GrainMate: Grain Moisture Meter

Control the moisture content of grains and reduce post-harvest losses.

The Grain Moisture Meter helps African farmers prevent mold and post-harvest losses. Ministries of Agriculture, extension services, and food safety agencies use it to ensure quality control, improve storage, and enforce market standards. It supports fair trade, enhances food security, and boosts market value at both farmer and national levels.

Sesi Technologies Limited
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This technology is pre-validated.

8·7 Scaling readiness: idea maturity 8/9; level of use7/9

Inclusion assessment 4

Climate impact 4

Problem

- **Grain Losses:** FAO reports 10–20% of grain is lost in Sub-Saharan Africa due to poor post-harvest handling.
- **Unreliable Methods:** Farmers use biting or tossing grains, which are inaccurate.
- **Lack of Moisture Meters:** Many farmers can't afford or find reliable grain moisture meters.
- **Mold Risk:** Grains above 13.5% moisture quickly develop mold.
- **Poultry Impact:** High-moisture grains reduce egg production and increase bird disease and deaths.

Solution

- **Eliminates Guesswork:** The meter replaces unreliable methods, enabling informed storage decisions.
- **Improves Accessibility:** Affordable and easy to use, priced at $60, it's accessible to many farmers.
- **Reduces Grain Losses:** It helps farmers measure moisture accurately, preventing post-harvest losses and ensuring food security.
- **Supports National Planning:** Reliable data aids governments in monitoring grain quality, predicting risks, and shaping food security policies.

Key points to design your program

GrainMate Grain Moisture Meter can be integrated into post-harvest management, grain value chain development, food safety, and food security programs to improve grain quality, reduce post-harvest losses, and promote safer grain storage through accurate moisture measurement. Its adoption contributes to **SDGs 2, 3, and 8.** To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- **Facilitate access** to GrainMate moisture meters and support their procurement, distribution, and maintenance.
- **Establish partnerships** with **SESI**, ministries of agriculture, extension services, grain traders, warehouse operators, processors, and other grain value chain stakeholders to support technology deployment.
- **Conduct** training on grain moisture testing, drying, and storage practices, and **monitor** technology adoption, grain quality, post-harvest losses, and compliance with recommended moisture standards.

Commodities

Maize, Sorghum/Millet, Soybean, Wheat, Groundnut

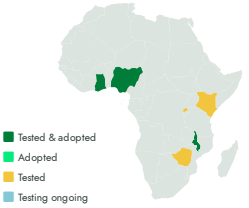
Sustainable Development Goals

2 ZERO HUNGER · 3 GOOD HEALTH AND WELL-BEING · 8 DECENT WORK AND ECONOMIC GROWTH

Categories

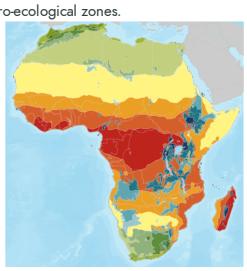
Postharvest, Equipment, Post-harvest handling

Tested/adopted in



Where it can be used

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



Target groups

Farmers, Processors, Warehouse Operators, Advisory and Extension Services