

Dissemination of Good Agricultural Practices (GAPS) through “Govi Nena” Mobile Application

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Abstract

Agriculture is the mainstay of Sri Lanka's economy. However, inadequate farming methods from production to the post-harvest stage adversely influence the safety and quality of agriculture in Sri Lanka. Hence, this study intends to disseminate Good Agricultural Practices (GAPs) through the “Govi Nena” mobile-based certification model as a sound solution to overcome these challenges in this technologically advanced era. Potato crop was selected as the first test crop and primary data were collected using pre-tested structured questionnaires and discussions from 225 potato farmers by random sampling technique and the model was developed using the Design Science Research methodology. The survey findings indicate that the majority of potato farmers, encompassing 90% of the respondents, rigorously adhere to proper agricultural practices such as soil conservation, crop rotation, cropping methods, and land preparation. Nonetheless, challenges persist, including the excessive use of inorganic chemicals and fertilizers, inadequate soil fertility management, subpar Integrated Pest Management (IPM) implementation, and unsatisfactory post-harvest handling practices. In response, a certification model which covers all necessary information for pest and disease management was developed. It was noted that several factors significantly influence the development of the certification model, including farmers' experience ($p=0.000$), age ($p=0.000$), education level ($p=0.014$), awareness of GAPs, the willingness to acquire knowledge about GAPs ($p=0.000$), and the eagerness to implement GAPs through a mobile-based application ($p=0.000$). This application is designed to provide actionable information and guidance on GAPs, offering a promising solution to mitigate improper farming practices in Sri Lanka by disseminating knowledge and guidance effectively.

Keywords: *Certification Model, Design Science Research Methodology, Good Agricultural Practices, Govi-Nena, Integrated Pest Management*