

PETIOLE NITRATE LEVELS IN NARROW-ROW COTTON

M.D. Openshaw and C.R. Farr

Nitrogen management in narrow-row cotton culture is important in most soils to obtain the most economical yield. One nitrogen diagnostic tool that has been used in cotton production is petiole nitrate analysis. The nitrate level is monitored during the season and can be used to indicate when nitrogen additions are required.

Three soil types were chosen to study the petiole nitrate levels of narrow-row cotton culture. Five levels of ammonium nitrate were applied to the soil before planting. The plots were 150 feet long and six beds wide (40-inch beds). The treatments were replicated five times and arranged in a Latin square design. The center two rows of each plot were harvested.

Even though there were differences in the petiole nitrate levels the yields were similar. The soils used in these trials had sufficient nitrogen in their profiles to grow the narrow-row cotton without applying fertilizer nitrogen. This reinforces the recommendation that there is little need to add nitrogen initially when the soil test levels are above 20 ppm and the petiole levels remain above 3000 ppm.

Caution should be used in using these guidelines to interpreting petiole nitrate data of narrow-row cotton. This is only one year of data and next year may present a different picture and interpretation.

\* \* \* \* \*

NARROW-ROW SHORT STAPLE VARIETY TRIAL

Larry Carpenter - Safford

Agent in Charge - J.L. Sears

Variety	Rep.		lbs. seed cotton /A	% turnout <sup>1/</sup>	lbs. lint /A
	I	II			
Stoneville 213	860	780	3183.6	28.0	891
DPL-16	630	780	2606.4	31.7	826
Rilcot Stripper S	710	720	2866.5	28.0	803
Dunn 56C	750	780	2951.8	28.0	827
Dunn 118	700	790	2843.6	27.1	771
Rilcot Stripper N	620	710	2527.8	28.9	731
Dunn 119	600	670	2404.9	28.9	695

<sup>1/</sup> Percent turnout based on laboratory gin results.

CROP HISTORY: Previous crop - cotton. PRE-IRRIGATED 3/7/71. FERTILIZER: No fertilizer applied. Irrigation water contained 20 lb N/A in each 12" of water applied. PLANTED: 4/12/71. PLANTING RATE: 28-30 lb seed/A. PLANTING PATTERN: 2 rows/bed seed rows 8" apart on 38" beds. Plot size 2 beds. HARVEST: 11/20/71 with a Garland stripper.