

## Comparison of Storage Facilities on Different Varieties of Orange Fleshed Sweet Potato Grown in Rwanda

**Authors :** Jean Paul Hategekimana, Dukuzumuremyi Yvonne, Mukeshimana Marthe, Alexandre Niyonshima

**Abstract :** Sweet potato (*Ipomoea batatas*) is a very important staple food crop in Rwanda due to its high growth and consumption in all parts of the country. The effect of seven different storage conditions on the quality and nutritional composition of the three most grown and consumed varieties of orange-fleshed sweet potato (OFSP), namely Kabode, Terimbere, and Vita, were studied over a period of six weeks at Postharvest Service and Training Center of University Rwanda, Busogo Campus. The potato stored under the following conditions (zero energy cooling chamber, ground washed sweet potato, ground unwashed sweet potato, perforated washed sweet potato, perforated unwashed sweet potato, non-perforated washed sweet potato, and non-perforated unwashed sweet potato) were assessed in this study. These storage conditions are the modifications of existing methods currently used in Rwanda for suitable local climatic conditions. Hence, 30kgs of freshly harvested OFSP for each variety were bought from farmers of Gakenke and Rulindo districts and then transported to the postharvest training and service center UR-CAVM, Busogo Campus. 2.5kg of each potato sample was selected and stored under the above-mentioned storage conditions after pretreatment. Data were collected for six weeks on percent weight loss, shrinkability and the general appearance at interval of three days. The stored samples were also analyzed for moisture, crude ash, crude fiber, and reduced sugar levels during the entire storage period. Results showed the difference among the various storage conditions. It was shown that ZECC and non-perforated sacs (in the open air) storage techniques had good potential for storage of orange flesh sweet potato for up to six weeks without considerable change in physical and nutritional parameters compared to other considered conditions and, therefore, can be recommended as more useful for OSFP at farm level and during transport and market storage.

**Keywords :** ZECC, orange fleshed sweet potato, perforated sacs, storage conditions

**Conference Title :** ICFSN 2024 : International Conference on Food Science and Nutrition

**Conference Location :** Ottawa, Canada

**Conference Dates :** July 11-12, 2024