MucunaSeed: Mucuna cover-crop seed multiplication and supply system

Reliable Mucuna seed for healthier, resilient and more productive farms!



MucunaSeed provides governments with a practical approach to expanding access to Mucuna seed for soil restoration and sustainable management of perennial farming systems. By supporting local seed multiplication and distribution, the system can help farmers adopt Mucuna to control erosion, suppress weeds, conserve soil moisture, and improve soil health. Its decentralized model can support wider adoption of Mucuna cover cropping while strengthening sustainable land management and the productivity of perennial farming systems.

Alliance Bioversity-CIAT
Ocimati Walter

This technology is pre-validated.

8·8 Scaling readiness: idea maturity 8/9; level of use8/9

Inclusion assessment 12 12 12

Climate impact 7

Problem

- Limited seed supply constrains large-scale adoption of Mucuna cover crops.
- Soil degradation, erosion, and declining fertility reduce land productivity.
- High weed pressure, poor moisture retention, and soil heat constrain crop production.

Solution

- Local seed multiplication expands access to viable Mucuna seed.
- Mucuna ground cover helps control erosion and support soil restoration.
- Dense Mucuna growth suppresses weeds and reduces labour requirements.
- Soil cover and biomass help conserve moisture and moderate soil temperature.
- Nitrogen fixation and biomass support soil fertility and nutrient recycling.
- Farmer-led seed multiplication strengthens local seed supply and supports wider scaling.

Key points to design your project

MucunaSeed can support government programmes focused on soil restoration, sustainable land management, and improved productivity of perennial farming systems. Its local seed multiplication model helps overcome seed-access constraints and supports continued farmer adoption. Successful implementation should:

- Target smallholder farmers and degraded perennial farming areas.
- Ensure access to viable Mucuna seed and local seed multiplication.
- Support training, demonstrations, and extension services.
- Strengthen partnerships with research institutions, cooperatives, farmer organizations, and seed multipliers.
- Monitor adoption, area covered, seed production, and farmer-led seed distribution to sustain scaling.

47.20 USD/farmer	1 USD/kg	8–10 Months	16.2 Tonnes	IP
	Mucuna seed price in eastern DR Congo	Period from planting to seed harvest		Open source / open access

Commodities

Bananas & plantains, Coffee, Cacao, Maize, Cassava

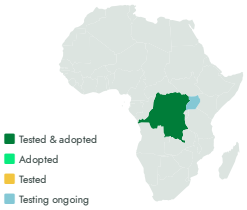
Sustainable Development Goals



Categories

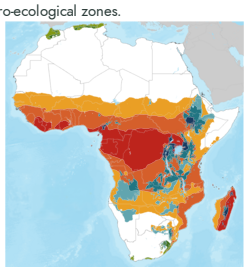
Production, Practices, Water management, Weed management, + 0 more

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Development institutions, Farmers, Governments, Seed companies, Sellers, Researcher center, + 4 more

Estimated cost to deliver support to one farmer	Mucuna seed produced by adopters in eastern DR Congo

See details ›