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Pesticides Swapping Through Organic Innovation: An Interdisciplinary Path to Green Chemistry

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Abstract

Thirteen questions are selected on the various basis. Seven samples are taken to conduct the study. P-Value is 0.0001 of the t-test conducted. The extra information collected from the farmers are considered as guidelines. This is not possible to convince the farmers from use of synthetic pesticides. Due to several incident. It is printed in the mind of farmer that all pesticides are toxic. Realization about toxic chemicals become welcome and safe to the Green Chemistry. This is necessary to encourage the farmer to use organic pesticides & fertilizers. The productions of crop are important and what about the mother earth?

The involvement of universities specially Agriculture Universities with the farmer are important. University must take the exam paper on the field work and on actual problem of farmer.

The is the new era of technology. The introduction of new automotive devices, new apps, monitoring of water & selection and use of certain pesticides are easily available, the special tech seminar to each & every village is necessary by the expects of university.

Keywords: *Pesticides, organic pesticides, green chemistry, alienation, rootlessness, Black Consciousness, allegory.*

Introduction

Green chemistry is the new concept in the new era. The use of mobile is increased so the radiations are also increased. This is the new types of waves pollution. The villages are still using the cow dung. Cow urine and dung are the natural protector for such types of radiation. Now a days the use of pesticides is increased. The pesticide Mfg. companies adopting the policy to sell in large quantity. They are using the synthetic pesticide; which were banned in foreign countries like D.D.T. The purchaser of this pesticide is mostly illiterate, they don't know use, secondly the tin pack size of pastiches is same for all the farmer having two acres or ten acker land. So, the residue of pesticides becomes high. The disposal be tin pack is harmful to the lives on and above the land and underwater or aquatic life. Other thing is that, the chemical consumed by the insects and others are approximately sixty five percent. It means the thirty-five percent of pesticides are for polluting soil, water and indirectly the air.

Basically, environmental science is the interdisciplinary paths or field. It is interred related between the nature and the nuisance and nutritious activities of human. The Green Science is the guide to reduce all expected or related pollution.

Landlord community produces the organic vegetable & crop in their farm for them only. The relevance of organic pesticide and fertilizers.

Now-a-days, the institution like. I.I.T. are studying to find the solution in, the agriculture (moderate rate crop etc.), waste management (making petrol, tar from the polythene. bags, recycling the plastic for making second item like wire, bucket, chairs etc.), eco-friendly materials (The carry bags looking like polythene can be degrade) The prestigious institution, IIT Kanpur made the machine called 'BHOOMI'. With the help of this, the organic material converted to fertilizer with in the ten days. The organic & horticulture waste converts into Bio Compost. Another useful research was made by IIT Madras is that, the conversion of Paddy waste of the county to commercial std carbon material.

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The fast growth in the crop and others; lost the forty five percent of nutritional values. The state Sikkim became the first organic state. With the help of organic fertilizer, pesticides the production of crop reduces. IIT Bombay made the soil less farming due to this the growth of crop and others increased by 75%. The water saving management reduces water by 80%.

Ultra sound is used in many cases. The process of homogenization of milk; can be done by the ultra sound. This is used for reducing the map or size of fat molecules. It reduces the carbon foot prints.

Aim & Objectives: -

The research aims, to locate the exact position of rich village related to the high-tech Agriculture activities. and also, the information which relates to the green chemistry principles. Main aim is to make the robust belief that synthetic pesticide is toxic.

Objectives:

1. To identify the presence of harmful pesticides.
2. To identify the accident related to the health impacts.
3. To list out the organic alternative.
4. To find the link with green chemistry.
5. To fine the use of automotive devices in rich like village Sasti, Dist. Akola

Research Design and Framework: -

The methodology used for this study is based on the questionnaire. Thirteen questions, questionnaire made from the following criteria.

1. To identify the harmful pesticides used by farmer during farming.
2. To identify the harmful compounds used by farmers.
3. To assesses the environmental health impact.
4. To collect the information about the organic pesticide.
5. To study the Green Chemistry through this theoretical study.
6. To collect the information to make the sustainable environment.
7. To collect the information about use of drone.
8. To collect the information about the organic pesticide known & in use.
9. To collect the information about varies apps used for Water Management, Pesticide Management.

The questionnaires made is in the form of YES and NO. The samples taken for study are seven, from the village Sasti of Dist. Akola in Maharashtra. The questionnaire is in Marathi. The information collected, answers collected are kept in conclusion and recommendation. The questionnaire was followed:

Questions:

1. Are the crop spraying Pesticides Toxic
2. Did anyone have poisoned due to spraying of crop? If that is the case, what is his name?
3. Does spraying organic pesticides? If so, tell the list?
4. Does spraying pesticides, remaining after spraying?
5. Do you use both organic and synthtic pesticides?
6. If a group of four five farmers with farming farms are grouped, will the crop production be greatly increased? Tell your opinion?
7. Does the drone use for spraying?
8. There are various apps for water management, what do you use?
9. There are various apps for pesticide management, what do you use?
10. Do you plan to use Safe chemicals in pesticide
11. Do you use degraded pesticides?
12. Has the Organic Pasteiside never sprayed?
13. Before sowing in all the villages, should the Agricultural University organize a camp?

Null Hypothesis: -

Farmers do not have the retention and requirements of the organic pesticides.

Alternative Hypothesis:

Farmers do not have the retention and requirements of the organic pesticides.Vegetables, fruits, cereals, jaggery, grains are produced using organic fertilizers, organic pastaside. This is used by people only for themselves

Table No.1
Table contains the quantity of Y and N

S. N.	Samples	QUESTIONS													Positive - Y	Positive - N	TOTAL	
		01	02	03	04	05	06	07	08	09	10	11	12	13	Y	N	Y	N
1	A	Y	Y	N	Y	Y	N	N	Y	Y	N	--	Y	Y	01	01	08	04
2	B	Y	Y	N	Y	N	N	N	Y	Y	N	--	Y	Y	01	04	07	05

3	C	Y	Y	N	Y	Y	N	N	Y	Y	N	--	Y	Y	01	01	08	04
4	D	Y	Y	N	N	Y	N	N	Y	Y	N	--	Y	Y	01	01	07	05
5	E	Y	Y	N	Y	Y	N	N	Y	Y	N	Y	Y	Y	--	01	08	05
6	F	Y	Y	N	N	N	Y	N	Y	Y	N	Y	Y	Y	--	02	09	04
7	G	Y	Y	N	Y	N	Y	N	Y	Y	N	--	Y	Y	01	02	08	04
	Total														**05**	**09**	**55**	**31**

The online P-Value is generated and tabulated as table no.2

Table No.2

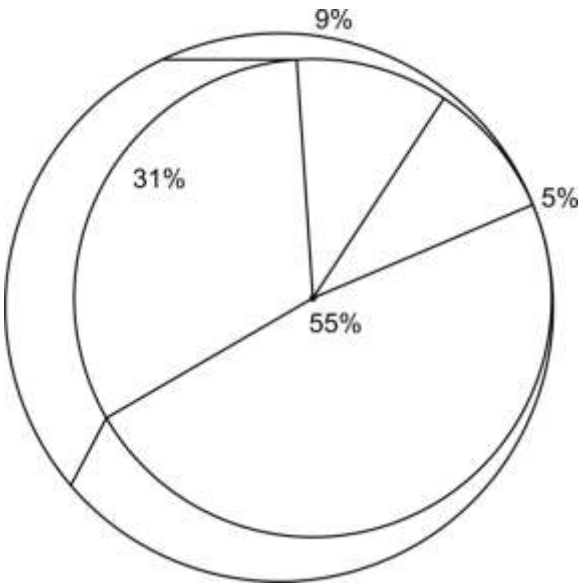
Unpaired t-test results

1	P-Value and Statistical Significance: (a) P-value = 0.0001		
2	Confidence Interval; (A) Group. YES, minus Group. NO. = 3.43 (b) 95% confidence interval of this differences = 2.71 to 4.15		
3	Intermediate Values used in calculations: (a) t = 10.3923 (b) df = 12 9c) Std. error of difference = 0.330		
4	Data collected (online)		
	1 TEMS	for YES	for NO
a)	Mean	7.86	4.43
b)	S. D. (Standard Deviation)	0.69	0.53
c)	SEM	0.26	0.20
d)	No. of Samples N	07	07

As the P-Value is less than 0.05, so the null hypothesis is rejected and alternative hypothesis is accepted. So, the diagram No.1 indicates the exact YES counts and NO counts. The positive YES & NO counts are also shown in it. The positive NO means its vote is towards the Green Chemistry. Positive YES mean; the farmer is in swing mood. The answers to question no. 11 are passed. it is neither accepted nor rejected.

Diagram No.1

Diagram show the distribution of YES and No counts.



Discussion on Results: -

In the questionnaire, particular types of questions are taken. On the ground that the synthetic pesticides support to increase the crop production. These are toxic or nontoxic or general pesticide. Pesticides are like the water; this was the Meath or assumption made by the village farmers. But when Shri Vishvanath Khakre hospitalized at Akola with many uncertainties. After this incident 'Pesticides' become, very toxic, Use and handling became very special due to this major health input.

After this incident the use of pesticide became 'limited'. Organic pesticides are introduced. Due to the worry of average crop production, again these pesticides became important.

The use of mobile became common to all villages. Its actual use related to the agriculture or its demo is necessary by the expertise of Agriculture Universities. Crop Insurance's advertise and its implementation are also necessary.

In the tabulation of questionnaire two aspects are introduced that are POSITIVE - YES and POSITIVE - NO. while note down the answers received from the farmers, some abnormalities are found in the explanations given on 'YES' and on 'NO'. It means that the explanation given and YES/NO selected are opposite.

The online P-value generated is 0.001. This value is less than 0.05. It means that the null hypothesis rejected. And it converted to the YES factor. i.e. alternative hypothesis.

Conclusion and Recommendation: -

Synthetic pesticides can be replaced by organic pesticides. This is necessary to show the actual master plan of microorganisms and production affected by this. Or master plan of synthetic pesticides and its effect on the crops. Due to the organic pesticide, the production of crops decreases. this belief of the farmers must be replaced by the side effects of it. This is also necessary to intertwines the sustainable chemistry and its principles on the field.

Literature Reviews:

Urvashi Kashyap et.al (2024), Human health is the main aspect in any science. The development in each sector, causes minimum harm. This minimum became maximum; when the banned chemical is used as pesticide. Causes serious health effect, the risk are created and converted to the Parkinson's diseases, development of cancer.

Madhumita Hazra (2021), Safe product and safe manufacture processes are the key points in the green chemistry and the philosophy of Green Chemistry are also necessary to be insourced in society, most important aspect is the ultrasound cell membrane or microorganism get ruined as soot.

M. L. Flint et.al (1980), Insects may be killed by giving the stomach poisons. The physical and mechanical driven devices are important to control. But now a days, arial control devices are exist. Swiss chemist, Muller introduced DDT as insecticides, its use became dangerous to human.

Bidisha Subba et.al (2023), Every plant has its own properties. Special types of insects attracted toward that plant; every insect has the special weaker aspects. That should be noted and used so that the insects should not to be attracted.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

References:

1. Urvashi Kashyap, Shivani Garg, Pooja Arora (2024), "pesticide pollution in India: Environmental and Health task and Polley challenges", ELSVIER, TOXICOLOGY REPORTS, Vol. 13, Pg. 4-6
2. Madhumita Hazra (2021), "Applications of Green Chemistry", BIGYAN - an interdisciplinary journal of science, S. S. Mahavidyalaya, Pg. 28
3. Press Release (29/3/2023), "IIT madras Researchers to develop Eco-Friendly tech to upcycle paddy work and its super capacitors", IIT Madras New, Home Page, Pg. - Home page
4. M. L. Flint et.al (1981), "Introduction to the integrated pest man", Flenum Press, New York, Pg. 65
5. Bikash Subba, Suk ram Thapa, Biwas Gurung, Puran Pokhrel (2023), "Plant based Organic Insecticides, Cape Comorin Publishers, Raced Trend in Entomology, Pg. 155-156
6. Cape Comorin Publishers, Raced Trend in Entomology, 2023, pp. 155-156.
7. Hazra, Madhumita. "Applications of Green Chemistry." BIGYAN - an interdisciplinary journal of science, S. S. Mahavidyalaya, 2021, p. 28.
8. Flint, M. L., et al. "Introduction to the integrated pest man." Flenum Press, New York, 1981, p. 65.
9. IIT Madras. "IIT madras Researchers to develop Eco-Friendly tech to upcycle paddy work and its super capacitors."
10. IIT Madras New, Home Page, 2023.