Fluid Fertilizer Foundation

Fluid Facts

TIMELY FOLIAR APPLICATIONS RECTIFY NUTRIENT DEFICIENCIES

Foliar application of specific nutrients is a method used to improve the efficiency of fertilizer use and increase yields. The increased use of foliar fertilizers in crop production in the last decade is due in part to changes in production philosophy. In cotton, for example, the change to cultivars that fruit in a shorter time and mature earlier has placed greater emphasis on understanding plant uptake and use of nutrients.

Summary Points

- *In general, foliar applications should be made early morning or late evening for maximum efficiency, and no foliar applications should be made to water-stressed plants.*
- *Results of field research clearly demonstrate the uptake of foliar-applied nitrogen (^{15}N-labeled) urea by cotton leaves and trans-location to the developing bolls.*
- *Foliar-applied ^{15}N was rapidly absorbed by the leaf to which it was applied (30% within one hour) and translocated into the closet boll within 6 to 48 hours after application.*
- *Potassium (K) fertilizers have a high pH in solution, and adjusting the solution to a pH of 4 to 6 significantly increased uptake and yield.*

Conclusions

Nutrient deficiencies often occur for a variety of reasons, but can be rectified by timely applications of the deficient nutrient. Foliar fertilization is a viable means of applying certain fertilizers that can supplement traditional soil methods.

Advantages of foliar feeding:

- *Low cost*
- *Quick plant response*
- *Lack of soil fixation*
- *Independent of root uptake*
- *Small quantities needed*
- *Higher yields.*

Research Credits

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Full paper is available from the Fluid Journal archives:
http://www.fluidfertilizer.com/PastArt/2009.htm

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