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Impact of organic manures and hydrophilic polymer hydrogel on conservation of moisture and sunflower production under rainfed condition

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ABSTRACT : The experiment was conducted at Oilseeds Research Unit Dr. P. D. K. V, Akola, during 2015-16 using a Randomized Block Design with three replications along with seven treatments *viz.*, RDF (80:60:30), RDF + 5t FYM/ha spreading across field, RDF + 2.5t FYM/ha in seed furrows, RDF + hydrogel @ 2.5kg/ha in seed furrows, RDF + humic acid @ 2.5 kg/ha in seed furrows, RDF + vermicompost @ 2.5t/ha in seed furrows and RDF + Fly ash @ 2.5 t/ha in seed furrows. This study was carried out with specific objectives of higher moisture retention and slow release to tide over intermittent drought in *Kharif*. The result showed that growth parameters *viz.*, plant height, head diameter and 100 seed weight varied significantly due to use of moisture retentive material on sunflower. Application of 100 per cent RDF with vermicompost @ 2.5t/ha recorded highest seed yield which was at par with the application of 100 per cent RDF with hydrogel. Remaining treatments were at par with each other. Among the treatments, highest moisture was observed with application of 100 per cent RDF with vermicompost @ 2.5t/ha at 30 DAS. After 45 DAS, 60 DAS and at harvest application of 100 per cent RDF with hydrogel @2.5 kg/ha in seed furrows recorded highest moisture percentage at different growth stages followed by vermicompost.

KEY WORDS : Sunflower, Organic manure, Yield

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