## ORGANIC FARMING

### (Community Service Project Report)

***Submitted in accordance with the requirement for the degree of***

### BACHELOR OF TECHNOLOGY

**in**

### Electrical And Electronics Engineering

**Submitted By**

**NAME OF THE STUDENT: ROLL NO:**

### CH. PRUDHVI ARAVIND (21A91A0211)

***Under the esteemed guidance of***

**Mr.CH.B.AYYAPPA RAJU MTech**

**Associate Professor**



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

# ADITYA ENGINEERING COLLEGE (A)

**Approved by AICTE, Permanently Affiliated to JNTUK & Accredited by NAAC with ‘A’ Grade Recognized by UGC under the sections 2(f) and 12(B) of the UGC act 1956**

**Aditya Nagar, ADB Road - Surampalem – 533437, E.G .Dist., A.P.,**

**2022-2023**

# Student’s Declaration

I Am **CH. PRUDHVI ARAVIND,** a student of **B.Tech (EEE), (Electrical And Electronics Engineering)** Program, with Roll No.**21A91A0211** of the Department of **EEE**, **ADITYA ENGINEERING COLLEGE,** do hereby declare that I have completed the mandatory community service from **22-08-2022** to **13-10-2022** in **SURAMPALEM** under the Faculty Guideship of **Mr.CH.B.AYYAPPA RAJU***,* Department of ELECTRICAL AND ELECTRONICS ENGINEERING**,ADITYA ENGINEERING COLEEGE.**

### By

**CH. PRUDHVI ARAVIND (21A91A0211)**

### Faculty Guide Head of the Department

**Mr. CH.B.Ayyappa Raju MTech Dr. V. Srinivasa Rao Ph.D.**

**Associate Professor Professor**

# Certificate from Official of the Community

This is to certify that CH. PRUDHVI ARAVIND Reg.No 21A91A0211 of Aditya Engineering college underwent community service in surampalem from 22-08-2022 to 13-10-2022 the overall performance of the Community Service Volunteer during his community service is found to be ***satisfactory***



## Acknowledgements

The satisfaction that accompanies successful completion of any task would be incomplete without the mention of the people who made it possible and whose constant guidance and encouragement crown all the efforts with success. The acknowledgment transcends the reality of formality.

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I am also wish to convey our sincere thanks to **Dr. V. Srinivasa Rao** Professor, Head of the Department (EEE) who provided vital information which was necessary for the project.

I am thankful to **Dr. M. SREENIVAS REDDY**, Principal, **Aditya Engineering College** for providing appropriate environment required for this project.

I am also thankful to all staff members, lab technicians, librarians, parents, and friends who are directly and indirectly helped us in the completion of the project with flying colors.

I would like to express my gratitude and appreciation to all those who gave me the possibility to complete the project report.

I would like to acknowledge with much appreciation the crucial role of the staff, who gave me permission, suggestions and Encouragement in writing the report. I also sincerely thanks for the time spent for proofreading and correcting my mistakes.

Finally, words are not sufficient to express gratitude on my cherished family members for supporting me with their constant encouragement and moral strength.

**PROJECT MEMBER**

CH.PRUDHVI ARAVIND (21A91A0211)

### CHAPTER1: EXECUTIVE SUMMARY

* 1. **Description of community:**

On the basis of Community Service Project, we visited a village of PEDDAPURAM. Which is located in PEDDAPURAM Mandal of East Godavari District in Andhra Pradesh , India. The total geographical area of village is 261 hectares. Farming is the main activity in PEDDAPURAM whereas several other activities such as small- scale manufacturing, dairy, transport, etc. are carried out on a limited scale. People living in PEDDAPURAM depend on multiple skills. The PEDDAPURAM village have all the natural resources. PEDDAPURAM has a total population of 91663 peoples. There are about 35101 houses in PEDDAPURAM village. Out of these 28815 families depends on agriculture farming and 38015 people work in agriculture land as a Labor in PEDDAPURAM. agriculture is the main source livelihood .

### summary of activities done during project

The main aim of the project is to create and give a new vision to a farmerin farming on community. For this we conducted a survey among communityto give new vision and ideas about the farming and land management. After that we went to fields and given the new visons of farming, ideas that provide more helpful to them like modern technology , use of modern technology soil testing, usage of natural fertilizers like cow dung and how the Grama Rythu Barosa Kendhram and water conservation and prevention to plants and from plants. As we all explain in detail about fertilizers, usage of fertilizers, pros and cons of fertilizers. And some other details like pest control methods, and disease control methods for plants like using cow manure. As we all take the

initiative to make a note to the farmers about the usage of drip irrigation.

### Learning objectives & outcomes:

1. To know the various pest control and disease control methods and how it establishes sustainable health in future generations.
2. To know about the importance of Gram Rythu Barosa Kendhram and how it plays a key role in increasing knowledge to a ordinary farmers.
3. By the usage of drip irrigation, it is possible for field to grow equally and healthy. With usage of drip irrigation, plant may gets the water equally drop by drop. And create awareness about the organic farming.

### CHAPTER2: OVERVIEW OF THE COMMUNITY

The PEDDAPURAM village have all the available natural resources and the village consists of all typical living conditions and scenarios. Agriculture is the main source livelihood in PEDDAPURAM village. The people in the village follow the traditions, ethics and moral values. Humanity is the basically ethical value of the village. There are many holy places to visit.

PEDDAPURAM is a village in East Godavari district of Andhra Pradesh state in India. PEDDAPURAM population in 2022 is estimated to be 91663.According to 2011 census population is 83,990. And the total households residing are 1141.The Gram Panchayat is PEDDAPURAM. The Mandal headquarters is KAKINADA, and the distance from KAKINADA to PEDDAPURAM is 58 kilometers.

PEDDAPURAM Pin Code is 533437. The PEDDAPURAM village located in KAKINADA Mandal. 91663 people are living in this village, 24334 are males and 25143 are females as per 2011 census. Literacy rate of PEDDAPURAM is around 76.14% .

Total 215 cultivators are depended on agriculture farming out of 197 are cultivated by men and 18 are women. 805 people work in agriculture land as a labor in PEDDAPURAM, men are 591 and 214 are women. The population density in this area is 815/Sq.Km. The agriculture commodities are PADDY, VEGETABLES,MANGO,CASHEW NUTS,MAIZE.

The total area of PEDDAPURAM is 621 hectares(12.06 sq.km). The non agriculture area in this locality is 94.0 hectares. The waste land in this locality is 47 hectares .

the unirrigated agriculture is about 300 hectares.

Total Sub Primary Health Care units are 1(sub centers are staffed by health workers for outreach services).The total government primary schools available in this locality is 3.

The village PEDDAPURAM consists of all the resources and facilities which are required by the people. And the people in village follows Ethics make a society peaceful, harmonious and better place to live by guiding the behavior of people.

### CHAPTER3: COMMUNITY SERVICE

* 1. **:Activities conducted:**

### Awareness of farming :

In nutshell, the objective of organizing these block level awareness meetings was to educate and sensitize the public about the ill-fates of chemicals and pesticides being used in agriculture and the importance of locally available agriculture friendly fertilizers and manures, which can be used to increase the productivity of crops.

### Awareness on soil and nutrients management:

Proper soil management protects and enhances soil performance. It also reduces input costs, prevents pollution, and improves both crop quality and quatity. Before planting, the soil should be in the best physical condition for the crop, to encourage rapid and successful root growth. The common soil management practices are:

* + - **Undermining:** a poorly used tillage practice; mainly to solve standing water and soil porosity problem.
    - **Plowing:** classified into very shallow, and pre-sowing plowing, this practice is the base of soil tillage; it improves soil microbiological activity, destroys already emerged weeds and prevents losses of moisture from the soil by evaporation.
    - **Disking:** plays a huge role in preparing the soil for sowing; disking breaks up clods and surface crusts, thereby improving soil granulation and surface uniformity.
    - **Harrowing:** creates a crumbly layer for planting thus protecting the soil surface from rapid drying and enhancing plant nutrient availability.
    - **Rolling:** the final soil tillage practice to create a smooth and firm seedbed and press the seeds into the soil for faster germination.

### Awareness on seed selection:

The selection of seeds is used to improve the quality of yields. There are several diseases that are transmitted via the seeds. If the selected seeds are from the infected fields then the seed-borne diseases will cause severe problems in the agricultural process. Thus, always obtain seeds from healthy plants.

### Awareness on proper care and maintenance of crops:

To have a successful crop production, all segments need to be managed properly. Good soil preparation is half of the job, while the other half is good management of crop maintenance.

After soil preparation and planting are completed, there is still no break for the farmers. If they want to achieve a good and quality yield, they must constantly implement crop maintenance practices during the growing season.

Crop maintenance practices important for proper crop growth include:

* Weeding
* Soil cultivation
* Irrigation
* Mowing
* Insect pest and disease control
* Removal of standing water
* Pruning

### Awareness to controls pests and insects by organic farming:

As we all know, Organic farming is the safest way of farming, which protects

humans, plants, and the whole ecosystem. We people are slightly shifting towards Organic Farming. So, let us take a step in the world of organic farming by using

### Organic Pest and insect Management Techniques:

1. **Cultural Practices**: To protect the crop from pests, some traditional cultural practices can be done. It includes Crop Rotation, Intercropping, etc.
2. **Sticky Traps**: As clear by the name, these are color traps and a sticky substance is spread over them. These traps are used to catch the insect which is attracted to a particular color.
3. **Mechanical and Physical pest control**: This is one of the simplest methods of pest control. This includes cutting, mulching, mowing, tillage, and organic soil coverage and barriers. This method also includes simply hand-packing insects or hand-pulling weeds.
4. **Oil sprays**: Oil sprays suffocate the pests and insects. If sprayed directly on the pest and insects , it is more effective
5. **Bio**-**pesticides**: Bio-pesticides harm neither plants nor farmers. The most common bio-pesticide that Indian farmers use is Neem. Neem water can be sprayed on crops to protect them from pests and insects.

### : Skills acquired:

By doing this project we have gained much of knowledge about farming andwe also develop my skills like:

1. Interpersonal Communication: By interacting with farmers
2. Time management
3. Team work
4. Problem solving
5. Project management
6. Leadership ; 7. Increase self-confidence ; 8. Analytical Skills

**ACTIVITY LOG FOR THE FIRST WEEK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In-**  **Charge Signature** |
| **22-08-2022** | We went to SURAMPALEM Sachivalayam and tell them about our project details and take permission from the VRO | Time management, decision- making and work together effectively |  |
| **23-08-2022** | We have visited the community and identified the problems in the community. | Observe the surroundings and analyze the problems which have been identified |  |
| **24-08-2022** | Survey the people about the problems in the village | Active listening |  |
| **25-08-2022** | Interact with the farmers about crops and cultivating methods | We know the habitation of the community and ideology of the farmers |  |
| **26-08-2022** | we know the cultivating methods which are used by community in detailed. | From this we understand the motto behind the community |  |
| **27-08-2022** | we know the crop yield status of the community and know how much time is taken. | We know some strategies followed by the community |  |

**WEEKLY REPORT**

**WEEK–1 (From Dt 22-08-2022 to Dt 27-08-2022 )**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| We went to SURAMPALEM Sachivalayam tell them about our project details and take the |
| Permission from the VRO .After that we visited the community and identified the problems in |
| the village. After that we conduct survey to the people in the habitation about the problems in the |
| Village . After that we have visited the fields in the village and interacted with the farmers . |
| About what are crops and cultivating methods they used. |
| From this we collect the information which farms (or) crops like Paddy, Maize ,Chilly |
| are mostly cultivated in the village. The farmers are also cultivating Bitter guard, Brinjal, Lady  finger |
| Black gram dal crop etc..., we also collect the information about what are the pesticides and  Chemicals. |
| They are used and we noted the details of chemicals and fertilizers. |
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**ACTIVITY LOG FOR THE SECOND WEEK**

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| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In- Charge Signature** |
| **29-08-2022** | We have conducted awareness program on importance of organic farming | Leadership qualities |  |
| **30-08-2022** | Create awareness among the community by explaining the advantages of organic farming | Team work for creating awareness on organic farming |  |
| **31-08-2022** | Explain about the quality of product and how it effect our health. | We know that quality is more important than quantity |  |
| **01-09-2022** | Create awareness on problems which are faced by future generations by using of inorganic farming. | Assertiveness, sharing the views among the community |  |
| **02-09-2022** | How organic farming establishes sustainable health | Effective speaking |  |
| **03-09-2022** | Main aim of the project is to encourage the people to follow the organic farming methods | Supportiveness of the team |  |

**WEEKLY REPORT**

**WEEK–2(From Dt 29-08-2022.to Dt 03-09-2022)**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| In second week, we have conducted awareness on importance of farming |
| We done awareness about farming to every one in the village then we explained the |
| Advantages and use of farming and how farming is playing a key role to get |
| Quality of food and what are side effects and health issue are faced by using chemicals and |
| Inorganic farming. We also explained the farmers that farming and food contributes to |
| better health through reduced pesticide exposure for all increased nutritional quality of the food. |
| We also make awareness among the community about the negative effects of chemicals on health |
| Like thyroid condition, various kinds of human cancer, Diabetes etc.. |
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**ACTIVITY LOG FOR THE THIRD WEEK**

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| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In- Charge**  **Signature** |
| **04-09-2022** | Explained about which soil is better for organic farming and how it maintained according to crop | Social skills |  |
| **05-09-2022** | Organic methods for increasing soil fertility like plowing under mining | Learned about soil fertility techniques |  |
| **06-09-2022** | Soil fertility and nutrient management of organic farming | Social skills |  |
| **07-09-2022** | Selection of seeds for organic farming and how it play a key role in farming | Communication skills |  |
| **08-09-2022** | Seed purification techniques and why it needs purification | Time management |  |
| **09-09-2022** | Explain the Bhijamritham and Jeevamritham. | Learned About Bhijamritham and Jeevamritham. |  |

**WEEKLY REPORT**

**WEEK–3 (From Dt 04-09-2022 to Dt 09-09-2022)**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| This week, we conducted awareness on soil and nutrients managements. We explained |
| that the soil should be well maintained before seeding, which results in rapid and successful root |
| growth, improves crop quality then explained soil management practices like undermining-mainly to |
| Solve standing water, plowing-destroys already emerged weeds, harrowing-used for enhancing |
| Plant nutrient availability. |
| After that we explained that seed selection process place a major role to improve the quality |
| Of yields .then created awareness by proper selecting of seeds which are viable and disease free. |
| Putting seed in water is the best method to separate healthy seeds from infected seeds. Then |
| Explained some seed purification techniques like priming, hardening, film coating etc., |
| Then explained Bhijamritham and Jeevamritham which are prepared by using available materials in |
| Nature like cow dung, cow urine etc., then aware the farmers by using this natural thing, the soil |
| Get protected and produces healthy vegetables |
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**ACTIVITY LOG FOR THE FORTH WEEK**

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| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In- Charge Signature** |
| **26-09-2022** | The crop required which type of micro and macro nutrients and importance of Jeevamritham | Communication skills |  |
| **27-09-2022** | Explain the procedure and importance of Amruthajalam | Acquired professional speaking skills |  |
| **28-09-2022** | We also created awareness on Acchadana, which reduce water consumption | Social skills |  |
| **29-09-2022** | Explain the preparation of Bhijamritham and Ghara jeevamrithm | Increase self confidence |  |
| **30-09-2022** | Explain the uses of bhijamrithm and Ghara jeevamrithm. | Learned how to use Bhijamrithm on fields |  |
| **01-10-2022** | Detail explanation about the Bhijamritham and Ghana jeevamritham | Communication skills |  |

**WEEKLY REPORT**

**WEEK–4 (From Dt 26-09-2022 to Dt 01-10-2022 )**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| In this week, we explain the farmers about preparation procedures, importance and usage methods |
| and some methods of organic manure then we explained about soil fertility method like Jeevamrithm |
| and Ghana Jeevamritham. Jeevamritham is prepared by mixing 10kg local cow dung, cow urine, |
| and give the crop by mixing with water. |
| Ghana jeevamritham is dry state of jeevamritham.it increase resistance against pests and |
| diseases. Mainly bore Jeevamrithm and Ghana Jeevamritham bore used to boost the plant and its |
| growth and gives a good yield. We also explained and aware the people how to get good yields by |
| using natural resources. |
| From this week, we learned how to get good yields and quality of food by using natural |
| Resources . |
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**ACTIVITY LOG FOR THE FIFTH WEEK**

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| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In- Charge Signature** |
| 02-10-2022 | Awareness on weed management by cover crops , inter cropping and sanitation | Lear about inter croping |  |
| **03-10-2022** | Explain the solution for weed by pouring salt water (or) vinegar directly on weeds roots | Learn about hoe to control weeds |  |
| **04-10-2022** | Explain the pest control methods like chemical pest control, electronical pest control. | Learned about different pest control techniques |  |
| **05-10-2022** | Explain the inset control by implementing sticky traps. | Learned the usage of pest control methods |  |
| **06-10-2022** | Tell them about usage of pest control | Pest control solutions like crop rotation, irrigation. |  |
| **07-10-2022** | Awareness on pest control methods, how it is used and how it is useful | Learned what pest control is major problem |  |

**WEEKLY REPORT**

**WEEK–5 (From Dt 02-10-2022 to Dt 07-10-2022 )**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| In this week, we had conducted awareness on weed management. Weeds can be considered a |
| significant problem in agriculture which takes water and nutrients in the soil. So, crops growth will |
| be effected. After that we explained weed management techniques like cover crops, Inter cropping |
| and Sanitation. And suggested some solutions for weeds by pouring salt water (091) vinegar, lime |
| juice directly on weed roots. |
| Then we explained about pest control methods like pest control, crop rotation which uses Cow  dung |
| (2kg), cow urine (10lt) and neem leaves (10kg) mixed with 200 lt water and sprayed on fields in 20 |
| days, 45 days which kills insects and their eggs. And also suggested sticky traps methods which is a |
| sticky substance placed on. plants and trapped the insects. |
| Then explained the preparation of agnastram which uses cow urine (20 lt), Mischi paste (500 |
| tobacco powder (1kg), Garlic paste (500 g) mixed with neem leaves and used by mixing 2 lt of |
| agrastram with 100 lt of water. By completion of this week we gained skills like Self-confidence, |
| presentation skills and communication skills |
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**ACTIVITY LOG FOR THE SIXTH WEEK**

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| **Date** | **Brief description of the**  **daily activity** | **Learning Outcome** | **Person In- Charge Signature** |
| **08-10-2022** | The community said that farming is highly invested then we said the schemes provided by government | Communication skills |  |
| **09-10-2022** | Awareness on natural ingredients and how it is important to us | Learned organic farming acquires natural ingredients |  |
| **10-10-2022** | How to increase the quality and quantity Of the yield by using organic methods | Learn about how to increase Crops growth |  |
| **11-10-2022** | In this way, we explain the importance, advantages and role of farming | Learn that no organic, no life |  |
| **12-10-2022** | We create awareness among the people and motivate to use the farming | Teamwork |  |
| **13-10-2022** | Finally, doing this project. We acquire the knowledge and importance of farming | From this project we enhance the skills like confidence, punctuality, co- ordination |  |

**WEEKLY REPORT**

**WEEK–6 (From Dt 08-10-2022to Dt 13-10-2022)**

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| **Objective of the Activity Done:** |
| **Detailed Report:** |
| In this week, we explained about the natural ingredients and how it is important for the soil and the |
| environment. Then also explained how organic farming seduces investment. Due to usage of natural |
| resources. and simple ingredients the organic farming includes low investment, and it also increase  . |
| efficiency of the yield. We also explained the importance of farming for our future generation. In |
| this way, we create awareness about farming importance and its methods. |
| After that the completion of the project we took the them to among |
| Evolution of Person-in-charge signature and completion certificate. Finally, from this project I acquire the |
| skills like professional skills with officials of community and social skills |
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**CHAPTER5: OUTCOMES DESCRIPTION**

The main goal of agriculture is not raising the quantity, but improving the quality of food products. For this we have conducted a survey on vision for farmers and asked some questions which are related to farming done by the community.

### What do you add to the soil before you plant a crop?

Add nitrogen rich manures which increases the humus content and water holding capacity of the soil. Eg: cow dung manure

### Do you use herbicides? If not, how do you control weeds?

Following are several options to kill weeds without chemicals: Hand-pulling, hand- digging, shallow cultivation.

### Do you spray your crops for pests and diseases? If not, how do you control them?

By using natural pest control methods, we can control the pest and Diseases. Eg: spraying of neem oil

### Do you add synthetic petrochemical-based fertilisers to feed your crops? If not, what do you feed them?

Synthetic fertilizers contribute very little to the ecosystem or structure of the soil. May actually decrease soil fertility due to chemical nitrogen stimulating excessive

Organic plant growth regulators: Ghana jivamritham,dhrava jivamritham

### Have you tested your soil for heavy metals and pollutants?

Heavy metals are common pollutants in the soil environment. This type of contamination is biologically toxic ,widely distributed, and persists long-term in soil environment.

1. After collecting of all the information which is given by the farmers. We understood the habitation of the community and ideology of the farmers. After that we give some suggestions about organic farming and tell the importance of organic farming in Conserving environment and natural resources, re- establishing ecological balance, encouraging sustainable agriculture, improving soil fertility, conserving flora and fauna,increasing genetic diversity, and putting an end to chemical pollution and toxic residues and explained the farming methods in detail. by doing all these activities we also acquire more knowledge about farming and understand the when we encourage the farming then we build a nutritionally, ecologically, and economicallyhealthy nation in near feature.

**Problems identified in the community:**

When we have conducting survey among the community. We have identified some problems in the community like

* + Inorganic farming
  + Over use of chemical fertilizers
  + Water

These are the problems identified in the village which can be solved in short term as well as long term period of time.

# Inorganic farming:

When we have done the survey we observing most of farmers uses inorganic farming for cultivating the crops. and they also said that organic farming is highly invested and doesn’t give proper yields so that they uses inorganic farming. And some of farmers said that lack of proper guidance they follow inorganic farming.

### Over use of chemical fertilizers:

To grow , plants require nitrogen compounds from the soil , which can be produced naturally or be provided by fertilizers. However , applying excessive amounts of fertilizer leads to the release of harmful greenhouse gases into the atmosphere and the eutrophication of waterways. The farmers uses chemical fertilizers like urea, nitrogen, potassium, phosphorous etc.. the overuse of chemical fertilizers bringing hazards to human health.

# Short term and long term action plans:

## Short term action plans:

1. Credit bailout to distress farms.
2. Fixing of minimum support prices for produces facing glut.
3. Establishing shelter homes for cattle of farmers
4. Use of water efficient technology in irrigation such as Drip irrigation and Sprinkler irrigation
5. Use of HYV seeds to increase productivity
6. Use of biotechnology in GM crops such as BT-cotton and BT-brinjal .
7. Soil health card can be used as deterministic factor in fertilizer decision. It will improve the quality of soil
8. Avoid soil erosion through various methods like - contour binding and terracing which will help in agriculture failure

# Long term action plans:

* 1. Consolidation of farm holdings for sustainable land size.
  2. Installing efficient irrigation system in farms for reducing water use. Introduction of genetically modified crops for higher yields.

Canvassing for diversification of crops.

* 1. " Need to modernize agriculture " -- By introducing farm techniques which guarantee a definite success, an increase in youth participation on agricultural fields is economically possible. This can be attained by implementing new technologies. For instance, " PPP MODEL " may help.
  2. The claim should be settled easily under the supervision of the district collectors. e.g., Index based insurance, on the other hand, responds to defined parameter.
  3. Need for national weather risk management system/disease alert system " -- When there is a danger of extreme weather, would go a long way in reducing losses in agriculture.

E.g. . Water Watch Cooperative, a Netherlands based organization. 6.Need for better water management

7.Expansion of Credit Facilities

### AWARENESS PROGRAM W.R.T. PROBLEMS AND OUTCOMES

The main activity done by our batch members is to aware the community on organic farming.

Based on the survey we conducted, some problems are identified like soil pollution, water pollution, air pollution and it's also effecting human health.

Firstly, we conducted awareness camps on disadvantages and harmful effects of chemical fertilizers like urea, nitrogen, potassium, phosphorus etc. .. and by explaining them about the over-use of chemical fertilizers can lead to soil acidification because of a decrease in organic matter in the soil. Nitrogen applied to fields in large amounts over time damages topsoil, resulting in reduced crop yields, hardened the soil, decreased fertility, strengthened pesticides, polluted air and water, and released greenhouse gases, thereby bringing hazards to human health and environment as well.

And we suggest them about avoid chemical fertilizers. Also advised them to not Use of excessive quantity of synthetic fertilizers, which are harmful for human health. High levels of nitrates and nitrites in chemical fertilizer may cause some disease like Cancer, hemoglobin disorders, Alzheimer’s disease, and diabetes mellitus.

Finally, we told that if we can't stop using this harmful chemicals there is no healthy food for upcoming generations, they easily get effected due to weak immune system by eating that chemical based vegetables.

From this project we acquired the following outcomes,

We formed as a group and started to communicate about the project and the ideas helps us in improving the group discussions and communication as a part

of the technical skills and the way we interacted with the children helps in interacting with the people and also the way manages thesituations helps us to have the good management skills

# Report of the mini-project work done in the related subject w.r.t the

**habitation/village.**

**ABSTRACT**

In the ancient time, agriculture was practiced without the use of artificial chemicals. The use of artificial chemicals such as fertilizers and pesticides came into picture during the mid-19th century.

This kind of agricultural practice was causing harm to the environment. With the rapid change in farming practices, organic farming came into existence in the 20th century.

It made use of environment friendly practices by avoiding the use of artificial chemicals and making use of organic matter to raise crops.

Organic food is beneficial to human health and the practice of organic farming keeps the environment clean. Organic farming is an alternative to regular farming. It makes use of compost, manure, green manure, bone meal rather than using fertilizers and pesticides . This system makes use of organic wastes and crops are raised in such a manner that it keeps the soil healthy and alive. Microbes are used as bio-fertilizers to increase production without polluting the environment Organic farming promotes eco-friendly agricultural practices without making use of synthetic inputs and majorly relies upon the use of organic wastes to raise crops

**OBJECTIVES**

* Conserving environment and natural resources, re-establishing ecological balance, encouraging sustainable agriculture, improving soil fertility, conserving flora and fauna, increasing genetic diversity, and putting an end to chemical pollution and toxic residues.
* In addition to banning the use of every kind of synthetic and chemical pesticides and fertilizers, organic agriculture encourages practicing organic and green fertilization, crop rotation, soil conservation, improving plants resistance to pests and diseases, benefiting from parasites and predators.

The main goal of organic agriculture is not raising the quantity.

improving the quality of food products

* Now, by practicing organic agriculture, it is possible to produce agricultural goods without polluting soil, water resources, and air while protecting environment, plant, animal, and human health.
* At the beginning of organic farming procedures, one should plan what kind and how much of organic production will be realized before sending the application form to a control and certification agent (ORSER).

# ACTIVITIES CONDUCTED

|  |  |  |
| --- | --- | --- |
| S.No | Week | Activity |
| 1 | Week 1 | Discussed the project with team members and decided the community called gurrappalem and collect the  information about farming. |
| 2 | Week 2 | Created awareness among organic  farming |
| 3 | Week 3 | Explained about organic methods  For increasing of soil fertility. And Selection of seeds for organic farming |
| 4 | Week 4 | Explained about plant growth  Regulators like Amrutha jalam, Ghana jivamritham. |
| 5 | Week 5 | Explained about weed management  Techniques and pest control Organic methods. |

|  |  |  |
| --- | --- | --- |
| 6 | Week6 | Explained about how inorganic  farming is hazard to humans and environment. |

**Community awareness programms conducted**

## We created awareness among the people in the village that to cultivate the crop by organic.

farming schemes provided by the government

* + Surampalem,Andhra pradesh
  + Mission organic value chain development for North eastern region .
  + Capital investment subsidy scheme under soil health Management scheme.
  + National mission on oilseeds and oil palm
  + National food security mission

These schemes increasing organic farming by providing subsidies to farmers

### Selection of seeds for organic farming :

To achieve better crop yield in the cultivation ,using quality seeds is an important factor. So , proper care has to be taken in choosing seeds of the best quality. Much of the success in raising healthy seedlings based on the quality of seed. Seed panned for sowing must satisfy the following requirements.

* The seed must be clean and free from obvious mixtures of other seeds.
* It must be mature, well developed, and plump in size.
* The seed must be free from obvious signs of age or bad storage.
* It must have a high germinating capacity

### Organic methods for seed treatment:

**Bhijamritham** :

The Bhijamrutha is mainly used for seed treatment. Seed treatment is very important for seed germination, because during the germination many diseases may attack in the germination stage. The seeds soaked with Beejamrutha are controlling the seed's disease, which increases seed germination.

### Ingredients required for Beejamrutha:

For 100 kg seed use water 20 liters

Use cow urine 250 ml for one liter of water Use jaggery 2kg

Use any pulses flour

Use soil-like dikes or clay bundles, which do not have any stone

### Preparation method Beejamrutha:

With the help of plastic or cement tank-mix all the ingredients in it. And Make sure that there is no lump in cow’s dung. And with the help of a wooden stick mixture the ingredients. The mixture should be rotated to the clockwise direction. so that

positive energy spreads in the mixture.

And the mixture tank is Cover with a jute sack or poly net. And the tank should be kept in the shadow place, And be ensured that the tank is not directly exposed to the sunlight and rainwater.

After one day the Beejamrutha is ready and it can be used for seed treatment.

### Preparation time:

12-24 hours

### Storage:

Use it to disinfect for the seeds. However, it can be kept for 7 days.

### Usage of Beejamrutha:

20 liters of water can be used to prepare the seed production for the 100 kg seed.

And seed must Spread on the plastic sheet on the ground. And Sprinkle the Beejamrutha on the surface of the seeds. Mix the seeds properly and make sure that all seeds are spread with Beejamrutha.

And seeds like pulses should be mix carefully, and therefore they should not rub them hardly. Use your hands properly to mix seeds

### Soil fertility for farming :

In farming systems, soil fertility means more than just providing plants with macro- and micronutrients. Effective fertility management considers plants, soil organic matter (SOM), and soil biology. Ideally, farming systems are designed to enhance soil fertility

to achieve multiple goals. Important goals include: the protection and, if possible, improvement of soil physical condition so that the soil supports healthy plants and soil- dwelling organisms and has the ability to resist and recover from stresses like flooding or aggressive tillage; the maintenance of soil buffering capacity to minimize environmental degradation caused by soil loss or soils' failure to filter nutrients or degrade harmful compounds; and increased water and nutrient use efficiency by increasing biological fixation and retention of needed nutrients while reducing their loss from the system to the extent possible. farming systems are designed with the aim of maintaining nutrients in organic reservoirs or in bioavailable mineral forms instead of just supplying nutrients through frequent fertilizer additions. This is achieved by cycling nutrients through organic reservoirs. Soil fertility is improved by organic matter management and not through input substitution.

### Jeevamritham :

Jeevamritham,It has no side effects on the soil and the produce.

It boosts the plant and its growth, gives a good yield.

Gives resistance against pests and diseases.

Increases beneficial organism activity and promotes organic carbon in the soil. Jeevamrutha is prepared by mixing 10 kg local cow dung with 10 liters cow urine, add 2 kg local jaggery, 2 kg pulse flour and handful of garden soil and the volume made up to 200 liters. Keep the drum in shade covering with wet gunny bag and stir the mixture clockwise thrice a day and incubate.

# Plant growth regulators :

### Ghana jeevamritha:

The dry state of jeevamritha

Requirements for semi solid jeevamritham- 100kg desi cow dung, 5 litre urine, 1kg jaggery, 1kg pulse, one handful of soil from the same land. Preparation -Mix all of them with a small amount of water. Make the small balls out of the mixture.

Keep these balls in full sunlight to dry them.

### Usage method:

It can be used in dry state or powder

It is a rich source of Nitrogen and valuable micro-organisms which naturally enhances soil fertility. How to use: It has to be applied on wet soil. It must be scattered evenly on the soil.

### Panchagavya :

Panchagavya consists of nine products viz. cow dung, cow urine, milk, curd, jaggery, ghee, banana, Tender coconut and water. When suitably mixed and used, these have miraculous effects. After 3 days mix cow urine and water and keep it for 15 days with regular mixing both in morning and evening hours.

# Pest and disease control methods :

The best principles used for pest control in the production of organic farming :

* Use varieties resistant to insects, diseases, and other pests and suitable to the particular rice-growing area.
* Apply suitable cultural practices, such as land preparation, seed rate, planting date of the season and spacing, crop rotation is must and should to cut life cycle of diseases, insects and other pests, the maintenance of soil fertility and the balance of nutrient along with water management for better growth of healthy rice plants. Such cultural practices thus decrease the damage caused by insects, diseases, and other pests.

### Neemastra :

Because of the presence of neem extract, this organic pesticide is highly effective in controlling wide range of pests. However, this pesticide is mainly effective for sucker pests

### Preparation:

**Neemastra**: Crush 5 kg neem leaves in water, add 5 lit cow urine and 2 kg cow dung, ferment for 24 hours with intermittent stirring, filter squeeze the extract and dilute to 100 lit, use as foliar spray over one acre, useful against sucking pests and mealy bugs.

### Usage

You can either use this organic pesticide periodically once in every month in the form of foliar spray. Or whenever your plant or crop gets infested with pest the spray this solution during early mornings or evenings**.**

### Brahmastra:

Brahmastra is a natural pesticide against large and small insects. such as borer, pod

borer, and fruit borer. This Brahmastra liquid natural pesticide mixture can be made by farmers easily at home.

### Preparation:

Crush 3 kg neem leaves in 10 lit cow urine.

Crush 2 kg custard apple leaf, 2 kg papaya leaf, 2 kg pomegranate leaves, 2 kg guava leaves in water.

Mix the two and boil 5 times at some interval till it become half

Keep for 24 hrs., then filter squeeze the extract. This can be stored in bottles for 6 months.

Useful against sucking pests, pod/fruit borers. Dilute 2-2.5 lit of this extract to 100 lit for 1 acre.

### Usage:

For a 1-acre agriculture land farm, use 6 to 8 liters of Brahmastra mixture with 200 liters of water and sprinkle on the plants. and with the help of foliar -spray sprinkle it to all the plants. and Sprinkle the Brahmastra on infected plants use 3% Brahmastra with water. and If the infection is high use a 4% mixture.

In this way we explain the importance of organic farming and we encourage the farmers to use organic farming for cultivation.

**CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS OF THE MINI PROJECT**

### Conclusion :

Organic farming yields more nutritious and safe food. The popularity of organic food is growing dramatically as consumer seeks the organic foods that are thought to be healthier and safer. Thus, organic food perhaps ensures food safety from farm to plate. The organic farming process is more eco-friendly than conventional farming. Organic farming keeps soil healthy and maintains environment integrity thereby, promoting the health of consumers. Moreover, the organic produce market is now the fastest growing market all over the world including India.

Organic agriculture promotes the health of consumers of a nation, the ecological health of a nation, and the economic growth of a nation by income generation holistically. India, at present, is the world’s largest organic producers and with the vision, we can conclude that encouraging organic farming in india can build a nutritionally, ecologically, and economically healthy nation in near feature.

### Future implementation :

Awareness camps can be held about organic farming and explained in detailed with the advantages of organic farming. And how it’s benefitable in future by conducting awareness camps and making videos about organic farming. And also explain the consequences of inorganic farming and how it harmful to environment and economical health.so finally our project encourages the organic farming that maintains and improves the natural balance of the environment. To put it another way, this farming technique is based on the usage of organic fertilizers. Traditional

other practices that have a significant negative impact on the environment. As a result, this method of farming is used to create toxin-free food for consumers while also maintaining soil fertility and contributing to ecological balance. This form of farming promotes environmentally responsible, long-term economic development.

Sustainable development is defined as the mutually beneficial interaction of legitimate corporate and economic interests, government and polity interests, and civil society and culture interests. These cultural relationships, on the other hand, do not occur in a vacuum. On a physical and material level, society is constrained by the carrying capacity of various ecosystems, landscape ecology, and, in the end, the Earth’s biosphere or nature. Individuals’ caring capacity contextualizes society’s three-fold functional distinction on a psychological and spiritual level. As a result, sustainable development is a multifaceted notion with at least four components. In general, there are four key pillars to sustainable development: social, economic, environmental, and institutional.

#### Student Self-Evaluation for the Community Service Project

**Please rate your performance in the following areas:**

**Rating Scale: Letter grade of CGPA calculation to be provided**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 Oral communication | 1 | 2 | 3 | 4 | 5 |
| 2 Written communication | 1 | 2 | 3 | 4 | 5 |
| 3 Proactiveness | 1 | 2 | 3 | 4 | 5 |
| 4 Interaction ability with community | 1 | 2 | 3 | 4 | 5 |
| 5 Positive Attitude | 1 | 2 | 3 | 4 | 5 |
| 6 Self-confidence | 1 | 2 | 3 | 4 | 5 |
| 7 Ability to learn | 1 | 2 | 3 | 4 | 5 |
| 8 Work Plan and organization | 1 | 2 | 3 | 4 | 5 |
| 9 Professionalism | 1 | 2 | 3 | 4 | 5 |
| 10 Creativity | 1 | 2 | 3 | 4 | 5 |
| 11 Quality of work done | 1 | 2 | 3 | 4 | 5 |
| 12 Time Management | 1 | 2 | 3 | 4 | 5 |
| 13 Understanding the Community | 1 | 2 | 3 | 4 | 5 |
| 14 Achievement of Desired Outcomes | 1 | 2 | 3 | 4 | 5 |
| **15 OVERALL PERFORMANCE** | **1** | **2** | **3** | **4** | **5** |

**Date: Signature of the Student**

#### Evaluation by the Person in-charge in the Community/Habitation

Please rate the student’s performance in the following areas:

Please note that your evaluation shall be done in dependent of the Student’s self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 Oral communication | 1 | 2 | 3 | 4 | 5 |
| 2 Written communication | 1 | 2 | 3 | 4 | 5 |
| 3 Proactiveness | 1 | 2 | 3 | 4 | 5 |
| 4 Interaction ability with community | 1 | 2 | 3 | 4 | 5 |
| 5 Positive Attitude | 1 | 2 | 3 | 4 | 5 |
| 6 Self-confidence | 1 | 2 | 3 | 4 | 5 |
| 7 Ability to learn | 1 | 2 | 3 | 4 | 5 |
| 8 Work Plan and organization | 1 | 2 | 3 | 4 | 5 |
| 9 Professionalism | 1 | 2 | 3 | 4 | 5 |
| 10 Creativity | 1 | 2 | 3 | 4 | 5 |
| 11 Quality of work done | 1 | 2 | 3 | 4 | 5 |
| 12 Time Management | 1 | 2 | 3 | 4 | 5 |
| 13 Understanding the Community | 1 | 2 | 3 | 4 | 5 |
| 14 Achievement of Desired Outcomes | 1 | 2 | 3 | 4 | 5 |
| **15 OVERALL PERFORMANCE** | **1** | **2** | **3** | **4** | **5** |

**Date: Name & Signature of the Supervisor**