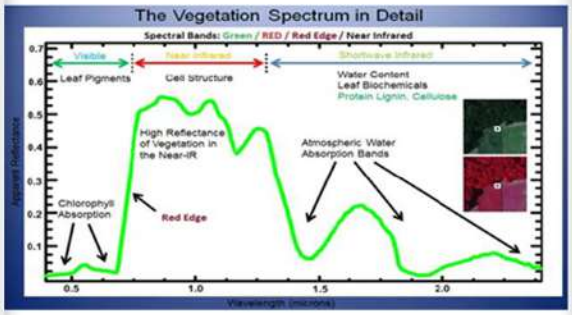
IITI DRISHTI CPS FOUNDATION
IIT INDORE

TECHNOLOGY DEVELOPMENT PROGRAM

AGRITECH



Agricultural Precision

Hyperspectral Image analysis and Machine learning for germ detection and precision agricultural

Issue Being Addressed

- Identifying crop disease is done by the experts through their naked eyes
- Lack of experts for disease detection, making it a tedious and time taking process
- Pests and illnesses have historically been a major stumbling block to increasing grain output, resulting in significant economic losses for agriculture

Key Feature of The Technology/Product /App Which Is Being Developed

- The multispectral imaging technique used for plant physiology as greatly relates to its ability to reflect certain wavelengths
- The NDVI Index would be used as the metric for detection

Impact & Benefit

- Real-time data and information on soil/crop health enable farmers to take early corrective actions
- Provide opportunities to enhance productivity and reduce potential losses
- Identifying crop stress in early stages reduces the use of resources, e.g., it eliminates the need for massive widespread applications of chemicals to treat pests and diseases, which, consequently, reduces environmental impacts

Team

- PI:Dr. Pawan Kamalkishor Ajmera
  Assistant Professor
- Co-PI: Hitesh Datt Mathur
  Professor

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Targeted Customers & End Users

- National Commodities Management Services Limited (NCML)
- Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan
- Maharawada Krushi Vidyapeeth, Parbhani, Maharashtra
- Various Krishi Vigyan Kendra across Rajasthan

Commercialization Status

- Prototype is developed and tested for rice

SHORT TERM PROJECT SCHEME