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

Tagasaste

Scientific name(s)

Chamaecytisus palmensis, Chamaecytisus proliferous, Cystisus proliferous

Strengths

- Evergreen fodder shrub for deep sands
- High stocking rates and meat production
- Autumn feed for maintenance
- Winter spring feed for animal production
- Prevents wind erosion

Limitations

- Requires mechanical cutting for sheep (and cattle depending on grazing management).
- Cannot be set-stocked by sheep.
- Permanent shrub that limits cropping when sown in plantations

Plant description

Plant: A tall (up to 5 m) perennial legume shrub with very deep root system (at least 10 m)

Stems: Can grow into a tree form if unmanaged, but is managed for a low shrub with multiple stem branching from just above the soil surface.

Leaves: Multiple narrow leaflets (5 to 30 mm) long, emerging from a common petiole.

Flowers: Small white pea flowers

Pods: Narrow pods with about 10 seeds per pod.

Seeds: Hard seeded

Pasture type and use

An evergreen legume fodder shrub used for year round grazing with cattle or autumn feed for sheep and cattle.

Where it grows

Rainfall

> 250 mm

Soils

Deep (> 1 m), well drained sands

Temperature

Young leaves are burnt by frost, but plants are adapted to a wide range of temperatures. Growth rates slow in winter due to cool temperatures

Establishment

Companion species

Annual pastures in inter-row

Sowing/planting rates as single species

Sown as plantations at 8 to 10 m spacing between rows. When planted as seedlings space plants 2 to 3 m apart within rows.

Sowing/planting rates in mixtures

'Alley farming' is where the inter row spacing is more than 15 m.

Sowing time

Sown in winter May to August.

Inoculation

Tagasaste special inoculum thought tagasaste is considered 'promiscuous' for rhizobium.

Fertiliser

25 kg/km of row of a Super:Potash mix (higher rates can kill seedlings)

Management

Maintenance fertliser

200 kg/ha/year superphosphate (9% P) for optimum animal production

Grazing/cutting

Seedlings are lightly grazed or cut in the first autumn to promote branching (remove no more than 1/3 of the leaf)
With sheep tagasaste is grazed at high stocking rates (e.g. 100 DSE/ha) for a maximum of 6 weeks in autumn to replace supplementary feeding. If only grazed once a year the tagasaste will require mechanical cutting (0.5 to 1.0 m height) in autumn. Tagasaste can not be set stocked with sheep.
Tagasaste can be set stocked or rotationally grazed with cattle at any time of the year. If the grazing pressure is adequate the tagasaste will not need mechanical cutting.

Seed production

Small number of professional seed producers (hand picking or vacuum harvesting)

Ability to spread

Limited, but occasionally seedlings will strike in the absence of grazing.

Weed potential

Low, though can establish in bushland

Major pests

Most insect pest in the seedling stage (first 9 months), occasional grass hopper damage in mature plants.
Rabbits will kill seedlings.

Major diseases

None

Herbicide susceptibility

Limited knowledge or requirement in paddocks

Animal production

Feeding value

Very high feed quality in winter and spring, but maintenance only in autumn. Crude Protein levels are at least 14% in autumn but animals respond to protein supplements at this time. In autumn high phenolic levels can inhibit rumen function and cause protein shortages.

Palatability

Good during winter and spring, but declines over summer and autumn. Leaves on stems that have flowered in spring will become unpalatable in the following summer (and the bark of those stems becomes palatable). Mechanical cutting / hard grazing in the first half of the year prevents flowering in the second half of the year.

Production potential

Has increased carrying capacity from 2 DSE/ha to 8 DSE/ha on infertile sands in WA.

Livestock disorders/toxicity

'Tagasaste staggers' can occur in winter and spring but animals recover quickly (< 30 minutes) and there is no permanent damage. Rare nervous problems with new born calves - a condition

which is not yet understood.
Pregnancy toxaemia in lactating ewes and calves in autumn due to tagasaste only supplying maintenance quality feed prior to the break of season.

Cultivars

Common tagasaste, Weeping tagasaste (seedlings only)

Further information

Wiley et al (1994). 'Tagasaste' Dept Agriculture WA, Bulletin 5291

Lefroy, Oldham & Costa (1996). Tagasaste Chamaecytisus proliferous' workshop proceedings, CRC for Legumes in Mediterranean Agriculture, Occasional Publication No 19.

Oldham et al (1988-94). 'Advances in research on Tagasaste (1 to 4) Martindale Research Project, Animal Science Group, School of Agriculture, University of Western Australia.

Acknowledgements

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Author and date

Tim Wiley

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