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Extent of Improvement in the Production of Gram Among the Beneficiaries of NFSM in Southern Rajasthan

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ABSTRACT

The present study was conducted at Banswara and Udaipur districts of Southern Rajasthan. Total eighty NFSM gram beneficiary farmers were selected on the basis of random sampling method from the identified districts. From the study it was found that out of the 80 respondents before initiation of NFSM, 41 respondents were categorized in low level of yield of gram, whereas 33.75 respondents were placed in medium yield category and only 12 respondents possessed high level of yield of gram. Whereas after initiation of NFSM project, 50.00 per cent respondents could be placed under medium level of increase in yield group. It was further noted that only 8 (10.00%) gram growers and 32 (40.00 %) respondents possessed high level of increase in yield of gram crop.

Key words: NFSM, beneficiary, improvement, production and yield

INTRODUCTION

NFSM is being run at present in all 13, 33 and 12 districts of Rajasthan under the component of wheat, pulses and course cereals respectively. In Rajasthan, rice is not covered under this programme. The emphasis in component third on NFSM- pulse reflects that several million people in the country remain largely bypassed by the green revolution and modern agricultural practices. The component NFSM-pulse is being implemented at Udaipur, Dungarpur and Banswara districts of southern Rajasthan since 2010. These districts come under Tribal-Sub-Plan area and also represent nearly 45 per cent tribal population of the state. The mission is in full swing and so far no impact study in the operational area of the mission has been conducted regarding the response of farmers about gram interventions introduced under NFSM. This is the right time to assess the impact of the mission with regards to interventions introduced in gram cultivation. With this background in view, the present study entitled "Extent of Improvement in Production of Gram among the Beneficiaries of NFSM in Southern Rajasthan" was undertaken with the specific objectives to find out the extent of improvement in the production of gram among the beneficiaries of National Food Security Mission and to find out the year-wise area and yield of gram crop among the beneficiaries of NFSM.

METHODOLOGY

The present study was conducted at Banswara and Udaipur districts of Southern Rajasthan. Two panchayat samithis from each identified district were selected on the basis of maximum number of farmers getting benefited through pulse interventions introduced under NFSM. From each selected panchayat samithi, four beneficiary villages where interventions related to gram are introduced were selected on the basis of maximum farmers who were benefitted under NFSM. Thus, a total of 16 villages were selected from all the identified panchayat samithis for the present investigation. For the selection of beneficiary respondents, 5 gram growers were selected randomly from each identified village. Thus, a total of 80 gram beneficiary farmers were selected on the basis of random sampling method. Data were collected by personal interview technique. Thereafter, data were analyzed, tabulated and the results were interpreted in light of the objectives of the study.

RESULTS AND DISCUSSION

National Food Security Mission (NFSM) was implemented for increasing food grains and pulse production through introduction of interventions in rice, wheat and pulses among targeted districts of the country. In this connection, the present investigation was carried

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out with one of its objectives as "to find out the extent of improvement in the production of pulses among the beneficiaries of NFSM". The results have been presented in subsequent tables.

Distribution of the respondents according to increase in yield of gram crop

The increase in area and yield of gram crop was calculated of beneficiary respondents. On the basis of yield of gram crop, the respondents were categorized into three groups *viz.,* (i) low (up to 17.03 q/ha) (ii) medium (between 17.04 to 28.31 q/ha) and (iii) high (above 28.31 q/ha). These categories were made on the basis of mean and standard deviation of the yield obtained from the cultivation of gram crop by the respondents.

Table 1: Distribution of the beneficiary respondents according to yield of gram before and after NFSM beneficiaries

Level of yield	Before NFSM beneficiary		After NFSM beneficiary	
	f	%	f	%
Low (Up to 17.03 q/ha)	41	51.25	8	10.00
Medium (17.04 to 28.31 q/ha)	27	33.75	40	50.00
High (Above 28.31 q/ha)	12	15.00	32	40.00
Total	**80**	**100.00**	**80**	**100.00**

f = Frequency, % = per cent

The Table 1 revealed that a comparative view of yield derived from gram crop before and after becoming the beneficiaries of NFSM highlights that out of the 80 respondents before initiation of NFSM, 41 respondents were categorized in low level of yield of gram, whereas 33.75 respondents were placed in medium yield category and only 12 respondents possessed high level of yield of gram. Further analysis of table clearly shows that after initiation of NFSM project, 50.00 percent respondents could be placed under medium level of increase in yield group. It was further noted that only 8 (10.00%) gram growers and 32 (40.00 %) respondents possessed high level of increase in yield of gram crop.

From the above discussion it could be concluded that more than 90.00 per cent after becoming beneficiaries of NFSM were either in high or medium level of yield group. This was due to the fact that after initiation of NFSM project in the study area, the respondents adopted the gram interventions introduced under National Food Security Mission. Hence, there was a positive impact of NFSM in terms of improvement in the yield of gram crop in Banswara and Udaipur districts of Rajasthan.On the basis of these results, it can be recommended that NFSM on gram may be continued in the operational areas so that all gram growers may be benefitted by this scheme.

The present findings are in line with the findings of Singh et al. (2009) which revealed that increase in crop yield has been recorded in NATP adopted districts as compared to non-NATP districts. Diversified farming system and adoption of improved farming practices increased crop yield, which resulted in an increase in the income of respondents. Samota (2011) also reported that 50.66 per cent of the total respondents were relatively in medium B:C ratio group, whereas, 46.71 and 2.63 per cent of the total respondents were found in the high and low B:C ratio group respectively.

Year-wise area and yield of gram crop among the beneficiaries of NFSM

The results of the Table 2 shows that before becoming the beneficiary of NFSM, total area and yield of gram crop was 46.16 hectares and 683.60 quintals/ha respectively. Whereas, after becoming the beneficiary the total area and yield was recorded 56.96 hectares and 980.50 quintals /hectare respectively in the year 2010-11 Analysis of the table further shows that in the year 2011-12, total area and yield of gram crop was found with 62.80 hectares and 1116.50 qt-1 respectively which got increased because of the adoption of interventions of gram by the beneficiaries of NFSM in the operational area. Whereas, in the year 2012-13 and 2013-14, the area sown under gram crop was increased up to 78.40 and 113.60 hectares respectively as compared to previous year and yield increased with the extent of 1440 qt-1 and 1815.60 qt-1 respectively.

Table 2: Year wise area and yield of gram crop among the beneficiaries of NFSM

Year	Area (ha)	Yield (q/ha)
Before NFSM	**46.16**	**683.60**
After NFSM		
2010-11	56.96	980.50
2011-12	62.80	1116.50
2012-13	78.40	1440.00
2013-14	113.60	1815.60
2014-15	150.80	2116.50

Further, analysis of the table reveals that in the year 2014-15, the area sown under gram crop was more increased with 150.80 hectares as compared to previous years and yield was increased with the extent of 2116.50 qt-1 in the study area.

From the above discussion, it could be inferred that area and yield of gram crop was in an increasing trend after becoming the beneficiaries in the study area. It is apparent and obvious that this increased area and yield of gram crop is due to the gram interventions given to the

respondents. It means that NFSM played an important role in increasing the area and yield of gram in the study area. Therefore, it is strongly recommended that the present consortia of NFSM project in the study area should be continued even after its termination. It must be repeated at some other places with more budgetary provision.

From the above results it can be concluded that National Food Security Mission is most effective in terms of increase in area and yield of gram crop in Banswara and Udaipur districts of Rajasthan.

The present finding are in line with the findings of Kumar (2012) which revealed that more than 90.00 per cent beneficiary farmers were either in high or medium economic benefit group. This was due to the fact that beneficiary farmers adopted the wheat interventions introduced under National Food Security Mission. Hence, there was a good impact on beneficiary farmers so that they obtained farm benefits at a higher level from the cultivation of wheat. Sharma and Choudhary (2014) reported that improved technologies of wheat enhanced yield from 42.09 q/ha to 49.22 q/ha in frontline demonstrations. The percentage of increase in yield ranges from 27.46 to 39.65. The economic analysis of yield performance showed that front line demonstrations recorded higher average gross return (Rs. 65077/ha), higher average net return (Rs. 44500/ha) with higher cost benefit ratio of 3.16 as compared to local check.

CONCLUSION

It was found that out of the 80 respondents before initiation of NFSM, 41 respondents were categorized in low level of yield of gram, whereas 33.75 respondents were placed in medium yield category and only 12 respondents possessed high level of yield of gram. Whereas after initiation of NFSM project, 50.00 percent respondents could be placed under medium level of increase in yield group. It was further noted that only 8 (10.00%) gram growers and 32 (40.00 %) respondents possessed high level of increase in yield of gram crop.

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