Abstract

Fake (Counterfeit) agro-inputs are causing myriad challenges to agricultural sectors in the developing countries by affecting the productivity rate. This paper analyzes the magnitude of the counterfeit agro-inputs and propose a system that integrates a mobile-based solution that helps the authentication of the agro-inputs products in Tanzania. A face to face interview with key informants in the agriculture sector and field data collection in one region were carried to understand the challenges in preventing the fake agro-inputs and awareness among stakeholders. The study has revealed that there is no trustworthy methods of verifying agro-inputs, the current methods such as expiration date and labels are weak and can be forged easily. The magnitude of counterfeit agro-inputs is rated by the respondents to be high. Crop seeds were found to be mostly counterfeited among other agro-inputs such as fertilizers, animal feeds and pesticides. The proposed system allows the stakeholders to authenticate the genuineness of the agricultural inputs through their mobile phones. This will tremendously boost confidence to farmers and greatly increase yields by buying hybrid seeds instead of replanting their own seeds. The evaluation study shows that the Agro-inputs Products Verification System (APVS) is feasible in Tanzanian settings and can significantly reduce the magnitude of counterfeit in agro-inputs products.
References

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**Index Terms**

Computer Science  
Security

**Keywords**

Mobile phones; Counterfeit agro-inputs; Agro-ICT;