



SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE

(gudlavalleru village (521356), Andhra Pradesh)

Department of electronics and communication engineering

survey on

ADVANCEMENTS IN ORGANIC FARMING

Presented by :Batch C11

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Contents :-

- Abstract
- Introduction
- Details of work place visited
- Importance of Organic Farming
- Objectives
- Problems identified
- Analysis of problems
- Activities conducted/Observed
- Short and long term goals
- Recommendations
- Conclusion

Objectives:-

The main objectives of the **ADVANCEMENTS OF ORGANIC FARMING** are:

- To work out on the current problems of farmers.
- Reduced chemical usage.
- In organic farming promote more usage of natural pesticides.
- Keep and build soil structure and fertility.
- Control pests, diseases and weeds.
- Required better technologies for the organic cultivation.
- Avoid pollution.
- Healthier and safer food.
- Better animal welfare

Abstract:-

- Fertilizers are used to replace the nutrients that crops remove from the soil.
- The use of more fertilizers reduces soil utility.
- Organic fertilizers are naturally available mineral sources that contain a moderate amount of essential plant nutrients.
- Microbes which in turn improve soil structure and crop growth.
- Organic fertilizers are generally thought to be slow releasing fertilizers and they contain many trace elements. They are safer alternatives to chemical fertilizers.



Introduction:-

- Organic farming has been practiced in India from thousands of years.
- The great Indian civilization thrived on organic farming.
- India was one of the most prosperous countries in the world until the British invaded and ruled it.
- In traditional India, the entire industry of agriculture is practiced using organic techniques, where the fertilizers and pesticides were obtained from plant and animal products.
- Organic farming was the backbone of the Indian economy and cows were worshiped (as is still as sacred animals from God).



Details of the workplace visited:-

- Gudlavalleru is Mandal in Andhra Pradesh state and population in 2023 is 68,314.
- The major crop grown in the area is Paddy and it is cultivated in both the seasons.
- Sugarcane is the second largest crop grown during Kharif season.



Importance of organic farming:-

- **Healthier Ecosystems**

Organic farming promotes biodiversity and reduces pollution, creating a more balanced and sustainable environment.

- **Nutrient-Rich Food**

Organic crops are free from synthetic pesticides and genetically modified organisms, resulting in more nutritious and natural produce.

- **Sustainability & Climate Change**

Organic farming practices help mitigate climate change by reducing carbon emissions and conserving water and soil resources.



Problems Identified:-

- **Yield limitations:** Organic farming often yields lower crop production compared to conventional methods.
- **Land use efficiency:** Organic farming typically requires more land to produce the same amount of food as conventional farming.
- **Weed control challenges:** Organic farmers face difficulties in managing weeds without the use of synthetic herbicides.
- **Nutrient Management:** Organic fertilizers release nutrients more slowly than synthetic ones.
- **Limited Access to Organic Inputs:** Organic farmers may face challenges in obtaining organic seeds, fertilizers, and other inputs.

Activities Conducted/Observed:-

- upload Photo

We met a shopkeeper and shop named Raghuram Agro Enterprises. He has been working in this field for 7 years. He explained to us about fertilizers used in the organic farming of black gram.

.upload photo

We met four farmers in Gudlavalleru. They have been working in this field for 20 years. Two types of crops have been cultivated by this farmer, Rice and black gram and time period of rice is for 6 months and black gram is for 90 days.



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Interaction with the farmers



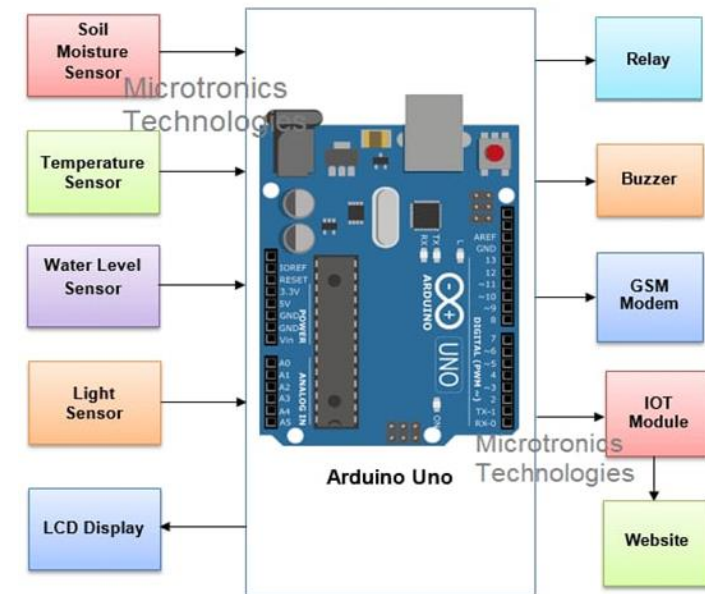
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Solutions/ improvements suggested or Recommendations:-

- Don't use more inorganic fertilizers fertilizers.
- Maintain soil PH value should be 5.5-7.5.
- Promote the use of compost to improve soil structure.
- Integrate trees and shrubs into farming systems.
- Planting and harvesting time in right time.
- Better water management.
- Government Support for farmers.
- Provide farmers with knowledge and training on organic practices

Technical idea:-

- **Moisture sensors:** It organic farmers by measuring soil moisture levels, aiding in precise irrigation for healthier crop naturally.
- **Crop Health Sensors (e.g., Spectrometers):** Assess the health of crops by analyzing the spectral characteristics of plants.
- **Soil Temperature Sensors :** Monitor soil temperature to understand plant growth patterns.
- **Light Sensors :** Measure sunlight intensity and duration, helping farmers optimize planting schedules, understand crop growth



Conclusion

- The ill-effects of the conventional farming system are felt in India in terms of the unsustainability of agricultural production, environmental degradation, health and sanitation problems, etc.
- Organic agriculture is gaining momentum as an alternative method to the modern system. Many countries have been able to convert 2-10 per cent of their cultivated areas into organic farming.
- The demand for organic products is growing fast (at the rate of 20 per cent per annum in the major developed countries).

A close-up photograph of several green rice stalks. The stalks are filled with unopened panicles, which appear as small, elongated, green seed pods. The background is a soft, out-of-focus green, suggesting a field of rice. The lighting is bright and even, highlighting the texture of the rice grains.

Thank You