

medic variety

SARDI



SOUTH AUSTRALIAN
RESEARCH AND
DEVELOPMENT
INSTITUTE

PASTURES
GROUP

MOGUL[®]

An excellent producer of herbage and seed on heavier soil types.

Good resistance to bluegreen (BGA) and spotted alfalfa aphid (SAA).

Prostrate and branched habit makes Mogul excellent for grazing and hay production.

Distinctive purple flecking on underside of leaf and anticlockwise coiling pods.



RAINFALL

Adapted to the >350mm rainfall regions of the cereal livestock zone.



SOIL TYPE

Specifically suited to the heavier textured (clays and loams) neutral to alkaline soils (>pH_(H₂O) 6.5) that are free from boron. Where boron toxicity is a problem Caliph and/or Paraggio are the preferred varieties.



MATURITY

Mogul is a mid-season variety which flowers about 105 days after an early May germination, making it slightly earlier than Paraggio, Jemalong and Jester.



REGENERATION

Hardseededness is between that of Paraggio and Jemalong. Mogul regenerates well in the year following seed-set and after a cropping break of up to three years, depending on soil seed reserves.



GRAZING

Mogul, like its parent line Borung, has a high leaf to stem ratio. Early growth is prostrate with a high degree of primary and secondary branching. Together these features make Mogul an excellent variety for both grazing and hay production.



PESTS & DISEASE RESISTANCE

- Mogul has good resistance to both spotted alfalfa (SAA) and bluegreen aphid (BGA) but will need protection from cowpea aphid (CPA) if present in large numbers.
- Like most other medics it is susceptible to redlegged earth mite, lucerne flea and sitona weevil.
- Mogul is generally free of foliar disease but may occasionally be affected by *Phoma* black stem fungus in under-grazed lush stands in wet seasons.
- Medics suffer from *Rhizoctonia* and are rated MS/MR for *Pratylenchus neglectus*.

Mogul[®] the aphid resistant mid-season medic for grazing and hay production on heavier soils - bred by SARDI

Pastures for stock, crop & country

Managing Mogul[®] for production and persistence

ESTABLISHMENT

Establishes well if sown dry (from mid April onwards) into cereal stubbles free of broadleaf weeds and with good weed control the previous year. Alternatively, sow into a fine, moist and weed free seedbed soon after the break of the season.

SEEDING RATE & SOWING

Sow at 4-10 kg/ha, depending on the situation. Higher seeding rates will improve competition with weeds and allow for earlier grazing in the first year. Sow Mogul at the lower rates if using in mixtures of varieties with different maturity, adaptation and hardseededness (*mixtures can help to overcome seasonal, soil and rotational variability*).

Aim for a sowing depth of 1-2cm and ensure good seed-soil contact by the use of press wheels or covering devices such as harrows or prickle chains.

INOCULATION

Inoculate seed with group **AM** rhizobium (**not** AL), unless the paddock has had a healthy stand of medic in the past two years. Inoculation is vital if the soil is under pH7_(H₂O). Good nodulation is essential to maximise nitrogen fixation for the benefit of the following crop.

NUTRITION

Good phosphorus (**P**) and zinc (**Zn**) nutrition is critical for maximum medic growth and nitrogen fixation. Recent experiments at 15 low rainfall alkaline sites in SA and Victoria have found that addition of P (31 kg P/ha) and Zn (6.3 kg Zn/ha) increased medic dry matter production by an average of 25% from 1640 kg/ha to 2040 kg/ha, (GRDC project UA345).

WEED CONTROL

Maximise seed-set in the establishment year by reducing weed competition as much as possible. Early removal of grasses with grass selective herbicides results in improved pasture growth and reduced carry-over of cereal root diseases (eg Take-all and CCN). Less selective means of weed control such as spray-grazing, winter-cleaning and spray-topping can be used to control weeds after the initial year, when medic density and soil seed reserves have built-up. Medics are very sensitive to sulphonylurea herbicide residues and attention must be paid to plant-back periods for these chemicals, especially in lower rainfall regions with alkaline soils.

PEST CONTROL

Monitor for redlegged earth mite and lucerne flea damage, both at the seedling and flowering stage, especially in the year of establishment. Spray as necessary.

GRAZING

establishment

Defer grazing after sowing until plants are well established and then only graze to promote prostrate growth until flowering. Remove stock until the stand has finished flowering and producing pods to maximise seed-set. Carefully monitor summer grazing, especially in the first year, as over-grazing of pods will reduce future pasture regeneration.

regeneration

Initially defer grazing at the break of the season to maximise plant establishment. Then apply grazing pressure to control upright grasses and encourage prostrate growth until ground cover is complete. Increase grazing pressure if necessary to prevent overly bulky pastures which are more susceptible to moisture stress and foliar fungal disease.

Ensure a good seed-set at least one year in four, to maintain adequate seed-soil reserves for maximum persistence, regeneration and production.

Available from your local farm store. For more information on other varieties and the SARDI Pastures Group visit www.sardi.sa.gov.au/pastures

Author: Jake Howie

ISBN 0 7308 5275 X - August 2002

BREEDING AND PLANT BREEDERS RIGHTS

MOGUL[®] was bred by the South Australian Research and Development Institute (SARDI) and was supported by growers through the GRDC.

MOGUL[®] is protected by Plant Breeder's Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the *Plant Breeder's Rights Act, 1994*.

Disclaimer

The recommendations given in this publication are based on the best available information at the time of writing. The South Australian Research and Development Institute (SARDI) makes no warranty of any kind (expressed or implied) concerning the technology presented in this publication. All liability or responsibility to any person using this information/advice is expressly disclaimed by SARDI, its employees and agents.

 **Grains Research & Development Corporation**

National Annual Pasture Legume Improvement Program (NAPLIP)



PRIMARY INDUSTRIES AND RESOURCES SA

Produced by AgriKnowHow. Design and layout by Lightning Designs.