Bindaroo Button Medic

Medicago orbicularis

Species developed by DEEDI from a line originally collected in Libya.

Key features:

- early flowering, self-regenerating annual forage legume with distinctive flattened, buttonshaped pods
- Ideal legume to complement tropical grass based pastures.
- Producer of larger quantities of seed than barrel medics in dry and marginal environments.
- Well adapted to low rainfall and marginal environments
- Adapted to heavy and loamy textured alkaline soils in QLD and north-western NSW, and alkaline sandy and loamy soils in southern Australia
- Semi-prostrate in habit, and flowers and sets seed readily under grazing

High seed producer – grazing does not diminish its seed production, which can occur with other medic varieties.

Button medic will be useful when sown with other medics currently available to provide resilience in pastoral and crop/pasture systems.
Seed agronomy table

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<table>
<thead>
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<tbody>
<tr>
<td>Maturity</td>
<td>Early</td>
</tr>
<tr>
<td>Min Rainfall (mm)</td>
<td>300</td>
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<tr>
<td>Hard Seed Level</td>
<td>10</td>
</tr>
<tr>
<td>Seeding Rate Dryland</td>
<td>Kg/Ha</td>
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<td>3-4</td>
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Hard Seed Level 1 = Least Hard 10 = Most Hard

Blends using this Seed

Medic Haygraze LR Blend
Tropical Legume Oversow Blend
Medic Oversow Blend

Enterprises this seed is being used for

Sheep
Beef Cattle
Diary Cattle
Horse
Hay & Silage
Viti & Horti

Goldstrike<sup>®</sup> the premium seed treatment that assists with establishment vigour and plant development.

Establishment Guarantee<sup>®</sup> replacement of your crop if it fails to establish satisfactorily in the first thirty days.*

Strengths

• Early flowering and seeding and well adapted to marginal climatic conditions.
• High seed production.
• High levels of hard seed and a slow breakdown pattern ensure large seed reserves.
• Good nutritive value with high protein, palatable.
Limitations

- Productive in good seasons but not as productive as barrel and strand medics in average seasons.
- Regeneration not as reliable as other medics.
- Aphid susceptible.
- Seedling regeneration from the resilient seed reserve could pose a problem in crop rotations though readily removed by herbicide.

Plant Description

Plant: Prostrate with trailing runners.

Stems: Trailing up to 50 cm long.

Leaves: Trifoliolate; leaflets oval; leaflets 9-18 mm long, 6-14 mm wide, toothed almost to base, upper surface glabrous; lower surface glabrous or hairy.

Flowers: Inflorescences 1-5 mostly yellow, sometimes with mauve markings.

Pods: Pod light straw coloured, spineless, flattened with papery edges, 3.5-7 mm long, 13-17 mm diam, coils 3-7, seeds 10-26.

Seeds: Triangular to square in shape, flattened, yellowish brown.

Pasture type and use

A self regenerating winter growing annual ley legume in dryland cereal growing regions in the Upper Eyre Peninsula and Mallee of southern Australia and in pastoral systems in subtropical Australia. Used in marginal cropping and grazing environments owing to the resilience of the hard seed reserve.

Where it grows

Rainfall: Requires an annual rainfall of 200-650 mm/ann in southern Australia and 300-650 mm/ann in the sub tropics.

Soils: Adapted to a wide range of alkaline soils, from sands and loams (southern Australia) to loams and heavy textured soils (subtropics).

Temperature: Winter growing, can withstand frosts.

Establishment

Companion species: In the subtropics it may be sown with any of the adapted tropical and temperate grasses, other adapted medics (particularly early flowering barrel and spineless burr medics) and Desmanthus and Caatinga stylo; in southern Australia, it may be sown with early flowering cultivars of snail, strand medic, spineless burr medic and barrel medic.

Sowing/planting rates as single species: 2-3 kg/ha of scarified seed.

*ensure seed is Goldstrike treated.
Sowing/planting rates in mixtures: Sow at a rate depending on the proportion in the mix. *ensure seed is Goldstrike treated.

Sowing time: Early autumn to early winter.

Inoculation: GoldstrikeTreated.
The use of Goldstrike XLR8 seed treatment is recommended to reduce damage from insects at seedling stages.

Fertiliser: Phosphorous is generally the single most limiting macronutrient for medics; sulphur and/or potassium may be required on some soils (especially sandy loams and/or in the subtropics). Some soils, particularly infertile sands, may also be deficient in important trace elements (eg Cu, Zn, Mo and Co), some of which are directly involved in nitrogen fixation.

Management

Maintenance fertiliser: Ongoing applications of P and S as required. Soil tests will determine the need and appropriate rates.

Grazing/cutting: In the establishment year, delay grazing until plants are well established. Graze leniently until flowering then remove stock to maximise seed set. Makes more production when rotationally grazed. Does not respond well to crash grazing.

Ability to spread: Rate of spread slow but, because of its high hard seed levels, could be spread through livestock.

Weed potential: Low weed potential owing to slow hard seed breakdown pattern. It is palatable and readily eaten. In ley systems, it could be a weed of cereal and grain legume crops.

Major pests: Susceptible to red legged earth mite, blue-green aphid, spotted alfalfa aphid and Cow-Pea Aphid.

Major diseases: It is susceptible to powdery mildew.

Herbicide susceptibility: Susceptible to residual herbicides from a cropping phase, particularly sulfonylurea on alkaline, sandy soils.

Animal production

Feeding value: High levels of crude protein (17-22%), energy (8-10 MJ/kg ME) and digestibility (55-75% DMD) in leafy growth.

Palatability: Readily eaten by livestock. Anecdotal evidence is that pods are not readily sought by livestock.

Production potential: Button medic has a lower dry matter production potential than the barrel medics, but has produced 7 t/ha DM in a good season in the subtropics.

Livestock disorders/toxicity: Bloat can be an issue with cattle. Inoculate to prevent pulpy