

Nutrient management options in ravine of Chambal and its affects on growth and yield of wheat (*Triticum aestivum* L.)

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ABSTRACT : A field experiment was conducted for two consecutive *rabi* seasons (2013-14 and 2014-15) on degraded sandy clay loam soil to evaluate the effect of integrated and chemical fertilizers on wheat (*Triticum aestivum* L.) at Aisah village (Ambah, district Morena) on Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya farm situated in the ravines of Chambal river. The experiment consisted seven treatments viz. Farmer Practices (T_1), 100% RDF (T_2), 150% RDF (T_3), STCR Based NPK Application (T_4), 50% RDF+5 ton FYM/ha + PSB+ $ZnSO_4$ @ 25 kg/ha (T_5), 75% RDF+2.5 ton FYM/ha+ PSB+ $ZnSO_4$ @ 25 kg/ha (T_6), Organics Practices FYM @10 tone/ha + PSB+Azotobacter (T_7). The experiment was laid out in a RBD design with three replications. The results revealed that the maximum CGR (2.83, 4.70, 18.52, 27.80 /g/m²/day), RGR (0.047, 2.349, 2.667, 3.077, g/g/day) and dry matter (128.8, 236.4, 623.5, 1457.5, g/m²) at 45, 70, 90 DAS to the harvest stage, at pooled basis, respectively was observed with application of 75% RDF+2.5 ton FYM/ha+ PSB+ $ZnSO_4$ @ 25 kg/ha (T_6), which was followed by 150% RDF (T_3) and both treatments were at par with each other and significantly higher over rest of remaining treatments. The maximum grain and straw yield (3984 kg/ha and 4454 kg/ha) was also noted in T_6 (75% RDF+2.5 ton FYM/ha+ PSB+ $ZnSO_4$ @ 25 kg/ha), which was statistically at par with T_3 and significantly higher over rest of the remaining treatments. The minimum grain and straw yield (1915 and 2245 kg/ha) was observed in farmer practices.

Key Words: Degraded ravine soil, CGR, DM, RGR, wheat yield.