



Herbage Development Fact Sheet 11 • By Eric Hall and Andrea Hurst

Red clover, cv. Rubitas^(b)

(*Trifolium pratense* L.)

Origin

Natural selection in the field: 5 cycles for persistence at a low rainfall site at Jericho, Tasmania (AAR 549.7 mm). Recurrent phenotypic selection: 4 cycles of recurrent phenotypic selection for seedling vigour, uniform leaf marker and prostrate growth (fig. 1) habit within CPI 134699, collected as seed by Mr Bob Reid (ex TIA) near Escalada, Burgos province, Spain (42°49'N 03° 48'W), 6th July 1993.

Breeders

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Description

Rubitas^(b) is a prostrate herbaceous perennial legume, growing to 40 cm tall and a spread of 100 cm, with a strong, deep, extensively branched taproot. Stems are sparsely hairy, leafy with many long thin branches originating from a dense crown. Rubitas^(b) is a stoloniferous type of red clover (fig.2), meaning it can produce daughter plants at the stem nodes. It has proved to be more persistent than Astred A red clover in TIA trials. Its low crown and prostrate growth habit makes it tolerant of close grazing by sheep. Rubitas^(b) has a distinct leaf marker with a very broad crescent.

Major attributes

Rubitas^(b) is a stoloniferous persistent perennial red clover with a dense prostrate growth habit. It has high level of drought and cold tolerance and once established can tolerate long periods of close grazing by sheep. Rubitas^(b) will extend the use of red clover into sheep grazing areas.

Seasonal production

Rubitas^(b), like other red clovers produces most forage in the warmer months of spring/summer, producing a large bulk of high protein, high-energy forage with a high level of digestibility and nutritive value.

Drought tolerance

Once established Rubitas^(b) develops a very strong taproot giving the plant the ability to survive extended dry periods.

Cold tolerance

Very high. Tolerates frosts to -9° C with little or no frost damage.

Waterlogging tolerance

Will tolerate short periods of waterlogging.

Salt tolerance

Low.

Soil and climate requirements

Best adapted for sowing in temperate low to medium rainfall areas receiving 500mm to 1000mm average annual rainfall. Adapted to a range of soil types, pH levels 5.5 to 7.5. Not suited to areas with very high summer temperatures. At several trial sites in Tasmania plants have survived years where annual rainfall has been as low as 250mm.

Maturity

Flowers late November. Seed matures mid January.

Seed size

Thousand seed weight 1.57gms (white clover 0.636gms).

Hard seed

Very low. 10% hard seed.

Seed treatment

Seed must be scarified and inoculated with appropriate rhizobia prior to sowing.

Rhizobium

Group B

Sowing methods

Drilled, direct drilled or broadcast.

Sowing depth

Best sown at 5mm.

Sowing rate

3-6 kg/ha, depending on seedbed quality.

Sowing time

Preferably late summer to autumn for sufficient seedling development coming into winter, but can be sown in spring.

Land preparation

Well-cultivated firm seedbed required for best results. For direct drilling or broad-

casting there should be as little vegetation as possible and adequate soil moisture prior to sowing. Unlikely to establish when broadcast onto existing pasture.

Compatibility with other species

One of the more competitive legumes and is suitable for sowing with all forage grasses and legumes with moderate seedling vigour. Seedlings may struggle if sown in a mix with high rates of more vigorous grass species such as perennial ryegrass or perennial bromes.

Suggested mix

Rubitas^(b) with Uplands^(b) or Megatas^(b) cocksfoot.

Seedling vigour

Rubitas^(b) has been selected for its improved seedling vigour.

Grazing management

Grazing should be lax in the year of establish to allow the plants to develop a strong taproot. Once established, Rubitas^(b) can tolerate persistent close grazing by sheep.

Dry matter yield

Similar to cv. Astred in total herbage production. Peak growth period is during spring and summer, with 3.5 t/dm/ha summer herbage production achieved by a 6-month-old stand under dryland conditions at Cressy, Tasmania. Responsive to summer rains or irrigation.

Feed value

Highly digestible, declining slowly with maturity.

Typical feed test figures

Crude protein (%DM)	22.1
Digestibility (%digestible DM)	81.2
Metabolizable energy (MJ/kg DM)	12.0

Anti-quality factors

May be some risk of bloat for stock grazing pure stands. Has a low level of isoflavones.

Seed harvest methods

Direct heading, cutter rowing. Holds seed very well when mature.

Diseases

None recorded.

Pests

Resistant to pasture grub attack. Susceptible to red legged earth mite attack as seedlings, but established swards appear more resistant.

Animal performance

No data available at this stage.

Other data

Relative persistence of Rubitas (l) vs Astred red clover, based on frequency measurements over three years – Sown May 2008, Meander Rise, Tasmania, annual average rainfall 678 mm.

Year	Rubitas (l)	Astred (l)
2009	100	80
2010	100	62
2011	100	38



(l) Variety is protected by Plant Breeders Rights

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