Control of Aspergillus rot in wood-apple (Ferronia acidissima) (CARP funded project)

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

Wood apple (Ferronia acidissima) that belongs to family Rutaceae is a nutrient rich fruit still in underutilized in tropical countries. In Sri Lanka, Aspergillus rot is a major post harvest problem in wood apple and causative pathogen is not yet identified.

A study was conducted to identify the pathogen species of wood-apple rot and to develop a method to control the pathogen using GRAS (Generally Recommended as Safe) compounds. Five GRAS compounds, namely, sodium bicarbonate, calcium chloride, sodium benzoate, citric acid and ascorbic acid were used in this study. A shelf life of treated fruits under ambient and refrigerated conditions was studied by packaging them in different packaging materials namely, 0.0375 mm. low density polyethylene (LDPE), 0.075 mm. LDPE, and 0.04 mm. high density polyethylene (HDPE) bags.

Aspergillus niger was identified as the causative agent of the wood-apple rot and the fruit treated with 4% sodium bicarbonate (SBC) solution gave 100% control of the wood-apple rot. The storage life of the treated fruits packed in 0.075 mm LDPE was extended up to 23 days at ambient conditions (280C ± 2&85-90%RH), and under refrigerated conditions the shelf life was extended up to nine weeks in 0.04 mm. HDPE. .