

Berseem clover

Scientific name(s)

Trifolium alexandrinum

Strengths

- High nutritive value and productive throughout year. Some tolerance of salinity. Free of oestrogen risks

Limitations

- Poor regeneration; intolerant of heavy frost

Plant description

Plant: Erect, annual with short tap root; grows to 750 mm

Stems: Slender, hollow, branched.

Leaves: plain, trifoliate, slightly hairy on both surfaces; oval leaflets with, near the tip, serrated margins

Flowers: oval/cone shaped, ~2cm diameter, numerous, cream

Pods: contain 1-2 seeds

Seeds: oval, yellow/red-brown; ~350,000/kg

Pasture type and use

A winter-growing, annual capable of excellent early growth in autumn. Suited to seasonal irrigation. A valuable green manure crop.

Where it grows

Rainfall

> 600 mm in winter/spring rainfall zone for dryland use. Mainly used with irrigation. Tolerates water with up to 1000 ppm salt.

Soils

Best on neutral to alkaline soil, pH 6-8. Moderately tolerant of water-logging and saline soil. Well suited to deep alluvial soil.

Temperature

Good heat tolerance; low cold tolerance. The least winter hardy of the cultivated clovers. It should not be grown in areas where winter temperatures commonly go as low as 6°C.

Establishment

Companion species

Grasses: Italian ryegrass

Legumes: Persian, balansa, arrowleaf clovers

Sowing/planting rates as single species

8-10 kg/ha (10-15 kg/ha if irrigated); sow at 15-20 mm into a clean, finely worked seed bed and roll

Sowing/planting rates in mixtures

3-5 kg/ha

Sowing time

Early autumn

Inoculation

Group B

Fertiliser

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

Management

Maintenance fertiliser

For optimum growth Olsen soil P > 15

Grazing/cutting

More suited to cutting/fodder conservation; quick regrowth and good aftermath - on suitable soils. Rotationally grazing in 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. Set residues at 2-3 cm (winter) and 4-5 cm (spring) to avoid over grazing.

Seed production

Ability to spread

Poor recruitment; no hard seed

Weed potential

Low. Seed very susceptible to false breaks.

Major pests

Red legged earthmite, blue-green aphid, spotted alfalfa aphid, heliothis, blue oat mite.

Major diseases

Some cultivars susceptible to leaf and stem blight and clover scorch - Pythium, Phytophthora and Kabatiella caulivora

Herbicide susceptibility

Glyphosate. Damaged by most broad-leaf herbicides

Animal production

Feeding value

High; high protein content

Palatability

Palatable

Production potential

Good autumn, winter, spring

Livestock disorders/toxicity

Low isoflavone content - no risk to breeding livestock. Low risk of bloat.

Cultivars

Group	Cultivar	Seed source/Information
Early	Bigbee	AusWest Seeds
Late	Elite II 	Seedmark/PlantTech
	Carmel	
	Multicut	
	Memphis 	AusWest Seeds
	Alexandria	Seed Distributors

 Denotes that this variety is protected by Plant Breeder's Rights Australia

Further information

University of California - SAREP Online
Irrigated winter forages in Northern Victoria - Victoria DPI
Primefacts - NSW DPI

Acknowledgements

Departments of Agriculture, Seed companies

Author and date

KFM Reed, July 9th 2008