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Silicon Application for Maintaining of Mango Quality after Harvest

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Abstract

Mango cv. Nam Dok Mai Sri Tong is a fruit that is popular for consumption all over the world. Mango is a horticultural fruit with a lot of water, a soft texture, and easily damaged. This causes losses during harvesting, transportation, and disease infestation. In this experiment, silicon that plays a role in cell strengthening and disease reduction was applied to maintain mango quality. The mango was harvested from the silicon foliar spray experiment at 0.5 and 1% fruiting period 30, 45, and 60 days after flowering and stored at 13 °C for 28 days. After 28 days of storage, the lowest weight loss about 7.54% was observed in Silicon 1% while control and 0.5% silicon had 8.76 and 8.95% weight loss, respectively. The highest peel firmness was tends observed in Silicon 0.5%. No differences in total soluble solid (TSS) were observed among all treatments about 15.6-16.2%. The highest titratable acidity (TA) about 0.31% was observed in Silicon 1% while total soluble solid (TSS) among all treatments about 0.26-0.27%. No differences in Vitamin C were observed among all treatments about 12.51-14.97 mg ascorbic/100 ml. The lowest postharvest disease was tends observed in Silicon 0.5% about 2.17 score or Mangoes have less than 30% incidence of postharvest disease.

Biography

Panumas Kotepong is currently working as a senior scientist at the Department of Agriculture,Thailand. He has received his Ph.D. on horticuture from Kasetsart University, Thailand and postdoctoral studies on plant biology from Lincoln University, New Zealand. He has authored several publications in various journals and books. His publications reflect his research interests in postharvest technology, plant nutrition, and plant biochemistry.

