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RESEARCH ARTICLE

BEHAVIORAL APPROACH OF FARMING COMMUNITY TOWARDS LAND AND WATER USE IN THE STUDY AREA OF KALYANDURG, BRAHMASAMUDRAM AND SETTURU MANDALS OF ANANTAPUR DISTRICT, AP, INDIA

*Raghuveer Naidu, K., Nagaraja. Ravoori and Ramanaih, Y. V.

Department of Geography Sri Krishnadevaraya University, Anantapur, NRSC Hyderabad, A.P. India

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ABSTRACT

The present paper examines the Behavioral approach of the farming community in the study area of Kalyandurg, Brahasamudram and Setturu mandals of Anantapur district, AP. For understanding of the Behavioral Approach of the farming community in the study area, I have been selected 99 farmers from three mandals of the study area and analyzed various Socio-Economic characteristics of the farming community along with their awareness on land and water use practices. In this regard, from 99 samples of the farmers I have analyzed mandal wise age, Educational status, size of the family, number of family members engaged in Agriculture, Land holding sizes of the sample farmers, Water management through various sources of irrigation, source of irrigation for Agriculture in the study area, Area under single crop in the sample mandals, Problems encountered in Agro-Biological factors of production, Awareness of the farming community on land management practices, change cropping pattern to use less water with more irrigation, Awareness of the farming community on the benefits of changing the cropping pattern and awareness on water harvesting methods. The farming community is facing the problems of low yield, uneven rainfall attack of diseased and poor land and water management practices in the drought prone area of Anantapur district in Rayalaseema Region in Andhra Pradesh.

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INTRODUCTION

To understand the behavioral approach of the respondents in the study area, we have to analyze the various socio economic characteristics of the farming community along with their awareness on land and water use practices. For these purpose 99 farmers from three sample mandals in the district have been selected.

STUDY AREA AND METHODOLOGY

The present Study area of Kalyandurg, consisting of Kalyandurg, Brahasamudram and Setturu Mandals of Ananthapur District of Andhra Pradesh, India, Lies between 140 17' and 140 40' North Latitude and 760 50' and 770 24' East Longitude. It is located in the middle of the peninsular region and is confined to southwestern part of Andhra Pradesh. It is bounded by Gummagatta, Beluguppa, Atmakur, Kanaganapalli and Kambadur Kundurphi Mandals of the same district and western side bounded by Karnataka state. The total geographical area of the study area is 1101.25 Sq Km. Annual temperatures vary between 21°C and 42°C, temperatures will reach up to 45°C in Summer, Annual average rain fall varies between 370 m.m. and 760 m.m.

*Corresponding author: **Raghuveer Naidu, K.**,
Department of Geography Sri Krishnadevaraya University,
Anantapur, NRSC Hyderabad, A.P. India

MANDAL WISE AGE OF THE SAMPLE FARMERS

The age of the sample respondent farmers in Kalyanadurg area of Anantapur district is presented in Table 1. It reveals that 6.9% of the respondent farmers in Kalyanadurg Mandal, 4.7% in Brahasamudram Mandal and 7.4% in Setturu Mandal are in the age group of below 30 years of age. About 24% of the respondent farmers in Kalyanadurg Mandal, 32.6% in Brahasamudram Mandal and 40.7% in Setturu Mandal are in the age group of 30 to 40 years. It may also noticed that 44.8% in Kalyanadurg Mandal, 53.5% in Brahasamudram Mandal and 29.6% in Setturu Mandal are in the age group of 40-50 years of age. About 24% in Kalyanadurg Mandal, 9.3% in Brahasamudram Mandal and 22.2% in Setturu Mandal are in the age group of above 50 years. It may also noticed that out of 99 sample respondent farmers in the study area, 6.1% are in the age group of less than 30 years, 32.3% are in the age group of 30-40 years, 44.4% are in the age group of 40-50 years and the remaining 17% are in the age group of more than 50 years of age. The age group of the sample respondent farmers in the study area is presented diagrammatically in Figure 2.

Educational Status of the Sample Farmers

As shown in Table 2, in Kalyanadurg Mandal, 20.7% of the sample respondents are illiterates, 69% of the respondents have school education and 10.3% of the respondents have

college education. It may also noticed that in Brahmasamudram Mandal, 35.7% of the sample farmers are illiterates, 50% have school level education and 16.3% have college level education.

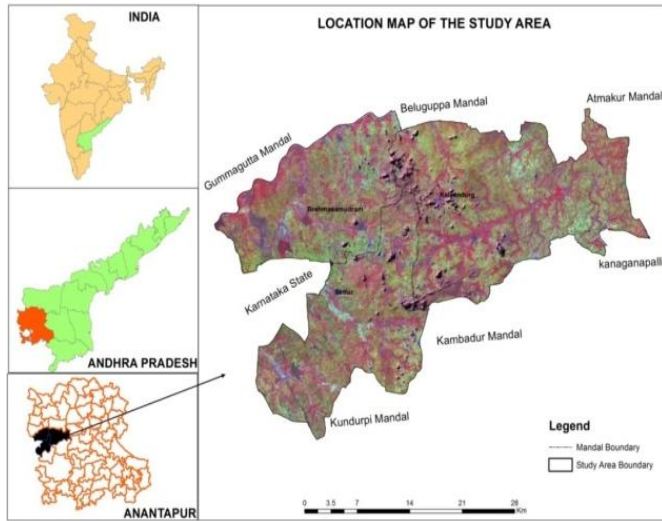


Figure1. Location Map of the Study Area of FCC Image of Kalyandurg

Table 1. Mandal-Wise Age of the Sample Farmers

Name of the Mandal	Age				Total
	Below 30	30 – 40	40 – 50	> 50	
Kalyanadurg	2.00	7.00	13.00	7.00	29.00
%	6.90	24.10	44.80	24.10	100.00
Brahmasamudram	2.00	14.00	23.00	4.00	43.00
%	4.70	32.60	53.50	9.30	100.00
Settur	2.00	11.00	8.00	6.00	27.00
%	7.40	40.70	29.60	22.20	100.00
Total	6.00	32.00	44.00	17.00	99.00
	6.10	32.30	44.40	17.20	100.00

Source: Field Survey

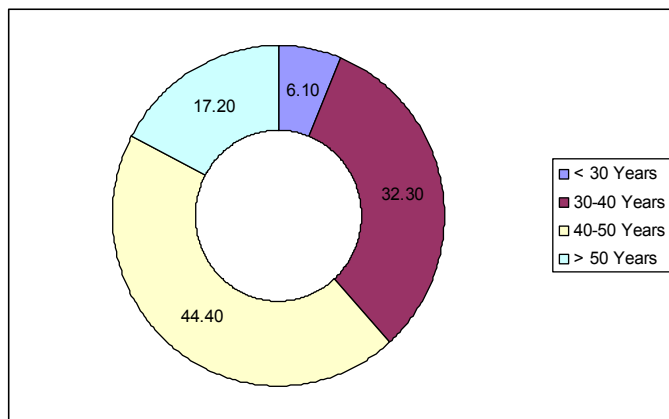


Fig. 2. Mandal-Wise Age of the Sample Farmers

It shows that in Settur Mandal, 44.4% are illiterates and other 55.6% have school level education. In all 3 sample gram Mandals under study, 33.7% are illiterates, 57.1% have school level education and 10.1% have college level education. The educational status of the sample respondent farmers in the selected Mandals of Kalyanadurg mandal under study is shown diagrammatically in Figure 3.

Table 2. Educational Standards of the Sample Farmers

Name of the Mandal	Educational Status			Total
	Illiterate	School Level	College Level	
Kalyanadurg	6.00	20.00	3.00	29.00
%	20.70	69.00	10.30	100.00
Brahmasamudram	15.00	21.00	7.00	43.00
%	35.70	50.00	16.30	100.00
Settur	12.00	15.00	0.00	27.00
%	44.40	55.60	0.00	100.00
Total	33.00	56.00	10.00	99.00
	33.70	57.10	10.10	100.00

Source: Field Survey

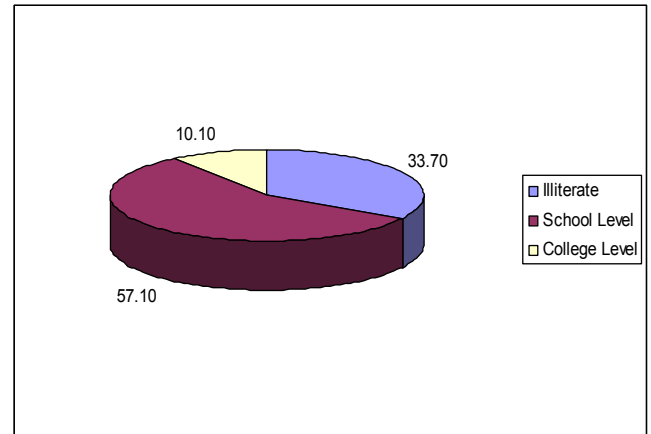


Fig. 2. Educational Standards of the Sample Farmers

SIZE OF THE FAMILY OF THE SAMPLE FARMERS

The size of family members of the sample households in the study area is presented in table 3. It is noticed that 6.9% of the sample respondent households in Kalyanadurg Mandal, 7 percent in Brahmasamudram Mandal and 11.1% in Settur Mandal have up to 3 members in the family. It may also observe that 17.2% of the sample households in Kalyanadurg Mandal, 9.3% in Brahmasamudram Mandal and 11.1% in Settur Mandal have 4 members in the family. It reveals that 31% in Kalyanadurg Mandal, 39.55 in Brahmasamudram Mandal and 25.9% in Settur Mandal have 5 family members. About 28% of the respondent families in Kalyanadurg Mandal, 25.6% in Brahmasamudram Mandal and 22.2% in Settur Mandal have 6 members in the family

Table 3. Size of the Family of the Sample Farmers

Name of the Mandal	No. of Family Members					Total
	Up to 3	4	5	6	> 6	
Kalyanadurg	2.00	5.00	9.00	8.00	4.00	29.00
%	6.90	17.20	31.00	27.60	13.80	100.00
Brahmasamudram	3.00	4.00	17.00	11.00	4.00	43.00
%	7.00	9.30	39.50	25.60	9.30	100.00
Settur	3.00	50.00	7.00	6.00	3.00	27.00
%	11.10	18.50	25.90	22.20	11.10	100.00
Total	8.00	14.00	33.00	25.00	11.00	99.00
	8.10	14.10	33.30	25.30	11.10	100.00

Source: Field Survey

It shows that 13.8% in Kalyanadurg Mandal, 9.3% in Brahmasamudram Mandal and 11.1% of the sample farmers in Settur Mandal have above 6 members in their families.

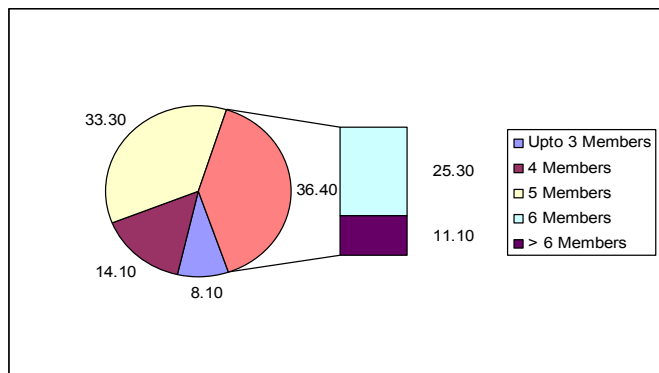


Fig. 4. Size of the Family of the Sample Farmers

It may also noticed that about 8% of the respondents in all the 3 sample Mandals have up to 3 members in their families, 14.1% of the respondents have 4 members, 33.3% have 5 members and 11.1% of the sample respondents have above 6 members in the family under study. The size of the family members of the sample respondent households in the study area is presented diagrammatically in Figure 4.

Number of Family Members Engaged in Agriculture

As shown in Table 4, about 10% the sample farmers in Kalyanadurg Mandal, around 2% in Brahmasamudram Mandal and about 7% in Settur Mandal, up to 2 members are engaging in agriculture. It shows that in 62% of the respondent households of Kalyanadurg Mandal, in nearly 70% of the sample household families of Brahmasamudram Mandal and in 46.2% of the sample household families of Settur Mandal, 3 members have been engaged in agriculture under reference.

Table 4. Number of Family Members Engaged in Agriculture

Name of the Mandal	Family Members Engaged in Farming Activity				Total
	2	3	4	5	
Kalyanadurg	3.00	18.00	7.00	1.00	29.00
%	10.30	62.10	24.10	3.40	100.00
Brahmasamudram	1.00	30.00	5.00	7.00	43.00
%	2.30	69.80	11.60	16.30	100.00
Settur	2.00	12.00	10.00	3.00	27.00
%	7.40	46.20	38.50	11.50	100.00
Total	6.00	60.00	22.00	11.00	99.00
%	6.10	61.20	22.40	11.20	100.00

Source: Field Survey

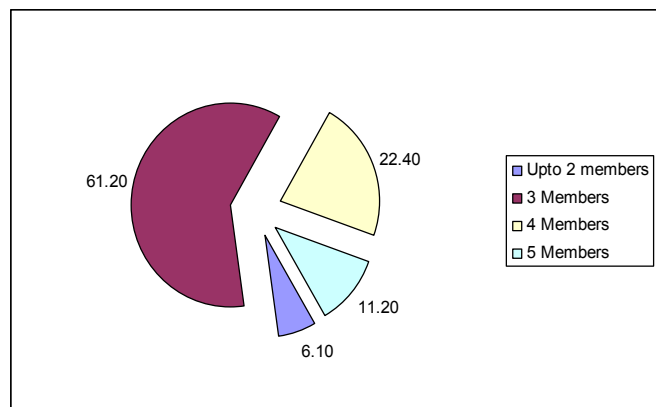


Fig. 5. Number of Family members Engaged in Agriculture

It may also observed that 4 family members are engaged in agriculture in 24% of the sample families of Kalyanadurg Mandal, in 11.6% of the families in Brahmasamudram Mandal and in 38.5% of the sample families in Settur Mandal. It may also noticed that 5 family members have been working in the farming activities of only one sample family in Kalyanadurg Mandal, 16.3% of the sample families in Brahmasamudram Mandal and in 11.5% of the sample families in Settur Mandal under reference. The figure 5 illustrates the number of family members engaged in Agriculture in the study area under reference.

LANDHOLDING SIZES OF THE SAMPLE FARMERS

Table 5 reveals that 20.7% of the sample households in Kalyanadurg Mandal, 28.6% of the sample farmers in Brahmasamudram Mandal and 33.3% of the sample respondent households in Settur Mandal have less than 3 acres of agricultural land. It shows that 27.6% of the sample households in Kalyanadurg Mandal, 31% of the respondents in Brahmasamudram Mandal and 33.3% of the sample respondents in Settur Mandal have 3 to 5 acres of land for agricultural operations. Nearly 35% of the sample respondent farmers in Kalyanadurg Mandal, 23.3% of the sample respondents in Brahmasamudram Mandal and 18.5% of the respondent families in Settur Mandal have 5 to 10 acres of agricultural land.

Table 5. Landholding Sizes of the Sample Farmers

Name of the Mandal	Land holding Size				Total
	<3 acres	3 – 5	5 – 10	> 10	
Kalyanadurg	6.00	8.00	10.00	5.00	29.00
%	20.70	27.60	34.50	17.20	100.00
Brahmasamudram	12.00	13.00	10.00	8.00	43.00
%	28.60	31.00	23.30	19.00	100.00
Settur	9.00	9.00	5.00	4.00	27.00
%	33.30	33.30	18.50	14.80	100.00
Total	27.00	30.00	25.00	17.00	99.00
	27.60	30.60	25.30	17.30	100.00

Source: Field Survey

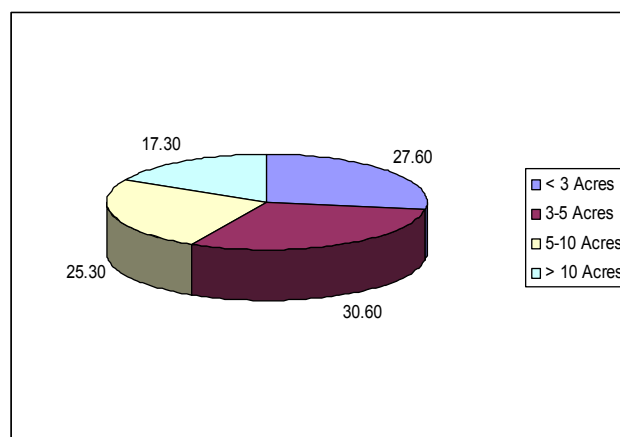


Fig. 6. Landholding Sizes of the Sample Farmers

It may also noticed that about 17% of the respondent families in Kalyanadurg Mandal, 19% of the sample farmers in Brahmasamudram Mandal and 14.8% of the sample respondents in Settur Mandal have above 10 acres of

agricultural land. It is observed that out of 99 sample respondent households, 27.6% of them have less than 3 acres of agricultural lands, 30.6% of the sample farmers have 3 to 5 acres and the remaining 17.3% have above 10 acres of land for cultivation and the same is illustrated diagrammatically in figure 6.

WATER MANAGEMENT THROUGH VARIOUS SOURCES OF IRRIGATION

As shown in Table 6, the various crops grown under rainfed by 458.3% of the sample farmers in Kalyanadurg Mandal, by 32.6% of the sample households in Brahmasamudram Mandal and by 22.2% of the respondent farmers in Settur Mandal.

Table 6. Rainfed and Irrigated Area under Different Crops of the Sample Farmers

Name of the Mandal	Rainfed / Irrigated		Total
	Rainfed	Irrigated	
Kalyanadurg	14.00	15.00	29.00
%	48.30	51.70	100.00
Brahmasamudram	14.00	29.00	43.00
%	32.60	69.00	100.00
Settur	6.00	21.00	27.00
%	22.20	77.80	100.00
Total	34.00	65.00	99.00
	34.30	66.30	100.00

Source: Field Survey

The Agriculture has been growing under irrigation by 51.7% of the sample cultivators in Kalyanadurg Mandal, by 69% of the sample farmers in Brahmasamudram Mandal and by 77.8% of the sample respondents in Settur Mandal. Out of 99 sample farmers in the study area, 34.3% are cultivating the crops under rainfed and 66.3% are cultivating the same under irrigation. The same is shown diagrammatically in figure 6.

SOURCES OF IRRIGATION FOR AGRICULTURE IN STUDY AREA

As shown in Table 7, canal irrigation is the major source for Cultivation in Brahmasamudram Mandal for only one respondent farmer. Bore well Irrigation is the major source for 94.1 % of the respondent farmers in Kalyanadurg Mandal. It is the major source for 96.4% in Brahmasamudram Mandal and for all the respondents in Settur Mandal. Open well irrigation is the major source for only one respondent farmer in Kalyanadurg Mandal under reference. Out of 66 farmers who are depending on irrigation sources, 1.5% each is depending on canal irrigation and open well irrigation respectively and the remaining 97 % of the respondents are depending on bore well irrigation. The source of irrigation for agricultural operations for the sample farmers is presented diagrammatically in Figure 8.

AREA UNDER SINGLE CROP IN THE SAMPLE MANDALS

It reveals that 84.6 percent of the sample respondent farmers in Kalyanadurg Mandal, 34.8% in Brahmasamudram Mandal and 28.6 % in Settur Mandal have been adopting single crop system in less than 2 acres of land. It may also observed that

11.5% in Kalyanadurg Mandal, 43.5% in Brahmasamudram Mandal and 64.3% in Settur Mandal are cultivating the single crops in 2 to 4 acres.

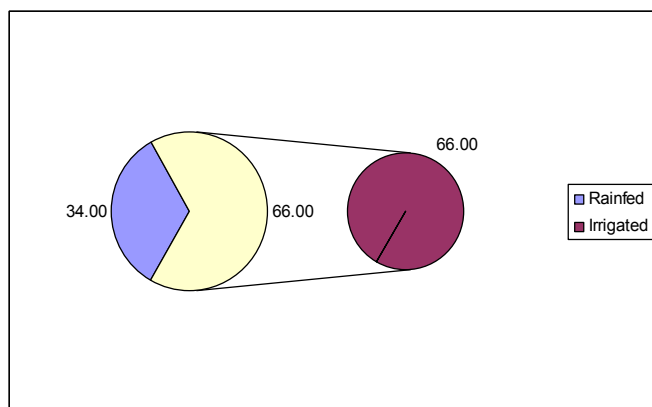


Fig. 7. Rainfed and Irrigated Area under different Crops of the Sample Farmers

Table 7. Sources of Irrigation for Agriculture of Farmers

Name of the Mandal	If irrigated source			Total
	Canal	Well	Bore well	
Kalyanadurg	0.00	16.00	1.00	17.00
%	0.00	94.10	5.90	100.00
Brahmasamudram	1.00	27.00	0.00	28.00
%	3.60	96.40	0.00	100.00
Settur	0.00	21.00	0.00	21.00
%	0.00	100.00	0.00	100.00
Total	1.00	64.00	1.00	66.00
	1.50	97.00	1.50	100.00

Source: Field Survey

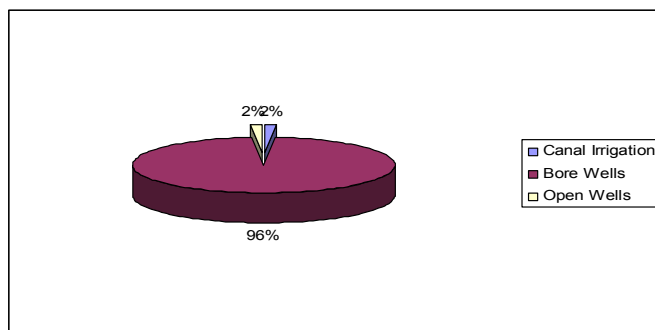


Fig. 8. Sources of Irrigation for Agriculture among the Sample Farmers

Table 8. Area under Single Crop in of the Farmers in Sample Mandals

Name of the Mandal	Under Single Crop			Total
	< 2 acres	2 – 4 acres	> 4 acres	
Kalyanadurg	22.00	3.00	1.00	26.00
%	84.60	11.50	3.80	100.00
Brahmasamudram	8.00	10.00	5.00	23.00
%	34.80	43.50	21.70	100.00
Settur	4.00	9.00	1.00	14.00
%	28.60	64.30	7.10	100.00
Total	34.00	22.00	7.00	63.00
	54.00	34.90	11.10	100.00

Source: Field Survey

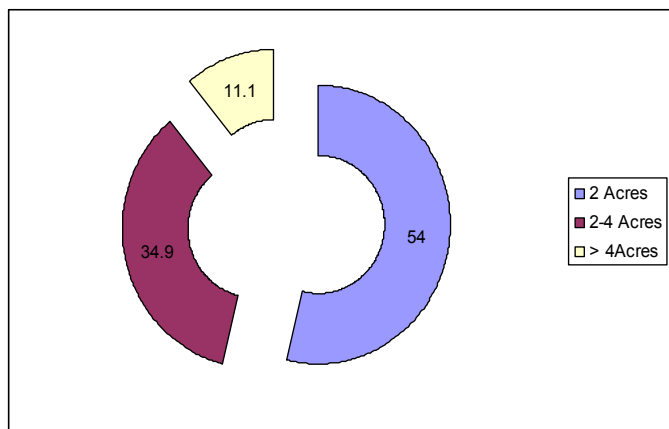


Fig. 9. Area under Single Crop in of the Farmers in Sample Mandals

It is noticed that 3.8 % in Kalyanadurg Mandal, 21.7 % in Brahmasamudram Mandal and 7.1 % in Settur Mandal are cultivating single crops in more than 4 acres as shown in Table 7.8. The area under single crops in the study area by different farmers is shown diagrammatically in Figure 9.

PROBLEMS ENCOUNTERED IN AGRO-BIOLOGICAL FACTORS OF PRODUCTION

The yield of crops in the rainfed area like Anantapur district depends on agro-biological conditions. It is observed that 10 % of the sample respondent farmers in Brahmasamudram Mandal and 3.7% in Settur Mandal faced the problem of severity of disease for their Agriculture. Nearly 4% in Kalyanadurg Mandal, 5% in Brahmasamudram Mandal and 7.4% in Settur Mandal encountered the problem of severity of pests. The severity of unequal rainfalls for the agricultural production was faced by 89.3% in Kalyanadurg Mandal, 52.5% in Brahmasamudram Mandal and 48.1% in Settur Mandal.

Table 9. Problems Encountered In Agro-Biological Factors of Production of Farming Community

Name of the Mandal	Problems Encountered In Agro-Biological Factors of Production				Total
	Severity of disease	Severity of pests	Severity of unequal Rains	Soil conservation	
Kalyanadurg	0.00	1.00	25.00	2.00	28.00
%	0.00	3.60	89.30	7.10	100.00
Brahmasamudram	4.00	2.00	21.00	13.00	40.00
%	10.00	5.00	52.50	32.50	100.00
Settur	1.00	2.00	13.00	11.00	27.00
%	3.70	7.40	48.10	40.70	100.00
Total	5.00	5.00	59.00	26.00	95.00
	5.30	5.30	62.10	27.40	100.00

Source: Field Survey

The soli conservation is the major problem for 7.1 % of the sample farmers in Kalyanadurg Mandal, for 32.5% of the respondents in Brahmasamudram Mandal and for 40.7% in Settur mandal. Out of 95 sample respondent farmers who faced the agro-biological factors, 5.3 % each were suffered with severity of disease for agriculture and pest problem. A majority of 62.1% faced the problem of unequal rainfall and another 27.4% encountered with the soil conservation problem. The problems encountered in agro-biological factors of production are shown diagrammatically in Figure 10

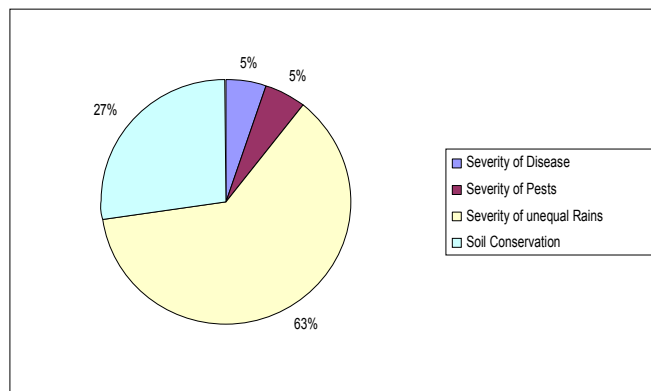


Fig. 10. Problems Encountered in Agro-Biological Factors of Production

AWARENESS OF THE FARMING COMMUNITY ON LAND MANAGEMENT PRACTICES

As shown in Table 10, only one respondent farmer in Kalyanadurg Mandal has no awareness on land management practices which increases the yield levels. It reveals that 96.6% in Kalyanadurg Mandal and all the respondent farmers in Brahmasamudram and Settur Mandals observed that they have an awareness on land management practices. The details of awareness of the farming community on land management practices of the sample respondent farmers are shown diagrammatically in Figure 11. As shown in Table 11, only one respondent farmer in Kalyanadurg Mandal has awareness on water management through drip irrigation. Another 13.95 % of the sample farmers in Brahmasamudram Mandal shave awareness on sprinkler irrigation. It reveals that all the respondent farmers in Kalyanadurg and Settur Mandal have no proper water Management practices and still they depends on traditional methods of irrigation. Out of 99 sample respondent farmers in Kalyanadurg area under study, one percent of the farming community has water management practice through

drip irrigation, 5% adopted the sprinkler irrigation practices and the remaining 94.95% are still depends on traditional methods of water management practices. The awareness of the farming community on modern irrigation methods in the study area is presented diagrammatically in figure 12.

CHANGE OF CROPPING PATTERN TO USE LESS WATER WITH MORE IRRIGATION

It may be observed that 13.8% of the sample farmers in Kalyanadurg Mandal, 44.7% in Brahmasamudram Mandal and

59.3% in Settur Mandal have been changed their cropping pattern from paddy to maize. Because of utilizing the less ground water for more area under irrigation 34.5% in Kalyanadurg Mandal, 18.4% in Brahmasamudram Mandal and 22.2% in Settur mandal diverted their cropping pattern from ragi/jowar to which gives more income with less water.

Table 10. Awareness of the Farming Community on the Land Management Practices

Name of the Mandal	Awareness on Land Management Practices		Total
	Yes	No	
Kalyanadurg	28.00	1.00	29.00
%	96.60	3.40	100.00
Brahmasamudram	36.00	0.00	36.00
%	100.00	0.00	100.00
Settur	25.00	0.00	25.00
%	100.00	0.00	100.00
Total	89.00	1.00	90.00
	98.90	1.10	100.00

Source: Field Survey

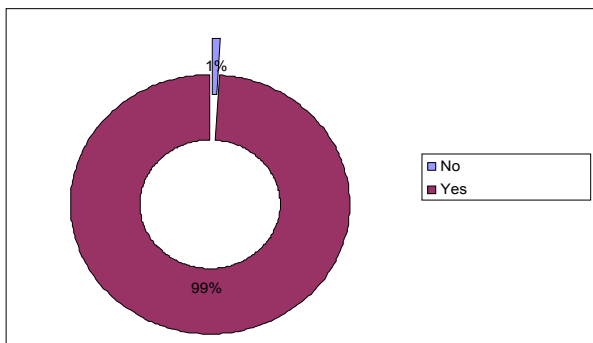


Fig. 11. Awareness of the Farming Community on the Land Management Practices

Awareness of the Farming Community on Water Management Practices

Table 11. Awareness of the Farming Community on Modern Irrigation Methods

Name of the Mandal	Awareness on			Total
	Drip Irrigation	Sprinkler Irrigation	No Awareness on Modern Irrigation Practices	
Kalyanadurg	0.00	0.00	29.00	29.00
%	0.00	0.00	100.00	100.00
Brahmasamudram	1.00	5.00	37.00	42.00
%	2.40	13.95	86.05	100.00
Settur	0.00	0.00	28.00	28.00
%	0.00	0.00	100.00	100.00
Total	1.00	5.00	94.00	99.00
	1.00	5.05	94.95	100.00

Source: Field Survey

It may be observed that 41.4% of the sample farmers in Kalyanadurg Mandal, 31.6% in Brahmasamudram Mandal and 14.8% in Settur Mandal changed their cropping pattern from to vegetable crops. Because of less income with more water requirement, 10.3% in Kalyanadurg Mandal, 5.3% in Brahmasamudram Mandal and 3.7% in Settur Mandal have changed their cropping pattern from traditional crops to

commercial crops. The change of cropping pattern by the farming community in the sample mandals is diagrammatically shown in Figure 13.

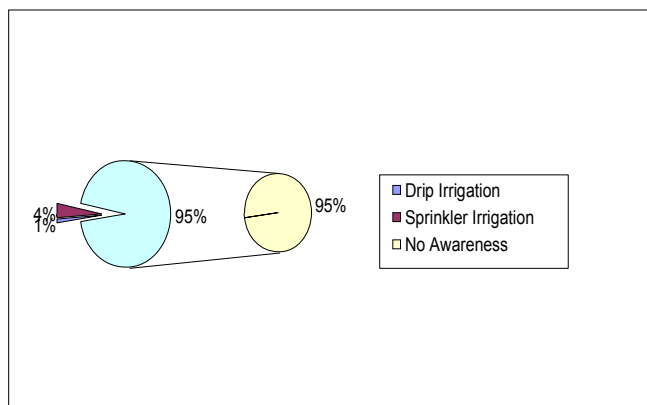


Fig. 12. Awareness of the Farming Community on Modern Irrigation Methods

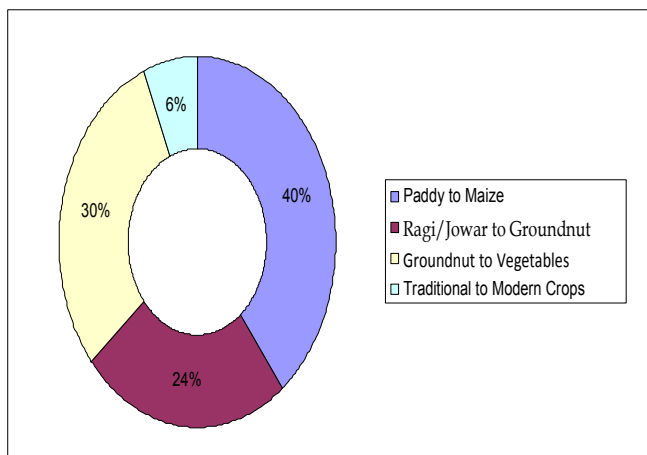


Fig. 13. Change of Cropping Pattern to use Less Water with More Irrigation

Awareness of the Farming Community on the benefits of Changing the Cropping Pattern

The awareness of the farming community on the benefits of change of cropping pattern is presented in table 13. It may be observed that 18.5% of the sample respondents in Kalyanadurg Mandal, 10.64% in Brahmasamudram Mandal and 4% in Settur Mandal have an awareness on the benefit of change of cropping pattern. It may also noticed that 81.5% in Kalyanadurg Mandal, 89.36% in Brahmasamudram Mandal and 96% in Settur Mandal have no awareness on the change of cropping pattern. Out of 99 sample respondents in the study area, 11.11% have awareness on the benefit of changing the cropping pattern and the remaining 88.88% of the sample farmers have no awareness on the benefit of changing their cropping pattern under study. The awareness on the benefit of change of cropping pattern in the study area is diagrammatically presented in Figure 14.

AWARENESS ON SOIL CONSERVATION PRACTICES

The awareness of the farming community on soil conservation practices in the study area is presented in Table 15. It is

Table 12. Change of Cropping Pattern to use Less Water with More Irrigation

Name of the Mandal	Change of Cropping Pattern				Total
	Paddy to Maize	Ragi/Jowar to	to Vegetables	Traditional Crops to Commercial Crops	
Kalyanadurg	4.00	10.00	12.00	3.00	29.00
%	13.80	34.50	41.40	10.30	100.00
Brahmasamudram	17.00	7.00	12.00	2.00	38.00
%	44.70	18.40	31.60	5.30	100.00
Settur	16.00	6.00	4.00	1.00	27.00
%	59.30	22.20	14.80	3.70	100.00
Total	37.00	23.00	28.00	6.00	94.00
	39.40	24.50	29.80	6.40	100.00

Source: Field Survey

observed that 96.3% of the sample respondents in Kalyanadurg Mandal, 64.3% in Brahmasamudram Mandal and 72% of the sample respondents in Settur Mandal have an awareness on soil conservation practices which results to fertile the soil and in turn to increase the yield levels in dry land agriculture.

practices in the selected Mandals of Kalyanadurg mandal is shown diagrammatically in Figure 15.

Table 13. Awareness on the Benefit of Changing the Cropping Pattern

Name of the Mandal	Awareness on the change of cropping pattern		Total
	Yes	No	
Kalyanadurg	5.00	22.00	27.00
%	18.50	81.50	100.00
Brahmasamudram	5.00	42.00	42.00
%	10.64	89.36	100.00
Settur	1.00	24.00	25.00
%	4.00	96.00	100.00
Total	11.00	88.00	99.00
	11.11	88.88	100.00

Source: Field Survey

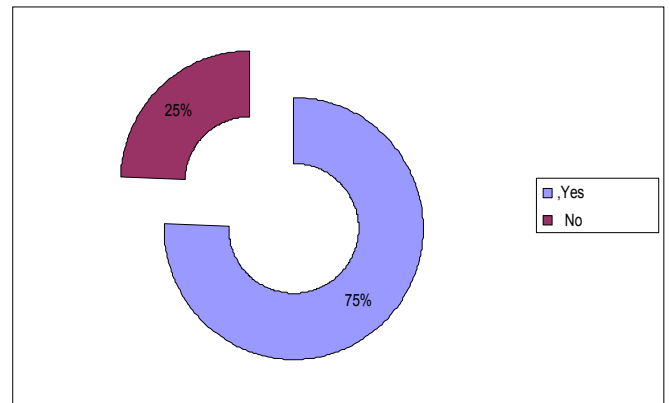


Fig. 15. Awareness on Soil conservation Practices

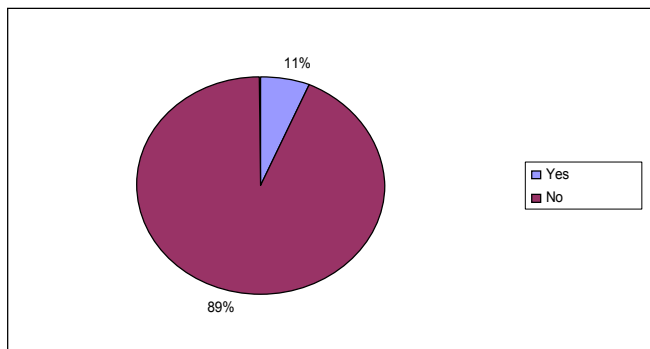


Fig. 14. Awareness on the Benefit of Change of Cropping Pattern

Table 14. Awareness on Soil Conservation Practices

Name of the Mandal	Awareness		Total
	Yes	No	
Kalyanadurg	26.00	1.00	27.00
%	96.30	3.70	100.00
Brahmasamudram	27.00	15.00	42.00
%	64.30	35.70	100.00
Settur	18.00	7.00	25.00
%	72.00	28.00	100.00
Total	71.00	23.00	94.00
	75.50	24.50	100.00

Source: Field Survey.

Table 15. Awareness on Water Harvesting Methods

Name of the Mandal	Awareness		Total
	Yes	No	
Kalyanadurg	26.00	1.00	27.00
%	96.30	3.70	100.00
Brahmasamudram	41.00	1.00	42.00
%	97.60	2.40	100.00
Settur	25.00	5.00	30.00
%	83.30	16.67	100.00
Total	92.00	2.00	99.00
	92.93	7.07	100.00

Source: Field Survey.

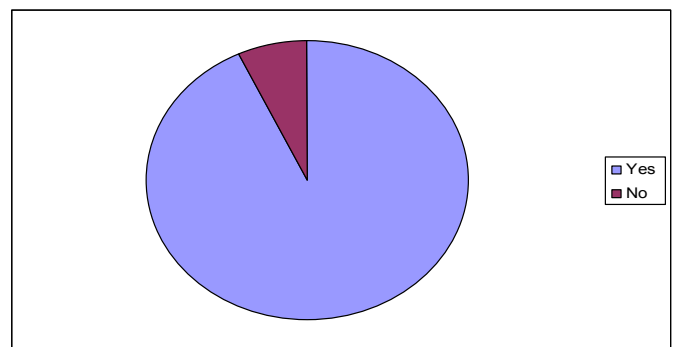


Fig. 16. Awareness on Water Harvesting methods

It may also noticed that nearly 4% in Kalyanadurg Mandal, 35.7% in Brahmasamudram Mandal and 28% in Settur Mandal have no awareness on soil conservation practices. The awareness of the farming community on the soil conservation

Awareness on Water Harvesting Methods

As shown in Table 16, 96.3% of the sample farmers in Kalyanadurg Mandal, 97.6% in Brahmasamudram Mandal and

83.33 % in Settur Mandal have an awareness on water harvesting methods. It may also noticed that one respondent farmer each in Kalyanadurg and Brahmasamudram Mandal and 16.67% of the sample farmers in Settur Mandal have no awareness on water harvesting practices. Out of 99 sample farmers in the study area, 92.93% have no awareness on water harvesting methods under study.

Conclusion

The study has been undertaken to know the behavioral approach of the farming community on land and water management practices in Kalyanadurg area of Anantapur district. The farmers in the dry land areas of the district are mainly depending on Agriculture. The farming community is facing the problems if low yield, uneven rain fall, attack of diseases and poor land and water management practices in a drought prone Anantapur district of Rayalaseema region in Andhra Pradesh. It reveals that 6.9% of the respondent farmers in Kalyanadurg Mandal, 4.7% in Brahmasamudram Mandal and 7.4% in Settur Mandal are in the age group of below 30 years of age. About 24% of the respondent farmers in Kalyanadurg Mandal, 32.6% in Brahmasamudram Mandal and 40.7% in Settur Mandal are in the age group of 30 to 40 years. It may also noticed that in Brahmasamudram Mandal, 35.7% of the sample farmers are illiterates, 50% have school level education and 16.3% have college level education.

It is noticed that 6.9% of the sample respondent households in Kalyanadurg Mandal, 7 percent in Brahmasamudram Mandal and 11.1% in Settur Mandal have up to 3 members in the family. It may also observed that 17.2% of the sample households in Kalyanadurg Mandal, 9.3% in Brahmasamudram Mandal and 11.1% in Settur Mandal have 4 members in the family. It shows that 13.8% in Kalyanadurg Mandal, 9.3% in Brahmasamudram Mandal and 11.1% of the sample farmers in Settur Mandal have above 6 members in their families. It shows that in 62% of the respondent households of Kalyanadurg Mandal, in nearly 70% of the sample household families of Brahmasamudram Mandal and in 46.2% of the sample household families of Settur Mandal, 3 members have been engaged in agriculture under reference.

It may also noticed that 5 family members have been working in the farming activities of only one sample family in Kalyanadurg Mandal, 16.3% of the sample families in Brahmasamudram Mandal and in 11.5% of the sample families in Settur Mandal under reference.

It reveals that 20.7% of the sample households in Kalyanadurg Mandal, 28.6% of the sample farmers in Brahmasamudram Mandal and 33.3% of the sample respondent households in Settur Mandal have less than 3 acres of land. It shows that 27.6% of the sample households in Kalyanadurg Mandal, 31% of the respondents in Brahmasamudram Mandal and 33.3% of the sample respondents in Settur Mandal have 3 to 5 acres of land for agricultural operations. The Agriculture has been growing under irrigation by 51.7% of the sample cultivators in Kalyanadurg Mandal, by 69% of the sample farmers in Brahmasamudram Mandal and by 77.8% of the sample respondents in Settur Mandal. Out of 99 sample farmers in the

study area, 34.3% are cultivating under rainfed and 66.3% are cultivating the same under irrigation. Bore well Irrigation is the major source for 94.1 % of the respondent farmers in Kalyanadurg Mandal. It is the major source for 96.4% in Brahmasamudram Mandal and for all the respondents in Settur Mandal. Open well irrigation is the major source for only one respondent farmer in Kalyanadurg Mandal under reference. It reveals that 84.6 percent of the sample respondent farmers in Kalyanadurg Mandal, 34.8% in Brahmasamudram Mandal and 28.6 % in Settur Mandal have single crops in less than 2 acres of land. It may also observed that 11.5% in Kalyanadurg Mandal, 43.5% in Brahmasamudram Mandal and 64.3% are doing the practice of single crop system in Settur Mandal in 2 to 4 acres. The soil conservation is the major problem for 7.1 % of the sample farmers in Kalyanadurg Mandal, for 32.5% of the respondents in Brahmasamudram Mandal and for 40.7% in Settur panchayat. Out of 95 sample farmers who faced the agro-biological factors, 5.3 % each were suffered with severity of disease for Agriculture and pest problem.

It reveals that 96.6% in Kalyanadurg Mandal and all the respondent farmers in Brahmasamudram and Settur Mandals have awareness on land management practices under references. It reveals that 4.40 percent of the farming community in Kalyanadurg has no awareness on land management practices. Out of 99 sample respondent farmers in Kalyanadurg mandal under study, one percent has awareness on drip irrigation method, 5% have awareness on sprinkler irrigation method.

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