Nitrogen levels and its correlation with the Chlorophyll content in Cotton. (S04-furlani074551-Poster)

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Abstract:

Nitrogen deficiency can be observed throughout the life cycle of cotton plants, but quantifying the extent of the deficiency is difficult. Advances in other crops using the spad 501 chlorophyll meter prompted an evaluation of the instrument for quantifying N and chlorophyll levels in cotton. This work was carried out at the experimental station of the Sao Paulo State University, located at the county of Ilha Solteira, Brazil. One trial was conduced under greenhouse conditions with the cotton cultivar IAC 23 in pots. The N was supplied from 0 to 175 mg per plant, applied in January 22 of 2001, in a randomized completely design with 5 replications. The chlorophyll contents were estimated using the spad 501 chlorophyll meter. Eight sets of readings were collected at approximately 7 days intervals. Nitrogen supply did not affect chlorophyll content until the third set of readings. Thereafter increasing nitrogen supply up to 3 g of urea was associated with increasing chlorophyll content, and N supply above 3 g was associated with lower chlorophyll content. These data suggest that the SPAD 501 meter may be useful for cotton to estimate nitrogen and chlorophyll content as affected by nitrogen supply.

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