



Foliar applied potassium nitrate outperformed other K sources in terms of maize grain yield

A pot experiment in Thailand was conducted to find the most effective K-salt for foliar K-fertilization of maize plants (

Zea mays

L.) grown with sufficient K-supply to the soil. Glazed clay pots were filled with 23-25 kg soil (air dry), that had been classified as Pakchong series. Different treatment ratios were used to apply equal K concentration of 0,52%. Treatments were: control (no foliar), 1% KCl, 1,4% KNO₃, 1,2% K₂SO₄, 1,8% KH₂PO₄ and 1,2% K₂HPO₄. Sprays were applied on the third day after 50% tasselling (50% of tassels, male flowers, visible). Results showed that only the potassium nitrate spray caused a statistically significant increase in grain yield of 47% compared to the control.

In another pot experiment, maize was sprayed with different potassium nitrate concentrations, ranging from 0,5% to 5% KNO₃. Maximum maize grain yield was obtained with 2,5% KNO₃ spray concentration, which resulted in 36% grain yield increase in comparison to the untreated control plot.