

Identification of the Potential to Introduce Mobile Based-Demand and Supply Forecasting System for Potato Farmers: A Case in Nuwara Eliya District

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In Sri Lanka, potato farmers commonly face uncertainties regarding supply and demand. Therefore, most of the farmers used to take their decisions based on the rough measurements, or informal/formal recommendations. This leads to occur over-supply resulting food wastage and price dropdown. To overcome this situation, this study was conducted to identify the potential on providing future demand and supply information through mobile-based information system in planning stage. This research study was conducted in Nuwara Eliya district by selecting 50 potato farmers using Snowballed sampling method. Then, selected farmers' willingness was captured by using pretested questionnaire. Collected data were analyzed by using one-way ANOVA. According to the results of one-way ANOVA, age of the farmers ($p = 0.05$), gender ($p = 0.05$) and education level ($p = 0.000$) showed the strong significant relationship with willingness to have mobile-based demand and supply forecasting system while farmers' employment status ($p = 0.080$) and their farming type ($p = 0.068$) showed the marginal significant relationship. Moreover, when comparing the mean values within the categories, 20-30 age group (Mean = 4.80) in age category, male farmers (Mean = 4.36) in gender category, farmers educated up to GCE A/L (Mean = 4.75) in education category, farmers who engaging other sectors as their fulltime occupation and doing part time potato farming (Mean = 4.67) in employment status category, and farmers doing contract farming (Mean = 5.00) in farming type category showed the highest mean values within the category that they belonged. Therefore, these farmers tend to have mobile-based demand and supply forecasting system for their decision-making process than the other farmers. Accordingly, there is a high potential to introduce mobile-based demand and supply forecasting system for male, educated farmers up to GCE A/L who belong to 20-30 age group, who do part time potato farming, and who engaged in contract farming at the initial stage. These findings provide promising avenues for future research related to other crops as well in this regard.

Keywords: Demand and supply, Forecasting, Mobile-based information system, Potato Farming