Title Postharvest technology development for root and tuber crops in the Philippines

Author M. A. Quevedo

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Abstract

Postharvest technology development for root and tuber crops at PhilRootcrops started in 1979 with the conduct of benchmarking surveys to document traditional practices and indigenous techniques in storage and processing in the Philippines. Survey findings were used as basis in developing technologies linked to market demand of rootcrops. For fresh cassava roots, postharvest techniques developed include pruning at 2-3 weeks before harvest to control vascular discoloration, box or underground storage utilizing moist soil or sawdust in between layers of fresh roots to prolong storage life by 2 months instead of 3 days at ambient, and modified atmosphere packaging (MAP) to increase shelf life during supermarket display. For sweetpotato, storability potential of different varieties was evaluated and showed that varieties with high moisture content easily lost weight and hence, had shorter shelf life. Farmers' practice of ambient storage to enhance sweetness of roots was also improved through the use of hut storage with diffused light. For yam, modified clamp method and chemical regulation of sprouting, including the use of gibberellic acid, were tried to prolong tuber shelf life. For taro, storage in moist sawdust was developed to prolong shelf life by 2 weeks. Parallel to the development of fresh produce handling and storage techniques, several processing technologies and new or improved rootcrop-based food products were developed, such as cassava-chocolate roll and cassava-based dehydrated product locally known as 'Cabcab', sweetpotato beverage, chips, catsup, and dehydrated product, arrowroot flakes, and yam yogurt.