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ICBA launches AI-powered mobile app for crop disorders detection

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A new AI-powered mobile application for crop disorders detection was launched by Mariam bint Mohammed Almheiri, Minister of Climate Change and Environment of the UAE.

The application is a result of collaboration between the International Centre for Biosaline Agriculture (ICBA) and the University of Barcelona, Spain, under a project titled â??Developing a user-friendly mobile application for smallholder farmers to detect plant disordersâ??.

The application has been created with the support of local partners in Egypt, Tunisia, and the UAE, the application is designed to aid smallholder farmers and extension specialists in spotting crop disorders at early stages and thus minimizing yield losses and improving incomes. It can identify 18 different common disorders affecting tomatoes, capsicum, and cucumber. These cash crops are considered important for smallholder farmers who practice protected agriculture.

Mariam bint Mohammed Almheiri, Minister of Climate Change and Environment of the UAE, said, â??This app is a prime example of how we can harness the power of technology to address pressing concerns. In the face of ever-rising challenges, with climate change at the forefront, we believe that technological interventions will optimize agricultural practices, enhance harvest quality and quantity, and notably improve the lives of farmers. We are confident the app will prove to be a game changer for smallholder farmers, providing them with early diagnosis at the click of a button and helping them save their crops.â?•

Dr. Tarifa Alzaabi, Director General of ICBA, said: â??Smallholder farmers are on the frontlines of food security. They are the backbone of many agricultural economies, yet they often lack access to information about pests and diseases. We have developed this mobile application to help bridge this gap and put knowledge in their hands.â?

As part of the project, ICBA collected raw data from the three countries for training the AI model which was developed by the University of Barcelona. The application was field-tested, and 414 smallholder farmers and extension specialists were trained and provided their feedback on the beta version from 2020 to 2022.

Currently, the application is customized for Egypt, Tunisia, and the UAE. But there are plans to upgrade and roll out the application in other countries in the future.