

# CABI Fertilizer Optimization Tool

## 🔍 Background

In sub-Saharan Africa an estimated 180 million people are affected by land degradation. Prime reasons for poor food production include long-term overuse of soil, and low or unpredictable rainfall. The CABI Fertilizer Optimizer Tool (FOT) is a decision support tool that enables farmers to maximize net returns when choosing fertilizer, while reducing risks associated with conventional fertilizer recommendations.

## 🔗 Approach

The CABI Fertilizer Optimizer app is designed to help resource-constrained farmers to maximise the return on investment when choosing fertilizer, based on what they can realistically afford. This includes the integrated soil fertility management (ISFM) feature, which helps determine where crop-nutrient combinations will generate optimal results, and a calibration tool which helps farmers apply the right quantity of fertilizer to their crops. Access to the latest soil and agronomic data ensures that farmers are being provided the best information possible.

## ✅ Results

Improvements in soil and agronomic data sharing across Africa, have empowered over 3,000 extension workers to use the FOTs to advise farmers how to maximise their profits when selecting fertilisers. In Uganda, this data-driven tool has increased yields for some farmers by 700%.



**Improvements in soil and agronomic data**



**Increased yields for some farmers by 700%.**

## Organisations

Centre for Agriculture and Bioscience International (CABI)



## Region

Uganda



## Further reading

- CABI (2019), "Fertilizer Optimization Tool to increase farmers' yields highlighted at CODATA 2019 Conference", <https://www.cabi.org/news-article/fertilizer-optimization-tool-to-increase-farmers-yields-highlighted-at-codata-2019-conference/>
- CABI (2019), "Designing User-Centered Decision Support Tools for Agriculture", <https://www.scribd.com/presentation/427206950/Designing-User-Centered-Decision-Support-Tools-for-Agriculture>