	<ul style="list-style-type: none"> Outstanding tropical browse tree for fertile soils. Does not compete with weeds as a seedling. Manage correctly to avoid it spreading. Affected by psyllid in coastal environments. Seed readily available.
Lotononis (<i>Lotononis bainesii</i>) cv. Miles	_2	L	Good	Fair	Good	700	Sandy and loamy soils of low fertility in subtropics	<ul style="list-style-type: none"> Persistent perennial legume for low phosphorus soils. Can stand waterlogging and heavy grazing but dislikes grass competition. Some salt tolerance. Limited seed available.
Perennial lablab (<i>Lablab purpureus</i>) cv. Endurance	15-20	J	Poor	Good	Poor	650	Loams to heavy clays of moderate to high fertility in subtropics and tropics	<ul style="list-style-type: none"> Weakly perennial. 2-3 years maximum stand life if well managed. Some regeneration from seed. Seed is available.
Pinto peanut (<i>Arachis pinto</i>) cv. Amarillo	10-20	P	Fair	Fair	Fair	1200	Moist, well drained soils of moderate fertility	<ul style="list-style-type: none"> Well adapted to the wet tropics where it grows well with signal grass.

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							in subtropics and tropics	<ul style="list-style-type: none"> • Very shade tolerant. • Seed production is limited but increasing.
Round-leafed cassia (<i>Chamaecrista rotundifolia</i>) cv. Wynn	1-2	M	Poor	Good	Poor	625	Well drained soils of low to moderate fertility in subtropics	<ul style="list-style-type: none"> • Perennial, self-regenerating form seed. • Hardy and widely adapted. • Stands heavy grazing. • Seed is available.
Shrubby stylo (<i>Stylosanthes scabra</i>) cvv. Seca, Siran	1-3	Stylo	Poor	Very Good	Fair to Good	500	Sandy-loams to light clays in tropics	<ul style="list-style-type: none"> • Perennial, slow to establish. • Very hardy and tolerant of dry conditions. • Easy to manage, persistent. • Siran has most anthracnose resistance. • Seed is readily available, high levels of hard seed.
Siratro (<i>Macroptilium atropurpureum</i>) cvv. Siratro, Aztec	1-4	M	Poor	Good	Fair	650	Sandy loams to heavy clays in subtropics and tropics	<ul style="list-style-type: none"> • Twining perennial. • Needs late summer spelling for best persistence. • Aztec has greater rust resistance. • Seed is readily available.

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Villose jointvetch (<i>Aeschynomone villosa</i>) cvv. Reid, Kretschmer	2-4	Jointvetch	Poor	Poor	Very good	1000	Sandy loams to light clays in subtropics and tropics	<ul style="list-style-type: none"> • Spreading, perennial for wet soils in coastal areas. • Grazing tolerant. • Compatible with grasses. • Seed is available.

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ANNUAL MEDICS								
Barrel medic (<i>Medicago truncatula</i>) cvv. Paraggio, Parabinga, Caliph, Jester	2-4	AM	Very Good	Good	Poor	600 (Winter 175)	Alkaline soils of medium to high fertility in subtropics	<ul style="list-style-type: none"> • Self-regenerating annual for southern cropping and grazing zone. • New cultivars are aphid resistant. • Seed is readily available
Snail medic (<i>Medicago scutellata</i>) cvv. Sava, Silver, Essex, Kelson	2-8	AM	Good	Good	Poor	600 (Winter 175)	Alkaline soils of medium to high fertility in subtropics	<ul style="list-style-type: none"> • Self-regenerating annual, suited to ley pastures. • Early and mid flowering types set the most seed. • Seed is readily available.
Burr medic (<i>Medicago polymorpha</i>) cvv. Santiago, Circle Valley, Scimitar, Cavalier	2-4	AM	Good	Good	Poor	600 (Winter 175)	Slightly acid to alkaline soils of medium to high fertility in subtropics	<ul style="list-style-type: none"> • Self-regenerating annual. • Not as widely used as barrel and snail medics. • Not aphid tolerant. • Seed is available.
CLOVERS								
Balansa clover (<i>Trifolium michelianum</i>) cvv. Frontier, Paradana, Bolta	3-6	C	Fair	Fair	Fair	Irrigate	Wide range of soils in subtropics	<ul style="list-style-type: none"> • Annual for irrigated dairy pastures. • Bolta is a long growing season plant. • Poor performance on coastal, heavy soils. • Seed is readily available.
Berseem clover (<i>Trifolium</i>	3-15	B	Fair	Poor	Fair	Irrigate	Neutral to	<ul style="list-style-type: none"> • Irrigated winter forage

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<i>alexandrinum</i>) cv. Multicut, Elite II							alkaline, fertile alluvial soils in subtropics and tropics	annual. <ul style="list-style-type: none"> • Poor for haymaking. • Best used as a pure sward. • Seed is readily available.
Gland clover (<i>Trifolium glanduliferum</i>) cv. Prima	1-3	C	Good	Fair	Fair	650	Acid to neutral, sandy and loamy soils in subtropics	<ul style="list-style-type: none"> • Potentially useful on granite belt soils.
Persian (shaftal) clover (<i>Trifolium resupinatum</i>) cvv. Maral, Nitro Plus, Prolific	1-5	O	Very Good	Poor	Very Good	Irrigate	Alkaline heavy soils in subtropics and tropics	<ul style="list-style-type: none"> • Annual for irrigated winter forage. • Tolerates some salt and waterlogging. • Useful wet site alternative to Berseem and more tolerant of heavy grazing. • Seed is readily available.
Red clover (<i>Trifolium pratense</i>) cvv. Renegade, Claret, Pac 19, Sensation	2-5	B	Very Good	Poor	Fair	Irrigate	Well drained neutral to alkaline soils in subtropics	<ul style="list-style-type: none"> • Annual for winter feed under irrigation. • Good late spring production but disease restricts persistence. • Seed is readily available.
Subterranean clover (<i>Trifolium subterraneum</i> ssp <i>subterraneum.</i>) cvv. Dalkeith, Seaton Park, Goulburn, Nungarin, York, Urana	2-10	C	Very Good	Good	Fair	600	Neutral to slightly acid loams and lighter sandy soils in subtropics	<ul style="list-style-type: none"> • Suited to dryland pastures in southern border area. • New cultivars are coming onto the market. • Seed is readily available

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Subterranean clover (<i>Trifolium subterraneum</i> ssp. <i>brachycalycinum</i>) cv. Clare, Rosedale	10-20	C	Very Good	Good	Fair	Irrigate	Neutral to alkaline loam and clay soils in subtropics and tropics	<ul style="list-style-type: none"> Annual used for winter forage for dairying under irrigation, particularly in central Queensland. Seed is available.
White clover (<i>Trifolium repens</i>) cvv. Haifa, Will, NuSiral, Grasslands Sustain, Demand, Mink	1-4	B	Very Good	Poor	Very Good	800 or irrigate	Versatile - Low lying free draining fertile alluvial soils (irrigated) to sandy and loamy surfaced soils in subtropics and tropics	<ul style="list-style-type: none"> Most useful clover for irrigated dairy production. Useful on granite belt and more favoured coastal sites. Haifa has performed well.
OTHER LEGUMES								
Biserrula (<i>Biserrula pelecinus</i>) cvv. Casbah, Mauro	2-4	Biserrula	Good	Fair	Poor	675	Acid, sandy-loam soils in subtropics	<ul style="list-style-type: none"> Useful on sandy granite belt and solodic soils. Seed readily available.
Greater lotus (<i>Lotus pedunculatus</i>) cv. Grasslands Maku	1-4	D	Fair	Poor	Very Good	900 or irrigate	Poorly drained acid soils in subtropics	<ul style="list-style-type: none"> Summer growing, hardier and more vigorous than <i>Lotus major</i>. Useful on wet areas.

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								<ul style="list-style-type: none"> Seed supplies are limited.
Lucerne (<i>Medicago sativa</i>) cvv. Trifecta, Sceptre, Sequel, Genesis, UQL1, Hallmark, L90, Super 7, L55, Venus, 54Q53, L69, Eureka, Aquarius, Super 10, Rippa, Sequel HR	1-16	AL	Fair	Very Good	Poor	600 or irrigate	Well drained neutral to alkaline, fertile loams and clays in subtropics	<ul style="list-style-type: none"> The king of fodders . Used widely for irrigated hay and grazing though widely sown for extensive dryland grazing in the grain belt. Very widely adapted. Seed readily available.
French serradella (<i>Ornithopus sativus</i>) cv. Cadiz	2-4	S	Very good	Good	Poor	650	Deep, well drained, acid, sandy soils in subtropics	<ul style="list-style-type: none"> Annual that is successful in WA, but too soft seeded for the subtropics. Cadiz is readily available. New hard seeded cultivars are being released. These may be better adapted to the subtropics.
Slender serradella (<i>Ornithopus pinnatus</i>) cv. Jebala	1-2 as free seed 4-6 when sown as pods	S	Very Good	Fair	Fair	600	Deep acid, sandy and loamy soils, and sandy and gravely surfaced solodic soils in subtropics	<ul style="list-style-type: none"> Self-regenerating annual. Hardseed is a problem with podded seed. More tolerant of wet conditions than yellow serradella. Seed difficult to obtain.
Woolly pod vetch (<i>Vicia villosa</i> ssp. <i>dasycarpa</i>) cv. Namoi	6-10	E	Very good	Fair	Fair	650	Versatile — acid sands and loams to	<ul style="list-style-type: none"> Hard seeded regenerating annual. Excellent pioneer legume.

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							alkaline loams and clay soils in subtropics	<ul style="list-style-type: none"> • Heavy grazing, heliothus can affect seed set.
Yellow serradella (<i>Ornithopus compressus</i>) cvv. Madeira, Santorini, King, Charano	2-3 when sown as free seed, 4-6 when sown as pods	G	Very good	Fair	Poor	600	Acid, sandy surfaced, well drained, low fertility soils in subtropics	<ul style="list-style-type: none"> • Best self-regenerating annual. legume for sandy solodic soils. • Requires less super than subclover. • Hard seed a problem and seed is difficult to thresh. • Seed is available from WA, Madeira difficult to obtain.

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For use in subtropics, high fertility needs can be supplied by legumes, seed of all cultivars readily available								
Cocksfoot (<i>Dactylis glomerata</i>) cv. Currie, Porto	6-10	–	Very Good	Fair	Good	600	Fertile moist areas well drained sandy to loamy soils	<ul style="list-style-type: none"> Perennial that is not well suited to the subtropics.
Tall fescue (<i>Festuca arundinacea</i>) cvv. Demeter, Au Triumph, Epic, Jesup, Dovey, Quantum, Advance, Flecha, Prosper	5-10	–	Very Good	Fair	Good	600	Fertile moist areas on well drained sandy to loamy soils	<ul style="list-style-type: none"> Perennial, winter active types are less adapted to the subtropics. Mixes well with perennial ryegrass and white clover. New varieties more palatable than older varieties.
Annual ryegrass (<i>Lolium</i> spp.) cvv. Tetila, Renovator AM, Surrey, Winter Star, T-Rex	4-20	–	Very good	Poor	Poor	Irrigate	A range of fertile loamy to friable clay soils	<ul style="list-style-type: none"> Quick growing irrigated annual forage crop in subtropics. Very palatable and nutritious. Very responsive to nitrogen.

TEMPERATE GRASSES

Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerant to)					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Short rotation or Italian ryegrass (<i>Lolium multiflorum</i>) cvv. Aristocrat, Concord, Renovator LM, Renovator SR, Crusader, Dargle, Marbella, Flanker	4-20	–	Very Good	Poor	Poor	Irrigate	A range of fertile loamy to friable clay soils	<ul style="list-style-type: none"> • Quick growing irrigated annual forage crop in subtropics. • Very palatable and nutritious. • Very responsive to nitrogen.
Perennial ryegrass (<i>Lolium perenne</i>) cvv. Kangaroo Valley, Grasslands Impact, Samson, Bronsyn, Fitzroy, Meridian	2-10	–	Very Good	Poor	Poor	600 or irrigate	A range of fertile, well drained loamy to light clay soils	<ul style="list-style-type: none"> • High quality perennial pasture. • Very responsive to nitrogen. • A useful component of perennial pasture with white clover.
Phalaris (<i>Phalaris aquatica</i>) cvv. Siroso, Sirolan, Holdfast, Landmaster	2-4	–	Good	Good	Good	700 or irrigate	A range of loamy fertile soils	<ul style="list-style-type: none"> • A hardy perennial. • Does not stand wet subtropical summer conditions. • Susceptible to summer grazing.
Prairie grass (<i>Bromus unioloides</i>) cv. Grasslands Matua, Atom	5-20	–	Very Good	Poor	Poor	600 or irrigate	A range of well drained, loamy to friable clay soils	<ul style="list-style-type: none"> • Very palatable annual. • Useful in areas too warm for ryegrasses. • Regenerates well.

SUMMER FORAGE CROPS								
Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerances)					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Cowpea (<i>Vigna unguiculata</i>) cvv. Red Caloona, Ebony	15-20	I	Fair	Good	Very Poor	650	Well drained sandy loams to friable clays	<ul style="list-style-type: none"> • Excellent early season production. • Ebony can withstand multiple grazings.
Lablab (<i>Lablab purpureus</i>) cvv. Highworth, Rongai	10-30	J	Fair	Good	Poor	650	Fertile loams to heavy clays	<ul style="list-style-type: none"> • A productive, twining, annual grazing legume, stands well into the autumn. • Is an effective cover and green manure crop that makes good hay.
Japanese millet (<i>Echinochoa esculenta</i>) cv. Japanese, Shirohie	6-8	–	Fair	Good	Good	550	A range of soils including poorer soils	<ul style="list-style-type: none"> • A quick growing early feed on poorer soils than suited to sorghum. • A good pioneer.
Siberian millet or white panicum (<i>Echinochola frumentaceae</i>) cv. Siberian (or white panicum)	8-10	–	Fair	Good	Poor	550	A range of soils including poorer sandy soils	<ul style="list-style-type: none"> • Quick feed for subtropical areas, highly nutritious.
Silk sorghum (<i>Sorghum</i> spp.hybrid) cv. Silk	2-10	–	Fair	Good	Fair	550	Fertile clay loams to heavy clays	<ul style="list-style-type: none"> • Short-term perennial. • Establishes readily in self-mulching clays.
Forage sorghum — sorghumx sudan grass hybrids (<i>Sorghum bicolor</i> x <i>S. sudanense</i>) cvv. Betta Graze, Cow Pow, Jumbo,	3-10 (dryland sowings)	–	Fair	Good	Poor	550	Fertile loams to heavy clays	<ul style="list-style-type: none"> • A wide range of types and proprietary cultivars. • These are the main summer forage crops. • Plant when minimum

SUMMER FORAGE CROPS								
Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerances)					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Sweet Jumbo, Lush, Everlush, Bully Beef, Justleaf, Zulu								daily soil temperature is 16°C and rising. <ul style="list-style-type: none"> • Best feed quality at 1 metre high.
Brown midrib forage sorghum - BMR sorghum x sudan grass hybrid (<i>Sorghum bicolor</i> x <i>S. sudanense</i>) cv. Pacific BMR	3-10 (dryland sowings)	–	Fair	Good	Poor	550	Fertile loams to heavy clays	<ul style="list-style-type: none"> • Lower lignin levels than normal forage sorghum gives higher digestibility and higher energy.
Forage sorghum - sweet sorghum hybrids (<i>Sorghum bicolor</i> x <i>S. bicolor</i>) cvv. Sugargraze, Mega Sweet, Hunnicut, Hunnigreen, Fatso	3-10 (dryland sowings)	–	Fair	Good	Poor	550	Fertile loams to heavy clays	<ul style="list-style-type: none"> • Used for grazing, standover winter feed or silage. • A very good standover feed into winter with a sweet stem and grain. • Chop for silage after flowering.
Forage sorghum — sweet sorghum x sudan grass hybrids (<i>Sorghum bicolor</i> x <i>S. sudanense</i>) cvv. Sweet Lush, Nectar	3-10 (dryland sowings)	–	Fair	Good	Poor	550	Fertile loams to heavy clays	<ul style="list-style-type: none"> • Use for grazing, hay or silage. • Good as autumn standover feed when sown in summer. • Has a high sugar level.
Forage sorghum — grain sorghum hybrids (<i>Sorghum bicolor</i> x <i>S. bicolor</i>) cvv. Chopper, Graze-N-Sile	2-8 (dryland sowings)	–	Fair	Good	Poor	550	Fertile loams to heavy clays	<ul style="list-style-type: none"> • Recommended for silage production. • Better water use efficiency than corn.
Sudan grass (<i>Sorghum</i>	2-10	–	Fair	Good	Fair	600	Fertile loams to	<ul style="list-style-type: none"> • Good recovery after

SUMMER FORAGE CROPS									
Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerances)					Comments	
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences		
<i>sudanense</i>) cv. Piper, Greenleaf but usually purchased as sweet sudan or ordinary sudan grass	(dryland sowings)							heavy clays	grazing.
Sudan grass hybrids (<i>Sorghum sudanense</i> x <i>S. sudanense</i>) cv. Superdan	2-10 (dryland sowings)	–	Fair	Good	Poor	600	Fertile loams to heavy clays		<ul style="list-style-type: none"> • High dry matter, leafy, handles wetter conditions better than forage sorghums. • Good for hay production.
Pearl millet (<i>Pennisetum glaucum</i>) cvv. Open pollinated variety	4-5	–	Poor	Fair	Fair	700	Fairly fertile soils of lighter texture		<ul style="list-style-type: none"> • Best adapted to hot tropical climates. • Stands over well in winter.
<i>Pennisetum</i> (millet) hybrids (<i>Pennisetum glaucum</i> x <i>P. glaucum</i>) cvv. Hybrid Pearl, Nutrifeed	2-8	–	Poor	Fair	Fair	700	Fairly fertile soils of lighter texture		<ul style="list-style-type: none"> • High quality feed, no prussic acid. • Plant when minimum temperature is 18°C or above.

WINTER FORAGE CROPS								
Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerant to)					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Barley (<i>Hordeum vulgare</i>)	30-50	–	Good	Good	Fair	500	Fertile loams to heavy clays	<ul style="list-style-type: none"> Will grow on soils too rundown for oats. Mildew can be a problem.
Canary (<i>Phalaris canariensis</i>)	9-12	–	Good	Fair	Fair	600	Fertile loams to heavy clays	<ul style="list-style-type: none"> Mainly grown for birdseed but good winter grazing before flowering.
Field pea (<i>Pisum sativum</i>)	20	E	Good	Fair	Fair	500	Heavy textured alkaline soils	<ul style="list-style-type: none"> Useful supplement to oats on run down soils.
Lupins (<i>Lupinus</i> spp.)	20-60	G	Good	Good	Poor	600	Light sandy soils	<ul style="list-style-type: none"> Sweet lupins provide useful grazing on less fertile, acid sandy soils.
Oats (<i>Avena</i> spp.) cvv. Gwydir, Barcoo, Nugene, Taipan, QA1, Warrego, Moola, Riel, Amby II, Culgoa II	40-60	–	Good	Good	Fair	500	Fertile loams to heavy clays	<ul style="list-style-type: none"> The premier winter grazing crop. A range of growth habits and maturities. Good rust resistance in many newer varieties.
Rape (<i>Brassica napus</i>)	2-4	–	Good	Good	Fair	650	Fertile loams to heavy clays	<ul style="list-style-type: none"> Sometimes planted instead of oats where early winter rains are unreliable.
Triticale (<i>Triticum x Secale</i>)	30-50	–	Very Good	Good	Fair	600	Lighter soils — loams to friable clays	<ul style="list-style-type: none"> A useful dual purpose grain/grazing crop.

WINTER FORAGE CROPS								
Species & Cultivars	Seeding Rate (kg/ha)	Inoculum Group (Legume only)	Adaptation (Tolerant to)					Comments
			Frost	Drought	Water logging	Minimum Rainfall (mm)	Soil Preferences	
Vetches (<i>Vicia</i> spp.) cvv. Popany, Blanche fleur	6-30	E	Good	Fair	Poor		A range of soils from sands to heavy clays	<ul style="list-style-type: none"> • Quick growing, productive. • Easy to establish. • Soft seeded, does not regenerate.