

Supply chain management of 'Kluai Khai' for exporting in Thailand

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Abstract

Supply chain management is very important to improve quality of fruits. The study was conducted in Chanthaburi Province (5 districts, viz., Makham, Pong Nam Ron, Tha Mai, Khao Khitchakut and Klung) and Sukhothai Province (2 districts, viz., Sawankhalok and Thung Saliam) from October 2009 to May 2010 through structured interview of farmers, collectors, and exporters. In Chanthaburi, it was found that 'Kluai Khai' banana was grown as intercrop in fruit orchards. Plant density was approximately 937-1,562 plants/ha, depending on the spacing of the main fruit crop. Average yield was 1 ton per rai (1 rai=0.16 ha). Two to three suckers were usually allowed to grow per mother plant. Fruit bunches were harvested when fruit angularity was 3/4 light full and sold to the collectors. The produce was sorted into two grades, standard grade and under-standard grade or off-grade. About 60-70% of the total production met the standard grade while the rest was off-grade due to insect and disease damage and/or under fruit size. Fruit hands that met the standard grade were subjected to postharvest operation conducted by the collectors who graded them into three sizes; AAA, AA and A, before packing into cardboard boxes and loaded onto a refrigerated truck at 13-14°C. This operation usually took 8-12 hours. Price of off-grade fruits was 8-10 times lower than that of standard-grade fruits. In Sukhothai, the banana had been grown as main crop at the density of 2,500 plants/ha. Only one sucker was allowed to grow successively after flower emergence of the mother plant. Postharvest handling operation was done at the farmers' orchard by the exporters. Fruit hands with insect pest, disease damage and small sized or undeveloped fingers, usually about 5-10 and 10-20% of total production, respectively, were sorted out and sold in local markets. Fruit hands that met the standard (60-70%) were graded into three sizes. Most exporters (74%) took 14-24 hours to complete the operation while the rest (26%) took 6-10 hours. Average yield was 0.36 t/ha and the production cost was around 66.6 US\$/ha.