

Category	: International Rice Research Conference
Select Theme	: Disruptive technologies and innovations
Endorsement email	:
Keyword 1	: Artificial intelligence/computer learning
Keyword 2	: Mobile advisory technology
Keyword 3	:
Title of Entry	: An android mobile application to detect rice diseases in field and support smallholder farmers
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Select only one type of presentation	: 15 minute oral presentation

Abstract : Every year farmers face economic hardships due to reduction in their yields because of pests and diseases. Agricultural extension workers are the primary contacts at field level with farmers when it comes to advisory on crop production practices including plant protection. Farmers rely on traders for advice on plant protection measures due to unavailability of timely extension services. An innovative app Plantix was developed by Progressive Environment Agricultural Technologies (PEAT), a German agri-tech startup that can help to bring timely and tailor made advice to farmers. Plantix is an android mobile app that uses artificial intelligence to identify plant diseases when the user uploads an image of damage symptoms through their smart phone. Plantix also provides advisory on disease management including biological and chemical control measures. PEAT customized Plantix for Indian major crops like Rice along with its on-site partner International Crops Research Institute for Semi-Arid Tropics (ICRISAT) and the state agricultural universities. Plantix has been translated to local Indian languages Telugu and Hindi. Currently, Plantix can identify over 200 crop pest and diseases in over 30 crops. Realizing the importance of rice as the most important crop that feeds two-third of world population, Plantix focused on rice and maintains a database of over 2,00,000 images covering twenty eight pests, nineteen diseases, fifteen nutrient deficiencies in rice. Now Plantix can consistently identify major pests like brown plant hopper, green horned caterpillar, yellow stem borer, Rice leaf roller, rice Grasshopper, rice hispa and diseases like bacterial leaf blight, sheath rot of rice, blast of rice, rice sheath blight, brown spot of rice, false smut, leaf scald of rice. Images are geo and time-tagged making it possible to monitor pests and diseases real-time through a decision support system that is web based. Plantix app is being downloaded by over 2 million in India and helps agricultural extension workers and smallholder farmers with timely advisory on plant protection and management.

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