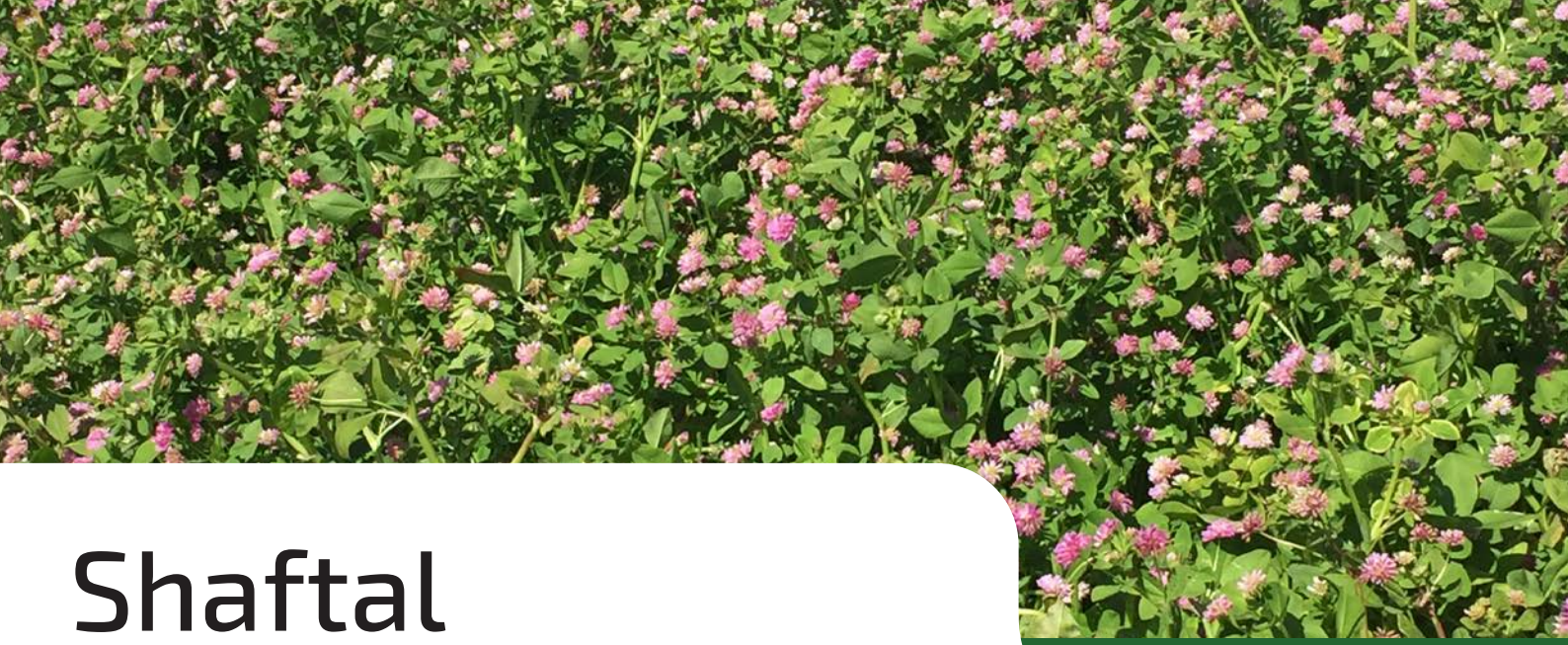

Shaftal

Persian Clover

(Trifolium resupinatum var. majus)

INTERNATIONAL

KEY FEATURES

- Soft seeded variety
- Mid/late maturity approx. 145 days
- Good spring growth
- Salinity tolerance
- Good companion species in mixtures with Annual and Italian Ryegrasses

SHAFTAL has an erect habit, thick, hollow stems and large leaflets. Hard seed level is very low at one to two per cent. Flowering and maturity is mostly late. Used in high density legume crops. Minimum average annual rainfall for this group of Persian clovers is 450 mm (northern Vic). An autumn and winter, spring growing annual with excellent tolerance to waterlogging, SHAFTAL Persian clover is moderately tolerant of salinity.

Growing Conditions

Soil Type:
Suited to most soil types from sandy loams through to heavy clay soils

Sowing Rate:
Dryland 6 – 10kg/ha
High Rainfall/Irrigation 10 – 15kg/ha

Rainfall:
450mm+

pH:
5.5 - 8.5 ($CaCl_2$)

Inoculant:
Group C Rhizobium

Persian Clover Agronomic Information

Scientific name(s)

Trifolium resupinatum L. var. majus Boiss.

Strengths

- High nutritive value
- Extremely high production potential
- Multi cut forage crop
- Tolerant of seasonal flooding
- Some tolerance of salinity
- Free of oestrogen risks

Limitations

- Poor regeneration

Plant characteristics

Plant: erect, annual. Up to 750 mm height.

Stems: up to 35 mm diameter, hollow, soft.

Leaves: trifoliate, up to 25 mm long, plain, strongly veined, oval-shaped leaflets with serrated margins.

Flowers: pink-violet flowers. Many-flowered cluster and mature in axillary, white, spherical, woolly seedheads to 15 mm diameter on long stalks.

Pods: membranous, dehiscing at thickened sutures; one seeded.

Seeds: ~1 mm long, ovoid, various colours (brown, olive, purple); ~1.5 million/kg

Pasture type and use

A winter-growing, annual capable of excellent winter and spring growth. Suited to seasonal irrigation. A valuable fodder crop.

Where it grows

Rainfall

> 450 mm in winter/spring rainfall zone for dryland use. Also used with irrigation. Tolerates water with up to 1500 uS/cm on low salinity soils with adequate drainage.

Soils

Suited to clay soils, pH 5.5-8.5 ($CaCl_2$). Tolerant of severe waterlogging and mildly saline soil.

Temperature

Good heat tolerance. Quite tolerant of frost and cold but slow growing at low temperatures.

Establishment

Companion species

Grasses: Italian ryegrass.

Legumes: balansa clover, arrowleaf clover.

Sowing/planting rates as single species

5-10 kg/ha; broadcast onto a finely worked, weed free seed bed and cover lightly by a roller or drill seed at 5 mm depth into a clean, finely worked seedbed. High seed rate boosts winter yield and reduces weed invasion.

Sowing/planting rates in mixtures

3-7 kg/ha.

Sowing time

February (if irrigating) to April.

Inoculation

Group C.

Fertiliser

Apply ~20-30 kg P/ha annually and correct any nutrient deficiencies, especially K, Mo, Cu, S.

Management

Maintenance fertiliser

For optimum growth Olsen soil P (0-10 cm depth > 15.

Grazing/cutting

Suited to winter grazing. Set residues at 2-3 cm (winter and 4-5 cm (spring to avoid over grazing. Rotationally graze during the cool season when 15-20 cm tall; this stimulates tillering. If sown with grass, must graze late winter/early spring to allow clover to contribute later.

Suited to hay/silage production; most valuable aftermath. Stems are nutritious but slow to dry; use conditioner to speed up drying. Fast regrowth facilitates second cut; remove bales promptly - hay quite susceptible to rain damage.

Ability to spread

Poor recruitment: most cultivars produce little hard seed.

Weed potential

Low. Seed very susceptible to sprouting in the head and to false breaks.

Major pests

Red-legged earth mite and lucerne flea need to be identified and controlled rapidly during establishment.

Major diseases

Some cultivars susceptible to leaf and stem rust (Uromyces trifolii-repentis) and clover rot (Sclerotinia trifoliorum).

Herbicide susceptibility

Glyphosate. Damaged by many broad-leaf herbicides.

Animal production

Feeding value

High (high soluble carbohydrate, high protein content & low NDF content). Retains excellent feeding value as dry standing hay during dry weather.

Palatability

Palatable.

Production potential

Good winter, spring, summer.

Livestock disorders/toxicity

Low isoflavone content - no risk to breeding livestock. Low risk of bloat. Can be associated with photosensitization.

Source: Pastures Australia and Departments of Agriculture

Australian Government
Rural Industries Research and Development Corporation
RIRDC www.rirdc.gov.au

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