

BENCHMARK SURVEY ANALYSIS IN BHARATPUR DISTRICT OF RAJASTHAN

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ABSTRACT

A survey was carried out in ten villages of Bharatpur District of Rajasthan by Participatory Approach method. Bharatpur stands on top ranking in mustard cultivation in Rajasthan. The district has dry climate with hot summer, cold winter and short monsoon season. The average annual rainfall in the district is 645.2 mm. Major crops grown in area are mustard, wheat, barley, gram, and lentil. Occupation is mainly (85%) based on the agriculture. The Average landholding is 1.39 ha. Area under mustard is 1.77 lakh ha. (65%) of total cultivated area in rabi. After interviewing the 100 respondents of 10 villages of district Bharatpur (Raj.) different categories personally, it was found that the average family size was 7 and number of male exceed over the number of females in the society. The joint family system was predominant than nuclear family. About 30 per cent respondents were illiterate. Farming was the main occupation of all the respondents and animal husbandry was the widely adopted as a subsidiary occupation. The average size of land holding was found 1.39 hectare. Except few cases of leasing in, the leasing in and leasing out was not a common practice among the farmers. Only 24 per cent farmers used certified seed. Neighbours were the main source of information in the area. Only 33 per cent community were aware about the quality of mustard oil. Major constraints faced by the mustard growers felt the diseases and pest susceptibility of crop and unavailability of irrigation.

INTRODUCTION

Rapeseed-Mustard is the most important group of oilseed crops after groundnut grown in India. They provide edible oil for human consumption and seed meal or cake for livestock consumption and for use as fertilizer. The traditional varieties of rapeseed-mustard being cultivated in India have high erucic acid in oil and high glucosinolates in seed meal/cake. These compounds are hazardous to human and livestock health, respectively if taken excessive in quantity. Therefore, developing new varieties of low erucic acid or glucosinolate contents has gained momentum to meet the international quality norms and for the purpose of reduced health hazards. The safer varieties are in two categories, viz., 'O' (low erucic acid or low glucosinolate) and '00' (low erucic acid and low glucosinolate). In order to popularize these varieties, the ICAR has sponsored an ambitious project entitled "Increasing 'O' and '00' quality Rapeseed-

mustard production through on farm Demonstration and Training". It was stipulated that for a successful implementation of the project and for post-facto appraisal of the impact, a socioeconomic survey of the project area is necessary.

A bench mark survey was conducted in 10 villages around the National Research Centre on Rapeseed-Mustard, Bharatpur with the objectives to have information on the current status of Survey of rapeseed- mustard cultivation practices production system of small and marginal farmers and their socioeconomic status.

MATERIAL AND METHODS

The study was conducted in the operational area of UNDP Project that was 10 villages Mandra, Ludhawai, Chuk Meena, Mohanpura, Ghasola, Jatoli-Ghanna, Bacchamandi, Borai, Dhormui and Rareh of district Bharatpur (Rajasthan). From each selected village ten rural people were randomly

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selected and hence a total of one hundred respondents were drawn for the study purpose. For measuring different aspects a schedule was developed in light of the suggestions of the experts of NRCRM, Sewar, Bharatpur and interviewing them personally collected the responses of farmers. The data so collected were classified, tabulated and statistically analyzed and the findings were presented as follows.

RESULTS AND DISCUSSION

Socio-economic status:

1. Family size, composition and system

The average family size was 7 comprising 4 adults and 3 children. The numbers of males exceed the number of females. The difference is substantial in case of children than in adults (Table 1). The reasons being that the married (girls) were not counted among the family members. The joint family

system was predominant (51 per cent) than nuclear family.

2. Education

31 per cent of the sampled farmers were illiterate and only 1 per cent were alone graduate (Table 2).

3. Occupation and income

Farming was the main occupation of all the respondents and only a few reported to be engaged in subsidiary occupation such, as service, business, labour, agricultural labour and animal husbandry. The average annual income of the household worked out to Rs. 23,800 (Table 3).

4. Landholding

Average size of land holding was found to be 1.39 ha. The leasing in and leasing out of land was not common among the farmers (Table 4) except a few cases of leasing in.

Table 1. Family size, composition and system

Village	Adult		Children		Family system	
	Male	Female	Male	Female	Joint	Nuclear
Mandera	15	18	21	23	03	07
Ludhawai	25	27	17	06	04	06
Chuk meena	30	19	16	05	02	08
Mohanpura	18	17	17	07	05	05
Ghasola	24	21	23	16	04	06
Jatoli Ghana	19	19	19	13	08	02
Bacchamandi	22	16	11	13	04	06
Borai	20	13	15	13	06	04
Dhormui	31	26	19	11	10	Nil
Rareh	18	08	09	02	05	05
Total	222	184	167	109	51	49

Table 2. Education level of farmers

Village	Illiterate	Up to primary	Up to middle	Sr. Sec.	Graduate
Mandera	-	2	2	5	1
Ludhawai	5	2	3	-	-
Chuk meena	3	1	4	2	-
Mohanpura	3	5	1	1	-
Ghasola	4	2	2	2	-
Jatoli Ghana	3	1	6	-	-
Bacchamandi	4	3	3	-	-
Borai	3	4	2	1	-
Dhormui	6	2	2	-	-
Rareh	-	8	1	1	-
Total	31	30	26	12	1

Table 3. Subsidiary occupation and annual income

Village	Agricultural labour	Labour	Service	Business	A.H.	Annual income (Rs.)
Mandera	-	-	-	1	6	23250
Ludhawai	2	3	-	-	2	14600
Chuk meena	-	-	-	1	9	15300
Mohanpura	-	-	-	1	-	18675
Ghasola	1	1	-	-	7	31534
Jatoli Ghana	-	1	1	1	3	28334
Bacchamandi	1	-	-	-	4	17500
Borai	-	-	-	-	3	30375
Dhormui	-	-	1	-	4	38182
Rareh	-	-	-	-	8	20250
Total	4	5	2	4	46	238000
Average						23800

Table 4. Land holding structure

Village	Owned land (ha)			Leased in land (ha)		
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
Mandera	6.52	12.16	18.68 (1.8)	1.52	2.84	4.36
Ludhawai	8.55	4.53	13.08 (1.18)	0.8	-	0.8
Chuk meena	2.2	13.46	15.66 (1.57)	-	-	-
Mohanpura	8.04	7.48	15.52 (1.5)	-	1.28	1.28
Ghasola	6.24	13.53	19.77 (1.5)	-	-	-
Jatoli Ghana	7.8	2.52	10.32 (0.86)	-	-	-
Bacchamandi	8.86	6.52	15.38 (1.53)	-	-	-
Borai	6.02	3.4	9.42 (1.17)	-	-	-
Dhormui	10.46	5.68	16.14 (1.34)	-	-	-
Rareh	10.36	1.28	11.64 (1.45)	-	-	-

Rapeseed-Mustard Production System**1. Seed**

About 24 per cent farmers used certified seed whereas remaining farmers used their own produce as seed for raising next year crop (Table 5).

2. Crop-rotation

The eight crop rotations/sequence followed by the farmers 1997-98 (Table 6). Fallow-mustard is the most widely used crop rotation by the farmers in Bharatpur district. Next important crop rotations were Jowar (fodder) - Wheat + Mustard (19 per cent) and Bajra - Lentil + Mustard (13 per cent). Further, only a few farmers took mustard after Jowar.

3. Source of Information utilized

Majority of the (86 per cent) acquired

information about mustard from their neighbors. Radio and Television (Table 7) are the second most important source of information reported.

4. Awareness of oilseed and seed meal quality

Only 33 per cent of the community is well aware about the quality of mustard oil, whereas 79 per cent prefer the mustard seed meal for their livestock.

5. Major constraints faced by the mustard growers

Majority of farmers felt the diseases and pest susceptibility of crop and about 70 per cent observed the unavailability of irrigation.

Table 5. Type of seed used

Village	No. of farmers used	
	Certified seed	Own seed
Mandera	3	7
Ludhawai	2	8
Chuk meena	4	6
Mohanpura	1	9
Ghasola	0	10
Jatoli Ghana	4	6
Bacchamandi	3	7
Borai	4	6
Dhormui	2	8
Rareh	1	9
Total	24	76

Table 6. Crop rotation

Crop rotation	Frequency
Jowar - wheat + mustard	3
Bajra - mustard	9
Bajra - lentil + mustard	13
Bajra - gram + mustard	5
Fallow - mustard	41
Jowar - wheat + mustard	19
Jowar - mustard	4
Dencha - mustard	6

Table 7. Source of information utilized

Source of information utilized	No. of farmers
Neighbour	86
Relative/Progressive farmer	60
VLW/ ADO	21
Extension Officer	23
B D O	12
News paper	50
Radio /TV	61
Others	42

Table 8. Awareness of oilseed and seed meal quality

Village	Are you aware of oil and cake quality in mustard		Whether your livestock prefer the mustard seed meal	
	Yes	No	Yes	No
Mandra	4	6	6	4
Ludhawai	2	8	9	1
Chuk meena	3	7	8	2
Mohanpura	6	4	8	2
Ghasola	2	8	9	1
Jatoli Ghana	3	7	7	3
Bhachamandi	3	7	8	2
Borai	1	9	10	-
Dhormui	4	6	6	4
Rarerh	5	5	8	2
Total	33	67	79	21

Table 9. Major problems faced by the farmers in mustard cultivation

Disease	% of farmers
White rust	76
Aphid	74
Alternaria blight	23
Susceptible to frost	13
Unavailable of High yielding variety seed	6
Climatic changes	19
Unavailability of irrigation water	71
Less availability of fertiliser, pesticide and insecticide	15

RECOMMENDATIONS

1. Inter cropping with wide spaced crops for utilizing the space and also to get extra income.
2. Balance doze of fertilizer should be applied.
3. Integrated pest management practices should be followed.
4. Replacing raw FYM may do termite control by compost FYM or bio-gas slurry or wermi-compost.
5. Vermiculture may be used for composting.
6. Crop rotation must be followed in place of mono cropping to minimize the incidence of pest and disease.

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