

CROP SHEET

Mucuna



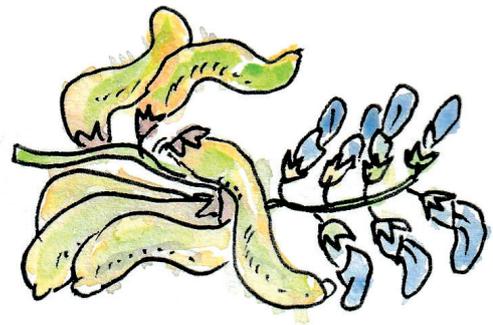
Photo credit: Dinesh Valke

Alternative names: Velvet bean, lacuna bean

What is it?

Mucuna is a fast-growing, short-lived vine from China and India that is now grown across the Pacific. It is used as a vegetable crop, as food for animals, and as a cover crop that protects soil and replaces nitrogen in the soil. Its beans are sometimes used in traditional medicines.

The plant is a fast-growing vine that can grow over the ground as cover, on a trellis, or up the stalks of corn or maize or similar plants if it is being used as an intercrop plant. It has white and purple flowers, and its flowers develop into white and purple bean pods.



Mucuna thrives in soil with a lot of moisture and a good mix of nutrients. It grows well in rotation with taro. It fixes nitrogen in the soil (taken from the air), replacing nitrogen used by heavy feeding crops. It can be used as a green mulch to retain soil moisture but is often grown during the wet season to restrict topsoil movement. Although it also provides feed for livestock, its main use in Pacific agriculture is as a cover to regulate soil moisture and suppress weeds, and for its ability to fix nitrogen.

FEATURES

- fast-growing, short-lived annual vine
- likes full sun, though seedlings may need protection from hot sun in the first weeks after planting
- puts nitrogen back into the soil, as well as carbon
- helps plants take in phosphorous
- highly resistant to pests, suitable as intercrop, can reduce parasites on companion plants
- likes wet soil, can be used as fallow cover crop after taro

Some varieties can cause irritation to skin. You can check with Ministry of Agriculture and Livestock staff to ensure you have a safe variety.

What can it be used for?

Mucuna can be used as a cover crop or intercrop, to add nitrogen to the soil. It also adds carbon biomass to the soil when used as green mulch. The plants can be cut and left to decompose in the field.

It can be used as food for livestock, and for humans. Animals can eat beans and foliage, or the beans and pods can be crushed for feed. Mucuna can be used for hay or silage, but it works better as a pasture feed. Beans can be boiled and made into a paste for human consumption.

Used as a ground cover, mucuna can prevent moisture loss during the dry season. It can be used to help retain topsoil during the wet season when there is a risk of high water runoff and flooding. Mucuna likes wet soil, so is useful in rotation with taro.

As a fast-growing, rambling ground cover, it can quickly smother weeds and is good for reclaiming sections of land that have been overtaken by weeds.

Mucuna can be grown in restricted areas by running over a trellis, or it can be grown up the stalks of corn or maize, fixing nitrogen for these crops at the same time.

As a companion plant, there is evidence it reduces rhizome parasites, and it is highly resistant to pests.

How can I grow it?

Mucuna plants should be grown in compost-rich soil. Compost can be dug into soil before planting.

Seeds (beans) should be planted 1 metre apart, 2cm deep.

Seedlings can be left to spread across ground, to grow on other crops or trees, or a trellis can be used. Take care not to disturb young roots when digging a trellis into the ground.

Saturate soil when planting. Mulch can be used to regulate soil moisture.

Seedlings should be sheltered from very hot sun for 2 weeks. Vines will seek out sun as they grow.

