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A Study on Farmers Satisfaction in Relation to Organic and Non Organic Pesticides with Reference to Yadadri District

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ABSTRACT: Organic farming is getting high popularity all over the world, as it can concentrate agricultural production systems towards achieving improved productivity, farm income and food, as well as environmental safety. The aim of this study was therefore to assess farmer's perception of organic farming and the issues linked with it. The present study was conducted in Mandya District, Karnataka. The District of Mandya consists of 7 Taluk out of these a convenient and purposive sampling technique was used to select 200 respondents. Descriptive statistics are used to present the findings of the study while the One way ANOVA and One sample t Test was used to test the study hypotheses. Study revealed that 95 % of respondents have positive perception towards organic farming. Also, 8 out of 10 variables selected, affects respondents perception towards organic farming. There were significant relationships ($p \leq 0.05$) between respondents' age, educational, income, farm size, Investment, and government subsidies, high income, safety and healthy, high yield, Cost of produces and perception of organic farming.

I. INTRODUCTION

Yadadri District lies in the heart of agricultural activity and serves as a microcosmic representation of the wider agricultural panorama in India. As farming practices evolve and the issue of sustainability takes center stage, a question regarding the efficacy and impact of pesticides continually emerges. In the midst of this debate, the decision between organic and non-organic pesticides becomes a matter of critical concern, not only for agricultural productivity but also in terms of environmental conservation and human health. The present study attempts to explore the complex perceptions of farmers in Yadadri District in relation to their level of satisfaction with organic and non-organic pesticides, attempting to understand the factors that influence their preferences and the implications for sustainable agricultural practices. The acceptance of pesticides, either organic or non-organic, is tied deep within the socio-economic fabric of farming communities.

Organic pesticides, made from plant extracts, microbes, or other natural sources, have become increasingly popular alternatives to synthetic chemicals and have potential advantages, like reduced ecological footprint and minimized health risks. On the other hand, non-organic pesticides, mostly constituted by their synthetic formulations and strong pest control properties, continue to be the mainstream choice within the agricultural world, driven by factors of affordability and immediate effectiveness. In Yadadri District, socio-economic, ecological, and institutional factors interplay in determining farmers' choices on pesticide usage; their preferences, perceptions, and experiences regarding organic and non-organic pesticides need to be understood with nuance.

II. REVIEW OF LITERATURE

D Pimentel, M Burgess (2005)
Various organic technologies have been practiced for approximately 6,000 years while making agriculture sustainable and, at the same time, conserving soil, water, energy, and biological resources. Traditional organic technologies of farming can be adopted by conventional agriculture, making it more sustainable and ecologically sound.

K Lorenz, R Lal - Advances in agronomy, (2016)
OA is practised on 1% of the world's agricultural land area and its significance is growing. Particularly, OA is regarded by many as having fewer adverse environmental impacts compared to conventional agriculture since soluble mineral fertilizers and synthetic herbicides and pesticides are totally banned. However, scientific evidence for better environmental impact is scanty. Specifically, yields under OA are about 19% lower and the attendant lower soil carbon

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(C) inputs together with tillage for weed.

C Dimitri, H Baron (2020)
Lies between the farm and the consumer along the supply chain, certified organic handling firms rely on a predictable supply of organic ingredients and commodities to meet consumer
demand for organic food. Yet, organic firms often must bear high transaction costs regarding locating certified organic products. A potential reason, transaction costs may be one reason growth in organic farmland fails to keep pace with consumer demand for organic food. When costs are high enough, the certified organic handling firms might directly support farmers to go through the 3-year transition process. Support may take the form of advice or financial support. We analyze primary data collected in 2017 and find that around 20 percent of certified organic firms in the sample assist farmers with the transition. The most frequently cited forms of support reduce technical barriers to organic farming and include advice on the organic standards and organic farming practices.

III. RESEARCH METHODOLOGY

RESEARCH GAP
The literature on farmer satisfaction with organic and non-organic pesticides in Yadadri District generally fails to undertake comprehensive analyses of those factors that contribute to satisfaction among organic and non-organic farmers. Moreover, research that tries to find the intersect of this issue with farmers' satisfaction from a socio-economic perspective, agricultural practices, and environmental concerns is almost non-existent. Another glaring gap is the contribution of government policies and extension services of the agricultural department in shaping farmers' perceptions and satisfaction with pesticide choices.

OBJECTIVES OF THE STUDY
1. To identify the satisfaction levels of farmers with organic and non-organic pesticides in the Yadadri District.
2. To determine the key drivers of farmers' satisfaction with pesticide choices, which include socio-demographic variables, environmental concerns, and agricultural practices.

RESEARCH TYPE: Descriptive in Nature
Sampling Technique: Simple non-random technique is used for the purpose of the study.

DATA COLLECTION METHODS
Primary Data: This research will gather primary data through questionnaires with farmers in Yadadri District, getting information from them directly to establish their satisfaction levels with organic and non-organic pesticides. Qualitative data will be gotten from in-depth interviews with a sample of farmers for a more profound understanding of the views and experiences in the use of pesticides.

Secondary Data: The secondary data will come from the already existing literature, research papers, government reports, and agricultural databases that will provide background information on pesticide usage, agricultural practices, and environmental concerns in Yadadri District.

SAMPLE SIZE: 50 SAMPLE UNIT: **MEDCHAL**
A well-structured questionnaire with straight forward questions is employed for data gathering. Close- ended multiple choice items are included in the survey.

TOOLS USED: Google forms, Charts, Bar graphs and chi-square test.
HYPOTHESIS
H0: There is no significance in the difference between organic and non-organic pesticides in relation to satisfaction levels among farmers in Yadadri District.
H1: There is significance in the difference between organic and non-organic pesticides regarding satisfaction levels among farmers.

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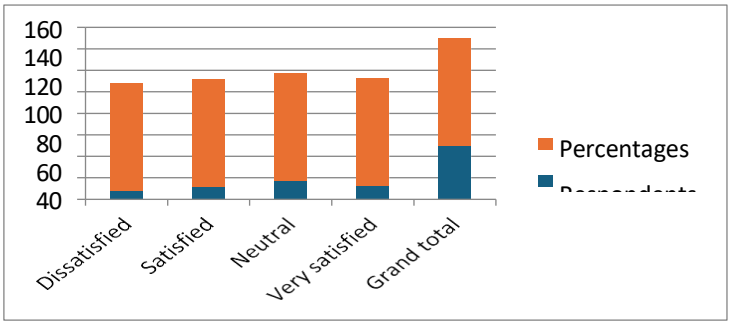
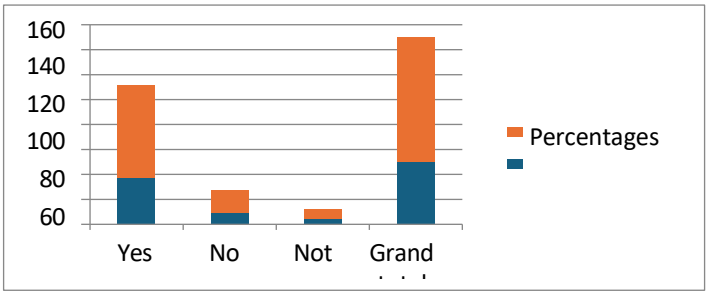
DATA ANALYSIS

How satisfied are you with the effectiveness of non- organic pesticides in controlling pests on your crops?	Dissatisfied	Satisfied	Neutral	Very satisfied	Grand total
Respondents	8	12	17	13	50
Percentages	16	24	34	26	100



Interpretation: Satisfaction with non-organic pesticides is more varied, with 50% feeling neutral or dissatisfied and 50% feeling satisfied or very satisfied.

Do you perceive organic pesticides as safer for human health compared to non-organic pesticides?	Yes	No	Not sure	Grand total
Respondents	37	9	4	50
Percentages	74	18	8	100



Interpretation: The majority, 74%, perceive organic pesticides as safer for human health compared to non-organic pesticides.

Do you perceive organic pesticides as safer for human environment compared to non-organic pesticides?	Yes	No	Not sure	Grand total
Respondents	30	13	7	50
Percentages	60	26	14	100

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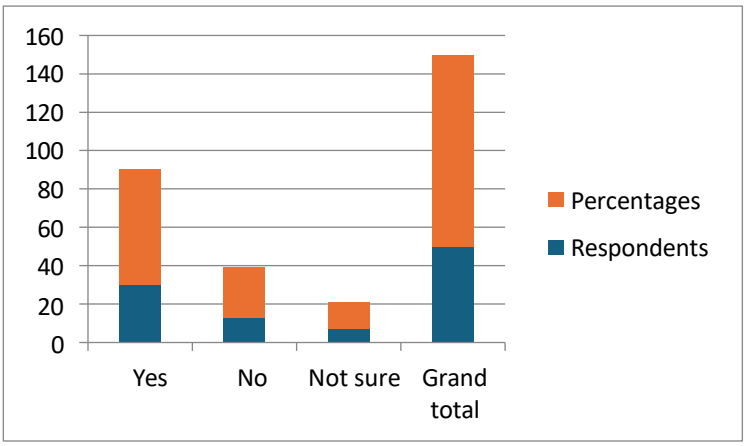
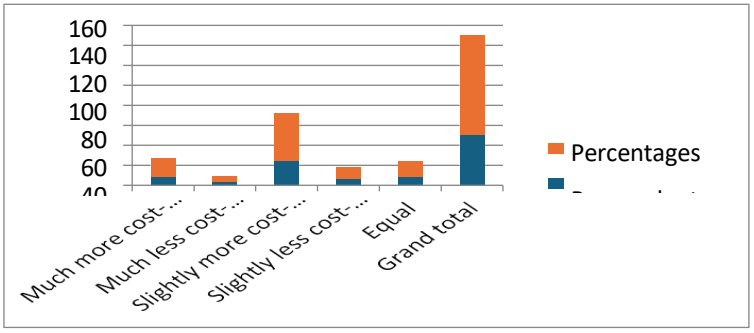


Interpretation: 60% of respondents perceive organic pesticides as safer for the environment compared to non-organic pesticides.

How would you rate the cost effectiveness of organic pesticides compared to non-organic pesticides?	Much more cost-effective	Much less cost- effective	Slightly more cost-effective	Slightly less cost-effective	Equ al	Gr an d tot al
Respondents	**9**	**3**	**24**	**6**	**8**	**50**
Percentages	**18**	**6**	**48**	**12**	**16**	**100**



Interpretation: Most respondents, 66%, find organic pesticides to be slightly or much more cost-effective than non-organic pesticides.

In your opinion, do non- organic pesticides have any adverse effects on crop yield or quality?	Yes	No	Ma ybe	Grand total
Respondents	**20**	**16**	**14**	**50**
Percentages	**40**	**32**	**28**	**100**

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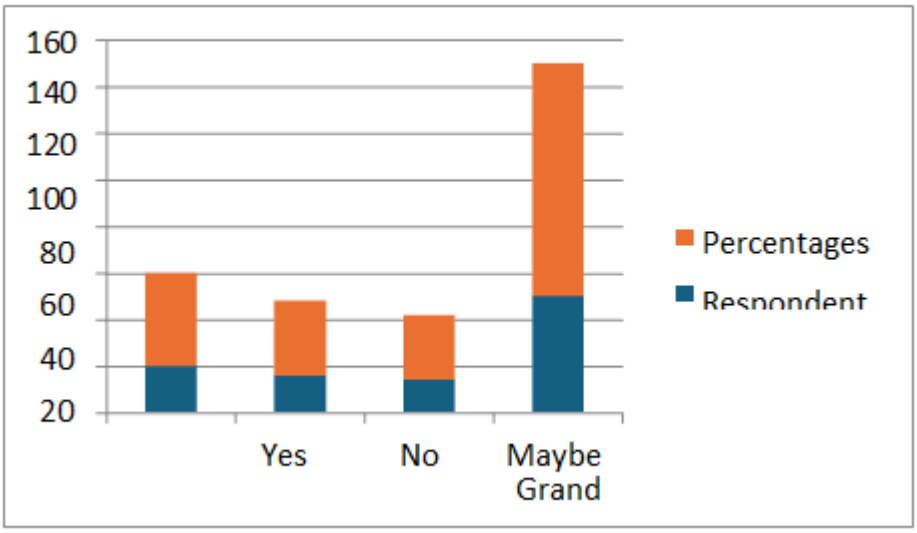
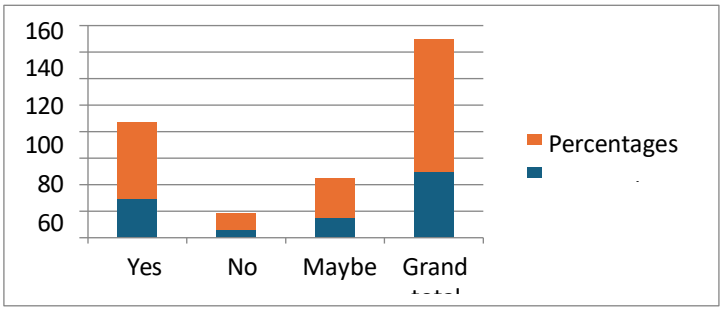


Interpretation: Opinions are mixed on the adverse effects of non-organic pesticides on crop yield or quality, with 40% saying yes, 32% saying no, and 28% unsure.

In your opinion, do organic pesticides have any adverse effects on crop yield or quality?	Yes	No	Maybe	Grand total
Respondents	29	6	15	50
Percentages	58	12	30	100



Interpretation: A majority, 58%, believe that organic pesticides have adverse effects on crop yield or quality, while 12% disagree and 30% are unsure.

How satisfied are you with the availability of non- organic pesticides in Yadadri District?	Dissatisfied	Neutral	Satisfied	Very Satisfied	Very Dissatisfied	Grand total
Respondents	6	18	16	4	5	50
Percentages	12	36	32	8	10	100

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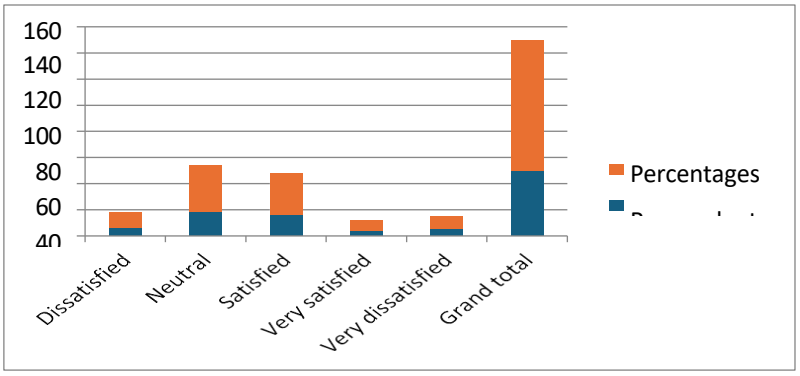
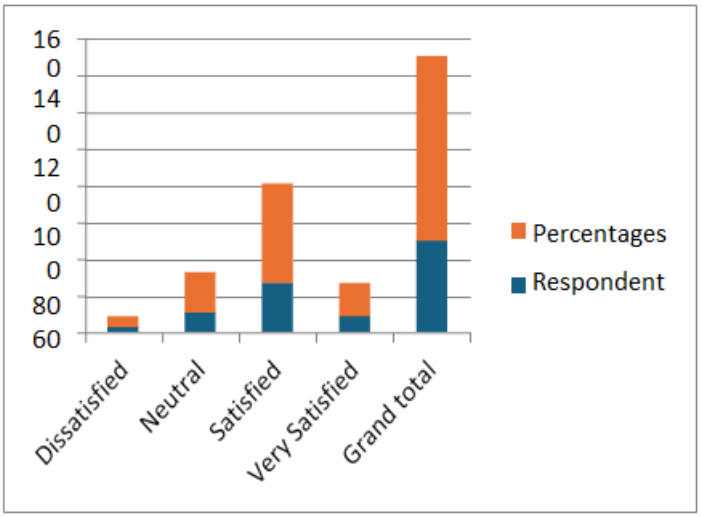


Interpretation: Most respondents, 68%, are either neutral or satisfied with the availability of non-organic pesticides in Yadadri District.

How satisfied are you with the availability of organic pesticides in YadadriDistrict?	Dissatisfied	Neutral	Satisfied	Very Satisfied	Grand total
Respondents	3	11	27	9	50
Percentages	6	22	54	18	100



Interpretation: The majority of respondents, 72%, are satisfied or very satisfied with the availability of organic pesticides in Yadadri District.

Have you experienced any resistance issues with pests when using organic pesticides?	Yes	No	Not sure	Grand total
Respondents	16	20	14	50
Percentages	32	40	28	100

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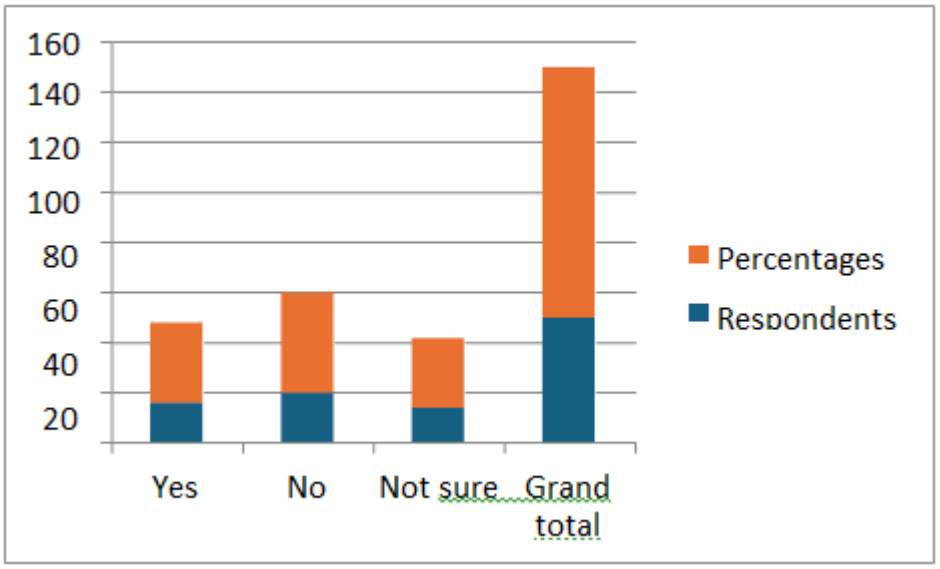

Interpretation: Thirty-two percent of respondents have experienced resistance issues with pests when using organic pesticides, while 40% have not, and 28% are unsure.

IV. FINDINGS

The survey had an equal gender distribution, with 50% female and 50% male respondents. The majority of respondents ere below 25 years old, comprising 56% of the total.

The majority of respondents, 74%, are satisfied or very satisfied with the effectiveness of organic pesticides in controlling pests on their crops.Satisfaction with non-organic pesticides is more varied, with 50% feeling neutral or dissatisfied and 50% feeling satisfied or very satisfied.

The majority, 74%, perceive organic pesticides as safer for human health compared to non- organic pesticides.
60% of respondents perceive organic pesticides as safer for the environment compared to non-organic pesticides.

V. SUGGESTIONS

While conducting research on farmers' satisfaction with organic and non-organic pesticides in Yadadri District, a comprehensive approach that takes into consideration all factors affecting their preferences and experiences is very necessary. The research inquiries may include effectiveness, safety concerns, availability,. In addition, agricultural policies existing within the district and the available support systems should be analyzed to determine their influence on pesticide use and farmer satisfaction.

- Field trials or experiments to test organically and non-organically produced pesticides in a local agricultural context to provide empirical data for decision-making.
- Carry out intensive surveys and interviews among the local farmers regarding their perceptions, attitudes, and experiences about organic and non-organic pesticides, considering factors such as effectiveness, safety, availability, and cost-effectiveness.

The research findings should take the line of offering practical recommendations to the stakeholders, such as farmers, policymakers, and agricultural extension services. Overall, by taking a multifaceted approach and engaging with stakeholders at various levels, the study can contribute to improving farmer satisfaction and promoting sustainable agricultural practices in Yadadri District.

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VI. CONCLUSION

The study on farmers' satisfaction with organic and non-organic pesticides in Yadadri District portrays the complex dynamics shaping agricultural practices in the area. From in-depth surveys, interviews, and field trials, useful insights on the attitudes, perception, and experience of farmers toward different kinds of pesticides could be gained.. Therefore, there is a pressing need for stakeholders, including farmers, policymakers, and agricultural extension services, to cooperate in advancing sustainable agricultural practices that balance efficacy, safety, and environmental stewardship.

Emphasizing education, training, and support mechanisms for farmers to turn integrated pest management into reality. Increases in initiatives that ensure organic pesticides are affordable and within reach, along with incentives for their use, could lead toward a sustainable and resilient agricultural sector in the Yadadri District. Moreover, an important result is the continuous research and monitoring that allow the constant assessment of performance and effects of the pesticide options under other perspectives, ensuring agricultural practices are in line with the region's socio-economic and environmental goals. Addressing the nuanced needs and preferences of farmers while prioritizing sustainability, Yadadri District could pave the way to an increasingly prosperous and ecologically sound agricultural future.

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