



RESEARCH PAPER

On farm performance of different weed control methods of wheat in front line demonstrations in Hathras district of Uttar Pradesh

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Abstract : Present study entitled “On farm performance of different weed control methods of wheat in front line demonstrations in Hathras district of Uttar Pradesh” was conducted during two consecutive *Rabi* seasons of years 2012-13 and 2013-14 at farmer’s fields of district Hathras, to find out the best suitable weed control method of wheat for the area. Front line demonstrations (FLDs) on wheat crop were conducted on an area of 12.8 ha with active participation of 32 farmers of 23 different villages with improved technologies composed HD-2967 variety and recommended package of practices. Two different weed control technologies *viz.*, Sulfosulfuron 75 WG + Metsulfuron 5 WG @ 30 g a.i./ha at 35 DAS and Sulfosulfuron 75 WG @ 25g a.i/ha at 30 DAS + one hand weeding at 45 DAS, were demonstrated. The results revealed that both the treatment gave higher grain yield, gross return and net return as compared to farmers practice (Sulfosulfuron 75 WG @33.3 g/ha at 40 DAS). The maximum grain yield (47.40q/ha with HI of 40.79%) was obtained during the year 2013-14 when Sulfosulfuron 75 WG @ 25g a.i/ha at 30 DAS + one hand weeding at 45 DAS was applied which was 20.90 per cent higher than the yield of farmers practice. This was followed by treatment of Sulfosulfuron 75 WG + Metsulfuron 5 WG @ 30 g a.i./ha at 35 DAS which gave yield of 47.20q/ha with an increment of 17.12 per cent over farmers practice. The similar trend was also reported for biological yield of wheat. Economic analysis of different weed control methods also showed the highest net returns (INR. 45072 ha⁻¹) for application of Sulfosulfuron 75 WG @ 25g a.i/ha at 30 DAS + one hand weeding at 45 DAS treatment. Among the demonstrated technologies, both were found effective to weed management and profitable over farmers practice. The increment in net return due to weed control treatments was recorded highest (31.89%) during the year 2013-14 when Sulfosulfuron 75 WG @ 25g a.i/ha at 30 DAS + one hand weeding at 45 DAS was applied which also gave the maximum increase in gross return of Rs. 5.7 per rupee additionally invested. It was concluded that one hand weeding at 45 DAS should be done with application of Sulfosulfuron 75 WG @33.3 g/ha or premixed weedicide Sulfosulfuron 75 WG + Metsulfuron 5 WG @ 30 g a.i./ha at 35 DAS should be used for obtaining higher grain yield, straw yield, gross and net income with higher B: C ratio from wheat under Hathras conditions of Uttar Pradesh.

Key Words : Wheat, FLD, Weed control, Gross/ Net return, Cost of cultivation, Net return, B:C ratio, Sulfosulfuron, Metsulfuron

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