



Di Bella Produce and Farming

Ingham North QLD Australia

Seed sales- tech sheet

IN STOCK NOW!

Velvet bean

Velvet bean plants (*Mucuna pruriens*) are tropical legumes that are native to southern China and eastern India. The plants have spread throughout much of Asia and are often cultivated around the world, especially in Australia as a cover crop. The plant species was used by cane farmers in the 1950-60's as a cover crop but fell out of favour because cultivation equipment was not designed to handle the stubble and because of the limited use of herbicides used to terminate the plant.



Above: Velvet bean seed pod

Velvet bean is a little slow to establish, but it is very vigorous once established. The seed is large when compared to cowpea and soybean seeds.

The crop is well suited as a cover crop as a single species stand or in a mixed fallow cover crop, usually mixed with other species like lablab. Velvet bean is very vigorous and can smother less vigorous plant species in mixed cover crops.

In a crop rotation program, this legume can be included in crop rotations to build up soil nitrogen as well as to break weed and disease cycles. Velvet bean is known to control some parasitic nematode species in the soil. They are particularly useful for building up fertility in country that has been run down from overcropping. Velvet bean crops that are well nodulated, can fix between 50 to 200 kg nitrogen/ha into the soil.

Cultivar type

This Velvet bean cultivar has been selected because it is a late flowering type. Terminate cover crops once flowering is observed.



Above: Velvet bean seed.
Photo taken by Di Bella
Produce and Farming.

Sowing

Velvet bean can be sown into a well-prepared, fallowed seedbed that has a good depth of subsoil moisture (at least 75 cm) or direct drilled into existing cover. Seed should be sown at a depth of 1 to 5 cm into moist soil with good seed-soil contact.

Sowing time

Velvet bean planting should take place in spring and summer, after all chance of frost has passed and soil temperature is at least 18 C. Plant the seeds to a depth of 1-5 cm. Velvet bean plants naturally fix nitrogen in the soil, so they don't need any additional nitrogen fertilizer. They do respond well to phosphorus, however.

Sowing rate

Seedling rates for lablab should be between 10 to 20 kg/ha in cover crop situations.

Row spacings from 15 to 90 cm are suitable for Velvet bean when direct drilled. Velvet bean can be broadcast and incorporated into a prepared seed bed to achieve a similar affect.

Inoculation

Seed must be inoculated before sowing with a Group M or I inoculant.

It is advisable to inoculate only enough seed for each day's planting. Store inoculated seed under cool conditions out of sunlight.

Inoculation will ensure that the legumes nodulate efficiently to produce nitrogen.

Fertiliser

It is not recommended to apply nitrogen fertiliser because it will reduce nodulation and the fixing of atmospheric nitrogen.

Sugarcane fallow cover crops are usually not fertilised; however, some micro-nutrients listed below should be considered.

Location, soil type and history of fertiliser application will determine fertiliser needs. The main nutrients that should be considered when growing Velvet bean are phosphorus, potassium, cobalt, molybdenum, and zinc levels should be considered.

Consult your local agronomist for a specific nutrition program for cover crops.

Herbicides and weed control.

Weeds can become an issue with Velvet bean when establishing the crop or when plants are small.

Most summer grasses (such as Summer grass, and Liver seed grass) can be controlled with pre-emergent herbicides like Pendimethalin, Trifluralin. S-Metolachlor or Metolachlor can also be used to control some grass and broadleaf species.

Velvet bean is highly sensitive to the phenoxy herbicides such as 2,4-D, M.C.P.A., 2,4-D-B, Tordon-50-D® and dicamba. Do **not** apply these herbicides to or near these crops, as severe damage will occur.

Insect pests

Velvet bean crops are vulnerable to serious insect damage from sowing until about four weeks after seedling emergence. Establishing crops are sometimes damaged by cutworm, wireworm, and bean fly, or by cutworm, wireworm, and armyworm.

Consult your local agronomist for an integrated pest management options when controlling insect pests.

Nematodes

Velvet bean can significantly lower the level of some parasitic nematodes in soil, especially root rot nematode.

Warning

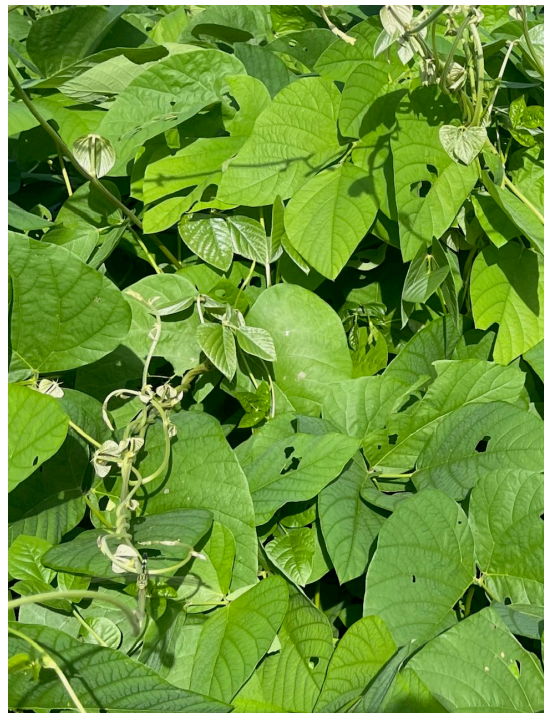
Velvet bean is slightly toxic, and it not recommended to be feed to livestock.

The beans are slightly toxic to humans; however, I find that when cooked green in the pods in briny water the flavor is delicious – a lot like boiled green peanuts. They're a natural testosterone booster as well as a mood lifted thanks to their dopamine precursors.

Pregnant female humans should not consume Velvet bean, especially seeds because high testosterone levels that maybe present.

It is not recommended to plant Velvet beans as cover crops in tree cropping situations because the plant can become a significant weed and climb onto trees.

Terminate cover crops of Velvet bean before they seed, to avoid infestations in other crops. As a cover crop, Velvet bean can be terminated 90 days after planting, as flowers begin to form. Seed production requires about 120 days to maturity.



Above: Velvet bean has a large leaf size and twinning habit when compared to other legume crops. Photo by Di Bella Produce and Farming at Ingham, North Queensland.

Suitability in a mixed species cover crop.

Velvet bean is not an ideal in a mixed cover crop because it can suppress all other plant species, maybe except lablab or sorghums.

Positives for Velvet bean:

- Easy to establish.
- Can provide good cover to prevent soil erosion.
- Suppresses weeds.
- Captures nitrogen in its nodules.
- Forages for residual nutrients in the soil and stores it in plant tissue.
- Has a high biomass.
- Can be planted using a spreader or precision planter with a large plate size.



Above: Nodules on a Velvet bean plant. Photo taken by Di Bella Produce and Farming, Ingham, North Queensland.

Purchasing seed to plant.

Contact:



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