

PPeDMaS: Precision Pest and Disease Management System based on Multidimensional Big Data

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Objectives

- 1 Develop a database of pests and diseases of maize, tomato, and onion in Burkina Faso using data mining, farmer-oriented crowdsourcing, and multispectral UAV aerial photography.
- 2 Determine the set of biotic stress indicators/indices for the detecting impacts of common pests and diseases on maize, tomato, and onion farms.
- 3 Determine the key influencing bioclimatic and environmental factors of pest and disease outbreaks on maize, tomato, and onion farms.
- 4 Develop an early warning system for pest and disease outbreaks on maize, tomato, and onion farms.
- 5 Develop an expert- and AI-based advisory system to prevent and control pest and disease outbreaks on maize, tomato, and onion farms.