



Potassium nitrate sprays improved fruit growth and olive oil quality.

The experiment on olive trees was designed to evaluate the influence of foliar nutrition with N and K. Two potassium nitrate sprays at 3% during the second (II) and third (III) phase of development of the fruit increased fruit fresh weight, flesh to pit ratio, dry weight and oil content (Table 1). These foliar sprays also increased the important yield parameters: fruit yield, oil yield and fruit retention (Table 2).

Table 1. Average fruit characteristics of Olive cv. Carolea.

Treatment	Fresh weight (g)	Flesh to pit ratio	Dry weight (g)	Oil content (% PS)
Untreated	3,9	3,9	1,3	32,7
KNO ₃ II + III	4,9	5,1	1,8	38,1
Difference (abs.)	1,1	1,2	0,5	5,4
Difference (%)	27,0	31,0	41,0	17,0

Table 2. Average yield characteristics of Olive cv. Carolea.

Treatment	Fruit yield (kg/tree)	Oil yield (kg/tree)	Increase of fruit retention (%)
Untreated	76,3	6,1	
KNO ₃ II + III	86,9	10,1	
Difference (abs.)	10,6	4,0	
Difference (%)	14,0	65,0	66