

Improvement in Postharvest Treatments of Summer Fruit Vegetables in Kaoping Area

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Abstract

The bitter gourd, cucumber, eggplant and asparagus bean are the important fruit vegetables in this district and were used as material in this experiment. Their qualities have always deteriorated when they reach the consumer market in Taipei due to the high temperature and humidity in summer. Through traditional channel, the vegetables were conveyed from Pingtung to Taipei by a vehicle without any cooling system installation, the damage rate including yellowing, mechanical injury, rotting and damage caused by diseases and insect pests, was 14 ~ 48% for bitter gourd, 8 ~ 12% for cucumber, 5 ~ 35% for eggplant and 0 ~ 3% for asparagus bean (packing with ice cube).

The purpose of this experiment was to study the effect of ethylene absorbent as a postharvest treatment on these vegetables. The experimental results from 1993 to 1994 indicated that the vegetable qualities in terms of losing weight, hardness, smoothness and color, were not affected at all from the vegetable appearance, even after a long distance conveying, if they were packed at a constant room temperature of 20 °C and were transported immediately from Pingtung or Kaohsiung to Taipei by a cool stored vehicle (10 °C).

The rot level of bitter gourd, cucumber and eggplant were significantly affected by the humidity, the higher the moisture content in the air, the more rot occurred. In addition, high temperature also accelerated the yellowing of the fruit vegetables. In order to decline weight loss, delay soft and yellowing of the vegetables, there was an attempt by adding ethylene absorbent inside the fiberboard box, and a positive result was found. For reducing damage of these vegetables caused by high temperature and rain fall before harvest, several recommendations are made as follows:

- 1) The fiberboard box should be punched as many pores as possible to disperse metabolic heat.
- 2) To select the same level of maturing fruit vegetables for harvest.
- 3) The better time for harvesting is in the afternoon, in order to shorten time from harvesting to loading.
- 4) To select good quality of fruit vegetables, and the ethylene absorbent should be put inside the fiberboard box during packing.

Key words : Bitter gourd, Cucumber, Eggplant, Asparagus bean, Postharvest, Transportation in summer, Ethylene absorbent.

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