Abstract

Pumpkin is an important fruit vegetable in Sri Lanka having a peak production from October to March where considerable amount is wasted due to inappropriate post harvest handling and less usage in industrial applications. In such situations, harvest is stored for a longer period, and then marketed during rest of the year when producers and dealers can obtain a reasonably high price. There may be considerable changes in quality of pumpkin and one of the major challenges facing at present is how to reduce the wastage of the harvest. So far, no proper system has been introduced to preserve pumpkin in Sri Lanka. Processing pumpkin into value added products that combines it's diversity, nutritional value and convenience for use is one method of increasing consumption of pumpkin. Therefore the overall objective of the project was focused to assess the quality changes of pumpkin with prolonged storage and utilization of bulk production of pumpkin for industrial applications.

Assessment of quality changes of pumpkin was done both quantitatively and qualitatively. The changes in the parameters considered were also assessed through a sensory evaluation. For the value addition pumpkin based breakfast cereal and dry soup mixture were formulated. The best samples were identified through the sensory evaluations.

Results showed that reducing sugar content was increased during first 3 weeks after harvesting and then it was slightly decreased. The starch content was decreased during the period. Sensory evaluation proved that there is a significant difference in sweetness, starchyness, mouthfeel, and odor of cooked pumpkin. Color was changed from yellow to orange with prolonged storage. The developed breakfast cereal using pumpkin, rice and soya at a ratio of 55:3510 contains 3.72% fat, 2.62% ash, 2.11 % fiber and 17.47% protein with 378.56 kCal/100g. The developed dry soup mixture provides 0.09% protein and 1.78 % fat.

Methods to improve the nutritive value, selection of suitable packing material and shelf life evaluation of both products should be further studied.