Potassium nitrate sprays in “Nova” tangerine reduced fruit splitting and increased fruit weight

The effects of nutritional and hormonal sprays on decreasing fruit splitting was investigated. A citrus Florida hybrid (Clementine X Orlando) named ‘Nova’ was used. It was found that two to three sprays of KNO_3 at 5% in combination with auxins (2,4-D, NAA, Maxim) at a concentration of 20 ppm, mainly used to increase fruit size, increased leaf K level and fruit weight, reduced the percentage of split fruit and increased yield per tree (Table 1). There was an indication that this treatment reduced the percentage of creased fruits. In some cases fruit splitting might be the result of creasing, a serious peel disorder of 'Valencia' orange, 'Nova' mandarin and others.

Table 1. The effects of foliar spray treatments on leaf K, fruit weight, split fruit and yield of Nova tangerines.

Spray treatment*	Leaf K (% dry weight)	Fruit weight (g)	Split fruit (%)	Yield (kg/tree)
Control	0,50 d**	117 c	27,5 a	47,4 c
KNO_3 (1 spray)	0,50 d	123 abc	18,0 b	54,7 bc
2,4-D (1 spray)	0,69 c	123 abc	15,0 bc	65,4 ab
KNO_3 + 2,4-D (2 sprays)	0,79 b	130 ab	15,0 bc	64,2 ab
KNO_3 + 2,4-D (3 sprays)	1,00 a	134 a	11,0 c	68,8 a

* The concentrations of KNO_3 and 2,4-D were 5% and 20 ppm, respectively, in all tratments.
** Mean separation within columns by Duncan´s multiple range test at P = 0,05.