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Knowledge of Agriculture Waste Management in Rural Areas

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Abstract: *We can't turn blind eye to the waste generated through human activities. Economy development, urbanization and rising human life standards along with increasing waste in the cities. According to united national development programme 40 percentage agriculture (organic) waste is generated in India yearly. In yearly generated are different type of agriculture waste Like fruits and vegetables waste is 70 percentages. Agricultural waste management is essential for decreases environment pollution. The present study aim overall knowledge of farmers regarding waste, agriculture waste, agriculture waste generation, problems due to agriculture waste, and waste management techniques. Structured interview questionnaire methods used for data collection. Study results shows that the highly significant overall knowledge in different topics agriculture waste management like vermicomposting technology and other technology. The present Study concluded that after training farmers had high knowledge regarding agriculture waste management through vermicomposting technology and different technologies. The present study was recommended done on Chomu block some village's farmer's further research study could be planned by all districts.*

Key Words: agriculture waste, knowledge, technology, vermicomposting, waste, and agriculture waste generation.

1. INTRODUCTION:

Waste is burned, open – ditched on land shells and disposed of into bodies of water, leading to environmental and global warming enterprises. Burning agrarian trash contributes to health problems and climate change by releasing dangerous adulterants like particulate matter and hothouse feasts.[1] Waste is not only an environmental problem, but also a profitable loss. Agriculture waste is unwanted or unmarketable accoutrements produced wholly from agrarian operation directly related to the growing of crops or rising of creatures for the primary purpose of making a profit or for a livelihood.[2] According to ICAR India induce about 350 million tons of agrarian waste every time. Other than according to The Hindu business line) studies suggest that every time 84 million tones (23.86) of stubble is burnt on field incontinently after crop.[3] Likewise, studies also indicate that India produced further than 620 million tons of agrarian waste annually.[5, 6] The post-harvest agro-waste generally the crop remainders similar as rice straw, wheat straw, sludge straw, barley straw, oats straw, etc. An effective means of managing agrarian solid wastes is to reclaim them to produce useful products.[7] This can be achieved through composting/ organic ordure. [6] India agriculture waste is used as; first is making ordure which increases fertility of fields.[8] Than second it's used as energy in biogas factory for generating electricity. Agrarian waste may be exploited to induce energy biofuel product, bio-fertilizer, compost, biogas, paper, etc. Composting is an effective result for managing factory remainders, trouncing, ordure and other husbandry products which putrefy into nutrient-rich compost.[9]

2. OBJECTIVE:

Study objective change in overall knowledge of farmers regarding waste, agriculture waste, agriculture waste generation, problems due to agriculture waste, and agriculture waste management techniques.

3. MATERIALS AND METHODS:

The Location of the study was selected as Chomu block, Jaipur district, Rajasthan. The block was selected purposively because Chomu is the area for growing vegetables maximum. The Jaipur district has a well-developed horticultural production and has a huge demand for horticulture produce. To achieve the above objectives in the present empirical investigation Chomu block, district Jaipur was selected purposely. There are a total 115 villages in

Chomu block.[10] The farmers of these villages constituted the population of this study and the sample is representative of the population. Knowledge consisted of statements about the knowledge of selected farmers regarding agriculture waste management. This part was used a dichotomous scale. This section consisted of statements about agriculture waste management through different technologies with the help of tools designed by the researcher.

4. RESULTS AND DISCUSSION:

Figure 1 Distribution of Knowledge Level of respondents (Overall) there was increase in overall high level of knowledge among study participants from {1(0.06%)} to {136(90.7%)} from pre-test to post-test with an overall gain of {135(90%)}

Table 1 shows that only 0.6% of respondents had high knowledge regarding agriculture waste management through vermicomposting and other technology before training which improved later after training to 90.7%. Initially maximum respondents had low knowledge regarding agriculture waste management through vermicomposting and other technology that is 84% but they also showed a shift to higher side. Also same results were found that the Public willingness to pay and participate in domestic waste management in rural areas of china according to **Zhiyong han, et. al., (2019).**[11] However, 73.72% of overall knowledge of successful waste management and 90.61% of facility to waste collection.

Table 2 Significance test of knowledge improvement after training shows (Table -2) 't' value which is highly significant in difference of overall knowledge of respondents regarding agriculture waste management through vermicomposting and other technology. (t = 40.861, P = 0.000). Similar results were found by **Ramesh R., and Sivaram P., (2016)**[12] highly significant knowledge of solid waste management in rural areas.

Figure 2 Mean knowledge scores (Overall) there was a significant (p=0.000) gain in overall mean knowledge score {(8.43±5.274)} among study participants from pre-test {(8.43±5.274)) to post-test {(35.63±6.864)}. Same results were seen in study by

It means that training programme was more effective in bringing overall improvement in the overall knowledge of respondents regarding agriculture waste management through vermicomposting and other technology.

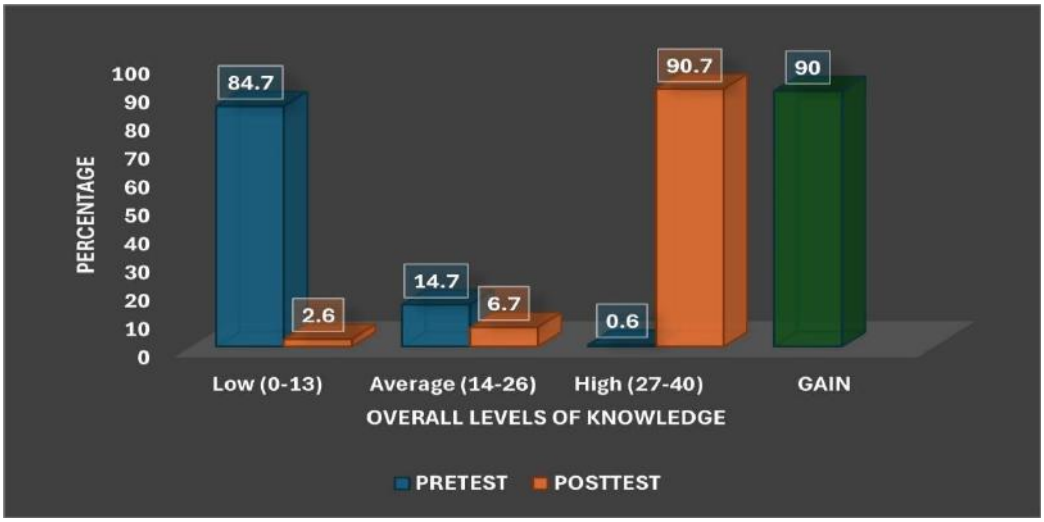

Figure 1 overall levels and gain in knowledge

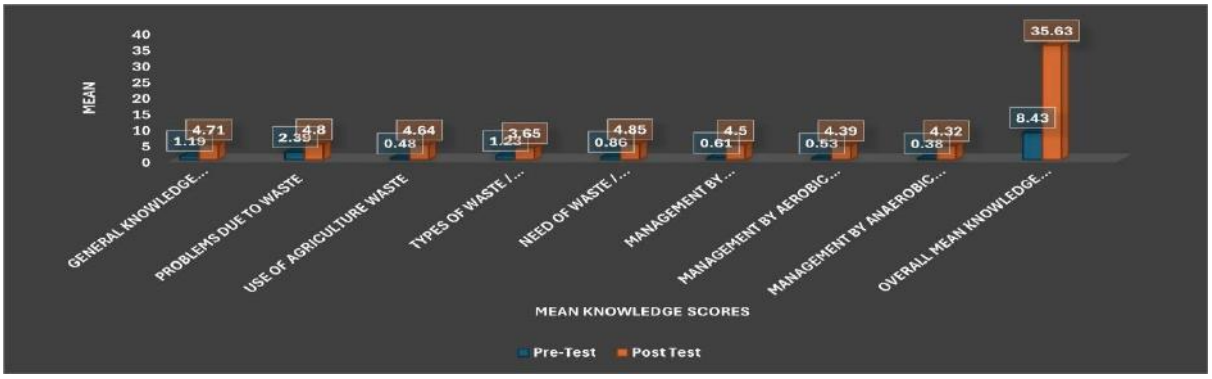

Figure 2 mean knowledge scores and mean overall knowledge scores

					n = 150	
LEVEL (Total Score = 40)	Pre-Test		Post-Test		Gain	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Low (0-13)	127	84.7	4	2.6		
Average (14-26)	22	14.7	10	6.7		
High (27-40)	1	0.6	136	90.7		
Total	**150**	**100**	**150**	**100**	135	90

Table 1: Overall levels of knowledge and gain in knowledge among study participants

OVERALL MEAN KNOWLEDGE SCORES	**n= 150**							
	Pre-Test		**Post Test**		**SE**	**t value**	**P value**	**HS/S/NS**
	Mean	**SD**	**Mean**	**SD**				
	8.43	5.274	35.63	6.864	0.666	40.861	**0.000**	**HS**

Table – 2 Overall mean knowledge scores among study participants

5. CONCLUSION:

In India, problems arising from increased generation of agricultural waste and its preparation of crops subsequent changes are foreseeable in the near future. Existing agriculture waste collection and disposal systems will not be able to meet the needs of sustainable agriculture waste management. Agricultural waste management is a major problem. Maximum amount of agriculture waste generated is organic so it is very important to teach management of agricultural organic waste. Vermicomposting technology is a best way to utilize the agricultural waste. It is an environmental friendly. The present study concludes that post training farmers had high knowledge regarding agricultural waste management through vermicomposting technology and other technology. There was a highly significant difference. Seem in the change of knowledge towards agricultural waste management through Vermicomposting-technology and other technology.

6. RECOMMENDATIONS:

Awareness Campaigns: Educate farmers about the importance of waste management through workshops, local meetings, and training programs. Highlight the economic and environmental benefits of proper waste handling.
Knowledge Sharing Platforms: Create platforms for sharing best practices in waste management, such as using agricultural residues for compost or bioenergy production.
Promote Composting: Encourage farmers to compost agricultural residues like crop waste, manure, and food scraps. Compost improves soil fertility, reduces the need for chemical fertilizers, and mitigates waste burning.
Vermiculture: Introduce vermiculture (worm farming) to convert organic waste into high-quality compost that can improve soil health and crop yields.

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