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Increase oil seed crops production through cluster from line demonstrations

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Abstract

Field demonstrations were conducted in Kharif and Rabi season 2016-17 and 2017-18 at village Bhaguwala and Jahanpur Block Muzaffarabad, Bidvi and Jagheta jujar block Nakura and Maheshpur block Devband district Saharanpur UP under cluster front line demonstrations programme to evaluate the yield in oil crops of the different varieties of groundnut and mustard crop. It was found that mustard variety RH-749 given highest yield 24.6 q/ha in year 2016-17 and 26.8 q/ha in year 2017-18. The average yield (both year pooled) 25.7 q/ha and local variety (Kranti) yield was 18.6 q/ha in 2016-17 and 18.2 q/ha yield was found 2017-18. The average yield (both year pooled) was 18.4 q/ha. The demonstrated variety RH-749 give the 39% higher yield and B.C. Ratio of RH-749 was 4.05 and local variety B.C. Ratio was 2.7. It was also significantly higher than local variety (Kranti). In groundnut the demonstrated variety average yield was 25 q/ha in year 2016-17 and 21.6 q/ha was 20.5 q/ha 21.6 q/ha 2017-18 while check variety (Chandra) yield was 15 q/ha in year 2016-17 and 16.5 q/ha was found in 2017-18. The yield of demonstrated variety (TG-37 A) was also significantly higher than check variety yield. The B.C. Ratio of demonstrated variety in 2016-17 was 2.26 while check variety B.C. Ratio was found 1.9 in 2017-18. The B.C. Ratio of demonstrated variety was also higher. The result revealed that the yield of demonstrated variety of mustard (RH-749) and groundnut variety TG-37A was higher than check varieties yield. So it is recommended to increase the yield of oil crops production and productivity of mustard variety RH-749 and groundnut variety TG-37A was found suitable in western Uttar Pradesh.

Keywords: Groundnut, TG-37A, Mustard RH-749.

Introduction

Amongst the different Oil seeds crops rape seed mustard & Groundnut having promine crops in Northern India. Groundnut & Mustard ranks are first & second and mustard contributes 27% of total oil seeds acreage in the country although the rapeseed mustard occupies significant place in Indian dilatory but its productivity is still very low (<-1.2 tons/ha) due to in unavailability of H.Y.V. of mustard and appropriate crop management in general and in balanced nutrient in particular (Tiwari 2002) [2]. The inadequate or excess supply of nutrients is not only giving undesired yield & quality of both crops mustard & groundnut but also results uneconomic for producers. Some scattered studies reveal that balanced nutrient management in rapeseed-mustard has significant influence of the seed yield as well as quality of rapeseed-mustard (Tena *et al.* 1998). Apart from their use of Growth regulators many also triggered the product of rapeseed-mustard.

Materials & Methods

Cluster Front Line Demonstrations were Conduction at Farmers Field by Scientist of Krishi Vigyan Kendra Saharanpur as per Guideline of ministry of Agriculture Government of India as per direction of ICAR-ATARI (Agricultural Technology Application Research Institute) Kanpur in the year 2016-17 & 2017-18. To conduct the CFLD First of all Four Village from Two Blocks were selected. Village Bhaguwala & Jahanpur in block Muzaffarabad & Talhapur & Us and in Block Sadholikadeem. Farmers were selected in Cluster based and for Mustard Crop village Bidvi & Jaghetagujar in Block Nakur, Nandiferoz pur & Malhipur Block Baliakhedi District Saharanpur and Farmers also were on Cluster based. Soil samples were collected & Tested at soil Testing Laboratory of K.V.K. Saharanpur. Soil Health Card also prepared & distributed to the Farmers Grid basis. Quality inputs, seeds of Groundnut & Mustard were arranged timely provide to the Farmers Trichoderma Bio-Agent was provided to the Farmers @ 5kg/Ha and emphasise was given for their applications timely. Ground nut was sown in the month June and Mustard in the first week of October. After that Cultural Practices done as per need basis.

S. No.	Name of Crop	Varieties	Production Details in q/ha			Product q/ha in local	Production increase
			Highest	Lowest	Average		
1	Mustard	RH-749	30.2	19.4	24.6	18.6	32.25
2	Groundnut	TG-379	26.0	16.00	20.5	15.00	36.94

Economics Detail of oilseed Crops /ha (2016-17)

S. No.	Name of crop	Details of Demonstration (Rs./ha)				Detail of Local check			
		Gross Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	B:C	Gross Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	B:C
1	Mustard	21300	86450	65150	4.05	17050	63000	45950	3.7
2	Groundnut	45300	102500	57200	2.26	47410	75000	27590	2.0

Comparative production table of oilseed crops (2017-18)

S. No.	Name of Crop	Varieties	Production Details in q/ha			Product q/ha in local	Production increase
			Highest	Lowest	Average		
1	Mustard	RH-749	31.40	24.30	26.80	20.20	32.36
2	Groundnut	TG-379	24.00	16.10	21.60	16.50	30.90

Economics Detail of oilseed Crops /ha (2017-18)

S. No.	Name of crop	Details of Demonstration (Rs./ha)				Detail of Local check			
		Gross Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	B:C	Gross Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	B:C
1	Mustard	23840	107200	83360	4.5	22750	72800	50050	3.2
2	Groundnut	45300	102500	57200	2.26	40410	75000	27590	1.9

Results and Discussions

In Table-1 Recommended variety of mustard (RH-749) and Local Variety (Kranti) were demonstrated in the village Bidvi & Jagheta gujar of block Nakur And village Nandifiroj pur & Malhipur block Balia khedi The yield of demonstrated variety (RH- 749) was found 24.6Q/Ha in year 2016-17 & 26.8 Q/Ha in 2017-18, Local check variety (kranti) gave the 18.60 Q/Ha & 20.20 Q? Ha in 2017-18. The yield of recommended variety (RH-749) was significance higher in comparison to local check variety (Kranti). The B. C. ratio of recommended variety was 4.05 in year 2016-17 and 4.50 in Year 2017-18 and B:C ratio of local check variety (Kranti) was 3.7 in 2016 and 3.2 in year 2017-18. B:C ratio of recommended variety was higher than Local check variety (Kranti). The result revealed that recommended variety of mustard (RH-749) is better than local check Variety of Mustard.

In Table -2 recommended Variety of Ground nut (TG-37A) And Local Check variety (Chandra) were demonstrated in the village Bhaguwala & Jahanpur of block Muzaffara bad and village Talhapur & Usand block Sadholi kadim. The yield of recommended Variety (TG-37A) was found 20.5Q/Ha in year 2016-17 and 21.6 Q/Ha in year 2017-18 and Local check variety (Chandra) gave the yield 15 Q/Ha in year 2016-17 and 16.5 Q/Ha in 2017-18. The of Recommended Variety (TG-37A) was found Significantly higher both year in compression to local check variety (Chandra). The B:C ratio of recommended variety of 2016-17 was 2.26 and local check variety was 1.9 and in 2017-18 the B:C ratio of recommended variety was both year were higher in comparative to the Local variety (Chandra). The result revealed that recommended variety (TG-37A) of Ground nut is superior than Local check variety (Chandra).

On the basis of the both crops result were high of the recommended varieties mustard (RH-749) and groundnut variety TG-37A. On the above basis we can say that increased yield of oil crops play significant role through CFLD demonstration.

Conclusion

Field demonstrations were conducted in Kharif and Rabi season 2016-17 and 2017-18 at village Bhaguwala and Jahanpur Block Muzaffarabad, Bidvi and Jagheta jujar block Nakura and Maheshpur block Devband district Saharanpur UP under cluster front line demonstrations programme to evaluate the yield in oil crops of the deferent varieties of groundnut and mustard crop. The demonstrated variety RH-749 give the 39% higher yield and B.C. Ratio of RH-749 was 4.05 and local variety B.C. Ratio was 2.7. It was also significantly higher that local variety (Kranti). In groundnut the demonstrated variety average yield was 25 q/ha in year 2016-17 and 21.6 q/ha was 20.5 q/ha 21.6 q/ha 2017-18 while check variety (Chandra) yield was 15 q/ha in year 2016-17 and 16.5 q/ha was found in 2017-18. The yield of demonstrated variety (TG-37 A) was also significantly higher than check variety yield. The B.C. Ratio of demonstrated variety in 2016-17 was 2.26 while check variety B.C. Ratio was found 1.9 in 2017-18. The B.C. Ratio of demonstrated variety was also higher. The result revealed that the yield of demonstrated variety of mustard (RH-749) and groundnut variety TG-37A was higher than check varieties yield. So it is recommended to increase the yield of oil crops production and productivity of mustard variety RH-749 and groundnut variety TG-37A was found suitable in western Uttar Pradesh.

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