

## Seed Yield and Quality of Late Planted Rabi Wheat Crop as Influenced by Basal and Foliar Application of Urea

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**Abstract :** A field experiment was conducted with three basal nitrogen levels (90, 120 and 150 kg N/ha) and five foliar application of urea (absolute control, water spray, 3% urea spray at anthesis, 7 and 14 days after anthesis) at G.B. Pant University of Agriculture & Technology, Pantnagar, U.S. Nagar (Uttarakhand) during rabi season in a factorial randomized block design with three replications. Results revealed that nitrogen application of 150 kg/ha produced the highest seed yield, straw and biological yield and it was significantly superior to 90 kg N/ha and was at par with 120 kg N/ha. The number of tillers increased significantly with increase in nitrogen doses up to 150 kg N/ha. Spike length, number of grains per spike, grain weight per spike and thousand seed weight showed significantly higher values with 120 kg N/ha than 90 kg N/ha and were at par with that of 150 kg N/ha. Also, plant height showed similar trend. Leaf area index and chlorophyll content showed significant increase with an increase in nitrogen levels at different stages. In the case of foliar spray treatments, urea spray at anthesis showed highest value for yield and yield attributes. In case of spike length and thousand seed weight, it was similar with the urea spray at 7 and 14 days after anthesis, but for rest of the yield attributes, it was significantly higher than rest of the treatments. Among seed quality parameters protein and sedimentation value showed significant increase due to increase in nitrogen rates whereas, starch and hectolitre weight had a decreasing trend. Wet gluten content was not influenced by nitrogen levels. Foliar urea spray at anthesis resulted in highest value of protein and hectolitre weight whereas, urea spray at 7 days after anthesis showed highest value of sedimentation value and wet gluten content.

**Keywords :** foliar application, nitrogenous fertilizer, seed quality, yield

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