

ICT Enabled Solution through Kiosk for Rural Farmers in Sri Lanka

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Abstract: This paper investigates the effective use of ICT models to facilitate the transferring of knowledge to farmers in order to solve their problems in the Agricultural sector in Sri Lankan context. Farmers in rural areas are faced with the difficulties in consulting agricultural specialists, to solve their problems including pests and disease identification as agricultural specialists are less in numbers. There has been some initiatives to address this problem through ICT based models, however, as due to poor IT literacy and less access to IT infrastructure farmers have not been able to reap the benefits of these systems. This paper proposes an ICT based model to deliver information through kiosks established in a public place where all farmers can be able to access. The pilot prototype is developed using icon-based interactive interfaces and simple set of functionalities, mainly targeting computer illiterate farmers. The content will be delivered in farmer's local language. Our proposed solution is mainly focused on pest and disease identification and suggests remedies to treat them by providing appropriate web based solution using rule based expert system. JESS expert system shell is used to build the system and inference the knowledge using backward chaining. The inference engine selects the appropriate rules from knowledge base and use facts to retrieve the queries from database to display localized text to user. The expert system diagnoses diseases on the basis of responses of user made against queries related to particular disease symptoms which are triggered from rules in the knowledge base. The evaluation reveals that 80% of farmers are satisfied with this solution and findings appear to be promising.