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Perception of youth towards farming in India

Abstract

The involvement of youth in farming is necessary for many developing countries including India. But nowadays large-scale youths are migrating to urban areas and foreign countries in search of reputed jobs and opportunities, which causes a lack of people in the farming sector. Based on this, an exploratory data analysis was carried out in India to measure the perception of youth toward farming as well as collect information regarding youth. The study revealed that 79.8 per cent of youth are interested in farming. The government needs to implement new measures, ideas, and technologies to encourage and train the interested youth which helps in the future development of the country.

Keywords: perception towards farming, farming, youth, migration

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Introduction

Farming is one of the primary occupations of many developing countries including India. It provides employment, income, and livelihood to numerous people belonging to different sectors. But the farming sector has several risk factors.[1] Uneducated and poor farmers are losing their lives and jobs day by day as they are not aware of the new policies implemented by the government and scientific farming techniques. According to Narain S et al.[2] when the production rate and average annual income of small and marginal farmers decrease, the cost of production increases, and farming is unprofitable. Attracting and Retention of Youth in Agriculture (ARYA) is a new scheme introduced by the Indian Council of Agricultural Research (ICAR) to encourage youth toward farming for the future development of the nation.[3]

Climatic change and Crops that are damaged by wild animals in different parts of India have raised serious concerns as they could reduce the production of crop yield and lead to drought.[4] Such a threat leads the young generation to rethink working in the agricultural sector.[5,6] Youths are part of a family, and without parental support, it is not easy for them to get involved in family farming. They are much worried about the attitude of other people including teachers, neighbours, and relatives when it comes to marriage proposals and other social functions.[7]

As we know that food security is an important problem that we are facing today. The ultimate aim of youth is to ensure food security which helps in increasing the production of crop yields and maintaining the quality of it. Agricultural products without pesticides and other methods of farming are to be implemented to reduce the number of diseases in humans. So, it is better to cultivate vegetables and other things at home itself to get a healthy next generation.[8]

Based on the above statements, it is necessary to collect the opinion of youth regarding farming including the current and future farming facts. The purpose of this study is to quantify the housing condition, area of residence, age group, educational qualifications, and interest of youth in farming. The paper focuses on the attitude of youth, involvement, mass media use, and challenges faced by educated youth in farming. Educated youth should engage in farming, consider it as a profession, and adopt new technologies and ideas to increase the production rate, and limit the rate of unemployment in the country. The questionnaire consisted of 22 questions that were shared using social media platforms and 129 young people ranging from 18 to 35 years responded. With the use of R- codes, we have recorded the responses in the form of pie charts, bar graphs, and histograms, and also the Chi-square test is carried out to find the relation between various variables.

Analysis of data and interpretation

An online survey was conducted to measure the perception of youth toward farming in India. The survey was carried out through various social media platforms by sharing Google forms and selected young people ranging from 18 to 35 years from different parts of India were allowed to participate in the study. 140 youths in the age group 18-35 agreed to participate but only 129 responses were taken into the sample (Table 1).

Table 1 Frequency table on interesting characteristics

S. No.	Characteristics		Frequency	Percentage
1	Family Type	Nuclear Family	112	86.80%
		Joint Family	17	13.20%
2	Family possesses the land for farming activities	Yes	93	72.10%
		No	36	27.90%
3	Information about farming through social networking sites	Yes	87	67.40%
		No	42	32.60%
4	Information about farming from government institutions	Yes	98	76%
		No	31	24%
5	Self farming	Agree	92	71.30%
		Neutral	27	20.90%
		Disagree	10	7.80%

Table Continued...

S. No.	Characteristics		Frequency	Percentage
6	Farming profitability	Agree	101	78.30%
		Neutral	21	16.30%
		Disagree	7	5.40%
7	Profitability in scientific farming	Agree	61	47.30%
		Neutral	59	45.70%
		Disagree	9	7%
8	Farming as a profession only by the lower section of society	Agree	26	20.20%
		Neutral	43	33.30%
		Disagree	60	46.50%
9	Farming is not a profession	Agree	51	39.50%
		Neutral	57	44.20%
		Disagree	21	16.30%
10	Social status of farmers	Agree	83	64.30%
		Neutral	29	22.50%
		Disagree	17	13.20%
11	Age dominance in decision making	Agree	49	38%
		Neutral	54	41.90%
		Disagree	26	20.20%
12	Farming as a solution to unemployment	Agree	101	78.30%
		Neutral	17	13.20%
		Disagree	11	8.50%

A perusal shows that most of the respondents (50.4%) had qualifications up to graduation but certain factors cause young people not to take up farming as a profession. The main purpose of choosing this age group is that they can change the face of farming and make farming a profitable business. 71.3% of people agree that farming food for our needs by ourselves, not depending on other sellers is a prestigious thing and 46.5% disagree that only people belonging to the lower section of society considered farming a profession. When it comes to marriage proposals and other social functions 64.3% supported that farming as a profession has less acceptance and in the agricultural sector, adult plays a superior role in taking decisions while youth have nothing to say in it secured 38%. The statements "The involvement of educated youth in the farming sector needs to be increased to limit the rate of unemployment in the country" and, "In the current situation, farming as a business is a less profitable one due to low prices for agricultural products, and the increased rate of production" got 78.3%. In general, youth must be aware of the risk factors such as lack of adequate irrigation facilities, and climatic change, etc. that are involved in farming. Also, they need to adopt new ideas and technologies to increase production and motivate young people in farming to limit the rate of unemployment in the country.[8]

Data visualization in R

R is a programming language and software environment for statistical computing, data analytics, graphics representation, and reporting. With the use of R-codes, we have recorded the responses in the form of pie charts, bar plots, grouped bar charts, and histograms. Also, the Chi-square test is carried out between various variables.

Figure 1 is used to find the different classifications of demographic variables (gender-Male, Female, Others). 129 responses were collected with the help of social networking sites and out of which 32.6% (blue) of the participants belong to the male category and 67.4% (red) of the participants were female. Among those participants, it is clear that females attended the survey more in number.

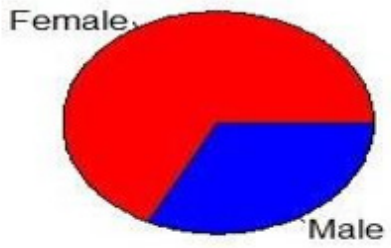

Figure 1 Gender.

The given pie chart shows the interest of youth in farming. 79.8% (Yellow) of youth are interested in farming whereas 20.2% (red) of youth are not interested in farming. So, the interested youth (103 from 129) helps in increasing production activities (Figure 2).

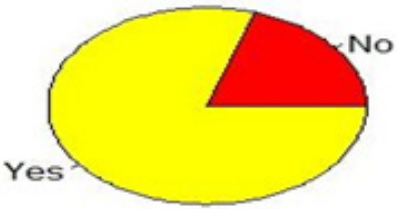

Figure 2 Interest in farming.

Figure 3 Revealed that 41.1% (green) are in agricultural farming, 10.9% (red) are in business, 7.8% (blue) are in livestock farming and 40.3% (orange) are in other services. Most families considered agricultural farming as the main occupation which is the main source of their income and they know that agricultural farming is more informants for the future development of the country.

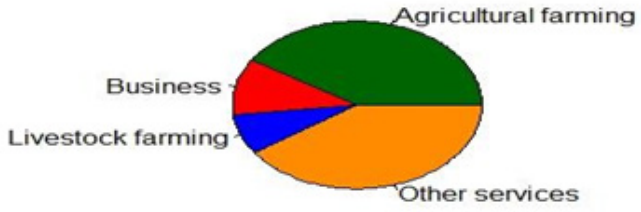

Figure 3 Main occupation of the family.

Figure 4 shows that 55% (orange) have land up to 1 acre, 31.8% (blue) have land >1 and 13.2% (red) belong to landless. Those who have land >1 (41) and up to 1 (71) have the chance of cultivating agricultural products but those who do not own any land of their own (17) can take land for lease for doing the farming process.

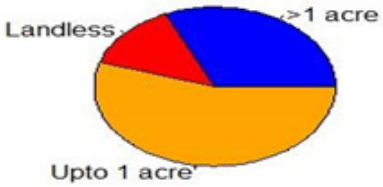

Figure 4 Area of land holding.

Figure 5 revealed that 77.5% (dark blue) who attended the survey belonged to rural areas whereas 22.5% (red) belong to urban areas. Youth belonging to rural areas can do farming in their landholdings but it is difficult for those who live in urban areas. A large scale of youth migrating from rural areas to urban areas has become a major concern about the future of farming.[3]

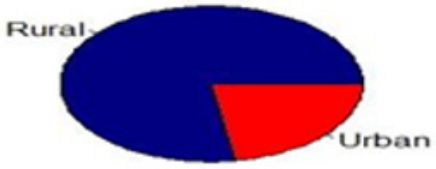

Figure 5 Area of residence.

From Figure 6 it is clear that 50.4% (magenta) have at least graduation, 38% (red) have postgraduation and 11.6% (yellow) have other educational qualifications. Education plays an important role in one's life as it helps farmers to understand new policies and decisions introduced by the government and also to find better solutions to increase production, marketing, and other challenges faced during the time of cultivation. Uneducated farmers find it difficult to solve every problem in a better way.

Figure 6 Educational status.

By using Figure 7, a study was conducted within the age limit of 18-35 since this age group comprised the majority of the population. The majority of the youth who attended the survey 71.3% (maroon) are of the age group 18 -23. Also, 14.7% (orange) are between the age group 24-28, and 14% (violet) between 29-35 participated in the study.

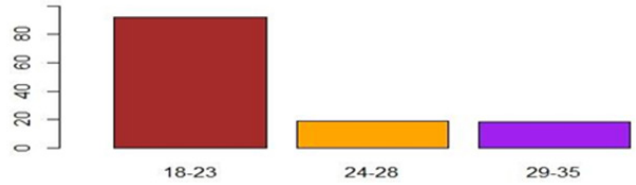

Figure 7 Age.

From the bar plot (Figure 8), it is clear that out of 129 respondents 89.1% (magenta) have their own house whereas 10.9% (violet) have only rented houses. Both have the chance to do some cultivations for their own needs on the terrace or other open spaces.

By using Figure 9, 58 females and 29 males are using social networking sites for getting information regarding farming. The use of social media platforms like Facebook, Twitter, YouTube, etc. has helped the youth to increase their interest in farming which provides useful tips on how to deal with agricultural problems and pursue opportunities.

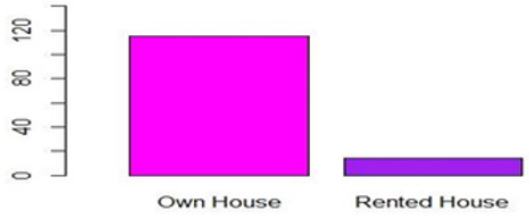

Figure 8 Housing condition.

Figure 9 Distribution of social networking sites by gender.

Figure 10 shows that people belonging to rural areas (78) and urban areas (20) get information about farming. The government institutions like Krishi Bhavan give seeds, fertilizers, and pesticides to farmers but some people (rural-22 & urban-9) didn't get any information which makes them lose interest in farming.

Figure 10 Distribution of information from govt. institutions by residence.

In Figure 11, 1 is allotted for 'yes', and 2 is allotted for 'no'. The majority (54.3%) of youth who participated in the study did not attend any exhibitions regarding farming. By attending these exhibitions one can improve the knowledge about agricultural products, different types of farming, marketing strategies, risk orientation, and new scientific mechanisms of farming which helps to increase production and to make farming a profitable business.

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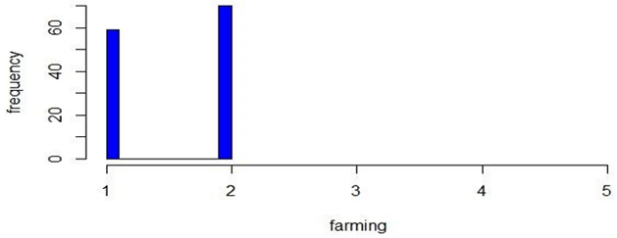

Figure 11 Histogram of youth attended exhibitions regarding farming.

In Figure 12, 1 is assigned to 'agree', 2 for 'neutral', and 3 for 'disagree'. A majority (47.3%) supported the statement that scientific farming is economically profitable and can be possible only by the adoption of scientific practices like using pesticides, artificial fertilizers, etc. Scientific farming helps the farmers in the increasing production of crop yields which plays an important role in the future development of the nation.

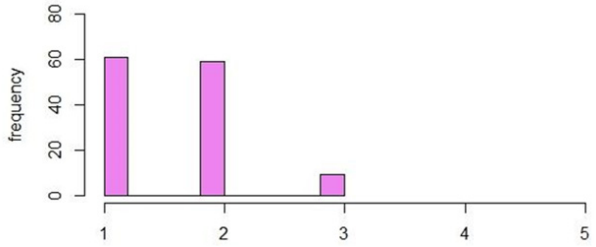

Figure 12 Histogram of scientific farming is always profitable.

The chi-square test is performed to find an association between different variables. Assume the null hypothesis are independent.

*Using Table 2, it is clear that the p-value is <0.5, and the hypothesis is rejected. So, there is an association between the variable under study and the compared variables. If the p-value >0.5, it indicates that the hypothesis is accepted.

Table 2 Association between different variables-Chi square test

S. No.	Variable	Parameter of Comparison	χ^2	df	p-value
1	Self farming	Gender	0.037299	2	0.9815
		Interest	11.34	2	0.003448*
2	Farming profitability	Gender	0.79136	2	0.6732
		Area of land-holding	9.833	4	0.04334*
3	Profitability in scientific farming	Family type	9.9332	2	0.006967*
		Interest	4.5346	2	0.1036*
4	Farming as a profession only by the lower section of society	Gender	0.82136	2	0.6632
		Area of residence	1.1239	2	0.5701
5	Farming is not a profession	Gender	2.8887	2	0.2359*
		Main family occupation	4.4775	6	0.6123
6	Social status of farmers	Gender	0.51536	2	0.7728
		Educational status	7.9477	4	0.09351*
7	Age dominance in decision making	Gender	0.29211	2	0.8641
		Area of residence	0.41728	2	0.8117
8	Farming as a solution to unemployment	Educational status	3.7865	4	0.4357
		Gender	2.6108	2	0.2711*

Conclusion

Our study on the perception of youth towards farming was an innovative experience and we came to know that 79.8% of youth are interested in farming. Also, the data reveal that 47.3% agree that "Always scientific farming is profitable". The results indicate that scientific farming is economically profitable and it can be possible only by adopting scientific practices. Educated youth are willing to adopt new ideas and technologies for the future development of the country but they are worried about the mentality of other people when it comes to marriage proposals and other social functions. Poor income from farming and a low standard of living keeps the youth away from farming. So, the government needs to implement new schemes to encourage, motivate and train the skilled youth which helps to reduce unemployment in the country. Youth participating in agricultural production need to get awards and other rewards so that their interest in farming gets increased which can change the face of agriculture.

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None.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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