



What are the benefits?

- Research results have recorded more than 100% increase in crop yields compared to farmers' practice.
- *Mucuna* suppresses growth of weeds (has allelopathic activity), and farmers in western Kenya are using it to control striga (*Striga hermonthica*) weed.
- *Mucuna* forms a thick cover on the soil, thus effectively controlling soil erosion.

A word of caution

Do not eat *Mucuna* beans, as they contain a poisonous chemical. Research is going on to investigate how this chemical can be eliminated or broken down.

To ensure that you have enough seed at the beginning of the season, plant small plots of *Mucuna* for seed production. Seeds will be mature from 5 to 6 months.

Cover photos:

Top: *Mucuna* relayed in maize method

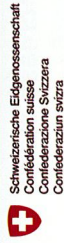
Bottom: *Mucuna* biomass after harvesting maize

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Partners



Mucuna pruriens green manure

A pamphlet for use by extension personnel and farmers in Kenya

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Importance of using *Mucuna pruriens*

Low soil fertility, especially low nitrogen, is the major cause of poor crop yields in smallholder farms. Farmers lack the financial resources to buy inorganic fertilisers to replenish the nitrogen. *Mucuna* (velvet bean) is a legume cover crop that fixes nitrogen from the air through the root nodules. It grows fast, accumulating leafy material that is rich in nitrogen (3.5% N). When cut and incorporated into the soil, the leafy material decomposes rapidly, releasing its nitrogen into the soil for use by crops. It is, therefore, a good green manure.



Mucuna root nodules that fix nitrogen

How to grow *Mucuna*

Mucuna is propagated through seeds. The seeds of *Mucuna* are big, and cream or black in colour.



Mucuna bean

How to use *Mucuna* to increase maize yields (slash/mulch method)

- *Mucuna* could be grown in rotation with maize.
- Plant *Mucuna* at a spacing of 30 by 60 cm at the beginning of the rainy season and allow it to grow for 6 months. By this time it will have accumulated a large amount of biomass and produced pods. When mature, pods should be harvested for seed.
- Harvest *Mucuna* by cutting at the base at least one week before the rains.
- Chop up the *Mucuna* biomass and spread it evenly on the land where it was growing.
- Incorporate into the soil by digging it in using a hoe.

How to incorporate *Mucuna* green manure into the soil



1. Chop up the *Mucuna* biomass



2. Spread the chopped up *Mucuna*



3. Incorporate the *Mucuna* into the soil