A STUDY ON CROP ROTATION OF SURAVARAM VILLAGE OF SRIKAKULAM DISTRICT OF ANDHRA PRADESH

DR.V.S. KRISHNA GOVERNMENT DEGREE & PG COLLEGE(A), VISAKHAPATNAM

DEPARTMENT OF BOTANY

COMMUNITY SURVEY PROJECT REPORT

BATCH 2022-2023

SUBMITTED BY

Name: Ms. S. Swathi Rajeswari

Group: BSc. BtBC

ID Number: E20204028

Under the Guidance of

Dr. S. Padmavati

Lecturer in Botany

PROJECT REPORT

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CERTIFICATE

DEPARTMENT OF BOTANY

DR.V.S. KRISHNA GOVT DEGREE & PG COLLEGE(A)

VISAKHAPATNAM

This is to certify that is a Bonafide project report of the work done under the guidance of lecture.

Mr. \ Miss. **Suravarapu Swathi Rajeswari** of DR. V. S. Krishna Govt Degree & Pg College(A), **II BTBC** Class with Regd.No **E20204028** during the academic year 2022-2023.

She has successfully completed the community survey project titled "A Study on Crop Rotation of Suravaram Village of Visakhapatnam District of Andhra Pradesh" under my supervision. As per the declaration made by him/her the original project work was done by him/her and I recommend his/her work for further evaluation.

Dr. S. Padmavathi	**DR. P. SREEVANI**	**DR. I. VIJAYA BABU**
Lecture in Botany	**Head of the Department**	**Principal**

DECLARATION

I hereby declare that the project report titled "**A Study on Crop Rotation of Suravaram Village of Visakhapatnam District of Andhra Pradesh**" is my original work and has not been published or submitted for any degree, diploma or other similar titles elsewhere.

This has been undertaken for the purpose of partial fulfillment of B.Sc. Degree of Dr.V.S.Krishna Government Degree & PG College(A), Visakhapatnam.

S. SWATHI RAJESWARI

B. Sc. Bt. B. C

II Semester

Regd. No: E20204028

Date:

Place: Visakhapatnam

ACKNOWLEDGEMENT

I'm deeply grateful to my Mentor, Dr. S. PADMAVATHI, lecturer in Botany for her guidance, patience and encouragement. I would not be able to finish my study without her support. I wish to express my gratitude to all the members of Suravaram village for giving the proper responses, which has been instrumental in completion of this project.

I am thankful to Dr. I.VIJAYA BABU, Principal, Dr. V. S. Krishna Government Degree & PG College (A) Visakhapatnam for his support and encouragement throughout the tenure of the project.

I also want to show my sincere gratitude to Dr. P. SREEVANI, Head of the Department of Botany, and the other faculty members of the Botany Department. Dr. T. M. A. Niveditha, Dr. D. Appa Rao, Dr. K. Vijayalakshmi and Dr. D. S. Madhava Rao, for being a source of support during this project period.

I am most grateful to my family, friends and well-wishers for their love and support

.

S. SWATHI RAJESWARI

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INTRODUCTION

INTRODUCTION

CROP ROTATION

Despite great recent progress, hunger and poverty remain widespread and poor agricultural methods damage environment. There is a need for developing sustainable agricultural methods and develop technologies and practices to rise in food production and that do not have adverse effects on environmental.

Crop rotation proves to be a great measure which increase crop production in sustainable way.

Crop rotation is a system of designing how to cycle a piece of land through various crops, reducing the reliance on chemical fertilizers, pesticides and herbicides. It is how successful farmers nurtured their land. It is how successful farmers nurtured their land over generations, and remains vitally important for farmers today wanting to nourish their local environment whilst growing good, healthy food.

The practice of crop rotation dates back to antiquity. Roman agronomists 2000 years ago thus recommended the practice of alternating legumes and cereals in a rotation, including the use of legumes legumes green manure. This is also a valuable practice in current organic farming system

Crop rotation refers to the cultivation of different crops on a particular piece of land over time. The succession of crops to be grown is carefully designed to ensure soil nutrients are sustained, pest populations are controlled, weeds are suppressed and soil health is built.

A rotation will Cycle Through Cash crops (such as vegetables), cover crops (grasses and cereals) and green manures (often legumes). The exact sequence of crops will vary depending on local circumstances, with the critical design element being an understanding what each crop contributes and takes from the soil. For instance, nitrogen depleting crop should be preceded by a nitrogen fixing crop.


METHODOLOGY

METHODOLOGY

The study was carried out in three phases

First phase

It is the actual socio-economic survey. In Phase I, survey conducted from 3rd June to 10th June 2022. In the first phase I have visited the 3rd ward of Suravaram village in Srikakulam district. A standard questionnaire was prepared and responses were noted. This was done for seven days. The study area consists of 50 households. So approximately 5-10 households were surveyed each day to survey the entire ward in a week. After conducting socio economic survey, data was analyzed and certain problems were identified.

Second phase

In the second phase awareness programes were conducted for different problems so identified in the first phase. Awareness programes were organized from 11th June to 17th June.

Third phase

The third phase is focused on to a single problem identified In my study area and again questionnaire was standardized and collected data by verbal interaction and interviewed the persones. I have selected Crop Rotation topic for survey because the Area I am Surveyed is mostly Agricultural land and the main occupation of the villagers is Agriculture. This is again done for a week from 19th June to 25th June date.

PROJECT STUDY AREA

ABOUT THE VILLAGE - SURAVARAM

Suravaram is a Village in Jalumuru Mandal, Srikakulam district of Andhra Pradesh state in India. The population of Suravaram in 2022 is estimated to be 463-529. According to 2011 census population is 472. The Total area of Suravaram is 2.29 Sq km. The non-agricultural area in this locality is 65.1 hectares. The non-agricultural area in this locality is 65.1 hectares. The unirrigated land is 41.64 hectares. The canals are covered with 41.64 hectares.

Literacy rate of Suravaram village is 52.75%, out of which 61.61% are males and 44.76% are females, Literate people are 249 out of 138 are male and 111 are female. People living in Suravaram depend on multiple skills, total workers are 228 out of which men are 127 and women are 101. Total 30 Cultivators are depended on agriculture farming out of 23 are cultivated by men and 7 are women. 59 people works in agricultural land as a labour in Suravaram, men are 23 and 36 are women. The Population density in this area is 231/Sq Km.

As per 2009 stats. Suravaram village is also a Gram Panchayat. The Mandal headquarters is JALUMURU, and the distance from Suravaram to JALUMURU is 8 kilometers. The district headquarters is SRIKAKULAM, and the distance from Suravaram to SRIKAKULAM is 45 kilometers. The nearest town is AMADALAVALASA for all major economic activities, and the distance from Suravaram to AMADALAVALASA is 33 kilometers. Suravaram pin code is 532427.

The total government primary schools available in this locality is 1.
There are no Sub Primary Health Care units in the village.

Suravaram village map

ABOUT THE MANDAL

Jalumuru is Mandal in Andhra Pradesh state, Jalumuru Mandal population in 2022 is 76,287. According to 2011 census of India, Total Jalumuru population is 59,599 people are living in this Mandal, of which 29,413 are male and 30,186 are female. Total workers are 30,829 depends on multi skills out of which 17,150 are men and 13,679 are women. Total 5,105 Cultivators are depended on agriculture farming out of 3,502 are cultivated by men and 1,603 are women. 15,962 people works in agricultural land as a labour in Jalumuru, men are 7,912 and 8,050 are women.

Jalumuru consist of 102 Villages and 40 Panchayats. Garinivalasa is the smallest Village and Lingalavalasa is the biggest Village. It is in the 50 m elevation(altitude).

In jalumuru, the mandal revenue office(MRO), Mandal Education office (MEO), Telugu velugu office, Agriculture market committee office, jalumuru police station and KGBV Girl's hostel and a Government intermediate College are present. Literacy rate of jalumuru village is 66.41%

JALUMURU MANDAL MAP

ABOUT SRIKAKULAM DISTRICT

Srikakulam District is the extreme Northeastern District of Andhra Pradesh situated within the Geographic Co-Ordinates of 18°-20’ and 19°- 10’ of Northern latitude and 83°-50’ and 84°-50’ of Eastern longitude. The Nagavali, Vamsadhara, Suvarnamukhi, Vegavathi, Mahendratanaya, Gomukhi, Champavathi, Bahuda and Kumbikota Gedda are the important rivers of the District

Boundaries of the District

Vizianagaram District flanks in the south and west while Orissa bounds it on the North and Bay of Bengal on the East.

Land Utilization :

The Geographical area of the District is 583700 Hectares covered by 38 Mandal’s under three Revenue Divisions Viz., Srikakulam, Palakonda & Tekkali. During the Year 2009-10 the Cultivable land was 3,56,654 hectares and it accounted for 61.10% of the total Geographical area of the district. The Forest Area of the District during 2009-10 is 68,641 hectares accounting for 11.76%. Agriculture area is 99,269 hectares accounting for 17.01% of the Geographical area.

Developmental Activities :

A) Agriculture

The role of Agricultural Sector in District Economy is very significant. However, out of 47.36% of Main Workers in the District Population comes under this category, 32.14 % Cultivators and Agricultural Labours are still dependent on Agriculture. Agriculture in Srikakulam district is mostly Rainfall

dependent, Monsoon and Seasonal conditions play a major role in the Agriculture Production.

B) Irrigation

The Gross area irrigated by all sources during the year 2009-10 is 189729 hectares. This accounted for 46.81% of the Gross cropped area as against 48.93% during the year 2008-09.

C) Education

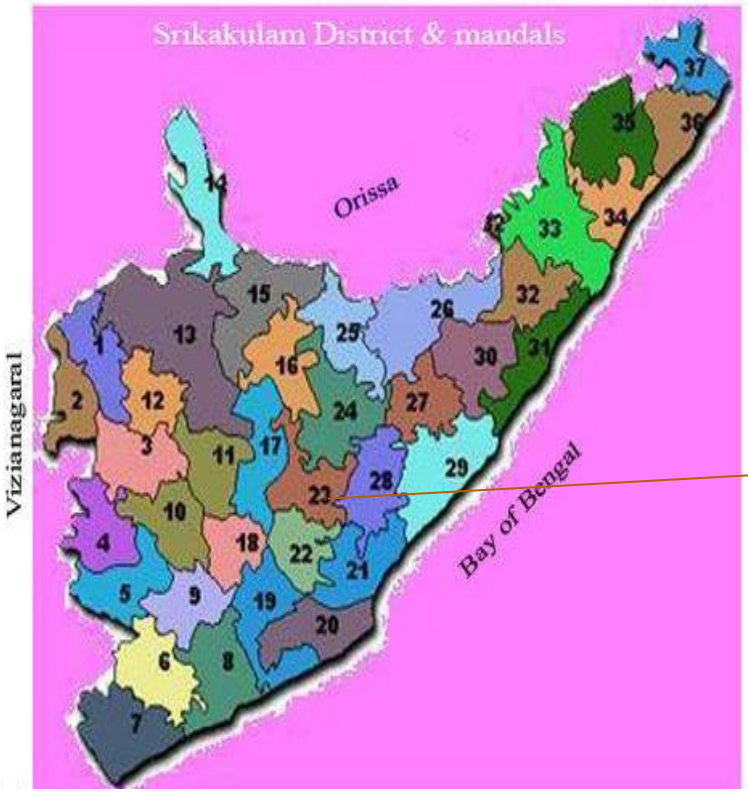
The District is Backward and the infrastructure is very poor. There are 2714 Primary Education Schools in various Management Enrolled 1.41 Lakhs students, under Upper Primary Schools are 847 covered 1.08 Lakshs students, High Schools are 531 and accounted for 1.61 Lakhs, Junior Colleges are 129 in various Managements, 69 Degree Colleges and one Dr. B.R.Ambedkar University and 12 B.Ed. College, Rajeev Gandhi Institute of Medical Sciences attached Medical College is recently established one Dental College under Private Management is in Academic Capacity.

D) Industries

There are 25 Large and Medium Scale Industries in the District involving a total investment of Rs:7750799.80 Lakhs and providing employment to around 7130 persons. In addition to there are around 1101 Tiny and Small Scale Industries and business employment with an investment of Rs:29733.614 lakhs and providing employment 35316 persons.

E) Transport And Communications

The district spread with NH5 around 194 Kms from Kandivalasagedda at Ransthalam Mandal to Ichapuram Mandal.



PROBLEMS IDENTIFIED AND ANALYSES OF THE PROBLEMS

The main problems identified in this village during socio economic survey are discussed below

Poverty

The poverty of individuals is also one of the main problems of the village. Landless laborers, and casual workers are mostly prevailing in the conditions of poverty. The majority of the poverty-stricken people are employed in the agriculture sector and other activities such as animal husbandry, fisheries and daily workers.

Inadequate marketing and storage facilities

The average Indian farmer does not have adequate storage facilities. Moreover, there is no satisfactory warehousing facilities in the market. For these two reasons the farmer has to sell his produce immediately after the harvest. Lack of storage facilities and lack of market access are the two other important causes of food losses in developing countries.

Infrastructure related problems

The road conditions in this village are really very bad. The roads are un-metalled and cannot be used during the monsoon season.

There is no drainage facility in the village

Health facilities

There is no primary health care hospital in the village and also there is no medical store in the village.

Most of persons in the village suffering from Diabetes and arthritis.

Employment

Now a days employment is very much necessary to lead our life and our family's life, but in the village there is no employment opportunities and source. Agriculture is only the source of employment in the village.

SOLUTIONS FOR PROBLEMS IDENTIFIED

1) Poverty - to decrease poverty, the people were make small scale savings in their day to day life.

2) Government need to provide storage facilities for the storage of produce after harvest, because there is necessary to store the produce to avoid food loss.

3) Infrastructural - To construct the drainages in the village to maintain cleanliness and it is leads to good health to people.

4) There is must need to construct a primary health care hospital in village to avoid health problems of villagers. I also suggest to take healthy diet to avoid some health problems

5) Employment - The government need to provide some employment opportunities for unemployed people in the village.

6) The village surpanch and VRO are responsible to clear the above problems in the village. They associate with higher officials and make solutions for the problem identified in village.

COMMUNITY AWARENESS CONDUCTED ON

1. Awareness conducted on general health and hygiene. As a part of this program demonstrated the proper way of washing hands and educated the villagers about wearing mask

2.. Awareness organized for the farmers about the negative impacts of excessive use of pesticide that there is a threat of groundwater contamination due to pesticide use by farmers. Awareness on judicious use of chemical fertilizers

3. Awareness on importance of using Leguminosae plants (Ground nuts, Black gram etc) as alternate crop for crop rotation

4. Awareness on judicious use of chemical fertilizers. And advised to use organic manure and cow urine for crops as they are rich in nitrogen and proved that they are antimicrobial.

5. Awareness organized for the farmers about the implementation of direct borewell recharge wherever possible to improve the availability of water for drinking and irrigation needs.
6. I have also conducted awareness on washing hands after every agricultural works. spraying of fertilizers, sowing, tilling etc and also before eating

OUTCOMES

1) The villagers aware about health and hygiene and maintain cleanliness in their surroundings and washing hands properly and wearing mask.

2) They decreased the use of high amount of chemical fertilizers and pesticides. some people use till use small amounts of pesticides and fertilizers.

3) They practice crop rotation properly by selecting high yielding crop varieties.

4) They improve and utilize the irrigation sources properly whenever needed for crops.

5) And the people also aware and follow balanced diet


OBJECTIVES

OBJECTIVES

The objectives of the present study are:

- The Crop Rotation Survey will collect information on all aspects of farmers' production, from seeding, fertilizer, tillage, and chemical application to harvest.
- The objective of this project is to evaluate farmers' progress towards sustainable on-farm practices.
- The data will be used to inform governments and the public about the improvements in crop production sustainability.
- To examine the traditional patterns of crop rotation(and system rotation) in Suravaram villages of Andhra Pradesh.
- To understand the rationale behind these practices
- To examine the changes in rotation practices and causes
- To highlight the implications of the findings for the direction of research on cropping systems and crop rotations.
- To get handy installments of cash returns especially in irrigated crops,
- To achieve better distribution of labour throughout the year
- To utilize available space & nutrients to maximum extent possible,

- To safe guard against hazards of weather, diseases & pests,
- To secure daily requirements like pulses, oilseeds, fibers, etc.
- To get balanced cattle feed.

Benefits of Crop Rotation

1. Reduces dependence on fertilizer use
2) Enhances soil fertility
3) Increases crop yield and variety
4) Less fallow periods
5) Enhances productivity of successive crops
6) Better soil structure
7) Improves overall soil quality
8)Minimize soil erosion.

RESULTS

RESULTS

PHASE I

In the first phase of the survey, a total of 50 houses were surveyed. Some individuals refused to provide data, but after convincing them they provided the data. the mean age of the respondents was 43.69 years. further more, 55.42% of the participants were male and 41.12% were female participants. In this socio economic survey found some problems.

PHASES II

We also bring some solutions for the problems identified in the first phase Awareness conducted on the problems identified.

In this survey, I got that most of the people practice crop rotation with 2 to 3 crops. Paddy is the main crop and green and black grams are the subsidiary crops in my village.

Most of the people cultivate paddy, green gram, black gram and sesame in crop rotation. Paddy cultivated twice.

The people use pesticides, fertilizers and organic manure for crops and in which the use of organic manure increase the crop yield.

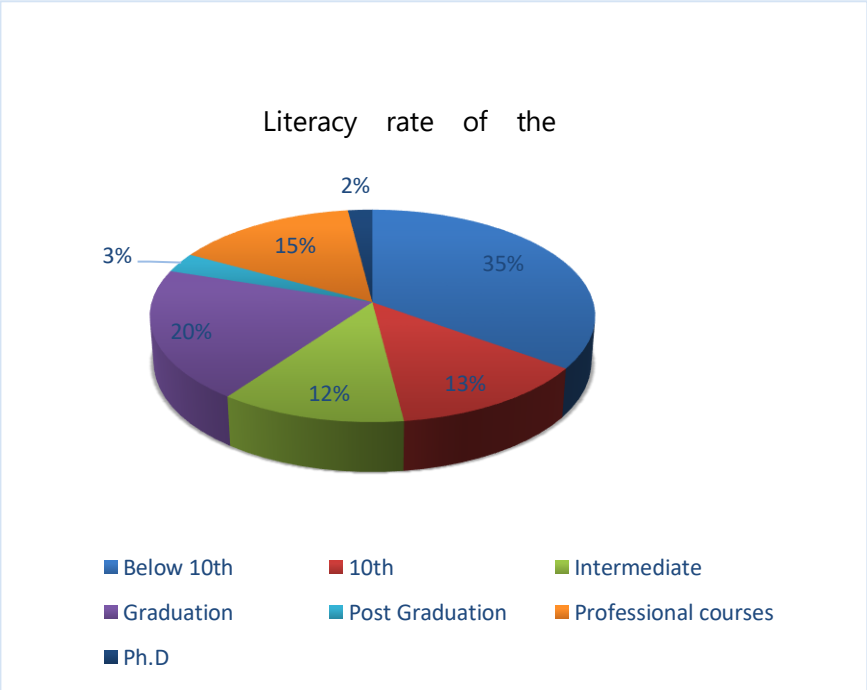
Some people cultivating the land by borrowing from other farmers.

PHASE III

Implemented the project report by analysing the data from phase - I and phase - II survey

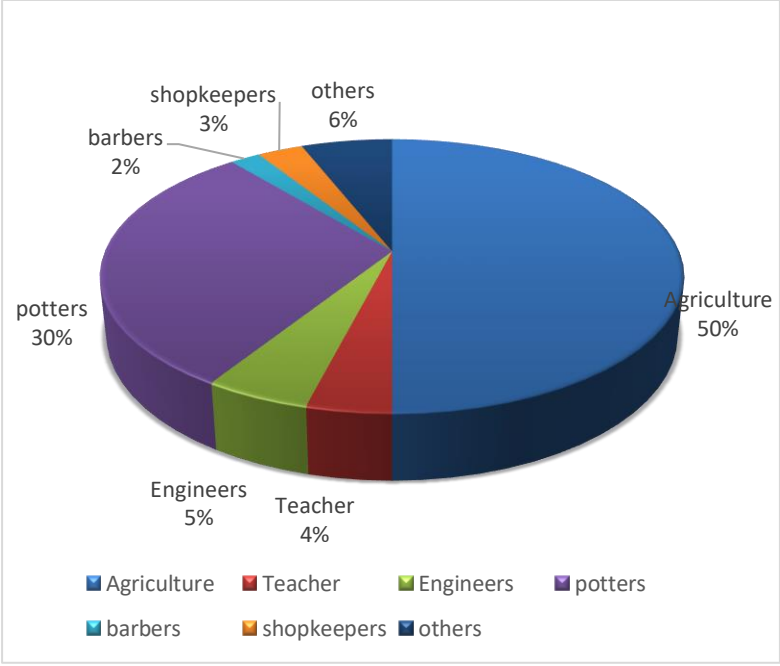
Literacy rate of the village

- I am analyse the data of the village on different aspects
- Firstly, I have represented the data of literacy of the village in pie chart.
- In the village the people with below 10th class are 35%.
- The people with 10th class qualification are 13%
- The people with inter qualification are 12%.
- The graduation completed people are 20%
- The Post Graduation completed people are 3%
- Professional courses are studied by 15% of people
- Ph.D is completed by 2% of people



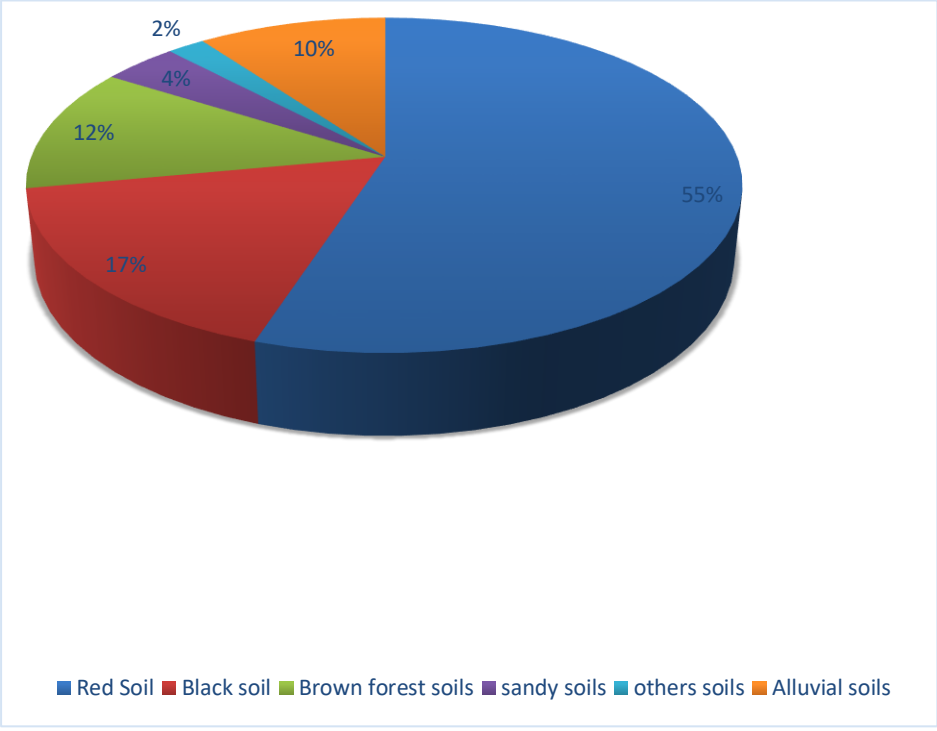
THE OCCUPATIONS STATUS OF THE VILLAGE

- In the village the people are working on different types of occupations
- In the village, more people are depend on agriculture and is represented as 50%
- Potters are 30% in village
- Teachers are 4% and engineers are 5% in the village
- Barbers and shopkeepers are 2% and 3% respectively
- Other small occupations are represented as 6%



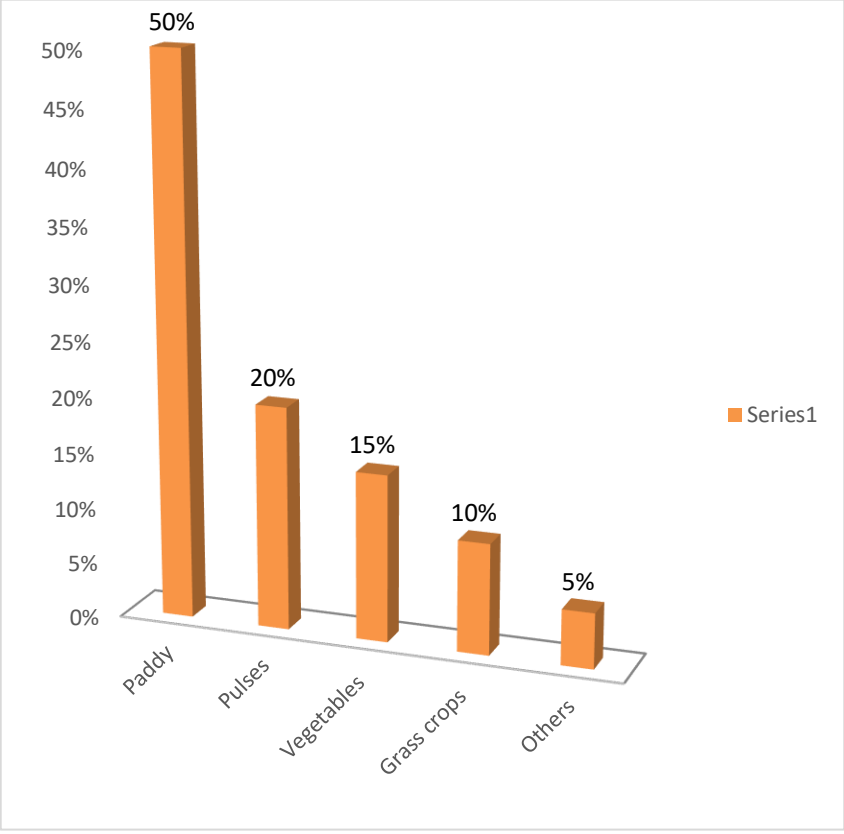
TYPES OF SOILS

- In Srikakulam district, there are different soils are present and they are presented by pie chart
- The red soils are occupied 55%
- Black soils are occupied 17%
- Brown forest soils are occupied about 12%
- Sandy Soils are occupied about 4%
- Alluvial soils are occupied about 10%
- other soils or occupied least 2%



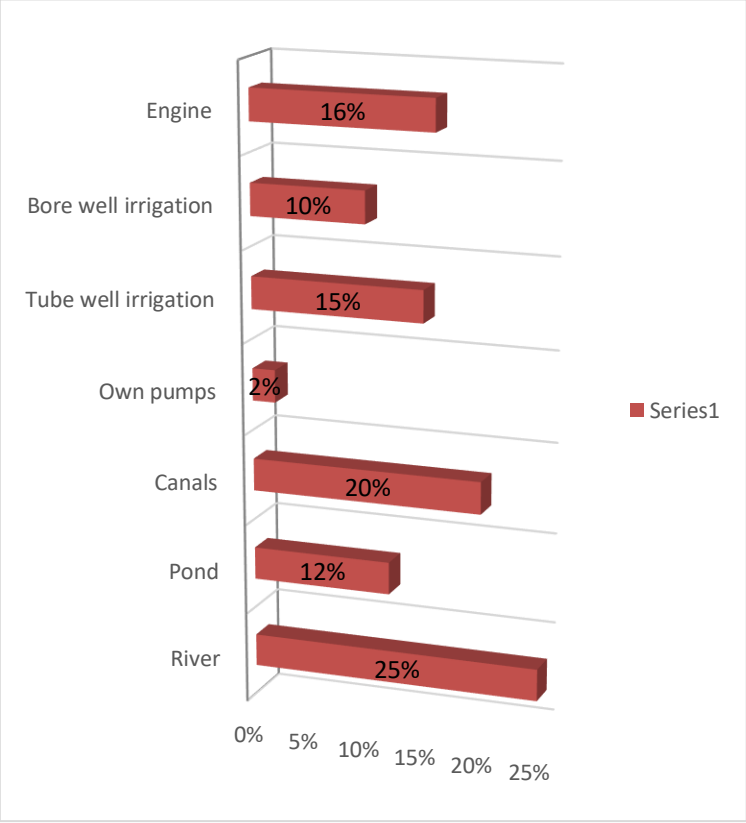
Cultivation and production of different crops

- The villages cultivate different crops in crop rotation they are paddy is highly cultivated and produced about 50%
- Pulses are cultivated 20%
- vegetables are cultivated 15%
- And grass crops cultivated about 10%
- And other crops are 5% respectively



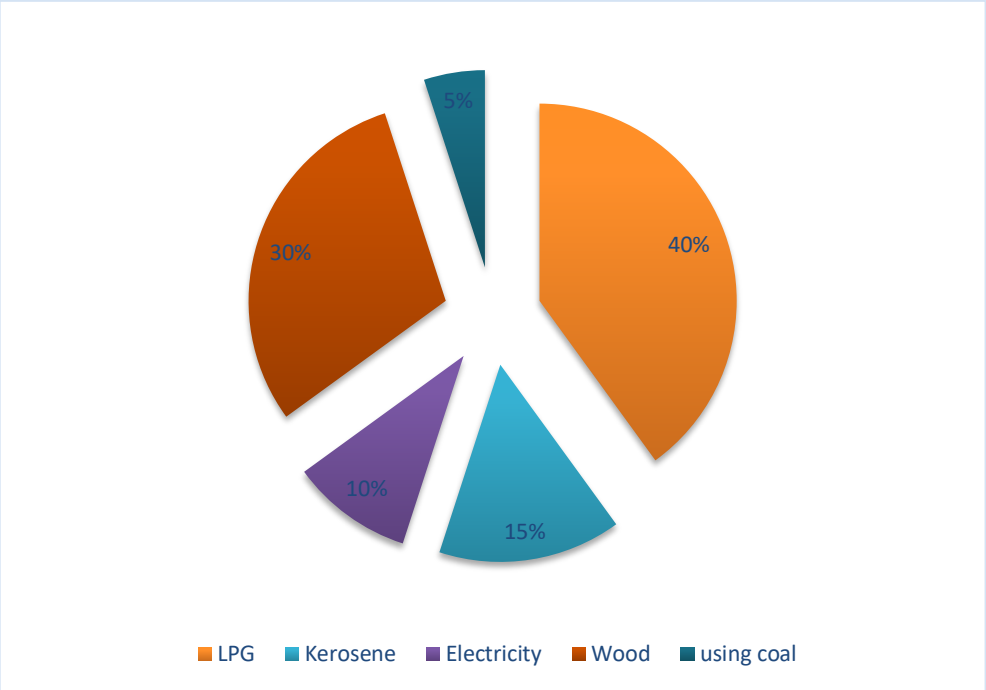
Irrigation sources

- In village the people use different types of irrigation sources for crops
- The river is highly used about 25%
- Canals are used about 20%
- And engines are used about 16%
- Tubewell irrigation used about 15% finally pond borewell irrigation and own pumps are used about 12%, 10% and 2% percentage respectively



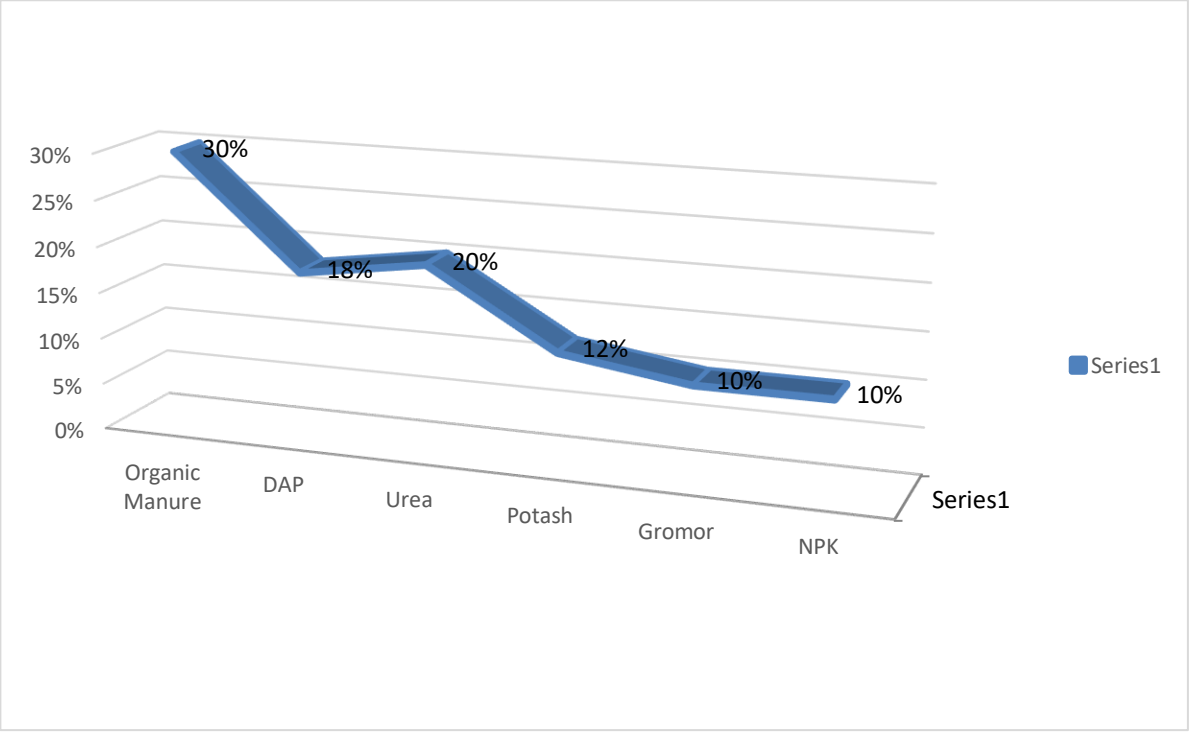
Types of cooking fuels

- The people in Suravaram Village using different types of cooking fuel and they are represented as pie chart
- The types of cooking fuels are LPG that is highly used with 40%
- Wood is used by 30%
- Some People using kerosene fuel represented by 15%
- After that electricity is used by 10% of people
- The least used cooking fuel is coal is represented by 5%



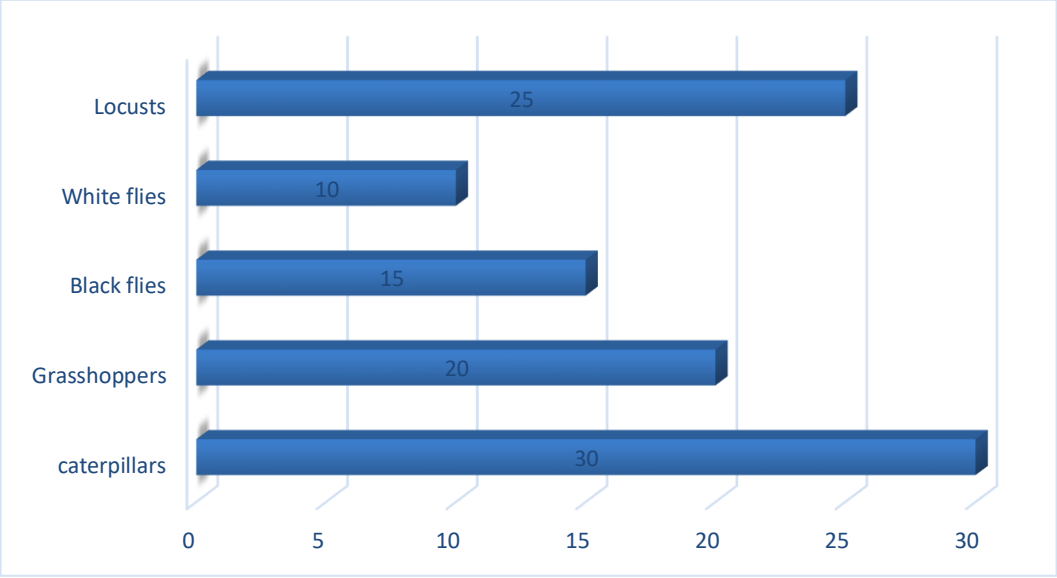
Types of fertilizers used in crop rotation

- It is represented by line chart
- Villagers highly use organic manure about 30%
- DAP is used about 18%
- Urea is used about 20%
- Villagers also use potash, gromor and NPK fertilizers about 12%, 10% and 10% respectively



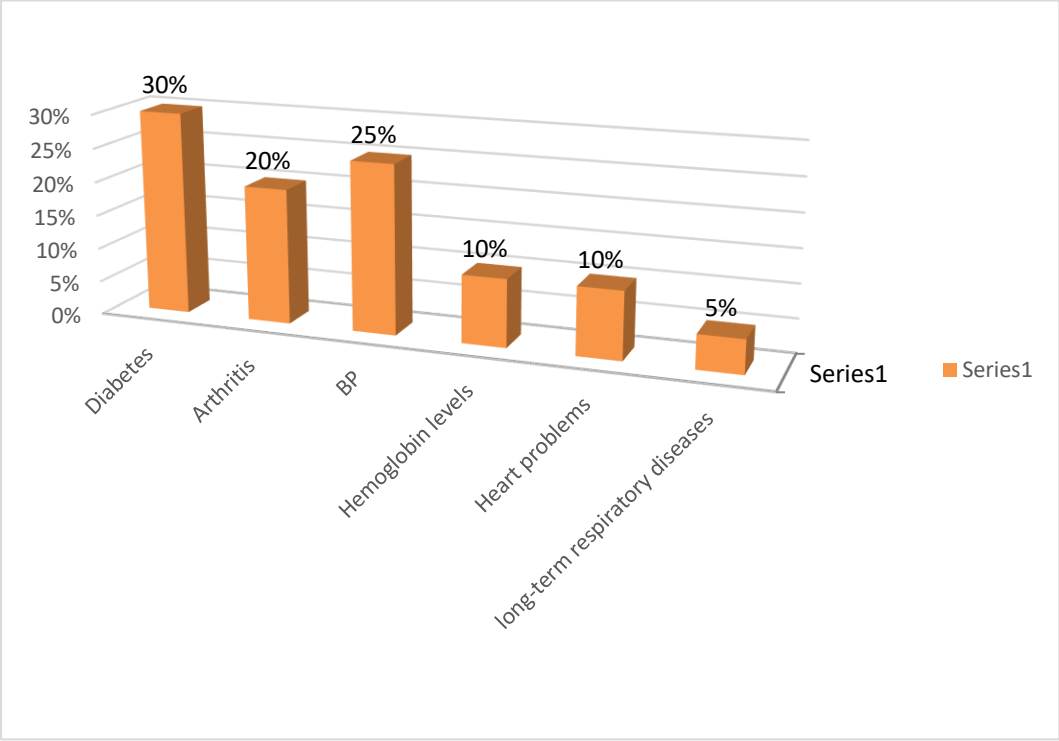
Pests attacking to crop

- This data represented by bar chart
- The caterpillars are highly attacking to crop about 30%
- The locusts attacking about 25%
- Grasshoppers attacking about 20%
- black flies attacking about 15%
- White flies are attacking about 10%



Health issues in the village

- In Suravaram village there are different types of health issues are found and it is represented by column chart
- 30% of people in the village suffered from Diabetes
- 25% of people suffered from BP
- 20% of people are suffer from arthritis
- people suffered heart problems and haemoglobin levels in equal percentage i.e., 10%
- Finally the least 5% of people suffered from long term respiratory diseases



Types of seeds used for crops

- Represented by tabular form
- The local seeds are highly used about 63%
- Traditional seeds are used about 20%
- Hybrid seeds are used about 10%
- Foreign seeds are used less about 5%
- Genetically Modified seeds are used very rare about 2%

TYPES OF SEEDS	PERCENTAGE OF USE
LOCAL SEEDS	**63%**
TRADITIONAL SEEDS	**20%**
HYBRID SEEDS	**10%**
FOREIGN SEEDS	**5%**
GENETICALLY MODIFIED SEEDS	**2%**


SUMMARY

SUMMARY

By interviewing the farmers, it came to know that crop rotation increases a 10 to 25% increase in crop yield in crop rotation rather than monoculture. Not only the yield from a single seasonal crop but also benefited by a variety of crops after each season. Besides, the farmers get more options in selling various products and are not reliant only on one crop and market price.

The increase in yield is mostly depends on the crop we select. It was also observed that planting crops like legumes, increases the yields than the other crops because legume crops increase the nitrogen in the soil as they contain nitrogen-fixing bacteria that fix nitrogen naturally into the soil. Each crop type adds up or absorbs different soil nutrients to the soil; therefore, it needs a mix up of a variety of plants to make them more balanced.

From the survey it was found that farmers can see a decrease in the incidence of insect pests and pathogens when they try crop rotation. The reason for this is similar plants tend to have the same pathogens; therefore, crop rotation interrupts the pest life cycle and their habitat. In this regard scientists should advice the farmers about the kinds of pests and diseases that break out at a given time of the year and the crops affected. So, by knowing this a farmer can plant the host plant at a different season when the chances of infestation are low. This lowers the risk of plants getting infested and minimizes the application of pesticides which is good for the environment.

Crop rotation improves the soil structure as well as soil texture. This allows for good conditions for seed germination and root proliferation. It also helps with other soil processes such as water infiltration and aeration, which have a lot of benefits to the crops and improves the composition of the soil.


CONCLUSION &
RECOMMENDATIONS

CONCLUSIONS & RECOMMENDATIONS

Growing of different crops in succession on a piece of land is called crop rotation. The reason for choosing the crop rotation survey is in Suravaram village, the agriculture is the main occupation and many other depend on agriculture as agricultural labourers. This project mainly aims to collect information on all aspects of farmers' production, from seeding, fertilizer, tillage, and chemical application to harvest. The objective of this project is to evaluate farmers' progress towards sustainable on-farm practices. The data will be used to inform governments and the public about the improvements in crop production sustainability. The findings of the survey reveal that much improvement was made during the last two decades in terms of yield, control of pests and reduction in use of fertilizers and many other thing.

The farmer get healthy cattle feed from this crop rotation because By the crop rotation the soil is healthy and give healthy cattle feed.

Because of crop rotation through that all the types of food grains and vegetables are available for all people in a required quantities.

Because of cultivating different crops the production is high and there is a decrease of food scarcity

Farmers get high profits from crop rotation it is also economically very useful for farmers

The practice of crop rotation results in disease and paste resistance of crop plants and improves the soil health

Recommendations

1. I am aware people on crop rotation and suggested to practice crop rotation.
2. I am explained benefits of crop rotation to the villagers.
3. I am suggested to the villagers to cultivate different types of crops to improve soil fertility.
4. I recommend to use organic manure for crops instead of fertilizers that will increase yield and decrease the soil erosion.
5. I am recommended to cultivate legume crops in crop rotation for more production.
6. Conclusions

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FORMAT-III- COMMUNITY SURVEY PROJECT (CSP)

STUDENT DAILY PROGRESS REPORT

LOG BOOK

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VISAKHAPATNAM
COMMUNITY SURVEY PROJECT

LOG BOOK

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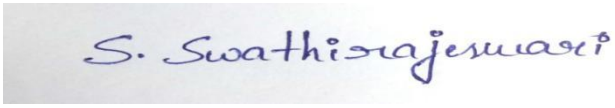
10. Mobile No. : 8919478853
11. Email Id. : swathirajeswari2468@gmail.com
12. Student signature : 

S.No	Date	Work Done	No. of Hours Spent
1	1/6/20221	Allotment of Mentor	2 hours
2	2/6/2022	Information on present location given to Mentor	1hours
3	3/6/2022	Orientation on Community Service Project	2 hours
4	4/6/2022	Using Google Docs, Geo-tagging of photos	1 hours
5	5/6/2022	Socio-Economic Survey - no. of houses visited - 5	1 hour
6	6/6/2022	Socio-Economic Survey - no. of houses visited -10	3 hours
7	7/6/2022	Socio-Economic Survey - no. of houses visited - 10	2 hours
8	8/6/2022	Socio-Economic Survey - no. of houses visited -10	4 hours
9	9/6/2022	Socio- Economic survey- no.of houses visited - 10	3 hours
10	10/6/2022	Socio- Economic survey- no. Of houses visited - 5	1 hour
11	11/6/2022	Awareness conducted on health and hygiene	2 hours
12	12/6/2022	Awareness conducted on don't use chemical pesticides for plants	1 hour
13	13/6/2022	Awareness conducted on healthy diet	1 hour
14	14/6/2022	Awareness conducted on prevent child marriages in village	3 hours
15	15/6/2022	Awareness conducted on girl's education	2 hours
16	16/6/2022	Awareness conducted on using organic manure instead of fertilizers	2 hours
17	17/6/2022	Awareness conducted on the use of natural resources in village	3 hours
18	18/6/2022	Awareness conducted on utilization of government schemes	1 hour
19	19/6/2022	Survey conducted on crop rotation	4 hours
20	20/6/2022	Survey conducted on crop rotation	3 hours
21	21/6/2022	Survey conducted on crop rotation	3 hours
22	22/6/2022	Survey conducted on crop rotation	2 hours
23	23/6/2022	Survey conducted on crop rotation	4 hours
24	24/6/2022	Survey conducted on crop rotation	1 hour
25	25/6/2022	Survey conducted on crop rotation	1 hour

Dr.V.S KRISHNA GOVT. DEGREE COLLEGE (A), VISAKHAPATNAM
COMMUNITY SURVEY PROJECT

LOGBOOK

S.No	Date & time of Visit	Name of the person Interviewed	House Address	Gender & Age	Mobile number	Observations made during Survey
Day-1	03/06/2022	S. Chinnarao	Colony, Suravaram, Srikakulam	55	-----	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. The crop yield is more.
	03/06/2022	D. Ramalaxmi	Colony, Suravaram	42	-------	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. The crop yield is decreased by using high chemicals fertilizers.
	03/06/2022	J. Rajeswari	Colony, Suravaram	47	-------	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. By using local seeds the crop yielding is more.

	03/06/2022	N. Hemalatha	Colony, Suravaram	30	-------	2 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. Because of Crop fields are very far to Village, there is slightly water problem, so they are cultivated only 2 crops.
	03/06/2022	P. Padma	Colony, Suravaram	52	-------	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. Because of some pests attacking to crop, the yield is decreased.
	03/06/2022	B. Suseela	Colony, Suravaram	40	------	2 crops are cultivated in crop rotation by using Organic manures, fertilizers and pesticides. After using organic manures the crop yield is increased.

Day -2	04/06/2022	S. Ramanamma	1-62, Suravaram	48	9959260452	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. By using local seeds the crop yield is increased than the use of hybrid seeds.
	04/06/2022	D. Anuradha	School street, Suravaram	35	7032327832	3 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides.
	04/06/2022	D.Rajini	Suravaram	30	-----	2 crops are cultivated in crop rotation by using organic manures, fertilizers and pesticides. They mainly cultivate paddy because it gives high yields to them.
	04/06/2022	D.Prabhavathi	suravaram	50	------	2 crops are cultivated in the crop rotation by using organic manures and fertilizers. Crop fields are grown healthy because of use organic manure.
	04/06/2022	Ch.Parvathi	Suravaram	40	Nill	Growing only 1 crop in crop rotation by using organic manure and pesticides.

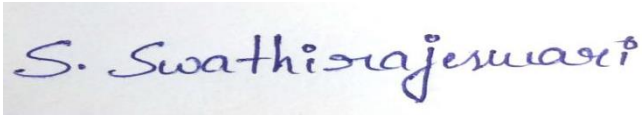
Day -3	05/06/2022	Ch.Hemalatha	Suravaram	32	Nill	Cultivating 2 crops in crop rotation. The crop yield is increased because the se organic manure.
	05/06/2022	S.Appalanarasamma	Colony, Suravaram	50	Nill	3 crops are cultivated in crop rotation by using organic manure,pest pesticides and fertilizers. The crop production is more because of the use local and traditional seeds.
	05/062022	S.Ramanamma	Colony, Suravaram	38	Nill	3 crops are grown in crop rotation by using fertilizers and organic manure. The crop yield is increased by using organic manure as well as required amount of fertilizers, pesticides.
	05/06/2022	J.Ramya	Colony, Suravaram	28	89787 95259	2 crops are grown in crop rotation. They using organic manure, pesticides and fertilizer. They supply water by canals.
Day -4	06/06/2022	M.Prabhavathi	Colony, Suravaram	45	78933 03492	2 crops are cultivated in crop rotation but the subsidiary crop is paddy because it is the main source of food.

	06/06/2022	B.Saraswathi	Colony, Suravaram	46	Nill	3 crops are cultivated in crop rotation, by using hybrid seeds.
	06/06/2022	S.Parvathi	Colony, Suravaram	46	Nill	3 crops are cultivated in a year by using local and hybrid seeds and organic manure, fertilizers. The crop yield is more.
	06/06/2022	R.Kavya	Colony, Suravaram	26	Nill	3 crops are cultivated in crop rotation and the crop yield is decreased because of pests like white flies, mosquitoes attacking to crop.
	6/06/2022	T.Sridevi	Colony, Suravaram	40	Nill	2 crops are cultivated with high water facility by canals.
Day -5	07/06/2022	J.Kalavathi	Colony, Suravaram	49	Nill	Only 1(paddy) crop is cultivated because of it is the main source of food.
	07/06/2022	M.Umakumari	Colony, Suravaram	38	Nill	3 crops are grown healthy with high yielding crop varities. The yield is increased by using required amounts of fertilizers And organic manure.

	07/06/2022	V.Saraswathi	Colony, Suravaram	52	Nill	3 crops are cultivated in crop rotation , the paddy is a main crop and it gives good yielding.
	07/06/2022	S.Parvathi	Colony, Suravaram	60	Nill	3 crops are cultivated by using local and hybrid seeds. They use both organic manure and fertilizers, pesticides.
	07/06/2022	S.Mohini	Colony, Suravaram	42	Nill	2 crops are cultivated and the crop yield is increased by using organic manure and fertilizers with required measurements.
Day -6	08/06/2022	B.parvathi	Colony, Suravaram	37	Nill	2 crops are cultivated by using local seeds. The crop yield is more.
	08/06/2022	S.Revathi	Peddhaveedhi, Suravaram	35	Nill	They cultivated 3 crops and the main crop is paddy. they grow paddy, black and green gram, sesame crops and sometimes maize. They change crop combinations in crop rotation.
	08/06/2022	K.prameela	Colony, Suravaram	34	Nill	2 crops are cultivated.

	08/06/2022	S.Ramakrishna	Colony,Suravaram	35	9154526761	2 crops are cultivated in crop rotation and the main crop is paddy, and they mostly cultivate paddy and black and green grams.
	08/06/2022	S.Harika	Colony, Suravaram	28	Nill	2 crops are cultivated by using organic manure, fertilizers and pesticides.
	08/06/2022	K.padma	Colony, Suravaram	36	Nill	2 crops are cultivated by using hybrid seeds.
Day -7	09/06/2022	S.Prameela	Peddhaveedhi, Suravaram	49	97053 03880	3 crops are cultivated and they cultivate paddy, black gram or green gram and sesame crop with local seeds.
	09/06/2022	S.Ramarao	Peddhaveedhi, Suravaram	62	Nill	3 crops are cultivated by using organic manure and fertilizers, pesticides. The crop production is slightly decreased by some pests highly attacking to crop.
	09/06/2022	S.Chinnammadu	Peddhaveedhi	54	93465 40329	2 crops are cultivated by providing high water facility by canals.

	09/06/2022	P.Appanna	Peddhaveedhi, Suravaram	65	Nill	3 crops are cultivate every year. They mostly cultivate paddy and black or green grams, paddy is the main crop.
	09/06/2022	V.sriramulu	Colony, Suravaram	61	Nill	2 crops cultivated by using organic manure and fertilizers and pesticides.
	09/06/2022	B.Uma	Colony, Suravaram	37	88861 94527	2 crops cultivated with hybrid seeds.
	09/06/2022	V.laxminna rayana	Peddhaveedhi, Suravaram	56	Nill	3 crops are cultivated and the crop production is more.
	09/06/2022	V.Raju	Peddhaveedhi,Suravaram	57	Nill	3 crops are cultivated, they cultivate paddy, black gram or green gram.



Signature of the Student

Second Week			
Day	S.No	Date & time of Visit	Awareness campaign Conducted
	1	10/06/2022	Awareness conducted to explain about detailed account of crop rotation and encourage people to practice crop rotation by using multiple crops
	2	11/06/2022	Awareness on judicious use of chemical fertilizers. And advised to use organic manure and cow urine for crops as they are rich in nitrogen and proved that they are antimicrobial
	3	12/06/2022	Awareness organized for the farmers about the negative impacts of excessive use of pesticide that there is a threat of groundwater contamination due to pesticide use by farmers.
	4	13/06/2022	Awareness on importance of using Leguminosae plants (Ground nuts, Black gram etc.) as alternate crop for crop rotation
	5	14/06/2022	Awareness organized for the farmers about the implementation of direct bore well recharge wherever possible to improve the availability of water for drinking and irrigation needs.
	6	15/06/2022	Awareness conducted on general health and hygiene. As a part of this program demonstrated the proper way of washing hands and educated the villagers about wearing mask
	7	16/06/2022	Awareness conducted on what is a balanced diet and to maintain balanced diet.

Third Week			
S. No	Date From	To	Work

1	17/06/2022	24/06/2022	❖ we identified and take a project topic crop rotation for second week from the socio economic survey i.e., done in first week. ❖ Implementation of Project work on crop rotation. ❖ Conducted interviews and surveys according to questionnaire on crop rotation. ❖ Aware people and suggested them to practice crop rotation and use organic manure for crops instead of chemical fertilizers. ❖ Recorded the response from people on questionnaire of crop rotation during survey

Fourth Week

S.no	Date from	To	Work
1	25/06/2022	30/06/2022	Writing project Work

Signature of the student

Dr.V.S KRISHNA GOVT. DEGREE COLLEGE (A), VISAKHAPATNAM
COMMUNITY SERVICE PROJECT
LOG BOOK

Survey related photos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Andhra Pradesh 532427, India
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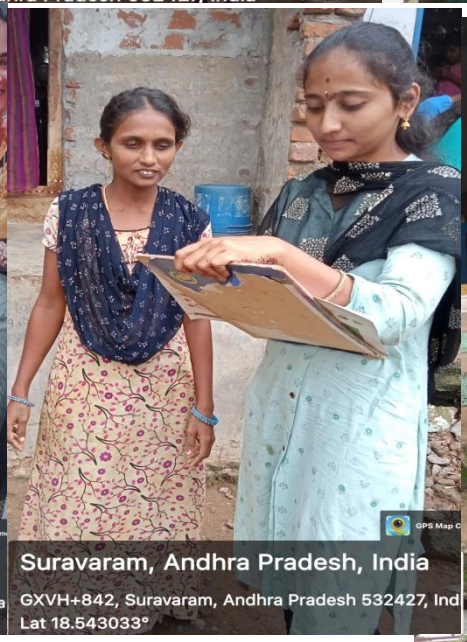
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India
Lat 18.54254°


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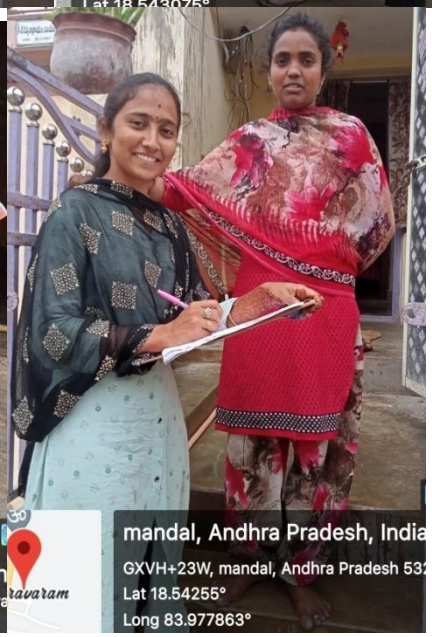
Kummari vede, near hanuman temple, Surava
Andhra Pradesh 532427, India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Long 83.981018°


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GXWJ+VC, Komanapalli, Andhra Prades
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Long 83.981018°


GPS Map Camera


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GXWJ+VC, Komanapalli, Andhra Prades


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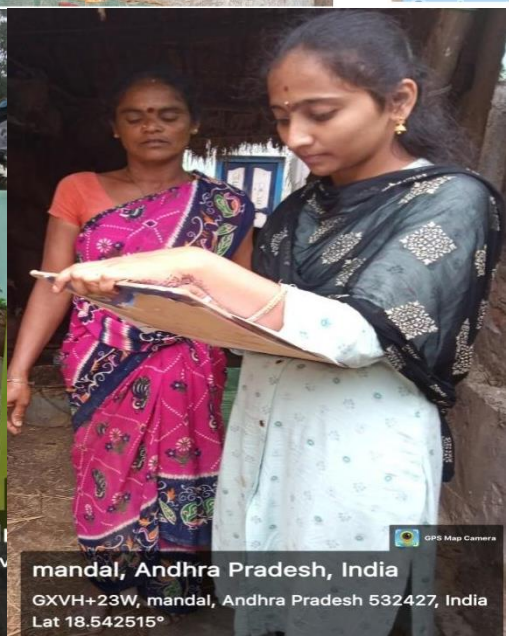
Suravaram, Andhra Pradesh, I
Kummari vede, near hanuman temple, Surav
Andhra Pradesh 532427, India
Lat 18.54259°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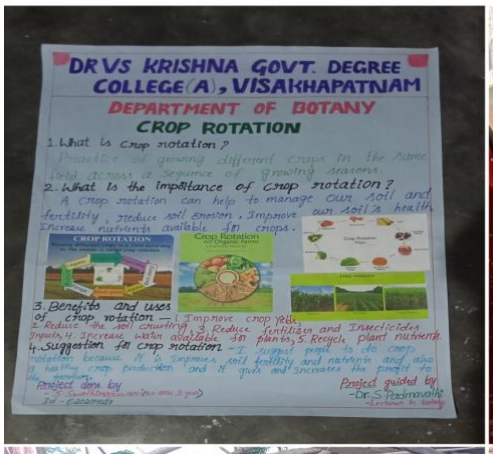
DR VS KRISHNA GOVT. DEGREE COLLEGE (A), VISAKHAPATNAM
DEPARTMENT OF BOTANY
CROP ROTATION
1. What is crop rotation ?
2. What is the impitance of crop rotation ?
3. Benefits and uses of crop rotation —
4. Suggestion for crop rotation —
Project guided by
-Dr. S Padmavathi


GPS Map Camera
106
Google
Srikakulam, Andhra Pradesh, India
Srimukhalingam - Challavanipeta Rd, Andhra Pradesh
532427, India
Lat 18.5433°
Long 83.982873°
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