



Increased yield of cotton lint with foliar applications of potassium nitrate

This experiment in cotton from cv. DPL-50 was held at the Tidewater Agricultural Research and Extension Center, Virginia, USA, in a thick free soil for 3 years. The effect of the foliar applications of K on the cotton yield in the experiment was investigated. Foliar sprays were applied every two to three weeks or starting weekly from the first flowering. The source of K was KNO_3 for foliar treatments and KCl was applied to the soil with a recommended dose of 56 kg K_2O /ha. KNO_3 was pulverized at 2.24; 4.48 and 6.72 kg/ha with a hand held carbon dioxide spray at a rate of 15.3 L/ha. Although foliar treatments at intervals of two to three weeks did not significantly increase yield, a slight increase was observed. The KNO_3 applied foliarly at intervals of five to seven days generated a significant increase in the yield of the fiber in comparison with the untreated plots. A 20% increase in fiber yield (196 kg/ha) was observed. The highest fiber yield is associated with the combination in the application of K to soil and foliar, which indicates the importance for the plant of having K available during the development of the cotton acorn. As explained by the author, the doses of KNO_3 applied were lower than in the previous trials with potassium nitrate applied foliarly at a dose of 11.2 kg/ha. This may explain the lack of consistent response to foliar treatments in this trial.