

B-66: Maturity studies on Mauritius and Kew variety pineapples with special reference to black heart disorder

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Sri Lankan pineapples which are known for their excellent flavour are exported to many countries. Their long term low temperature storage leads to a physiological disorder - black heart or endogenous brown spot (EBS). Laboratory trials were conducted to test the susceptibility of Mauritius and Kew variety pineapples with respect to symptoms of this disorder at 2 different stages of maturity.

Both varieties of fruit at full green and 20% yellow stages of maturity were stored at 10°C soon after harvest and were analysed for chemical parameters such as total soluble solids, titratable acidity and sugar content after 14 and 21 days. Coloured metabolites were extracted from mesocarp tissues of pineapples subjected to the specified low temperature treatment. Visual assessment of the incidence of EBS was confirmed by the intensity of colour extracted from coloured metabolites via spectrophotometric method.

The loss due to EBS after 14 and 21 days in mature full green Mauritius pineapples was 14% and 76% respectively compared with 60% and 90% loss in fruits of the 20% yellow stage of maturity. The loss due to EBS in Kew fruits after 14 and 21 days was 0% and 10% in the case of mature full green fruits and 5% and 17% in the case of fruits of the 20% stage of maturity. Though the fruits of the full green stage of maturity showed a lower incidence of EBS with respect to both varieties, fruits lacked the excellent flavour associated with Sri Lankan pineapples and the Mauritius variety in particular.

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