SPECIMEN FORMAT FOR THESES OF MONTH

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Abstract within 300 words:

This study investigates the impact of a training program on organic farming practices among rural households in selected areas, aiming to enhance health, reduce environmental pollution, and promote sustainable agricultural practices. The research methodology involved conducting household surveys, implementing training sessions, and evaluating the program's outcomes.

The household survey gathered demographic data and insights into current agricultural practices and organic waste management. Findings highlighted diverse farming practices and challenges such as pest attacks and diseases, exacerbated by the heavy use of chemical fertilizers and pesticides. Organic waste management practices also revealed significant gaps in disposal methods and environmental awareness among rural communities.

The training program focused on educating farmers about organic farming techniques, including composting and natural pest control methods. Evaluation of the training's impact showed notable improvements in farmers' knowledge and attitudes towards organic farming. Statistical analysis indicated significant changes in knowledge scores post-training, suggesting a substantial increase in understanding organic practices among participants.

The adoption of organic practices post-training was another key outcome assessed. Results demonstrated a marked increase in the adoption of composting, organic growth boosters, and natural pest and disease management methods. This adoption was supported by economic benefits derived from reduced input costs and improved crop yields, contributing to rural household prosperity.

Challenges identified during the study included logistical constraints in conducting widespread training and limitations in transportation for field visits. Despite these challenges, the training program succeeded in reaching a significant number of farmers and effecting meaningful changes in agricultural practices.

The findings underscore the importance of targeted training programs in promoting sustainable agriculture and improving rural livelihoods. The study contributes valuable insights into the efficacy of educational interventions in transitioning farmers towards organic farming practices. Recommendations include scaling up similar training initiatives, addressing logistical barriers, and enhancing community awareness on environmental stewardship and waste management.

i) Major objectives :

- identify the farming practices and organic waste management practices of
- marginalized farmers, smallholders, and large farmers.
- analysing organic waste management that contributes to the provision of organic agricultural inputs
- identify differences in agricultural practices before and after awareness on organic waste management between marginal farmers, small farmers, and large farmers.
- analyse the impact of organic waste management on the knowledge, attitudes, acceptance, and opinions of adoption before and after the awareness between marginal farmers, small farmers, and large farmers.
- identify the economic impact before and after the awareness programmes between marginal farmers, small farmers, and large farmers.

ii) Hypothesis:

Hypothesis 1: The average knowledge scores will not confirm any significant differences before and after the awareness programmes

Hypothesis 2: The average attitude scores will not prove any significant differences before and after the awareness programmes

Hypothesis 3 : Awareness programmes will significantly improve the acceptance to adopt organic waste management practices and organic farming.

iii) Methodology :

Therefore, there is a real need to develop technologies, processes, and practices that are organic so that agriculture becomes sustainable. The research design for the study on "Impact of Training on Organic Farming Practices among Selected Rural Households" consisted of the following aspects:

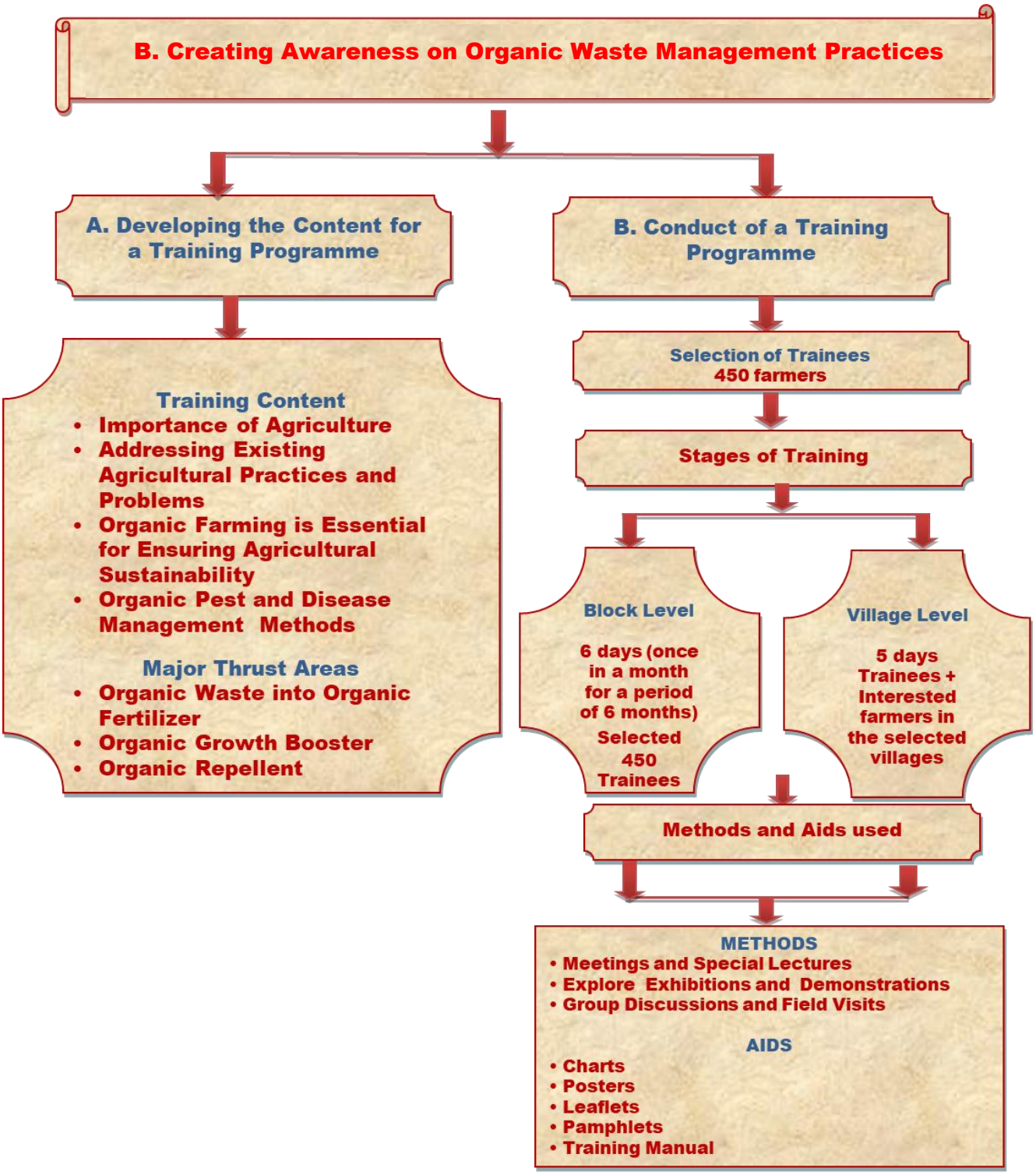
A. Household Survey

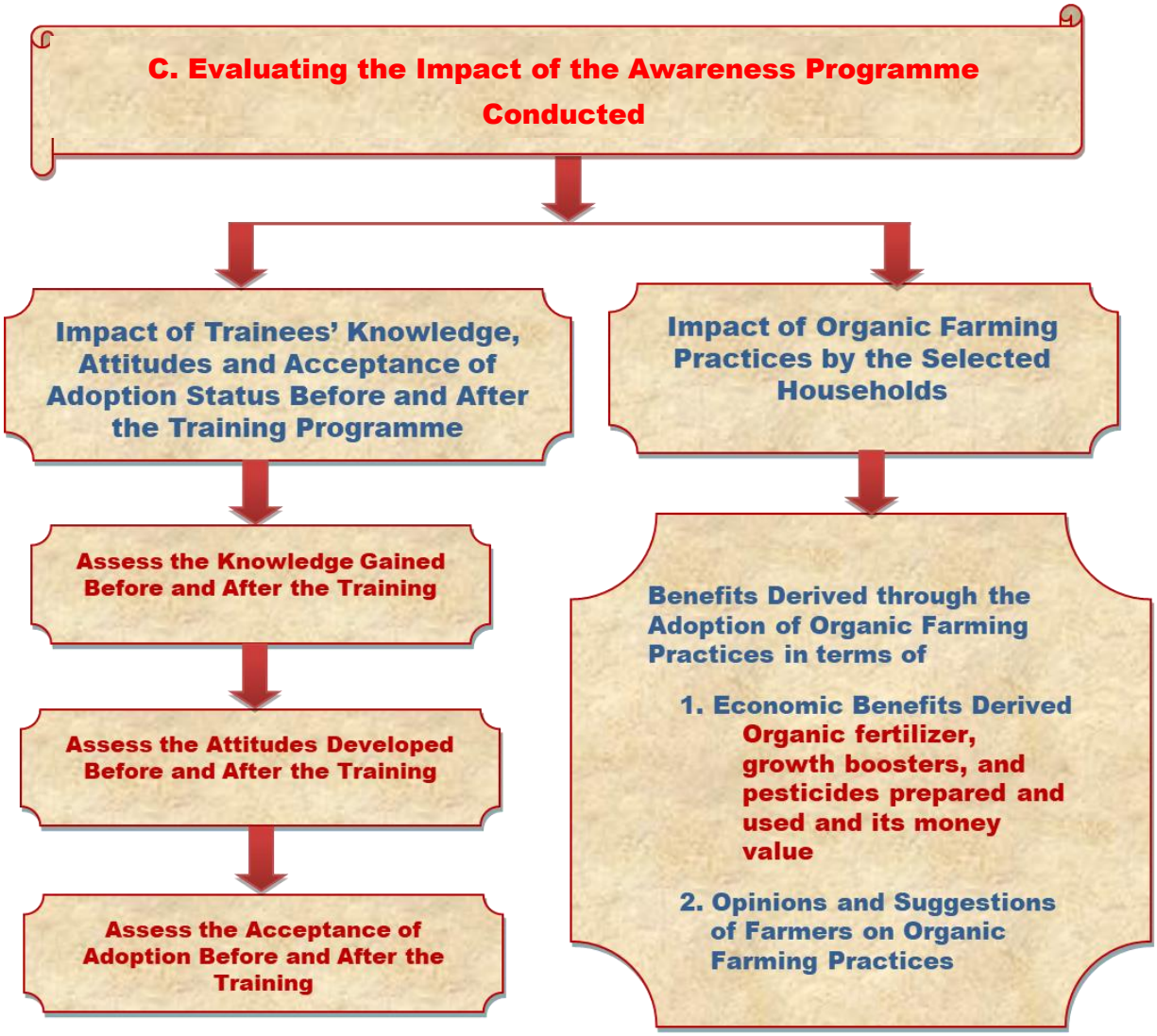
B. Creating Awareness on Organic Waste Management Practices

C. Evaluating the Impact of the Awareness Programme Conducted

The schematic representation of the research design is given in Figure I.

A. HOUSEHOLD SURVEY
Selection of Area
District – Erode
Block – Sathyamangalam
Villages – 15
1. Akkarainegamam
2. Alathucombai
3. Chikkarasampalayam
4. Dasaripalayam
5. Ikkarainegamam
6. Komarapalayam
7. Konamoolai
8. Malaiyadipudur
9. Pattavarthy Ayyampalyam
10. Pudupeerkadavu
11. Rajan Nagar
12. Rangasamudram
13. Sadumugai
14. Shenbagapudur
15. Varapalayam
Selection Samples -
Purposive Sampling
Total number of samples - 450
Marginal farmers - 150
Small farmers - 150
Large farmers -150
Selection of Method
Interview and
Observation methods
Selection of Research tool
Interview Schedule
Conducted of Household Survey
All the Selected 450 Households
Analysis and Interpretation of
Data Collected


B. Creating Awareness on Organic Waste Management Practices
A. Developing the Content for a Training Programme
B. Conduct of a Training Programme
Training Content
• Importance of Agriculture
• Addressing Existing Agricultural Practices and Problems
• Organic Farming is Essential for Ensuring Agricultural Sustainability
• Organic Pest and Disease Management Methods
Major Thrust Areas
• Organic Waste into Organic Fertilizer
• Organic Growth Booster
• Organic Repellent
Selection of Trainees 450 farmers
Stages of Training
Block Level
6 days (once in a month for a period of 6 months)
Selected 450 Trainees
Village Level
5 days Trainees + Interested farmers in the selected villages
Methods and Aids used
METHODS
• Meetings and Special Lectures
• Explore Exhibitions and Demonstrations
• Group Discussions and Field Visits
AIDS
• Charts
• Posters
• Leaflets
• Pamphlets
• Training Manual



iv) Findings:

Demographic Profile of the Selected Households

The study reveals a demographic profile of households categorized as marginal, small, and large, with a majority of individuals aged 40-50. Married individuals were more prevalent in these households, while unmarried individuals make up 32 percent, 49 percent, and 45 percent. Family structure favours joint families, with 66 percent, 51 percent , and 64 percent of households having nuclear families. Primary education was more prevalent in small households, with secondary and high secondary education levels varying. Agriculture was the primary occupation, with dairy-related occupations present in 79 percent of marginal, 69 percent of small, and 81 percent of large households.

2. Agricultural Farming Practices in the Selected Households

- Sathyamangalam Block, Erode District has red sandy, red loam, and laterite soil types. Water availability influences crop selection, with varied crop patterns and land distribution in wet, dry, and semi-arid areas.
- The study reveals that 31 percent of marginal farmers had wetlands, while 42 percent owned dry land and 29 percent owned semi-arid land. Cropping patterns vary among different groups, with cereal farming showing significant variability. Pulses, nuts, and oilseeds also show varying preferences. Large families were more likely to cultivate groundnuts, while small households preferred sunflowers. Coconut cultivation was stable across all groups. Vegetable and fruit production varies, with large families playing a significant role in bananas, onions, and sugarcane production, while small families dominate tomato and guava agriculture. The study suggests a downward trend in agricultural productivity.
- The study shows that 72 percent of large-scale farmers, 39 percent of small-scale farmers, and 21 percent of marginal farmers grow paddy twice annually, whereas all other farmers cultivate maize, black gram, green gram, and horse gram only once a year.
- The study reveals that urea, a nitrogenous fertilizer, was widely used in marginal, small, and large households for nitrogen supplementation, enhancing soil fertility. DAP, a phosphate fertilizer, was also widely used, with marginal households using it at a high rate. The use of these fertilizers demonstrates their importance in improving soil fertility and crop development, highlighting the common awareness of their role in current agricultural techniques.
- Fertilizers, essential for plant growth, provide essential nutrients and trace elements. Marginal farmers allocated approximately Rs. 3,370 per crop for chemical fertilizers, whereas small farmers spent around Rs. 5,680 and large farmers spent about Rs. 10,300 per crop. Marginal farmers spent less due to higher costs and less land.
- Pest attacks were the main problem faced by farmers during cultivation and storage, with 86 percent in marginal, 96 percent in small, and 85 percent in large households. A

labor shortage was a significant challenge, particularly for large households, with high demand for high-paying labor. The high cost of fertilizers and pesticides was a significant concern, and water shortages vary in intensity among different household categories.

- Over 50 percent of identified pests in the field were rice moths, whiteflies, and stem borer, while mealy bugs, green worms, white worms, and leaf folders affected 40 percent of marginal and large farmers.
- The study reveals that tomato plants were most affected in marginal households, with 56 percent of the population affected. Cercospora leaf spot was less widespread, while yellow mosaic disease affects 23 percent of tomato crops. Alternaria leaf spot was more prevalent in marginal households, and fruit rot was more pronounced in marginal households. Disease incidence in plants ranges from nine percent to 39 percent and in seeds from four to 18 percent.
- Copper sulphate, deltamethrin, glyphosate, and aluminum phosphate were common pesticides used in various household sizes. Copper sulphate was prevalent in marginal households, while deltamethrin was more prevalent in large households. Glyphosate was more prevalent in larger agricultural settings. Aluminum phosphate and other pesticides show consistent use.
- Marginal, small, and large farmers expended Rs. 9,900, Rs. 15,590, and Rs. 29,110 per crop, respectively, on chemical pesticides for pest control, yet they continue to face challenges in fully safeguarding their food crops.
- Headaches, eye irritation, rashes, itching, nausea, vomiting, allergies, wheezing, and diarrhea were the most common issues experienced by participants using inorganic fertilizers and pesticides.
- Organic agricultural practices vary across households, with different approaches to soil fertility preservation, organic fertilizer usage, and weed control. Fertilization methods were adopted by 12 percent of marginal, 16 percent of small, and eight percent of large households, while crop rotation, intercropping, tillage methods, and livestock manure were used by varying percentages.

Organic Waste Management Practices in the Selected Household

Households in selected blocks produced nearly half a kilogram of organic and inorganic waste daily, posing a threat to the ecosystem due to improper disposal, emphasizing the importance of proper waste management.

- Households were using plastic bins for organic waste collection due to their ease of availability, cost-effectiveness, ease of handling, and maintenance.
- The frequency of waste disposal depends on the amount produced, with one-third of households disposing of kitchen waste daily, 66 percent on alternative days, and 24 percent weekly.
- The data indicates that burning was the most prevalent method for disposing of household waste, with dumping in vacant lots being the second most common approach. Government dustbins or corporate waste collection was the third most common, followed by throwing waste on roadsides. The data underscores the need for responsible waste disposal practices and potential discrepancies in individual choices.
- The majority of respondents (97 percent) expressed concerns about pest-related issues, unhygienic surroundings, environmental pollution, unpleasant odours, and infrastructure challenges. They also mentioned health problems, such as street dog problems, drainage overflows, and the impact of polluted water supplies on the living environment.
- A significant 92 percent of households recycle, with eight percent composting. Newspapers were valuable in the recycling chain, with 54 percent used for wrapping and cleaning glass. 100 percent of bottles were recycled, and 18 percent were repurposed. Plastic covers are versatile, with a significant percentage being reused as bags or dustbins.
- The majority of respondents (85 percent) attribute improper waste disposal to laziness, lack of environmental awareness, and lack of knowledge of proper disposal methods. They also identified space and disposal provisions as constraints, mishandling of dustbins, and dissatisfaction with government waste collection practices as potential

areas for improvement. Educational initiatives and informative campaigns are crucial for promoting responsible waste management.

- The consensus unanimously acknowledges the importance of a clean environment in well-being, with 98 percent of farmers reporting a healthy living environment, 95 percent experiencing mental relaxation, and 93percent experiencing overall life satisfaction, highlighting the widespread value of cleanliness.

B. EVALUATE THE IMPACT OF THE TRAINING PROGRAMME CONDUCTED

Based on the household survey, a training content was formulated to impart a knowledge on organic farming practices for agriculture sustainability. In the first stage, a six-day training was given to 450 trainees who were willing to act as front-line farmers and delivered the messages learnt to their fellow members- both men and women.

In the second stange, training was given for a period of five days for the entire community of the selected villages. The training programme was included lectures, participatory discussions, demonstrations, meeting, exhibitions and field visits. The visual aids used during the training were charts, posters, pamphlets, booklets and training manual. The impact of the training programme was evaluated in terms of knowledge gained, attitudes developed and acceptance to adopt organic farming practices by the trainees. The percentage food grain losses and economic benefits through adoption of organic inputs such as organic fertilizers, boosters and pesticides is expressed by the selected households.

The major findings are summarized below.

1. Impact of Training on Organic Farming Practices on the Trainees

The study evaluated the impact of village-level training on organic farming practices, including the number of farmers benefitted, feedback on teaching methods, knowledge and attitude changes, and acceptance of organic farming practices.

- Male participation was higher than females and young individuals, with greater enthusiasm for knowledge acquisition and new concepts, despite limited youthful participation.

- Over 95 percent of farmers believe group discussion was the best method for communicating organic agricultural practices, as it encourages individual responsibility, clarification of doubts, and contribution to solutions.
- Field visits were highly useful for farmers, as they provided a tangible view of organic farming practices, demonstrating that a picture is equivalent to 1,000 words.
- The lecture method and demonstration were deemed satisfactory by 92 percent and 86 percent of farmers, as lectures provided background knowledge and demonstrations provided opportunities for participation and observation.
- The study identified notable variations in knowledge scores among marginal, small, and large farmers both before and after the training program, thereby disproving the hypothesis concerning knowledge scores.
- All farmers improved their knowledge score, with small farmers showing the highest increase at 38.36, followed by marginal farmers at 37.31. This is attributed to exposure to agricultural practices, large networks, and interest in learning new concepts.
- The data reveals that the trainees' attitude scores improved across all landholding categories—marginal, small, and large farmers—demonstrating the training program's positive effect on their views about organic farming. As a result, the hypothesis regarding the average attitude scores did not show significant differences before and after the training, leading to its rejection.
- Farmers were knowledgeable about the health advantages of organic farming but lacked awareness regarding its economic benefits, government support, organic certification bodies, and strong market demand for organic products. Increased awareness is essential for transitioning farmers to organic farming practices.
- The training program significantly improved farmers' attitudes towards organic farming, enhancing their understanding of the economic and environmental benefits. Participants were educated on government schemes, organic certification bodies, and market demand, leading to a significant increase in their overall attitude.
- The training program significantly improved the acceptance of organic farming practices among selected farmers, supporting the hypothesis that training will enhance their adoption.

- The study indicates that farmers are increasingly accepting the usage of organic agricultural practices as a productive alternative for preventing pests and diseases.
- Organic farming practices were generally accepted by all farmers, possibly due to resource availability, simple technology, cost-effectiveness, and health consciousness.

2. Impact of Training on Organic Farming Practices in the Selected Households

The current investigations assessed the embracing of organic farming practices by selected farm households for a year, monitoring it through visits and direct observation. Economic benefits were observed, including reduced expenditure on chemical fertilizers and pesticides, and increased food grain conservation. The study also analyzed the percentage of food grain losses, average economic benefits, farmers' opinions, and suggestions for better organic farming practices.

- The outcome shows improvements in vermicomposting adoption, with marginal and small farmers using silpaulin sheets and compost pits, and producing compost bags from discarded polythene bags, recognizing its importance in organic farming.
- Following education, farmers started using organic growth boosters, with neem cake being the preferred choice due to its availability, affordability, effectiveness, and efficiency. Marginal farmers used organic manure tea, while large farmers used Amuthakaraisal and Jeevamirtham
- Farmers used neem leaf powder, extract, cow dung extract spray, and cow urine seed treatment to control pests and diseases. After training, nearly half of selected households started organic farming practices, introducing new methods like light traps, yellow sticky traps, and neem kernel extract.
- The study analyzed the adoption of organic methods to prevent and control insects and pests during post-harvesting. The methods involved applying neem extract to gunny and polythene bags, coating pulses with red soil, and utilizing powders made from neem leaves, pungam leaves, and nochi leaves.
- Following the training program, all farmers adopted organic methods for managing insects and pests during post-harvest, which included treating gunny bags with neem extract, coating pulses with red soil, and applying neem leaf powder.

- Organic agricultural practices, including organic fertilizer, growth boosters, and pesticides, have significantly reduced food grain losses for all farmers, with large farmers showing the most reduction.
- Organic farming practices reduce farmers' expenditure on chemical fertilizers and pesticides, benefiting marginal and small farmers by 50 percent and large farmers by 75 percent. On average, these farmers save Rs. 6,570/-, Rs. 10,270/- and Rs. 24,700/- per crop. Organic fertilizers, growth boosters, and pesticides also reduce chemical use, providing health benefits.
- All marginal, small, and large farmers unanimously expressed and agreed that organic farming is cost-effective, convenient, and easy to access for all farmers, including marginal, small, and large ones. It is also chemical-free, tasty, and easy to eat. Most farmers use self-produced inputs like seeds, manures, leaf extracts, and natural plant protectors, and consider soil nutrient enhancement as an advantage.
- All marginal, small, and large farmers unanimously expressed and agreed that organic farming is cost-effective, convenient, and easy to access for all farmers, including marginal, small, and large ones. It is also chemical-free, tasty, and easy to eat. Most farmers use self-produced inputs like seeds, manures, leaf extracts, and natural plant protectors, and consider soil nutrient enhancement as an advantage.
- Regarding suggestions for better adoption of organic farming, 71 percent of farmers suggest conducting an awareness campaign to promote organic products for pest control. Seventy-one percent need support in marketing produce, technical guidance, and subsidies for raw materials and infrastructure. These suggestions should be implemented by government and extension agencies.

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