

Effect of *in-situ* soil moisture conservation practices and its interaction with nutrients in yield, quality and economics of sorghum [*Sorghum bicolor* (L.) Moench]

■ P. SINGH, H.K. SUMERIYA¹ AND M.K. KAUSHIK¹

AUTHORS' INFO

Associated Co-author :

¹Department of Agronomy, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, UDAIPUR (RAJASTHAN) INDIA

Author for correspondence :

P. SINGH

Department of Agronomy, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, UDAIPUR (RAJASTHAN) INDIA

ABSTRACT : The present study was undertaken to find out the effect of *in-situ* soil moisture conservation practices and splitting of NPK fertilizers application on productivity of sorghum. The field experiment was conducted during *Kharif* season of 2004 to 2006 at Udaipur to study the effect of moisture conservation practices and fertilizers levels on sorghum. Results from the present investigation revealed that among soil moisture conservation practices, ridge and furrow practice recorded maximum plant height, dry matter accumulation plant¹ at 60 DAS and at harvest. On pooled basis, it recorded 12.10, 10.47 and 10.95 per cent higher in grain, fodder and biological yields, 11.44 and 11.86 per cent in gross and net returns over compartmental bunds. Further results revealed that split application of fertilizers ($\frac{1}{2} + \frac{1}{2}$ and $\frac{1}{3} + \frac{1}{3} + \frac{1}{3}$) recorded maximum growth. Growth yield attributes, yields NPK and protein content and uptake over control. On pooled basis, application of nitrogen $\frac{1}{3} + \frac{1}{3} + \frac{1}{3}$ recorded 3.56, 18.81, 13.17, 14.82 and 15.94 per cent higher in text weight grain, fodder, biological yields and net returns over control, respectively.

Key Words : *In-situ*, Sorghum, Yield, Economics, Nutrients

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