RESEARCH ARTICLE

EFFECT OF INTEGRATED NUTRIENT MANAGEMENT PRACTICES ON LAI AND QUALITY PARAMETERS OF *BARLEY*

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Abstract: The present study entitled, "Effect of integrated nutrient management practices on LAI and quality parameters of *barley*" was conducted during the *rabi* season of 2017-2018 at the Agronomy Research Farm of Chaudhary Charan Singh Haryana Agricultural University, Hisar to study the effect of different nutrient management practices on quality parameters of barley. The soil of the experimental field is sandy loam in texture, slightly alkaline in reaction, low in organic carbon and nitrogen, medium in available phosphorus and potassium. The experiment was laid out in Randomized Block Design replicated thrice with ten different treatments viz. T_1(Control) , T_2 (*Biomix*) , T_3 (Vermicompost @ 5 t ha^{-1}), T_4 (*Biomix* + Vermicompost @ 5 t ha^{-1}), T_5 (50 % RDN + *Vermicompost* @ 5 t ha^{-1}), T_6 (75 % RDN + *Vermicompost* @ 5 t ha^{-1}), T_7 (50% RDN + *Biomix* + Vermicompost @ 5 t ha^{-1}), T_8 (75 % RDN + *Biomix*+ Vermicompost @ 5 t ha^{-1}), T_9 (RDN) and T_{10} (RDN + *Biomix* + Vermicompost @ 5 t ha^{-1}). Among various combinations of nitrogen fertilizer, *biomix* and vermicompost leaf area index at 30 DAS was highest in treatment T_{10}, being significantly higher than other treatments but statically at par with treatment T_8 and T_9. Similarly at 60 and 90 DAS the difference in leaf area index value of barley at in treatment T_8, T_9 and T_{10} were not significant but higher than other treatments. Treatment T_{10} (11.74 %) being at par with treatment T_3 to T_9 resulted in significantly higher protein content of barley and treatment T_1 being at par with treatment T_2 recorded significantly higher value of malt content of barley than treatment T_3 to T_{10}. But various combinations of nitrogen fertilizer, *biomix* and vermicompost fail to influence hectoliter weight and boldness as well as thinness of barley grain.

Keywords: Barley, Nutrient, Rabi

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