Suitability of bulk packages for transportation of leeks (*Allium porum*)

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Leek is an economically important vegetable which occupies a prominent position among vegetables grown in Sri Lanka. Due to variation in length of the crop, presently available packages are not suitable for leeks transportation and reported annual postharvest loss was 15.7%. Institute of Postharvest Technology has developed wooden bulk packages to transport leeks and this study evaluated the suitability of those packages for leek transportation. Preliminary studies were carried out to select the best from five types of packages. Leeks harvested from *Nuwara Eliya* farmer fields were filled up to 85% into these packages, and transported to *Dambulla* Economic Centre by a partially covered vehicle. Based on the results and feedback of the growers and transporters, the above packages were modified. There were two types of packages; T_1-100 cm x 45 cm x 40 cm, T_2-100 cm x 45 cm x 35 cm and poly-sack was used as control, which is the existing package for leeks transportation. Same supply channel was used and temperature inside the package, RH, physical damages, wilting, weight loss (%) respiration rate and ethylene production were measured during transportation using standard methods and analyzed using ANOVA procedure in a Completely Randomized Design. The leeks were unloaded from the packages and quality changes during storage at ambient condition (28-30 ^{0}C, 75%-80% RH) were measured using firmness, total soluble solids, wilting, physical damage, color, weight loss (%), visual quality rating and yellowing index. Results revealed that samples from T_2 showed significant difference ($p<0.05$) in weight loss (%), wilting, physical damages, temperature inside the package, RH and respiration rate during transportation. In the storage study, weight loss (%), wilting and firmness were significant ($p<0.05$) in samples unloaded from T_2 compared to control exhibiting the suitability of T_2 for leeks transportation.