



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

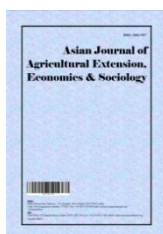
AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*



## **Profile of Beneficiary Farmers of Jalyukt Shivar Campaign**

**Pranali N. Thakare<sup>a\*</sup> and V. S. Tekale<sup>b†</sup>**

<sup>a</sup> Department of Extension Education, Post Graduate Institute, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola-444104, Maharashtra, India.

<sup>b</sup> College of Agriculture, Mul, Dist. Chandrapur-441224, Maharashtra, India.

### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

### **Article Information**

DOI: 10.9734/AJAEES/2021/v39i1130782

#### Editor(s):

(1) Dr. Roxana Plesa, University of Petrosani, Romania.

#### Reviewers:

(1) C. Thatchinamoorthy, Annamalai University, India.

(2) Jainaseni Rout, Ravenshaw University, India.

Complete Peer review History, details of the editor(s), Reviewers and additional Reviewers are available here:  
<https://www.sdiarticle5.com/review-history/77988>

**Original Research Article**

**Received 20 September 2021**

**Accepted 30 November 2021**

**Published 30 November 2021**

### **ABSTRACT**

In Maharashtra state, nearly 82 per cent area of the state falls in rainfed sector and 52 per cent area is drought prone. To mitigate drought in Maharashtra, state government specially launched Jalyukt Shivar Campaign in December, 2014. In Vidarbha, drought is the major challenge hence the research objective was formulated to study profile of beneficiary farmers of Jalyukt Shivar Campaign in Vidarbha region of Maharashtra state. An ex-post facto research design of social research was used for present investigation. The study was conducted in Nagpur and Yavatmal district in month of October and November, 2020, with 320 beneficiary farmers of Jalyukt Shivar Campaign. The findings revealed that, more than half of the respondents (54.69%) were belonged to middle age i.e. between 36 to 50 years. Majority of the respondents (70.00%) were engaged in agriculture as their main occupation for earning. Slightly more than two fifth of the respondents (40.63%) had annual income in the range of Rs. 2,36,001/- to 4,02,000/-. Nearly two fifth of the respondents (39.06%) from study area belonged to small land holding 1.01 to 2.00 ha. Majority of the respondents (70.63%) were belonged to medium category of social participation. Majority of the respondents (72.19%) were belonged to medium level of extension participation. Over three fifth of the

<sup>#</sup> Ph.D. Scholar;

<sup>†</sup> Associate Dean;

\*Corresponding author: E-mail: [thakarepranali55@gmail.com](mailto:thakarepranali55@gmail.com);

respondents (62.50%) were using medium sources of information. Majority of the respondents (66.88%) belonged to medium innovativeness. Majority of the respondents (66.88%) belonged to medium risk preference and medium economic motivation (65.63%). It is suggested that, efforts should be made by government to involve young farmers in agricultural development programmes like Jalyukt Shivar Campaign as well as in performing farming as main occupation. For success of this campaign, extension agencies must increase participation of farmers in local social institutions, extension activities and contact with information sources outside beneficiaries social systems.

**Keywords:** *Profile; beneficiary farmers; Jalyukt Shivar Campaign; water conservation; drought mitigation; source of irrigation.*

## 1. INTRODUCTION

Water is critical input for agricultural production and plays an important role in food security. Population growth, urbanization and climate change cause competition for water resources. Agriculture is by far the largest consumer of our freshwater resources using 70 per cent and the pressure on freshwater resources continues to increase due to the growing global demand for food.

In India drought has resulted in millions of deaths over the course of the 18th, 19th, and 20th centuries. The frequency of occurrence of drought years has significantly increased in India. According to meteorologists the frequency is set to increase between 2020 and 2049. India is the biggest user of groundwater. It extracts more groundwater than China and the USA. About 89 per cent of groundwater extracted in India is used for irrigation making it the highest category user in the country [1].

Maharashtra is the third largest state in union of India considering population as well as the area. Nearly 58 per cent of the population lives in the rural area which depends largely on agriculture for their livelihood. Inconsistency of rains in the very times of crop growth and discontinuity of rains create drought like situation. Nearly 82 per cent area of the state falls in rainfed sector and 52 per cent area is drought prone, due to which agriculture field is heavily affected. Considering irrigation facilities in the state, factors mainly challenging development of state are limited irrigation facility, large coverage of drought prone area, large proportion of poor and downgraded land. Heavy ups and downs have been observed in the production of crops on dryland in the state [2].

As per the Government Resolution (GR), dated 25 November, 2014, government of Maharashtra has declared drought like situation in 19059 villages of 22 districts. It is observed that after

every 2 years drought situation is created. Availability of water is the major challenge. There is need to recharge ground water and create decentralized water bodies to overcome the water scarcity problem in rainfed area of the state. Keeping in mind the various negative effects of lack of water availability the Maharashtra government had launched Jalyukt Shivar Campaign on December 5, 2014 to permanently overcome internal drought situation in the state by 2019. The programme aims to make 5000 villages free of water scarcity every year. There is convergence of various schemes related to water conservation. This programme focused on restoration, repair, rejuvenation and construction of local water bodies, where possible, it also linked to nearby rivers, allowing a continuous, uninterrupted flow of water for local irrigation requirements.

Jalyukt Shivar Campaign was the flagship programme of the Maharashtra state government. Between 2014 and 2019, over 6.41 lakh water conservation works were carried out in Maharashtra to make the state drought-free. According to the Comptroller and Auditor General (CAG) of India report, the scheme catered to 22,586 villages and 6.41 lakh works were undertaken in all. Of these, 6.3 lakh works were completed at a cost of Rs. 9,633.75 crore [3].

The present study was focused on studying the personal, socio-economic, situational, communicational and psychological profile of those farmers who were benefitted from the Jalyukt Shivar Campaign in the Vidarbha region. This region of Maharashtra state is mostly characterised by dry land farming, changes in rainfall during last couple of years had badly affected crop production, yield are very low, repeated crop failures pushed farmers into already mounted debts and causes distress among them. Number of suicides in this region increases over last few years. Drought is one of

the reasons behind farmer suicide. Despite high contribution of agriculture to the overall economy this sector in Vidarbha is challenged by many factors of which climate related disaster like drought in recent years.

There is huge scope under Jalyukt Shivar Campaign to enhance production, productivity of major crops and socio-economic development of farmers in the study area. For proper implementation of agricultural development programme, its success and sustainable development of targeted beneficiaries, insight on targeted beneficiaries is important. Keeping this in mind, the study was conducted with objective to study profile of beneficiary farmers of Jalyukt Shivar Campaign. The present study would be providing insights on characters of beneficiary farmers of Jalyukt Shivar Campaign.

## 2. METHODOLOGY

### 2.1 Research Design

For the present study an ex-post-facto research design of social research was used. It's a quasi-experimental study which explores how an independent variable, present earlier to the study in the participants, influence a dependent variable.

## 2.2 Sampling Procedure

### 2.2.1 Locale of study

The present study was conducted in the Nagpur and Yavatmal district of Vidarbha region in Maharashtra state. Jalyukt Shivar Campaign was implemented in Maharashtra state from the year 2015. In Vidarbha region there are two divisions namely; Nagpur and Amravati. From each division one district was selected purposively having maximum villages under Jalyukt Shivar Campaign in the year 2015-2016 (1<sup>st</sup> year of JSC) i.e. Nagpur district (313 villages) was selected from Nagpur division and Yavatmal district (413 villages) was selected from Amravati division.

### 2.2.2 Selection of talukas

In Nagpur district there were total 13 talukas under Jalyukt Shivar Campaign out of these, two talukas were selected purposively namely; Katol (69 villages) and Narkhed (30 villages), as these talukas having maximum villages under Jalyukt Shivar Campaign in the year 2015-2016. Similarly, from Yavatmal district, out of 16 talukas under Jalyukt Shivar Campaign, two talukas were selected purposively namely; Darwha (36 villages) and Digras (36 villages), as these talukas having maximum villages under Jalyukt Shivar Campaign in the year 2015-2016.

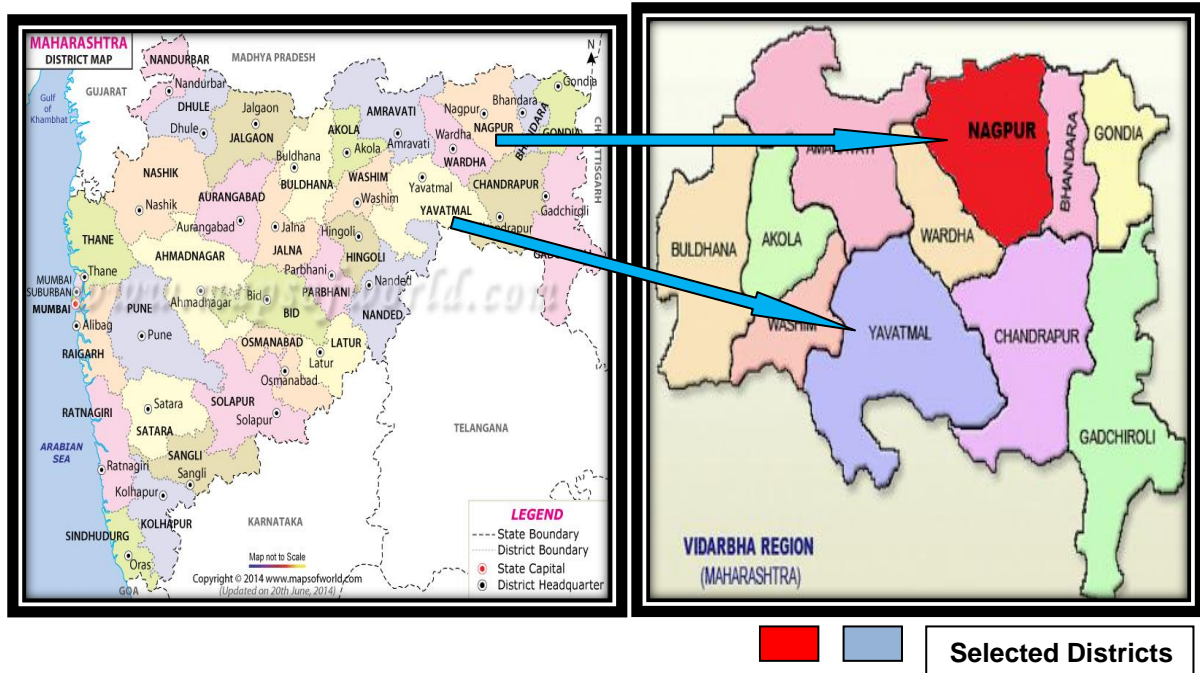


Fig. 1. Map of Maharashtra indicating Vidarbha region with selected Nagpur and Yavatmal district

### 2.2.3 Selection of activity

There were number of works taken up under 13 major activities of Jalyukt Shivar Campaign all over the state as well as in study area. Out of these, cement nala bund (CNB) deepening was one of the major activities undertaken in selected districts and talukas at same time in the year 2015-2016. It is listed as one of the activities among the total 13 activities promoted by Jalyukt Shivar to improve the availability of water. It is one of the promising droughts proofing measure. Therefore, after discussion with subject experts, officials of JSC implementing agencies, beneficiaries of this activity were selected purposively as respondents for present study.

### 2.2.4 Selection of villages

The 10 villages from each taluka were selected purposively, as these villages having maximum number of beneficiaries of selected CNB deepening activity of Jalyukt Shivar Campaign for the purpose of study. Total 40 villages were selected purposively for study from selected four talukas of two districts.

### 2.2.5 Selection of respondents

From each selected village, farmers who have taken benefits from CNB deepening activity of Jalyukt Shivar Campaign were selected purposively by proportionate random sampling method called as beneficiary of Jalyukt Shivar Campaign and they were consider as respondents in the present study. Thus, for the proposed study 160 beneficiary farmers from Nagpur district and 160 beneficiary farmers from Yavatmal district were selected. Total 320 beneficiary farmers were selected from 40 villages of four selected talukas of two districts of Vidarbha by proportionate random sampling method. These selected 320 beneficiary farmers were considered as respondents in the present study.

### 2.2.6 Selection of variables

The focus of the study was to study personal, socio-economic, situational, communicational and psychological characteristics of the beneficiary farmers of Jalyukt Shivar Campaign. Thus, the variables of the present study were selected on the basis of review of literature related to beneficiary farmers and after thorough consultation with research guide and experts. These variables included age, education, family size, occupation, annual income, land holding,

farming experience, social participation, source of irrigation, type of soil, extension participation, source of information, innovativeness, cosmopoliteness, risk preference and economic motivation.

## 2.3 Statistical Tools and Techniques used

The data were collected with the help of pre-tested, well structured interview schedule. The data were filled in excel and basic statistical tools like frequency, percentage, mean and standard deviation were used for data analysis. The final categories were made on the basis of mean  $\pm$  standard deviation.

## 3. RESULTS AND DISCUSSION

### 3.1 Age

Age is relevant factor which influences decisions to adopt technologies on farm. The data presented in Table 1 revealed that, more than half of the respondents (54.69%) were belonged to middle age (36 to 50 years), followed by 29.69 per cent were belonged to old age group (above 50 years). The 15.62 per cent of the respondents were found in young age group (up to 35 years). The majority of the beneficiary farmers of the Jalyukt Shivar Campaign from study area were from middle age group. The average age of the respondents was 48 years. The farmers of middle age group have family responsibility, always ready to take risks, adopt effective technologies and sensibility work with a sense of commitment and involvement. These might be the probable reasons for majority of the respondents to be found in the middle age group. On the other hand, less percentage of young respondents has been seen. Lack of interest of youngsters in agriculture as an occupation for earning might be the reason behind it. These results are in line with the findings reported by Parate [4], Trupti [5], Chavai [6], Pannu [7], Patel [8], Pandey [9], Tekale [10], Neeta [11] and Jakkawad [12].

### 3.2 Education

Education brings desirable changes in human behaviour such as knowledge, attitude and skills. The data presented in Table 1 reported that, higher proportions of the respondents (36.88%) were educated up to secondary school (8<sup>th</sup> to 10<sup>th</sup> std.), followed by 21.88 per cent, who had higher secondary school level education (11<sup>th</sup> to

12<sup>th</sup> std.). As much as 15.31 per cent of the respondents had middle school level education (5<sup>th</sup> to 7<sup>th</sup> std.). Few of the respondents (08.43%) had primary school level education (1<sup>st</sup> to 4<sup>th</sup> std.). The meagre per cent of the respondents (02.50%) were found illiterate (no schooling). It was worth to note that 09.38 per cent of the respondent had under graduate level education, followed by 03.12 per cent had post graduate degrees in different courses. Also a small fraction of the respondents (02.50%) hold diploma and technical education based on 10<sup>th</sup> and 12<sup>th</sup> standards. It is clearly indicated that higher proportion of the respondents had secondary school level education.

Overall educational background of the respondents has been seen to be good. Since post independence era government has launched various educational campaigns to make people literate. Many efforts have been

taken to provide educational facilities at reach of rural people with good institutional arrangements. Fair level of awareness among respondents about importance of education might be the reason behind this result. Similar results are reported by Trupti [5], Patel [8] and Kavita [13] that higher proportion of the respondents had education up to secondary school.

### 3.3 Family size

Family size plays important role in availability of household labour in farming. It is seen from Table 1 that, higher proportion of the respondents (45.94%) had medium family size (5 to 6 members), followed by 37.50 per cent of the respondents had small family size (up to 4 members), remaining 16.56 per cent of respondents had big family size (above 6 members). The average family size of the respondents was 5 members.

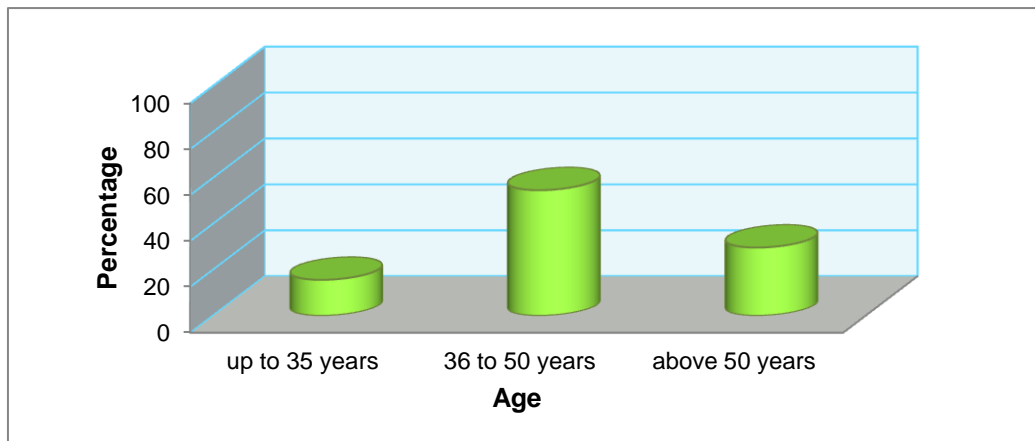


Fig. 2. Distribution of the respondents according to age

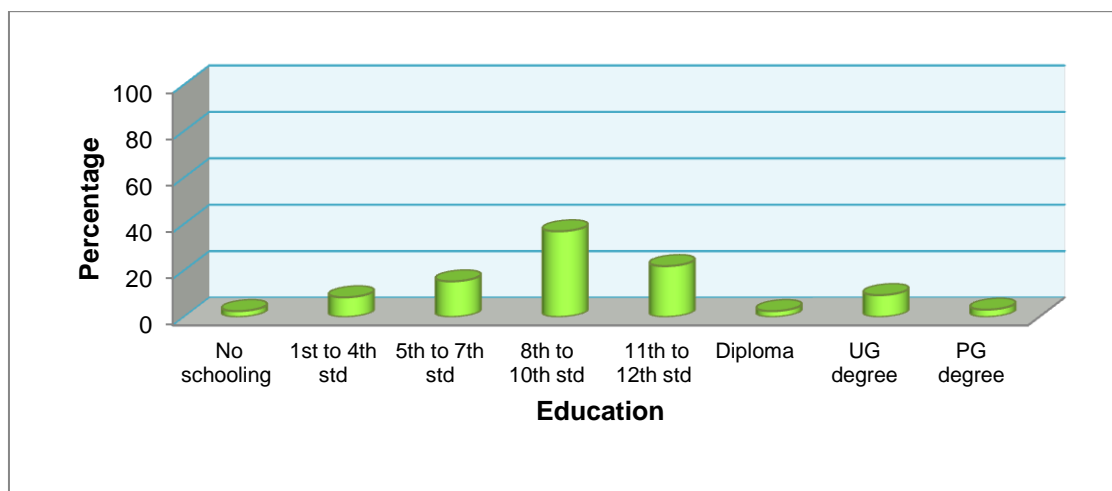


Fig. 3. Distribution of the respondents according to education



Having smaller families would help to maintain a good quality of life. Children get better access to education. Minimize expenses and increases saving. Importance of small families among the respondents might be the reason behind having less number of members in family. Koshti [14], Kavita [13] and Jakkawad [12] were observed similar results as respondents had medium to small family size.

### 3.4 Occupation

The occupational pattern reveals the source of livelihoods of the family. The data presented in Table 1 revealed that, majority of the respondents (70.00%) were engaged in agriculture as their main occupation for earning, followed by 14.07 per cent were engaged in agriculture and allied occupation as a subsidiary occupation. The 09.06 per cent of the respondents were engaged in agriculture and business and 04.06 per cent of the respondents were engaged in agriculture and service. The meagre per cent of the respondents (02.81%)

were engaged in agriculture and labour for wage earning as a support. The majority of the beneficiary farmers of the Jalyukt Shivar Campaign from study area were engaged in agriculture as a main occupation for earning.

Agriculture and agriculture based subsidiary occupations were the major sources of livelihood for the farmers in rural areas. They possessed land for cultivation of crops. Ample amount of on-farm employment was available season round. Other sources of livelihood like business and services were not available in rural areas as they were mostly in the towns or cities. In the study area, orange, cotton, soybean, pigeon pea, wheat and gram were the major crops grown in *Kharif* and *Rabi* season. Offer year round on-farm employment for respondents. Fair prices for these crops sustain respondents in cultivation of these crops might be the probable reason behind this result. These results are in close conformity with the findings reported by Dev [15] and Neeta [11].

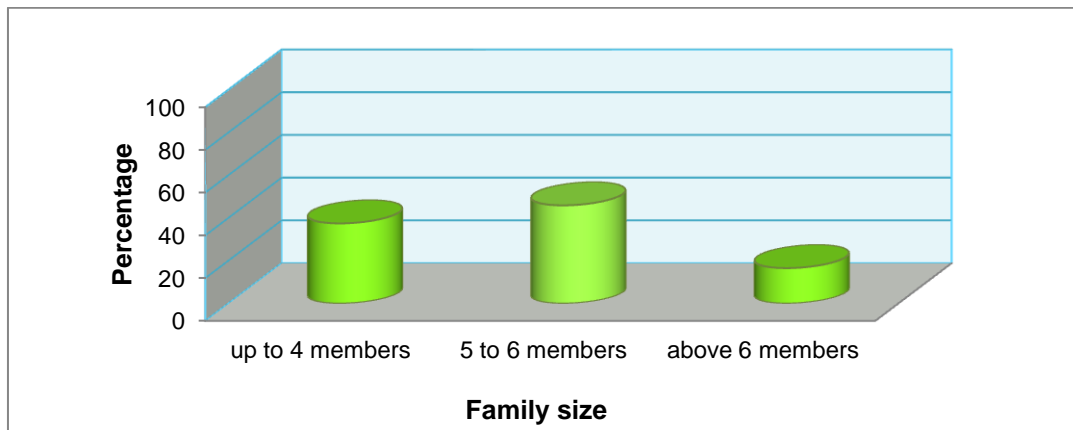


Fig. 4. Distribution of the respondents according to family size

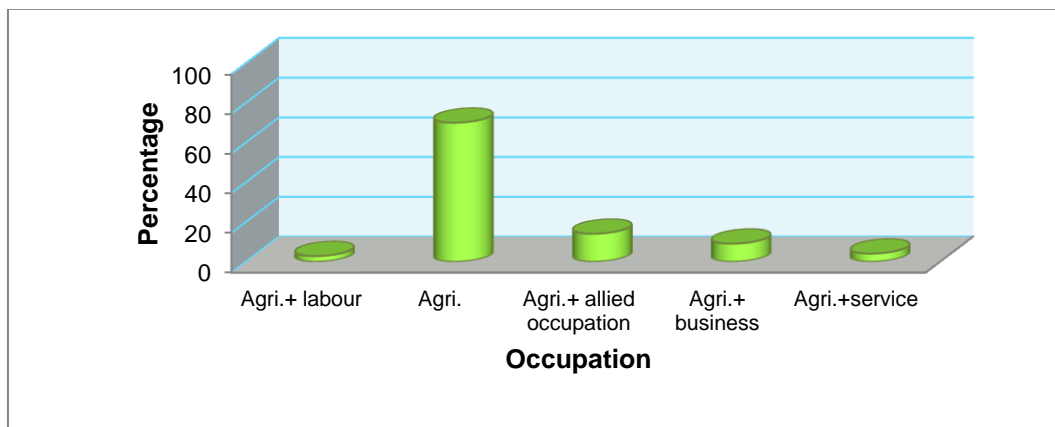


Fig. 5. Distribution of the respondents according to occupation

### 3.5 Annual Income

Annual income provides the availability of the capital for farming. It is apparent from the Table 1 that, slightly more than two fifth of the respondents (40.63%) had annual income in the range of Rs. 2,36,001 to 4,02,000/-, followed by 38.44 per cent of them had annual income up to Rs. 2,36,000/-. Whereas 16.56 per cent of the respondents had annual income between Rs. 4,02,001 to 5,68,000/- and 03.75 per cent of them had annual income in the range of Rs. 5,68,001 to 7,34,000/-. Only 00.62 per cent of the respondents had annual income above Rs. 7,34,000/-, respectively.

In the present study Katol and Narkhed talukas in Nagpur district popularly known as orange growing tract. Farmer from these areas possessed orange orchard. It was yearlong practice of orange cultivation. Oranges from these areas fetches remunerative prices because of its unique quality parameters. Rest of the study area viz. Darwha and Digras in Yavatmal district was mainly famous for cotton cultivation. Cotton is growing as a cash crop. The increase in annual income was because of increased crop production of different crops due to availability of irrigation water at proper growth stages of crops. This might be the probable reason that majority of the respondents had high annual income. Similar results are reported by Mano [16] and Neeta [11] as respondents had high annual income.

### 3.6 Land Holding

Land holding is observed as an important variable of the farming occupation. Farmers with larger land holdings possess good source of capital than marginal and small farmers.

It is revealed from Table 1 that, nearly two fifth (39.06%) of the respondents from study area belonged to small land holding (1.01 to 2.00 ha), followed by 36.56 per cent of the respondents belonged to semi-medium land holding (2.01 to 4.00 ha) and 16.25 per cent of them belonged to medium land holding (4.01 to 10.00 ha). Whereas, 07.19 per cent of the respondents belonged to marginal land holding (up to 1.00 ha). Only 00.94 per cent of the respondents belonged to large land holding (above 10.00 ha).

Land is the inherited property. In each family when new members added by marriage or birth the land gets sub divided making land holdings

smaller after every generation. In the present study majority of the respondents concentrated into medium to small size of family i.e. having nuclear family after separation from joint family. Gradual shrinking in size of land holdings after separation might be the reason behind these results.

Similar results are reported by Parate [4], Trupti [5], Chavai [6], Kavita [13], Pandey [9] and Jakkawad [12] that majority of the respondents had small to semi medium land holding.

### 3.7 Farming Experience

It is seen from Table 1 that, over two fifth of the respondents (41.88%) had 20 to 31 years of experience in farming, followed by 30.63 per cent of the respondents had up to 19 years of farming experience. Remaining 20.31 per cent of respondents had 32 to 43 years of farming experience, followed by 07.18 per cent of them had above 43 years of farming experience. The average farming experience of the respondents was 24 years.

Agriculture was a main occupation for livelihood of majority of the respondents from study area. They were practicing farming from generation to generation. Majority of the respondents were belonged to middle to old age categories. They had average age of 48 years. This might be the probable reason for having higher experience in farming.

Similar findings are reported by Neeta [11] that majority of the beneficiary farmers had 21 to 30 years of farming experience, followed by 11 to 20 years of farming experience.

### 3.8 Social Participation

The voluntary participation of farmers in person or group as member or office bearer in social organizations has many social benefits beyond household benefits.

It is apparent from the result of the Table 1 that, majority of the respondents (70.63%) were belonged to medium category of social participation, followed by 14.06 per cent of the respondents who had occupied in high social participation category. On the other hand 12.81 per cent of the respondents were belonged to the low level of social participation. Only 02.50 per cent of the respondents were never participated in any of the formal and non formal



organizations. It can be concluded that, considerable percentage of the respondents had medium social participation.

The majority of the respondents from study area were engaged in farming. To acquire information about crop cultivation and related practices, many had joined farming groups, as well as

considerable amount of beneficiaries had participation in co-operatives. This might be the probable reason behind result.

These results are similar to the findings of Trupti [5] and Pannu [7] as majority of the respondents belonged to medium category of social participation.

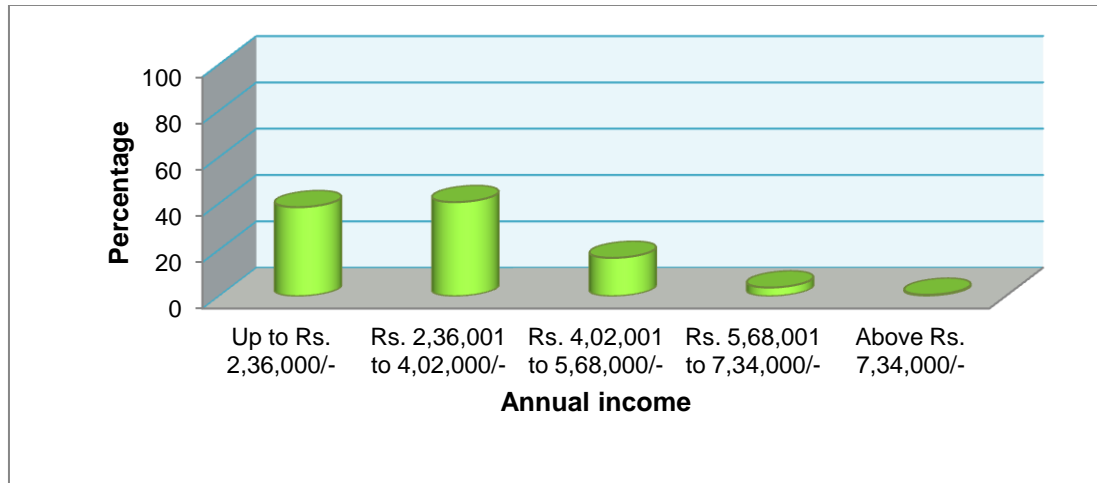


Fig. 6. Distribution of the respondents according to annual income

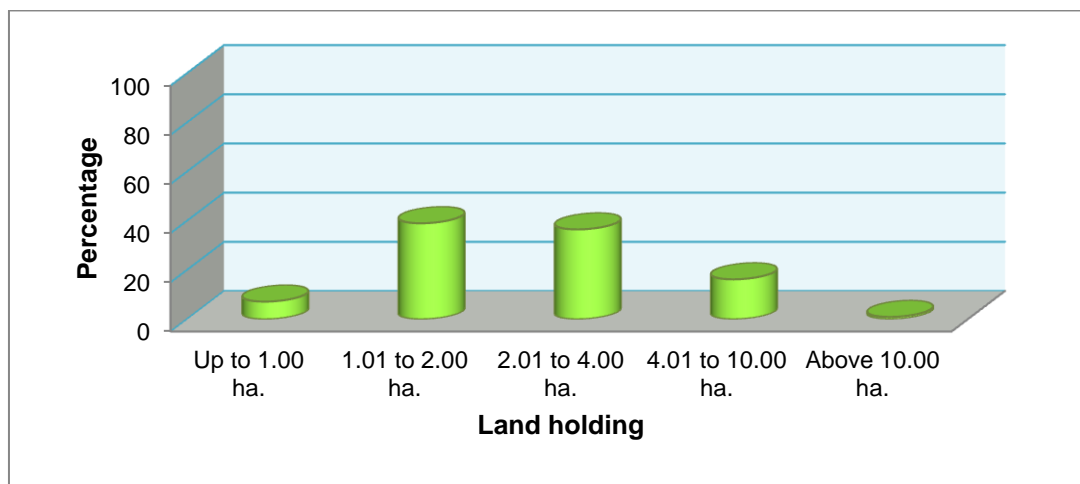
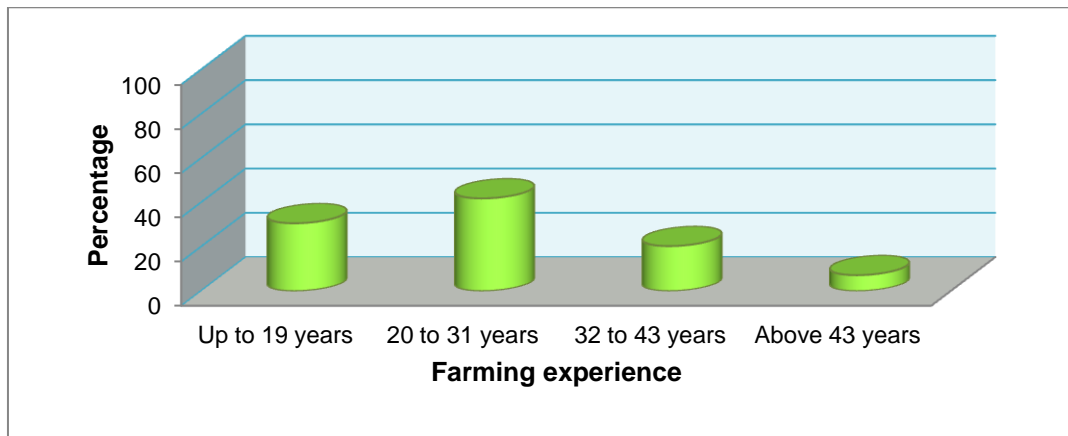


Fig. 7. Distribution of the respondents according to land holding

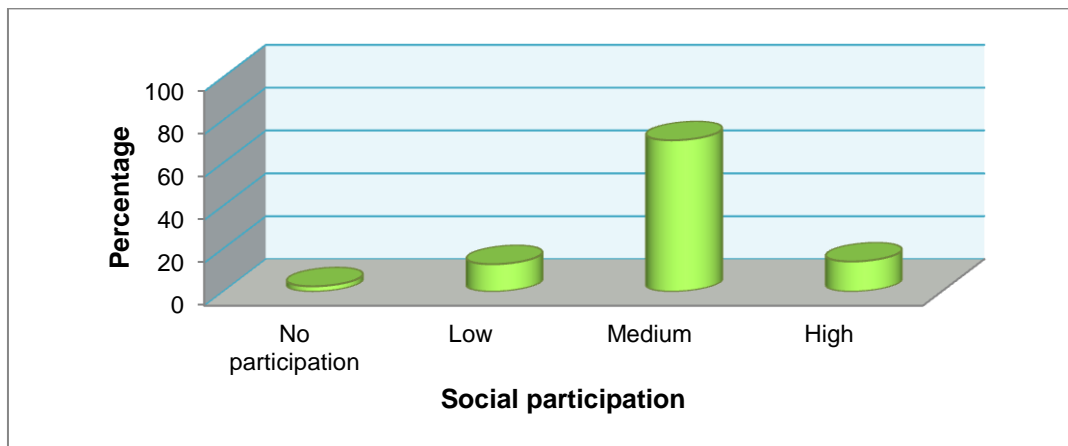
Table 1. Distribution of respondents according to their profile characteristics (n=320)

Characteristics	Categories	Frequency
Age	Young	50
	Middle	175
	Old	95
Education	Illiterate	08
	Primary school	27
	Middle school	49
	Secondary school	118
	Higher secondary school/Junior college	70
	Diploma or technical education (Based on 10 <sup>th</sup> or 12 <sup>th</sup> std)	08

	Under graduate degree (12+3/12+4/12+5)	30
	Post graduate degree (UG+2/3)	10
<b>Family size</b>	Small	120
	Medium	147
	Big	53
<b>Occupation</b>	Agriculture+ labour	09
	Agriculture	224
	Agriculture+ allied occupation	45
	Agriculture+ business	29
	Agriculture +service	13
<b>Annual income</b>	Up to Rs. 2,36,000/-	123
	Rs. 2,36,001 to 4,02,000/-	130
	Rs. 4,02,001 to 5,68,000/-	53
	Rs. 5,68,001 to 7,34,000/-	12
	Above Rs. 7,34,000/-	02
<b>Land holding</b>	Marginal	23
	Small	125
	Semi-medium	117
	Medium	52
	Large	03
<b>Farming experience</b>	Up to 19 years	98
	20 to 31 years	134
	32 to 43 years	65
	Above 43 years	23
<b>Social participation</b>	No participation	08
	Low (up to 2)	41
	Medium (3 to 5)	226
	High (above 5)	45
<b>Source of irrigation</b>	River	00
	Tube well	134
	Well	320
	Farm pond	13
	Canal	269
<b>Type of soil</b>	Very deep	58
	Deep	114
	Moderately deep	76
	Shallow	55
	Very shallow	17
<b>Extension participation</b>	Low (up to 5)	41
	Medium (6 to 11)	231
	High (above 11)	48
<b>Source of information</b>	Low (up to 15)	68
	Medium (16 to 29)	200
	High (above 29)	52
<b>Innovativeness</b>	Low (up to 11)	42
	Medium (12 to 17)	214
	High (above 17)	64
<b>Cosmopoliteness</b>	Low (up to 8)	43
	Medium (9 to 16)	231
	High (above 16)	46
<b>Risk preference</b>	Low (up to 22)	30
	Medium (23 to 28)	214
	High (above 28)	76
<b>Economic motivation</b>	Low (up to 22)	29
	Medium (23 to 29)	210
	High (above 29)	81



**Fig. 8. Distribution of the respondents according to farming experience**



**Fig. 9. Distribution of the respondents according to social participation**

### 3.9 Source of Irrigation

Irrigation is the artificial application of water to crops. It is important operation in cultivation of crops. Sources of irrigation with respondents play important role in crop production, crop productivity and cropping intensity.

It is revealed from Table 1 that, the cent per cent of the respondents (100.00%) had well as a source of irrigation, followed by 84.06 per cent of the respondents had canal as a source of irrigation. No one from study area has river as a source of irrigation.

For the present study farmers who have taken benefits from cement nala bund deepening activity of JSC and possessed well as one of the source of irrigation were purposively selected. Therefore, all the respondents from the study area possessed well as one of the source of irrigation. Along with well, majority of the respondents had canal as another source of

irrigation. Major crops grown in study area were irrigated viz. orange, wheat, gram, etc. This might be the probable reason for having open well and canal as a major source of irrigation with beneficiaries.

These results are in line with the findings reported by Tekale [10] and Neeta [11] as majority of the beneficiary farmers were having canal as a major source of irrigation followed by well/tube well.

### 3.10 Type of Soil

It indicates depth of soil profile from the top to parent material or bedrock. It can influence availability of water and nutrients to plant.

It is observed from Table 1 that, more than one third (35.63%) of the respondents were possessed deeper type of soils, followed by 23.75 per cent of them were possessed moderately deep type of soil. Nearly one fifth

(18.12%) and (17.19%) of the respondents were possessed very deep to shallow type of soil, respectively. Only 05.31 per cent of the respondents were possessed very shallow type of soil.

The selected Katol and Narkhed talukas in Nagpur district dominating very deep, deep and moderately deep soils. While, the selected Darwha and Digras talukas of Yavatmal district dominating deep, moderately deep and shallow soils. Therefore, majority of the beneficiary farmers from study area were possessed deep and moderately deep soils.

These results are supported by findings of Tekale [10] and Neeta [11] who reported that majority of the respondents were possessed deep to moderately deep type of soil.

### 3.11 Extension Participation

The degree of participation of the farmers in certain extension activities is a good indicator to ensure programme success.

It is cleared from the Table 1 that, majority of the respondents (72.19%) were belonged to medium level of extension participation. Whereas, 15.00 per cent of the respondents belonged to high level of extension participation. The least of the respondents (12.81%) were belonged to low level of extension participation. By and large respondents had medium to high level of extension participation in different extension programmes. Majority of the respondents had regularly taken part in extension activities like gramsabha, agricultural exhibitions and field visit.

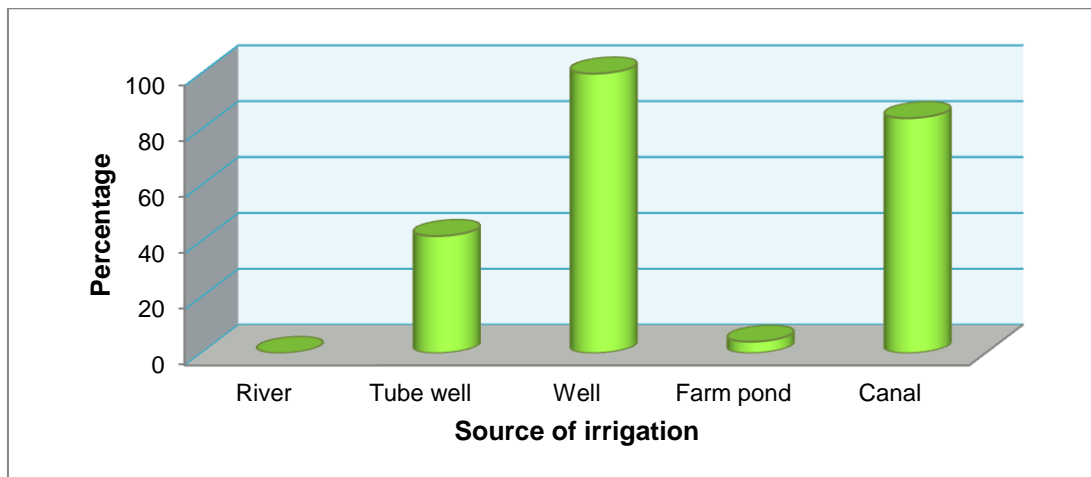


Fig. 10. Distribution of the respondents according to source of irrigation

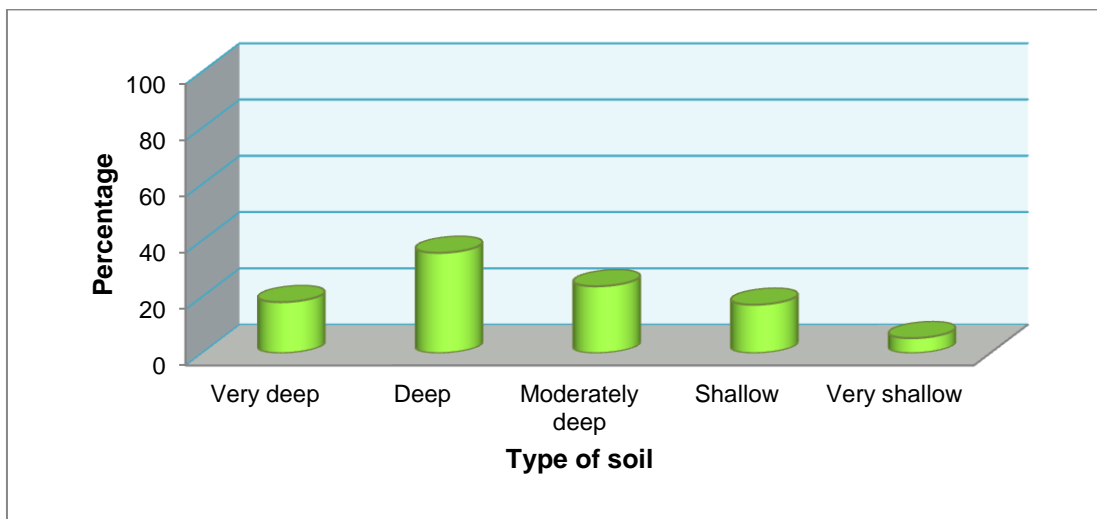


Fig. 11. Distribution of the respondents according to type of soil

At village level gramsabha is like the forum to discuss local governance and development and make need based plans for the village. Awareness regarding JSC was created through gramsabha, also village plan of activities was finalized through it. Agricultural exhibition serve the interests of majority of the farmers. It has many advantages viz. access to experts, meeting with fellow farmers, show of progressive technologies, demonstrations of modern technologies etc. A field visit is very useful to interlink the facts with the practical field. It builds interest of the farmers to get more about the places and the world around them and increase their awareness about new production technologies. Therefore the beneficiary farmers from study area have showed more interest and participation in these activities.

These results are in close conformity with findings of Pannu [7] and Pranali [17]. They reported that majority of the respondents had medium to high level of extension participation.

### 3.12 Source of Information

Sources of information are important in case of beneficiaries to derive information related to Jalyukt Shivar Campaign.

It is observed from the Table 1 that, majority of the respondents (62.50%) were using medium sources of information, followed by 21.25 per cent of the respondents used low level of sources of information, remaining 16.25 per cent respondents were using high number of sources of information. Therefore, it is concluded that most of the beneficiary farmers were using

medium information sources for getting information about Jalyukt Shivar Campaign. Friends/relatives and neighbours were regularly used localite sources of information by majority of the respondents, whereas from cosmopolite sources gramsevak and agricultural assistant were commonly used source of information and from mass media sources television, newspapers and facebook/whatsapp were regularly used by majority of the respondents as source of information.

In general, human beings consult and keep more faith on personnel from his social system. Friends, relatives and neighbours are easily available at call, jointly solved problems of each other, and shared information or experience about new technologies, schemes. On the other hand, officers who are working at grass root level have major role in implementation and success of village developmental programmes. Gramsevak and Agriculture assistant has good rapport with villagers because of their regular contact with them. Revolution in mass media brought people more closely in information world. Television, newspaper and smart phone are easily available at affordable rates. Government agencies take advantage of it for dissemination of new information and education of masses. This might be the probable reason as majority of the respondents using medium to high level of sources of information regularly which are easily available at their social system.

These results are in line with the findings reported by Mankar [18], Pranali [17] and Neeta [11] who observed that majority of the respondents used medium source of information.

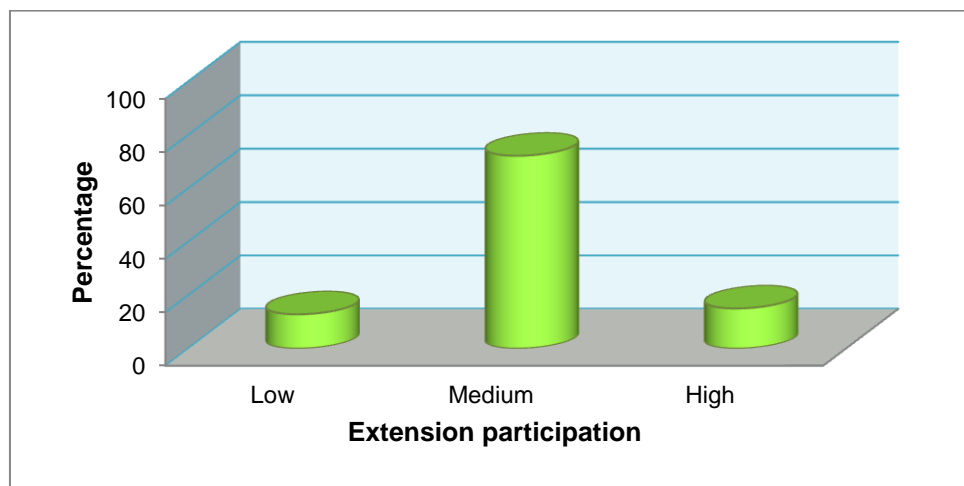
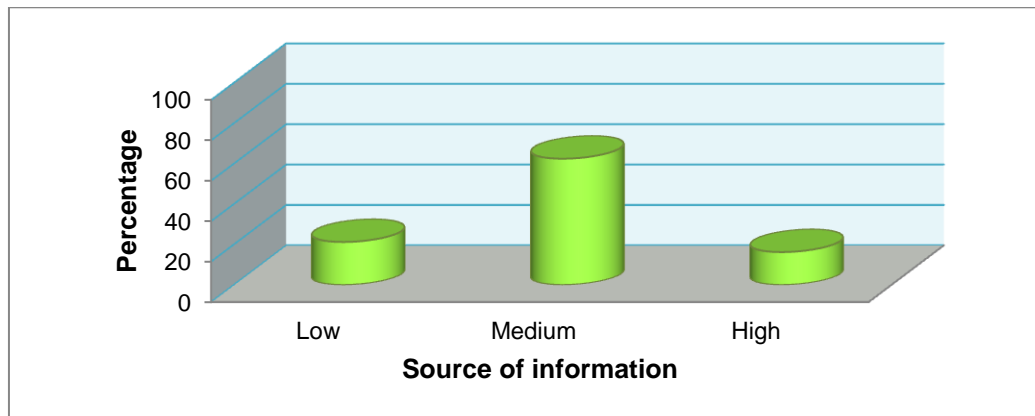


Fig. 12. Distribution of the respondents according to extension participation



**Fig. 13. Distribution of the respondents according to source of information**

### 3.13 Innovativeness

Innovative farmers are always earlier in adopting promising technologies. The result in the Table 1 revealed that, majority of the respondents (66.88%) belonged to medium innovativeness, while 20.00 and 13.12 per cent of the respondents belonged to high and low innovativeness categories, respectively.

The probable reason for medium to high innovativeness might be had considerable amount of knowledge about activities of Jalyukt Shivar Campaign, as a result they might have shown keen interest in adopting activities earlier and deriving maximum benefits through crop production hence this kind of result.

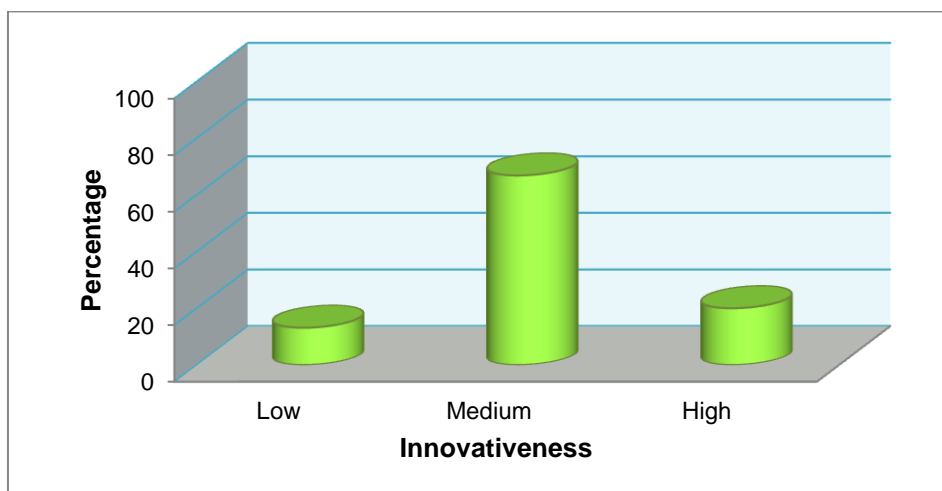
These results are in close conformity with findings of Trupti [5], Mano [16], T Mahesh Babu [19] and Neeta [11] who reported that majority of the respondents had medium innovativeness.

### 3.14 Cosmopoliteness

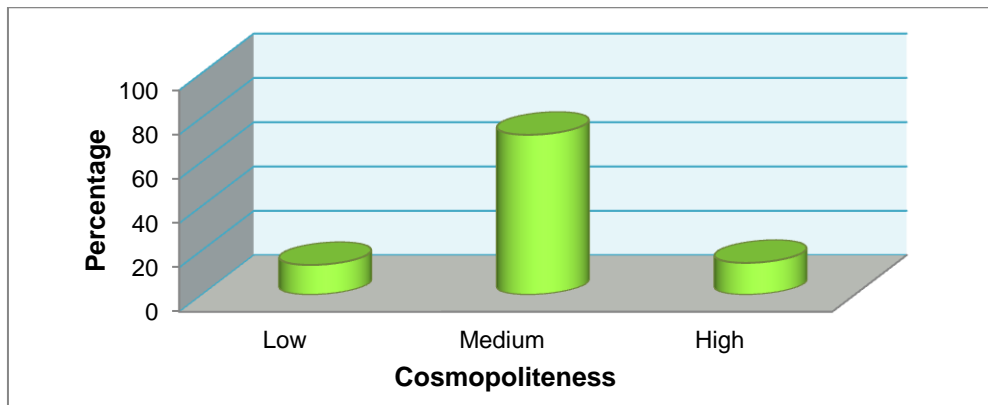
The farmers who are more cosmopolitan are earlier adopters of innovations know more about an innovation and exert opinion leadership. They are more likely to be stimulators of collective innovation-decisions.

The data in Table 1 revealed that, majority of the respondents (72.19%) had medium level of cosmopoliteness, followed by high (14.37%) and low (13.44%) level of cosmopoliteness, respectively. It can be concluded that, considerable percentage of the respondents were medium cosmopoliteness in nature.

This might be due to their sound economic conditions, their participation in extension activities like agricultural exhibition, study tour, krishimelawa. Networking with extension agencies for information seeking outside their social system.



**Fig. 14. Distribution of the respondents according to innovativeness**



**Fig. 15. Distribution of the respondents according to cosmopolitanism**

These results are in close conformity with the findings of Kumar [20] and Pranali [17] who observed that majority of the respondents belonged to medium cosmopolitanism.

### 3.15 Risk Preference

Risk preference ability guides farmer in making decisions in the farm management process. It can be predicted from Table 1 that, majority of the respondents (66.88%) belonged to medium risk preference, followed by high (23.75%) and low (09.37%) risk preference, respectively. It can be concluded that, majority of the respondents belonged to medium risk preference category.

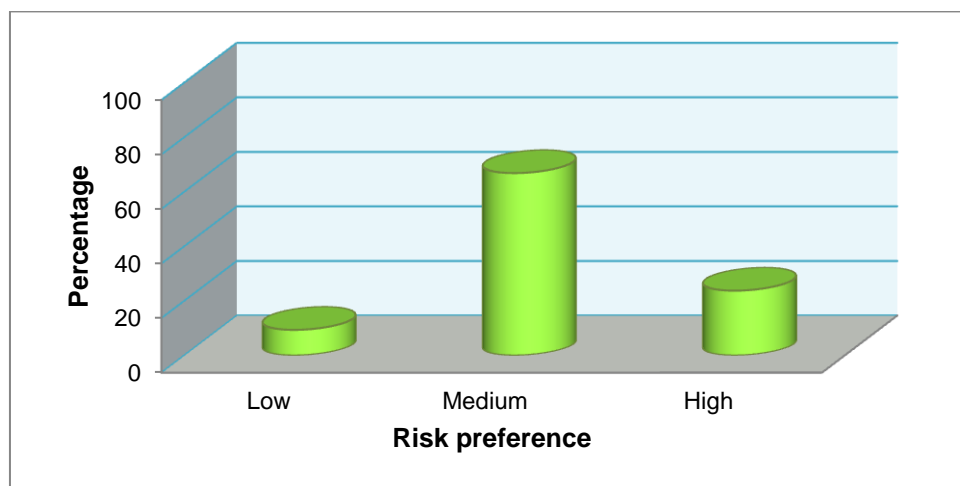
Risk bearing ability of an individual depends upon personal, social, economic and psychological, condition of farmers. The individual with good education, more farming experience, medium to high social participation, participation in extension activities like

gramsabha, meetings, agricultural exhibition, study tour etc., medium to large land holding and sound economic condition exhibited medium to high risk preference. The other reason may be that confidence of the respondents about activities and assurance of good yield, productivity and income. This might be the reason behind medium to high risk preference of the respondents.

Similar results are reported by Chavai [6], Pandey [9] and Supe [21] as majority of the respondents had medium to high risk preference.

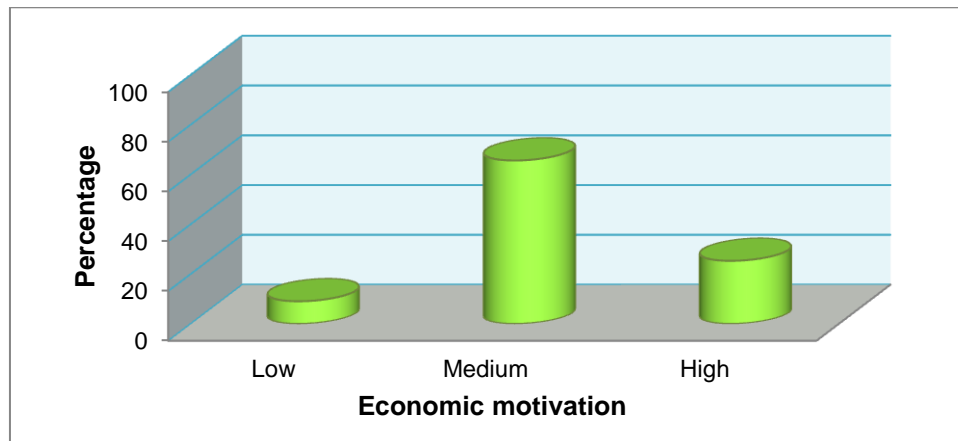
### 3.16 Economic Motivation

Economic motivation level of farmers is an important criterion to adopt a technology. It is their willingness for investment of available potential resources in adopting recommended agriculture practices.



**Fig. 16. Distribution of the respondents according to risk preference**





**Fig. 17. Distribution of the respondents according to economic motivation**

The data in Table 1 revealed that, majority of the respondents (65.63%) had medium economic motivation, followed by high (25.31%) and low (09.06%) economic motivation, respectively. It can be concluded that, majority of the respondents belonged to medium economic motivation category.

The beneficiary farmers from study area had a greater urge to increase his farming efficiency by minimizing inputs cost and maximizing profits. The beneficiary farmers who had higher level of extension contact were motivated towards getting higher yield and profit through available water for irrigation. This might be the probable reason behind result.

These results are in conformity with the findings of Kavita [13], Pandey [9] and Supe [21] who reported that majority of the respondents had medium economic motivation.

#### 4. CONCLUSION

From the observations of personal, socio-economic, situational, psychological and communicational profile of beneficiary farmers of JSC, it is concluded that most of the middle age respondents having good farming experience were engaged in farming as a main occupation for earning. Beneficiary farmers had sound educational background, financial background and awareness about importance of small family. Maximum beneficiary farmers had small land holdings with medium quality land. Almost all beneficiaries had good facilities of irrigation. Majority of the respondents had medium participation in social and extension activities. They were received information from personnel of their social system as well as modern mass

media sources. The beneficiary farmers were earlier in adopting technologies, had contacts outside their social system, taken moderate risk to maximize profit.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

#### REFERENCES

1. Dutta PK. Why India does not have enough water to drink. Accessed 10 June 2021. Available: <https://www.indiatoday.in/india/story/why-india-does-not-have-enough-water-to-drink-557669-2019-06-28>. 2019.
2. GoM. Water Conservation Department. Government Resolution No.JaLaA-2014/Case No. 203/JaLa-7 published on 5 December, 2014.
3. Ashar SA. Rs 9,674 crore spent, Jalyukt Shivar scheme had little impact: CAG. Accessed 4 October 2021. Available: <https://indianexpress.com/article/cities/mumbai/rs-9674-crore-spent-jalyukt-shivar-scheme-had-little-impact-cag/>. 2020.
4. Parate MB. Impact of farm ponds on its beneficiaries in Yavatmal district. M.Sc. Thesis, Dr. PDKV, Akola;2013.
5. Trupti P. Rathod. Impact of watershed development programme on developmental parameters of farmers. M. Sc. Thesis, Dr. PDKV, Akola;2014.
6. Chavai AM, Rakshe UV, Shinde SB. Impact of farm pond on the beneficiary farmers of Maharashtra. International J. of Trop. Agri. 2015;33(4): 3525-3528.

7. Pannu HR. Impact analysis of watershed technology of Desert Development Programme in Jodhpur region of Rajasthan. Ph. D. Thesis, SKNAU, Jobner; 2015.
8. Patel VM, Mistry JJ, Sutariya BA. Attitude of tribal farmers towards well recharging. *Guj. J. Ext. Edc.* 2015;26(01):74-76.
9. Pandey NK, Singh DK, Burman RR. Attitude of the farmers towards watershed development programme in Haryana, India. *Indian J. of Soil Conservation.* 2017;45(02): 223-226.
10. Tekale VS, Mosami, Ingale and Vidya, V. Tayde. Impact of intensive watershed development project. *Agric. Update.* 2017;12(2):288-291.
11. Neeta Deokate. Impact of WAN irrigation project on agriculture and socio-economic development of beneficiary farmers. Ph. D. Thesis, Dr. PDKV, Akola;2018.
12. Jakkawad SR, Sawant RC, Manvar VS. Study on profile and constraints faced by beneficiaries in use of farm pond in Aurangabad district of Maharashtra state. *J. of Pharmacognosy and Phytochemistry,* 2020; 9(4):175-178.
13. Kavita U. Deshmukh. Impact of National Watershed Development Programme on its beneficiaries in Marathwada region. Ph. D. Thesis, VNMKV, Parbhani; 2016.
14. Koshti NR. Farmers perception and adaptations towards climate change and variability in distress prone districts of Vidarbha. Ph.D. Thesis, Dr. PDKV, Akola;2013.
15. Dev K, Sharma R, Guleria A, Raj D. Impact analysis of Mid-Himalayan watershed development project on socio-economic and agricultural status of beneficiary farms in Ani tehsil of Kullu district in Himachal Pradesh. *Int. J. Curr. Microbiol. App. Sci.* 2017; 6(7): 2244-2255.
16. Mano SVV. Entrepreneurial behaviour and knowledge on export standard by orange growers in Vidarbha. M.Sc. Thesis, Dr. PDKV, Akola;2016.
17. Pranali N. Thakare. Attitude of beneficiary farmers about Jalyukt Shivar Campaign in Nagpur district. M. Sc. Thesis, Dr. PDKV, Akola;2017.
18. Mankar DM, Wankhade PP, Shambharkar YB. Impact of National Horticulture Mission on its beneficiaries. *International J. of Extn. Edu.* 2013;9:72-80.
19. Mahesh Babu T. Impact of Andhra Pradesh Micro Irrigation Project (APMIP) in Chittoor district of Andhra Pradesh. M. Sc. Thesis ANGRAU, Guntur;2016.
20. Kumar Vinaya HM, Mahatabali KM, Sujaykumar SK, Ramanna N, Gowda VG. Personal and socio-psychological characteristics of the beneficiary farmers of community based tank management project and their relationship with socio-economic status. *International J. of Advanced Biological Res.* 2013;3(2):184-187.
21. Supe DV, Kadam RP, Pawar GS. Relational analysis of profile of beneficiaries of farm ponds and its socio economic impact. *International J. of Environment Agri. and Biotechnology.* 2017; 2(4):1683-1688.

© 2021 Thakare and Tekale; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:  
The peer review history for this paper can be accessed here:  
<https://www.sdiarticle5.com/review-history/77988>