

Research Title Comparison of Storability and Changes in Internal Gas Accumulation in Pear Fruit (Pyrus pyrifolia Nakai) cv. Pathanak Wrapped with Plastic Film and Waxing

Author Miss Marasri Sankum

M.S. Teaching Biology

Examining Committee :

Assoc.Prof. Jinda Sornsrivichai	Chairman
Lecturer Dr. Pantawee Mapairoje	Member
Lecturer Dr. Jamnong Uthaibutra	Member

Abstract

Asian Pear cv. Pathanak had a short storage life and showed some incidence of disorder symptom during storage. The methods of packaging of fruits in 0.01 mm PVC plastic film and/or coating of fruit with 1.2% semperfresh wax were applied to the fruits to compare the storage life. Quality and physiological changes of fruits were determined during storage at room temperature (25-31 °C, 70-75% RH) compared to the fruits without the pretreatments and stored at 17±2 °C, 85-90% RH

The storage life of this Pear with the acceptability score higher than 5 from 9 scores was 10 days in both room temperature and 17°C conditions. But at 17°C condition the number of fruits with senescence disorder were reduced. Prolong storage of the fruits in both conditions, quality of fruit was unaccepted and the number of disorder fruit was increased. Symptom of brown flesh scattered internally or at beneath the peduncle end were founded in senescence disordered fruits.

Wax coating and packaging did not extend the storage life but caused injury to the fruits. The symptom was hasten and was more pronounced in the treated fruits than the non treated fruits. The waxed fruits both packed or unpacked with PVC film showed higher internal CO₂ accumulation and higher ethanol content in the flesh. The internal accumulation of CO₂ in waxed fruits was 22.6% compare to 2.69% in non waxed fruits.

The respiration rate of Pathanak Pear at room temperature was higher than 17°C and ethylene production rate was increased at 6 days after storage in both temperature but ethylene production rate at room temperature was lower than at 17°C.