

Impact of Information Systems in Sri Lanka: Implications in Vegetable Industry

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Abstract

Vegetable industry is a very sensitive sector in Sri Lankan economy. Cultivation for export market, cultivation for local consumption and cultivation for self-consumption are the main motives of the vegetable cultivation in the country. Farmers are the main stakeholders of the industry and they need information regarding cultivation during all the sections of the crop cycle. Accurate information and knowledge required for all the activities associated with crop cycle. Equip with information and knowledge on time about activities of crop cycle is essential for successful and profitable cultivation. Farmers can obtain information and knowledge regarding the cultivation from sources such as government agricultural officers, newspapers, agro business agents, agriculture related web sites, mobile based information systems and agriculture related mobile Apps. Ultimate objectives of the existence of above information and knowledge sources are, reduction of vegetable wastage, minimising price fluctuations, optimisation of vegetable prices and sustainability. Farmers can successfully cultivate vegetables and earn good profits, if these information and knowledge sources become effective for the cultivation. According to findings of published literature and preliminary researches, vegetable farmers face huge frustrations and issues today. Unexpected sudden price fluctuations, price drops, excess stock availability and vegetable wastage have become common scenarios in the industry. There is a problem get highlighted regarding the impact of available information and knowledge sources. According to the "Cobweb theorem", farmers consider previous season prices as the dominant attraction at the time of crop selection. The "Cobweb" theory further mentioned that, when there is a good demand for a vegetable during previous season, the "demanded commodity" will be selected by large number of farmers for cultivation. As a result of common crop selection, there will be high supply during harvesting period and price become very low due to excess stocks. Set of farmers who face financial difficulties due to price drops will leave from the cultivation, and there will be a short supply during coming season. The short supply creates good demand and high price situation. It will be an attraction for another set of farmers to cultivate the particular crop during next season and it will be occurred as a cycle. The preliminary study identified that, price fluctuation pattern of vegetable market in Sri Lanka behaves according to the "Cobweb theorem". The preliminary study observes that, extend of cultivation also fluctuates according to the "Cobweb theorem". Implemented agricultural information and knowledge sources of Sri Lanka expect smooth market behaviour, but still not achieved the same. The research focuses on ICT based agriculture information and knowledge sources. Reduce stock wastage, control price fluctuations and trim down excess stock arrivals are the main objectives of most of available ICT based information and knowledge sources. The preliminary field research indicated that most of farmers are not aware with the available ICT based information and knowledge sources. Some set of farmers do not interest to use technologies. Unawareness and failures of farmers indicate that the low impact of ICT in the vegetable industry in Sri Lanka. According to international experiences, ICT can be used effectively for vegetable cultivation. The research supposed to conduct an in-depth study regarding failures of achieving objectives of the ICT implications in the vegetable agriculture sector of Sri Lanka. Stakeholders of vegetable industry including farmers, agricultural officers and agriculture related private organizations will be interviewed to identify situations, issues and practical barriers in ICT implications. Agricultural ICT apps and packages will be observed.

Developers of agricultural ICT apps and packagers also get involved to obtain their experiences. The objective of the research is to identify the constrains of ICT implications in the vegetable agriculture sector in Sri Lanka. A set of recommendations for effective implementation of ICT based information and knowledge sources will be delivered for vegetable agriculture sector in Sri Lanka.

Keywords: ICT in Agriculture, Vegetable Industry in Sri Lanka, Vegetable supply and demand, Vegetable excess stocks,

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