Agnote

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Calopo

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INTRODUCTION

Calopo (*Calopogonium mucunoides*) is an annual pasture legume for the Top End of the Northern Territory. It was sown for a number of years in the late 1970s and early 1980s when there were few alternative legumes available to producers. Calopo has not been sown in recent years because there are better pasture legumes available, and seed has not been produced locally or interstate. It still persists in many of the areas where it was planted.

DESCRIPTION

Calopo is a vigorous annual twining legume with long stems which root at the nodes in contact with the soil or moist leaf litter. It is a good climber, growing up trees, shrubs and other vegetation.

The leaves have three leaflets (trifoliate). Leaflets are oval in shape, and up to 5 cm long. Stems and leaves are hairy. Flowers are small, and pale blue. Pods are 2.5-5 cm long, brown and hairy. Pods contain four to eight yellowish-brown seeds.

There are approximately 73,000 seeds per kilogram.

Calopo commences flowering each year in late April - early May and produces large quantities of seed. Flowering continues into the dry season until it runs out of soil moisture.

CLIMATE AND SOILS

Calopo is a native of tropical South America.

It will persist in areas receiving 1,300 mm or more of average annual rainfall. It is adapted to a wide range of soil types. Calopo is tolerant of water logging but not extended periods of flooding.

SOWING

Seed should be sown at 2-6 kg/ha depending on seedbed preparation and proposed end use. For best results, seed should be sown into a well-prepared seedbed.

Some soil disturbance, such as a rough cultivation is the minimum requirement to ensure establishment.

Inoculation to ensure nodulation is not necessary as calopo nodulates effectively with native soil rhizobia.

FERTILISER REQUIREMENTS

The type and rate of fertiliser to apply depends on soil type, but generally superphosphate at a rate of 100-250 kg/ha should be applied on virgin or previously unfertilised areas at sowing.

In subsequent years further fertiliser should be applied as maintenance dressings of 50-100 kg/ha of super per year.

Applications of potassium, molybdenum or zinc fertilisers may be necessary on some soils.

If you are unsure of the fertiliser requirements, check with a DBIRD Advisory Officer for advice before sowing.

YIELD

In pure swards under good growing conditions, calopo provides 4-10 tonnes of herbage.

Suction harvested seed yields of 500 kg/ha have been recorded.

GRAZING

Calopo is relatively unpalatable but stock gradually develop a taste for it. While young seedlings are palatable and can be killed by heavy grazing, it is generally only lightly grazed during the wet season. Calopo is well grazed only when it is maturing and drying out at the end of the wet season (April - June). During May/June it may constitute 50-60% of cattle diet. After June cattle again find calopo relatively unpalatable. Annual applications of superphosphate increase the palatability of calopo to livestock.

MIXTURES

Grasses with which calopo could be sown are Kazungula setaria, Guinea grass, pangola grass or Tully. It is difficult to maintain a calopo/grass sward because stock tend to graze the grass to the exclusion of the calopo during the wet season. Use of lower stocking rates will favour the grass.

HAY

For the best quality hay, cut early, at 10-20% flowering. Use a conditioner to reduce curing time and cart the bales away to storage before they are exposed to dew cycles or rain.

Stock generally do not immediately take to calopo hay, particularly if they have not previously been exposed to calopo.

The cause of this is not toxic factors or low digestibility, but factors such as smell, taste and hairiness which affect acceptability. An alkali treatment, a dressing of molasses or other additives may overcome this problem.

SMOTHERING

Calopo is an excellent pioneer/smothering legume. It will, over a number of years climb up, smother and choke out weeds. At the same time it fixes nitrogen, builds up soil nitrogen and soil organic matter. After a number of years, and following cultivation, a grain crop or a strong perennial grass which can utilise the fixed nitrogen should be sown.

Sowing calopo into an area after cultivation is a good long term low cost strategy to rejuvenate weedy areas and bring them back into production.

Calopo is not suitable as a cover crop in orchards because of its aggressive twining and climbing nature.

WARNING

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative materials are not inadvertently transferred to adjacent properties or road sides.

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