



Potassium nitrate sprays increased dry fruit yields in plum trees and corrected K-deficiencies

‘French’ prune trees (

*Prunus domestica*

syn. ‘Petite d’Agen’) grown on a fine-textured Wyman loam soil were sprayed with  $\text{KNO}_3$  in Gridley, California (USA). Spray applications (20-22 litres/tree, 43-48 kg/ha) of  $\text{KNO}_3$  were compared with single annual soil applications of potassium chloride (1,4-2,3 kg/tree) or sprays of urea +  $\text{KNO}_3$  with respect to leaf potassium and nitrogen concentrations, fruit size, drying ratio and dry yield.  $\text{KNO}_3$  sprays were as effective or better than soil-applied potassium chloride at maintaining adequate levels of potassium throughout the season. Lowest leaf potassium values, below the adequate level of 1,3% potassium, were found in the trees where no potassium was applied. These trees developed potassium deficiency symptoms. Trees showing below optimum leaf-potassium levels showed a clear yield benefit following spraying. Trees deprived of potassium were the lowest yielding. It was concluded that foliar  $\text{KNO}_3$  sprays applied four times throughout the growing season can correct relative potassium deficiency in ‘French’ prune and can obtain dry yields equivalent to those obtained with soil applications of KCl.