

## **Use of safe packaging for vegetable transportation on main supply chains in Sri Lanka**

*Gunawardhane.,C.R., WasalaW.M.C.B., Dissanayake.,C.A.K., Wijewardene.,R.M.N.A., Chandrajith.,U.G., Thilakaratne.,B.M.K.S., 2014, Use of packaging for vegetable transportation on main supply chains in Sri Lanka, Proceedings of the International Research Symposium on Postharvest Technology, Institute of Post Harvest Technology, Sri Lanka , pp52-56*

*Research and Development Center, Institute of Postharvest Technology, Jayanthi Mawatha, Anuradhapura 50000, Sri Lanka*

A study was carried out to determine the technical feasibility of use of safe packaging for cabbage, carrot, beet and luffa which are major vegetables where the harvest is handled in very large quantities. They are excluded from the regulation which vegetables should be transported in safe packages. The study was conducted through supply four chains Dambulla to Colombo, Thambuttegama to Colombo, Nuwaraeliya to Colombo and Jaffna to Dambulla. Plastic crates and polysacks bags were used as packaging types. Vegetables transported by farmers were selected randomly at wholesale markets of the starting point, then packed in polysack bags and plastic crates and transported to destinations. Weight loss, colour change, visual quality, firmness, TSS and disease incidence of produce were measured at end points. After two days, these parameters of vegetables transported in both packaging types were measured to determine loss occur at retailer and consumer stages.

At the stating markets damaged up to certain extent of vegetables were observed. Results indicated that mechanical damage was the main cause for postharvest losses of vegetables. The study reveals that postharvest losses of beet transported in polysacks and plastic crates did not show considerable difference. But transport loss of cabbage, carrot and luffa can be reduced using plastic crates. Overall visual quality of vegetables also was better when transporting in plastic crates. Fungal infections were observed at retailer/consumer level for long bean and okra transported in both packages. Loss of produce firmness was significantly higher of vegetables transported in polysacks compared to plastic crates. The use of plastic crates reduced the transport loss of cabbage by 5.8%, carrot by 15.8% and luffa by 14.7%, and also preserve the quality parameters of vegetables during post production handling.