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.

Determine the set of biotic stress indicators/indices for the detecting impacts of common pests and diseases on maize, tomato, and onion farms.

Determine the key influencing bioclimatic and environmental factors of pest and disease outbreaks on maize, tomato, and onion farms.

Develop an early warning system for pest and disease outbreaks on maize, tomato, and onion farms.

Develop an expert- and AI-based advisory system to prevent and control pest and disease outbreaks on maize, tomato, and onion farms.