



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

Rose clover

Scientific name(s)

Trifolium hirtum

Strengths

- High seed yields are easily harvested, handled and cleaned using common multi-crop machinery
- Very well adapted to mildly acid and alkaline sandy-loam and loam soils
- Productive annual forage and tolerant to heavy grazing in medium-low rainfall areas
- Suited to self-regenerating ley systems or short-term phase farming
- Protection against false breaks
- Medium-low level of hard seed
- Ideal companion plant in mixtures with other legumes such as subterranean clover or serradella

Limitations

- Not adapted to waterlogged soils
- Low level of hard seeds
- Lack of persistence under intensive crop rotation

Plant description

The inflorescence is a globular terminal head, which varies from light to dark pink in colour. Seed are smooth, slightly compressed, cream coloured, approximately 2 mm long and weigh 3-4 mg, with about 250,000 seeds per Kg.

Pasture type and use

Rose clover is an aerial seeding, winter growing self-regenerating annual pasture legume. It is typically grown in areas that support either subterranean clover or annual medics and is often sown in mixture with subterranean clover, serradella and biserrula.

Where it grows

Rainfall

Suited to regions with 400 to 700 mm annual rainfall.

Soils

Adapted to soils of mildly acid to alkaline reaction (pH 5 to 8 CaCl₂) and to a range of textures

Temperature

Tolerant to frosts

Establishment

Companion species

Grasses: Italian ryegrass, consol lovegrass and Premier digit grass).

Legumes: subterranean clover, biserrula, serradella, crimson clover, bladder clover, annual medics and gland clover

Sowing/planting rates as single species

Sowing rate for seed production and pure pasture swards should be 10 - 15 Kg/ha. Sow shallow at 0.5 cm. Rolling after sowing is an advantage.

Sowing/planting rates in mixtures

Sow at 3 - 7 kg/ha in mixtures with other pasture legumes.

Sowing time

Sow Rose clover in autumn as close to the break of season as possible.

Inoculation

Seed of Rose clover must be inoculated with group C rhizobia

Fertiliser

Sow with 100 - 150 kg/ha superphosphate, or super/potash if on sandy soils

Management

Maintenance fertiliser

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Grazing/cutting

Rose clover can be heavily grazed in winter. However, because of its erect growth habit, care needs to be taken in spring to prevent overgrazing and reduced seed set.

Seed production

Potential seed yields of rose clover are similar to that of subterranean clover, usually ranging between 250-700 kg/ha., and in lower rainfall areas clover are likely to be higher than subterranean clover.

Rose clover can be harvested for seed with a conventional header. Drum speed needs to be high with the concave closed down and airflow under 20%.

Ability to spread

Many seeds of rose clover survive ingestion by sheep and are readily spread around paddocks.

Weed potential

There have not been reported cases of rose clover growing within native vegetation.

Major pests

Rose clover is moderately tolerant to blue green aphid, lucerne flea and red legged earth mite.

Major diseases

It has little or no susceptibility to clover scorch disease (*Kabatiella caulivora*).

Herbicide susceptibility

Tolerant to most of the broad-leaf herbicides used on pastures.
Grass weeds can be safely controlled with common grass-selective herbicides.

Animal production

Feeding value

Rose clover has palatability similar to subterranean clover. Organic matter digestibility of rose clover in spring is usually around 70% with 20-25% crude protein, but these values decrease with senescence.

Palatability

Highly palatable

Production potential

The quantity of forage produced by rose clover is generally equivalent and sometimes better than subterranean clover. Peak dry matter yields in un-grazed swards can range between 4 and 7 t/ha.

Livestock disorders/toxicity

No livestock disorders have been reported but, as with most legumes, could cause bloat in cattle in very pure rose clover swards. Rose clover has very low to undetectable levels of the isoflavones associated with infertility in sheep.

Cultivars

Cultivar	Seed source/Information
Hykon	-
SARDI rose	-
Sirint (seed no longer available)	-
Olympus (seed no longer available)	-
Kondinin (seed no longer available)	-

Further information

For more information, phone Dr Angelo Loi (08 9368 3907), Mr Brad Nutt (08 9368 3870), Department of Agriculture and Food Western Australia, and Belinda Hackney, NSW Department Primary Industries (02 6938 1858).

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Author and date

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