



Paradana Balansa Clover

Trifolium michelianum

Paradana Balansa is a mid maturing, semi erect, self regenerating annual clover that grows mainly in spring. Paradana is very waterlogging tolerant and shows resistance to clover scorch and root rot. Paradana, with its easily curable hollow stems is used extensively for production of high yield, good quality hay on areas receiveing more than 450mm per annum.

- Suitable for most soils on which Subclover grows well
- Prolific seeder resulting in good persistence
- Excellent Spring Growth
- Good hay producer

Seed agronomy table

Min Rainfall	450
Seeding Rate	Kg/Ha
Dryland	4-6
High Rainfall / Irrigation	8-10

Enterprises this seed is being used for

Sheep
Beef Cattle
Horse
Hay & Silage

Strengths

- Sets large amounts of seed.
- Hardseeded in cool climates.
- Excellent waterlogging tolerance.
- Adapted to a wide range of soil types and pH ranges.
- Mild salinity tolerance.
- Tolerant of clover scorch.
- Regenerates well on suitable soils under appropriate grazing management.

Limitations

- Not suited to deep infertile sands.
- Not suited to moderate-high soil salinity.
- Slow establishment in the first year if sown under cold conditions.

Plant Description

Plant: Aerial seeding, erect or semi-erect, much branched, self regenerating annual temperate legume, growing to over 80 cm tall, but remaining prostrate when grazed.

Stems: Hollow, hairless.

Leaves: Comprise three hairless leaflets, of varying size, shape and leaf marking. Leaflet margins can be smooth or serrated. Some leaflets are plain green while others have white to silver, pink or purple markings.

Flowers: Borne in clusters in a globose flower-head 2 - 3 cm in diameter, each comprising up to 45 small white-pink flowers.

Pods: 3 - 4 seeds/pod, shattering readily on maturity.

Seeds: Ovoid-oblong, 1 - 2 mm long, olive green, yellow, light brown, dark brown to black in colour. 850,000 - 1.4 million seeds/kg depending on cultivar.

Pasture type and use

Used as a component of permanent pastures, or in hay mixtures.

Where it grows

Rainfall: Balansa clover is adapted to temperate climates with annual rainfall of 350 - 800 mm. Early flowering varieties are suited to lower rainfall zone, and later flowering varieties to higher rainfall areas. It can be grown successfully under irrigation.

Soils: Balansa clover grows across a diverse range of soil types, preferring soils of moderate to high fertility that are prone to waterlogging. It is not suited to deep sandy soils. It is adapted to acid and alkaline soils (pH water 5.4 - 9.0) although performs best where pH is below 8.3. Although displaying excellent tolerance of waterlogging, it has only low to moderate salt tolerance.

Temperature: Widely adapted to the agricultural areas of Western Australia, South Australia, Victoria, Tasmania and New South Wales. Good frost tolerance.

Establishment

Companion species:

Grasses: Range of perennial (e.g. tall wheatgrass) and annual grasses.

Legumes: medics, gland clover, persian clover, subterranean clover (particularly ssp. yanninicum). It is often sown in a mix with subterranean clover, if parts of the paddock are poorly drained or subject to waterlogging over winter.

Sowing/planting rates as single species: Typically sown at 4-10 kg/ha. *ensure seed is Goldstrike treated.

Sowing/planting rates in mixtures: Sown at 1-3 kg/ha in mixtures. Higher rates used when it is the only legume sown. * ensure seed is Goldstrike treated.

Sowing time: Sown April - June under rain-grown conditions, or as early as February under irrigation. Good weed control is essential due to its small seed size and slow early growth. Shallow sowing (Inoculation: Goldstrike Treated. The use of Goldstrike XLR8 seed treatment is recommended to reduce damage from insects at seedling stages.

Fertiliser: Phosphorus (with potassium on deficient soils) often applied at sowing levels determined after soil tests. Trace elements (eg. Cu, Mo, Zn) may be required on very infertile soils.

Management

Maintenance fertiliser: Annual applications of superphosphate (with potassium on deficient soils) are usually required (on responsive soils) to achieve maximum productivity. Additional fertiliser applications may be required in spring (just prior to flowering) in seed and hay crops where soil nutrient levels are low. Soil testing is required to determine appropriate application rates.

Grazing/cutting: Balansa clover can be lightly grazed in the first year. Care is needed to limit grazing pressure during flowering to ensure adequate seed set. Paddocks should not be "crash" grazed or cut for hay in the first year if the stand is expected to regenerate. However, plant residue should be grazed over summer to encourage hardseed breakdown and maximise regeneration. It can be used for both continuous and rotational grazing but persistence is better under the former. It remains relatively prostrate when continuously grazed and is very tolerant of regular defoliation while young. Left ungrazed it will grow up to 1 metre tall in spring, the stems collapsing and growing horizontally. It does not recover well from a late cut or grazing when stems are large and the plants tall and flowering. Very little seed will be produced if mature flowering stands are hard-grazed.

Ability to spread: Spreads by seed either by livestock or by movement of hay.

Weed potential: Despite its ability to spread from seed, there is little evidence of it becoming an environmental weed. This is likely to be due to its preference for moderate-high fertility soils and specific rhizobial requirements.

Major pests: Balansa clover is very susceptible to red legged earth mite, particularly at establishment. Lucerne flea can damage stands, mainly during the warmer months. Aphids, particularly blue green aphids, can cause damage in warmer regions where they are more active.

Major diseases: It is susceptible to root rots during establishment, particularly if sown late under cold, wet conditions. It is tolerant of clover scorch.

Herbicide susceptibility: Refer to chemical labels for suitability and recommended rates for herbicides registered for use on balansa clover.

Animal production

Feeding value: Balansa clover provides excellent green feed, and although quality reduces after maturity, but remains sufficient to ensure satisfactory animal production over summer e.g. crude protein levels in the dry matter at the very early bud stage may be over 20% and digestibility about 80%; within 4 weeks, these values may drop to about 15% and 70% respectively. In the same period, metabolisable energy may drop from around 11.5 to 10

MJ/kg DM.

Palatability: Readily consumed by livestock, either as green or dry feed.

Production potential: Capable of excellent productivity. Later-flowering varieties capable of higher total annual production in long-season environments.

Livestock disorders/toxicity: Bloat can occur in cattle grazing lush balansa clover dominant pastures.

International Contact

For international enquiries please contact

Sean Coffey

International Business Manager

[+61 4 2865 2226](tel:+61428652226)

sean.coffey@pasturegenetics.com



Disclaimer: Pasture Genetics has taken all reasonable care in the preparation of this publication. The information contained is thought to be correct at the time of publication. Always seek professional advice from your local agronomist or Pasture Genetics representative prior to purchasing any products. Combined information provided courtesy of Pastures Australia and Pasture Genetics

14 -16 Hakkinen Road, Wingfield, SA • T 08 8445 1111 • F 08 8445 7777 • seed@pasturegenetics.com • pasturegenetics.com