Use of elicitors to control postharvest diseases of banana

Rathnayake,R.M.R.N.A, Sumithra,S.J. Fernando,M.D., Palipane,K.B*.(2010) Effect of Calcium chloride and Sodium bicarbonate on crown rot of 'embul ' banana(Musa sp.), Proceedings of international symposium, University of Ruhuna.*

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

Banana is one of the most important and economical fruit crops grown in Sri Lanka. However, as in the other fruit crops, post harvest diseases represent a major limiting factor in the storage of banana. In Sri Lanka post harvest loss of banana is about 20-80 %.

Currently, synthetic fungicides are a primary means of controlling post harvest diseases. However it has been identified many draw backs of the application of fungicides at post harvest stage. On the other hand, it is well established that plant can be rendered resistant to disease organisms by artificially activating their natural defense mechanisms. Hence, a study was conducted to identify a cost effective method of controlling post harvest diseases of banana variety "Embul" using two elicitors namely calcium chloride and sodium bicarbonate.

The results of the study revealed that these two chemicals are not capable to induce natural disease resistance of bananas. However, 1% calcium chloride application was identified as a control method for banana crown rot and anthracnose and inhibition of spore germination and mycelial growth. The shelf life of treated fruits with calcium chloride was prolonged to 18 days where untreated fruits were infected after 4-5 days.