

**FOLIAR FERTILIZATION OF NITROGEN  
ON COTTON IN SOUTH CAROLINA**

**Robert Lippert and John Durant**

**Clemson University**

**Clemson, SC**

**Florence, SC**

**Ken Legé**

**Sure Grow Seed Co.**

**Centre, AL**

**Abstract**

A two-year (1996 and 1997), two-location cotton (*Gossypium hirsutum*) investigation was established to discern the yield and lint quality effects of three different groups of N management treatments. The soils in both locations were coastal plain soils and the cultivar was DPL 90. In all the treatments, the cotton received 20 lb per acre soil applied pre-plant N as ammonium nitrate. The first treatment group investigated the effects of sidedress N rates of 20, 30, 40 and 50 lb per acre. The second treatment group was established to observe the effects of delayed sidedress N applications if excessively wet soils prevented optimum timing of sidedressing. In one treatment, 50 lb per acre N was soil applied 2 weeks after the optimum time. In the second treatment, 10 lb of N was foliar applied as urea and the balance was soil applied 2 weeks later. In the third treatment group, N was sidedressed at the rates of 20, 30 and 40 lb per acre and the balance required for a total application of 70 lb per acre was foliar applied in 10 lb per acre increments as urea at various stages of bloom. There was no statistical difference for lint or seedcotton yield as well as percent lint turnout when averaged for all the treatments at both locations and both years. The treatments did not significantly affect percent N in the leaf tissue at late bloom nor the fiber quality determined with HVI analysis. Subsequently, this research shows that for these situations, a grower can use the N application scenario which is best adapted to his weather conditions and management program.