

Impact of front line demonstration on mustard in transfer of improved technology in Ghazipur district of eastern Uttar Pradesh

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ABSTRACT : This study investigated an impact of Front Line Demonstrations (FLDs) conducted by Indian Council for Agricultural Research (ICAR) on mustard through Krishi Vigyan Kendra's (Farm Science Center's). The study was carried out during *rabi* season in villages of Ghazipur, Uttar Pradesh during 2009-10 to 2012-13 in area of 25 ha by the active participation of farmers with the objective to demonstrate the improved technology of mustard production potential. The improved technologies consisting use of modern variety, seed treatment with PSB culture, balanced fertilizer application on the basis of soil test value and pest management. Improved practices recorded higher yield as compared to farmer's practices. The improved technology recorded higher yield of 20.5, 22.0, 21.5 and 20.4 q/ha in the year 2009-10 to 2012-13, respectively than 14.0, 14.0, 14.3 and 12.4 q/ha. In spite of increase in yield of mustard, yield attributing attributes, technology gap, extension gap and technology index existed. The improved technology gave higher gross return (51250, 55000, 64500 & 65280 Rs./ha), net return (39288, 43930, 52650 & 43231 Rs./ha) with higher benefit cost ratio (4.28, 4.96, 5.44 & 2.96) as compared to farmer's practices. The variation in per cent increase in the yield was found due to the lack of knowledge, and poor socio economic condition. Under sustainable agricultural practices, with this study it is concluded that the FLDs programmes were effective in changing attitude, skill and knowledge of improved package and practices of HYV of mustard adoption.

Key Words : Adoption, B:C ratio, Economic impact, FLDs, mustard.

Table-1 : Differences between technological intervention and farmers practices under FLDs in mustard.

S. No.	Particulars	Technological intervention	Existing practices	Gap
1	Farming situation	Irrigated	Rainfed	Full gap
2	Variety	NDR-8501	Varuna	Partial Gap
3	Time of sowing	20-25 Oct.	1 st of Nov.	Partial Gap
4	Method of sowing	<i>Line Sowing</i>	Broadcast	Full gap
5	Seed treatment	Carbendazim	No seed treatment	Full gap
6	Seed rate	4-5 kg/ha	3-4 kg/ha	Partial Gap
7	Fertilizer dose	N:P:K:S=120:40:40:30	Imbalance	Full gap
8	Plant Protection	Endosulfon	No plant protection	Full gap
9	Weed management	Pendimethalin	No weed management	Full gap

Table-2 : Yield and yield attributing character of mustard variety NDR-8501 under and FLDs.

Year	Variety	Trial No.	Area (ha)	Average yield (q/ha)		Per cent increase	No. of siliquae/plant	
				Trial	Farmers practice		Trial	Farmers practice
2009-10	NDR-8501	38	10.0	20.5	14.0	46.42	246	183
2010-11	NDR-8501	11	5.0	22.0	14.0	57.14	264	186
2011-12	NDR-8501	20	5.0	21.5	14.3	50.35	257	197
2012-13	NDR-8501	15	5.0	20.4	12.4	64.52	247	180
Total/Average		84	25	21.1	13.7	54.61	254	187

Table-3 : Technology & Extension gap and Technological Index of mustard variety NDR-8501 under FLDs.

Year	Variety	Trial No.	Area (ha)	Technology gap (q/ha)	Extension gap (q/ha)	Technological index (%)
2009-10	NDR-8501	38	10.0	4.5	6.5	18
2010-11	NDR-8501	11	5.0	3.0	8.0	12
2011-12	NDR-8501	20	5.0	3.5	7.2	14
2012-13	NDR-8501	15	5.0	4.5	8.5	18
Total/Average		84	25	3.9	7.6	16

Table-4 : Economic Impact of mustard variety NDR-8501 under FLDs.

Year	Variety	Trial No.	Area (ha)	Gross Income(Rs/ha)		Net Return(Rs/ha)		B:C Ratio	
				Trial	Farmers practice	Trial	Farmer's Practice	Trial	Farmer's Practice
2009-10	NDR-8501	38	10.0	51250	35000	39289	24800	4.28	3.43
2010-11	NDR-8501	11	5.0	55000	35000	43930	24500	4.96	3.33
2011-12	NDR-8501	20	5.0	64500	42900	52650	31700	5.44	3.83
2012-13	NDR-8501	15	5.0	65280	39680	43231	22008	2.96	2.24
Total/Average		84	25	59008	38145	44775	25752	4.41	3.21

