

BALANCE FERTILIZATION FOR HIGH SUSTAINABLE RICE (*ORYZA SATIVA* L.) YIELD AND QUALITY IN CENTRAL ALLUVIAL SOILS OF UTTAR PRADESH

Kautilya Chaudhary¹, Puspendra Kumar², H.C. Tripathi¹ and Pardeep Kumar*³

¹Department of Soil Science and Agricultural Chemistry, C. S. Azad University of Agriculture & Technology, Kanpur-208002 (U.P.)

² Department of Agronomy, C. S. Azad University of Agriculture & Technology, Kanpur-208002 (U.P.)

³Department of Soil Science, S.V.P. University of Agriculture & Technology, Meerut-250110 (U.P.)
Email: sehravat@gmail.com

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Abstract: The pot experiment was conducted at soil science laboratory of C. S. Azad University of Agriculture & Technology, Kanpur with 150kg N+ 75kg P₂O₅+ 75kg K₂O ha⁻¹ in rice crop during kharif 2011. The other treatments included the 125% increased doses of above and sulphur (60 kg ha⁻¹) and zinc (5 kg ha⁻¹) were added since the experimental soil was deficient in these two nutrients. Mustard was grown after rice on the residual nutrients of the same treatments with application of 80 kg N ha⁻¹ uniformly. The results revealed that rice yields varied from 49.0 to 73.0 q ha⁻¹ and NPK raised by 125% with 60 kg S ha⁻¹ and 5kg Zn ha⁻¹ gave the highest yields. The starch content varied from 65 to 71%, amylose from 27 to 34% and amylopectin from 66 to 73%. The treatment T₈ (187.5N + 93.75 P₂O₅ + 93.75 K₂O + 60 S + 20 Zn Kg ha⁻¹) gave the best result in terms of yield and crop quality.

Keywords: Balanced fertilization, Rice yield, Starch, Amylose, Amylopectin

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*Corresponding Author