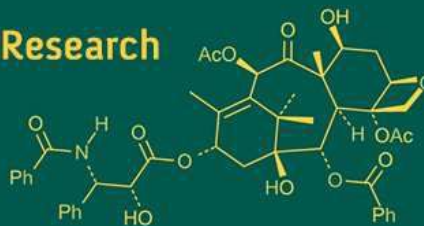
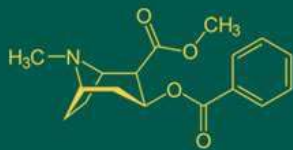


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Relational analysis between profile of turmeric growers and attitude of turmeric growers towards the use of biomix

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Abstract

The present study was undertaken with the main objective to study the relationship between profile of turmeric growers and attitude of turmeric growers towards the use of biomix. The study was conducted in Parbhani and Hingoli district of Marathwada region of Maharashtra. Total 120 respondents were selected purposively. The data was collected by personal interview and "Ex-Post-Facto" research design was used for conducting the study. The collected data was processed and statistically analyzed by using statistical tools like frequency and percentage, mean, standard deviation and coefficient of correlation. Among the eleven independent variables, Education, knowledge, social participation, extension contact and mass media exposure shows positive and highly significant relationship with attitude of turmeric growers towards the use of biomix at 0.01 level of significance. Land holding, area under turmeric crop, annual income and risk orientation shows positive and significant relationship with attitude at 0.05 level of significance. Family size and farming experience shows negative and non significant relationship with attitude of turmeric growers towards the use of biomix.

Keywords: Attitude of turmeric growers, turmeric, turmeric growers, biomix, use of biomix

Introduction

Turmeric is an important spice grown in India since ancient times. It is referred as Indian saffron and commonly called as Haldi/Halad. India is the largest producer, consumer and exporter of turmeric in the world.

Turmeric is a flowering plant, *Curcuma longa*, of the ginger family, Zingiberaceae, the rhizomes of which are used in cooking. The plant is a perennial, rhizomatous, herbaceous plant native to the Indian subcontinent and Southeast Asia.

According to the Directorate of Agriculture, Maharashtra (2023), the state's annual turmeric production stands at approximately 3.8 lakh tonnes. Districts like Sangli, Satara, Kolhapur, Hingoli, Nanded, Amravati and Buldhana are prominent turmeric producers. (agritimes.co.in)

In 2005, Prof. Dr. V.T. Jadhav created an experimental product for managing citrus decline and introduced biocontrol to the Marathwada region (at VNMKV, Parbhani). He called it "Biomix," which is a combination of *P. fluorescens* and *Trichoderma* spp. Biomix was created by incorporating certain biofungicides, biopesticides, and growth-promoting bioagents, taking into account the turmeric's performance, literature, and issues. All of turmeric's significant issues were resolved by this product.

Biomix was made with a combination of growth-promoting bioagents, biofungicides, and biopesticides. The Department of Plant Pathology introduced biocontrol to the Marathwada region in 2005 and developed an experimental product for managing citrus decline, called it "Biomix" (a combination of *P. fluorescens* and *Trichoderma* spp.). Biopesticides and biofertilizers are mixed with an organic product called biomix. The primary characteristic of Biomix is its ability to function as a fungicide, insecticide, and so forth. The Biomix is thought to be a viable substitute for chemical pesticides in terms of enhancing germination and providing plant protection for long-term agricultural productivity. Because biomix is reasonably priced, environmentally benign, and have caused considerable changes in the

agricultural production system, they are expected to be of great relevance as a complement or supplement to chemical fertilizers. They support the survival and growth of beneficial microorganisms in the soil. Because of their low cost and great economic impact in managing pests and plant diseases, Biomix users can afford them. *Aspergillus niger*, *Pseudomonas striata*, *Neumoria relyi*, *Gluconacetobactor*, *Bacillus subtilis*, *PPFM*, *Tricoderma harzianum*, *Pseudomonas fluorescens*, *Beauveria bassiana*, *Metarhizium anisopliae*, *Paecilomyces lilacinus*, *verticillium lecanii*, and *Azospirillum brasilence* are some of the specific species of microbes that make up Biomix, a unique and well-balanced blend. The present study was designed to analyze the relationship between profile of turmeric growers and attitude of turmeric growers towards the use of biomix with the following specific objective.

1. To study the profile of turmeric growers.
2. To study the relationship between profile of turmeric growers and attitude of turmeric growers towards the use of biomix

Methodology

The present study was carried out with the main objective to analyze the relationship between profile of turmeric growers and attitude of turmeric growers towards the use of biomix. The study was carried out in Maharashtra's Parbhani and Hingoli district, in the Marathwada region. A total of 120 responders were chosen purposively. The data was collected by personal interview and "Ex-Post-Facto" research design was used to carry out the investigation. Utilizing statistical techniques such as frequency and percentage, mean, standard deviation, and coefficient of correlation, the acquired data was processed and evaluated using statistical analysis. The independent variables were education, size of family, farming experience, knowledge, land holding, area under turmeric crop, annual income, social participation, extension contact, mass media exposure, risk orientation and the only dependent variable was attitude.

Result and Discussion

The findings of the present study as well as the relevant discussion have been summarized under the following heads. Relationship between profile of turmeric growers and attitude of turmeric growers towards the use of biomix.

Table No.1 shows that, majority (53.33 %) of the respondents educated up to middle school level, 53.33 percent of the respondents belonged to medium size of family, 70.00 percent of the respondents had medium farming experience, 78.33 percent of the respondents had medium level of knowledge, 31.67 percent of respondents having small land holding, 82.50 percent of the respondents had medium level of area under turmeric crop, 80.00 percent of the respondents belonged to medium level of annual income, 51.67 percent of the respondents belonged to medium level of social participation, 78.33 percent of the respondents belonged to medium category of the extension contact category, more than half (60.83%) had a medium level of mass media exposure, majority (41.67%) of the respondents had medium level of risk orientation, and 61.67 percent had favourable attitude while 24.16 percent of the respondents had highly favourable attitude and remaining 14.17 percent of respondents had less favourable attitude towards the use of biomix.

Table No. 2 shows that, eleven independent variables that were chosen for this study, five had a positive and highly-significant association, four had a positive and significant association, and only two had a negative and non-significant association with turmeric grower's attitudes toward the use of biomix. The independent variables that had shown positive and highly-significant association were education, knowledge, social participation, extension contact, mass media exposure. While variables like land holding, area under turmeric crop, annual income and risk orientation showed positive and significant association with the attitude of turmeric growers towards the use of biomix. Size of family and farming experience showed negative and non-significant association with the attitude of turmeric growers towards the use of biomix.

Table 1: Profile of turmeric growers

Profile of Turmeric growers				
Independent variables				
Education	Sr. No.	Category	Frequency	Percentage
	1	Illiterate	12	10.00
	2	Can read only	00	00.00
	3	Can read and write	00	00.00
	4	Primary school (Up to 4 th std)	09	07.50
	5	Middle School (5 th std to 10 th std)	64	53.33
	6	Higher Secondary (11 th std and 12 th std)	21	17.50
	7	Graduate	14	11.67
Total			120	100.00
Size of Family	Sr. No.	Category	Frequency	Percentage
	1	Small family (Up to 4)	38	31.67
	2	Medium family (5 to 8)	64	53.33
	3	Big family (9 and above)	18	15.00
Total			120	100.00
Farming Experience(Years)	Sr. No.	Farming experience (years)	Frequency	Percentage
	1	Low (Up to 14)	17	14.17
	2	Medium (15 to 30)	84	70.00
	3	High (31 and above)	19	15.83
Total			120	100.00
Knowledge	Sr. No.	Knowledge index	Frequency	Percentage
	1	Low (Up to 64)	03	02.50
	2	Medium (65 and 75)	94	78.33
	3	High (76 and above)	23	19.17
Total			120	100.00
Land holding (ha.)	Sr. No.	Land Holding	Frequency	Percentage
	1	Marginal (Up to 1.00 ha)	12	10.00
	2	Small (1.01 to 2.00 ha)	38	31.67
	3	Semi medium (2.01 to 4.00 ha)	35	29.17
	4	Medium (4.01 to 10.00 ha)	27	22.50
	5	Large (10.01 ha and above)	08	06.66
Total			120	100.00
Area under turmeric crop (ha.)	Sr. No.	Area Under turmeric Crop (ha.)	Frequency	Percentage
	1	Small (Up to 0.36 ha)	02	01.67
	2	Medium (0.37 ha to 1.31 ha)	99	82.50
	3	Large (1.32 ha and above)	19	15.83
Total			120	100.00
Annual income	Sr. No.	Category	Frequency	Percentage
	1	Low (Up to Rs.122477.98)	07	05.83
	2	Medium (Rs. 122477.99 to Rs. 503938.67)	96	80.00
	3	High (Rs.503938.68 and above)	17	14.17
Total			120	100.00
social Participation	Sr. No.	Category	Frequency	Percentage
	1	Low (Up to 4)	37	30.83
	2	Medium (5 and 6)	62	51.67
	3	High (7 and above)	21	17.50
Total			120	100.00
Extension contact	Sr. No.	Category	Frequency	Percentage
	1	Low (Up to 3)	12	10.00
	2	Medium (4 to 10)	94	78.33
	3	High (11 and above)	14	11.67
Total			120	100.00
Mass Media exposure	Sr. No.	Category	Frequency	Percentage
	1	Low (Up to 1)	27	22.5
	2	Medium (2 to 4)	73	60.83
	3	High (5 and above)	20	16.67
Total			120	100.00
Risk Orientation	Sr. No.	Category	Frequency	Percentage
	1	Low (Up to 19)	24	20.00
	2	Medium(20 -21)	50	41.67
	3	High (22 and above)	46	38.33
Total			120	100.00
Dependent Variable				
Attitude of turmeric growers	Sr. No.	Category	Frequency	Percentage
	1	Less favourable (Up to 50)	17	14.17
	2	Favourable (51 to 57)	74	61.67
	3	Highly favourable (58 and above)	29	24.16
Total			120	100.00

Table 2: Coefficient of correlation between profile of turmeric growers and their attitude towards the use of biomix.

Sr. No.	Independent Variables	Variable code	X ² Value
1	Education	X ₁	0.649**
2	Size of Family	X ₂	-0.076 ^{NS}
3	Farming Experience	X ₃	-0.090 ^{NS}
4	Knowledge	X ₄	0.296**
5	Land Holding	X ₅	0.224*
6	Area Under Turmeric Crop	X ₆	0.231*
7	Annual Income	X ₇	0.214*
8	Social Participation	X ₈	0.351**
9	Extension Contact	X ₉	0.509**
10	Mass Media Exposure	X ₁₀	0.364**
11	Risk Orientation	X ₁₁	0.221*

* Significant at 0.05 level of significance

**significant at 0.01 level of significance

NS - Non-significant

Conclusion

The study has identified certain independent variables that have significant effect on attitude of turmeric growers towards the use of biomix. The variables like education, knowledge, social participation, extension contact, mass media exposure were having significant highly significant relationship with the attitude of turmeric growers towards the use of biomix. Therefore, it is suggested that these aspects need to be prioritized more in order to help farmers have a positive attitude toward the use of biomix.

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