

Crop Sprayer App: Dosage calculator for plant protection products

Optimizing Pesticide Application for Sustainable Agriculture



The Crop Sprayer App enables users to determine accurate pesticide dosages by considering factors such as sprayer tank size, sprayer output, and application area. It calculates the amount of pesticide concentrate needed per tank and the total quantity for the entire spraying operation. The app operates offline after initial download, ensuring accessibility in remote areas.

This technology is **pre-validated**. 9·7 Scaling readiness: idea maturity 9/9; level of use 7/9

Gender assessment 3

Climate impact 2

Problem

- Food Security Challenges:** Up to 40% of crops are lost to pests and diseases, directly impacting the food security of vulnerable communities and hindering sustainable development efforts.
- Inefficient Pesticide Use:** Research indicates that up to 75% of pesticide applications are misapplied or overused. This inefficiency increases production costs, contributes to environmental degradation, and jeopardizes community health.
- Barriers to Sustainable Farming:** The lack of precise pesticide application tools prevents smallholder farmers from adopting efficient, sustainable practices, undermining efforts to improve livelihoods and promote long-term agricultural resilience.


Solution

- Strengthen food security and community resilience with sustainable pesticide practices.
- Empower smallholder farmers through capacity building and efficient resource use.
- Leverage data for targeted, impactful interventions in agricultural development.

Key points to design your program

- Support Smallholder Farmers:** Introduce the Crop Sprayer App to improve pesticide application accuracy, boosting crop yields and farmer incomes.
- Facilitate Capacity Building:** Provide training on the app's use, empowering communities with knowledge for sustainable pest management.
- Monitor and Evaluate Impact:** Utilize data from the app to assess intervention effectiveness, informing future agricultural development strategies.

0 USD
Crop sprayer App

 **IP**
Open source / open access

CABI PlantwisePlus
Claire Palmer

Commodities
All Crops

Sustainable Development Goals

2 ZERO HUNGER



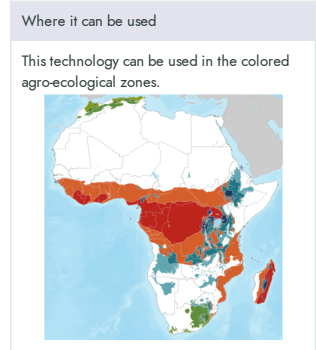
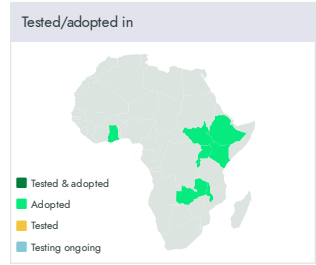
8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Categories
Production, Digital applications, Advisory and information service, Pest control



Target groups
Farmers, Sellers, Advisory and Extension Services

