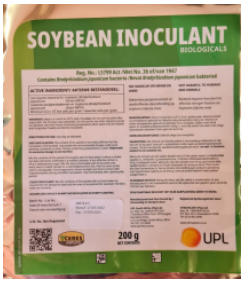
Soybean inoculant: Rhyzobium inoculant range, various strains

N-fixing bacteria to reduce chemical fertilizer use

Stimuplant is a specialized range of inoculants designed for various legume crops. It capitalizes on a unique symbiotic relationship between the legume plants and a beneficial bacterium known as Rhizobia. This natural partnership results in the addition of significant nitrogen levels to the soil, ranging from 40 to 150 kg per hectare.



UPL
Florent Clair

This technology is validated.

9·9 Scaling readiness: idea maturity 9/9; level of use9/9

Inclusion assessment 5

Climate impact 7

Problem

- Nitrogen limitation hampers plant growth, particularly affecting legume crops.
- Soil degradation arises from excessive reliance on chemical fertilizers.
- These factors culminate in economic hardships and food insecurity among farmers.

Solution

- UPL Powder Carrier Technology shields bacteria from harsh environmental conditions like high temperatures and pH fluctuations.
- It holds the CERES organic certification, meeting stringent organic standards.
- Tailored packaging suits the needs of smallholder farmers, enhancing accessibility.
- The powder formulation extends shelf life to 9 months, reducing wastage and improving efficiency.

Key points to design your program

Stimuplant improves legume productivity through biological nitrogen fixation, enabling soybean, common bean, cowpea, and groundnut to naturally fix 40–150 kg of nitrogen per hectare. By reducing dependence on synthetic fertilizers, lowering production costs, and restoring soil fertility, the technology supports regenerative agriculture, climate-smart agriculture, sustainable soil management, and legume value chain programmes. It contributes to SDGs 2 (Zero Hunger), 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land), while providing an affordable and environmentally sustainable solution for smallholder farmers.

To successfully integrate this technology, consider the following key actions :

- Identify legume production areas where high fertilizer costs and declining soil fertility constrain productivity.
- Establish partnerships with research institutions, certified inoculant suppliers, agrodealers, and extension services to strengthen access to quality Rhizobium inoculants.
- Strengthen farmer capacity on seed inoculation, proper handling, storage, integrated soil fertility management, and effective application practices while improving access to certified biological inputs.
- Monitor improvements in nitrogen fixation, legume productivity, fertilizer savings, soil fertility, technology adoption, and programme outcomes.

IP

Open source / open access

Commodities

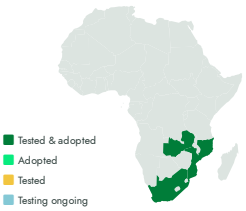
Soybean, Groundnut, Cowpea, Common bean

Sustainable Development Goals

Categories

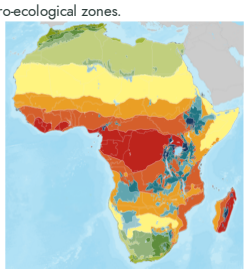
Production, Inputs, Inoculant

Tested/adopted in



Where it can be used

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



Target groups

Farmers