

# **IMPACT ASSESSMENT STUDY**

## **CHILLI FARM VALUE CHAIN DEVELOPMENT THROUGH INTEGRATED AGRI EXTENSION PLATFORM IN ANDHRA PRADESH 2020-21**

**PROJECT REPORT**

**Submitted to**

**COLLEGE OF HORTICULTURE, VR GUEDEM, Dr. YSRHU**

**AND**

**ITC LIMITED - AGRI BUSINESS DIVISION**

**By**

**B. ARUNA**

**D. MEGHANA**

**A.L.S.V. MANEESHA**

**K. LEELA VAISHNAVI**



[B.Sc. (Hons) Horticulture, College of Horticulture]

**DR. Y.S.R HORTICULTURAL UNIVERSITY**

**VENKATARAMANNAGUEM, WEST GODAVARI - 534 101.**

## DECLARATION

We, **Ms. B. ARUNA, Ms. D. MEGHANA, Ms. A.L.S.V. MANEESHA** and **Ms. K. LEELA VAISHNAVI** hereby declare that the project report entitled, "**IMPACT ASSESSMENT STUDY - CHILLI FARM VALUE CHAIN DEVELOPMENT THROUGH INTEGRATED AGRI EXTENSION PLATFORM IN ANDHRA PRADESH 2020-21**", submitted to ITC Agri Business Division, Guntur, Andhra Pradesh, in the fulfilment of requirement for the completion of internship, is the result of original work done by us.

**Place:** VR Gudem

**Date:**

*B. Aruna*

**1. B. ARUNA**

(College of Horticulture, VR Gudem, Dr. YSRHU)

*D. Megha*

**2. D. MEGHANA**

(College of Horticulture, VR Gudem, Dr. YSRHU)

*A. L. S. V. Maneesha*

**3. A.L.S.V. MANEESHA**

(College of Horticulture, VR Gudem, Dr. YSRHU)

*K. Leela Vaishnavi*

**4. K. LEELA VAISHNAVI**

(College of Horticulture, VR Gudem, Dr. YSRHU)


## CERTIFICATE

Ms. B. ARUNA, Ms. D. MEGHANA, Ms. A.L.S.V MANEESHA and Ms. K.LEELA VAISHNAVI have satisfactorily completed the project titled "IMPACT ASSESSMENT STUDY - CHILLI FARM VALUE CHAIN DEVELOPMENT THROUGH INTEGRATED AGRI EXTENSION PLATFORM IN ANDHRA PRADESH 2020-21". The project has been submitted based on the review study and original farmer's survey in Guntur, Krishna, Kurnool and Prakasam districts of Andhra Pradesh state. The work done is of sufficiently high standard to warrant its submission to the industry.

I certify that neither the project report nor its part thereof has been previously submitted by them for any other institution or industry.

Place: VR Gudem

Date:



K UMAJYOTHI

Associate Dean  
College of Horticulture, VR Gudem  
Dr. YSR Horticultural University

ASSOCIATE DEAN  
COLLEGE OF HORTICULTURE  
Dr. YSR HORTICULTURAL UNIVERSITY  
VENKATARAMANNAGUDEM-534 101

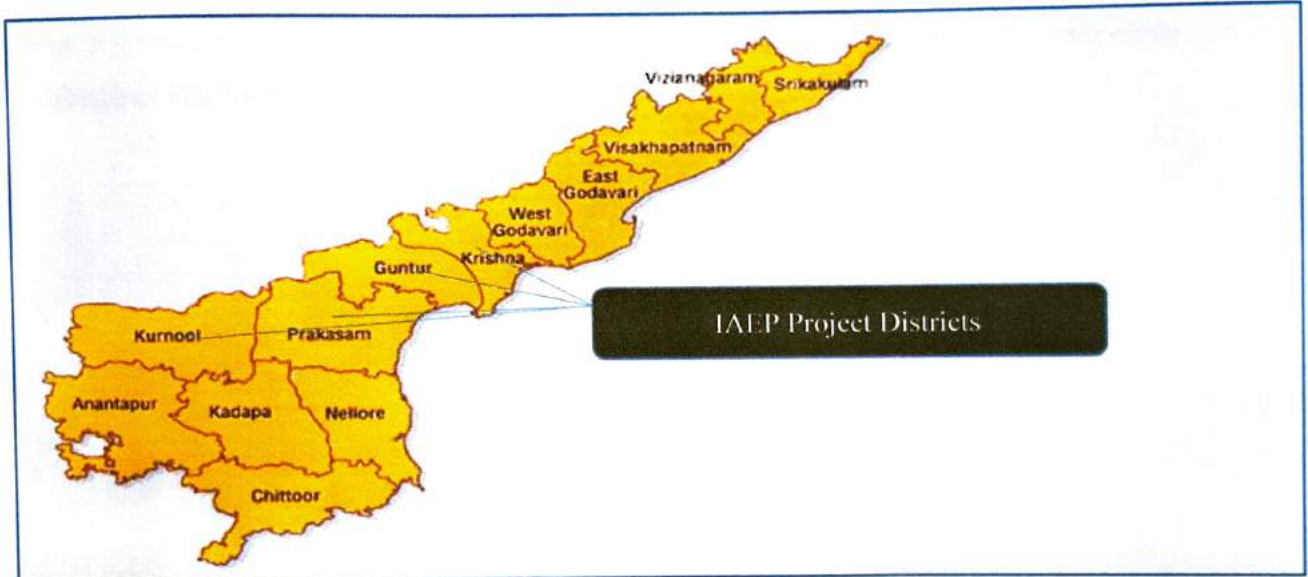
## TABLE OF CONTENTS

<b>Sl.No.</b>	<b>CHAPTER TITLE</b>
<b>1</b>	<b>INTRODUCTION</b>
<b>2</b>	<b>METHODOLOGY</b>
<b>3</b>	<b>RESULTS AND DISCUSSION</b>
	<b>3.1 GUNTUR DISTRICT</b>
	<b>3.2 KRISHNA DISTRICT</b>
	<b>3.3 KURNOOL DISTRICT</b>
	<b>3.4 PRAKASAM DISTRICT</b>
<b>4</b>	<b>SUMMARY AND CONCLUSION</b>
<b>5</b>	<b>ANNEXURE - I &amp; II</b>

# CHAPTER - I

## INTRODUCTION

Andhra Pradesh being the largest chilli producing state in India, having potential for improvement in chilli exports. Considering the above potential Horticulture Department of Andhra Pradesh and ITC Limited - Agri Business Division had signed a Memorandum of Understanding (MOU) to establish an "Integrated Agri Extension Platform (IAEP)" with focus on Chilli farm value chain development under public private partnership model during 2019-20. The objective of the partnership was to enable farmers to improve agricultural productivity and to meet global quality standards, also to manage the cost of production and to address agricultural sustainability in chilli farming. This five years MOU targets to cover 1 lakh acres of chilli area under "Integrated Agri Extension Platform (IAEP)" by 2023/24 in 4 districts of Andhra Pradesh (Guntur, Krishna, Kurnool and Prakasam).



The progression plan of area coverage is given below:

Implementation Year		Area Progression Plan
Y 1	2019-20	12,250 Acres
Y 2	2020-21	26,844 Acres
Y 3	2021-22	50,000 Acres
Y 4	2022-23	75,000 Acres
Y 5	2023-24	100,000 Acres

The project started with undertaking a baseline study during May 2019 by Acharya NG Ranga Agriculture University (ANGRAU), explaining the As-Is scenario of farmers in project districts. The study was conducted in planned project villages of Guntur, Krishna, Kurnool and Prakasam districts and major heads covered during baseline survey was - Farmers and Crop profiling, Cost of cultivation, Adoption status of Good Agriculture Practices and Market information.

The project titled "Chill Farm Value Chain Development through Integrated Agri Extension Platform" was implemented during crop season 2019-20 (Year I), covering 4,035 farmers and 12,250 acres. In 2020-21 (Year II) the project was extended to 10,064 farmers covering 26,844 acres. To understand the impact of the programme implemented during Year II, College of Horticulture, VR gudem, Dr. Y.S.R. Horticulture University, has undertaken "Impact Assessment Study" in the project villages at Guntur, Krishna, Kurnool and Prakasam districts, under the chairmanship of Dr. K. Umajyothi (Associate Dean, College of Horticulture Dr. YSRHU)

---

## CHAPTER - II

# STUDY METHODOLOGY

To study the impact of "Integrated Agri Extension Platform (IAEP)" project implemented during 2020-21, following tools were selected for study.

### 2.1. One to one interaction with farmers

It was planned for one to one interaction with the sample farmers to collect data and to analyze the impact status

**Sample size:** The Digital crop monitoring of ITC's e-Choupal 4.0 data review revealed 10,064 farmers under the IAEP programme during 2020-21. Hence, considering the available farmer base, the statistically validated sample size for impact assessment finds to be 328 farmers. Team has planned to collect data from more number of farmers to avoid data outliers during the study, making the total sample size near to 390 farmers.

Raosoft		Sample size calculator
What margin of error can you accept? <small>Lower is a tighter choice</small>	5%	The margin of error is the amount of error that you can tolerate. If 50% of respondents answer yes while 10% answer no, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 25-75. Lowest margin of error requires a larger sample size.
What confidence level do you need? <small>Typical choices are 90%, 95%, or 99%</small>	99%	The confidence level is the amount of uncertainty you will tolerate. Suppose if you have 20 possible solutions in your survey. With a confidence level of 95%, you would expect that for one of these questions (1 in 20), the percentage of people who choose your solution is more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.
What is the population size? <small>Enter 0 for unknown</small>	10064	How many people were there to choose your solution with? If a sample size doesn't change much in populations larger than 20,000.
What is the response distribution? <small>Leave this as 50%</small>	50%	For each question, what do you expect the results will be? If the sample is skewed highly one way or the other the probability is, too. If you don't know, use 50% which gives the largest sample size. See below under <b>More information</b> if this is confusing.
Your recommended sample size is	328	This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

### 2.2. Review of desk-based data

A good quantum of data was captured on ITC's digital platform called e-Choupal 4.0. To understand the implementation status, it was planned to review the data captured on e-Choupal platform as well as to understand the improvement in adoption of good agricultural practices, Baseline study report prepared by ANGRAU was planned to be reviewed and compared.

#### Steps followed during the Impact study:

- ❖ Template preparation for data collection, in consideration with data captured during baseline survey and various initiatives implemented in IAEP project.
- ❖ Defining district wise statistically validated sample size to undertake study.

- ❖ One to one farmer interaction in all project districts and collection of data.
- ❖ Desk-based data collection and review.
- ❖ Data analysis.
- ❖ Report writing and submission to College of Horticulture, VR Gudem, DR. YSR Horticulture University and ITC Limited.

Data collection template for the study and List and details of surveyed farmers are given in annexure I and annexure II respectively.

---



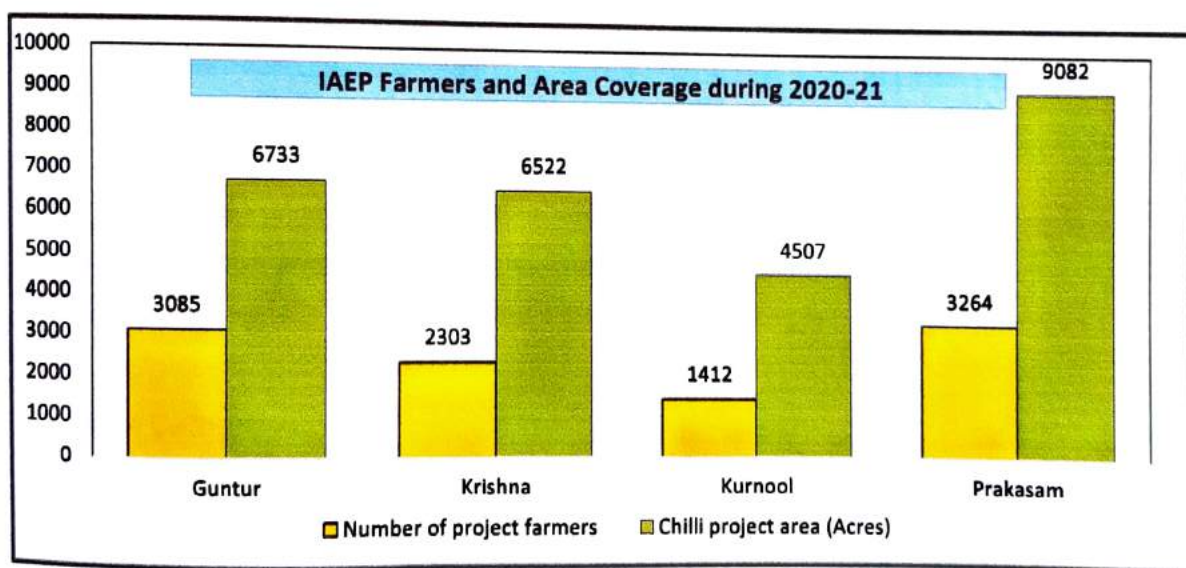
## CHAPTER - III

### RESULTS AND DISCUSSION

Farmer's survey and Desk-based review has revealed that the Integrated Agri Extension Platform (IAEP) has demonstrated multi-disciplinary approach of agri extension, which includes one to one farmer interaction by agri experts, village level collaborative training programme by Horticulture Department, ITC Limited and technical partners, establishment of large scale demonstration plots, crop advisory by digital call centre, crop advisory/news/alerts by digital application called e-Choupal 4.0, distribution of chilli handbook to project farmers, real time digital crop monitoring and supporting farmer's in adoption of good agriculture practices by leveraging subsidy schemes by Government.

The table given below details the number of project farmers and chilli area covered

Project Particulars	District				Grand Total
	Guntur	Krishna	Kurnool	Prakasam	
Number of project farmers	3,085	2,303	1,412	3,264	10,064
Chilli project area (Acres)	6,733	6,522	4,507	9,082	26,844



Three hundred and ninety (390) chilli project farmers from IAEP project villages were selected randomly and surveyed from 4 districts.

The key outcomes of the study are divided into five heads:

1. Farmer and Crop profiling
2. Cost of cultivation
3. Adoption status of Good Agriculture Practices and Sustainability measures
4. Market information
5. Farmer's feedback on IAEP project

District wise key outcomes of the impact study results are given below

### 3.1 GUNTUR DISTRICT

A total of 105 chilli farmers were selected randomly out of 3085 farmers and surveyed to capture the project impact in Guntur district from Atchampet, Edlapadu, Krosuru, Medikondur, Nadendla, Narasaraopet, Prathipadu, Satenapalli mandals. The key outcomes of the study are based on farmer's response and desk based study is given below:

#### 3.1.1 Farmer and Crop profiling

Farmer categorization:

- ❖ Marginal farmers (<2.5 acres) - 11%
- ❖ Small farmers (2.5 to 5 acres) - 21%
- ❖ Semi medium farmers (5 to 10 acres) - 37%
- ❖ Medium farmers (10 to 25 acres) - 27%
- ❖ Large farmers (>25 acres) - 4%
- ❖ Major crops grown by the farmers - Chilli and Cotton
- ❖ Average area under Chilli cultivation - 3.8 Acres (47% of the total land holding is used for chilli cultivation and remaining is used for cotton and other crop cultivation)
- ❖ Major chilli variety grown in Guntur district is Teja (34%) followed by LCA - 334 (19.5%).

#### 3.1.2 Cost of Cultivation

- Chilli crop productivity - 22.3 Qtl/acre.
- Grade out turns of Chilli-
  - Grade A + B - 88%
  - Grade C + Talu - 12%

Sl.no	Particulars	OP Varieties	Hybrids
1	Annual gross income from Chilli - lakhs/acre	2.26	2.32
2	Cost of cultivation of Chilli - lakhs/acre	1.15	1.18
3	Net returns from Chilli - lakhs/acre	1.11	1.14

### 3.1.3 Adoption status of Good Agriculture Practices and Sustainability measures

Horticulture department and ITC's efforts in Guntur district for improving the adoption of good agriculture practice and sustainability measures among farming community, by various training programmes, establishment of demonstration plots and real time crop monitoring and crop advisory is detailed below:

Initiatives Head	Base line report	Implementation status	% improvement over base line
Seed Source - Market/Own seed	100%	100%	100% quality seed were used by the farmers, sourced from market
Fertilizer application (Bags/Acre)	17	15	Reduction of 2 bags per acre equivalent of saving of 100 Kg fertilizer per acre
Frequency of fertilizer application (No's/season)	3	3	-
Customized fertilizer %	0%	4%	4% increase in adoption of customized fertilizer
Frequency of Pesticide application (No's/season)	20	16	Reduction in 4 sprayings
Integrated pest management Kits - Sticky traps, Pheromone traps and Neem oil	10%	17%	7% increase in adoption of Sticky traps, Pheromone traps and Neem oil
Integrated crop management Kits - Trichoderma, Pseudomonas, Beauveria	15%	18%	3% increase in adoption of Trichoderma, Pseudomonas, Beauveria
Weedicide (% farmers)	30%	0	-
Irrigation type – Drip (% area)	2%	2%	-
Irrigation type - Flood (% area)	98%	98%	-
Frequency of irrigation	6	5	Reduction in 1 irrigation

% farmers give wages to labor as per Govt. Norms	-	100%	-
% farmers do not engage child labor	-	100%	-
Chilli drying- Over bare soil (%)	95%	82%	13% reduction in chilli drying over bare soil
Chilli drying- Over Silpaulin (%)	5%	16%	11% increase in adoption of chilli drying over silpaulin
Chilli drying- Foldable Chilli dryer (%)	0%	2%	2% increase in adoption of chilli drying over silpaulin
% farmer adopted new gunny bags for packing	-	12%	

### 3.1.4 Market information

- Total chilli volume produced by the project farmers at Guntur district (3,085 farmers, 6,733 Acres) – 15,016 MT
- Total farm gate buying from Guntur project villages – 7,510 MT (50 % of total produced volume)
- Total chilli volume sold at Mandi – 4,296 MT (28.6% of total produced volume)
- Total chilli volume stored at Cold storage – 3,210 MT (21.4% of total produced volume)
- Improvement at farm gate buying has been observed in project villages in comparison to general villages

### 3.1.5 Farmer's feedback on IAEP project

Following are the feedback received from Guntur district farmers, when asked about the implementation of various initiatives planned for Integrated Agri Extension Platform project 2020/21. On five-point scale ranging from not good, OK, Good, Very Good, Excellent, the overall feedback of Guntur farmers on project implementation and its impact was Excellent by 32% farmers and Very good by 63% farmer where remaining 5% was good.

Questionnaire asked	Farmer response	% Farmer response
Did you get regular support/advisory from Village level ITC's field monitor or Horticulture Department?	Yes	100%
	No	-
Did you attend village level meetings conducted by ITC limited and Horticulture Department?	Yes	100%
	No	-
Did you receive "Chilli handbook" by ITC and Horticulture Department?	Yes	100%
	No	-
Is Chilli handbook useful to you?	Yes	100%
	No	-
How is the Chilli handbook useful to you?	Farmer found chilli handbook as useful pertaining to Pest and Disease Management, Good agricultural Practices and Post Harvest Product Management	
Did you receive crop advisory from ITC Call center on good agriculture practices?	Yes	100%
	No	-
Was the information's provided by Call center and Village level meetings were useful to you?	Yes	100%
	No	-
Do you know about e-Choupal application?	Yes	100%
	No	-
Did you check on your own or get assisted by field resource to see Good agriculture practice videos/ photos on e-Choupal application?	Self	-
	Field Staff	100%
Did you participate in forum/Chat section of e-Choupal application ever?	Yes	100%
	No	-
Did you visit demonstration plots established in your village?	Yes	100%
	No	-
Did you learn some good agriculture practice from demonstration plot?	Yes	100%
	No	-
Did you receive training on labor rights, child labor and fair treatment of labors?	Yes	100%
	No	-
How is your overall feedback about IAEP project in your village?	Not Good	-
	OK	-
	Good	5%
	Very Good	63%
	Excellent	32%

### 3.2 KRISHNA DISTRICT

A total of 99 chilli farmers were selected randomly out of 2303 farmers and surveyed to capture the project impact in Krishna district, from Anigandlapadu, Kambhampadu, Lingagudem, Machinenipalem, Makkapeta, Bhimavaram, Utukuru, Konijerla, Penuganchiprolu, Sivapuram, Thalluru and Vatsavai villages of Penuganchiprolu, Gampalagudem and Vatsavai mandals. The key outcomes of the study are given below. The key outcomes of the study are based on farmer's response and desk based study is given below:

#### 3.2.1 Farmer and Crop profiling

Farmer categorization:

- ❖ Marginal farmers (<2.5 acres) - 1%
- ❖ Small farmers (2.5 to 5 acres) - 9%
- ❖ Semi medium farmers (5 to 10 acres) - 28%
- ❖ Medium farmers (10 to 25 acres) - 53%
- ❖ Large farmers (>25 acres) - 9%
- ❖ Major crops grown by the farmers – Chilli, Paddy, Maize and Cotton
- ❖ Average area under chilli cultivation - 6.69 Acres (49.9% of the total land holding is used for chilli cultivation and remaining is used for cotton and other crop cultivation).
- ❖ Major chilli variety grown in Krishna district is LCA- 334 (57%), followed by Teja (36%).

#### 3.2.2 Cost of cultivation

- Chilli crop productivity- 21.6 Qtl/Acre
- Grade out turns of chilli -
  - Grade A + Grade B: 85%
  - Grade C + Talu: 15%

Sl.no	Particulars	OP Varieties	Hybrids
1	Annual gross income from Chilli - lakhs/acre	2.19	2.32
2	Cost of cultivation of Chilli - lakhs/acre	1.4	1.15
3	Net returns from Chilli - lakhs/acre	1.05	1.17

### 3.2.3. Adoption status of Good Agriculture Practices and Sustainability measures

Horticulture department and ITC' s efforts in Krishna district for improving the adoption of good agriculture practice and sustainability measures among farming community, by various training programmes, establishment of demonstration plots and real time crop monitoring and crop advisory is detailed below:

Initiatives Head	Base line Report	Implementation status	% improvement over base line
Seed Source - Marketing/Own seed	100%	100%	100% quality seed were used by the farmers, sourced from market.
Fertilizer application (Bags/Acre)	18	16	Reduction of 2 bags per acre equivalent of saving of 100 Kg fertilizer per acre
Frequency of fertilizer application (No.s/season)	3	3	-
Customized fertilizer %	12%	14%	2% increase in adoption of customized fertilizer
Frequency of Pesticide application (No.s/season)	18	16	Reduction in 2 sprayings
Integrated pest management Kits – Sticky traps, Pheromone traps and Neem oil	45%	54%	12% increase in adoption of Sticky traps, Pheromone traps and Neem oil
Integrated crop management Kits - Trichoderma, Pseudomonas, Beauveria	20%	28%	8% increase in adoption of Trichoderma, Pseudomonas, Beauveria
Weedicide (% farmers)	35%	2%	33% reduction in usage of weedicide against 35% farmers following weedicide application during baseline.
Irrigation type - Drip(% area)	3%	3%	-
Irrigation type - Flood (% area)	97%	97%	-
Frequency of irrigation	6	5	Reduction in 1 irrigation
% farmers give wages to labor as per Govt. Norms	-	100%	-
% farmers do not engage child labor	-	100%	-
Chilli drying- Over bare soil (%)	93%	84%	9% reduction in chilli drying over bare soil

Chilli drying- Over Silpaulin (%)	7%	13%	6% increase in adoption of chilli drying over silpaulin
Chilli drying- Foldable Chilli dryer (%)	0%	3%	3% increase in adoption of chilli drying over foldable chilli dryer
% farmer adopted new gunny bags for packing	-	21%	

### 3.2.4 Market information

- Total chilli volume produced by the project farmers at Krishna district from 2,303 farmers at 6,522 Acres – 14,096 MT
- Total farm gate buying from Krishna project villages – 8,954 MT (63.5% of total produced volume)
- Total chilli volume sold at Mandi- 3,354 MT (23.8 % of total produced volume)
- Total chilli volume stored at Cold storage – 1,788 MT (12.7% of total produced volume)
- Improvement at farm gate buying has been observed in project villages in comparison to general villages

### 3.2.5 Farmer's feedback on IAEP project

Following are the feedback received from Krishna district farmers, when asked about the implementation of various initiatives planned for Integrated Agri Extension Platform project 2020/21. On five-point scale ranging from not good, OK, Good, Very Good, Excellent, the overall feedback of Guntur farmers on project implementation and its impact was Excellent by 48% farmers and Very good by 45% farmer where remaining 7% was good.



Questionnaire asked	Farmer response	% Farmer response
Did you get regular support/advisory from Village level ITC's field monitor or Horticulture Department?	Yes	100%
	No	-
Did you attend village level meetings conducted by ITC limited and Horticulture Department?	Yes	100%
	No	-
Did you receive "Chilli handbook" by ITC and Horticulture Department?	Yes	100%
	No	-
Is Chilli handbook useful to you?	Yes	100%
	No	-
How is the Chilli handbook useful to you?	Farmer found chilli handbook as useful pertaining to Pest and Disease Management, Good agricultural Practices and Post Harvest Product Management	
Did you receive crop advisory from ITC Call center on good agriculture practices?	Yes	100%
	No	-
Was the information provided by Call center and Village level meetings useful to you?	Yes	100%
	No	-
Do you know about e-Choupal application?	Yes	100%
	No	-
Did you check on your own or get assisted by field resource to see Good agriculture practice videos/ photos on e-Choupal application?	Self	12%
	Field Staff	88%
Did you participate in forum/Chat section of e-Choupal application ever?	Yes	100%
	No	-
Did you visit demonstration plots established in your village?	Yes	90%
	No	10%
Did you learn some good agriculture practice from demonstration plot?	Yes	100%
	No	-
Did you receive training on labor rights, child labor and fair treatment of labors?	Yes	100%
	No	-
How is your overall feedback about IAEP project in your village?	Not Good	-
	OK	-
	Good	7%
	Very Good	45%
	Excellent	48%

### 3.3 KURNOOL DISTRICT

To capture the project impact in Kurnool district, a total of 76 chilli farmers were selected randomly out of 1412 farmers and surveyed from Chintakunta, Degalahal, Khazipet, Kokkarachedu, Medehal, Midthur, Regadagudur, Siraladoddi, Ralladoddi, Sirangapuram, Talamudipi and Yerur villages of Chippagiri, Halaharavi, Midthur and Velogudu mandals of Kurnool district. The key outcomes of the study are given below. The key outcomes of the study are based on farmer's response and desk based study is given below:

#### 3.3.1 Farmer and Crop profiling

##### Farmer categorization:

- ❖ Marginal farmers (<2.5 acres) - 1%
- ❖ Small farmers (2.5 to 5 acres) - 11%
- ❖ Semi medium farmers (5 to 10 acres) - 43%
- ❖ Medium farmers (10 to 25 acres) - 32%
- ❖ Large farmers (>25 acres) - 13%
- ❖ Major crops grown by the farmers - Chilli, Cotton and Bengal gram
- ❖ Average area under Chilli cultivation - 5.8 Acres (44% of the total land holding is used for chilli cultivation and remaining is used for cotton and other crop cultivation).
- ❖ Major chilli variety grown in Kurnool district is Byadagi and Teja (42%), followed by LCA-334(52%).

#### 3.3.2 Cost of cultivation

- Chilli crop productivity- 16.6 Qtl/Acre
- Grade out turns of chilli -
  - Grade A+ Grade B: 64%
  - Grade C + Talu: 36%

Sl.no	Particulars	OP Varieties	Hybrids
1	Annual gross income from Chilli - lakhs/acre	1.16	1.75
2	Cost of cultivation of Chilli - lakhs/acre	0.95	0.98
3	Net returns from Chilli - lakhs/acre	0.72	0.79

### 3.3.3 Adoption status of Good Agriculture Practices and Sustainability measures

Horticulture department and ITC' s efforts in Kurnool district for improving the adoption of good agriculture practice and sustainability measures among farming community, by various training programmes, establishment of demonstration plots and real time crop monitoring and crop advisory is detailed below:

Initiatives Head	Base line report	Implementation status	% improvement over base line
Seed Source - Marketing/Own seed	90%	100%	100% quality seed were used by the farmers, sourced from market.
Fertilizer application (Bags/Acre)	16	16	-
Frequency of fertilizer application (No.s/season)	4	3	Reduction in frequency of fertilizer application
Customized fertilizer %	10%	13%	3% increase in adoption of customized fertilizer
Frequency of Pesticide application (No.s/season)	17	16	Reduction in 1 sprayings
Integrated pest management Kits - Sticky traps, Pheromone traps and Neem oil	25%	30%	5% increase in adoption of Sticky traps, Pheromone traps and Neem oil
Integrated crop management Kits - Trichoderma, Pseudomonas, Beauveria	25%	28%	3% increase in adoption of Trichoderma, Pseudomonas, Beauveria
Weedicide (% farmers)	40%	2%	38% reduction in weedicide application over baseline.
Irrigation type - Drip(% area)	14%	3%	-
Irrigation type - Flood (% area)	86%	97%	-
Frequency of irrigation	6	5	Reduction in 1 irrigation
% farmers give wages to labor as per Govt. Norms	-	100%	-
% farmers do not engage child labor	-	100%	-
Chilli drying- Over bare soil (%)	80%	70%	10% reduction in chilli drying over bare soil
Chilli drying- Over Silpaulin	20%	28%	8% increase in adoption of chilli drying over silpaulin

(%)			
Chilli drying- Foldable Chilli dryer(%)	0	2%	-
% farmer adopted new gunny bagsfor packing	-	24%	-

### 3.3.4 Market information

- Total chilli volume produced by the project farmers at Kurnool district (1412 farmers, 4507 Acres) - 7473 MT
- Total farm gate buying from Kurnool project villages - 4285 MT (57.4% of total produced volume)
- Total chilli volume sold at Mandi- 2954 MT (39.5 % of total produced volume)
- Total chilli volume stored at Cold storage - 234 MT (3.1% of total produced volume)

### 3.3.5 Farmer's feedback on IAEP project

Following are the feedback received from Kurnool district farmers, when asked about the implementation of various initiatives planned for Integrated Agri Extension Platform project 2020/21. On five-point scale ranging from not good, OK, Good, Very Good, Excellent, the overall feedback of Guntur farmers on project implementation and its impact was Excellent by 82% farmers, Very good by 14% farmer and OK by 4% farmers.

Questionnaire asked	Farmer response	% Farmer response
Did you get regular support/advisory from Village level ITC's field monitor or Horticulture Department?	Yes	100%
	No	-
Did you attend village level meetings conducted by ITC limited and Horticulture Department?	Yes	100%
	No	-
Did you receive "Chilli handbook" by ITC and Horti Department?	Yes	100%
	No	-
Is Chilli handbook useful to you?	Yes	100%
	No	-
How is the Chilli handbook useful to you?	Farmer found chilli handbook as useful pertaining to Pest and Disease Management, Good agricultural Practices and Post Harvest Product Management	
Did you receive crop advisory from ITC Call center on good agriculture practices?	Yes	100%
	No	-
Was the information provided by Call center and Village level meetings were useful to you?	Yes	100%
	No	-
Do you know about e-Choupal application?	Yes	100%
	No	-
Did you check on your own or get assisted by field resource to see Good agriculture practice videos/ photos on e-Choupal application?	Self	-
	Field Staff	100%
Did you participate in forum/Chat section of e-Choupal application ever?	Yes	100%
	No	-
Did you visit demonstration plots established in your village?	Yes	95%
	No	5%
Did you learn some good agriculture practice from demonstration plot?	Yes	100%
	No	-
Did you receive training on labor rights, child labor and fair treatment of labors?	Yes	100%
	No	-
How is your overall feedback about IAEP project in your village?	Not Good	-
	OK	-
	Good	4%
	Very Good	14%
	Excellent	82%

### 3.4 PRAKASAM DISTRICT

A total of 110 chilli farmers were selected randomly out of 3264 farmers and surveyed to capture the project impact in Prakasam district, from Budawada, Nuthalapadu, Nuzendlapalli, Ramanayapalem, Subbareddypalem, Vankayalapadu and Vengalareddipalli villages of Giddalur, Inkollu, J Pongaluru and Parchur mandals. The key outcomes of the study are given below. The key outcomes are the average of the responses given by 110 farmers of the district and the review from desk-based study

#### 3.4.1 Farmer and Crop profiling

##### Farmer categorization:

- ❖ Marginal farmers (<2.5 acres) - 5%
- ❖ Small farmers (2.5 to 5 acres) - 13%
- ❖ Semi medium farmers (5 to 10 acres) - 27%
- ❖ Medium farmers (10 to 25 acres) - 50%
- ❖ Large farmers (>25 acres) - 5%
- ❖ Major crops grown by the farmers - Chilli, Cotton and Paddy
- ❖ Average area under Chilli cultivation – 5.8 Acres (55% of the total land holding is used for chilli cultivation and remaining is used for cotton and other crop cultivation)
- ❖ Major chilli variety grown in Prakasam district is LCA-334 (71%), Teja (24%) and remaining 5 % is covered by other varieties.

#### 3.4.2 Cost of cultivation

- Chilli crop productivity- 18.9 Qtl/Acre
- Grade out turns of chilli -
  - Grade A+ Grade B: 76 %
  - Grade C + Talu: 24%

Sl.no	Particulars	OP Varieties	Hybrids
1	Annual gross income from Chilli - lakhs/acre	1.9	2.12
2	Cost of cultivation of Chilli - lakhs/acre	1.04	1.06
3	Net returns from Chilli - lakhs/acre	0.86	0.96

### 3.4.3 Adoption status of Good Agriculture Practices and Sustainability measures

Horticulture department and ITC' s efforts in Prakasam district for improving the adoption of good agriculture practice and sustainability measures among farming community, by various training programmes, establishment of demonstration plots and real time crop monitoring and crop advisory is detailed below:

Initiatives Head	Base line report	Implementation status	% improvement over base line
Seed Source - Marketing/Own seed	90%	100%	100% quality seed were used by the farmers, sourced from market.
Fertilizer application (Bags/Acre)	16	16	
Frequency of fertilizer application (No.s/season)	4	3	Reduction in frequency of application
Customized fertilizer %	10%	13%	3% increase in adoption of customized fertilizer
Frequency of Pesticide application (No.s/season)	18	16	Reduction in 3 sprayings
Integrated pest management Kits - Sticky traps, Pheromone traps and Neem oil	25%	36%	11% increase in adoption of Sticky traps, Pheromone traps and Neem oil
Integrated crop management Kits - <i>Trichoderma</i> , <i>Pseudomonas</i> , <i>Beauveria</i>	35%	37%	2% increase in adoption of <i>Trichoderma</i> , <i>Pseudomonas</i> , <i>Beauveria</i>
Weedicide (% farmers)	45%	0%	No adoption of weedicide against 45% farmers following weedicide application during baseline.
Irrigation type - Drip(% area)	20%	6%	-
Irrigation type - Flood (% area)	80%	94%	-
Frequency of irrigation	6	5	Reduction in 1 irrigation
% farmers give wages to labor as per Govt. Norms	-	100%	-
% farmers do not engage child labor	-	100%	-
Chilli drying- Over bare soil (%)	80%	73%	7% reduction in chilli drying over bare soil

Chilli drying- Over Silpaulin (%)	20%	24%	4% increase in adoption of chilli drying over silpaulin
Chilli drying- Foldable Chilli dryer(%)	0%	3%	3% increase in adoption of chilli drying over foldable chilli dryer
% farmer adopted new gunny bagsfor packing	-	20%	

#### 3.4.4 Market information

- Total chilli volume produced by the project farmers at Prakasam district (3,264 farmers, 9,082 Acres) – 17,244 MT
- Total farm gate buying from Prakasam project villages – 2,443 MT (14.2% of total produced volume)
- Total chilli volume sold at Mandi- 2,389 MT (13.9 % of total produced volume)
- Total chilli volume stored at Cold storage – 12,412 MT (71.9 % of total produced volume)

#### 3.4.5 Farmer's feedback on IAEP project

Following are the feedback received from Kurnool district farmers, when asked about the implementation of various initiatives planned for Integrated Agri Extension Platform project 2020/21. On five-point scale ranging from not good, OK, Good, Very Good, Excellent, the overall feedback of Guntur farmers on project implementation and its impact was Excellent by 22% farmers and Very good by 76% farmer.



Questionnaire asked	Farmer response	% Farmer response
Did you get regular support/advisory from Village level ITC's field monitor or Horticulture Department?	Yes	100%
	No	-
Did you attend village level meetings conducted by ITC limited and Horticulture Department?	Yes	100%
	No	-
Did you receive "Chilli handbook" by ITC and Horti Department?	Yes	100%
	No	-
Is Chilli handbook useful to you?	Yes	100%
	No	-
How is the Chilli handbook useful to you?	Farmer found chilli handbook as useful pertaining to Pest and Disease Management, Good agricultural Practices and Post Harvest Product Management	
Did you receive crop advisory from ITC Call center on good agriculture practices?	Yes	100%
	No	-
Was the information's provided by Call center and Village level meetings were useful to you?	Yes	100%
	No	-
Do you know about e-Choupal application?	Yes	100%
	No	-
Did you check on your own or get assisted by field resource to see Good agriculture practice videos/ photos on e-Choupal application?	Self	-
	Field Staff	100%
Did you participate in forum/Chat section of e-Choupal application ever?	Yes	100%
	No	-
Did you visit demonstration plots established in your village?	Yes	96%
	No	4%
Did you learn some good agriculture practice from demonstration plot?	Yes	100%
	No	-
Did you receive training on labor rights, child labor and fair treatment of labors?	Yes	100%
	No	-
How is your overall feedback about IAEP project in your village?	Not Good	-
	OK	-
	Good	2%
	Very Good	76%
	Excellent	22%

## CHAPTER - IV

### SUMMARY AND CONCLUSION

The study found that the IAEP project under PPP model has created a significant impact by creating an ecosystem for converging the expertise and capabilities of multiple stakeholders across the value chain. This section summarizes and averages the key outcomes mentioned in "Result and Discussion" section of the report

#### 4.1 Crop Profiling:

- Average area under Chilli cultivation – 5.5 Acres (50% of the total land holding is used for chilli cultivation and remaining is used for cotton and other crops cultivation like Paddy, Bengal gram, Maize, Red gram).
- Major chilli variety grown in all districts is LCA- 334 (49%), followed by Teja (32%). Other 19% chilli varieties grown by the farmers are Byadigi, DD, S-4884, US-341 & HPH-5531.
- Average Chilli crop productivity- 20.06 Qtl/Acre (12% improvement over general farmers during 2020-21).
- Grade out turns of chilli -
  - ❖ Grade A + Grade B: 80.5% (5.6% improvement over general farmers)
  - ❖ Grade C + Talu: 19.5%
- The impact of the Public private partnership for chili value chain has been found impressive, leading to a 12% crop productivity improvement and a 26% rise in net returns per acre for the chilli farmers, to the extent of approx. Rs. 20,448 per acre.

Net Returns 2020/21 - IAEP Vs General Farmers				
Particulars	General farmer	IAEP farmer	Rate (General farmer)	Rate (IAEP farmer)
Cost of Production (Rs/Ac)	100958	110864		
Total productivity (Kg/Ac)	1785	2006		
Grade A (Kg/Ac)	1196	1467	120	120
Grade B (Kg/Ac)	143	139	95	95
Grade C (Kg/Ac)	36	38	85	85
Talu (Kg/Ac)	411	366	45	45
Gross Returns (Rs/Ac)	178589	208943		
Net returns (Rs/Ac)	77631	98079	26%	
<b>Benefit to IAEP farmers (Rs/Ac)</b>		<b>20448</b>		

- The above table explains the net returns excluding the benefits of farm gate buying viz., savings on Transportation (Rs. 2.3/Kg) and savings in marketing expenses @ Rs.4/Kg

## 4.2 Adoption status of Good Agriculture Practices and Sustainability measures over Baseline status

- **Seed sourcing - Market/ Own seeds:** 4% improvement (95% to 99%) noticed in usage of quality seed by the farmers, sourced from market.
- **Fertilizer application:** Reduction in usage of 2 bags per acre (19 bags to 17 bags) resulting in average savings of 100 Kg of fertilizers per acre, contributing to soil health improvement.
- **Customized fertilizer:** 2% increase (8% to 10%) in adoption of customized fertilizer by the farmers, contributing to soil conservation.
- **Pesticide application:** Reduction in 4 sprays of pesticide (20 sprays to 16 sprays), contributing to chilli quality improvement.
- **Integrated pest management kits:** 8% increase (25% to 33%) in adoption of Sticky traps, Pheromonetraps and Neem oil, contributing to chilli quality improvement.
- **Integrated crop management kits:** 4% increase (24% to 28%) in adoption of *Trichoderma*, *Pseudomonas* and *Beauveria*, contributing to chilli quality improvement.
- **Weedicide application:** A drastic reduction of 38% weedicide (38% to 0%) application was noticed, contributing to chilli quality improvement.
- **Drip irrigation:** Drip irrigation coverage in the project area is almost same as baseline, which was 10%.
- **Occupation health and safety:**
  - 100% farmers are following minimum wages to the labor as per Govt. norms.
  - 100% farmers understand and do not engage any child labor for chilli production.
  - 12% farmers (500 farmers) received PPE kits from ITC limited during crop season and ensured the usage of same while pesticide spraying by the labors.
- **Hygienic chilli drying:** 10% reduction (88% to 78%) in drying over bare soil, which is non-hygienic traditional method. 20% farmers used silpaulin for drying while 2% farmer has adopted foldable chilli drying technology.

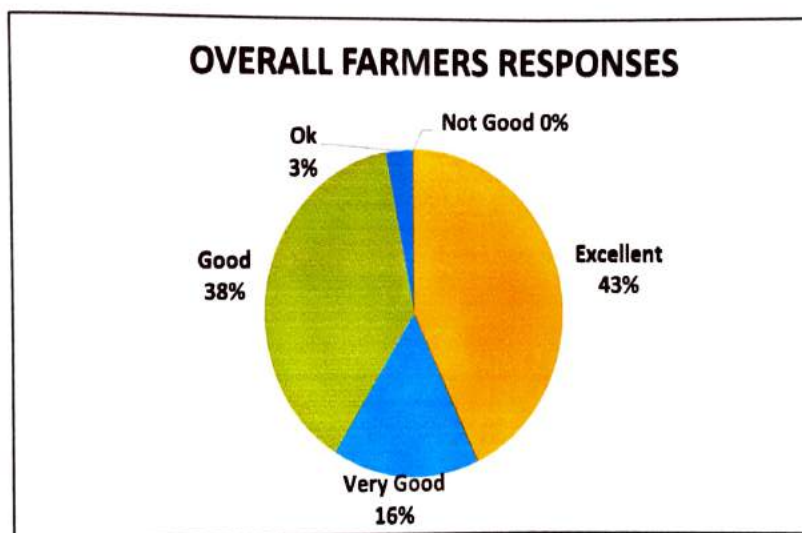
## 4.3 Marketing information

- Total chilli volume produced by the project farmers (10,064 farmers, 26,844 Acres) is 53,829 MT.
- Total farm gate buying from project villages – 23,192 MT (43.1% of total produced volume)
- Total chilli volume sold at Mandi- 12993 MT (24.1 % of total produced volume)

- Total chilli volume stored at Cold storage – 17,644 MT (32.8% of total produced volume)
- Improvement at farm gate buying has been observed from 30% (General villages) to 43% (IAEP Villages).
- Improvement in farm gate buying has helped farmers in saving Rs. 6.3 per Kg incurred for transportation and commission to the middle men.

#### Farmer's feedback on IAEP project

- Farmers have shown their gratitude to Horticulture Department and ITC limited for supporting chilli farmers by various means of crop advisory and extension activity. The support provided to the farmers have helped them in improving crop productivity, crop quality and sale ability of their produce at farm gate.
- On five-point scale ranging from Not good, OK, Good, Very Good, Excellent, the overall feedback from the farmers on project implementation and its impact was "Excellent " by 43% farmers, "Very Good" by 16% farmers, "Good" by 38% farmers and "O K" by 3% farmers.



# CHAPTER - V

## ANNEXURES

### Annexure I: Data collection template

IMPACT STUDY- CHILLI FARM VALUE CHAIN DEVELOPMENT-INTEGRATED AGRI EXTENSION PLATFORM 2020-2021	
DATA COLLECTION TEMPLATE	
<b>Farmer Profile</b>	
Farmer Name:	
Father's Name:	
Age :	
Educational Qualification:	
Family Members Detail:	
Phone Number:	
Total land Holding(acres) :	
<b>Date:</b>	
	Leased/owned Land (Acres):
	Leased/owned Land (No. of plots):
	Number of Cattles:
	Annual Income (Rs /yr):
	Marginal/small/medium /large farmer:
	Village:
	Manda:
	District:
	<b>Answers</b>
S.No.	Questions
<b>Crop Profile</b>	
1	What are the major crops grown by you?
2	How much is the area (Acres) under chilli cultivation?
3	How much is the cultivation area (Acres) under other crops?
4	What are the various chilli varieties grown (Acres)? - LCA -334, DD, Chapata, Bydiga etc.
	Other crop 1 (Acres) Other crop 2 (Acres) .....
<b>Cost of Cultivation - Gross Return and Net Return</b>	
1	How much is the chilli crop productivity? Please mention variety wise (Yield/acre)
3	What is the grade out turn for chilli crop? (Grade A, B, C and Talu)
4	What was the grade wise farm price (Rs/kg) of chilli (Grade A, B, C and Talu)
5	What is your cost of production for chilli? (Rs/acre)
6	What is your gross return from chilli crop? (Rs/acre)
7	What is your net return from chilli crop? (Rs/acre)
<b>Status of Adoption of Good Agriculture Practices</b>	
1	What is the sowing method followed - direct sowing or seedling?
2	Do you purchase seedlings from outside or grow your own seedling in nursery?
3	Do you use trays for growing nursery?
4	How is the land preparation done?
5	What are the fertilizers being used and how frequently?
6	Do you use customized fertilizers?
7	What are the pesticides being used and how frequently?
8	Do you or your labor take any precautions while using pesticides?
9	Do you give wages to labor as per Govt. norms? How much wages ?
10	Did you use child labor at any stage of chilli cultivation?
11	Do you use Integrated Pest Management methods? If yes, then what kind of kits you use (Sticky traps, Pheromone traps, Neem oil, Trichoderma, Pseudomonas, Beauveria etc.)
12	Do you use bio fertilizers/bio pesticides? Name them.
13	What are the weedicide being used and how frequently?
14	What is the source and frequency of irrigation?
	Source of Irrigation:
	Frequency of Irrigation:

15	How do your dry chilli? Open drying, Drying over Silpaulin/Foldable le chilli drier?	
D	Market information	
1	Transportation cost of chilli to Mandi	
2	Cost to middle men for selling chilli	
3	How do you avail the information on market conditions?	
4	How do you know about the market prices of the crops?	
5	How do you decide where and to whom to sell the produce?	
6	What kind of packing material do you use for packing chilli?	
7	What is machhu (Rebided) percentage in your sale?	
8	How much is the loss to you due to macchu? (Rs./kg)	
9	Where do you sell your chilli produce?	
10	To whom do you sell your chili produce?	
11	Name the traders/dealers involved in procurement of chilli?	
12	Who all are the exporting companies involved in chilli procurement?	
13	Mention the savings per Acre in direct farm gate buying by the company (due to transport saving/less handling etc.)	
14	Any other important information related to market	
E	Farmer's feedback on IAEP project	
1	Did you get regular support/advisory from Village level ITC's field monitor?	
2	Did you attend village level meetings conducted by ITC limited and Horticulture Department?	
3	Did you receive "chilli handbook" by ITC and Horti Department?	
4	Is Chilli handbook useful to you? How?	
5	Did you get receive crop advisory from ITC Call center on good agriculture practices?	
6	Was the information provided by Call center and Village level meetings were useful to you?	
7	Do you know about e-Choupal application ?	
8	Did you see or get assisted by field resource to see Good agriculture practice videos / photos on e-Choupal application?	
9	Did you participate in forum/Chat section of e-Choupal application ever?	
10	Did you visit demonstration plots established in your village?	
11	Did you learn some good agriculture practice from demonstration plot?	
12	Did you receive training on labor rights and fair treatment?	
13	How is your overall feedback about IAEP project in your village - Not Good/ OK / Good/ Very Good / Excellent?	

## Annexure II: List of Surveyed farmers.

### List of Farmers surveyed from Guntur District

Sl. No.	Farmer Name	Father name	Age	Village	Mandal
1	A.Kanakaiah	Ramulu	45	Atchempet	Atchempet
2	P.Lalitha Babu	Krishnamurthy	41	Velpuru	Atchempet
3	K.Ramarao	Krishna Murthy	45	Velpuru	Atchempet
4	J.Ravi	Yellayya	60	Velpur	Atchempet
5	A.srinivasa Rao	Prabhakar Rao	49	Velpuru	Atchempet
6	J.Ganesh	Perayya	30	Velpuru	Atchempet
7	Ch.Venkayya	Narasamayya	56	Velpuru	Atchempet
8	J.Srinivasa Rao	Venkateswarulu	45	Velpuru	Atchempet
9	J.Appa Rao	Venkata narayana	46	Velpuru	Atchempet
10	Alla Seetharami Reddy	Alla Koti Veera Reddy	45	Chirumamilla	Nadendla
11	M.Tirupathiah	Ramulu	41	Thalluru	Krosuru
12	D.Brahma Reddy	D.Golla Reddy	46	Chirumamilla	Nadendla
13	Y.Swamy	Mohan Rao	42	Thalluru	Krosuru
14	Minnampalli Samba Siva rao	M Sivanagayyah	52	Chirumamilla	Nadendla

15	A.Venkatappa Rao	Koteswara Rao	49	Thalluru	Krosuru
16	Nuthaki Sreenu	Nuthaki Mose	45	Chirumamilla	Nadendla
17	Y.Ramakrishna	Pull Rao	41	Uyandana	Krosuru
18	T.Parameswara Reddy	T.Jayaram Reddy	37	Chirumamilla	Nadendla
19	M.prasangam	John	40	Thalluru	Krosuru
20	M.Chandra babu	John	54	Thalluru	Krosuru
21	M.Lakshmi Narayana	Guravayya	51	Thalluru	Krosuru
22	M.Mastan Rao	Pull Rao	29	Thalluru	Krosuru
23	R.Sambayya	Venkayy	55	Thalluru	Krosuru
24	Ch.Venkata Narayana	Rangayya	52	Nadendla	Nadendla
25	Miriyala Subba Rao	Subbayya	60	Nadendla	Nadendla
26	Miriyala venkateswara Rao	Subba Rao	45	Nadendla	Nadendla
27	Jetti Koteswara Rao	Jetti Pullayyah	55	Chirumamilla	Nadendla
28	T.Siva Reddy	T.Venkateswar Reddy	58	Chirumamilla	Nadendla
29	Unnava Sithapathi	Unnava Sai kumar	32	Paladugu	MediVatsavai
30	R Poorna Chandra Rao	Rayapati Raghavayyah	67	Dhulipalla	Sattenapalle
31	P.Dileep	P.Adam Khan	37	Appapuram	Kakamanu
32	P.Jinna Khan	P.Adam Khan	40	Appapuram	Kakamanu
33	P.Adam Khan	Nabi Khan	63	Appapuram	Kakamanu
34	Gandu. Venkatappaiah	Sambaiah	42	Solasa	Yedlapadu
35	Mancha. Srinivasa rao	Balayya	45	Solasa	Yadlapadu
36	Pathakamuri Veeraiah	Pathakamuri Subba Rao	40	Appapuram	Kakamanu
37	Gorantla. Srinivas rao	Enkamma rao	41	Solasa	Yedlapadu
38	Meka Bulli reddy	Meka Nagi Reddy	46	Mallayapalem	Prathipadu
39	Meka Venkat Reddy	Meka Busi Reddy	60	Mallayapalem	Prathipadu
40	M.Srinivas Reddy	M.Subba Reddy	42	Mallayapalem	Prathipadu
41	Kurri Anjanadh Reddy	Kurri Bhemi reddy	37	Mallayapalem	Prathipadu
42	Venkat Reddy	Sambi Reddy	39	Mallayapalem	Prathipadu
43	Galam Guruswamy	Chandrayya	44	Pamidimarru	Narasaraopeta
44	Meesala Nageswar Rao	Venkateswarulu	32	Pamidimarru	Narasaraopeta
45	P.Hanumanth Rao	P.Subba Rao	45	Prathipadu	Prathipadu
46	Jonnalagadda Sagar	Yesu	28	Pamidimarru	Narasaraopeta
47	A.Srinivas	A.Venkayya	58	Prathipadu	Prathipadu
48	Mythukuri Chinna Subba Rao	Gangayya	26	Pamidimarru	Narasaraopeta
49	M.Subba Rao	M.Krishnaiah	46	Prathipadu	Prathipadu
50	Glama Chinna Yedukondalu	Kondayya	45	Pamidimarru	Narasaraopeta
51	B.Venkateswarulu	B.Narayana Murthy	42	Prathipadu	Prathipadu
52	Maripudi Perumallu	Saidulu	23	Kondakavuru	Narasaraopeta
53	Vennapusa Srinivas Reddy	Ranga Reddy	42	Kondakavuru	Narasaraopeta
54	Mancha. Prasad Rao	Veera nagulu	50	Solasa	Yedlapadu
55	Bapathu. Vema reddy	Venkateswara reddy	45	Solasa	Yedlapadu
56	Kakani. Nagaraju	Pichaiah	34	Solasa	Yedlapadu
57	Kokkera. Srinivasrao	Nageswara rao	35	Solasa	Yedlapadu
58	Venkata rao. B	Venkateswarulu	39	Lingarao palem	Yadlapadu
59	Anka rao. Miriyala	Seetharamaiah	35	Karuchola	Edlapadu
60	Vennapusa vemareddy	Chinappa Reddy	25	Kondakavuru	Narasaraopeta
61	Nakka chinna Venkaiah	Satya narayana	31	Kondakavuru	Narasaraopeta
62	Kongala Venkateswar	Seeta Ramayya	35	Kondakavuru	Narasaraopeta
63	Mopuri Venkateswaralu	Venkateswarulu	35	Kondakavuru	Narasaraopeta
64	Sareddy Srinivas Reddy	Koti Reddy	35	Kondakavuru	Narasaraopeta
65	Kata. Srinivas rao	Samba siva rao	52	Gottipadu	Prathipadu

66	Tokala. Rajesh	Nageswara rao	46	Lingarao palem	Edlapdu
67	Gunti. Sathyam	Sundhar rao	53	Lingarao palem	Edlapadu
68	Jetti. Srinivas rao	Koteswara rao	37	Karchola	Edlapadu
69	Parameswara reddy. B	Pedha obul reddy	43	Solasa	Edlapadu
70	Sk. Paker sahib	Meera sahib	36	Solasa	Edlapadu
71	Ramesh. Guntipalli	Krishna rao	50	Gottipadu	Prathipadu
72	Devendra babu. Guntupalli	Masthan rao	57	Gottipadu	Pathipadu
73	M Linga Rao	M. Saidulu	30	Kondakavuru	Narasaraopeta
74	Chiguri Yerraiah	Lakshmayya	43	Pamidimarr	Narasaraopeta
75	Meesala AdiNarayana	Gangayya	39	Pamidimarru	Narasaraopeta
76	Chandra Sekhar Reddy	Acchi Reddy	20	Solasa	Edlapadu
77	Venkata Rami Reddy	Siva Reddy	40	Solasa	Edlapadu
78	Ambati Nagi Reddy	Ambati Arunadh Reddy	44	Solasa	Edlapadu
79	M.Bhaskara Rao	M.Gangayyah	42	Solasa	Edlapadu
80	Ankayya	Jagannadam	40	Thalluru	Krosuru
81	Amarayya	Chinna nagayya	30	Thalluru	Krosuru
82	Sambasiva Rao	Venkata Narayana	36	Thalluru	Krosuru
83	D.Sambasiva Rao	Meerayya	39	Thalluru	Krosuru
84	Koteswara rao	Basavalah	50	Pamidimarru	Narasaraopeta
85	Sk. Jilani	Kajawali	36	Pamidimarru	Narasaraopeta
86	jonnalagadda Mark	Hussain	30	Pamidimarru	Narasaraopeta
87	Cheerala Vijay	Ankamma	64	Pamidimarru	Narasaraopeta
88	Garnipudi Yehoshuva	Koti Raju	33	Pamidimarru	Narasaraopeta
89	R. Srinivas Rao	Vemanayya	37	kondakavuru	Narasaraopeta
90	V. Venkateswarulu	Venkaiah	34	Pandhirimamidi	Narasaraopeta
91	Dasari. Chinna vemaiah	Seshaiah	29	Pamidimarru	Narasaraopeta
92	David Raju	Brahmaiah	35	Thalluru	Krosuru
93	Hanumanth	Lakshmi Narayana	22	Thalluru	Krosuru
94	Venkateswarulu	Guravayya	32	Thalluru	Krosuru
95	A.Venkateswarulu	Srinivasa Rao	24	Thalluru	Krosuru
96	V.Narasimha Rao	Pichayya	40	Thalluru	Krosuru
97	Ajay kumar	Chinna subbarao	22	Thalluru	Krosuru
98	Basavayya	Somayya	32	Thalluru	Krosuru
99	Bodetla rama rao	Venkateswarulu	45	Thalluru	Krosuru
100	Subba Reddy	Ram Mohan Rao	50	Chirumamilla	Nadendla
101	Miriyala Lakshmi Narayana	Subba Rao	40	Nadendla	Nadendla
102	Venkateswara Reddy	Subba Rao	45	Nadendla	Nadendla
103	Ramana Reddy	Pothi Reddy	48	Chirumamilla	Nadendla
104	Narendra	Gopalah	45	Thalluru	Krosuru
105	Golla. Radha krishna	Poorna chandhra	35	Thalluru	Krosuru

#### List of farmer's survey in Krishna District:

Sl. No.	Farmer Name	Father name	Age	Village	Mandal
1	Patibandla kotiswerao	Rosayya	45	Machinenipalem	Vatsavai
2	Shaik Galisa	Shaik Mastan	25	Vatsavai	Vatsavai
3	Rama rao Sidhi	Sidhi Narayana	49	Vatsavai	Vatsavai
4	N.Narasimha Rao	N.Pitchaiah	55	Vatsavai	Vatsavai
5	K.Srinu	K.Sinayyah	42	Vatsavai	Vatsavai



6	K. Srinivas	K. Krishnaswamy	48	Kambampadu	Vatsavai
7	Alla Satyanarayana	Alla Pitchaiah	38	Makkapeta	Vatsavai
8	Kopuri Nageswara rao	Mallaiah	49	Sivapuram	Penaganchiprolu
9	Ch Brahmaiah	Ramaiah	45	Kambampadu	Vasavai
10	S.Srinu	S.Lingayya	30	Vatsavai	Vatsavai
11	Enjam Ravi	Venkateswarulu	45	Sivapuram	Penaganchiprolu
12	N.Narayana Rao	N.Ranga Rao	38	Vatsavai	Vatsavai
13	B venke	Bhaskar Rao	27	Kambampadu	Vatsavai
14	pondhur Venkata Ramana	Jagannadha rao	45	Anigendlapadu	Penaganchiprolu
15	Shaik Mastan	Shaik Nabi	52	Vatsavai	Vatsavai
16	Ch. Saideswarao	Venkateswara Rao	32	Vemavram	Vatsavai
17	P.Venkateswarulu	Narasimha	38	Kambampadu	Vatsavai
18	T. Murali Krishna	Gopal Rao	40	Kambampadu	Vatsavai
19	Bolla srinivas Rao	Pichayya	50	Machinenipalem	Vatsavai
20	N Vishweshwara Rao	Subbayya	43	Vatsavai	Vatsavai
21	Chandu Venkatarama Rao	Nageswara Rao	42	Chittela	Vatsavai
22	Narala Rajashekhar Reddy	Venkatanarayana Reddy	36	Kambampadu	Vatsavai
23	Lenkala Mallareddy	Lenkala Veera Reddy	40	Chittela	Vatsavai
24	Yarragani srinivas	Venkatachalam	42	Thalluru	Vatsvai
25	Nalajala Srinivas Rao	Venkateswarulu	45	Thalluru	Vatsvai
26	Chandu Gopala Krishna	Kondaiah	30	Chittela	Vatsavai
27	Pasula Narasimharao	Pasula Satyanarayana	49	Makkapeta	Vatsavai
28	P Kondal Rao	Narayana	50	Penuganchiprolu	Penuganchiprolu
29	Marri Janaiah	Marri Ramayyah	35	Makkapeta	Vatsavai
30	D.Murali	dasaria Haribabu	32	Penuganchiprolu	Penuganchiprolu
31	S. Yedukondalu	Mahalakshmi	56	Penuganchiprolu	Penuganchiprolu
32	Veera raghavulu	laksmipati	48	Penuganchiprolu	Penuganchiprolu
33	K. Chinna Venkateswarulu	Kondabolu Veerayya	35	Makkapeta	Vatsavai
34	B.Shankar Rao	Narasimharao Rao	45	Machinenipalem	Vatsavai
35	Kilari Hanumaniah	Kilasi Surayyah	59	Indugupalli	Vatsavai
36	Madasu Ram pullaiah	Tirapayya	50	Kannavedu	Vatsvai
37	K. Narasimhrao	Gopayya	48	Makkapeta	vatsavai
38	Chava Srinaad	Chava Mohan Rao	44	Indugupalli	Vatsavai
39	Karnati Shankar Rao	Ramarao	39	Kannavedu	Vatsvai
40	Penugonda Srinivas Reddy	Lakshma Reddy	48	Bheemavaram	Vatsavai
41	Kurapati Nageswarao	Brahmam	47	Kannavedu	Vatsavai
42	M Sambashiva Rao	Narasimharao Rao	39	Vemavaram	Vatsvai
43	Daniyala Vishwanadham	Daniyala Madhava Rao	40	Bheemavaram	Vatsavai
44	B.Venkata Narayana	Nageswarao	35	Vutukuru	Gampalagudem
45	Chithati parameshwara rao	Narasimha Rao	36	Vemavaram	Vatsavai
46	Gottipala Ramababu	Gottipala Verrayyah	41	Lingagudem	Penuganchiprolu
47	Katta venkataiah	Rangayya	65	Vemavaram	Vatsavai
48	B Nageshwara Rao	Devuda Naik	43	Lingagudem	Penuganchiprolu
49	Barigela Subba Rao	Barigela Basavayyah	44	Lingagudem	Penuganchiprolu
50	Pavan Kumar	Maruvayya	30	Vutukuru	Gampalagudem
51	K. Nagaraju	Gopala Krishna	31	Vutukuru	Gampalagudem
52	V. Sudheer	Venkateswara Rao	30	Vutukuru	Gampalagudem

53	K.Murali	Lakshman Rao	30	Vutukuru	Gampalagudem
54	Anil Kumar	Anil kumar	21	Konijarla	Gampalagudem
55	Jagannadham. L	Narasimhayya	65	Sivapuram	Penaganchiprolu
56	Yeluru shivaji	Nageswara rao	33	Sivapuram	Penaganchiprolu
57	Cherukuri Lingaiah	Venkata ramana	44	Anigenllapadu	Penaganchiprolu
58	G.Srinivas	Ramaiah	44	Anigellapadu	Penaganchiprolu
59	Nampalli venkata ramana	Basavaiah ( late)	32	Anigellapadu	Penaganchiprolu
60	Veldi. Chandra sekhar	Venkateswar	46	Anigellapadu	Penaganchiprolu
61	Avula Lakshmi Narayana	Ramaiah	60	Senagapadu	Penaganchiprolu
62	P.Krishna	Sesha rao	26	Konijarla	Gampalagudem
63	Parupalli. Nageswara rao	Hanumaiah	25	Senagapadu	Penaganchiprolu
64	R.Srinu	Nageswara rao	45	Vutukuru	Vatsavai
65	Kuchi. Srinivas rao	Narasaiah	48	Venkatapuram	Penaganchiprolu
66	Karla nageswara rao	Satya narayana	59	Penaganchiprolu	Penaganchiprolu
67	Nannapuneni thirupathi rao	Gopal rao	48	Penaganchiprolu	Penaganchiprolu
68	Karnati kishore	Sathya narayana	42	Konijarla	Gampalagudem
69	Sangeetham Raghavayya	Nageswara rao	55	Vutukuru	Gampalagudem
70	Nallabothu. Vinod	Venkateswara rao	28	Venkatapuram	Penaganchiprolu
71	Modhugu balakrishna	Jaya rao	49	Konijarla	Gampalagudem
72	Sirivella. Rama krishna	Venkati	37	Vutukuru	Gampalagudem
73	Pattipati. Ajay kumar	Nageswara rao	35	Konijarla	Gampalagudem
74	Seelam Ramireddy	Venkata Reddy	60	Kambampadu	Vatsvai
75	Ragha. Kotaiah	Gopaiah	38	Polampalli	Vatsavai
76	Prasad sampathi	Venkata narasaiah	46	Polampalli	Vatsavai
77	Venkata. Satyanarayana	Koteswara rao	58	Kammampadu	Vatsavai
78	Thota gopi	Sambasiva rao	30	Anigendlapadu	Penaganchiprolu
79	Yeluri sudhakar	Ravindra babu	36	Sivapuram	Penaganchiprolu
80	Pagadam pichayya	Sudharshanam	50	Ponnavaram	Penaganchiprolu
81	Bhanavathu krishna	Rupla naik	39	Anigendlapadu	Penaganchiprolu
82	Mallikarjun rao	Pullayya	49	Bheemavaram	Vatsavai
83	Vallabhi venu	Srinivas rao	35	Vatsavai	Vatsavai
84	Narasimha swami	Rama narasayya	35	Senagapadu	Penaganchiprolu
85	Jaya raju	Naga	42	Khambampadu	Vatsavai
86	Saileswara rao	Venkateswarulu	32	Bhimavaram	Vatsavai
87	Gopi	Eswaraiah	28	Anigendlapadu	Penaganchiprolu
88	Gopinadh	Rama rao	26	Khmbampadu	Vatsavai
89	Venkateswara rao	Bhaskara rao	28	Khambampadu	Vatsavai
90	Bramhaiah	Ramaiah	35	Khambampadu	Vatsavai
91	Bhadhrayya	Venkateswarulu	50	Anigendlapadu	Penaganchiprolu
92	Nareen babu	Saidhulu	45	Penaganchiprolu	Penaganchiprolu
93	Nageswara rao. P	Rama rao	41	Penaganchiprolu	Penaganchiprolu
94	Marri janaiah	Ramaiah	38	Makkhapeta	Vatsavai
95	B. Yellarao	Narsarao	36	Makkhapeta	Vatsavai
96	Venkata Brahmam. K	Gopaiah	61	Makkhapeta	Vatsavai
97	Prasad rao. K	Subbaiah	48	Makkhapeta	Vatsavai
98	Ennamadhi Subba rao	Pullaiah	42	Penaganchiprolu	Penaganchiprolu
99	Kakani Ashok	Sathyanarayana	45	Penaganchiprolu	Penaganchiprolu

List of farmers surveyed from Kurnool District:

Sl. No.	Farmer Name	Father name	Age	Village	Mandal
1	G. Ramanjaneyulu	Narasappa	47	Kulumala	Gonegandla
2	G. Chemdraiah	Thimmappa	45	Ralladhoddi	Yemmiganur
3	Srinivasulu	Ramudu	35	Ralladhoddi	Yemmiganur
4	C. Ramakrishna	Ramanana	45	Errakota	Yemminganur
5	E. Venkata ramudu	Pedha rangayya	55	Errakota	Yemminganur
6	Satyanarayana reddy	Kesav reddy	42	Kadimetta	Yamminganur
7	S. Srinivasulu	S. Thammanna	40	Siraladoddi	Yemminganur
8	E. Raj kumar	Srinivas	28	Errakota	Yemminganur
9	G urukund	Narasanna	54	Siraladoddi	Yemmiganur
10	K. Baludu	Devanna	53	Thalamudipi	Midthur
11	Sivaiah	Mallaiah	30	Thalamudipi	Midthur
12	Govindu	Siribalu	55	Midthur	Midthur
13	Nageswara reddy	Malla reddy	39	Midthur	Midthur
14	Siva reddy. B	Laxmi reddy	27	Peda antapuram	Atmakur
15	Seshi reddy. P	Rajeswara reddy	31	Regadaguduru	Velugodu
16	Hareesh	Chinna baabu	23	Bijinavemula	Koilkuntla
17	Sudharshanam	Yermiyya	52	Regadaguduru	Velugodu
18	K. Govardhana Reddy	K. Narayana reddy	35	Kajipeta	Midthur
19	Zakariya	Nizamuddin	36	Maddur	Pamulapadu
20	Bala madduleti	Venkateswarulu	29	Kulumala	Gonegandla
21	Vijay bhaskar. K	Naganna	48	Errakota	Yemminganur
22	Satyenna achari	Raghappa achari	54	Kadimetta	Yammiganur
23	Raghunandhan. K	Raghappa	56	Kadimetta	Yamminganur
24	Peddha. Mallaiah	Naganna	55	Thalamudipi	Midthur
25	Shankar nayak	Sirikalu	60	Peda antapuram	Atmakur
26	Venu gopal	Sai baba	40	Peda antapuram	Atmakur
27	S. Nagarathnam	Naganna	50	Regadaguduru	Velugodu
28	K. Nagesh	Veera naganna	45	Errakota	Yemminganur
29	B.Manjunath	Pandurangappa	34	Yeruru	Chippagiri
30	Bhupal	Thimmayya	34	Degalahal	Chippagiri
31	Rangayya	Ramanna	45	Degalahal	Chippagiri
32	Rangaswamy	Ranganna	33	Yeruru	Chippagiri
33	Venkanna	Nettappa	55	Yeruru	Chippagiri
34	Chandra	Ramachandra	42	Degalahal	Chippagiri
35	Srinivasulu	Yerappa	45	Chintakunta	Halaharvi
36	Ramesh	Rangappa	49	Chintakunta	Halaharvi
37	Vijay	Seshappa	25	Chintakunta	Halaharvi
38	Ravi Kumar	Anjanayya	25	Chintakunta	Halaharvi
39	Hari	Raghu Mahesh	42	Chintakunta	Halaharvi
40	Shankar	Madivalappa	34	Chintakunta	Halaharvi
41	Chandrasekhar	Ramachandra	38	Chintakunta	Halaharvi
42	Venkatesh	Veeranjaneyulu	27	Chintakunta	Halaharvi
43	Jesus	Alla sahib	40	Chintakunta	Halaharvi
44	Raju	Pachiyarappa	35	Chintakunta	Halaharvi
45	Nagaraju	Venappa	30	Chintakunta	Halaharvi
46	Anil	Pedanna	24	Chintakunta	Halaharvi

47	Hiran	Hiran	50	Chintakunta	Halaharvi
48	Siva Prasad	Siddalingam	29	Chintakunta	Halaharvi
49	Shiva Raju	Raja lingam	29	Chintakunta	Halaharvi
50	Kaja Sahib	Navi Sahib	35	Chintakunta	Halaharvi
51	Simappa	Ramayya	34	Chintakunta	Halaharvi
52	Ramesh	Sanjayappa	26	Chintakunta	Halaharvi
53	Yashwanth	Venkatesh	32	Chintakunta	Halaharvi
54	Vandrappa	Ramanjaneyulu	32	Chintakunta	Halaharvi
55	Saivalli	Nabu Sahib	35	Chintakunta	Halaharvi
56	Kishore	Chandrasekhar	28	Chintakunta	Halaharvi
57	Sreenath	Tirumala	28	Chintakunta	Halaharvi
58	Rudrayya	Lakshmana	28	Chintakunta	Halaharvi
59	Prakasham	Venkata swami	44	Bijinavemula	Koilkuntla
60	Balakrishna	Chinappa	24	Chintakunta	Halaharvi
61	Ramesh	Naganna	45	Khajipuram	Chippagiri
62	Sudhakar	Bhimanna	35	Khajipuram	Chippagiri
63	Mahesh	Sanappa	22	Chintakunta	Halaharvi
64	Mallik	Malappa	37	Medhal	Halharvi
65	Nagireddy	Peddi Reddy	42	Khajipuram	Chippagiri
66	Marena	Potanna	60	Degalahal	Chippagiri
67	Marrlah	Lingappa	42	Degalahal	Chippagiri
68	Srinivasulu	Marayya	30	Degalahal	Chippagiri
69	Lakshmi	Peddapotanna	22	Yeruru	Chippagiri
70	Dulleti	Venkateswara Rao	29	Kulumala	Gonegandla
71	Nagesh	Veeranaganna	40	Errakota	Yemiganur
72	Ramakrishna	Ramudu	45	Errakota	Yemiganuru
73	Ashok	Nagendra	27	Medhal	Halaharvi
74	Balu	Naganna	32	Khajipuram	Chippagiri
75	U.Shekhar	Durganna	56	Yeruru	Chippagiri
76	Manju	Pandugaru	34	Yeruru	Chippagiri

### List of farmers surveyed from Prakasam District:

Sl. No.	Farmer Name	Father name	Age	Village	Mandal
1	Subba Reddy	Narayana Reddy	30	Ankabhupalem	Ardhaveedu
2	K.Nageswara Rao	K.Subbayyah	32	Ankabhupalem	Ardhaveedu
	Pulla Reddy	Subba Reddy	62	Ankabhupalem	Ardhaveedu
3	Rami Reddy	Baali Reddy	38	Ankabhupalem	Ardhaveedu
4	D.Janaki Ramayyah	D.Brahmayya	33	Ankabhupalem	Ardhaveedu
5	Pandu Ranga	Rangaa Swamy	32	Ankabhupalem	Ardhaveedu
6	Ranga Nayakulu	Lakshmi Rangayya	26	Ankabhupalem	Ardhaveedu
7	Kama Pandu	Vemanayya	35	Cholavidu	Racherla
8	Nadipi Kassiah	Kasivalli	25	Chinnaganipalle	Racherla
9	Venkata Rangaiah	Venkata Ramana	57	Chinganipalli	Racherla
10	Ramachandra Reddy	Rama Reddy	26	Chinaganalpalli	Racherla
11	Karipireddy Guruva Reddy	Chinchi Reddy	65	Chinganpalli	Racherla
12	Venkata Ranga Reddy	Keshavulu Reddy	45	Chinganipalli	Racherla
13	A.Srinivas Reddy	A.Veera Reddy	45	Ramanayapalem	Parchur
14	D.Subba Reddy	D.Krishna Reddy	50	Nuthalapadu	Parchur
15	Ramakrushna Reddy	Chinna Reddy	50	Erramvaripalem	Karemchedu

16	K.Anki Reddy	K.Venkat Reddy	41	Chinthaguntapalem	Parchur
17	Srinivas Reddy	Obul Reddy	45	Ankireddy palem	Inkollu
18	M.Srinivas Reddy	M.Brahma Reddy	42	Chintaguntapalem	Parchur
19	Erram Sudhakar Reddy	Erram Pulla Reddy	42	Ankireddy palem	Inkollu
20	Erram Sita Rami Reddy	Erram Srinivas Reddy	42	Erramvaripalem	Karemchedu
21	Venkateswara Reddy	Rami Reddy	62	Aadipudi	Karemchedu
22	Hanumanth Rao	Venkata Subbayah	67	Nuthalapadu	Parchur
23	Mahesh Naik	Subba Naik	26	Chinaganipalli	Racherla
24	Efak	Sherif	59	Aadipudi	Karemchedu
25	Nagaraju	Nageswar Rao	39	Chinaganipalli	Racherla
26	Kota Lakshmi Reddy	Venkat Reddy	43	Chinaganipalli	Racherla
27	Jamal Sahib	Hussain Sahib	48	Chinaganipalli	Racherla
28	Rami Reddy	Peddaveera Reddy	42	Chinaganipalli	Racherla
29	Polaiah	Pullaya	48	Chinganiipalli	Racherla
30	T.Nagaraju	T.Chinnaamayya	31	Aadipudi	Karemchedu
31	Venkata Reddy	Srinivas Reddy	44	Ankireddypalem	Inkollu
32	E.Srinivas Reddy	E.Subba Reddy	47	Erramvaripalem	Karemchedu
33	Arunadh Reddy	Pulla Reddy	58	Erramvaripalem	Karemchedu
34	G.Uendra Reddy	G.Subba Reddy	50	Nuthalapadu	Parchur
35	Sanjeeva Reddy	Rami reddy	43	Ramanayapalem	Parchur
36	B.Srinivas Reddy	Venkat Reddy	38	Erramvaripalem	Karemchedu
37	P.Veera Reddy	P.Venkata Reddy	40	Nuthalapadu	Parchur
38	Gangadhar Reddy	Prathap Reddy	39	Erramvaripalem	Karemchedu
39	T.Srinivas Reddy	T.Sriram Reddy	45	Nuthalapadu	Parchur
40	Vasu Babu	Srinivas Rao	40	Aadipudi	Karemchedu
41	Chinna Reddy	Venka Reddy	38	Erramvaripalem	Karemchedu
42	Ravi babu	Srinivas Rao	34	Erramvaripalem	Karemchedu
43	Surendra Reddy	Rami Reddy	48	Ramanayapalem	Parchur
44	Gopi	Ramayyah	28	Aadipudu	Karemchedu
45	Srinivas Reddy	Bushi Reddy	48	Ramanayapalem	Parchur
46	RamaKrishna Reddy	Veera Reddy	51	Ramanayapalem	Parchur
47	Veera Reddy	Venkat Reddy	60	Ramanayapalem	Parchur
48	Lakshman Reddy	Bushi Reddy	48	Ramanayapalem	Parchur
49	I.Siva Kashi Reddy	I.Bashi Reddy	58	Vengalareddy Palli	Giddaluru
50	B.Srinivasulu Reddy	B.Devendhar Reddy	27	Vengalareddy Palli	Giddaluru
51	R.Praveen Kumar Reddy	R.Nagi Reddy	31	G.Kothapalli	Racherla
52	A.Swami Ranga Reddy	A.Ranga Swami Reddy	24	Vengalareddy Palli	Giddaluru
53	B.Rama Chandra Reddy	BNL Reddy	55	Vengalareddy Palli	Giddaluru
54	V.Easwar Reddy	V.Veera Reddy	45	Vengalareddy Palli	Giddaluru
55	M.Ranga Swami	M.Obayyah	53	Vengalareddy Palli	Giddaluru
56	R.Madhava Reddy	R.Chithambaram Reddy	48	Vengalareddy Palli	Giddaluru
57	P.Venkateswara Reddy	P.Tirupathi Reddy	51	Vengalareddy Palli	Giddaluru
58	R.Rama Krishna Reddy	R.Ranga Swami Reddy	31	Vellampalli	Maddipadu
59	M.Pedda Kasaiah	M.Ramayyah	40	Jayarampuram	Giddaluru
60	D.Rajasekhar Reddy	D.Venkata Ranga Reddy	43	Vengalareddy Palli	Giddaluru
61	P.Ramalinga Swami	P.Balayya	38	Vengalareddy Palli	Giddaluru
62	Vajrala venkareddy	Veera reddy	41	Vudavada	J.ponguluru
63	G.subba Rao	Ramayya	63	Nujallapalli	J.ponguluru
64	M.venkateswarulu	Subba Rao	55	Nujallapalli	J.ponguluru
65	Ch Ankamma Rao	Venkata Rao	32	Vudavada	J.ponguluru
66	Suresh	Subba Rao	40	Nujallapalli	J.ponguluru

67	Simhadri	Sai babu	48	Pavuluru	J.ponguluru
68	Pothuraju	Ankamma	41	Pavuluru	J.ponguluru
69	Vajrala kotireddy	Venkateswara reddy	53	Vudavada	J.ponguluru
70	M.sai	Ramu	24	Punuru	Yeddapanudi
71	T.Ashok	Koteswara rao	31	Vudavada	J.ponguluru
72	Pulla Reddy	Anjireddy	34	Vudavada	J.ponguluru
73	G.Nagaraju	Punna Rao	30	Vudavada	J.ponguluru
74	Ashok Reddy	Subba rami reddy	34	Jagarlamudi	Yeddapanudi
75	Ch.kotireddy	Nagireddy	55	Jagarlamudi	Yeddapanudi
76	M.srinivasa Reddy	But hi reddy	51	Jagarlamudi	Yeddapanudi
77	Venkatanarayana	Subbarao	46	Timidithapadu	Karemchedu
78	B.srinivasa rao	Koteswara rao	50	Thimidithapadu	Karemchedu
79	K.Ramakrishna	Lakshmi narayana	44	Themidithapadu	Karemchedu
80	Prattipati prasanna	Siva nageswara Rao	29	Temidithipadu	Karemchedu
81	Nadendla.suresh babu	SrinivasaRao	33	Temidithapadu	Karemchedu
82	Kottillu.Gopi	Badrayya	21	Temidithapadu	Karemchedu
83	Pateti.Mastan Rao	Venkateswarulu	48	Pothiravari palem	Karemchedu
84	Kottapalli Rambabu	Sambayya	48	Pothiravari palem	Karemchedu
85	T.pavan kumar	Seshayya	22	Pothiravari palem	Karemchedu
86	Koteswara Rao	Nageswara Rao	32	Temidithapadu	Karemchedu
87	Sikha koteswara Rao	Chinna yohanu	69	Thimidithapadu	Karemchedu
88	Sikha vandanam	Mohan Rao	44	Thimidithapadu	Karemchedu
89	Bodevula vamsi	Ramarao	27	Thimidithapadu	Karemchedu
90	Danda Chowdary	Ankamma	61	Thimidithapadu	Karemchedu
91	Daniel	Bulliyya	22	Thimidithapadu	Karemchedu
92	Esuratnam	Pichayya	36	Thimidithapadu	Karemchedu
93	J.David	Davidhu	39	Thimidithapadu	Karemchedu
94	T.kishore	Issac	42	Thimidithapadu	Karemchedu
95	V.sambasiva Rao	Anjayya	42	Vankayalpadu	Inkollu
96	Bh.Ravindhara Reddy	Venkata subbareddy	53	Vankayalpadu	Inkollu
97	E.Venkatareddy	Sambireddy	32	Subbareddy palem	Inkollu
98	Bh sambireddy	Anjireddy	58	Subbareddy palem	Inkollu
99	T.pollireddy	Subbareddy	49	Subbareddy palem	Inkollu
100	K.Ramesh	Brahmanandham	50	Pusapadu	Inkollu
101	K.srinivasarao	Subba rao	54	Pusapadu	Inkollu
102	Y.venkatareddy	Krishna reddy	40	Vankayalpadu	Inkollu
103	Y.Murali	Subbareddy	45	Vankayalpadu	Inkollu
104	Bh.srinivasa Reddy	Subbareddy	47	Vankayalpadu	Inkollu
105	B.venkataramireddy	Sambi reddy	42	Subbareddy palem	Inkollu
106	V.srinivasa Reddy	Hanuma Reddy	46	Subbareddy palem	Inkollu
107	Bhavanam lakshma reddy	Subba reddy	45	Subbareddy palem	Inkollu
108	B.Ramireddy	Brahmareddy	45	Subbareddy palem	Inkollu
109	B.Brahmareddy	Ramakrishna Reddy	56	Subbareddy palem	Inkollu
110	Subba Reddy	Narayana Reddy	30	Ankabhupalem	Ardhaveedu

**List of Farmers surveyed from NON IAEP villages:**

Sl.no	Farmer Name	District	Mandal	Village
1	L. Bhadra rao	Guntur	Pedanandipadu	Ravipadu
2	L.Bhaskara rao	Guntur	Pedanandipadu	Ravipadu

3	N alluri praveen	Guntur	Pedanandipadu	Ravipadu
4	Velaga sivasankara rao	Guntur	Pedanandipadu	Ravipadu
5	Pusulri srinivasa rao	Guntur	Pedanandipadu	Ravipadu
6	M Srinivas rao	Guntur	Pedanandipadu	Ravipadu
7	B srinivasa rao	Guntur	Pedanandipadu	Ravipadu
8	L Veeraiah	Guntur	Pedanandipadu	Ravipadu
9	Karri brahmaiah	Guntur	Pedanandipadu	Ravipadu
10	P ravindra	Guntur	Pedanandipadu	Ravipadu
11	Govindhappa	Kurnool	Chippagiri	Beldon
12	Balakrishna	Kurnool	Chippagiri	Beldon
13	B Ramesh	Kurnool	Halaharvi	Mallikarjuna Palli
14	Mahesh	Kurnool	Halaharvi	Mallikarjuna Palli
15	Govardhan	Kurnool	Halaharvi	Mallikarjuna Palli
16	C Rathan Kumar	Kurnool	Halaharvi	Mallikarjuna Palli
17	Laluswamy	Kurnool	Halaharvi	Sridharhal
18	Dhurganna	Kurnool	Halaharvi	Sridharhal
19	P Gopal	Kurnool	Yammiganur	Jaggapuram
20	B Anji	Kurnool	Yammiganur	Jaggapuram
21	Murali	Kurnool	Yammiganur	Kadevalli
22	Madhavareddy	Kurnool	Midthur	Chintalapalli
23	Balaji Nayak	Kurnool	Athmakur	Mustapalli
24	Kesavarapadu Pothuraju	Prakasam	Karamchedu	Kesavarapadu
25	Gopaiah.Koniki	Prakasam	Inkollu	Koniki
26	Satish Koniki	Prakasam	Inkollu	Koniki
27	Gopaiah.Koniki	Prakasam	Inkollu	Koniki
28	Najaraidu	Prakasam	Karemchedu	Swarna
29	B.Venkatesh	Prakasam	Inkollu	Edupulapadu
30	G.Srinu	Prakasam	Inkollu	Edupulapadu
31	D.Ravibabu	Prakasam	Inkollu	Edupulapadu
32	M.Brahmanandam	Prakasam	Inkollu	Edupulapadu
33	G.Ramarao	Prakasam	Inkollu	Edupulapadu
34	N S Azeem Basha	Prakasam	Karmchadu	Daggubadu
35	T Ramanjineyulu	Prakasam	J Panguluru	Chinna Mallavaram
36	M Rathnam	Prakasam	Martur	Dronadhula
37	B Chinna Venkata Narayana	Prakasam	Yaragundapalem	Botlapalli
38	D Anjaneyulu	Prakasam	Pullala Charuvu	Komarolu
39	v.murali	krishna	Vatsavai	Alluripadu
40	SK. Janu	krishna	Vatsavai	Alluripadu
41	A. Srinivas	krishna	Vatsavai	Alluripadu
42	M. bujji	krishna	Vatsavai	Alluripadu
43	D. SrinivasRao	krishna	Vatsavai	Alluripadu
44	Venkatesh	krishna	Vatsavai	Alluripadu
45	Srinivasarao	Prakasam	Vatsavai	Alluripadu
46	Srinivasulu	Prakasam	Vatsavai	Alluripadu
47	Narayana	Prakasam	Vatsavai	Alluripadu
48	Sivayya	Prakasam	Vatsavai	Alluripadu
49	Anjayya	Prakasam	Vatsavai	Alluripadu
50	Rama krishna	Prakasam	Vatsavai	Alluripadu