

Analysis of Personal, Socio-economic Characteristics and Information Seeking Pattern of Rapeseed Mustard Growers on Jammu Division of J&K

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ABSTRACT

The present research study was undertaken to analyze the different socio-personal characteristics and information seeking pattern of rapeseed mustard growers in sub-tropical and temperate region of Jammu division. The present study was conducted in four districts, namely, Jammu, Samba, Reasi and Doda of Jammu division with 50 randomly selected rapeseed mustard growers from each district thereby making a total sample of 200 respondents. Multistage random sampling technique was employed for selecting the respondent farmers. Major findings indicate that average age of respondent farmers was 49.02 years, average schooling years was 07 years, and average family size was six. Average operational land holding size was 1.64ha and majority (41%) farmers were marginal farmers and average farming experience was 26 years. Ninety percent respondents had no social participation and 51 percent had extension contacts. Only 22 percent households were solely dependent upon agriculture occupation for earning their livelihood. Private input dealers were main source utilized by farmers for obtaining information regarding seed, fertilizers and pesticides followed by field extension functionaries of agriculture department.

Key words: Information, livelihood, rapeseed mustard, socio-personal characteristics.

INTRODUCTION

Oilseed sector has been an important area of concern and interventions for Indian policy makers in the post-reforms period when India became one of the largest importers of edible oils in the world, importing about half of domestic requirement in the 1990s (Sharma V.P, 2014). After cereals, oilseeds constitutes the second largest agricultural commodity in India accounting for 13 per cent of the Gross cropped area, 3 per cent of the Gross National Product (GNP) and 10 per cent value of all the agricultural commodities. Despite being the largest cultivator of oilseeds in the world, India imports about 50 per cent of the requirements because of the life style changes in dietary pattern and increasing per capita income. India grows oilseeds on an area of 27.02 million hectares, with productivity of 1108 kg/ha for the 2013-14 (Vision document 2050-Indian Institute of oilseed research). Among 09 oilseeds soybean (39 %), groundnut (26%), Rapeseed & Mustard (24 %) contributes more than 88 per cent of total oilseeds production in the country. In view of the current contribution of rapeseed-mustard (20-25 %) to the oilseed production in India about 16.4-20.5

mt rapeseed-mustard need to be produced from the present level of 7 mt to make country self-sufficient in edible oil sector (DRMR, Vision-document-2030, 2011). In terms of rapeseed mustard productivity, global ranking of India is 28th (Bhardwaj, 2013). Rapeseed mustard is a major oilseed crop of rabi season in Jammu and Kashmir. In J&K total area under rapeseed mustard crop is 55236ha and in Jammu province the total area under rapeseed mustard crop is about 11241 ha comprises of both temperate and sub-tropical area. Average productivity of rapeseed mustard in J&K is 6.99qts/ha which is 37.72 percent of global productivity and 67.85 percent of national productivity. (Directorate of Agriculture, Jammu 2015-16). The constraints in production are use of traditional varieties, inadequate moisture availability at sowing time and late sowing of mustard particularly in rice –fallow areas, broadcasting method of sowing and use of high seed rate and aphid infestation as reported by Kushwah *et al.* 2016. Non-adoption of different recommendations is the main reason for low productivity of rapeseed mustard in sub-tropical regions of Jammu division as reported by Ajrawat *et al.* 2013 in their study on rapeseed mustard crop. Different socio-personal

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characteristics of farming community play a crucial role in adoption of different recommended production technologies. It has already been reported in different studies that age, education, extent of social participation and extension contacts significantly affect the farmers' decision to adopt different production recommendations. Keeping this point of view the present study entitled "Analysis of socio-personal characteristics and information seeking pattern of rapeseed mustard growers in Jammu division of J&K" was undertaken.

METHODOLOGY

Stratified random sampling technique was applied to select the districts for the present study. The study area was divided into two strata on the basis of agro-climatic conditions i.e. sub-tropical and temperate zones. From the sub-tropical zone, Jammu and Samba districts and from temperate zone Reasi and Doda districts were selected on the basis of maximum area under rapeseed mustard crop. Further from each selected district, two blocks were delineated on the basis of maximum area for the present study, thus comprising a total of eight blocks for the present study. A list of 1177 rapeseed mustard growers was obtained from relevant agencies from all the blocks. Out of list, 50 rapeseed mustard growers from each study district were selected randomly with the help of random number generator, thereby making a total sample size of 200 rapeseed mustard growers 100 each from subtropical and temperate zone of Jammu division. The sample size was 17 per cent of total population size. Data were collected from the sampled respondent on the pre-tested interview schedule by contacting personally to the farmers on their fields or at their homes. Analysis of collected data was performed using SPSS 16.0 (statistical package for social sciences) software.

RESULTS AND DISCUSSION

Table 1: Socio-personal characteristics of rapeseed mustard growers

Parameter	Samba (n=50)	Jammu (n=50)	Reasi (n=50)	Doda (n=50)	Overall percentage n=200
Average age	51.20 ±14.37	51.10 ±11.35	46.64 ±11.24	47.14 ±13.09	49.02 ±13.09
Age categories (percent farmers)					
18-42yrs	32	18	36	40	32
43-60yrs	42	64	54	46	51
61-85yrs	26	18	10	14	17
Education (percent farmers)					
Illiterate	16	14	38	10	20
Below primary	02	00	02	00	01
Primary	14	02	8	10	08
Middle	24	18	26	26	24
Matric	32	38	16	38	31
10+2	08	18	04	12	10

Graduate & above	04	10	06	04	06
Average education (formal no. of schooling years completed)	7.47 ±4.04	9.34 ±4.07	5.66 ±5.00	8.42 ±3.55	7.79 ±4.39
Average family size	5.88 ±2.65	6.86 ±3.12	6.88 ±2.45		6.70 ±3.08
Type of farm households (percent farmers)					
Joint	16	30	24	20	23
Nuclear	84	70	76	80	77
Size of farm households categories					
2-7 members	80	72	64	68	71
8-11 members	18	22	34	20	24
12-22 members	02	06	02	12	05

The data presented in the Table 1 revealed that average age of rapeseed mustard growers in all the four districts was 49.02 years (± 13.09). Majority of rapeseed mustard growers 51.00 per cent belong to middle age group (43-60 years) followed by 32.00 per cent (18-42 years) group and 17.00 per cent (61-85 years) group respectively. The present findings got support from the study conducted by Hadiya and Deshmukh (2014) in which they reported that majority of oilseed growers belong to middle age category. The overall percentage of the education of rapeseed mustard growers in four districts was 31 per cent matric, 24 per cent middle, 10 per cent were 10+2, 8 per cent were primary pass, 6 per cent were graduate and above and only 1 per cent were below primary. Whereas one fifth of the respondents were illiterate. The average overall formal education was 8 years (± 4.00). The data in table 1 further indicated that in case of rapeseed mustard growers in Samba district 84 per cent had nuclear families followed by 80 per cent in Doda, 76 per cent in Reasi and 70 per cent in Jammu district. The percentage of joint families of rapeseed mustard growers was 16, 30, 24 and 20 in Samba, Jammu, Reasi and Doda districts respectively. With respect to categorization of family size done by Singh's Cube root method (1975) overall 71 per cent of the mustard growers had a family size of 2 to 7 members followed by 24 per cent growers who had family size of 8 to 11 members and only 5 per cent growers had family size between 12 to 22 members per family. The findings were in agreement with the findings of Slathia *et al.* (2016).

Table 2: Land holding & farm size detail of respondent farmers

Particular	Samba (n=50)	Jammu (n=50)	Reasi (n=50)	Doda (n=50)	Overall percentage n=200
Average operational land holding (ha)	1.81 (±2.12)	1.61 (±1.31)	2.10 (±1.72)	1.08 ±0.96	1.64 (±1.63)
Owned	1.29 ±1.11	1.52 ±1.36	2.08 ±1.73	1.08 ±0.96	1.49 ±1.36
Leased in	0.52 ±1.67	0.08 ±0.30	0.01 ±0.09	-	0.15 ±0.87

Average irrigated land holding(ha)	1.22 ±2.20	1.57 ±1.32	0.18 ±3.40	.11 ±0.32	0.77 ±1.44
Average un irrigated land holding	0.59 ±1.01	0.04 ±0.14	1.91 ±1.58	0.97 ±.96	0.88 ±1.25
Average irrigated land holding(ha)	1.22 ±2.20	1.57 ±1.32	0.18 ±3.40	.11 ±0.32	0.77 ±1.44
Average un irrigated land holding	0.59 ±1.01	0.04 ±0.14	1.91 ±1.58	0.97 ±.96	0.88 ±1.25
Categorization of respondent farmers					
Marginal(<1ha)	44	34	30	56	41
Small(1-2ha)	22	32	24	28	26
Semi-medium (2-4ha)	22	26	30	12	23
Medium (4-10ha)	10	08	16	04	09
Large (>10ha)	02	00	00	00	01

*Categorization of farmers as per MOA notification (2011) ±means Standard deviation

Data given in Table 2 revealed that in case of mustard growers average operational land holding in Samba, Jammu, Reasi and Doda districts was 1.81,1.61,2.10 and 1.08 hectares including irrigated land holdings 1.22, 1.57, 0.18 and 0.11hectares respectively.

Overall average operational land holding of mustard growers in the study area was 1.64 hectare which was higher than state average land holding size of 0.67 hectare (DSE, 2007). Data presented in table 2 further showed that in case of rapeseed mustard growers overall 41 per cent were in the category of marginal farmers (<1ha) followed by 26 per cent small farmers (1-2ha), 23 per cent semi-medium farmers (2-4ha), 9 per cent medium farmers (4-10ha) and only 1 per cent were in large farmers category having land holding size greater than 10 hectares.

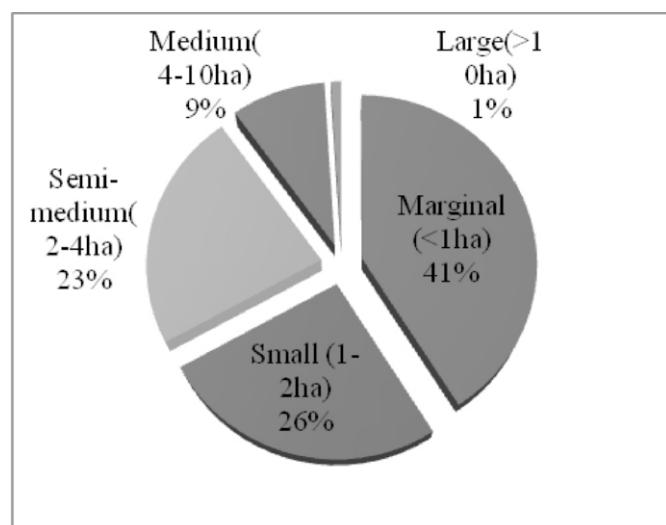


Fig: Farm size of rapeseed mustard growers

Table 3: Average farming experience and distance from source of different inputs

Particular	Samba (n=50)	Jammu (n=50)	Reasi (n=50)	Doda (n=50)	Overall percentage n=200
Average farming experience (in years)	29.84 ±12.99	27.00 ±10.29	25.00 ±10.29	23.48 ±12.36	26.33 ±11.63
Average distance from (in kms)					
Agri office	3.68 ±2.45	3.72 ±2.93	10.04 ±9.68	11.39 ±7.55	7.21 ±7.30
Seed store	3.68 ±2.45	3.42 ±2.72	9.32 ±9.37	7.29 ±3.97	5.93 ±5.92
Fertilizer store	2.12 ±2.10	2.76 ±2.30	9.32 ±9.37	7.29 ±3.97	5.37 ±6.09
Pesticide store	2.12 ±2.10	2.76 ±2.29	9.49 ±9.39	7.29 ±3.97	5.39 ±6.09
Market	3.96 ±3.33	3.80 ±2.78	9.64 ±9.38	7.69 ±3.79	6.22 ±6.06

The figures given in Table 3 depicted that average farming experience of rapeseed mustard growers was 26.33 years (±11.63). Data presented in table 3 regarding distance shows that overall average distance from the nearby market and seed store in case of rapeseed mustard growers was 6.00 kilometers from their place of residence and an equal distance of 5.00 km in case of pesticide and fertilizer sale center. The overall average distance of the Department of Agriculture was 7.00 km. The average distance from agricultural office, seed store, fertilizer store and pesticide store was more in hilly & temperate sampled districts of Reasi and Doda than plain and sub-tropical study districts of Jammu and Samba.

Table 4: Social participation and extension contacts of respondent farmers

Social participation (per cent farmers)					
Membership of an organization	6	14	12	08	10
No membership in any organization	94	86	88	92	90
Extension Contacts with different agencies (per cent farmers)					
Yes	60	52	40	50	51
No	40	48	60	50	49

A close look at table 4 indicated that overall only 10 per cent mustard growers had membership in some social organizations. With regard to extension contacts of the respondent farmers, overall 51 per cent growers had contact with different field extension functionaries

Table 5: Distribution of respondents on the basis of occupation n=200

Occupation	Growers n=200
Agriculture as main occupation	41
Agriculture as a subsidiary occupation	59

On-farm source of income of respondent farmer	
Agriculture	41
Both on-farm and off- farm source of income	
Agri+ Govt service	8
Agri+ Retired from govt. service	9
Agri+ Business (shops, rural artisans)	9
Agri +Labour	29
Agri+ Pvt service	4
Household's source of livelihood	
Households solely depending upon agriculture	22
Households having other economic activities	88

CONCLUSION

On the basis of results it has been concluded that average operational size of land holding of rapeseed mustard growers was 1.64 *ha* which is higher than state average land holding. Average irrigated land holding of rapeseed mustard growers was 0.77 *ha* which indicates that rapeseed mustard is mainly grown as rainfed crop in the study area. Majority of the respondent farmers had low social participation and almost half of the respondent farmers had extension contacts. Overall only 19 per cent sampled households were solely dependent upon agriculture as their only source of livelihood. Majority of respondent farmers had nuclear family system. Private input dealers were the major source of information about different inputs followed by personnel's of department of agriculture for obtaining information about seed, fertilizers and pesticides.

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The results presented in Table 5 indicate that only 41 per cent sampled mustard growers had agriculture their main occupation. The results further clear that in case of growers 59 per cent households had other source of income also which includes Agri+labour (29%), Agri+retired from govt. service (9 %), Agri+ Business (9 %), Agri+ govt service (8 %) and Agri + pvt service (4%) only. Further out of 200 sampled mustard grower's households only 22 per cent were exclusively dependant on agriculture for their source of livelihood. Peshin *et al.* also reported in 2014 that only 26 per cent households in Jammu region are exclusively dependent on farming for their livelihood.

Table 6: Information seeking pattern of rapeseed mustard growers

Source of information	Seed	Fertilizers	Pesticides	Overall Percentage
Department of Agriculture	44	25	5	73
Agri University/(KVK)	8	4	5	17
Private Input dealers	35	41	18	93
Fellow farmers	41	5	7	53
Mass media (Radio, T.V, Newspaper etc)	4	5	6	16

* Multiple responses

Data presented in Table 6 analyze different source of information utilized by mustard growers about different inputs required for rapeseed mustard cultivation and it was found that private input dealers (93 %) was the main source of information utilized by the rapeseed mustard growers for obtaining information regarding seed, fertilizers and pesticides for growing rapeseed mustard crop followed by Department of Agriculture (73 %), fellow farmers (53 %), SKUAST-J/KVK (17 %) & Mass media (Radio, T.V, Newspaper etc.) (16 %). The findings of the present study regarding information sources are on the same track as the findings of study conducted by Sharma *et al.* (2008) in which it is reported that the input dealers and agents of commercial seed, fertilizers, plant protection, *etc.*, played a critical role in information network of rapeseed mustard farmers. However Slathia *et al.* (2015) reported that personals of Department of Agriculture are the main source of agri-input information.

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