

Title Preharvest ethylene and postharvest curing effects on baked sweet potato (*Ipomoea batatas* l. Lam) quality and prevention of sprouting on cured sweet potatoes

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Citation Thesis, Master of Science (Food Science, Nutrition, and Health Promotion), Mississippi State University. 2011

Keywords Curing; Ethephon; Ethylene; Sprouting; Sweet potato

Abstract

The effect of preharvest foliar applications of ethephon and postharvest curing on baked sweet potatoes (*Ipomoea batata*) were analyzed. Ethylene had negative effects on appearance of baked roots while curing increased the total phenolics in sweet potatoes. Panelists preferred the non-ethylene treated and green or cured over ethylene treated sweet potatoes with respect to texture, color and flavor. No differences in chemical or color properties were found between treatments. The effect of curing time (0, 7, 14 days) on baked sweet potatoes was studied. Curing caused more browning on flesh of sweet potatoes. Moreover, panelists preferred the texture of the green over the cured roots but did not find any differences in flavor sensory quality. The effect of hot water treatment on sprouting and spoilage of cured sweet potatoes was investigated. The most effective treatment was at 53-56 °C for less than 10 min, resulting in less than 60% (control=80%).