

Adaptation of Different Navel Orange Variety in Taitung Region

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Abstract

Four navel orange varieties ('Dream', 'Frost', 'Shirayanagi', and 'Washington') were evaluated at Taitung region through four successive seasons (2010 to 2013). The results showed that 'Dream' and 'Frost' varieties had higher yield that were 44.5kg and 41.4kg per plant respectively. Then 'Shirayanagi' had the lowest yield, only 7.6kg per plant. 'Shirayanagi' variety matured early in mid-November, and 'Dream', 'Frost', and 'Washington' were similar maturity from late-November to early-December. In the percentage of navel exposed, 'Washington' variety was maximum, 69.0%, and 'Dream' variety was minimum, 26.4%. Fruit quality among four varieties, 'Shirayanagi' had the highest total soluble solids of 9.4 °Brix. he percentage of granulation was unstable, but 'Frost' variety was serious, the rate of 74.7%. Fruit weight, fruit skin thickness, and titrable acidity were no significant among four varieties through the four years of test. Navel orange is a parthenocarpic variety, and the plant growth characteristic is sensitive to climate. In Taitung region, 'Dream' navel showed promise for adaptable performance, but low percentage of navel exposed and unstable granulation. So it needed continue for more investigation.

Key words : *Citrus sinensis* L Osbeck, variety, adaptability

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