# Yield and Fiber Quality of Cotton as Influenced by Nitrogen Nutrition. (C02-read130638-Oral)

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## **Abstract:**

Nitrogen (N) deficiency decreases yield in cotton, and may thus influence fiber quality. Plants were grown outdoors in large pots using half-strength nutrient solution (control) via a drip irrigation system until some three-row plots received a restricted N supply. Treatments comprised control N throughout; 20% N from first square (N1-S); 0% and 20% N from first flower (N2-F and N1-F); and 0% N from boll-filling stage (N2-B) in 1999 and 2000. Lint yield was determined from each of 10 plants per row (replicate). Mature bolls were harvested by hand and grouped according to week of anthesis across a five-week flowering period, and lint quality was determined for each group. Results indicate N1-S and N2-F treatments had lowest yield per plant, and generally lower fiber strength than controls. Micronaire was lowest in controls, and ranged from 4.2-5.0 in 1999, and 4.0-4.4 in 2000 across N treatments. Micronaire and strength were generally highest in N2-B treatment, and was mainly due to micronaire values of about 4.9 from late July-early Aug flowering week. Specific glycan oligomers increased in N2-F and others were reduced in N1-S bolls at 20 days post anthesis.

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