



Foliar applied potassium nitrate increased individual fruit size in citrus

The paper described the effects of a single high concentration spray of potassium nitrate enriched with soluble phosphates (13-2-44, N-P-K) and a special adjuvant on citrus yields, fruit quality and grower's profitability. All experiments were conducted in mature (>15 year old) citrus orchards in central Israel.

Foliar feeding with this enriched potassium nitrate product has achieved the following results in citrus crops:

- in 'Shamouti' ("Jaffa") oranges a single application of 9-10% (w/v), when fruits were 18-22 mm in diameter, increased percentage of fruit size above 75 mm (diameter) by 75%, consequently, total yield increased by 14 ton/ha. Shelf life of stored fruit was also significantly enhanced due to a marked increase in potassium content of the rind by 0,44% (in dry matter).

- In 'Newhol' navel orange (

*Citrus sinensis*

Os.), a single application of a 10% solution, when fruits were 15-20 mm in diameter, significantly increased total yield by 19% and fruit share above 75 mm increased by 28% (Figure 1).

- In Nova tangerine (

*Citrus*

*reticulata*

Bla.), a single application of a 10% solution, when fruits were 12-20 mm in diameter, significantly increased total yield by 30%, mean fruit weight by 38,3 g and reduced the incidence of rind creasing by 20%.

The described experiments showed that foliar application of potassium nitrate is recommended for high production and fruit quality in citrus. The applications resulted in agronomical and economic benefits compared to the unsprayed control in terms of nutrient contents in the leaves, fruit rind, total yield, fruit-size distribution and grower revenues. The shift towards bigger sizes in fruit-size distribution is the major factor in



producing higher revenues due to the higher market prices received for the bigger sized fruits.

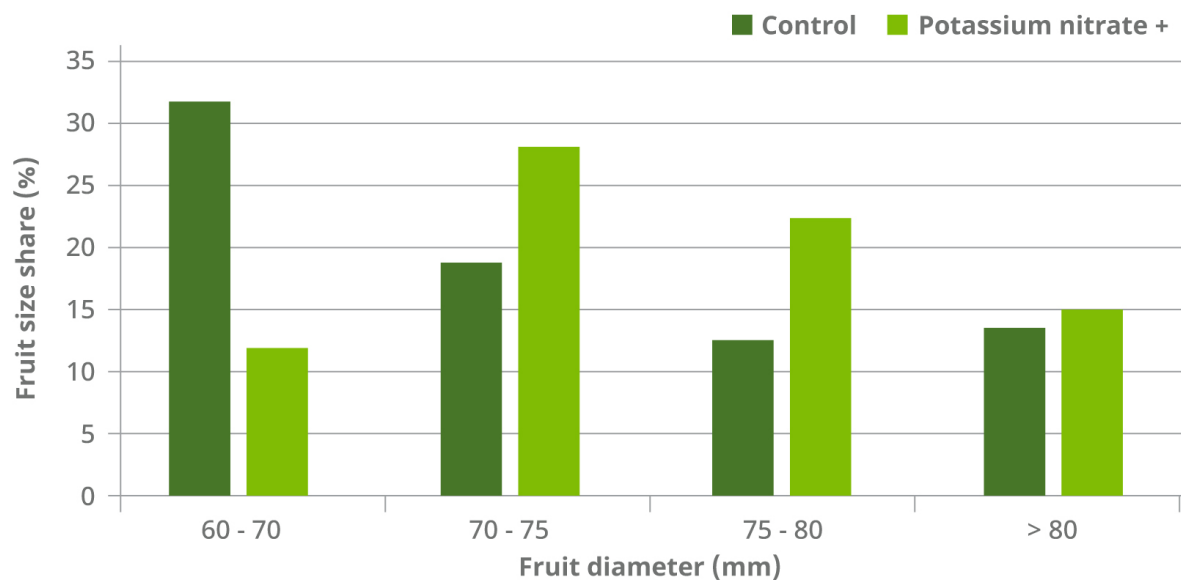


Figure 1. The effect of foliar application of potassium nitrate enriched with soluble phosphate and a special adjuvant on size distribution in 'Newhol' navel orange.