# ADOPTION OF PLASTIC CRATES BY PRODUCERS OF FRUITS AND VEGETABLES IN *ANURADHAPURA* DISTRICT

**H.M.S.M. Herath[1], K.P.P. Kopiyawattage[1] and C.A.K. Dissanayake [2]**

*[1]Department of Agricultural Systems, Faculty of Agriculture, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.*
*[2]Research and Development Centre, National Institute of Post-harvest Management, Jayanthi Mawatha, Anuradhapura, Sri Lanka.*

Fruits and vegetables are highly perishable commodities. Post-harvest loss of perishables lies between 30-40%. Nearly 75% of this loss occurs during transportation mainly due to use of improper packaging materials. Having identified the importance of reducing this loss, the National Institute of Post-harvest Management initiated a program to introduce plastic crates at a subsidized price to all the stakeholders of the supply chain. This study was conducted to identify factors affecting the adoption of plastic crates by fruit and vegetable producers in *Anuradhapura* district using the Decomposed Theory of Planned Behaviour. An index was developed to measure compatibility, relative advantage, complexity, subjective norms, external constraints and facilitating conditions, and perceived personal ability to capture the usage intention. Multi-stage random sampling method was used to select 100 respondents. Data collected through a pre-tested semi structured questionnaire were analysed using SPSS. Ordinal logistic regression disclosed that compatibility of plastic crates in transportation of perishables, relative advantage over using other packaging, and peer influence significantly ($p<0.05$) affected the likelihood of plastic crates adoption. Lower compatibility, lower relative advantage, and lower peer influence levels were less likely (OR<01) to have a higher usage intention compared to the higher levels of compatibility, relative advantage, and peer influence respectively. Based on problem confrontation index high price, less availability in required places, high additional transport cost and limited space availability for storage of plastic crates were identified as major limitations for adoption of plastic crates. Modification of the transporting vehicles to occupy high number of plastic crates to reduce the transport cost per travel, enhance availability of plastic crates, assure reasonable price for crates are recommended to enhance the adoption of plastic crates to reduce post-harvest loss during transportation.

***Keywords***: Behavioural intention, Decomposed theory of planned behaviour, Fruits and vegetables transportation, Plastic crates, Post-harvest loss