pastures australia
A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

Cluster clover

Scientific name(s)

Trifolium glomeratum

Strengths

- Valuable self-regenerating annual legume for use in pastoral systems on granite and traprock soils in subtropics
- Drought resistant and persistent
- Prolific seeder
- High hard seed levels
- Suited to low fertility soils with fertiliser amendment

Limitations

- Later flowering than the subclovers used in subtropics
- Less productive than subclover in good seasons
- Preference for soils of moderate fertility
- Subordinate to subclover in temperate and Mediterranean regions

Plant description

Plant: Prostrate with slender trailing stems.

Stems: Green 20 to 30 cm long.

Leaves: Trifoliate, oval shape, smooth, slightly toothed, sometimes with a white crescent shaped mark.

Flowers: Solid greenish ball (7 mm) with white to pink flowers.

Pods: Contains 1 or 2 seeds.

Seeds: yellow, heart shaped, small, 2.6 million/kg.

Pasture type and use

Temperate, winter growing, self regenerating annual legume used in permanent grass pasture on soils of low fertility (granite and traprock) in the subtropics (southern border uplands of southern Queensland and north west slopes of New South Wales); not used commercially in farming systems in southern and Western Australia.

Where it grows

Rainfall

600-850 mm/ann (subtropics); not recommended in southern and Mediterranean Australia.

Soils

Adapted to acid to neutral, sandy and loamy soils

Temperature

Winter growing so can withstand frosts, produced higher DM when sown in early autumn.

Establishment

Companion species

Sown with sub clover, rose clover, and the summer growing grasses, Premier digit grass and Swann forest blue grass. Naturalised in sub clover pastures in southern Australia.

Sowing/planting rates as single species

1-2 kg/ha.

Sowing/planting rates in mixtures

Sow at a rate depending on the proportion in the mix with other legumes. Very small seeded so low sowing rates provide a good plant population.

Sowing time

Mid autumn to early winter.

Inoculation

Group B

Fertiliser

Where soils are low in nutrients, particularly P and/or S, apply 10-15 kg P and 10 kg S/ha initially, and Cu, Zn Mo if they are deficient. Soil tests will determine the need and appropriate rates.

Management

Maintenance fertliser

Ongoing applications of P and S as required, particularly in 'good' seasons. Soil tests will determine the need and appropriate rates.

Grazing/cutting

In the establishing year, delay grazing until plants are well established. Graze leniently until flowering then remove stock to maximise seed set. Produces better under rotational grazing. In subsequent years, will set seed under heavy grazing.

Seed production

Wide variation between 140 and 1640 kg/ha.

Ability to spread

Rate of spread slow though seed may be distributed through livestock owing to high hard seed levels.

Weed potential

Highly palatable, low weed potential. Regenerating seedlings could pose a problem if used as a ley in crop rotations though no more so than subterraneum clover. No weed potential in pastoral systems.

Major pests

None in the subtropics.

Major diseases

None in the subtropics.

Herbicide susceptibility

Not applicable in pastoral systems.

Animal production

Feeding value

High quality legume of similar value to other clovers.

Palatability

Readily eaten by livestock.

Production potential

Production less than subclover but is complementary, making its contribution after subclover in the subtropics.

Livestock disorders/toxicity

Bloat can be issue with lush growth in wet spring seasons.

Cultivars

Cultivar	Seed source/Information
One cultivar known by the common name, cluster or ball clover	Public variety

Further information

Pasture for the Eastern Garnite Belt

Author and date

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