Thesis Title	Influence of Packing Material and Precooling on Carbondioxide and Oxygen Changing Pattern during Eqilibrium Modified Atmosphere Storage of Kluai Khai (*Musa*, AA group).
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ABSTRACT

Study on influence of packing material and precooling on carbondioxide and oxygen changing pattern during eqilibrium modified atmosphere storage of Kluai Khai (*Musa*, AA group). This study was divided into 2 experiments. First experiment, study on influence of packing materials on changing pattern of CO_2 and O_2 during storage of Kluai Khai (*Musa*, AA group). The statistical model was completely randomized design composed of 4 treatments as 4 packaging material as followed polyethylene (PE), polypropylene (PP), laminate (vacuum) and polyvinyl chloride (PVC) stored at 13±2°C. Second experiment, study on influence of precooling time and temperature on changing pattern of CO_2 and O_2 during eqilibrium modified atmosphere storage of Kluai Khai (*Musa*, AA group). The statistical model was 4x5 factorial in completely randomized design comprised of 2 factors ; 4 levels of precooling temperature 5, 0, -5 and -20°C and 5 levels of precooling time 15, 20, 25, 30 and 35 minutes.

First experiment the results showed that packing material pronounced effect on CO_2 and O_2 changing in package which high CO_2 accumulated and low O_2 permeable effected on quality declined of Kluai Khai. The polyethylene plastic bag (PE) could do suitable proportion adjust of CO_2 and O_2 would be lengthen on storage life of Kluai Khai. The longest storage life of 46.67 days received from Kluai Khai those stored in polyethylene (PE) and gave quality better than those which stored in polypropylene (PP), polyvinyl chloride (PVC) and laminate (vacuum) respectively. Kluai Khai stored in laminate (vacuum) plastic bag had the shortest storage life of 5 days and showed significant difference. TSS content increased after degreened at ambient temperature TSS content of Kluai Khai after degreened of ambient temperature comparable to

those before storage. TA content increased according to the storage time increased. There were slightly changed in peel and pulp colors when compared to fresh harvested Kluai Khai.

Second experiment, the results showed that changing pattern of CO_2 and O_2 during storage of Kluai Khai on 27 hours stored while CO_2 had decreased and after that CO_2 had a steady line up to the end, O_2 had increased during the first period up to 27 hours and followed by steady line as same as CO_2. Kluai Khai precooled at 5°C for 35 minutes and precooled at 0°C for 15 minutes had the longest storage life of 48.50 days which very well physical appearance, good quality and good taste. TSS content increased of Kluai Khai degreened at ambient temperature comparable to those of which fresh harvested when degreened at ambient temperature. TA content increased according to the storage time increased. There were slightly change in pulp firmness, peel and pulp colors. After degreening all of them showed very well physical appearance and palatability as well as to those degreened at ambient temperature before storage.