B-112: Effect of cold storage on ripening, chilling injury and quality of avocado fruit

T Mahendran, V Thireganathan
(Dept of Agronomy, Faculty of Agriculture, Eastern University, Chenkalady (E.P)).

The ripening, chilling injury and quality of "Fuerte" avocado fruit (*Persea americana* L.) were determined at 20°C subsequent to 0 to 5 weeks storage at 4°, 7° and 10°C. No softening or chilling injury symptoms occurred during the 5 weeks at 4° or 7°C. However, after transfer to 20°C fruits held at 4°C for longer than 2 weeks and fruits stored at 7°C for more than 3 weeks developed chilling injury and severity increased as the exposure period increased. Fruits stored at 10°C showed no chilling injury symptoms and were eating ripe after 3 weeks of storage. Further storage at this temperature was limited due to over-ripeness and fruit decay.

Avocados placed directly at 20°C began to soften after 7.5 days and were eating ripe after 10.2 days. Storage temperature and duration appeared to have a significant influence on ripening of avocados. After transfer to 20°C, the fruits held at 4°C for 1 to 4 weeks and fruits stored at 7°C for 1 to 5 weeks ripened in a shorter time than control fruits. The optimum storage period for "Fuerte" avocados was 4 weeks at 7°C.

The data indicated that the vitamin C, total sugars and flesh firmness decreased during storage and ripening. Fruits stored at 4°C and 10°C showed about 5 and 8% loss in vitamin C respectively from original level throughout the 3 weeks storage period. The oil content increased from 15.4% during storage and ripening, reaching a maximum of 21.3% at the edible ripe stage.