

Determination of maturity indices for harvesting of Luffa (Luffa acutangula) Hybrid: Herculis

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Institute of Post Harvest Technology, Research and Development Centre,Jayanthi Mawatha, Anuradhapura.

Harvesting of crops at incorrect stage of maturity leads to serious quantitative and qualitative losses. Harvesting too early results in incomplete use of the yield potential. Delaying of harvesting results in losses due to abscission and softening, shortening of shelf life, poor palatability characteristics and increased internal disorders. However, the maturity indices of most local vegetable varieties have not been identified yet for practical use.

The CARP has provided a research grant to initiate a project to determine the maturity indices of selected economically important crops. Under this project, during the year 2003, a study was completed to determine the subjective and objective indices to identify the correct stage of maturity for harvesting of Luffa (hybrid: Herculis) and their effects on field yield, product quality and shelf life.

Luffa pods were harvested at three maturity stages, namely, 9,11 and 13 days after fruit set. Soon after harvest, the number of pods per plot, length, diameter, weight, dry matter, fiber content, firmness and total soluble solids were measured. The harvest pods were stored separately under ambient conditions of temperature 30 ± 2 °C and 60-70% to identify the shelf life by measuring weight loss, colour changes, firmness, visual quality, fiber content, acidity, total soluble solids and sensory properties.

The result revealed that Luffa harvest at 11 days after fruit set causes a significant increase in the field yield, as well as storage and product qualities of the pods. The other indicators of the optimum stage of maturity for harvesting are: dark green colour of the pods; average pod length 42cm, diameter 5 cm and weight 290g.