

Research Article

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Effect of nitrogen scheduling on nitrogen use efficiency and performance of wheat (*Triticum aestivum* L.) in light textured soil

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Summary

A field experiment was conducted on wheat (*Triticum aestivum* L.) during *Rabi* season of 2005-06 at Crop Research Center of Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut. The experiment was aimed to evaluate the effect of different nitrogen scheduling and LCC based nitrogen scheduling in wheat. The experiment comprised of ten treatments was laid out in Randomized Block Design, with three replications. The major treatments were, control (where no nitrogen was applied), 50 % N in basal+25 % N at CRI + 25 % at tillering stage, 25 % N in basal + 25 % N at CRI + 25 % N at tillering + 25 % N at jointing stage, 37.5 % N in basal + 25 % at CRI + 37.5 % N at tillering stage, 50 % N at CRI + 50 % N at tillering stage, 50 % N at CRI + 25 % N at tillering + 25 % N at jointing stage, 50 N in basal + 25% N at tillering + 25% N at jointing stage, 25% N in basal + 37.5% N at CRI + 37.5 % N at tillering, 25% N in basal + 50% N at CRI + 25% N at tillering stage, and nitrogen applied on LCC (Leaf colour chart) based. In different nitrogen scheduling treatments, LCC based nitrogen scheduling treatment was found most efficient than recommended and other nitrogen scheduling treatments in terms of increased wheat yield and nitrogen use efficiency. Application of 25% N in basal + 50% N at CRI + 25% N at tillering stage was also found superior than other treatments, increased these parameters, but it was inferior to the LCC based nitrogen scheduling treatment. AE_N and RE_N also improved due to LCC based nitrogen application. LCC based nitrogen scheduling practice also reduces the over application of nitrogen which can be susceptible to different losses including leaching, ammonium volatilization and runoff.

Key words : Nitrogen use efficiency, LCC, Nitrogen scheduling

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