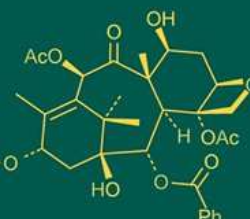
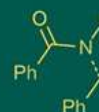
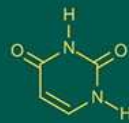
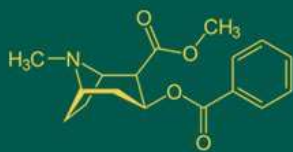


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Rajendra Singh Bareliya
 Ph.D. Scholar, Agricultural
 Economics, Agriculture
 Faculty, MGCGV, Chitrakoot,
 Satna, Madhya Pradesh, India

YK Singh
 Head of Department (TOT),
 Agriculture Faculty, MGCGV,
 Chitrakoot, Satna, Madhya
 Pradesh, India

Corresponding Author:
Rajendra Singh Bareliya
 Ph.D. Scholar, Agricultural
 Economics, Agriculture
 Faculty, MGCGV, Chitrakoot,
 Satna, Madhya Pradesh, India

Evaluation of socio-economic factors on mustard production in gird agro-climatic region of Madhya Pradesh

Rajendra Singh Bareliya and YK Singh

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Abstract

The farmers are socio-economically well off as compared to the non-farmers, community. A list of all the villages in each block was prepared and one village was selected randomly for the study. Further, a list of all the mustard growers with their size of farms were prepared and classified into small (< 2 ha), medium (2-5 ha) and large (> 5 ha) categories and 10% of mustard growers through multi stage stratified percentage proportionate random sampling method for the study. It is observed from the data that at overall level the highest number of selected mustard producers were found to be come under middle (50.83%) age group followed by young (33.75%) and old (15.42%) age groups. As for size of farm increase illiteracy was found to be decrease from 33.88 (small) to 25.00 (large) percent.

Keywords: Evaluation, socio-economic, mustard, agro-climatic region

Introduction

In India agriculture plays an important role in Indian economy. More than 70% of rural households are dependent on agriculture (Meshram *et al.*, 2020) [4]. India is the third largest producer of rapeseed-mustard after Canada, China and contributing to around 11% of world's total production of mustard is cultivated in majority of states of the country. A large part of the output from Asian countries such as Nepal, Myanmar and China are more likely used to produce mustard cooking oil (Meena and Jirli, 2019) [3]. The bulk of the production comes from Rajasthan (44.97%), Haryana (12.44%), Madhya Pradesh (11.32%) Uttar Pradesh (10.60%) and West Bengal (7.53%) during (2014-15 to 2018-19). The oil content varies from 37% to 49% (Verma *et al.*, 2023) [8]. 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, 2014) [6]. Different socio-personal 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 (Kumar *et al.*, 2019) [1]. In Madhya Pradesh this crop occupy 747.90 thousand ha area with the production of 975.79 thousand tones and productivity of 1305 kg/ha (Rai *et al.*, 2021) [5]. The farmers are socio-economically well off as compared to the non-farmers, community. As for education, nearly by two-thirds in the northern region were literate (Kumar *et al.*, 2018) [2].

Materials and Methods

The Gird Agro-Climatic Region of Madhya Pradesh have been taken into consideration for the study. The Gird agro-climatic region comprises seven districts namely Sheopur, Morena, Bhind, Gwalior, Shivpuri, Guna and Ashok Nagar. Out of seven districts, Bhind district was selected on basis of maximum area of Mustard. There are seven blocks in Bhind district namely Bhind, Ater, Mehgaon, Gouhad, Roun, Meohna and Lahar, out of which four blocks were selected having maximum area under mustard. A list of all the villages in each block was prepared and one village was selected randomly for the study. Further, a list of all the mustard growers with their size of farms were prepared and classified into small (< 2 ha), medium (2-5 ha) and large (> 5 ha) categories and 10% of mustard growers through multi

stage stratified percentage proportionate random sampling method for the study. Therefore 121, 79 and 40 mustard growers were selected from small, medium and large category for the study. Constituting total size of sample was of 240 Mustard grower from 4 villages, 4 blocks of Bhind district in Gird Agro-climatic Region of Madhya Pradesh.

Results and Discussion

There were many Socio-Economic factors which discussing to the mustard production in gird agro-climatic region of Madhya Pradesh.

Socio-Economic factors

Age, educational status, family composition and caste structure were considered in socio-economic profile of the selected mustard producers.

Age

The selected mustard producers were classified into three groups on age i.e., young (<36 year), middle (37-60 years) and old (above 60 year) and presented in fig 1. It is observed from the data that at overall level the highest number of selected mustard producers were found to be come under middle (50.83%) age group followed by young (33.75%) and old (15.42%) age groups.

Table 1: Classification of mustard growers on the basis of their age group (Numbers)

Age group	Small	Medium	Large	Overall
Young (<36 Years)	31 (25.62)	29 (36.71)	21 (52.50)	81 (33.75)
Middle (37-60 Years)	67 (55.37)	40 (50.63)	15 (37.50)	122 (50.83)
Old (>60 Years)	23 (19.01)	10 (12.66)	4 (10.00)	37 (15.42)
Total	121(100)	79 (100)	40 (100)	240 (100)

Source: Field Survey | Parenthesis represent percent of total for each value

These findings were found to be similar across size of farms with minor variation. However, in case of the large mustard producers were found to be maximum come under young age group (52.50%) followed by middle (37.50%) and old (10.00%) age groups. (Table 1).

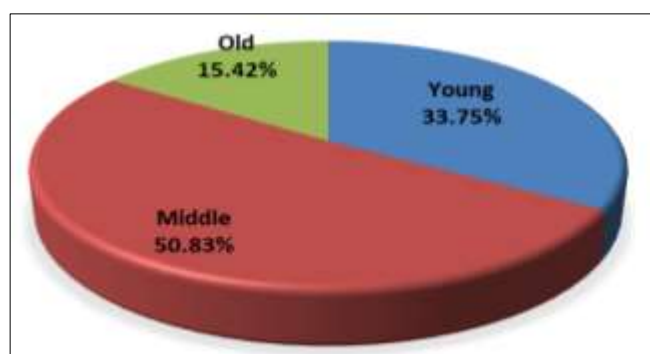


Fig. 1: Classification of selected Mustard growers on the basis of their age

Educational status

The educational status of selected mustard producers was concerned and found that at overall level the majority of producers were found to be illiterate (30.42%) followed by primary (21.25%), secondary (17.92%), middle (15.0%), higher secondary (11.25%) and graduation & above (4.17%) (Fig. 2). Though, in case of the small mustard growers were found to be well-educated extreme up to primary (20.66)

followed by middle (17.36), secondary (13.22), higher secondary (10.74) graduation & above (4.13%) educational status, while in medium group of selected mustard growers were also found to be up to primary and secondary (25.32%) followed by middle (12.66%), higher secondary (7.59%) and graduation & above (1.27%). The illiteracy was concerned in cultivation and at overall level it was found to be 30.42 percent in the study area. As for size of farm increase illiteracy was found to be decrease from 33.88 (small) to 25.00 (large) percent.

Table 2: Educational status of selected mustard producers across size of farms (Numbers)

Particulars	Small	Medium	Large	Overall
Illiterate	41.00 (33.88)	22.00 (27.85)	10 (25.00)	73 (30.42)
Primary	25.00 (20.66)	20 (25.32)	6 (15.00)	51 (21.25)
Middle	21.00 (17.36)	10 (12.66)	5 (12.50)	36 (15.00)
Secondary	16.00 (13.22)	20 (25.32)	7 (17.5)	43 (17.92)
Higher Secondary	13.00 (10.74)	6 (7.59)	8 (20.00)	27 (11.25)
Graduation and above	5.00 (4.13)	1 (1.27)	4 (10.00)	10 (4.17)
Total	121 (100)	79 (100)	40 (100)	240 (100)

Source: Field Survey | Figures in parenthesis show percent to total

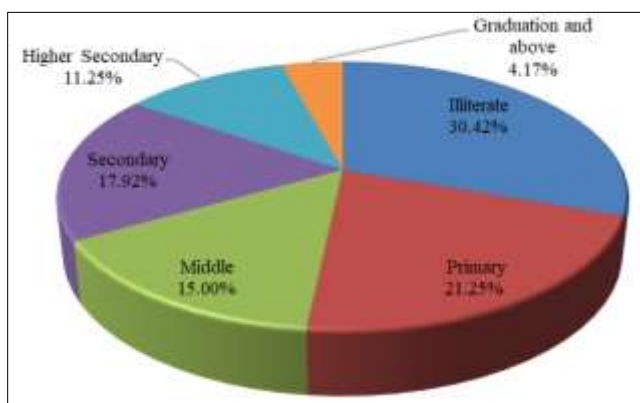


Fig 2: Percent share of educational status of selected Mustard growers (%)

Therefore, as for size of farm increase education level of mustard growers were found to increase, while illiteracy was decrease with size of farms in the study area. These finding was similar to Meshram *et al.* 2020 [4].

Family composition

The male, female and children make the family and they live together. The person who below 14 years age considered as children. At overall level an average size of family was found to be 7 members in his family. In the family composition maximum was found to be 3 males, 2 female and 2 children. These inferences were originated to parallel across size of farms with negligible disparity. Even though, in case of the small mustard producers was found 7 members in household, while the medium 6 and large group have 8 members were found in his family (Table 3).

Table 3: Family composition of selected mustard producers across size of farms (Numbers)

Particulars	Small	Medium	Large	Overall
Male	3	3	4	3
Female	2	2	2	2
Children (below 14 years)	2	1	2	2
Total Family Size	7	6	8	7

Source: Field Survey

Therefore, the male, female and children make the family and they live together. The person who below 14 years age considered as children. These finding was similar to Sonkar *et al.* (2017) [7].

Caste Structure

The caste was classified as General, OBCs, SC and ST and found that the majority of selected mustard producers were found to belonged to General caste (45.00%) followed by Other Backward Class (24.58%), Schedule Caste (20.83%) and Schedule Tribe (9.58%) at overall level (Fig. 3). The findings were found to be comparable crossways size of farms with minor variation. However, in case of the medium mustard growers were found to maximum belong to Scheduled Caste (32.91%) followed by other back class (31.65%), General (20.25%) and Scheduled Tribes (15.19%) caste, whereas in case of large mustard grower was only belong to general (82.50%) and other back class (17.50%) caste. None of large farmer was belong to SC and ST caste (Table 4).

Table 4: Caste wise classification of selected mustard grower across size of farms

Particulars	Small	Medium	Large	Overall
General	59 (48.76)	16 (20.25)	33 (82.50)	108 (45.00)
OBC	27 (22.31)	25 (31.65)	7 (17.50)	59 (24.58)
SC	24 (19.83)	26 (32.91)	0.0 (0.00)	50 (20.83)
ST	11 (9.09)	12 (15.19)	0.0 (0.00)	23 (9.58)
Total	121 (100)	79 (100)	40 (100)	240 (100)

Source: Field Survey | Figures in parenthesis show percent to total

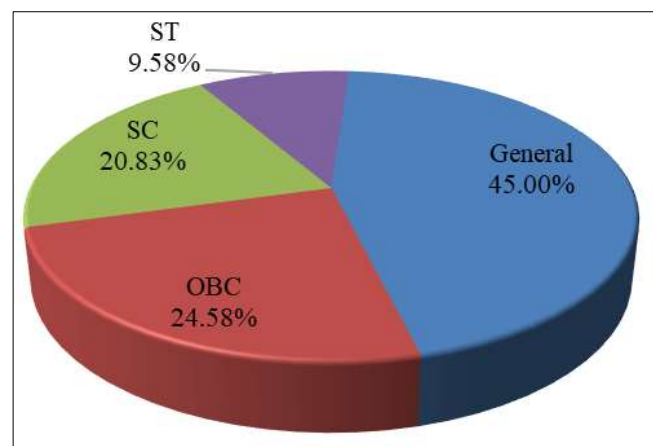


Fig 3: Classification of selected Mustard grower's basis on their caste

Therefore, majority of farmer was belonged to general followed by OBC, SC and ST categories of mustard cultivation. Hence, it can be concluded that among the general category farmer contribute maximum in mustard production. Theses finding was similar to Meena and Jirli (2019) [3].

In case of the small mustard producers was found 7 members in household, while the medium 6 and large group have 8 members were found in his family whereas in case of large mustard grower was only belong to general (82.50%) and other back class (17.50%) caste. None of large farmer was belong to SC and ST caste.

Conclusion

The Gird agro-climatic region comprises seven districts namely Sheopur, Morena, Bhind, Gwalior, Shivpuri, Guna

and Ashok Nagar. Out of seven districts, Bhind district was selected on basis of maximum area of Mustard. in case of the small mustard growers were found to be well-educated extreme up to primary followed by middle, secondary, higher secondary, graduation & above educational status. These inferences were originated to parallel across size of farms with negligible disparity. in case of the medium mustard growers were found to maximum belong to Scheduled Caste followed by other back class, General and Scheduled Tribes caste, whereas in case of large mustard grower was only belong to general and other back class caste. These factors were large effect on production of mustard in gird agro-climatic region of Madhya Pradesh.

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