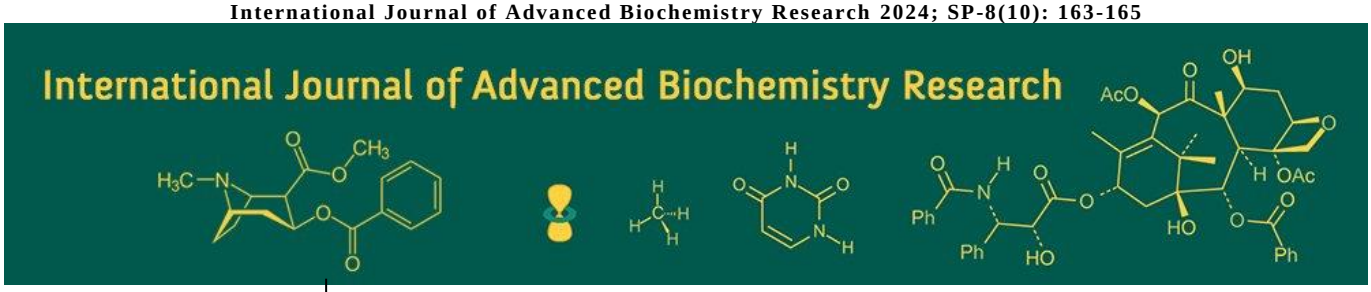

ISSN Print: 2617-4693
ISSN Online: 2617-4707
IJABR 2024; SP-8(10): 163-165
www.biochemjournal.com
Received: 09-08-2024
Accepted: 13-09-2024

Akash Gulabrao Anwane
M.Sc. Students, Department of Agricultural Extension Education, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra, India

RP Kadam
Professor and Head, Department of Agricultural Extension Education, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra, India

SR Jakkawad
Senior Scientist, AICRP, WIA, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra, India

Corresponding Author:
Akash Gulabrao Anwane
M.Sc. Students, Department of Agricultural Extension Education, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra, India

Personnel correlates of farmers and adoption of super Moti sorghum variety

Akash Gulabrao Anwane, RP Kadam and SR Jakkawad

DOI: https://doi.org/10.33545/26174693.2024.v8.i10Sb.2431

Abstract
The present study entitled "Adoption of sorghum variety developed by VNMKV"was conducted in Parbhani district of Marathwada region of Maharashtra state during the year 2023-24 on the basis of maximum number of farmers cultivating Parbhani Super Moti sorghum variety with the objective to study "Adoption of sorghum variety developed by VNMKV Parbhani". 120 respondents were selected purposively from 12 villages of 03 tehsils who were cultivating Parbhani Super Moti sorghum variety. An Ex-post-facto research design was followed for the study. Data was gathered using a well-structured interview schedule created with the study's objectives in mind. The collected data was analysed, classified and tabulated. Statistical tools such as frequency, percentage, mean, standard deviation and coefficient correlation were used to interpret findings and draw conclusions. It was observed that more than third fourth (75.83%) of the respondents had medium level of adoption whereas, 12.50 percent of the respondents had high level of adoption, whereas 11.67 percent had low level adoption towards Parbhani Super Moti sorghum variety.

Keywords: Adoption, sorghum, Parbhani super Moti, personal correlation

Introduction
Jowar is an important crop provide food, feed, and fodder in tropical and subtropical region in the world. It is a staple food for the rural poor in the country and African countries. Sorghum is the important in terms of nutritive value, which has large scale demand for food purpose it's contain nearly all essential nutrients including several medicinal properties. The five largest producers of sorghum in the world are United States (25%) India (21.5%) Mexico (11%) China (09%) and Nigeria (07%). As per 2023-24 data, in India total cultivated land is 4096 million hectares and production of sorghum is about 4.95 million with productivity of 998 kg/ha. In Maharashtra total cultivated land is 02.17 million hectares and production is about 1.81m tones with productivity of 833 kg/ha.

Grain sorghum is one of the most important dietary source of calories for population. The nutrient composition of sorghum indicates that it is a good source of energy, proteins, carbohydrates, vitamins and minerals. Sorghum is rich in minerals like phosphorus, potassium and zinc. Nutritional value of sorghum is better than wheat, rice, maize and barley. The energy value of 100 g sorghum grains ranges from 296.1 to 356.0 kcal. The grains contain 60% to 75% carbohydrates, 08% to 13% protein and 04% to 06% fat. Sugar content of sorghum is 10% to 20%. Sorghum is an important source of fat-soluble and B-complex vitamins except vitamin B12. Amongst the B vitamins, concentrations of thiamine, riboflavin and niacin in sorghum were comparable to those in maize.

Most of the species of sorghum is grown only for fodder use as feed for animals and one species is cultivated only for grain. Sorghum flour is used for 'Bhakri' making especially in India. With its nutritional quality and potential use in agriculture, most of the poor and rural people lived in village prefer jowar bhakri than wheat chapati. In India sorghum is being grown in both *kharif* (rainy) and *rabi* (post rainy) seasons. Sorghum has an ability to survive in many stresses including drought, salinity, heat and flood. It performs better in adverse soil and climatic conditions as compared to other crops. This makes the crop to minimize the risk and enables to fit to sustainable and economically profitable dry land production system.

Objective

Relationship between profile of farmers and adoption of Parbhani Super Moti Sorghum variety.

Materials and Methods

The present study was conducted in the Parbhani district of the Marathwada region of Maharashtra state. From this region Parbhani district was purposively selected for research purpose due to largest area of Parbhani Super Moti growers. From Parbhani district out of 9 tehsils, only three i.e. Parbhani, Jintur and Manvat have been purposively selected because their tehsil constituted maximum area under Parbhani Super Moti cultivation. From each selected tehsil four villages were randomly selected. Thus, total 12 villages were selected for the study. From each village 10 respondents were selected randomly. Thus, a total of 120 respondents were selected as sample respondents for this study. These selections were done by using a simple random sampling method. The ex-post-facto research design used for present study. An interview schedule was prepared in view of the objective of the study and data were collected by personal interview of the selected Parbhani Super Moti growers at their home or farms. The collected data was organized, tabulated and analysed with the help of statistical tools like frequency, mean, percentage, standard deviation and correlation of coefficient (r).

Results and Discussion

To study the relationship between profile of respondents and adoption of Super Moti variety.

Table 1: Distribution of the sorghum Super Moti cultivar according to their profile of respondents.

Sr. No	Category	Parbhani Super Moti Cultivator	
		Frequency	Percentage
A. Size of family			
1.	Low (Up to 4)	37	30.83
2.	Medium (5 to 10)	68	56.67
3.	High (Above 10)	15	12.50
B. Education			
1.	Illiterate	10	08.33
2.	Primary school level (1-4 Std.)	44	36.67
3.	Middle school level (5-7 Std.)	31	25.83
4.	High school level (8-10 Std.)	28	23.33
5.	College level/ Degree level	07	05.83
C. Land holding			
1.	Marginal (Up to 1.01)	07	05.83
2.	Small (1.01 to 2.00)	16	13.33
3.	Semi-medium (2.01 to 4.00)	43	35.83
4.	Medium (4.01 to 10.00)	47	39.17
5.	Large (above 10.01)	07	05.83
D. Annual income			
1.	Low (Up to 74000)	17	14.17
2.	Medium (74001 to 496000)	88	73.33
3.	High (Above 496001)	15	12.50
E. Farming experience			
1.	Low (Up to 7)	17	14.17
2.	Medium (8 to 32)	84	70.00
3.	High (Above 32)	19	15.83
F. Extension contact			
1.	Low (Up to 23)	26	21.67
2.	Medium (24 to 45)	68	56.67
3.	High (Above 45)	26	21.66
G. Knowledge			
1.	Low (Up to 7)	37	30.83
2.	Medium (8 to 15)	62	51.67
3.	High (Above 15)	21	17.50
H. Risk orientation			
1.	Low (Up to 1)	57	47.50
2.	Medium (2 to 4)	44	36.67
3.	High (Above 4)	19	15.83
I. Social participation			
1.	Low (Up to 1)	57	47.50
2.	Medium (2 to 4)	44	36.67
3.	High (Above 4)	19	15.83

The detailed analysis of profile characteristics of farmers indicated that whereas, more than half (56.67%) of the respondents were belonged to medium family size followed by 30.83 percent of them were found in small family size category. More than one third (36.67%) of respondent educated up to primary school level. Majority (39.17%) of the respondents belonged to medium level of land holding, followed by 35.83 percent of the respondents belonged to semi medium level of land holding. Third fourth (75.00%) of the respondents belonged to medium level of annual income, whereas 14.17 percent of the respondents had low level of annual income. Nearly third fourth (70.00%) of the

respondents had medium level of farming experience followed by 15.83 percent, 14.17 percent had high and low level of farming experience respectively. More than half (56.67%) of the respondents belong to medium level of extension contact, where 21.67 percent belong to low level of extension contact. More than half (51.67%) of the respondents had medium level of knowledge, nearly one third (30.83%) of the respondents were low level of knowledge. Majority (47.50%) of the respondents had low level of risk orientation, whereas more than one third (36.67%) respondents has medium level of risk orientation while 15.83 percent of the respondents had high level of risk orientation. Majority (47.50%) of the respondent had low level social participation, while 36.67 percent of the respondent had medium level social participation.

Table 2: Relationship between profile and adoption of sorghum Super Moti variety among farmers.

Sr. No.	Independent variable	Coefficient of correlation (r)
1	Size of family	0.303**
2	Education	0.315**
3	Land holding	0.305**
4	Annual income	0.199*
5	Farming experience	0.302**
6	Extension contact	0.305**
7	Knowledge	0.310**
8	Risk orientation	0.310**
9	Social participation	0.196*

** Significant at 0.01 level of Probability
*Significant at 0.05 level of Probability

It was observed from table 2 that size of family, education, land holding, farming experience, extension contact, knowledge and risk orientation were positive and highly significant with adoption of Parbhani Super Moti sorghum variety toward respondents. Social participation and annual income were positive and significant with adoption of Parbhani Super Moti sorghum variety toward respondents.

Conclusion

It is concluded that from the present study, the analysis of farmer profile characteristics reveals several key trends. A significant majority of respondents, 56.67 percent, belong to medium-sized families, while 30.83 percent come from small families. Educationally, over one-third (36.67%) are at the primary school level. In terms of land holding, 39.17 percent have a medium level, and a notable 75.00 percent report medium annual income. Additionally, 70.00 percent have medium farming experience, and 56.67 percent maintain medium levels of extension contact. Knowledge levels are similarly concentrated, with 51.67 percent falling into the medium category. However, it is noteworthy that a substantial portion, 47.50 percent, exhibit low risk orientation and low social participation. These insights suggest a predominantly medium profile among farmers, with specific areas, such as risk orientation and social engagement that may benefit from targeted support and development initiatives.

The analysis indicates that several factors significantly influence the adoption of the Parbhani Super Moti sorghum variety among respondents. Specifically, family size, education, land holding, farming experience, extension contact, knowledge, and risk orientation all show a strong positive correlation with adoption rates. Additionally, social participation and annual income also demonstrate a positive and significant relationship with the adoption of this sorghum variety. These findings suggest that enhancing these factors could further promote the adoption of innovative agricultural practices among farmers.

References

1. Gedam CV, Tekale VS, Gandhale AA. Profile analysis of tribal youth. Journal of Pharmacognosy and Phytochemistry. 2019:89-92.
2. Agale SB. Knowledge and attitude of farmers regarding Pradhan Mantri Fasal Bima Yojana (PMFBY) in North Gujarat. [Doctoral Dissertation]. Sardarkrushinagar Dantiwada Agricultural University, Sardar Krushinagar [Gujarat]; c2023. Available from: https://krishikosh.egranth.ac.in/items/e7304ac1-1ef0-40ea-8168-ee6c4c942f1d. Accessed June 3, 2024.
3. Jat A. Organic farming utilization status of vegetable growers in Jaipur District of Rajasthan. [Master's Thesis]. Shri Karan Narendra Agriculture University, Jobner [RJ]; 2020. Available from: https://krishikosh.egranth.ac.in/handle=1/5810155519.
4. Raut MG. Adoption of recommended package of practices among custard apple growers. [Master's Thesis]. Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani; c2023.
5. Bhutada PO, Kote GM, Jahagirdar JE, Kamble KR. Impact of front line demonstration on yield sorghum. Journal of Pharmacognosy and Phytochemistry. 2020;9(4):344-347.