

Effect of Naphtalean Acetic Acid (NAA) on Fruit Size and Quality of Satsuma Mandarin (*Citrus unshia*)

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Fruit size is one the most important quality factors in citrus fruits. Small fruit size in mandarin is always a serious problem for producers and reduces fruit marketability. One of the newest and best methods for increasing fruit size, is using synthetic auxins which cause an increase in fruit size without any significant reduce in number of fruit. In this experiment effect of four levels of naphtalean acetic acid (0,300,400 and 500 mg^{l-1}) were examined on Satsuma mandarin trees (*Citrus unshiu*) on grafted sour orange rootstock in "on year" using randomized complete block design with four replications. Fruit diameter, fruit weight, peel diameter, peel weight, juice amount, TSS, total acidity and pH of juice were used as plant responses.

All levels of auxin, increased fruit diameter and weight, but significant difference was observed in 400 mg^{l-1} treatment. Also peel firmness was increased significantly in 400 treatment, in compare with control. pH of juice indicated significant increase in 400 and 500 treatments and percentage of TSS decreased significantly in compare with control in 400 mg^{l-1} treatment. Different teatments didn't have any significant effect on fruit thinning but percentage of preharvest drop decreased significantly in 400 treatment in compare with control. In all treatments percentage of small and unmarketable fruit was reduced too much, in return percentage of midium fruit in 300 and 500 treatments, and percentages of large and very large fruits in 400 treatments were increased greatly.