

Title Effect of chemicals and irrigation on fruit cracking and sunburning in litchi cv. Bombai
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Citation Program and Abstracts, 4th International Symposium on Tropical and Subtropical Fruits, November 3-7 2008, Bogor, Indonesia. 215 pages.
Keyword litchi cv. Bombai; cracking; yield; quality

Abstract

Fruit cracking, a major issue in litchi is most common in India and the litchi orchardists face a huge crop loss in West Bengal (10-15%) and in India (30-40%) every year. In view of commercial importance of litchi in West Bengal, the present investigation was carried out to minimize the fruit cracking with quality litchi production at the farmer's field, West Bengal, India during 2004 to 2007 on cv. Bombai in 25 years old plant. The effect of mineral nutrients viz. calcium chloride (0.25 & 0.50%), borax (0.50 & 1.0%) and calcium nitrate (0.25 & 0.50) and different frequency of irrigations [three irrigations at 15,30 and 45 days after fruit set (DAFS), two irrigations at 30 and 45 DAFS and one irrigation at 45 DAFS] and their interaction effects were studied to minimize fruit cracking. Maximum number of normal fruit (96.45%), fruits with minimum cracked (0.89%) and sun-burnt fruits (2.66%) were recorded from the plants sprayed with borax at 0.5% + three irrigation followed by 94.01%, 1.78 % and 4.22 % with CaCl₂, at 0.50 % + three irrigations compared with 82.91%, 7.49 % and 9.60 % in control, respectively. Plants treated with borax at 0.50% + three irrigations showed the maximum fruit weight of 23.03g and aril recovery of 74.77%. Higher TSS (20.30^oB), total sugar (16.54%), reducing sugar (15.34%), ascorbic acid (48.08 mg/100 g pulp), anthocyanin (60.35 mg/100g peel) and TSS/acid ratio (44.74) of fruit were recorded from the plants treated with borax at 0.50% + three irrigations.