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Sweet Potato (*Ipomoea batatas*) Storage: A Review of the Present Status of Storage Practices and Losses

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Abstract

Sweet potato (Ipomoea batatas (L.) Lam.) is a dicotyledonous plant which belongs to the family of Convolvulaceae. It is at present cultivated in more than 100 countries worldwide. Most of the producer nations are situated in tropical developing countries where a high proportion of the poorest people live. Being relatively resistant to pests and diseases and comparatively water-use efficient, sweet potato yields are better than those of most of the major root and tuber crops. The crop has been playing an important role as a life-saver during periods of food shortages and famine especially in sub-Saharan Africa. Depending on the variety, the crop has a relatively short harvesting time of 3–8 months from planting which is less than most other root and tuber crops. Despite the clear potential which sweet potato holds for combating food insecurity and malnutrition, particularly vitamin A deficiency, full exploitation is constrained by its bulkiness and perishability. Due to the short shelf life of the crop, it has to be cured and placed in stores immediately after harvest. After two to three weeks most of the crop is not marketable anymore. This often forces farmers to sell the crop at low prices immediately after harvesting. There have been studies documenting that under room temperature or in a ventilated yard. after two months the losses of fresh sweet potatoes are70 % and 50 %, respedctively. They appear to be due to natural metabolic processes, such as weight loss due to shrinkage, rotting of roots, sprouting and attack by moulds and weevils. Optimum storage temperature of between 13°C and 16°C and a relative humidity of 80–95 % has been recommended for long-term storage of sweet potato. Lower storage temperatures results in physiological damages whereas higher temperatures promote sprouting with an increase in water and respiratory losses. The authors present a review of the current knowledge status of sweet potato storage practices that are adopted in various parts of the world, and the losses that are found to occur during storage. A future research direction for long-term storage of sweet potato will also be presented.

Keywords: *Ipomoea batatas*, losses, shelf life, storage, sweet potato, temperature

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