RESEARCH ARTICLE

EFFECT OF INTEGRATED NUTRIENT MANAGEMENT ON GROWTH AND DEVELOPMENT OF MUSTARD (*BRASSICA JUNCEA* L.) IN IRRIGATED CONDITION OF UPPER GANGETIC PLAINS

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Abstract: A field experiment was conducted to study the effect of integrated nutrient management on growth and development of mustard (*Brassica Juncea* L.) under timely sown irrigated conditions on sandy loam soil at Students' Instructional Farm (SIF) of C.S. Azad University of Agriculture and Technology, Kanpur. The experiment was laid out in Randomized Block Design replicated thrice. The treatments comprises of either 100% RDF (N:P:K:S) @ 120:60:40:40 kg ha^{-1} or 75 % RDF @ 90:45:30:30 kg ha^{-1} or 50 % RDF @ 60:30:20:20 kg ha^{-1} along with combinations of vermicompost @ 1.25 t ha^{-1} or 0.62 t ha^{-1}, FYM @ 5 t ha^{-1} or 2.5 t ha^{-1} with bio-fertilizers (azotobacter + PSB) @ 7.5 Kg ha^{-1} + $ZnSO_4$ @ 10 Kg ha^{-1}. The results of the present investigation revealed that the growth and yield traits *viz.*, plant height at maturity (201.41cm), number of branches at maturity (7.59 primary, 9.37 secondary and 3.97 tertiary branches), LAI at 90 DAS (4.46), dry matter accumulated at maturity (44.23 g/plant) and grains yield (23.25 q ha^{-1}) were recorded significantly highest with application of 50% RDF + FYM @ 2.5 t ha^{-1} + vermicompost @ 0.62 t ha^{-1} + bio-fertilizers @ 7.5 kg ha^{-1} + $ZnSO_4$ @ 10 kg ha^{-1}. Hence, it may be recommended for farmers for higher yield in the area of Upper Gangetic Plains.

Keywords: Development, Fertilizers, FYM, Growth, Mustard, Vermicompost

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