Low-cost Handheld Plant Health Monitoring Device for Resource Limited Regions

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Vision
- Low-cost plant health monitoring
- Management of nutrients and irrigation
- Disease detection and forecasting

Aims and Objectives
- To detect the chlorophyll content of the leaves
- To diagnose the disease(s) of rice plant
- Creating high-dimensional GIS database using mobile phone network.

Field testing and experimental plan
- **Phase I**
  - Initial testing and validation in agricultural field of Dept. of AgFE, IIT Kharagpur (*underway*)
  - For validation, data collection and observation in a 2nd rice season
- **Phase II**
  - Wider testing with up to 200 farmers with help of NGOs.
  - Based on Phase I success, an extended grant application will be submitted.

Collaborations
- Collaboration with EE and E&ECE departments at IIT Kharagpur (Student project/internship offered)
- Collaboration with NGOs
- Collaboration with Government organizations and departments.

Multispectral imaging using mobile microscope

Segmented lesion

Laboratory testing

Reporting on mobile app