

**EFFECT OF SOME ORGANIC AND INORGANIC NITROGEN
FERTILIZERS ON GROWTH AND PRODUCTIVITY OF
BALADY ORANGE TREES IN RELATION TO
INFECTION OF CITRUS NEMATODE
*TYLENCHULUS SEMIPENETRANS***

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Abstract

The effect of some organic or inorganic-N and various combinations treatments on root and soil population of *Tylenchulus semipenetrans* and on the growth response, quality and yield of balady orange trees grown in El-Kassasin Horticultural Research Station, Ismailia Governorate, Egypt over two crop seasons were studied. Generally, most treatments significantly ($P \leq 0.05$) increased fruit yield/tree, fruit no./tree, fruiting intensity, total sugars content, both root and shoot growth parameters as well as significantly ($P \leq 0.01$) decreasing populations of the nematode in both seasons. Inorganic-N (ammonium nitrate 33.5% and calcium nitrate 15.5%) gave the highest yield/tree, fruit weight, fruiting intensity, juice volume, fruit edible portion and inuced more vigorous vegetative growth as compared to other treatments. Mixed-N sources gave medium results between the completely organic and inorganic treatments. Water extract of organic N-treatment statistically increased yield/tree, fruit weight, fruit no./tree fruiting intensity, fruit juice volume and peel weight as well as root and vegetative growth parameters over control. Local-N application was the least effective treatment. Use of water extract and the local-N application gave the most significant ($P \leq 0.01$) reduction in nematode populations in both the seasons. Application of organic-N 75% + inorganic-N 25% was the most effective combined treatments compared to the other two combinations.