



RESEARCH PAPER

Fertilizer management in *Hordeum vulgare* L.

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Abstract : A field experiment was conducted at Bhagwant University, Ajmer during *Rabi*, 2016-17 on loamy sand soil, which consisted of 4 fertility levels (control, 50, 75 and 100% RDF) and 5 foliar spray (water spray, 2% urea, 3% urea, 2% DAP and 2% KCl spray at tillering and flowering) there by making 20 treatment combinations were tested in Randomized Block Design with three replications. Results indicated that application of 100% RDF significantly increased the plant height at harvest, number of tillers per meter row length at 90DAS and at harvest, dry matter accumulation per meter row length, number of spikes per plant, spike length, seeds per spike, yields (seed, straw and biological), total uptake of nitrogen and potassium and net returns over preceding levels. Whereas, plant height at 60, 90 DAS, total number of tillers per meter row length at 60 DAS and potassium concentration in seed and straw and total uptake of phosphorus increased significantly upto 75% RDF. However, in respect of plant height at 30 DAS, chlorophyll content and harvest index and the treatments 50 to 100% RDF remained almost same. Results further indicated that among foliar spray treatments, application of 2 % urea as foliar spray being at par with 2% DAP, 3% urea and 2% KCl spray, significantly increased plant height, total number of tillers per meter row length, dry matter accumulation per meter row length, chlorophyll content in leaves, spike per plant, number of seeds per spike, spike length, yields (seed, straw and biological), protein content, nitrogen, phosphorus and potassium concentration in seed and straw, total uptake of nitrogen, phosphorus, potassium and net returns over water sprayed control. Application of 75% RDF with 2% urea spray proved to be the best treatment combination in terms of number of tillers per meter row length and seed yield.

Key Words : RDF, Biological control, Spray, Protein, Barley

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