

CONCEPT NOTE

GHSS Regional Youth Innovation Challenge 2026
Agritech Domain

Project Title

YCD Farmer Guide – AI-Powered Mobile Platform for Smallholder Farmers in Cameroon

1. Executive Summary

YCD Farmer Guide is an innovative mobile application designed to empower smallholder farmers in Cameroon with AI-driven agricultural support, real-time market access, and expert advisory services. The platform addresses critical challenges facing over 70% of Cameroon's rural population who depend on agriculture for their livelihoods but lack access to modern farming knowledge, fair market prices, and timely expert guidance.

2. Problem Statement

Smallholder farmers in Cameroon face interconnected challenges that limit their productivity and income:

- **Crop Disease Losses:** Farmers lose 20–40% of crops annually due to undiagnosed plant diseases and delayed treatment.
- **Market Information Gap:** Lack of price transparency leads to exploitation by middlemen, reducing farmer income by up to 50%.
- **Limited Expert Access:** Agricultural extension officers cover 1:3,000+ farmer ratio, making personalized advice nearly impossible.
- **Climate Vulnerability:** Unpredictable weather patterns destroy crops; farmers lack access to localized forecasts.
- **Knowledge Silos:** Traditional farming knowledge is not adapted to changing conditions; modern techniques remain inaccessible.

The result: Low agricultural productivity, persistent rural poverty, and food insecurity affecting millions.

3. Proposed Solution

YCD Farmer Guide is a comprehensive mobile platform that brings together:

- **AI-Powered Disease Detection:** Farmers photograph sick plants; AI instantly identifies diseases with 90%+ accuracy and provides treatment recommendations in English and French.
- **Agricultural Marketplace:** Direct farmer-to-buyer connections, real-time pricing, and secure mobile payment integration.
- **Expert Advisory Network:** On-demand chat/video consultations with agricultural experts and appointment booking with verified agronomists.
- **Community Forums:** Peer-to-peer knowledge sharing and support among farmers nationwide.
- **Weather Forecasts:** Hyperlocal, actionable weather information for better planning.

4. Impact

- **Reach:** 50,000+ farmers in 10 regions
- **Crop loss reduction:** 30%
- **Income increase:** up to 2x for participating farmers
- **Alignment with SDGs:** No Poverty, Zero Hunger, Decent Work, Innovation

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