

## Socioeconomic characteristics and varietal preferences of groundnut growers in Kolhapur district of Maharashtra

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### ABSTRACT

The efforts were made to study the selected personal and socioeconomic characteristics of the groundnut growers and their preferences for different varieties in Kolhapur district of Maharashtra. Karveer Hatkanangale and Gadhinglaj Tehsils were selected for the study on the basis of maximum area under groundnut. Proportionate random sampling procedure was adopted and thus 120 respondents were selected from 12 villages. The study noticed that majority of the respondents were from middle age group of 32 to 59 years (60.00%) and secondary level of education (28.34%); 65.00 per cent respondents had medium size of family (4 to 7 members), medium usage of sources of information (60.84%), small size of landholding (44.16%), medium farming experience (55.83%) and medium annual income (67.50%). Majority of the respondents had medium cropping intensity (65.00%), always used Gramsevak as formal personal source of information (89.16%) and used TV among the mass media sources of information (72.50%). It was also found that majority of the farmers followed groundnut – wheat – groundnut and groundnut – sorghum – groundnut cropping patterns in their fields. Phule Pragati variety of groundnut was noticed as highly preferred for oilcake by the growers.

**Keywords:** Groundnut; varietal preferences; growers; socioeconomic characteristics

### INTRODUCTION

Groundnut or peanut (*Arachis hypogaea* Linn) is the second largest source of vegetable oil in the world. Groundnut is a major oilseed crop in India accounting for 45.00 per cent of oilseed area and 55.00 per cent of oilseed production. The area under groundnut in India during the year 2013-14 was 43.20 lakh ha and production was about 47.15 lakh MT (Anon 2013a). In Maharashtra under Kharif groundnut the area was 01.96 lakh ha in 2013-14, production was 02.29 lakh MT and productivity was 1168 kg/ha (Anon 2014). In Kolhapur district area under groundnut was about 57820 ha and productivity was about 1201 kg/ha in Kharif and 2049 kg/ha in summer during the year 2012-13 (Anon 2013b). The selection of varieties depends on environmental factors such as soil, climate, humidity, temperature etc as well as on purpose for which farmer selects the variety such as for edible purpose, for

livestock, for oil extraction, for selling purpose etc. In this background this study was undertaken to know the personal and socioeconomic characteristics and varietal preferences of the groundnut growers in Kolhapur district of Maharashtra.

### METHODOLOGY

The present study was undertaken in Kolhapur district of Maharashtra state; three Tehsils were taken for study namely Karveer, Hatkanangle and Gadhinglaj on the basis of highest area under groundnut crop. Proportionate random sampling procedure was adopted and thus 120 respondents were selected from 12 villages. A pre-tested structured interview schedule was used to collect the information through personal interview method. The efforts were made to know the socioeconomic characteristics and opinion of the respondents regarding the varieties viz Phule Pragati,

Phule Varna, Phule Unnati, Phule Unap, Western T-20, SB-11, TAG-26, TMV-10 and Dhanlaxmi about their suitability for different purposes. Socioeconomic variables included in the study were selected on the basis of an extensive review of literature, discussion with the experts and preliminary study conducted in the area. Only those variables which were considered to be having some relevance to the utilization of improved farm practices were selected for the study.

## RESULTS and DISCUSSION

The results of the study obtained regarding the various socioeconomic characteristics are presented in Table 1.

Table 1 shows that a majority (60.00%) of the respondents belonged to middle age group (32 to 59 years). The observation is supported by the work of Patil (2007). Only 28.34 per cent of the respondents were secondary school educated; majority (65.00%) had medium size of family (4 to 7 members); 60.84 per cent used medium sources of information for the adoption purpose as observed by Jadhav (2013). Data show that 44.16 per cent of the respondents had small size of landholding; 55.83 per cent had medium experience of farming (9-29 years); majority (67.50%) had medium annual income (Rs 120001 to 240000) and the findings are in line with the findings of Patil (2007). Their maximum annual income was Rs 400000 and minimum was 40000. Majority (65.00%) of them had medium level of cropping intensity.

Table 1. Socioeconomic characteristics of the respondents (n= 120)

| Parameter                                             | Frequency  | Mean   | Standard deviation |
|-------------------------------------------------------|------------|--------|--------------------|
| <b>Age (years)</b>                                    |            | 45.29  | 14.09              |
| Young (up to 31)                                      | 23 (19.17) |        |                    |
| Middle age (32 to 59)                                 | 72 (60.00) |        |                    |
| Old age (60 and above)                                | 25 (20.83) |        |                    |
| <b>Education</b>                                      |            | NA     | NA                 |
| Illiterate (no formal education)                      | 05 (4.16)  |        |                    |
| Primary (I to VII class)                              | 24 (20.00) |        |                    |
| Secondary (VIII to X class)                           | 34 (28.34) |        |                    |
| Higher secondary (XI to XII class)                    | 33 (27.50) |        |                    |
| Graduation and above (degree and post-graduation)     | 24 (20.00) |        |                    |
| <b>Size of family (number members)</b>                |            | 5.84   | 2.60               |
| Small (up to 3)                                       | 18 (15.00) |        |                    |
| Medium (4 to 7)                                       | 78 (65.00) |        |                    |
| Large (8 and above)                                   | 24 (20.00) |        |                    |
| <b>Usage of sources of information (score)</b>        |            | 25.50  | 3.55               |
| Low (up to 22)                                        | 23 (19.16) |        |                    |
| Medium (23 to 28)                                     | 73 (60.84) |        |                    |
| High (29 and above)                                   | 24 (20.00) |        |                    |
| <b>Size of land holding (ha)</b>                      |            | NA     | NA                 |
| Marginal (up to 1.00)                                 | 41 (34.16) |        |                    |
| Small (1.01 to 2.00)                                  | 53 (44.17) |        |                    |
| Semi-medium (2.01 to 4.00)                            | 24 (20.00) |        |                    |
| Medium (4.01 to 10.00)                                | 2 (1.67)   |        |                    |
| Large (10.01 and above)                               | -          |        |                    |
| <b>Farming experience (tenure in farming) (years)</b> |            | 19.03  | 10.96              |
| Less (up to 8)                                        | 28 (23.33) |        |                    |
| Medium (9 to 29)                                      | 67 (55.83) |        |                    |
| High (30 and above)                                   | 25 (20.84) |        |                    |
| <b>Annual income (Rs)</b>                             |            | NA     | NA                 |
| Low (up to 120000)                                    | 19 (15.84) |        |                    |
| Medium (120001 to Rs 240000)                          | 81 (67.50) |        |                    |
| High (>240000)                                        | 20 (16.66) |        |                    |
| <b>Cropping intensity (%)</b>                         |            | 184.46 | 47.77              |
| Low (<137.00)                                         | 22 (18.34) |        |                    |
| Medium (138.00 to 232.00)                             | 78 (65.00) |        |                    |
| High (233.00 and above)                               | 20 (16.66) |        |                    |

Figures in parentheses indicate percentage values

**Utilization of various sources of information**

Table 2 reveals that majority (89.16%) of the respondents had always used Gramsevak as

formal personal source of information; 62.50 per cent used representatives of Krishi Seva Kendra as their informal personal source of information. However

Table 2. Classification of the respondents according to the frequency and types of sources of information used by them (n= 120)

| Information source                                 | Frequency of use of source |             |            |
|----------------------------------------------------|----------------------------|-------------|------------|
|                                                    | Always                     | Sometimes   | Never      |
| <b>Formal personal source</b>                      |                            |             |            |
| Gramsevak                                          | 107 (89.16)                | 10 (08.34)  | 03 (02.50) |
| Agricultural Assistant (Department of Agriculture) | 16 (13.34)                 | 101 (84.16) | 03 (02.50) |
| Circle Agricultural Officer                        | 15 (12.50)                 | 41 (34.16)  | 64 (53.34) |
| Agricultural university scientists                 | 30 (25.00)                 | 50 (41.66)  | 40 (33.34) |
| <b>SMSs (KVK)</b>                                  | 17 (14.16)                 | 55 (45.84)  | 48 (40.00) |
| <b>Informal personal source</b>                    |                            |             |            |
| Representatives of Krishi Seva Kendra              | 75 (62.50)                 | 39 (32.50)  | 06 (05.00) |
| Progressive farmers                                | 30 (25.00)                 | 81 (67.50)  | 09 (07.50) |
| Relatives/neighbours                               | 35 (29.17)                 | 29 (24.16)  | 56 (46.67) |
| Local leaders                                      | 44 (36.66)                 | 47 (39.17)  | 29 (24.17) |
| <b>Group sources</b>                               |                            |             |            |
| Crop demonstration                                 | 54 (45.00)                 | 63 (52.50)  | 03 (02.50) |
| Agricultural exhibition                            | 37 (30.84)                 | 69 (57.50)  | 14 (11.66) |
| Farmers' tour                                      | 29 (24.16)                 | 55 (45.83)  | 36 (30.00) |
| Group discussion                                   | 44 (36.66)                 | 50 (41.67)  | 26 (21.67) |
| Shetkari Melawa                                    | 26 (21.66)                 | 61 (50.84)  | 33 (27.50) |
| Participation in training programmes               | 27 (22.50)                 | 39 (32.50)  | 54 (45.00) |
| <b>Mass media</b>                                  |                            |             |            |
| Radio                                              | 38 (31.66)                 | 52 (43.34)  | 30 (25.00) |
| TV                                                 | 87 (72.50)                 | 29 (24.16)  | 04 (3.34)  |
| Mobile phone                                       | 52 (43.34)                 | 40 (33.33)  | 28 (23.33) |
| Internet                                           | 24 (20.00)                 | 32 (26.66)  | 64 (53.34) |
| Social networking (Whatsapp, Facebook etc)         | 23 (19.16)                 | 31 (25.84)  | 66 (55.00) |
| <b>Print media</b>                                 |                            |             |            |
| Magazines                                          | 64 (53.34)                 | 53 (44.16)  | 03 (02.50) |
| Newspapers                                         | 45 (37.50)                 | 58 (48.34)  | 17 (14.16) |
| Krishi Darshini                                    | 16 (13.33)                 | 73 (60.83)  | 31 (25.84) |
| Other extension literature                         | 21 (17.50)                 | 29 (24.16)  | 70 (58.34) |

Table 3. Classification of the respondents according to their cropping pattern (n= 120)

| Crop          | Number of respondents | Percentage | Total area under crop (ha) | Average area (ha) | Total yield (q) | Average productivity (q/ha) |
|---------------|-----------------------|------------|----------------------------|-------------------|-----------------|-----------------------------|
| <b>Kharif</b> |                       |            |                            |                   |                 |                             |
| Groundnut     | 120                   | 100.00     | 64.90                      | 0.54              | 1203.21         | 18.53                       |
| Soybean       | 75                    | 62.50      | 23.40                      | 0.31              | 481.8           | 20.58                       |
| Rice          | 72                    | 60.00      | 21.20                      | 0.29              | 809.5           | 38.18                       |
| Sunflower     | 19                    | 15.83      | 04.40                      | 0.23              | 86.05           | 19.56                       |
| Green gram    | 15                    | 12.50      | 02.90                      | 0.19              | 22.40           | 7.72                        |
| Black gram    | 11                    | 09.16      | 02.40                      | 0.21              | 28.70           | 11.96                       |
| <b>Rabi</b>   |                       |            |                            |                   |                 |                             |
| Wheat         | 73                    | 60.83      | 20.95                      | 0.28              | 743.55          | 35.49                       |
| Sorghum       | 71                    | 59.16      | 26.10                      | 0.36              | 728.70          | 27.92                       |
| Maize         | 51                    | 42.50      | 17.40                      | 0.34              | 637.50          | 36.64                       |
| Gram          | 47                    | 39.16      | 14.50                      | 0.30              | 413.00          | 28.48                       |
| <b>Summer</b> |                       |            |                            |                   |                 |                             |
| Groundnut     | 53                    | 44.16      | 20.30                      | 0.38              | 546.20          | 26.91                       |
| Brinjal       | 15                    | 12.50      | 04.40                      | 0.29              | 1483.00         | 337.05                      |
| Tomato        | 10                    | 08.33      | 02.60                      | 0.26              | 639.0           | 245.76                      |
| Cabbage       | 02                    | 01.66      | 00.40                      | 0.20              | 104.0           | 260.00                      |
| <b>Annual</b> |                       |            |                            |                   |                 |                             |
| Sugarcane     | 116                   | 96.66      | 98.20                      | 0.84              | 92838           | 945.40                      |
| Banana        | 06                    | 05.00      | 03.30                      | 0.55              | 1496.0          | 453.33                      |

Table 4. Classification of respondents according to their opinion about varieties regarding use for different purposes (n= 120)

| Type of preference          | Variety       |               |               |               |               |               |               |               |               |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                             | Phule Pragati | Phule Varna   | Phule Unnati  | Phule Unap    | Western T-20  | SB-11         | TAG-26        | TMV-10        | Dhanlaxmi     |
| <b>General preference</b>   |               |               |               |               |               |               |               |               |               |
| Oilcake                     | 41<br>(34.16) | -             | -             | -             | 15<br>(12.50) | 07<br>(05.84) | 26<br>(21.66) | 21<br>(17.50) | 10<br>(08.34) |
| Roasted eating              | 15<br>(12.50) | -             | -             | -             | 36<br>(30.00) | 32<br>(26.66) | -             | 07<br>(05.84) | 30<br>(25.00) |
| Chatni                      | 10<br>(08.34) | -             | -             | -             | 22<br>(18.33) | 06<br>(05.00) | 12<br>(10.00) | 31<br>(25.83) | 39<br>(32.50) |
| Chikki                      | 25<br>(20.83) | -             | -             | -             | 11<br>(09.16) | -             | 04<br>(03.34) | 34<br>(28.34) | 46<br>(38.33) |
| <b>Technical preference</b> |               |               |               |               |               |               |               |               |               |
| High production             | 46<br>(38.34) | 05<br>(04.16) | -             | -             | 12<br>(10.00) | 06<br>(05.00) | 37<br>(30.84) | 08<br>(06.66) | 06<br>(05.00) |
| Oil                         | 28<br>(23.34) | -             | 07<br>(05.84) | -             | -             | -             | 30<br>(25.00) | 32<br>(26.66) | 23<br>(19.16) |
| Short duration              | 72<br>(60.00) | -             | -             | -             | -             | 25<br>(20.83) | 23<br>(19.16) | -             | -             |
| Kharif season               | 80<br>(66.66) | -             | -             | -             | -             | 10<br>(08.34) | -             | -             | 30<br>(25.00) |
| Summer season               | -             | -             | -             | -             | 44<br>(36.66) | 09<br>(07.50) | 34<br>(28.34) | 12<br>(10.00) | 21<br>(17.50) |
| Both seasons                | -             | -             | 08<br>(06.66) | 06<br>(05.00) | -             | 19<br>(15.84) | 09<br>(07.50) | -             | 78<br>(65.00) |
| Disease and pest resistance | 65<br>(54.16) | -             | -             | 04<br>(03.34) | -             | 09<br>(07.50) | 33<br>(27.50) | 09<br>(07.50) | -             |
| Good market price           | 80<br>(66.66) | -             | -             | -             | 10<br>(08.34) | -             | 07<br>(05.84) | 15<br>(12.50) | 08<br>(06.66) |
| Seed availability           | 31<br>(25.84) | -             | -             | -             | 17<br>(14.16) | 15<br>(12.50) | 20<br>(16.66) | 16<br>(13.34) | 21<br>(17.50) |

45.00 per cent of them had always used crop demonstration as a group source of information. Majority (72.50%) of the respondents used TV as mass media source of information and 53.34 per cent used magazines as printed media for their source of information.

### Cropping pattern used by the respondents

It was found that majority of the farmers followed groundnut – wheat – groundnut and groundnut – sorghum – groundnut cropping patterns in their fields. All farmers had been cultivating groundnut in Kharif season and 53 per cent in summer also. Sugarcane was also cultivated by a large majority as an annual crop (Table 3).

### Varietal preferences of groundnut growers

It was found that groundnut growers gave preference to Phule Pragati for oilcake (34.16%), high production (38.34%) and for being short duration variety

(60.00%), to Western T-20 for roasted eating purpose (30.00%), to Dhanlaxmi for Chatni (32.50) and Chikki making (38.33%) and to TMV-10 for oil making (26.66%) (Table 4).

Majority (66.66%) gave preference to Phule Pragati for Kharif season, 36.66 per cent preferred Western T-20 for summer season, 65.00 per cent preferred Dhanlaxmi for both seasons (Table 4). Of them 54.16 per cent preferred Phule Pragati for disease and pest resistance, 66.66 per cent for good market prices and 25.84 per cent for seed availability. Simtowe et al (2010) indicated that only 26.00 per cent of the sampled farmers grew at least one of the improved groundnut varieties.

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