Rytu Kosam Project
VISAKHAPATNAM District

Pilot Mandals : 1 Padmanabham

2 Butchayyapeta

3 Chintapalli

As envisaged in the agreement between State Government of Andhra Pradesh, ICIRISAT to augment the growth in the primary sector, by adopting the principles of convergence, collective action, consortium to build sustainable partnerships and build capacities of the farmers through innovations, inclusivity, and sustainable intensification.

As part of the programme, ICRISAT selected NGOs in 13 districts of Andhra Pradesh to implement the programme at ground level. VIKASA in one such NGO partner and has been implementing the programme in Padmanabham, Buchayyapeta and Chinthapalli mandals of Visakhpatnam District.

Doubling the productivity through crop and agronomic innovations is the main objective of the programme. Considering wide variety of constraints in primary sector, ICRISAT-led consortium suggested various Interventions to address these constraints viz., introducing soil-test-based fertilizer application for agriculture and horticulture crops; improved seed/varietal replacement majorly in paddy, groundnut, finger millet and Rajma; introduction of multi-purpose maize hybrids for fodder production; promoting organic manure including *Gliricidia*, aerobic and vermi-composting; crop intensification through cultivation of rice fallow areas; zero till maize cultivation with weed management; Ridge and Furrow method of maize cultivation; introduction of multi-cut fodder hybrid sorghum, and awareness building and CB program

The following activities were taken up by VIKASA with the financial support from the ICRISAT in implementing this project in the selected Pilot mandals.

1. Horticulture soil and leaf sample collection :

Soil and Plant Sampling Protocols in Horticultural Crops

From Visakhapatnam District a total of 208 samples were collected from 35 villages apread across 10 mandals. The samples were collected using the following standard protocol.

Methodology adopted for Soil sampling:

1. Divide the orchard into blocks of trees of the same species, age and other characteristics like topography, soil colour, soil texture and management practices.
2. Within a block, select 5 representative trees.
3. From each indicator tree in a block, pull 3 to 4 cores.
4. Mix the resulting 15-20 cores in the block and collect approximately 1 kg of soil sample using the partitioning method.

Table 1. Recommended soil sampling depth and distance from tree trunk adopted for collecting the samples.

S. No.	Crop	Recommended sampling depth (cm)	Recommended distance from tree trunk for sampling (cm)
1	Mango	0-40	75-100
8	Cashew	0-30	
11	Chillies	0-15	

2. RYTHU KOSUM– CIMMYT Farmers Field Maize Trials:

- We have identified Maize farmers for CIMMYT trails, and distributed seed as per norms given below Each trial is provided with 3 entries (2 test entries + 1 check)
- Some trials are provided with only 2 entries (1 test entry + 1 check)
- Each packet has 500 gms of maize seed. This should approximately cover an area of 250 square meters
- 15 farmers identified and given seed , now 15 Days old plants crop condition.
  CIMMYT MAIZE FIELD VISIT :DIFFERENT STAGES:

Trials laid out with the following farmers

S No	Plot No	Farmer Name	Father's Name	Village	Mandal	Hybrid Name
	42	Pandrangi RamaKrishna	Satyam	Korada	Padmanabham	ZH138088
1	43					VH 112651
	44	Duvvi Ramjulu	Pydaiah	Reddipalli	Padmanabham	VH 112651
2	45					ZH 141592
	46	Pandrangi RamaKrishna	Satyam	Korada	Padmanabham	ZH15374
3	47					VH 112651
	48	Duvvi Durga Rao	Ramjulu	Reddipalli	Padmanabham	ZH 15381
4	49					VH 112651
	50	Nammi Appalakonda	AdiNarayana	Reddipalli	Padmanabham	VH 12333
5	51					VH 112651
	52	Karri Sanyasi	Peddanna	Venkatapuram	Padmanabham	CAH1421
	53					CAH1423
6	54					VH 112651
	55	Nakkalla Ramu	Suridu	Venkatapuram	Padmanabham	CAH1437
	56					CAH1452
7	57					VH 112651
	58	Nakkalla SuryaNarayana	Sureedu	Venkatapuram	Padmanabham	CAH148
	59					CAH1514
8	60					VH 112651
9	61	Karri Bangaraiah	Abaddam	Venkatapuram	Padmanabham	CAH1526
	62					CAH1532

	63					VH 112651
	64	Karri SuryaNarayana	Pedda RamuNaidu	Venkatapuram	Padmanabham	CAH 1535
	65					CAH 1540
10	66					VH 112651
	67	Karri Peddanna	Chinna RamuNaidu	Venkatapuram	Padmanabham	CAH 1542
	68					CAH 1544
11	69					VH 112651
	70	Duvvi SuriAppadu	Ramanjulu	Reddipalli	Padmanabham	CAH1547
	71					CAH1548
12	72					VH 112651
	73	Karri Chinna RamuNaidu	Lakshmi Naidu	Venkatapuram	Padmanabham	CAH 1555
	74					CAH 1584
13	75					VH 112651
	76	Nammi Achhanna	Appayya	Duvvapeta	Padmanabham	CAH1592
	77					CAH162
14	78					VH 112651
	79	Nakkala Ramu	Suryudu	Venkatapuram	Padmanabham	CAH 1620
	80					CAH 1626
15	81					VH 112651

A total of 15 farmers were identified for laying the trials, of which 5 farmers laid two hybrids and rest of the 10 farmers laid 3 hybrids each. The detailed table with farmers' names, and data collected is annexed to this report.

3. Vegetable seeds distributed to small women farmers and elementary schools :

Vegetables play a key role in the augmentation of the nutritional status of the foods intake and are cheap sources of important nutrients required by a human body. In most of the villages, farmers cultivate the vegetables but keep only the low quality vegies for their own consumption. In order to inculcate the habit of nutritional education and awareness among the school children, vegetable seed kits were supplied to the schools so that the children get involved in the production and teachers can also inculcate the nutritional awareness among the students on different vegetables and their contribution in making us healthy and the vital nutrients they provide us.
Besides, seed kits were also supplied to the rural women to encourage them to raise the vegetables on their backyards and use them for home consumption.

The seed kit contains the following seeds.

Crop	Variety	Quantity (kg)	No of beneficiaries

Tomato	ArkaVikas	0.1	50
French bean	ArkaKomal	1.3	75
Bhendi	ArkaAnamika	0.6	25
Dolichos	Arka Jay	0.1	20
Spinach (Palak)	ArkaAnupama	0.8	30
Amaranthus	ArkaSuguna	0.2	25
	Total	**3.1**	**125**

- Vegetable seed distributed to 9 elementary and one high school in Padmanabham and 10 schools covered in Butchayyapeta mandal.


Kitchengarden seeds distribution.

4. Glyricidia seedling distribution:

It was observed from the soils sample data that, the organic carbon content was found to be low in the soils of the district. Out of the three mandals identified for piloting the project, Chintapalli being a tribal mandal, farmers have the habit of crop rotations and applying the organic manure to the fields, whereas in Buchayyapeta, mandal which is a rainfed area with low annual rainfall out of the three mandals, most of the farmers are going for cultivation of Casurina on the drylands, as they are not in a position to expect a good crop due the vagaries of monsoon coupled with the prolonged dry spells.

The remaining Mandal- Padmanabham , though is a rainfed mandal but receives better rainfall compared to the Buchayyapeta mandal. However, the bore wells dug in this mandal provide as an alternate source of assured irrigation. Being closer to the two important cities in the region (both Visakhapatnam and Vizianagaram), farmers are more enterprising and grow a variety of vegetbles and high value crops like Hybrid Maize and baby corn crops. As a result of continuous cultivation of these nutrient depleting crop cultivation, coupled with the low organic carbon content is not a good sign in the long run for the cultivation of crops.

Hence VIKASA distributed 300 Glyricidia seedling to Pilot villages of Padmanabham i.e Korada , Venkatapuram in order to inculcate the habit of preparing their own manure with locally available resources such as

గ్లైరి సీడియా మొక్కలతో పంటలకు మేలు

మొక్కలు పంపిణీ చేస్తున్న సందీప్ నాయక్

పద్మనాభం : గ్లైరిసీడియా మొక్కలను పెంచి వీటి కాండాలను భూములో కలియ దున్నడం వల్ల భూమిలో సేంద్రియ పదార్థం ఏర్పడి పంటలు బాగా పండుతాయని ఐకికాట్ సంస్థ ప్రతినిధి సందీప్ నాయక్ చెప్పారు. మండలంలోని కొరాడ, వెంకటాపురం గ్రామాల్లో రైతులకు 350 గ్లైరిసీడియా మొక్కలను ఆయన పంపిణీ చేశారు. ఈ సందర్భంగా సందీప్ నాయక్ మట్లాడుతూ నాటిన ఏడాది తర్వాత వీటి లేత కాండాలను భూమిలో కలియ దున్నాలని సూచించారు.

Glyricidia, which has a good coppicing capacity and adds good butrients to the soil with its quick decomposition capacities. We explained advantages of Glyricidia uses while supplying the saplings to the farmers.

5. Awareness meetings organized during the reporting period

Trainings are integral part of the programme. These trainings are organized to bring about the desirable changes in the Knowledge, Attitudes and skills among the participants. In order to bring about the sensitization on the need to have a soil sample data, the first trining was organized on the soil sample collection and explained the farmers the importance of having the data on soil type for the selection of crops as well as the measures to be taken to ameliorate the soil health.

A total of 17 trainings were organized with over a 3000 trainee participation during the reporting period and the list of trainings, topics covered and places where the trainings were organized is provided hereunder.

Important crops like using of Solar drier for drying their produce to prepare the value added products, conducing the trials both the new varieties and existing varieties and parameters to be used for assessment of the crop performance, application of micronutrients to the crops and their role plant metabolism etc were dealt with.

s no	**Location**	**Name of the Course/training**	**Male**	**Female**	**Total**
1	Padmanabham	Training on mango , Cashew , vegetables crops for **soil sampling 6 mandals**	345	154	499
2	Padmanabham	Training on Maize CIMMYT trails in padmanabham crop production , prtection	150	43	193

s no	**Location**	**Name of the Course/training**	**Male**	**Female**	**Total**
		(4)			
3	Chinthapalli	training on solar drier - Amla, coffee , Amla candy in Chinthapalli-A , sanivarm, Busalukota (6)	190	87	277
4	Padmanabham, Chinthapalli	Training on Micronutrient zinc, Boron,in paddy and Gypsum in Ground nut awarness meetings in 3 mandal	450	230	680
5	Padmanabham	awareness meeting on seed production Chickpea in Padmanabham(3)	150	56	206
6	Padmanabham	awareness training programme on organic farming in hrticulture crops Banana, Cashew , Mango alone with Horti. Dep. (4)	134	43	177
7	Padmanabham	seed production demo training on Red Gram, G nut -ICRISAT verities	132	23	155
8	Padmanabham	awareness meetings on Red gram on Paddy fields -ICPH VARIETY along with department officers	54	23	77
9	Padmanabham	awareness meetings on drum seeded technology with Zinc - Application	31	12	43
10	Padmanabham	training programme on Kitchen Grdeing in Schools (6)and rurla SHG woman group(4)	14	84	98
11	Padmanabham	awareness programme at Padmanabham mandal on Glyricidia comost, Production of glyricidia	67	24	91
12	Chinthappli,Padmanabham	training on Zero Based Natural Farming Trainings along with department in Korada , Padmanabham, 5,Chinthapalli 6	190	110	300
13	Padmanabham	awareness programme on Easy Planter in Chilli, Vegetables at Padmanabham mandal (2)	76	23	99

s no	Location	Name of the Course/training	Male	Female	Total
14	Padmanabham	training on Plant Shredder in Padmanabham	30	13	43
15		Training on Madhyam Culture in Chinthapalli, padmanabham, buchayapeta (10)	430	128	558
16		training on Rajma Cutivation on new ARKA KOMAL -ICRISAT provided	39	24	63
17		Yield estimations (CCE) in paady , maize , Rajma, in 3 mandals	150	67	217
		Grand Total	**2632**	**1144**	**3776**

6. Comparative crop performance trials

During the reporting period, comparative crop performace trials were conducted by binging in nee varieties in case of groundnut, finger millet, pigeonpea, bajra and rajmah crops.

Crop	Variety	Qty. of seed supp	ICRISAT-DEMOS	Check plot	Demo plot CCE per	Check plot CCE per acre	INCRESED YIELD OVER	Intervention planned
Groundnut	**ICGV 91114**	**200**	**2**	**k6,k7**	732.8	**560**	**31**	Varietal replacement
Finger millet	**MR1**	**15**	**2**	**local**	406.4	**272**	**49**	Good seed
	GPU 28	**10**	**2**	**Local**	252.8	**462.4**	**-45**	Heavy rains damaged demo plot
Pigeonpea	**ICPL 85063 (Laxmi)**	**50**	**2**	**local**	2273.6	**1633.6**	**39**	GOOD plant protectio
	ICPL87 119	**50**	**2**	**local, privat**	2216	**2006.4**	**10**	Good seed
BAJRA	**ICTP 8203**	**10**	**1**	**local, private**	673.6	**667.2**	**1**	lack of plant protectio
	HHB 67	**10**	**1**	**local, privat**	566.4	**574.4**	**-1**	lack of plant

RAJMASH	**(ARKA KOMAL)**	**750**	**20**	**Chinthapalli red,**	838.4	**459.2**	**83**	replacement of old local variety,

These trials were conducted with with an objective of showing the relative proformace of the new varieties *vis-à-vis* the existing best varieties in the above mentioned crops. Among all the trials, Groundnut performed better only in one location (Padmanabham) whereas in the rest of the two mandals, the performance of groundnut variety (ICGV 91114) was not up to the satisfaction of the farmers. Bajra trial was conducted but the suitable plant protection were not taken up by the faremers and hence the full yield potential could not be exploited.

In case of rajmah, the Arka Komal variety brought cheers among the farmers in Araku Valley where they were grown on an experimental basis but in Chintapalli Mandal the entire crop (even the local varieties) did not come up well due the prolonged drought spell occurred during the crop growing period.

Pigeonpea varieties (Lakshmi and Asha) performed well compared to the local ones and farmers were showing interest to continue their cultivation in the coming season.

7. **Seed distribution of Rajma at Chinthapalli**

Varietal characteristics of Arka Komal (Rajmash) :

- Pure line selection from IIHR-60 (Collection from Australia).
- Plants erect and bushy, Photo insensitive Flat, green straight pods. Seeds light brown, oblong and large.
- Good transportation and cooking qualities.
- Seed yield 1500 kg./ha Duration 70 days.
- Pod Yield 20 t/ha.
- Good export quality


రాజ్‌మాలో కొత్తరకం సాగు

- ఇక్రిశాట్ శాస్త్రవేత్తల ద్వారా 'ఆర్కా కోమల్' పంపిణీ
- ప్రయోగాత్మకంగా చింతపల్లిలో పంట

రైతులకు విత్తనాలు పంపిణీ చేస్తున్న ఏవో కాంతమ్మ

Thu, 22 September 2016


చింతపల్లి కేంద్రంగా రాజ్‌మా విత్తనోత్పత్తి

మన్యానికి మరో కొత్త అతిథి

పైలట్ ప్రాజెక్టుకు ఇక్రిశాట్ శ్రీకారం

Value Addition through Solar drier:

Value addition is an important aspect that farmers make use of it to make their agricultural enterprise more remunerative. A simple value addition is solar drying. VIKASA organized trainings in Chintapalli and Padmanabham mandals on solar drying of their agricultural products like Tomato, Tamarind and Amla.


అటవీ ఉత్పత్తులను కాపాడుకోవా


ఆర్థిక స్వావలంబన

Picture Gallery