



Potassium nitrate sprays positively affected vegetative characteristics of sunflower and safflower grown under salinity.

The effect of 250 ppm foliar application of  $\text{KNO}_3$  was assessed on growth and activity of nitrate reductase in the leaves of sunflower and safflower, subjected to different levels of salinity. In sunflower, leaf area and fresh and dry weight of leaves were increased by 32%, 36,4% and 43,4% respectively in comparison with the non-sprayed control (Table 1). The  $\text{KNO}_3$  foliar spray also increased the nitrate content, NR activity and soluble proteins (Table 2). Potassium nitrate sprays also increased the K concentration and decreased the Cl concentration in the leaves in both crops for all three salinity levels. In sunflower and safflower the benefits of  $\text{KNO}_3$  foliar spray are demonstrated, irrespective to the plant growth under non saline or saline conditions.

Table 1. Effect of foliar application of  $\text{KNO}_3$  on vegetative characteristics of sunflower under different salinity levels. LAI = Leaf Area Index, LFW = Leaf Fresh Weight and LDW = Leaf Dry Weight.

Sunflower		LAI	LFW	LDW
		cm <sup>2</sup>	g	g
Non saline	Control	2894	65,8	13,9
	Foliar $\text{KNO}_3$	3857	97,5	22,6
0,3 % sea-salt dilution	Control	2424	52,5	10,5
	Foliar $\text{KNO}_3$	3465	80,4	17,8
0,6 % sea-salt dilution	Control	1806	34,2	6,7
	Foliar $\text{KNO}_3$	2652	53,8	11,9

Table 2. Effect of foliar application of  $\text{KNO}_3$  on amount of nitrate, nitrate reductase activity and soluble proteins of sunflower under different salinity levels.



Sunflower		Nitrate content leaves	Nitrate reductase activity	Soluble proteins
		$\mu\text{mol (g fw)}^{-1}$	$\mu\text{mol NO}_3 \text{ (g. fw. hr)}^{-1}$	mg/g fw
Non saline	Control	25,6	9,4	25,8
	Foliar $\text{KNO}_3$	29,4	11,0	29,2
0,3 % sea-salt dilution	Control	23,5	8,7	24,0
	Foliar $\text{KNO}_3$	27,5	10,3	27,9
0,6 % sea-salt dilution	Control	18,7	7,1	19,0
	Foliar $\text{KNO}_3$	22,5	8,5	23,3