

Improved handling of sweetpotato in Tanzania, East Africa

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Abstract

Sweetpotato is increasingly being marketed in Tanzania. Roots sold in the markets, however, are often heavily damaged leading to loss in quality and discounts in market value. The objective of this research was to identify where in the marketing system these losses occur, what type of handling caused most damage and to evaluate simple technologies to improve quality and hence financial returns to rural farmers.

Sacks (weighing 100 kg) of sweetpotato (*Ipomoea batatas* (L) Lam, cv. Polista and SPN/0) were monitored from the farm to markets in Dar es Salaam and Mwanza. The handling was measured with sensors, located in the middle of the sacks that measured shock, temperature and humidity. Field trials studied the influence of pre-harvest curing, methods of handling (sack weight, height and number of impacts, and influence on shelf life) and method of packaging on the quality and shelf life of sweetpotato. Results showed that the most severe handling occurred during loading activities on ships and trucks and led to reductions in market value of 13%. The classes of root injury that most reduced the shelf life were skinning injury and breaks.

Pre-harvest curing improved quality by reducing susceptibility to skinning injury while root damage was less if the height that sacks were dropped was not greater than 0.25 m. The use of cardboard cartons to transport roots, instead of sacks, improved quality also by reducing skinning injury. The implications of these results for rural farmers in Tanzania are discussed.

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