The Pharma Innovation Journal 2023; 12(2): 279-282

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; 12(2): 279-282

www.thepharmajournal.com
Received: 08-12-2022
Accepted: 12-01-2023

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Profile characteristics of pomegranate cultivators

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DOI: https://doi.org/10.22271/tpi.2023.v12.i2d.18439

Abstract
The present study explored the profile characteristics of pomegranate cultivators regarding the technological gap in adoption of improved pomegranate cultivation practices. The present study was conducted during the year 2021-2022 in Aurangabad district of Marathwada region which has considerable area under pomegranate cultivation. From the district, four talukas were selected purposively where pomegranate is extensively cultivated. Three villages from each tehsil were selected, a total number of 12 villages were selected from the four tehsil. The data from the pomegranate cultivators were collected through personal interview schedule. An Ex-post-facto research design was followed for the study. The collected data was analyzed, classified and tabulated. Statistical tools such as frequency, percentage, mean and standard deviation were used to categorize the profile characteristics. It was observed that 28.33 percent of the pomegranate cultivators had secondary education, medium (65.83%) farming experience, 40.83 percent were possessing semi medium size of land holding, 76.67 percent of them medium annual income group, 54.17 percent were having medium size of orchard, 70.83 percent were having medium level of social participation, 67.50 percent medium level of extension contact. There after the (68.33%) of the pomegranate cultivators of the pomegranate cultivators had the medium level of risk orientation and 58.33 percent were having the medium level of scientific orientation. Most of the pomegranate cultivators were in the medium level of mass media exposure and economic motivation category i.e. (60.83%) and (65.83%), respectively. Further, (80.00%) of the pomegranate cultivators were having medium level of knowledge.

Keywords: Profile characteristics, pomegranate cultivators, improved pomegranate cultivation

Introduction
Pomegranate (*Punica granatum* L.) is an important fruit of tropical and subtropical regions of World. It commonly known as Anar, Dalib, Matulum. The centre of origin of pomegranate is Iran where it was first cultivated in 2000 B.C. It is extensively cultivated in various countries which includes Spain, Morocco, Egypt, Iran, China, Japan, USA, Russia, Pakistan, India and other Mediterranean countries. Pomegranate occupies 18th placed based on production among the world‟s main fruit crops.

India is world's largest producer of pomegranates and it produces finest quality pomegranate throughout the year. The total area under pomegranate crop in India 2018-19 is approximately 2.46 lack hectare and production is 28.65 lack metric tons. During the year 2018-19, 67.89 thousand MT fruits exported from India and it worth Rs. 6885 million, which shows that there is tremendous potential in fruit export (Annonymous, 2019) [2]. UAE, Nepal, Saudi Arab, Oman, Qatar, Netherland, Kuwait, Baharin, Srilanka, Egypt, Vietnam, Singapore are the major destinations were pomegranates exported from India.

Maharashtra contributes 64.43% in total production of pomegranates from India and it ranks first in total production followed by Karnataka, Gujrat, Andhra Pradesh, Madhya Pradesh etc. It is an important fruit crop of Maharashtra and it is cultivated in 43,151 ha. Area with total production of 4,31,510 tones. In Maharashtra, production is mainly concentrated in the Western Maharashtra region and the Marathwada region. Commercial cultivation of pomegranate takes place in Solapur, Nashik, Ahmednagar, Pune, Dhule, Aurangabad, Satara, Osmanabad and Latur districts of Maharashtra. The varieties like Bhagwa, Super Bhagwa, Arakta, Ganesh, Mrudula, Dholka popularly grown in Maharashtra.

In Marathwada, pomegranate is commercially cultivated in Aurangabad, Beed, Jalna, 0smanabad and Latur districts. Jalna and Aurangabad are the major pomegranate growing districts in which area under pomegranate cultivation in jalna is 2,424 ha and overall production is about 19,100 tonnes. While area under pomegranate cultivation in Aurangabad is 7,300 ha and production is 31,800 tonnes. (Annonymous, 2018) [1].

Bhagawa the variety of pomegranate growing in major districts of Marathwada. The fruit is glossy red in colour with soft seeds and high T.S.S. Variety Ganesh is also grown having yellow to reddish yellow rind colour, having light pink arils and soft seeds. Fruit weights between 225-250 gms with medium T.S.S Agricultural scientist 'Dr. Cheema' did the pioneering work in 1944 at Ganeshkhind, Pune selecting elite plants collected from Alandi and Dholka, cross breed of which gave rise to GBI-1, latter on renamed as "Ganesh" as a chance seedling.

Pomegranate contains calcium, phosphorous, iron and other mineral as well as 'B' and 'C' vitamins. It prefers for its cool, refreshing juice and also for its different medicinal properties. Bark and rind of fruit are commonly used in the therapeutics in dysentery and diarrhea. Juice is used as medicine for leprosy. With this background in mind the current research was conducted to study the profile characteristics of Profile characteristics of Pomegranate Cultivators

Materials and Methods

The present study was conducted in the Aurangabad district of Marathwada region of Maharashtra state during 2021-2022, mainly because the researcher is the native of state and is well proficient with socio-cultural situation and the local language of that area. This helped in establishing communication with the respondents and obtaining fiducial and authenticate information.

The villages were selected purposively from Aurangabad, Paithan, Phulambri and Kannad tehsil, where maximum number of pomegranate growers observed. Three villages from each tahsil, thus a total number of 12 villages were selected from the four tehsil. List of selected villages namely Jadgaon, Hivra and Tongaon were selected from Aurangabad taluka Tupewadi, Balanagar, Kadethan were selected from Paithan taluka Haladgaon khurd, Haladgaon budroog, Wakod from Phulabri taluka and Bahirgaoan, Dongaon, Chikalthan from the Kannad district.

From each village ten pomegranate growers were selected from the list provided by talathi and Agriculture Assistant of each village. Thus, a total 120 pomegranate farmers were selected as sample respondents for the study.

The data were gathered through personal interview method with the help of structured schedule consisting of various items concern with the objective of study. One shot case study method of Ex-post-facto research design was used for the present study. The collected data was analysed, classified and tabulated. Statistical tools such as frequency, percentage, mean, standard deviation were used to interpret findings and draw conclusions.

Results and Discussion

Profile of the pomegranate cultivators

Table 1: Distribution of pomegranate cultivators according to their education

Sr. No.	Category	Frequency	Percentage
1	Illiterate	9	7.50
2	Literate (Read and write)	8	6.67
3	Primary education (class1-7)	23	19.17
4	Secondary education (8-10)	34	28.33
5	Higher secondary (11-12)	33	27.50
6	Graduate and more than that	10	8.33
7	More than Post Graduate	3	2.50
	Total	120	100.00

Table 2: Distribution of pomegranate cultivators according to their farming experience

Sr. No.	Category	Frequency	Percentage
1	Low	24	20.00
2	Medium	79	65.83
3	High	17	14.17
	Total	120	100
Mean= 8.69 S.D. = 3.98			

Table 3: Distribution of pomegranate cultivators according to their land holding

Sr. No.	Category	Frequency	Percentage
1	Marginal (Up to 1.00 ha)	10	8.33
2	Small (1.01 to 2.00 ha)	36	30.00
3	Semi-medium (2.01 to 4.00 ha)	49	40.83
4	Medium(4.01 to 10.00 ha)	21	17.50
5	Large (Above 10.01 ha)	4	3.33
	Total	120	100
Mean = 2.78 S.D = 0.95			

Table 4: Distribution of pomegranate cultivators according annual income

Sr. No.	Category	Frequency	Percentage
1	Low	12	10.00
2	Medium	92	76.67
3	High	16	13.33
	Total	120	100
Mean = 322416.67 S.D. = 110369.25			

Table 5: Distribution of pomegranate cultivators according orchard size

Sr. No.	Category	Frequency	Percentage
1	Small (upto 1 ha)	40	33.33
2	Medium (1.01 to 2 ha)	65	54.17
3	High (2.01ha)	15	12.50
	Total	120	100.00
Mean = 1.36 S.D =0.63			

Table 6: Distribution of pomegranate cultivators according to social participation

Sr. No.	Category	Frequency	Percentage
1	Low	14	11.67
2	Medium	85	70.83
3	High	21	17.50
	Total	120	100.00
Mean = 26.18 S.D. = 4.32			

Table 7: Distribution of pomegranate cultivators according to extension contact

Sr. No.	Category	Frequency	Percentage
1	Low	18	15.00
2	Medium	81	67.50
3	High	21	17.50
	Total	120	100.00
Mean = 14.51 S. D. = 3.08			

Table 8: Distribution of pomegranate cultivators according to risk orientation

Sr. No.	Category	Frequency	Percentage
1	Low	21	17.50
2	Medium	82	68.33
3	High	17	14.17
	Total	120	100.00
Mean = 23.66 S. D. = 3.45			

Table 9: Distribution of pomegranate cultivators according to scientific orientation

Sr. No.	Category	Frequency	Percentage
1	Low	35	29.17
2	Medium	70	58.33
3	High	15	12.50
	Total	120	100.00
Mean = 21.73 S.D = 4.07			

Table 10: Distribution of pomegranate cultivators according to mass media exposure

Sr. No.	Category	Frequency	Percentage
1	Low	28	23.33
2	Medium	73	60.83
3	High	19	15.83
	Total	120	100.00
Mean = 12.93 S.D. = 3.40			

Table 11: Distribution of pomegranate cultivators according to economic motivation

Sr. No.	Category	Frequency	Percentage
1	Low	26	21.67
2	Medium	79	65.83
3	High	15	12.50
	Total	120	100.00
Mean = 22.45 S.D. = 4.94			

Table 12: Distribution of people according their knowledge

Sr. No.	Category	Frequency	Percentage
1	Low	17	14.17
2	Medium	96	80.00
3	High	7	5.83
	Total	120	100.00
Mean = 16.02 S.D. = 2.55			

Education

It is observed from table 1 that, 28.33 percent pomegranate cultivators were educated up to secondary education followed by (27.50%) of them educated up to higher secondary. About (19.17%) of them educated up to primary education level, followed by (8.33%) of people are graduate and more than that and (7.50%) were illiterate. Meager percantage (2.50%) were more than post graduate. It might be due to enough formal education institutions available in the villages and their by may be the reason for continuation of education at high school level. This findings are similar with the findings of Pawar (2015) [6], Chavan (2014) [4].

Farming experience

It is observed from the table 2 that most of the (65.83%) of the pomegranate cultivators involved in medium range of farming experience followed by low (20.00%) and high (14.17%) farming experience. It clearly indicate that majority of the pomegranate cultivators had medium level of experience in pomegranate cultivation. This findings are line with the findings of the Parikh (2013) [5], Chavan (2014) [4].

Land holding

It is revealed from table 3 that more than (40.83%) of the pomegranate cultivators were in semi-medium category of land holding (2.01 to 4.00 ha) while (30.00%) of the pomegranate cultivators were involved in small land holding category (1.01 to 2 ha) followed by (17.50%) of the pomegranate cultivators having medium land holding (4.01 to 10.00 ha), (8.33%) of the pomegranate cultivators were in marginal category of land holding (upto 1.00 ha) and very few (3.33%) of them having large land holding (above 10.01 ha) respectively.

It is quite natural that due to fragmentation and subdivision of land are prone to down their farms size. As well as other factors such as increased population on land. As a result, the bulk of pomegranate cultivators had small and semi-medium land holding. This findings are similar with the findings of the Chavan (2014) [4], Parikh (2013) [5].

Annual income

It is observed from table 4 that, large majority (76.67%) of the pomegranate cultivators had medium level of annual income followed by (13.33%) of them had high annual income and only (10.00%) of them had low annual income.

Data disclosed maximum farmers had medium level of annual income this could be because farming is the primary source of income for the majority of farmers. The majority of the farmers possessed small and marginal land holding. However, productivity is low for a variety of reasons, and marketing facilities are also lacking. This finding is in line with findings of Chavan (2014) [4].

Orchard size

It is evident from the table 5 that most of the (54.17%) of the pomegranate cultivators having medium orchard size of (1.01 to 2 ha) under pomegranate cultivation while (33.33%) of them having small orchard size of (up to 1 ha) under pomegranate cultivation followed by (12.50%) of the pomegranate cultivators having high orchard size of (2.01 ha and above) under pomegranate cultivation.

This might be due to fragmentation and subdivision of land which reduced the number of pomegranate cultivators for having more land size and based on the available land some part was brought under pomegranate cultivation. This findings represented similar to the findings of the Chavan (2014) [4].

Social participation

It is revealed from table 6 that most of (70.83%) of pomegranate cultivators had medium level of social participation followed by high (17.50%) and only (11.67%) belong to low level of social participation.

The high inclination and education level of pomegranate cultivators to involve in planning and organizing the activities might be the reason for their medium and high level of participation. This findings represents similar results to the findings of the Pawar (2015) [6].

Extension contact

It can be implied from table 7 that most (67.50%) of pomegranate cultivators had medium level of extension contact followed by (17.50%) of them had high level of extension contact and very few (15.00%) had low level of extension contact.

The frequently participation and contact and visits of the agricultural officers, SMS, agriculture extension officer etc. at villages might have generated the confidence among the pomegranate cultivators, which prompted them to fall under medium and high categories. This findings shows the similar results as per the results of Pawar (2015) [6] and Bhandare (2011) [3].

Risk orientation

It can be presented from the table 8 that the maximum (68.33%) of the pomegranate cultivators had medium level of risk orientation followed by (17.50%) of them had low level of risk orientation and very less quantity of pomegranate cultivators (14.17%) had high level of risk orientation respectively. This findings are in line with the findings of Pawar (2015) [6] and Chavan (2014) [4].

Scientific orientation

It can be implied from table 9 that significant (58.33%) of the pomegranate cultivators had medium level of scientific orientation followed by (29.17%) low and high (12.50%) respectively.

It can be understood that the frequent visits made by the Scientists of KVK, officers of state department of agriculture and other organizations uplifted the level of scientific orientation of the farmers. Second reason might be due to pomegranate as high value crop makes pomegranate cultivators to think more and acquire the new innovations related to pomegranate. This findings are in line with the findings of Parikh (2013) [5].

Mass media exposure

It is observed from table 10 that three-fifth (60.83%) of pomegranate cultivators had medium mass media participation followed by high (27.50%) and low (13.34%) mass media participation.

Due to high level of formal education more number of pomegranate cultivators belong to medium and high category of mass media participation. This findings are in line with the findings of Parikh (2013) [5].

Economic motivation

It is observed from table 11 that nearly three fifth (65.83%) of the pomegranate cultivators belongs to medium category of economic motivation followed by (21.67%) belongs to low category and (12.50%) high respectively. This findings represent the similar results with the findings of Pawar (2015) [6] and Parikh (2013) [5].

Knowledge

It is observed from Table 12 that large majority (80.00%) of the pomegranate cultivators had medium level of knowledge followed by (14.17%) had low level of knowledge and (5.83%) of the pomegranate cultivators had high knowledge about recommended package of practices of pomegranate. This is might be due the pomegranate cultivators have secondary and higher secondary educational level with medium extension contact. This findings provides the similar results as per the findings of Pawar (2015) [6], Parikh (2013) [5] and Chavan (2014) [4].

Summary and Conclusions

As regard the profile of pomegranate cultivators, it was observed that more than 28.33 percent of the pomegranate cultivators had secondary education, medium farming experience was (65.83%) while, (40.83%) of the pomegranate cultivators were possessing semi medium size of land holding. It was found that large majority (76.67%) of the pomegranate cultivators were from medium annual income group. It was a most (54.17%) of the pomegranate cultivators were having medium size of orchard, as well as the (70.83%) of pomegranate cultivators were having medium level of social participation. There is an (67.50%) of pomegranate cultivators having the medium level of extension contact. There after the maximum (68.33%) of the pomegranate cultivators of the pomegranate cultivators had the medium level of risk orientation. It can be implied that the significant (58.33%) of the pomegranate cultivators were having the medium level of scientific orientation. Nearly three fifth of the pomegranate cultivators were in the medium level of mass media exposure and economic motivation category *i.e.* (60.83%) and (65.83%), respectively. Further, large majority (80.00%) of the pomegranate cultivators were having medium level of knowledge.

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