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Assessment of front line demonstrations at the yield of mustard in eastern Uttar Pradesh

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Abstract

Mustard is one of the greatest basic oilseeds crop in India, which plays a central capability in enhancing the pay of little and peripheral ranchers of Mau region s in Eastern Uttar Pradesh. One of the fundamental requirements of conventional mustard cultivating is low efficiency due to non-reception of supported bundle of practices and ventured forward assortments. To supplant this inconsistency, Krishi Vigyan Kendra underneath ANDUAT, Ayodhya had performed bleeding edge exhibits at followed ranchers' fields. Cultivation rehearses contained under FLD *viz.*, utilization of ventured forward assortment, line planting, adjusted use of composts and control of mustard aphid through insect spray at monetary limit level affirmed that percent blast inside the yield of mustard went from 428.35% to forty eight. Seventy seven% over neighbouring investigate all through the heading of examine from 2008 to 2012. The time opening of 1.Ninety nine q/ha as least during 2012 to limit of 6.88q/ha on the primer degree of check out (2012) recommends the space in showing yield over capacity yield, but the above opening diminished eventually inside the next years.

Keywords: Frontline demonstration, technology gap, extension gap, technology index, mustard.

Introduction

Mustard is the major kind of revenue for the peripheral and little ranchers in rainfed regions. Due to its low water necessity (eighty-240 mm), mustard crop suit pleasantly inside the rainfed trimming gadget. Among the oilseed vegetation, mustard positioned ensuing to ground nut (*Arachis hypogaea* L.) and soybean [*Glycine max* (L.)] in commitment to the oilseed producing. Indian mustard [*Brassica juncea* (L.) Czernj and Cosson] is transcendently developed in Rajasthan, Uttar Pradesh, Haryana, Madhya Pradesh and Gujarat. Uttar Pradesh cash owed for 10.85% and 11.19% of area and assembling, separately in the country with the typical yield of 11.Forty nine q/ha that is equivalent to the public normal (11.17 q/ha). The mustard creation situation inside the nation has gone through an ocean trade. The advanced age applications had been likewise seen to be monetarily alluring. However, reception stages for a few added substances of the cutting edge innovation were low, underlining the requirement for higher spread. A few biotic, abiotic and socio-monetary limitations repress double-dealing of the yield capacity and those should be tended to. The country-reasonable yields got both under superior innovation and ranchers' training levels from 12 to every available ounce of effort among states and the countrywide normal being 36%. The extra assembling that might be achieved by taking advantage of the yield hole at public stage is around 2 million tones. Keeping the above point in view, the FLD on mustard the utilization of new harvest creation time become begun with the objectives of showing the compelling possibilities of the new creation innovation under genuine ranch situation over the locally developed mustard crop.

Methodology

The present examine changed into done through the Krishi Vigyan Kendra Mau underneath ANDUAT, Ayodhya during rabi season from 2008 to 2012 (5years) inside the ranchers' fields of 5 followed towns of Mau area in Eastern Fields Zone of Uttar Pradesh. Overall 250 cutting edge exhibits in 50 ha place detached towns have been performed. Materials for the present see with respect to FLDs and ranchers' practices had been given in Table 1. In the event of neighborhood check plots, existing works on being used by ranchers had been followed. As a general rule, soils of the area underneath investigate were sandy topsoil to loamy sand and medium to low in fruitfulness prominence. The FLD transformed into led to examine the holes among the capacity yield and exhibit yield, augmentation hole and innovation record.

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In the current assessment analyze, the measurements on result of mustard development have been gathered from FLD plots, aside from the insights on neighboring practices commonly

took on with the guide of the ranchers of this area had been additionally amassed.

Table 1: Particulars showing the details of mustard growing under FLD and farmer practice

S. No.	Operation	Farmer practice	Improved practices demonstrated
	Use of seed	Local seed	NDR- 8501, an improved variety from NDUAT, Faizabad, New Delhi. Line sowing by country plough followed by thinning at 30 DAS 120:40:40 (Kg N: P: K/ha); P through single super phosphate as it contains 12% sulphur. Three sprayings of dimethoate 30 EC@625, 850 and 1000 ml dissolved in 625, 850 and 1000 liters of water/ha, respectively at 15 days interval when aphid reached the economic threshold i.e. 44 aphids cm central twig.
	Sowing method	Broadcasting	
	Fertilizer application	80:40:0 (Kg N:P:K/ha)	
	Control of mustard aphid	No any control measure	

Table 2: Exploitable productivity, technology gaps, technology index, extension gaps and cost benefit ratio of mustard as grown under FLD and farmer practice.

Year	Area (ha)	No of FLDs	Yield (q/ha)		% increase over FP	Extension Gap (q/ha)	Technology Gap (q/ha)	Technology index (%)	BC ratio	
			FLD	FP					FLD	FP
2008	10	50	15.12	11.78	28.35	3.34	6.88	31.27	1.91	1.11
2009	10	50	16.22	11.46	41.54	4.76	5.78	26.27	2.02	1.13
2010	10	50	18.02	12.34	46.03	5.68	3.98	18.09	2.24	1.15
2011	10	50	19.14	13.24	44.56	5.90	2.86	13.00	2.48	1.26
2012	10	50	20.01	13.45	48.77	6.56	1.99	9.05	2.62	1.31

* Innovation hole = Likely yield - Show yield

* Augmentation hole = Show yield - yield under existing practice

* Innovation record = {(Potential yield - Show yield)/Potential yield} x 100

* The dirt surface of showing plots went from sandy advance to loamy sand and medium to low in richness status.

Results and Discussion

Consequences of 250 cutting edge shows performed for the span of 2008 to 2012 of every 50 ha area on ranchers' fields of ten towns of Mau region demonstrated that the development rehearses contained under FLD *viz.*, utilization of cutting edge range (NDR-8501), line planting, adjusted utility of manures (N:P:K@a hundred and twenty: 40:40 kg/ha⁻¹) and oversee of mustard aphid through insect spray at monetary limit stage, created on a normal forty one. Eighty five % more prominent yield of mustard in contrast with adjacent check (12.45 q/ha). The outcomes show that the forefront exhibit has given an astonishing effect over the cultivating organization of Mau regions as they were roused through the fresh out of the plastic new agrarian advancements applied inside the FLD plots. Information furthermore affirmed that the yield of mustard inside the next years expanded progressively which really discusses the excellent effect of FLD over current acts of mustard development (Table 2). In addition from first yr onwards, ranchers coordinated energetically in wearing out of FLDs which cause empowering results inside the following years. The period hole found might be ascribed to the divergence in the dirt ripeness acclaim and climate circumstances. Subsequently, range wise area exact proposal is by all accounts important to lessen the innovation opening for yield level in excellent circumstances. The greatest expansion holes which went from three. 34 q/ha to 6.56 q/ha at some stage in the time of investigate accentuated the need to show the ranchers through different way for the reception of further developed farming assembling advancements to inverse this design of wide augmentation opening. Increasingly more utilization of late assembling advances with unnecessary yielding sorts will thusly substitute this disturbing pattern of running augmentation opening. The new innovation will ultimately prompt the ranchers to discontinuance of old fashioned sorts with the pristine age. The period file recommends the achievability of the created innovation on the ranchers' fields. The lower the expense of

age file more prominent is the achievability of the age. Accordingly, decrease of innovation file from 31.27% (2008) to 9.05% (2012) displayed the achievability of period laid out (Table 2).

Conclusion

By taking part in bleeding edge exhibits of checked innovation, yield capacity of mustard can be extended to a magnificent volume. This will remarkably blast the pay as well as the vocation of the cultivating local area. There is a need to embrace multi-pronged methodology that remembers improving mustard creation through advanced innovations for Mau and Basti locale. This should be brought to the get section to of ranchers through switch of innovation focuses like KVKs.

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