PROFORMA FOR PREPARATION OF ANNUAL REPORT

(1st January 2022 to 31st December 2022)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail:

Name of the KVK as per official records (MoU) : Shri Hanumantharaya Educational & Charitable Society, Krishi Vigyan Kendra, Yagantipalle.

Address : Krishi Vigyan Kendra, Yagantipalle (P), Banaganapalle (M), Nandyal (Dt.), A.P.

Phone : 9440607424
Fax : -
Email : pendekantikvk@gmail.com

1.2 .Name and address of host organization with phone, fax and e-mail:

Name of the Host Organization as per Official Records : Shri Hanumantharaya Educational & Charitable Society
.

Status of the Host Organization (As per the MoU) : NGO
Address : Shri Hanumantharaya Educational & Charitable Society, Krishi Vigyan Kendra, Yagantipalle (P), Banaganapalle (M), Nandyal (Dt.), A.P.
Phone : 9440607424
Fax : -
Email : pendekantikvk@gmail.com
Name of the Chairperson : Sri P. Balaji
Mobile No : 7702127616
Email : Pb1961@rediffmail.com

1.3. Name of the Programme Coordinator with phone & Mobile No:

Name of the Programme Coordinator / SS&H : Smt. G. Dhanalakshmi
Residential Address : Illurukothapeta (V & P), Banaganapalle (M), Nandyal (Dt.), Andhra Pradesh.
Phone No. : -
Mobile No. : 9440607424
Email : dhanaguru12@gmail.com

1.4. Year of sanction of the KVK (as per Official Order) : 1989
1.5. Month and year of establishment : December, 1989
1.6. Total land with KVK (in ha) (Consolidated figure) :

S. No.	Item	Area (ha)
1	Under Buildings	2
2	Under Demonstration Units	1
3	Under Crops	10
4	Orchard/Agro-forestry	4
5	Others (specify)	3
	Total	**20**

1.6. Infrastructural Development:

A) Buildings:

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area(Sq.m)	Status of construction Completed/ in progress/ to be initiated)
1	Administrative Building	ICAR	1994	550	7.59	1990-91		
2	Farmers Hostel	ICAR	1994	450	8.0	1990-91		
3	Staff Quarters (No.)	ICAR	1998	650	32.27	1992-93		
4	Demonstration Units	ICAR	1992-93	300	6.5	1992-93		
5	Fencing	ICAR	2005-06		6.5	2004-05		
6	Rain Water harvesting system	-	-	-	-	-		
7	Threshing floor	-	-	-	-	-		
8	Farm godown	ICAR	2005-06	112.5	5.28	2005-06		
9	Shed (Farm equipment)	-	-	-	-	-		
10	Soil Testing Laboratory	ICAR	2004-05	112.5	8.59	2004-05		
11	Goat Shed	ICAR	2016-17	35.0	3.0	2016-17		

B) Vehicles:

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms covered as on 31.12.2020	Present status
Bolero	2019	6,50,000-00	25,024 Km	OK
Mahindra & Mahindra Tractor	2005	3,54,522-00	30678 (hrs)	OK
Motorcycle (Hero Honda)	2014	-	13386 Km	OK

C) Equipment & AV aids:

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Tape Recorder	1990	2,600-00	OK
Over Head Projector	1991	6,200-00	OK
Slide Projector	1991	7,168-00	OK
Ahuja Micro phone Set	1994	9,500-00	OK
Television	1994	19,999-00	OK
Video Cassette Recorder	1996	19,000-00	OK
Ahuja Portable wireless Amplifier	2003	9,927-00	OK
Cordless micro phone	2003	5,804-00	OK
Collar Mic	2005	5,800-00	OK

1.7. A). Details SAC meeting* conducted in the year:

S. No.	Date	No of Participants	Salient Recommendations
1	16.02.2023	33	1. Adoption of each technology (ANGRAU & ICAR) demonstrated or propagated is to be recorded. 2. Suggested to include information on Bengalgram variety NBeG-452 through SMS. 3. Incorporate suggestions made by the members for the technical programme. 4. In OFT on organic farming in rice, include one more treatment i.e. Natural farming method for SMS (Soil Science). 5. Include new OFT on organic farming in Bengalgram with three treatments T1: Farmer practices, T2: Organic farming practice, T3: Natural Farming practice for SMS (Soil Science). 6. In OFT include the different time of sowings in Cotton to SMS (Agronomy). 7. Demonstration on real time contingency measures in rainfed crops. Consult Dr. T. Sahadeva Reddy for components of demonstration for SMS (Agronomy). 8. Maintain RBK and FPOs data of the district and communicate the messages on regular basis for SMS (Extension). 9. Execute OFTs, demonstrations and trainings through RBKs which helps to reach the technology to larger area. 10. Change title of OFT to include IPM and Organic methods of pest management in Foxtail millet based cropping system. eg. Redgram intercropped with Foxtail millet for SMS (Plant Protection). 11. Explained about different seed varieties, technologies and functioning of ANGRAU for Research and Extension in Agriculture for understanding of the SAC members. 12. See that all the problems discussed in SAC be covered in technical programme. 13. ANGRAU may distribute a pamphlet depicting its latest technologies for the benefit of the house. 14. Virtual/ offline need based trainings to RBK in-changes at mandal, division and district level. 15. Document blue prints of IFS models in respective of Mandal, Division level and create wider awareness on it. 16. Conduct Seed production and value addition activities through FPOs. 17. Most of small and marginal farmers are showing interest towards organic farming, which is a welcoming sign. But they need more knowledge and support regarding marketing. 18. Late wilt in maize is the problem hampering the crop in Rabi, solution needed. 19. Efficient vaccinations are needed for management of Blue tongue disease in sheep, which is causing lot of damage to the herds. 20. He informed the house about his experiences of natural farming in his 1.7 ac acid lime orchard with about 25-30 types of other crops , vegetables, medicinal plants to maintain 365 days green cover in his field and how he is getting regular income from his Farm. He also said that he is producing Rice with SRI method with Natural Farming. 21. Shared his experience of controlling pest and diseases in red chilli without any chemical pesticides, relying completely on Botanicals

			and Bio-pesticides. He informed the house that he has achieved an yield of 20 q/ac in Super 10 variety this season. He expressed his gratitude to KVK for supporting this achievement and urged other farmers to try the same in their fields to reduce the load of pesticides in the harvested produce. 22. Use of alternatives for chemical pesticides need to be followed by all the farmers to reduce the poison load in the food we are eating and it is everybody's responsibility. He explained how he is practicing Natural farming in Rice and producing different kinds of rice and supplying to consumers. He said he is also supplying various Cow based preparations, Vermi compost, Mixed compost (Bio, cake enriched) at very reasonable price to the farmers.

**** Attach a copy of SAC proceedings along with list of participants***

2. DETAILS OF DISTRICT (2022)

2.0. Operational jurisdiction of KVKs:

District	New districts governed by the KVK after division of the district, if applicable	Taluks/Tehsils and/or Mandals under the KVKs jurisdiction
Nandyal	Nandyal	29 mandals

2.1. Major farming systems/enterprises (based on the analysis made by the KVK):

S. No.	Farming system/enterprise
1	Agriculture + Horticulture
2	Agriculture + Dairy
3	Agriculture + Horticulture + Dairy
4	Agriculture + Horticulture + Pastural Culture

2.2. Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography):

S. No.	Agro-climatic Zone	Characteristics
1	Scarce rain fall zone	Low, scanty and erratic rainfall due to which successful crop production with good yield is unrespectable and dry land agriculture is predominant with a variety of rainfed crops in the zone.

2.3. Soil types:

S. No.	Soil type	Characteristics	Area in ha
1	Black cotton soils	Heavy and deep to very deep belonging to vertisols.	3.69
2	Red Earths	Clayey sub soil (association of alfisols and inceptisols)	1.29
3	Red earths	Loamy sub soil i.e chalkas (association of inceptisols and alfisols)	3.18
4	Red sandy loam soils	Dubbas & Chalkas (association of entisols, inceptisols and alfisols)-Light textured soils, poor water holding capacity, poor fertility	0.54
5	Problem soils (Saline/sodic)	High pH more than 9.0	1.04
6	Rock land and others	Undulated sloppy lands. Very shallow soils.	0.47

2.4. Area, Production and Productivity of major crops cultivated in the district (or the jurisdiction as the case may be) for 2022:

Kharif:

S. No.	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	PADDY	64372.85		61.00
2	JOWAR	2045.29		48.00
3	BAJRA	2601.09		46.50
4	MAIZE	49228.06		56.00
5	KORRA	732.17		21.00
6	REDGRAM	32172.61		18.50
7	GREENGRAM	125.37		17.50
8	BLACKGRAM	7911.2		19.00
9	GROUNDNUT	9278.2		28.00
10	SUNFLOWER	488.1		18.50
11	CASTOR	4271.43		16.50
12	SOYABEEN	5588.21		18.60
13	CHILLIES	17537.87		
14	COTTON	33141.65		15.50
15	OTHERS	16945.88		
Gross area		**252737.68**		

Rabi:

S. No.	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	33171		64.05
2	Jowar	23434		50.50
3	Bajra	283		48.00
4	Maize	19309		58.00
5	Bengal gram	51560		0
6	Red Gram	1419		19.00
7	Green Gram	415		18.00
8	Black Gram	24774		19.50
9	Horsegram	108		
10	Groundnut	3022		29.00
11	Sesamum	163		13.00
12	Sun Flower	226		19.00
13	Castor	353		17.10
14	Rape seed and Mustard	375		0
15	Tobacco	1647		0
16	Other crops	4530		-
Total		**164789**		

Summer:

S. No.	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)

Crops	Name	NDL Dist. (ac)	Crops	Name	NDL Dist. (ac)
Fruits	Mango	5186	Vegetables	Tomato	10907
	Banana	1791		G. chilli	3389
	S. Orange	2104		Bhendi	955
	Acid Lime	1225		Dolichos bean	388
	Papaya	710		Brinjal	150
	Guava	422			
Spices	Dry Chilli	45669	Flowers	Jasmine	481
				Chrysanthemum	175
				Crossandra	44
				Marigold	107
				Total	**1,06,833 acres**

2.5. Weather data:

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January, 2022	-	-	-	-
February, 2022	-	-	-	-
March, 2022	-	-	-	-
April, 2022	-	-	-	-
May, 2022	-	-	-	-
June, 2022	117.2	-	-	-
July, 2022	130.6	-	-	-
August, 2022	136.0	-	-	-
September, 2022	145.8	-	-	-
October, 2022	136.1	-	-	-
November, 2022	6.5	-	-	-
December, 2022	33.1	-	-	-

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2022):

Category	Population	Production	Productivity
Cattle			
Crossbred	**159218**	-	-
Indigenous	-	-	-
Buffalo	**278559**	-	-
Sheep			
Crossbred	**692376**	-	-
Indigenous	-		
Goats	**259328**	-	-
Pigs	**5402**	-	-

Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	**3848**	-	-
Poultry			
Hens	685056	-	-
Desi	-	-	-
Improved	-	-	-
Ducks	**0**	-	-
Turkey and others	-	-	-

Category	Area	Production	Productivity
Fish	-	-	-
Marine	-	-	-
Inland	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.7. Details of Adopted Villages (2022):

S. No.	Taluk/ mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1	Allagadda	Gospadu Sirvella	Sreenivasapuram Govindapalli	2021	Rice, Sesame Blackgram	Low productivity in rice –rice system Low productivity in oilseeds	Introduction of rice based cropping systems (rice-Maize and rice-sunflower) Introduction of improved varieties of Sesame
2	Banaganapalli	Banaganapalli	Yerragudi Jolapuram Meerapuram	2021	Redgram Cotton	Low productivity	Integrated crop management in Redgram and Crop geometry in cotton
3	Banaganapalli	Banaganapalli	Yagantipalle	2021	Rice, Maize, Vegetables	Indiscriminate use of Fertilizers and Pesticides	INM and IPM
			Meerapuram, Jolapuram	2021	Redgram, Greengram, Korra	Indiscriminate use of Pesticides, Poor choice of varieties	ICM and IPM
4	Owk	Owk	K. Sunkesula	2021	Blackgram, Redgram and Chillis	Indiscriminate use of insecticides for management of pests in cotton & Chillis	IPM, IDM and ICM
					Groundnut Bengalgram Chillies	Non availability of improved varieties.	FLDs

						Use of higher seed rate. Imbalanced nutrient management and increased cost of production.	
5	Dornipadu	Dornipadu	Ramachandrapuram	2021	Rice, Cotton, Blackgram	PBW in cotton is increasing. Bud necrosis in Blackgram is noticed.	FLD on Bt Cotton FLD on Blackgram
			Dornipadu	2021	Bt. Cotton, Rice and Jowar	Indiscriminate and excess application of chemical fertilizers and increased cost of production.	FLDs
6	Sanjamala	Sanjamala	Mangapalle	2021	Bengalgram, Chilli, Rice	Dry root rot and wilt in Bengalgram. Viral diseases and root rot in Chillis.	OFT on Bengalgram seed treatment.
			Giddaluru	2021	Rice	Blast, Sheath blight, Stem borer, BPH in rice.	OFT on Rice seedling dip with Pf for disease mgmt.
			Kotapadu Mangapalle Giddalur	2021	Brinjal Banana	Sucking pests shoot & fruit borer.	FLD: Integrated Crop Management in Brinjal. Integrated crop management in Brinjal INM in Banana and cost reduction techniques.
7	Allagadda	Allagadda	Marripalle	2021	Blackgram, Groundnut, Citrus	Twig blight, Canker, die back in acid lime. Stem rot, LLS in Groundnut. Viral diseases in Blackgram	FLD and training programmes.

8	Banaganapalli	Banaganapalli	Yagantipalle Jolapuram GB Pet Meerapuram	2021	Household food security and Kitchen gardening Development of nutrient efficiency diet with local foods Women and child care Value Addition	• Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumption • Nutritional deficiencies among adolescent girls, pregnant and lactating women & children. • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversification with local foods.	Training programmes & Demonstrations Training programmes & Method Demonstrations Training programmes & Method Demonstrations
9	Bethamcherla	Bethamcherla	R.S. Rangapuram Rehmanpuram Bethamcherla Ambapuram Gutupalle H.Kottala	2021	Drudgery reduction technologies Development of nutrient efficiency diet with local foods Women and child care Value Addition	• Drudgery among farm women in farm operations. • Nutritional deficiencies among adolescent girls, pregnant and lactating women &	FLD and OFTs Training programmes & Method Demonstrations Training programmes & Method

						children. • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversificatio n with local foods.	Demonstrations
10	Allagadda	Allagadda	Marripalle Ramakrish napuram	2021	Household food security and Kitchen gardening Women and child care Value Addition Drudgery reduction technologies	• Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumption . • Nutritional deficiencies among adolescent girls, pregnant and lactating women & children. • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversificatio n with emphasis on millets.	Training programmes & Demonstrations Training programmes & Method Demonstrations Training programmes & Method Demonstrations FLD and OFTs

						• Drudgery among farm women in farm operations.	
11	Sanjamala	Sanjamala	Giddalur Mangapalle	2021	Development of nutrient efficiency diet with local foods Women and child care Household food security and Kitchen gardening Stiching and Tailoring Rural crafts Drudgery reduction technologies Value Addition	• Lack of awareness on Diversified products and value addition to local foods. • Nutritional deficiencies among adolescent girls, pregnant and lactating women & children. • Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumption. • Lack awareness on income generating activities for off season. • Drudgery among farm women in farm operations. • Lack of awareness	Training programmes & Method Demonstrations Training programmes & Demonstrations Training programmes FLD and OFTs

						on PHT of fruits and vegetables. • Lack of awareness on product diversificati on with local foods with emphasis on millets.	
12	Dornipadu	Dornipadu	Ramachan drapuram, Chakirajuv emula	2021	Household food security and Kitchen gardening Development of nutrient efficiency diet with local foods Women and child care Value Addition Stitching and Tailoring Rural crafts	• Lack of awareness on importance of consumptio n of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumptio n. • Nutritional deficiencies among adolescent girls, pregnant and lactating women & children • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversificati on with local foods with emphasis on millets. • Lack of awareness on income generating	Training programmes & Demonstrations Training programmes & Method Demonstrations Training programmes & Method Demonstrations Training programmes

						activities for off season.	
13	Nandyal / Dornipadu	Nandyal / Dornipadu	Ramachandrapuram	2021	Dairy	• Reproductive problems and poor milk yield in milch Buffaloes. • Wastage of agricultural by products.	OFT-3, FLD-2, Training - 1
					Poultry	• Non availability of improved breeds.	FLD-1, Trainings-1
14	Nandyal/ Sanjamala	Nandyal/ Sanjamala	Mangapalle	2021	Poultry	• Non availability of improved poultry breeds.	OFT-1, FLD-1 Trainings-1
			Giddaluru	2021	Dairy	• Poor milk yield, reproductive problems in milch buffaloes	OFT-3, Trainings - 2
15	Allagadda	Allagadda	Marripalle	2021	Dairy	• Poor milk production in milch buffaloes.	OFT-1,FLD-1, Trainings-2
DFI villages							
1	Banaganapalle	Banaganapalle	Yerragudi	2018	Household food security and Kitchen gardening	• Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumption.	Training programmes & Demonstrations
					Value Addition		Training Programmes Method Demonstrations
					Drudgery reduction technologies	• Lack of awareness on PHT of fruits and vegetables.	Demonstrations
					Development of nutrient	• Lack of	Training Programmes

					efficiency diet with local foods Women and child care Stiching and Tailoring Rural crafts	awareness on product diversification with local foods with emphasis on millets. • Drudgery among farm women in farm operations. • Nutritional deficiencies among adolescent girls, pregnant and lactating women& children. • Lack awareness on income generating activities for off season.	Training Programmes
					Dairy	• Poor milk production. • Reproductive problems in milch buffaloes. • Mastitis	Demonstrations & Trainings.
					Poultry	• No improved poultry breeds are available. • Poultry diseases	Demonstrations & Trainings.
2	Banaganapalle	Banaganapalle	Yerragudi	2018	Redgram, Paddy, Setaria, Jowar	• Pod borers and Pod fly in Redgram. • Stemborer in Rice.	IDM, IPM.
3	Bethamcherla	Bethamcherla	H.kottala		Groundnut setaria	Low productivity in oilseeds Due moisture stress	Introduction of Varieties tolerant Moisture stress , Balanced nutrition and weed management Alternate crops
					Redgram, Bengal	Indiscriminate use of pesticides, poor	ICM and IPM

					gram, Korra	knowhow on varieties suitable	
					Dairy	• Fodder shortage. • Poor milk production. • Reproductive problems. • Mastitis	Demonstrations & Trainings.
					Poultry	• Non availability of improved poultry breeds.	Demonstrations & Trainings.
					Sheep	• Poor growth in ram lambs, high lamb mortality.	Demonstrations & Trainings.

2.8. Priority/thrust areas:

Crop/Enterprise	Thrust area
Tomato	Low yielding and susceptible varieties in tomato
Vegetables	Less usage of drip irrigation system in fruits & vegetables
Vegetables	More usage of chemical fertilizers/pesticides in vegetable crops
Vegetables	Low yielding varieties in okra, onion and dolichos bean
Bio products	More usage of bio products, hormones and complex fertilizers
IPM	Black thrips, mites and viral diseases in chilli
Vegetables	Pin worm incidence in tomato and soot and fruit borer in brinjal
Onion	More incidence of twister blight in onion
Mango	Lack of INM and pruning in mango, Flower & fruit drop, Fruit fly incidence in mango
Guava	High incidence of fruit fly, canker and anthracnose in guava
Banana	More usage of drip fertilizer in banana

Jasmine	Fusarium wilt in chrysanthemum and mite in jasmine
Nutrition Education	Awareness on Nutritional Deficiency disorders, Food fads & Fallacies
Value addition to Local Foods	Design & Development of Minimum cost diet
Value Addition to millets	Design & development of high nutrient efficient diet
Nutrigardens	Household food security through nutri gardens
Location specific drudgery reduction technologies	Introduction of Improved implements for drudgery reduction
Income generation	Awareness on Skill training Programmes
Women Empowerment	Establishment of Mini Processing Units and Income Generation Units for Self Sustainability

3. Salient Achievements

Achievements of Mandated activities (1st January 2022 to 31st December 2022):

S. No.	Activity	Target	Achievement
1	Technologies Assessed and refined(No.)	16	14
2	On-farm trials conducted (No.)	11	10
3	Frontline demonstrations conducted (No.)	30	28
4	Farmers trained (in Lakh)	0.0169	0.03634
5	Extension Personnel trained (No.)	285	965
6	Participants in extension activities (in Lakh)	0.0615	1.39032
7	Production and distribution of Seed (in Quintal)		2232.67
8	Planting material produced and distributed (in Lakh)	970000	1856221
9	Live-stock strains and finger lings produced and distributed (in Lakh)		0.00252
10	Soil samples tested by Mini Soil Testing Kit (No)	0	0
11	Soil samples tested by Traditional Laboratory (No)	2000	3384
12	Water, plant,manureand other samples tested (No.)	50	93
13	Mobile agro-advisory provided to farmers (No.)	6000	137126
14	No.of Soil Health Cards issued by Mini Soil Testing Kits (No.)	0	0
15	No.of Soil Health Cards issued by Traditional Laboratory (No.)	4000	5620

4. TECHNICAL ACHIEVEMENTS

Details of target and achievements of mandatory activities by KVK during 2022

OFT (Technology Assessment):

No. of OFTs		Number of technologies		Number of locations (Villages)		Total no. of Trials/ Replications / Beneficiaries	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
16	14	20	28	17	22	60	75

FLD (crop/enterprise/CFLDs):

No of Demonstrations		Area in ha		Number of Farmers / Beneficiaries / Replications	
Targets	Achievement	Targets	Achievement	Targets	Achievement
30	28	76.8	85	285	285

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit):

Number of Courses			Number of Participants	
Clientele	Targets	Achievement	Targets	Achievement
Farmers and Farm Women	65	85	1950	3634
Rural youth	18	25	455	1013
Extn. Functionaries	16	20	470	965

Extension Activities:

Number of activities		Number of participants	
Targets	Achievement	Targets	Achievement
435	298	3475	139032

Seed Production (q):

Target	Achievement	Distributed to no. of farmers
3395	2232.67	5415

Planting material (Nos.):

Target	Achievement	Distributed to no. of farmers
9700000	1856221	159

Bio inputs:

Particulars	Target	Achievement	Distributed to no. of farmers
Vermicompost (Tonnes)	300	301	353
Vermiwash(lit.)	100	170	6
Earthworms(Kg.)	1000	1518	57
PROM (Kg.)	5000	5000	16

Technology Assessments (OFTs) in Detail

OFT: 1

1. Thematic area: Cropping systems

2. Title: Assessment of Suitable preceding crop to paddy under command area (KC canal and Tankfed area)

3. Scientists involved: M. Sudhakar, SMS (Agronomy)

4. **Details of farming situation:**Irrigated, Clay loam,

5. Problem definition / description:

Late onset of monsoon and late release of canal water leads to delay in paddy transplanting. Due to late release of water fields are fallow up to August. Short duration crop can accommodate before kharif paddy to increase cropping intensity and additional income.

6. Technology Assessed:

T1. Greengram- Paddy

T2:Blackgram-Paddy

T3:Fallow-paddy

7. Critical inputs given: Seed Rs 7500/-

8. Results:

Technology Option	No. of trials	Yield (t/ha)	Net Returns (Rs/./ha)	Data on Other performance indicators*	
				Paddy Equivalent yield	CB ratio
Fallow-paddy	*6*	***6.437***	46290	***6.437***	*1.59*
Greengram- Paddy		**7.239**	100715	102.98	2.02

Blackgram-Paddy		6.952	97580	104.57	1.93

Description of the results: Description of the results: On farm testing on Assessment of Suitable preceding crop to paddy under command area was conducted during the Pre-Kharif season of 2022 at Banaganapalli and Dornipadu mandals. The results indicated that Cultivation of Greengram and Blackgram preceding crop to paddy under command area resulted with maximum paddy equivalent yield and net returns (10298 kg ha Rs 100715/-) with Greengram-paddy, 10454 kg ha-1, Rs 97580 (blackgram-paddy) and 6437 kg ha Rs 46290 fallow-paddy were obtained respectively.

9. Constraints: -

10. Feed back of the farmers involved:

- Pulses- paddy system found to be remunerative than sole crop of Paddy
- While maintaining the Soil fertility, additional yields with the Pulse- paddy sequence have been realized.
- Since, a food legume is involved in the system, it will not only enhance the income of the farmer, but also provide with the much-needed protein to supplement the predominantly cereal diet of farmers, besides adding fertility to the Soil.

11. Feed back to the scientist who developed the technology:

- ❖ Research on development of Short duration Greengram and Blackgram has to be strengthened.

OFT: 2

1. Thematic area: Varietal Evaluation

2. Title: Assessment of Medium duration Redgram varieties in Rainfed situation ,

3. **Scientists involved:** M. Sudhakar, SMS (Agronomy)

4. **Details of farming situation:** Rainfed, Redsoils

5. Problem definition / description:

In Kurnool district generally Redgram is being cultivated in an area of 45,000 ha and yields are limited by the amount and distribution of rainfall during monsoon period and also long duration varieties are affecting due to terminal moisture stress..

6. Technology Assessed:

T1:LRG-105
T2: LRG-133-33
T3: LRG-41

7. Critical inputs given: seed Rs 6000/-

8. Results:

Performance of the technology

Technology Option	*No. of trials*	*Yield (t/ha)*	*Net Returns (Rs/./ha)*	*Data on Other performance indicators**	
				% of sterility mosaic	*B:C ratio*
T1: LRG-41	*6*	770	15610	35	1.42

T2:LRG-105		932	25946	3.0	1.70
T3: LRG-133-33		1035	33980	2.0	1.92

Description of the results:

The results indicated that among different **varieties of Redgram** LRG-105 ,LRG-133-33 and LRG-41, LRG-133-33 has recorded 1035 kg/ha(34.4 %) followed by LRG-105 932 kg/ha(19.7 %) compared with local check LRG-41 (770kg/ha .)

Feed back of the farmers involved:

- Redgram Variety LRG-133-33 and LrG-105 performed well in Medium black soils.
- These varieties are Fairly tolerant to sterility mosaic than LRG-41
- These varieties are suitable under protective irrigated situations and Not suitable for light soils.

10. Feed back to the scientist who developed the technology:

- Research on development of super early varieties tolerant to moisture stress has to be strengthened.

OFT: 3

1. Thematic area: Hybrids Evaluation

2. Title: Assessment of performance of high yielding hybrids in Castor,

3. **Scientists involved:** M. Sudhakar, SMS (Agronomy)

4. **Details of farming situation:** Rainfed, Redsoils

5. Problem definition / description:

Erratic of rainfall is one of the important factor for crop production under rainfed conditions leads to low yields and returns of the farmer with private castor hybrids

6. Technology Assessed:

T1: Private hybrids
T2:I DCH-519

T3: ICH-66

7. Critical inputs given: seed Rs 6000/-

8. Results:

Performance of the technology

Technology Option	*No. of trials*	*Yield (t/ha)*	*Net (Rs/./ha*	*Data on Other performance indicators**		
				Spike Length in (cm)	No of spikes/plant	CB ratio
T1 Private hybrids	*6*	1092	27310	48.60	4.0	1.83

T2:ICH-66		1590	54700	39.76	3.0	2.67
T3: DCH-519		1420	49200	35.45	2.0	2.50

Description of the results:

On farm testing on Castor hybrids under Rainfed situation was conducted during the Kharif season of 2022 at Yerragudi village of Banaganapalli and kamalapuri village of kovelakuntla mandals. The results indicated that among different **castor hybrids** ICH-66 and DCH-519 and private hybrids, ICH-66 has recorded 1590kg/ha(45.60. %) followed by DCH-519 1420 kg/ha(30.0 %) compared with local check (1092 kg/ha .)

Feed back of the farmers involved:

- The castor hybrid ICH-66 Performed well than private hybrids.
- The no of branches and Spikes were more in ICH-66 Compared to private hybrids,

10. Feed back to the scientist who developed the technology:

Research on development of Hybrids tolerant to wilt and Botrytis has to be strengthened.

OFT: 4

1. Thematic area: Varietal Evaluation

2. Title: Performance of Finger millet varieties

3. **Scientists involved:** M. Sudhakar, SMS (Agronomy)

4. **Details of farming situation:** Rainfed, Black soils

5. Problem definition / description: Finger millet mainly cultivated under rainfed situation with little management .The productivity levels are very low due to cultivation of traditional and low yielding varieties. Keeping these things in view , the OFT was planned by providing cultivars acceptable to farmers through participatory varietal selection.

6. Technology Assessed

T1: Non –descriptive

T2: Vegavathi

T3: Indravathi

7. Critical inputs given: seed Rs 3000/-

8. Results:

Performance of the technology

Technology Option	*No. of trials*	*Yield (t/ha)*	*Net (Rs/./ha*	*Data on Other performance indicators**		
				No of tillers/plant	No of Fingers/ear head	**CB ratio**
T1: Non -descriptive	*6*	1.740	24760	**5.0**	**6. 33**	1.68
T2: Vegavathi		2.188	40440	**9.0**	**6.40**	**2.11**
T3: Indravathi		2.089	36975	6.0	8.0	2.02

Description of the results:

The results indicated that among different **varieties of Finger millet** Vegavathi and Indravathi , Vegavathi has recorded 2188 kg/ha(25.2 %) followed by Indravathi 2089 kg/ha(20.5 %) compared with local check Vakula (1740kg/ha .)

Feed back of the farmers involved:

- The **Finger millet varieties V**egavathi and Indravathi Performed well than Non-descriptive Variety.
- The no of Tillers and Fingers were more in Vegavathi Compared to Non-descriptive Variety

10. Feed back to the scientist who developed the technology:

OFT: 5

S. No	Item		Particulars
1	Thematic Area	:	Integrated Nutrient Management
2	Title	:	Assessment of organic farming package Rice
3	Scientists Involved	:	K.V. Ramanaiah
4	Details of Farming Situation	:	Kharif-2022. Irrigated black soils
5	Problem definition/description	:	Paddy is a major cereal crop cultivating in of Nandyal district during kharif season. Un availability of sufficient quantities of FYM and other organic inputs. Low organic carbon content in 71 % soils of Nandyal dist. Low fertility and productivity.
6	Technology assessed	:	T_1: Farmers practice : Chemical farming T_2: : Organic farming: Green manuring insitu,FYM-10 T/ha, Neem cake-500 kg, Castor cake-500 Kg.PSB -5 Kg/ha, Azotobacter- 5Kg/ha, Top dressing Vermicompost -500 Kg for 2 Splits, Pf, neem oil for spaying
7	Critical Inputs given	:	Neem cake-500 kg, Castor cake-500 Kg.PSB -5 Kg/ha, Azotobacter-5Kg/ha, Top dressing Vermicompost -500 Kg for 2 Splits, Pf, neem oil for spaying

8. Results :

Table: Performance of the technology:

Technology Option	***No. of trials***	***Yield (q/ha)***	***Net Returns (Rs. in Rs./ha)***	***B:C ratio***	***Data on Other performance indicators****
Farmers Practice- Chemical farming	*5*	*70.32*	*25859*	*1.89:1*	*1.No.of effective tillers /1sqm* ***385*** *2.No. of grains /panicle* ***-239***
Technology1 – Organic farming		*57.18*	*51986*	*2.28:1*	*1.No.of effective tillers /1sqm* ***-302*** *2.No. of grains /panicle* ***-208***

Description of the results:

The result indicated that the yield in both T_2 (57.18 q/ha) was 18.68 % lower than farmer's practice -T_1 (70.32 q./ha)

9. Constraints faced: Farmers are reluctant on organic farming as yield reduction is more when comparative with farmers practice.

10. Feed back of the farmers involved:

Pre seasonal training conducted on soil sampling and testing, nutrient management and mid seasonal field visits finally field days were organized. It is low cost technology when procure locally available organic inputs

11. Feed back to the scientist who developed the technology:

No yield advantage during second year also as it is conversion period for 3 years. However, application of organic inputs is effective for Soil health improvement.

OFT: 6

S. No	Item		Particulars
1	Thematic Area	:	Integrated Nutrient Management
2	Title	:	Assessment of nano urea application in Rice
3	Scientists Involved	:	K.V. Ramanaiah
4	Details of Farming Situation	:	Kharif-2022. Irrigated black soils
5	Problem definition/description	:	Rice is major cereal crop in Nandyal distict. Indiscriminate and excess application of nitrogen in rice which leads soil health deterioration and more conducive to pest and diseases. Hence application of nano urea should avoid soil pollution and reduce subsidy burden on supply of urea.
6	Technology assessed	:	T_1: Farmers practice : N-280 kg./ha T_2: 75% of Recommended N at basal and PI stage and remaining 25 % N at tillering stage @0.25% as nano urea (N-240 Kg./ha T_3. Recommend N-240 kg/ha as per schedule of application at 3 splits
7	Critical Inputs given	:	Nano urea-500ml per acre

9. Results :

Table: Performance of the technology:

Technology Option	*No. of trials*	*Yield (q/ha)*	*Net Returns (Rs. in Rs./ha)*	*B:C ratio*	*Data on Other performance indicators**
Farmers Practice- Chemical farming (N-300 kg./ha)	5	*75.25*	*82275*	*2.09:1*	*1.No.of effective tillers /*1sqm ***-445*** *2.No. of grains /panicle* ***-248***
Technology1 T_1: 75% of Recommended N (240 Kg./ha)at basal and PI stage and remaining 25 % N at tillering stage @0.25% as nano urea		*73.9*	*84227*	*2.23:1*	*1.No.of effective tillers /*1sqm- ***436*** *2.No. of grains /panicle* ***-239***

T_2. Recommend N-240 kg/ha as per schedule of application at 3 splits		*74.56*	*85465*	*2.25:1*	*1.No.of effective tillers /1sqm-440 2.No. of grains /panicle* ***-245***

Description of the results:

The result indicated that the yield of T_1 , T_2 and farmers practice were on par irrespective of treatments

9. Constraints faced:

10. Feed back of the farmers involved:

Pre seasonal training conducted on soil sampling and testing, nutrient management and mid seasonal field visits finally field days were organized. Farmers expressed that application of nano urea reduce the soil and environmental pollution .

11. Feed back to the scientist who developed the technology:

Application of nano urea is better to reduce soil and environmental pollution as the cost of nano urea and subsidized urea is same. application of nano urea is not only reduce actual cost of urea and also reduce the soil and environmental pollution .

OFT - 7

S. No.	Item		Particulars
1	Thematic Area	:	Integrated Pest Management
2	Title	:	Evaluation ofIPM and Organic Package on Yield and Pest Managementin Setaria
3	Scientists Involved	:	D.Balaraju, SMS – Plant Protection
4	Details of Farming Situation	:	Rainfed Light Black Soils
5	Problem definition/description	:	Foxtail millet is one of the important millet crop being cultivated in considerable area in recent years in the district. It is now being attacked by pests like stem borer and diseases like blast. As the crop uses low inputs for its cultivation, complete avoidance of pesticides make it Organic. Hence, the organic pest management may be adopted to make it totally organic apart from some organic amendments to soil.
6	Technology assessed	:	TO 1 – IPM : • Recommended doses of fertilizer application on soil test basis, • Seed treatment with Mancozeb @ 2.5 g / kg seed • Spray azadirachtin 1500 ppm @ 1000ml/ac to manage early incidence of insect pests. • Spraying need based chemicals for management of Stem borer. • Spraying Tricyclazole @ 0.6 g/lt on noticing incidence of Blast.**(ANGRAU)** TO 2 – Organic Package : • Application of FYM @ 5 t / acre • Seed treatment with Pseudomonas fluroscens 10 g or Azospirillam @ 10 g/kg of seed, • Spray azadirachtin 1500 ppm @ 1000ml/ac to manage early incidence of insect pests. • Spray Beauveria @ 5 ml/lt for stem borer if necessary. • Spraying of Pseudomonas fluorescens @ 1000 g/ac at 10 days interval for management of Blast and other diseases..**(ANGRAU)** FP - Applying fertilizers and Spraying Insecticides indiscriminately
7	Critical Inputs given	:	Pseudomonas - 1500 ml, Azospirillum - 500 ml, Azadaractin 1500 ppm - 1000 ml, Beauveria - 1000 ml (Rs.1150/-)

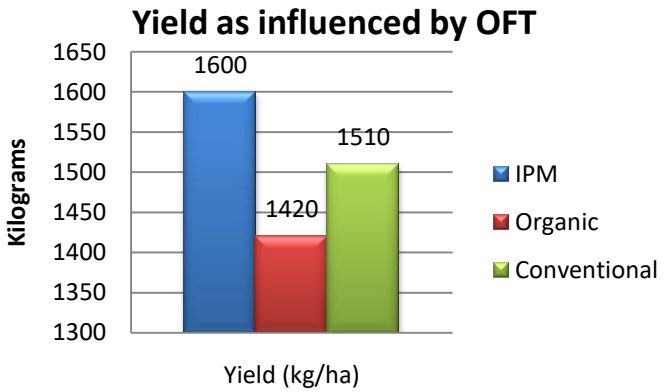
8. Resutls :

Table :Performanceof the technology

Technology Option	*No.of trials*	*Yield (t/ha)*	*Net Returns(Rs. lakh./ha)*	*B:C ratio*	*Data on Other performance indicators**
TO 1 : IPM Package	*5*	*1.600*	*0.1285*	*1.43*	*Stem borer Incidence –4.5%* *Blast – 5.8 %* *Cost of PP – Rs. 3,875-00/ha*
TO 2 : Organic package		*1.420*	*0.1117*	*1.44*	*Stem borer Incidence –5.6%* *Blast – 7.9 %* *Cost of PP – Rs2,625-00/ha*
Farmers Practice		*1.510*	*0.1326*	*1.51*	*Stem borer Incidence – 4.6%* *Blast – 6.7 %* *Cost of PP - Rs.4,875-00/ha*

Description of the results:

The result indicated that in IPM, resulted in better yield than organic package and farmers practice, with better level of control of pests and diseases. Though the farmer incurred less investment in Organic method, the net returns are less than IPM.



9. **Constraints faced**: Farmers are not ready to apply FYM for Seteria in recommended quantities due to low value of the crop.Knowledge and adoption of bio fungicides is low with the farmers.

10. Feed back of the farmers involved:

- ✓ The farmers readily accepted some of the components viz., Seed treatment, Neem oil spray as they are familiar with these. But, they showed reluctance in adoption of soil application of pseudomonas, as they are new and have less confidence in them about their performance.
- ✓ Farmers were convinced with the control of pest / disease with chemical application and they readily agreed to spray recommended chemicals.

11. Feed back to the scientist who developed the technology:

Management of Stem borer and Blast in organic methods need to be standardized to reduce the rise of toxic chemical usage and also to reduce cost of production.

OFT – 8

S. No	Item		Particulars
1	Thematic Area	:	Varietal evaluation
2	Title	:	Assessing the performance of okra varieties
3	Scientists Involved	:	M. Adinarayana SMS Horticulture
4	Details of Farming Situation	:	Irrigated red soils
5	Problem definition/description	:	Local varieties producing lower yields and susceptible to YVMV. Farmer using varieties are less branching type and fruits are having with spines and medium length fruits.
6	Technology assessed	:	T_1: Arka Nikita T_2: Arka Anamika T_3: Surabhi-33
7	Critical Inputs given	:	Arka Anamika seed

8. Results:

Table : Performance of the technology

Technology Option	*No. of trials*	*Yield (q/ha)*	*Net Returns (Rs./ha)*	*B:C ratio*	*Data on Other performance indicators**
Farmers Practice: Surabhi-33	*5*	*14.75*	*279485*	*3.35*	
Technology 1(Arka Nikita)		*Not conducted due to unavailability of seed at IIHR Bengaluru*			
Technology 2(Arka Anamika)		*16.51*	*329520*	*3.83*	

**** Other performance indicators: such as pest intensity, weed population, test weight, duration etc***

* Data on other parameters

Parameters	**Arka Anamika**	**Surabhi-33**
No.of fruits/plant	16.45	15.78
Ag. Fruit wt (g)	14.28	13.30
Fruit length (cm)	13.77	13.22
Plant height (m)	1.07	1.04
Days to first harvest	51	54

Photos of okra OFT fields

9. Constraints: Not supplying seeds in timely by IIHR, Bengaluru.

10. Feedback of the farmers involved: Arka Anamika variety is good branching type, resistant to YVMV and fruits are spineless as it is easy to harvest.

11. Feed back to the scientist who developed the technology: Make availability of seeds for conducting assessments at farmers' fields. They must be given first priority to KVKs. Research on development of resistant hybrids for powdery mildew and YVMY.

OFT - 9

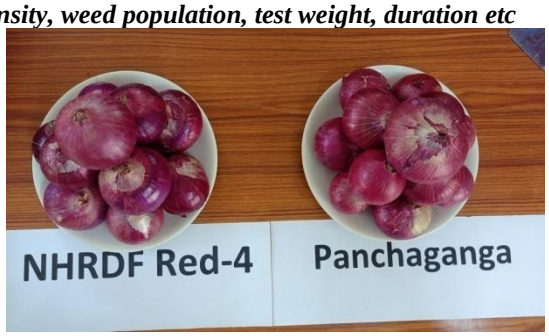
S. No	Item		Particulars
1	Thematic Area	:	Varietal evaluation
2	Title	:	Assessing the performance of onion varieties
3	Scientists Involved	:	M. Adinarayana SMS Horticulture
4	Details of Farming Situation	:	Irrigated red soils
5	Problem definition/description	:	Local varieties producing lower yields and unknown varieties
6	Technology assessed	:	T_1: Arka Bheem T_2: Red-4 T_3: Panchaganga
7	Critical Inputs given	:	Red-4 seed

8. Results:

Table : Performance of the technology

Technology Option	*No. of trials*	*Yield (q/ha)*	*Net Returns (Rs./ha)*	*B:C ratio*	*Data on Other performance indicators**
Farmers Practice: Panchaganga	*5*	*22.25*	*66746*	*1.42*	
Technology 1(Arka Bheem)		*Not conducted due to unavailability of seed at IIHR Bengaluru*			
Technology 2(Red-4)		*26.56*	*113032*	*1.74*	

**** Other performance indicators: such as pest intensity, weed population, test weight, duration etc***



Photos of onion OFT fields

9. Constraints: Not supplying seeds in timely by IIHR, Bengaluru.

10. Feedback of the farmers involved: Bulbs are red and round in shape, suitable for local markets and good keeping quality.

11. Feed back to the scientist who developed the technology: Make availability of seeds for conducting assessments at farmers' fields. They must be given first priority to KVKs. Research on development of resistant hybrids for twister blight disease.

OFT – 10

1	Thematic area	:	Breed evaluation
2	Title	:	**Assessment of different poultry breeds at backyards**
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Backyard poultry providing additional income and nutritional security to the small farmers.
5	Problem definition / description:	:	The existing desi/ND poultry have low egg production capacity and growth rate.
6	Technology Assessed:	:	T_1 – Ghagus T2- Vanashri

			T3- ND
7	Critical inputs given:	:	Chicks of five weeks age
8	Results	:	

Table: Performance of the technology

Technology Option	*No. of trials*	*Average Daily weight gain (g)*	*Net Returns/bird*	*B:C ratio*	*Mortality (%)*
Ghagus	*5*	*59.7*	*320.00*	*1.76*	*18*
Vanashri		*55.8*	*185.00*	*1.51*	*52*
ND		*32.7*	*110.00*	*1.50*	*35*

Description of the results:

The average daily weight gain (ADG) was highest in Ghagus (59.7g/day) followed by Vanashri (55.8g/day) and ND poultry (32.7g/day) for 150 days duration. The highest mortality was recorded in Vanashri followed by ND poultry and least mortality was recorded in Ghagus.

9. Constraints: Problem with predators in backayard

10. Feed back of the farmers involved:Ghagus was found better poultry bird suitable to the backyards and have more market demand.

11. Feed back to the scientist who developed the technology: Nil

OFT - 11

1	Thematic area	:	Nutrition management
2	Title	:	**Assessing the effect of probiotic yeast supplementation on milk production in milch buffaloes**
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Dairy farming provides sustainable income to the farmers and the cost of milk production completely depends on concentrate feeding.
5	Problem definition / description: (one paragraph)	:	Low milk production in existing feeding practices in milch buffaloes
6	Technology Assessed:	:	TO-1: Concentrate feed + Probiotic yeast (15g/day) + 2% Sodium bi carbonate TO-2: Concentrate feed + Probiotic yeast (15g/day) FP: Concentrate feed
7	Critical inputs given:	:	Probiotic yeast and Sodium bicarbonate
8	Results	:	

Table: Performance of the technology

Technology Option	*No.of trials*	*6%FCM yield/day (kg)*	*Net Returns/ day (Rs.)*	*B:C ratio*	*Data on Other performance indicators**
Concentrate feed + Probiotic yeast (15g/day) + 2% Sodium bi carbonate	*10*	*9.79*	*306.1*	*1.78*	

Concentrate feed + Probiotic yeast (15g/day)		*8.21*	*254.2*	*1.77*	
Concentrate feed (FP)		*7.9*	*182.4*	*1.58*	

Description of the results:

On supplementation of probiotic yeast @15g/day along with concentrate feed resulted in 24.4% increase in 6%FCM milk yield while on supplementation of probiotic yeast (15g/day) along with Sodium bicarbonate (40g/day) resulted in 4% increase in 6%FCM milk yield over farmers practice of concentrate feed only.

9. Constraints if any: Availability of probiotic yeast

10. Feed back of the farmers involved:Well accepted the technology by the farmers.

11. Feed back to the scientist who developed the technology: Nil

OFT - 12

1	Thematic area	:	Nutrition management
2	Title	:	**Assessing the effect of bypass fat supplementation on body weight gain fattening ram lambs**
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Ram lamb rearing is the subsidiary income source under rainfed situation. The ram lambs are mostly rear on grazing with or without supplementation of grains.
5	Problem definition / description: (one paragraph)	:	Low protein and energy value in the diet of lambs resulting in poor body weight gain.
6	Technology Assessed:	:	TO-1: Concentrate feed + Bypass fat (4g/kg feed) TO-2: Concentrate feed (200g/day) FP: Grain feeding
7	Critical inputs given:	:	Concentrate feed and Bypass fat
8	Results	:	

Table: Performance of the technology

Technology Option	***No.of trials***	***Body weight gain in 90days (kg)***	***Net Returns in per lamb (Rs.)***	***B:C ratio***
TO-1: Concentrate feed + Bypass fat (4g/kg feed)	*5*	*10.4*	*2502.00*	*5.63*
Concentrate feed (200g/day)	*5*	*9.8*	*2433.00*	*5.92*
Grain feeding (FP)	*5*	*8.32*	*2046.00*	*5.55*

Description of the results:

On supplementation of concentrate feed (15% CP) resulted in 18% increase in body weight gain and Concentrate feed + Bypass fat feed resulted in 25% increase in body weight gain over farmers practice of grain feeding.

9. Constraints if any:

10. Feed back of the farmers involved:Bypass fat incorporation resulted in increased feed intakebut the cost is high.

11. Feed back to the scientist who developed the technology: Nil

OFT – 13

1. Thematic area: **Post harvest Technology**
2. Title: Assessment of different coating methods to improve the shelf life of fruits
3. Scientists involved: K.LakshmiPriya,PA(H.Sc),K.Adinarayana,SMS(Horti)
4. Details of farming situation: -
5. Problem definition / description: The losses in Post harvest sector estimated in fruits and vegetables is 10 to 25% to 40% due to lack of proper storage facilities, accessibility of market, lack of proper transportation facilities.
6. Technology Assessed: T1: Farmers Practice: No Coating
   T2: ICAR-IINRG Ranchi, (2006)
   T3: Fruity Fresh- Enhanced Freshnees Formulations (EFF)

7. Critical inputs given: T2:Dipping in 2% of coating formulations for 5 minutes, surface drying & packing (ICAR-IINRG Ranchi)
T3: Dipping in 2 % TNAU Fruity Fresh coat for 5 minutes, surface drying & packing
8. Results:

Table: Performance of the technology

Technology Option	***No.of trials***	***Yield (q/ha)***	***Net Returns (Rs./ha)***	***B:C ratio***	***Data on Other performance indicators****
Farmers Practice	*5*				Assessment of Different Coating Methods to improve shelf life of Mango fruits was taken up with ICAR-IINRG Fresh Coat and TNAU Fruity fresh (20 ml/lt.). Shelf life enhancement was increased by two weeks.
Technology 1(Mention details)					
Technology 2(Mention details)					

**** Other performance indicators: such as pest intensity, weed population, test weight, duration etc***

9. Constraints:
10. Feedback of the farmers involved:

Assessment of Different Coating Methods to improve shelf life of Mango fruits was taken up with ICAR-IINRG Fresh Coat and TNAU Fruity fresh (20 ml/lt.). Shelf life enhancement was increased by two weeks.

11. Feed back to the scientist who developed the technology: -

OFT - 14

1. Thematic area: Nutritional Security
2. Title: Assessment of Nutri Smart farming systems
3. Scientists involved: K.LakshmiPriya,PA(H.Sc)
   M.Sudhakar, SMS(Agro.)
4. Details of farming situation: Rainfed, Red sandyloam
5. Problem definition / description: Malnutrition is widely prevalent among different sectors of the population mainly micronutrient deficiencies. One of the reason for the intensity of the problem lies with the changes in Agriculture from Integrated Farming system to Monocropping / commercial cropping led to poor supply of nutrients from farm to plate. Hence, Integrated approach with the system can solve the problem of malnutrition as well as improves soil health status and monitory benefit to the farmers.

6. Technology Assessed: TO-1: Pearl Millet, Nutri Kitchen garden, Moringa, Greengram, Fodder crops

   TO-2: FoxtailMillet+Redgram, Nutri Kitchen garden, Moringa, Border Fodde

   FP: Suryanandi as sole crop/redgram as sole crop

7. Critical inputs given: Seed + Bio Agents + Vermicopost + Fodder Strips+Moringa
8. Results: Performance of the technology

Technology Option	***No. of trials***	***Yield (q/ha)***	***Net Returns (Rs./ha)***	***B:C ratio***	***Data on Other performance indicators****
Farmers Practice					6.5 kgs/month/family Greens:300gms/week Other Vegetables:3kgs/week Rs. 14,500
Technology 1(Mention details)					Inclusion of Bajra and Seteria 2kgs/month/family apart from regular usage of Jowar (25kgs/month/family). Inclusion of greens and other vegetables increased by 3 times. (Greens: 2kgs/week/family Vegetables: 7kgs/week/) Rs 30,485.00 with T1 and T2 28,320.00
Technology 2(Mention details)					

Treatments	**Critical Iputs**	**Observations to be Recorded**	**Results**
T-1:Pearl Millet, Nutri Kitchen garden, Moringa, Greengram, Fodder crops	Seed + Bio Agents + Vermicompost + Fodder Strips	Inclusion of Millets In daily menu (qty/day): Inclusion of green leafy and other vegetables in	Inclusion of Bajra and Seteria 2kgs/month/family apart from regular usage of

(IARI,2018)		daily menu (qty/day) Income generation(Rs.)	Jowar (25kgs/month/family). Inclusion of greens and other vegetables increased by 3 times. (Greens: 2kgs/week/family Vegetables: 7kgs/week/) Rs 26,425.00 with T1 and T2 25,020.00
T-2:FoxtailMillet +Redgram, Nutri Kitchen garden, Moringa, Greengram, Fodder crops (KVK-NICRA, 2019)			
FP: Suryanandi as sole crop/redgram as sole crop			6.5 kgs/month/family Greens:300gms/week Other Vegetables:3kgs/week Rs. 14,500

9. Constraints: Farmers are not interested to cultivate all the crops in a single block
10. Feedback of the farmers involved: The Farming System is remunerative and helped the in increased incorporation and consumption of greens and other vegetables in daily menu
11. Feed back to the scientist who developed the technology: Nil

Frontline Demonstrations in Detail

a. Follow-up of FLDs implemented during previous years

S. No	Crop/Enterprise	Thematic Area	Technology demonstrated as a follow up from OFT	Feedback sent to the Research System	Details on the performance of the technology sent to the Extension Department	Horizontal spread of technology		
						No. of villages	No. of farmers	Area in ha
1	Bengal gram	Varietal Evaluation	Demonstration Bengalgram with NBeg-452 and NBeG-49	yes	Performing well in Rainfed situation. Tolerant to drought. Tolerant to wilt.	25	2000	23000
2	Paddy	Resource conservation	Direct Seeding	yes	Water saving and Cost reduction technology	15	5000	27500
3	Maize	Resource conservation	Zero tillage	yes	Water saving , time saving and Cost reduction technology	10	500	1500
4	Redgram Seteria	Cropping system	Redgram+ seteria Inter cropping System	yes	Remunerative cropping system under rainfed situation	20	300	3500
5	Redgram	Varietal Evaluation	Varietal Demonstration in Redgram-PRG-176& LRG-52	yes	Performing well in Rainfed situation. Suitable for light to medium black soils. Tolerant to wilt	50	5000	32000
6	Seteria	Varietal Evaluation	Varietal Demonstration in Setaria varieties Renadu and SIA-3156	yes	Performing well in Rainfed situation and as sole crops and inter crops.	25	500	7000
7	Redgram/ Bengal gram	Conservartion Agriculture	Raised bed planter	yes	In-situ moisture consevation	10	200	1000

8	Jowar	Varietal Evaluation	Varietal Demonstration in Jowar varieties NTJ-5, C-43 and N-15	yes	Performing well in Rainfed situation in black soils.	15	250	1500
9	Rice	INM	STCR based nutrient management	Yes	Yield of both demo and farmer practice on par and cost reduction on chemical fertilizers around Rs. 8500/ha	15	1050	1200
10	Bt Cotton	IPM	IPM	Ph. traps from square formation is effective for PBW monitoring.	Use of Ph traps, spray of Neem oil and Profenophos for PBW	18	472	1265
11	Redgram	IPM	Realtime contingent mgmt. of pests & diseases	Green pesticides with Thiomethoxam as two sprays at pod initiation and development - good control of pod fly.	Spray of Novaluron, Emamectin benzoate and Thiomethoxam for Maruca, Podborers and Pod fly.	17	428	305
12	Bengal gram	IDM	Biopriming for soil borne disease management	Seed treatment with Th with 30 g of FYM powder per kg seed supports establishment of Th in soil and effective in mgmt of Wilt.	T.harzianum seed treatement and soil application @ 2 kg/ac	28	515	724
13	Chillis	IDM	Mgmt of viral diseases	Installing Yellow/blue sticky traps at 25 DAT is effective in checking thrips and viral diseases.	Seed treatement(Imidacloprid 600 FS), Installation of Sticky traps, Spray of Fipronil, Difenthiuron and Acetamaprid .	13	165	128
14	Onion	IPM	Thrips& Leaf blight	Sticky traps from 15 DAT	Sticky traps, Fipronil, Chlorothalonil	8	106	85

				effective in mgmt of thrips.				
15	Blackg ram	IPM	Realtime contingent mgmt. of pest s & diseases	Seed treatment and Sticky traps gave good control of viral disease spread.	Seed treatement (Imida 600 FS), Sticky traps, Emamectin, Difenconazole.	17	316	338
16	Chilli	ICM	ICM whole package	Yes	Demonstrations, Exposure visits, and Field Days	41	2560	485 6
17	Acid lime	IDM	Dry root rot management with bio agents and fungicides	Yes	Demonstrations, Exposure visits, and Field Days	5	195	254
18	Brinjal	ICM	ICM whole package	Yes	Demonstrations, Exposure visits, and Field Days	18	238	312
19	Pomeg ranate	ICM	Best management practices from pruning to harvest	Yes	Demonstrations, Exposure visits, and Field Days	5	51	145
20	Hortic ulture crops	Cropping system	Two or more crops in the same piece of land and inter cropping systems in fruit orchards	Yes	Demonstrations, Exposure visits, and Field Days	25	175	270

b. Details of FLDs implemented during the reporting period

FLD - 1

Sl. No.	Item	Details
1	Crop:	Maize
2	Thematic area:	Resource conservation
3	Technology demonstrated	**Zero tillage Maize**
4	Season and year:	Kharif-2022
5	Farming situation:	Irrigated black- Sandy clay loam soil
6	Source of fund:	KVK
7	No of locations (Villages):	2
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	3
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	-
13	Feedback from farmers:	Maize can be successfully grown without any primary tillage under no-till situation with less cost of cultivation, higher farm profitability and better resource use efficiency.

14	Feedback of the Scientist:	The results indicated that **Zero tillage method has** recorded Yield 6720 kg /ha and net returns of Rs95340 as compared to Farmers practice (6512kg/ha.) with net returns of Rs 87014/
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD - 2

Sl. No.	Item	Details
1	Crop:	Pearlmillet +Redgram
2	Thematic area:	Cropping system
3	Technology demonstrated	**Demonstration on Redgram+ Pearlmillet**
4	Season and year:	Kharif-2022
5	Farming situation:	Rainfed black
6	Source of fund:	CRIDA
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	5
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	-
13	Feedback from farmers:	Intercropping of **Redgram+ Pearlmillet** is to stabilise the productivity and enhance the returns in terms of increased net returns And also the intercropping act as a insurance against total crop failures.
14	Feedback of the Scientist:	The additional net income of the farmers was increased in Rs. Rs 14928 /- more in Redgram+ Pearlmillet Intercropping than sole crops of Pearlmillet/ Redgram.
15	Extension activities on the FLD:	Field days-1 Training-1

FLD - 3

Sl. No.	Item	Details
1	Crop:	Setaria + Redgram- bengalgram
2	Thematic area:	Cropping system
3	Technology demonstrated	**Demonstration on minimum tillage Bengalgram in Setaria+ Redgram Intercropping.**
4	Season and year:	Kharif-2022 and Rabi
5	Farming situation:	Rainfed black
6	Source of fund:	CRIDA
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	5
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	-
13	Feedback from farmers:	Farmers were impressed with Introduction Bengalgram with minimum **tillage in Setaria+ Redgram intercropping system after harvest of Setaria.** The additional net income of the farmers was also increased in Rs. Rs 21672 more than the in Setaria+ Redgram Intercropping.
14	Feedback of the Scientist:	The results indicated that highest net returns was obtained with minimum tillage Bengalgram in Korra+ Redgram intercropping (Rs 71892/ha) than Korra+ Redgram intercropping (Rs 50310ha).
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD - 4

Sl. No.	Item	Details
1	Crop	Setaria -Bengalgram
2	Thematic area	Cropping system
3	Technology demonstrated	**Setaria- Bengalgram cropping sequence with minimum Tillage.**
4	Season and year	Kharif-2022 and Rabi
5	Farming situation	Rainfed black
6	Source of fund	CRIDA
7	No of locations (Villages)	1
8	No. of demonstrations (replications/farmers/beneficiaries)	10
9	No of SC/ST Farmers and women farmers	5
10	Area proposed (ha)	4
11	Actual area (ha)	4
12	Justification for shortfall if any	-

13	Feedback from farmers	Farmers were impressed with minimum **tillage in Setaria followed Bengalgram sequence.**
14	Feedback of the Scientist	Setaria-Bengalgram sequence has recorded 15887 additional returns over sole crop of Bengalgram. This shows the increased profitability through Korra-Blackgram and Setaria-Bengalgram sequence with minimum tillage. Foxtail millet (korra), crop being its short duration may fit well in double cropping sequence under rainfed situation in black soils. Inorder to increase net returns Rs/ha and cropping intensity.
15	Extension activities on the FLD (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD - 5

Sl. No.	Item	Details
1	Crop:	Soybean- Bengalgram
2	Thematic area:	Cropping system
3	Technology demonstrated	Soybean- Bengalgram sequence with minimum tillage in rainfed black soils.
4	Season and year:	Kharif-2022 and Rabi
5	Farming situation:	Rainfed black
6	Source of fund:	CRIDA
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	5
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	-
13	Feedback from farmers:	Farmers were impressed with minimum **tillage in Soybean followed Bengalgram sequence** .
14	Feedback of the Scientist:	The results indicated that highest net returns was obtained with Soyabean- Bengalgram sequence (Rs. 92198/ha) than fallow –Bengalgram (Rs. 58150 /ha). The additional net income of the farmers was also increased in Soyabean-Bengalgram sequence which is calculated as Rs. 34048 more than the Fallow- Bengalgram .
15	Extension activities on the FLD: (Field days, Farmers training,	Field days-1

	media coverage, training to Extension Functionaries)	Training-1 

FLD - 6 Soil test based Nutrient management in Bt. Cotton

Sl. No.	Item	Details
1	Crop:	Cotton
2	Thematic area:	INM
3	Technology demonstrated	STBR- Nutrient dosage(NPK Kg./ha)-160-44-40 and foliar application of KNO3 (2%), MgSO4-(1%), ZnSO4(0.2%), Borax (0.15%)
4	Season and year:	Kharif-2022
5	Farming situation:	Irrigated black- Sandy clay loam soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	5
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Farmers were satisfied with crop performances and expressed that Soil test based nutrient management is a viable technology in Bt. Cotton, because of less cost on chemical fertilizers and without reduction in yield compared to their own practice. They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields
14	Feedback of the Scientist:	Soil test based nutrient management and foliar application of K,Mg,Zn and B improved the productivity of Bt. Cotton where zinc and Boron are deficient in soils
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD – 7: Integrated nutrient management in Groundnut

Sl. No.	Item	Details
1	Crop:	Groundnut
2	Thematic area:	INM
3	Technology demonstrated	NPK-20-40-50 Kg / ha PSB-2.5 lt /ha, Gypsum – 500 Kg /ha, FYM-5 tonnes/ha
4	Season and year:	Kharif-2022
5	Farming situation:	Rainfed - Red soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	4
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Farmers were satisfied with crop performances and expressed that Integrated nutrient management is a viable technology in groundnut, because of less cost on chemical fertilizers and without reduction in yield compared to their own practice. They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields
14	Feedback of the Scientist:	Integrated nutrient management and application of gypsum would improve the productivity of groundnut
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD - 8 Soil test based nutrient management in Chickpea

Sl. No.	Item	Details
1	Crop:	Chickpea
2	Thematic area:	INM
3	Technology demonstrated	STBR-NPK 28-36-0 Kg/ha, PSB-2.5 lit, Gypsum-250 kg and Zinc sulphate-25 Kg/ha
4	Season and year:	Rabi-2022
5	Farming situation:	Rainfed - Black soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	4
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Farmers were satisfied with crop performances and expressed

		that Soil test based nutrient management is a viable technology in chickpea because of without reduction in yield compared to their own practice.
14	Feedback of the Scientist:	Soil test based nutrient management and basal application of zinc sulphate and gypsum for sulphur improved the productivity of Chickpea
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Field days-1 Training-1

FLD - 9 Soil test based nutrient management in Maize

Sl. No.	Item	Details
1	Crop:	Maize
2	Thematic area:	INM
3	Technology demonstrated	STBR NPK-242-42-5450 Kg/ha Zinc sulphate-50 Kg/ha and foliar spraying of borax @ 0.2 % for 2 times at 30 and 45DAS
4	Season and year:	Rabi-2022
5	Farming situation:	ID - Black soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	4
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Farmers were satisfied with crop performances and expressed that Soil test based nutrient management is a viable technology in Maize, because of less cost on chemical fertilizers and without reduction in yield compared to their own practice. They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields.
14	Feedback of the Scientist:	Soil test based nutrient management and basal application of zinc sulphate and foliar application of boron increased productivity of Maize
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1

FLD - 10

S. No.	Item	Details
1	Crop:	Mango
2	Thematic area:	IPM
3	Technology demonstrated	IPM Package : • Destroy All Fallen Fruits At Weekly Intervals, • Install Six Methyl Eugenol Plywood Traps Per Acre. • Plough The Soil At The Tree Basin At Frequent Intervals, • 3 Weeks Before Harvest, Spray Decamethrin 2.8 EC @ 0.5 Ml/L + Azadirachtin (0.3%) 2 Ml/Lt And Take Up Timely Harvest, • If Fruit Fly Is Very Serious (> 5/Surveillance Trap), Give Bait Sprays On The Tree Trunks At Weekly Interval: (Bait Spray Is Prepared By Mixing 100g Of Jaggery In One Litre Of Water To Which 2 ML Of Deltamethrin (2.8 EC) Is Added)
4	Season and year:	Kharif-2022
5	Farming situation:	Irrigated Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	3
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Erection of fruit flytraps reduced the fruit fly incidence and damage to a greater extent and gave good control of the problem, as they are installed early in the season during April, 2022.
14	Feedback of the Scientist:	Installation of sufficient number of fruit fly traps during April, 2022 followed by prophylactic spray of lower branches and canopy with Decamethrin twice at one month interval, removal and destruction of fallen damaged fruits at regular intervals is working efficiently in checking the fruit fly incidence and damage.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 2

FLD - 11 Management of Pod fly in Redgram

S. No.	Item	Details
1	Crop:	Redgram
2	Thematic area:	IPM
3	Technology demonstrated	IPM Package : • Azadaractin 1500 PPM @ 5 ml/lt at pod initiation • Spray of Profenophos @ 2 ml/lt or Novaluron @ 1 ml/lt at pod development stage.
4	Season and year:	Kharif-2021
5	Farming situation:	Rainfed Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations	10

	(replications/farmers/beneficiaries):	
9	No of SC/ST Farmers and women farmers:	4
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Prophylactic spray of Neem oil at flowering followed by spraying at fruit formation with Profenophos is good at controlling pod fly.
14	Feedback of the Scientist:	Spray of Azadaractin 1500 ppm at flowering to fruit development stage followed by spraying Profenofos and Novaluron alternately at 15 days interval is effective both for pod fly and pod borers.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 2

FLD - 12 Management of FAW in Maize

S. No.	Item	Details
1	Crop:	Maize
2	Thematic area:	IPM
3	Technology demonstrated	❖ IPM Package :Summer ploughing ❖ Seed treatmentwithFortenza duo (Cyantraniliprole + Thiamethoxam) @ 6 ml/kg ❖ Collection & Destruction of egg masses ❖ Pheromone traps (*S. frugiperda*) @ 4 nos/ac ❖ Border crop with grain sorghum & inter crop with cowpea (few rows) ❖ Azadirachtin 10000ppm @ 2ml/lt (10 to 15 DAS) ❖ EPN or Bt spray @ 2 ml/lt (15 to 21 DAS) ❖ First insecticide spray - Emamectin Benzoate 5SG @ 0.4g/lt (or) Spinosad 480SC @ 0.5 ml/lt (21-28 DAS) ❖ *Metarhiziumanisopliae* spray ($1x10^7$) @ 2 ml/lt (30 -35DAS) ❖ Second Insecticide spray - Flubendiamide 480SC @ 0.3 ml/lt (or) Chlorontriliniprole 18.5SC @ 0.3ml/lt orSpinetoram 11.7 SC @ 0.3 ml/lt (36 – 42 DAS) ❖ Poison Baiting – 45 -65 DAS usingThiodicarb 75WP
4	Season and year:	Kharif-2022
5	Farming situation:	Irrigated Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	3
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Seed treatment with Fortenzduo and erection of ph. traps reduced the FAW incidence and damage to a greater extent

		and gave more than 50% control of the problem during early growth stages of the crop.
14	Feedback of the Scientist:	Seed treatment, Ph traps, Border crop of fodder jower followed by prophylactic spray of Neem oil is working efficiently in checking the FAW incidence and damage.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 3

FLD - 13 Management of Gall midge in Rice

S. No.	Item	Details
1	Crop:	Rice
2	Thematic area:	IPM
3	Technology demonstrated	IPM Package : • Timely (Early) Transplanting • Use of Optimum Potash fertilizers. • Application of Fipronil 0.3% Granules @ 8 kg/ac with in 10-15 DAT. • Need based foliar Spraying of Thiomethoxam @ 0.2 g/lt orCarbosulfan @ 2 ml/lt
4	Season and year:	Kharif-2022
5	Farming situation:	Irrigated Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	3
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Soil application of Fipronil 0.3% followed by spray of Thiomethoxam effectively managed the incidence of gall midge.
14	Feedback of the Scientist:	Application of Fipronil 0.3% @ 8 kg /ac one week after transplanting, followed by spraying of Thiomethoxam @ 0.2 g/lt at 30 DAT gave good control of gall midge.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 3

FLD - 14 Management of viral diseases in Chillis

S. No.	Item	Details
1	Crop:	Chillis
2	Thematic area:	IPM
3	Technology demonstrated	IPM Package : • Seed treatment with Imidacloprid 600 FS @ 5 ml/kg seed. • Soil application of Fipronil 0.3% G @ 8 kg/ac. • Installation of Yellow Sticky Traps @ 20/ac immediately

		after transplanting. • Removal and destruction of virus infested plants early in the season. • Spray of need based insecticides for vector (whitefly) management i.e.Acetamaprid @ 0.2 g/lt or Defenthiuron @ 1.5 g/lt
4	Season and year:	Kharif-2021
5	Farming situation:	Irrigated Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	3
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Installation of Yellow sticky traps early in the season, followed by soil application of Fipronil granules and roughing of infested crops at regular intervals during early stages of crop gave good control of viral diseses.
14	Feedback of the Scientist:	Seed treatment with Imida 600 FS @ 5 ml/kg seed before sowing, Installing Yellow Sticky traps @ 20/ac at about 30 DAS followed by soil application of Fipronil 0.3% @ 8 kg/acwith initial rouging of virus infected plants gave better management of viral diseases.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 3

FLD - 15 Integrated Pest and Disease management in Blackgram

S. No.	Item	Details
1	Crop:	Blackgram
2	Thematic area:	IPDM
3	Technology demonstrated	IPDM Package : • Use of resistant seed varieties like TBG 104 or GBG 1 • Seed treatment with Imidacloprid 600 FS @ 5 ml/Kg of seed • Installation of Yellow Sticky Traps @ 20/ac. • Spraying neem oil 3000 ppm @ 5 ml/lt before flower bud initiation (20 and 35 DAS) for both whiteflies and Maruca. • Need based spray of Acetamaprid @ 0.2 g/lt for thrips/whiteflies, emamectin benzoate @ 0.4g/lt or Novaluron @ 1 ml/lt for maruca and Hexaconazole @ 2 ml/lt or Propiconazole @ 1 ml/lt for leaf spots and powdery mildew.
4	Season and year:	Rabi-2021
5	Farming situation:	Rainfed Light Black Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women	3

	farmers:	
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Seedtreatment, Installation of Yellow sticky traps, spraying of neem oil gave good control of sucking pests and YMV incidence.
14	Feedback of the Scientist:	Seed treatment with Imida 600 FS @ 5 ml/kg seed before sowing, Installing Yellow Sticky traps @ 20/ac at early vegetative stage followed by spraying of Neem oil at flowring and need based spray of Acetamaprid, Emamectin benzoate and Hexaconazole gave better management of pests and diseases.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 3

FLD - 16 Management of wilt and dry root rot in Bengalgram

S. No.	Item	Details
1	Crop:	Bengalgram
2	Thematic area:	IDM
3	Technology demonstrated	• Seed treatment with *Trichoderma harzianum* @ 10 g/kg seed + Soil application @ 2 kg/ac with Compost
4	Season and year:	Kharif-2021
5	Farming situation:	Rainfed Black Cotton Soil
6	Source of fund:	KVK
7	No of locations (Villages):	1
8	No. of demonstrations (replications/farmers/beneficiaries):	10
9	No of SC/ST Farmers and women farmers:	2
10	Area proposed (ha):	4
11	Actual area (ha)	4
12	Justification for shortfall if any:	
13	Feedback from farmers:	Seed treatement with T.harzianum @ 10 g/kg seed followed by soil application by mixing 1 kg formulation in 100 kg compost gave better control of wilt and root rot in bengalgram.
14	Feedback of the Scientist:	Seed treatment with Trichoderma harzianum followed by soil application of the same is very effective in managing both wilt and dry root rot in bengalgram.
15	Extension activities on the FLD: (Field days, Farmers training, media coverage, training to Extension Functionaries)	Training-1 Field Visits – 2

.

FLD - 17 Demonstration of Gebberrellic acid in chrysanthemum

Crop:'Chrysanthemum
Thematic area: ICM
Technology demonstrated: Spraying of Gebberrellic acid 100ppm at 30, 45and 60 days after transplanting for ealry flowering and high yield
Season and year: Kharif, 2022
Farming situation: Irrigated red soils
Source of fund: KVK
No of locations (Villages): 1
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers:4 and 1
Area proposed (ha):4
Actual area (ha):4
Justification for shortfall if any: Farmers are not aware about the spraying of GA and stage of the spraying in chrysanthemum
Feedback from farmers: Farmers are accepted this technology.
Feedback of the Scientist: Good technology, cost of spraying is very less and farmers are getting good yields
Extension activities on the FLD: Farmers training programmes, field days and social media
(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of chrysanthemum demo and control

FLD - 18 Demonstration of ridge gourd variety Arka Prasan

Crop: Ridge gourd
Thematic area: varietal evaluation
Technology demonstrated: demonstration of high yielding OP variety Arka Samrat
Season and year: Kharif 2022
Farming situation: irrigation red soils
Source of fund: KVK
No of locations (Villages): 2
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers: 4 and 1
Area proposed (ha): 4
Actual area (ha) 4
Justification for shortfall if any: local hybrids are very cost effective and compared to low yielders.
Feedback from farmers: Arka Prasan is a good marketable acceptance and compared to less seed cost and collected seed for next season. Stacking is good method to getting higher yields and observed less pest and diseases incidence.
Feedback of the Scientist: most of the farmers are following stacking for ridge gourd cultivation. So that farmers are getting good and quality yields.
Extension activities on the FLD: farmers training, filed days, field visits and media coverage
(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of ridge gourd fields

FLD - 19 Demonstration of Dolichos bean during the rabi as alternate to traditional vegetables

Crop: Dolichos bean
Thematic area: varietal evaluation
Technology demonstrated: demonstration of high yielding OP variety Arka Amogh in Dolichos bean
Season and year: Rabi 2022
Farming situation: irrigation red soils
Source of fund: KVK
No of locations (Villages): 2
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers: 3 and 1
Area proposed (ha): 4
Actual area (ha) 4
Justification for shortfall if any: Tomato cultivation during Rabi season resulted in less price realization due to glut in the market
Feedback from farmers: Arka Amogh is a good marketable acceptance and compared to less seed cost and collected seed for next season.
Feedback of the Scientist: less cost of investment, short duration and good market prices around the year
Extension activities on the FLD: farmers training, filed days, field visits and media coverage
(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of Dolichos bean variety Arka Amogh

FLD - 20 Demonstration of tomato hybrid Arka Samrat

Crop: Tomato
Thematic area: Varietal evaluation
Technology demonstrated: Arka Samrat
Season and year: Kharif, 2022
Farming situation: Irrigated red soils
Source of fund: KVK
No of locations (Villages): 2
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers:4 and 2
Area proposed (ha):4
Actual area (ha):4
Justification for shortfall if any: The local varieties are producing lower yields and more susceptible to ToLCV and bacterial wilt, blight diseases. Fruit size and number of harvests also low and less keeping quality
Feedback from farmers: Farmers are accepted this technology
Feedback of the Scientist: This hybrid is high yielding, triple disease resistance and suitable to local area.
Extension activities on the FLD: Farmers training programmes, field days, media coverage
(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of tomato demonstration plots

FLD - 21 Demonstration of bunch management practice in banana

Crop:Banana
Thematic area: ICM
Technology demonstrated: Bunch care activities like Fipronil spray→ KNO_3 spray→ Bunch covering→ Micronutrient sprays.
Season and year: Rabi, 2022
Farming situation: Irrigated red soils
Source of fund: KVK
No of locations (Villages): 1
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers:4 and 1
Area proposed (ha):4
Actual area (ha):4
Justification for shortfall if any: Formation of canker spot on finger due to attack by thrips. Poor bunch management practices fetches lesser price in market. Poor finger filling also concurrently reduces bunch weight. Moreover, bunches rejected for export purpose.
Feedback from farmers: Farmers are accepted this technology
Feedback of the Scientist: This technology is useful to get more export quality bunches and good market prices.
Extension activities on the FLD: Farmers training programmes, field days, media coverage

(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of banana demonstration plots

FLD - 22 Demonstration of management of sigatoka disease in banana

Crop:Banana
Thematic area: IDM
Technology demonstrated: Pre-monsoon spraying with Chlorothalonil @2g/lit and two to three post monsoon sprayings at 25 days interval with Propiconozole 1ml/lit or Tebuconazole + Trifloxistrobin @1.4ml/lit.
Season and year: Kharif, 2022
Farming situation: Irrigated red soils
Source of fund: KVK
No of locations (Villages): 1
No. of demonstrations (replications/farmers/beneficiaries): 10
No of SC/ST Farmers and women farmers:4 and 1
Area proposed (ha):4
Actual area (ha):4
Justification for shortfall if any: farmers are not following pre and post monsoon sprayings in banana.
Feedback from farmers: Farmers are accepted this technology
Feedback of the Scientist: Farmers are getting good quality bunches and less cost on diseases management
Extension activities on the FLD: Farmers training programmes, field days, media coverage

(Field days, Farmers training, media coverage, training to Extension Functionaries)

Photos of banana demonstration plots

FLD - 23	Improving reproductive efficiency though hormones
Crop	
Thematic area	Dairy management
Technology demonstrated	Double PgF2alpha protocol
Season and Year	Rabi 2022
Farming situation	-
Source of Fund	KVK
No. of locations (villages)	3
No. of demonstrations	50
No. of SC/ST farmers and women farmers	10
Area proposed	-
Actual area	-
Justification for short rainfall if any	-

Feedback from farmers	The technology is good as it reduces the inter calving period
Feedback of the scientist	-
Extension activities on the FLD	Health camps, Field visits and group discussions

FLD - 24	Demonstration on influence of nutrient supplementation on incidence of mastitis
Crop	
Thematic area	Nutrient management
Technology demonstrated	Supplementation of Se+Vit E, Vit A and mineral mixture
Season and Year	Rabi 2022
Farming situation	-
Source of Fund	KVK
No. of locations (villages)	3
No. of demonstrations	30
No. of SC/ST farmers and women farmers	10
Area proposed	-
Actual area	-
Justification for short rainfall if any	-
Feedback from farmers	The technology is good as it reduces the incidence of mastitis
Feedback of the scientist	-
Extension activities on the FLD	Health camps, Field visits and group discussions

FLD - 25	Mixed fodder production (CoFS-29 + Hedge lucerne)
Crop	Fodder
Thematic area	Feed and fodder management
Technology demonstrated	Cultivation of CoFS-29 and Hedge lucerne in 2:1 ratio and fed to milch buffaloes
Season and Year	Rabi 2022
Farming situation	-
Source of Fund	KVK
No. of locations (villages)	3
No. of demonstrations	10
No. of SC/ST farmers and women farmers	4
Area proposed	2.0 ha
Actual area	2.0ha
Justification for short rainfall if any	-
Feedback from farmers	The technology is good for milk production as it improved the protein value in the fodder
Feedback of the scientist	-
Extension activities on the FLD	Field visit, Method demonstration

FLD - 26	Supplementation of milk replacer to pre weaned lambs
Crop	Sheep
Thematic area	Animal Nutrition management
Technology demonstrated	Supplementation of milk replacer developed by NIANP @ 50g/day
Season and Year	Kharif 2022
Farming situation	Rainfed
Source of Fund	KVK
No. of locations (villages)	3
No. of demonstrations	10
No. of SC/ST farmers and women farmers	4
Area proposed	-
Actual area	-

Justification for short rainfall if any	
Feedback from farmers	The technology is well accepted by the farmers
Feedback of the scientist	-
Extension activities on the FLD	Field visit, Method demonstration

FLD - 27

Crop: Millets & Greens

Thematic area: Value Addition

Technology demonstrated: Foxtail Biscuits(72g-Foxtail Millet flour,23- Whole Wheat Flour,5- Moringa leaf Powder)

Season and year: 2021

Farming situation:-

Source of fund:KVK

No of locations (Villages):2

No. of demonstrations (replications/farmers/beneficiaries):10

No of SC/ST Farmers and women farmers:-

Area proposed (ha):-

Actual area (ha):-

Justification for shortfall if any: -

Feedback from farmers: -

Feedback of the Scientist: 72% Expressed Colour, Taste, Smell, Texture, Appearance, Overall Acceptability : Scale Points: 6 (Like slightly).

Extension activities on the FLD: -

(Field days, Farmers training, media coverage, training to Extension Functionaries)

Extension activities on the FLD:

(Field days, Farmers training, media coverage, training to Extension Functionaries)

FLD - 28

Crop: Oilseeds

Thematic area: Drudgery Reduction

Technology demonstrated: Groundnut stripper

Season and year: Rabi 2021

Farming situation:- Rainfed Redsoils

Source of fund: KVK

No of locations (Villages): 2

No. of demonstrations (replications/farmers/beneficiaries):5

No of SC/ST Farmers and women farmers:- 5

Area proposed (ha):- 2.5hac

Actual area (ha):- 2.5hac

Justification for shortfall if any: - -

Feedback from farmers: With the farmers practice for stripping of groundnut pods from the crop drudgery was recorded from moderate to minimum than stripping with stripper recorded from moderate to maximum.

Feedback of the Scientist: -

Extension activities on the FLD: -

(Field days, Farmers training, media coverage, training to Extension Functionaries)

FLD - 29

Crop: Greenleafy and Vegeables

Thematic area: Nutrition Garden

Technology demonstrated: Household food security by kitchen gardening and nutrition gardening

Season and year: Kharif & Rabi 2022

Farming situation:- Irrigated Medium Black soils

Source of fund: KVK

No of locations (Villages): 2

No. of demonstrations (replications/farmers/beneficiaries):5

No of SC/ST Farmers and women farmers:- 5

Area proposed (ha):- 1.5 hac

Actual area (ha):- 1.5hac

Justification for shortfall if any: - -

Feedback from farmers: With the Introduction of Nutrigardens consumption of greens and other vegetables Increased (10.5Kgs /week) in daily menu than their regular usage i.e, 4-5kgs/week helps in dietary diversity and income generated Rs. 1449.00/week (Rs.5,071 /season) on sales of surplus production.

Feedback of the Scientist: -

Extension activities on the FLD: -

(Field days, Farmers training, media coverage, training to Extension Functionaries)

Extension Studies

Extension Study 1:

A Study on Rythu Bharosa Kendras (RBKs) of Nandyal District with objectives of perception and utilization of RBK services, and identification of constraints faced by farmers while availing services, at the same time constraints faced by RBK in-charges in delivering the services to the farmers. Study conducted in the year of 2022-23 with 60 farmers and 60 RBK In-charges of the same villages with random sampling through *ex-post facto research design*. Study revealed that, under perception and utilization 93.33 % of farmers was aware and utilized e-crop booking facilities out of 33 services. Implementation of YSR Rythu Bharosa/PMKISAN scheme (88.33%), distributing quality fertilizers (76.66%), Implementation of Crop Insurance Scheme (53.33%), and quality Seed distribution (48..33%) were find as top five services utilizing by farmers from RBK. 38.33% of farmers comes under low utilization category, 43.33% of farmers fallen under medium utilization category and 16.66% of farmers were utilized higher level of services from RBKs with mean of 33.65. Non-availability of Advanced/preferred varieties of seeds /fertilizers/pesticides, Lack of timely supply of quality inputs and services, Input price was similar/ higher than outside market, Non availability of organic inputs, Lack of knowledge about improved scientific practices about crops by RBK in charge were received as top five constraints faced by farmers while availing services. Daily Updating of Digital APPs consuming more time (YSR APP, CM APP, CCE, DBT, e-Crop App, PM KISAN, etc.,). Lack of awareness and interest from farmers, Lack of technologies that prefer by farmers, Input price was similar/ higher than outside market, Inputs are supplied in a limited quantity, and all line department activities should be conducted by a single RBK in charge, so, it leads more desk work, than field work were received as constraints faced by the RBK in-charges while delivering the services.

Table 1. Distribution of respondents Perception and utilization of services of RBK

(n=60) Mean= 33.65

Sl. No.	Services	Perception		Utilization		Rank
		F	%	F	%	
1.	e-Crop booking	56	93.33	56	93.33	1
2.	Implementation of YSR RythuBharosa/PMKISAN scheme at RBK	53	88.33	53	88.33	2
3.	RBK is distributing quality fertilizers	51	85.00	46	76.66	3
4.	Implementation of Crop Insurance Scheme/ PMFBY	48	80.00	32	53.33	4
5.	RBK distributing quality Seed	32	53.33	29	48.33	5
6.	Implementation of YSR Zero Interest for crop loan Scheme (YSR Sunna Vaddi PantaRunalu)	32	53.33	28	46.66	6
7.	Subsidy on micro irrigation equipment (PMKSY)	43	71.66	26	43.33	7
8.	Conducting Polambadi (FFS)/thotabadi/ on a major crops	36	60.00	24	40.00	8
9.	Conducting of RBK level/ Village Agri-advisory board meeting (VAAB) once in a month	56	93.33	22	36.66	9
10.	RBK Library Utilization	36	60.00	21	35.00	10

Table 2. Constraints faced by farmers while availing the services from RBK (n=60)

Sl. No.	Constraints faced by farmer	F	%	Rank
1.	Non-availability of Advanced/preferred varieties of seed/breeds /fertilizers/pesticides	56	93.33	**I**
2.	Lack of timely supply of quality inputs and services from RBKs	55	91.66	**II**
3.	Input price was similar/ higher than outside market	53	88.33	**III**
4	Non availability of organic inputs	52	86.66	**IV**
5.	Lack of knowledge about improved scientific practices about crops by RBK in charge	42	70.00	**V**
6.	Poor knowledge about the services offered by RBKs	38	63.33	**VI**
7.	Insufficient training programmes conducted by RBKs	32	53.33	**VII**
8.	RBKs not communicating information about availability of inputs to all the farmers of a village	31	51.66	**VIII**

Table 3. Constraints faced by RBK Staff while delivering services (n=60)

Sl. No.	Constraints faced by RBK Staff	F	%	Rank
1	Daily Updating of Digital APPs consuming more time (YSR APP, CM APP, CCE, DBT, e-Crop App, PM KISAN, etc.,).	54	90.00	1
2	Lack of awareness and interest from farmers	53	88.33	2
3	Lack of technologies that prefer by farmers	52	86.66	3
4	Input price was similar/ higher than outside market.	52	86.66	3
5	Inputs are supplied in a **limited quantity**	51	85.00	4
6	All line department activities should be conducted by a single RBK in charge, so, it leads more desk work, than field work.	49	81.66	5
7	Complicated procedure for selling fertilizers to farmers.	46	76.66	6
8	Lack of subject matter specialists to serve farmers specific programmes	43	71.66	7
9	Political involvement in providing services.	41	68.33	8
10	Personal knowledge level is insufficient to answer all the queries of the farmers	38	63.33	9
11	Lack of training in extension methods and communication skills to work with farmers	32	53.33	10
12	No clear instructions from the higher authorities leads to	32	53.33	10

	conflict in the work			
13	Lack of demonstration materials.	26	43.33	11

Extension Study 2:

Perception study on drone technology in agro-chemical spraying with objectives of perception and comparative advantages of drone spraying with conventional methods of spraying and field performance of drone with 60 sample size. Perception study was divided as a technological, economical and psychological aspect. Under technological 100% of farmers agreed that operating of drone required more digital knowledge, 93.33% of farmers agreed that, drone helps to cover larger area in short period, 80 percent of farmers agreed that, more useful in tall and dense crops i.e. Maize, Jowar and Redgram, 76.66% of farmers agreed that, drone is more useful in Horti. Crops i.e. citrus, mango, sapota etc. than field crops. When analyzed the drone spraying with conventional method of spraying drone required 25% lesser chemical dosage, water requirement 20 lit/ha, low drudgery and it can cover all stages of crop canopy.

Table 1. Distribution of farmers based on technological perception on drone technology (n=60)

Sl. No	Technological aspects	Agree	Neutral	Disagree
1	Recommended dosage of chemical is possible with drones.	14 (23.33)	14 (23.33)	32 (53.33)
2	Drone usage leads to uniform spraying of chemicals.	43 (71.66)	0	17 (28.33)
3	Drone usage helps to cover large area in short period.	56 (93.33)	0	04 (6.66)
4	More digital knowledge is required for operating the drone	60 (100)	0	0
5	Possibility of spray drift to the nearby crop fields,	16 (26.66)	3 (5)	41 (68.33)
6	Drone is more useful in Horti. Crops i.e. citrus, mango, sapota etc. than field crops.	46 (76.66)	5 (8.33)	09 (15)
7	Immediately after irrigation we can go for spraying with drone	53 (88.33)	0	07 (11.66)
8	It more useful in tall and dense crops i.e. Maize, Jowar and Redgram	48 (80)	0	12 (20)
9	It more useful in undulated geographical areas	21 (35.00)	18 (30)	21 (35)

Table 2. Distribution of farmers based on economical perception on drone technology (n=60)

Sl. No	Economical Aspects	Agree	Neutral	Disagree
1	Reduce the labour cost than conventional/traditional methods.	12 (20)	16 (26.66)	32 (53.33)
2	Diesel/Petrol expenditure will be avoided in drone utilization.	60 (100)	0	0
3	Less chemical spray and low wastage leads to cut down unnecessary expenditure.	38 (63.33)	14 (23.33)	8 (13.33)

4	Best alternative to overcome labor scarcity	26 (43.33)	21 (35)	13 (21.66)
5	If used in flowering and fruiting stages of the crop, it may leads to damage	28 (46.66)	12 (20)	20 (33.33)
6	Drone Technology may not reduce the cost of spraying	36 (60)	6 (10)	18 (30)

Table 3. Distribution of farmers based on psychological perception on drone technology (n=60)

Sl. no	Psychological aspects	Agree	Neutral	Disagree
1	Reduces stress to arrange manual labour.	16 (26.66)	23 (38.33)	21 (35)
2	Drone utilization gives confidence to adopt other Precision farming technologies.	29 (48.33)	11 (18.33)	20 (33.33)
3	Enhances social status among peers.	8 (13.33)	16 (26.66)	36 (60)
4	Agricultural source of pollution is greatly reduced.	38 (63.33)	6 (10)	16 (26.66)
5	Drone utilization helps to reduce drudgery.	60 (100.00)	0	0
6	Eliminates threat to life of farmers by avoiding direct contact while spraying chemicals.	52 (86.66)	8 (13.33)	0

Table 4. Field performance of spraying drone:

Sl. No	Particulars	Paddy	Chikpea	Maize/ Redgram	Citrus/ Mango
1.	Optimum height of spraying, (m)	2	2	2.5	2.5-3.0
2.	Forward speed, (m/s)	4	5	5.5	2
3.	Width of spray, (m)	5.10	5.04	5.0	5.10
4.	Theoretical field capacity, (ha/hr)	7.34	9.07	9.9	3.67
5.	Effective field capacity,(ha/hr)	3.84	3.84	4.0	0.68
6.	Field efficiency, (%)	52.31	42.33	40.40	18.52

Evaluated field performance of drone through calculating of field efficiency (%), in this wise paddy (52.31%), chickpea (42.33%), maize (40.40%), were received higher field efficiency than horticultural crops like citrus and mango were identified only 18..52% of field efficiency due to high altitude and more time taking than field crops through drone technology.

Advantages with drone technology:

1. Possible to spray undulated and water logging areas with uniformity
2. Drone usage leads to uniform spraying of chemicals
3. Drone usage helps to cover large area in short period
4. Agricultural source of pollution is greatly reduced
5. Eliminates threat to life of farmers by avoiding direct contact while spraying chemicals.
6. Increases employment opportunities

Disadvantages /drawbacks of the drone technology:

1. Lack of pilot training centers for operating drone.
2. Need extra set of batteries to cover lager area at a time.
3. There is no stranded chemical dosage recommendations for drone spraying.
4. Lack of service and maintenance for drone.

Measures for enhancing / accelerating the adoption:

1. More awareness program are required for the farmer
2. Repair and maintenance should provide at local areas.
3. Drone subsidies should extent to general degree students
4. Training center of drone for both drone pilot and drone repair at dist/mandal level with affordable prices.

Extension Study 3:

Study on Integrated farming systems in Nandyal district with objective to identifying of dominate IFS models in the district and constrain to maintain IFS models. The study was conducted with 20 samples from each division and made in to 60 sample size. In Nandyal division, Chickpea + 3 Buffalos+ 5 Rams were received 2.22 cost benefit ratio, Paddy + Blackgram + 2 buffalos with 2.04 B.C Ratio and Paddy+ Maize+ 2 Buffalo with 1.93 B.C ratio were identified as more viable IFS models in the division. In dhone division Groundnut+ Redgram + Cotton + 2 buffalo + 5 Rams, Redgram +Korra + chickpea + 10 poultry, and Cotton + Maize + Blackgram+ 2 Bufflo are the top three IFS models identified in the division. Cotton + Maize + 2 Buffalo + 20 Rams, Maize+ blackgram+ 1 buffalo + 5 rams and Soyabean+ Setaria+1 buffalo were observed as top three viable IFS models in the Atmakur division of the District.

Production Constraints in IFS models as perceived by the farmers:

1. Labour intensive
2. High cost of production
3. Marketing problems due to low volumes

Suggestion for strengthening of IFS models as perceived by the farmers:

1. Mechanization to be adopted
2. Own/group/collective marketing to be promoted
3. Own labour can be used

Technology Week Celebrations:

Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	-	-	-
Exhibition	-	-	-
Film show	-	-	-
Fair	-	-	-
Farm Visit	-	-	-
Diagnostic Practical	-	-	-
Distribution of Literature (No.)	-	-	-
Distribution of Seed (q)	-	-	-
Distribution of Planting materials (No.)	-	-	-
Bio Product distribution (Kg)	-	-	-
Bio Fertilizers (q)	-	-	-
Distribution of fingerlings	-	-	-
Distribution of Livestock specimen (No.)	-	-	-
Total number of farmers visited the technology week	-	-	-
Others	-	-	-

Training/workshops/seminars etc. attended by KVK staff:

Trainings attended in the relevant field of specialization (Mention Title, duration, Institution, location etc.):

Name of the staff	Title	Dates	Duration	Organized by
D. Balaraju	National Workshop on Natural farming to KVKs	3rd Dec 22	1 day	RVSKVV, Gwalior, MP
D. Balaraju	Training on Natural Farming	5-6 Dec, 22	2 days	Gurukul, Kurukshetra, Haryana
A Krishna Murthy	National Livestock conference	11-13 April 2022	3days	Indian Society of Animal Production and Management
M. Adinarayana	Webinar on best management practice in banana	04.01.23	1	Dr.YSRHU Venkataramanagudem
K. Lakshmipriya	State Level workshop On Government Programmes for Building Food Processing Infrastructure	27/10/2022	1 Day	AndhraPradesh State Food Processing Society, Vijayawada.
G.Dhanalakshmi, M. Sudhakar, E. Ravi Goud	International conference on Reimagining Rainfed Agro-ecosystems: challenges & opportunities (ICRA-2022)	22-24- Dec, 2022	3 days	organized by ISDA at ICAR-CRIDA, Hyderabad

Details of sponsored projects/programmes implemented by KVK:

S. No.	Title of the programme / project	Sponsoring agency	Objectives	Duration	Amount (Rs)
1	Out scaling of Natural farming	ICAR	1. To create awareness on Natural farming to farmers in general. 2. To impart training and exposure to Natural farming. 3. To demonstrate Crop Based Natural Farming models in farmers fields.	5 years	Sanctioned 10.62 lakhs for (1st year), released 2.66 lakhs only.
2	IIHR SC Sub Plan	IIHR Bengaluru	Extending latest varieties and improved technologies of ICAR-IIHR	Kharif 2022	5,00,000
3	IIRR-SC Subplan	ICAR-IIRR, Hyderabad	Soil test based nutrient management	Kharif-2022	

SUCCESS STORIES

Success Story-1:

Fortune of the farmer changed with transition from Mono cropping to Multiple cropping

Sri. Y. Naga Lakshmi Reddy, aged 45 years is a resident of H.Kottala village (Bethamcherla mandal, Nandyal district.) and a Big farmer with 5.6 ha of land under farming with bore well irrigation. He used to cultivate Redgram and Groundnut crops in his total land of 5.6 ha as rainfed Kharif crop for the past 10 years. He drilled two bore bells in his field during 2018-19 and got good water (2.5 inches). From then onwards, he thought of diversifying crops and approached KVK for better planning of crops. KVK scientists suggested him to take up Redgram, Groundnut, Chillis, Onion and some vegetables and flower crops as a mix or in sequence.

Technological interventions recommended by KVK :

In Redgram, high yielding, variety LRG 52 and LRG 41 were recommended with IPM for Maruca and Pod fly which were hampering the yields in recent times in that area. Also recommended to take up seed treatment and soil application of Trichoderma towards management of wilt disease.

In Groundnut crop, new high yielding variety Kadiri Lepakshi was introduced during 2018 which is of about 120 days duration. IPDM for spodoptera and Leaf spots were also suggested to manage these recurring problems in groundnut in that area. Also suggested to go for mechanized metered seed drill for this variety, as it requires more spacing.

In Dry Chillis, raising seedlings and transplanting is recommended over popular practice of direct seeding in that area. IPM is stressed for viral disease complex management with seed treatment, border crops, trap crops, sticky pads, prophylactic spray of Neem and Pongam oil based botanicals, use of bio pesticides viz. Beauveria and Verticillium and finally need based chemical pesticides. All the bio rational products were supplied through KVK.

In Onion, high yielding varieties released by NHRDF viz., ALR for Kharif and Red 4 for Rabi are recommended with ICM package. Seed treatment and Soil application of Trichoderma is recommended for managing bulb rots and installation of Sticky traps and use of Neem oil and Stickers in pesticide sprays suggested for effective management of thrips, the prime problem of onion production. Frequent use of Pseudomonas along with sticker is suggested for better management of Purple blotch, Twister blight and Stemphylium blight. Need based chemical pesticide sprays recommended for managing the problems if they exceed the ETL.

Vegetables like Dolichos bean and Beet root and flower crops like marigold were also suggested as alternate crops for Rabi under irrigation facilities available for better income. Other better technologies like Green manuring, application of bio enriched compost, Micro irrigation, Fertigation, Mulching, Raised Bed method etc. were promoted in all possible crops he undertook.

Crop based advisory is being given to the farmer through Mobile Short Messaging at frequent intervals. Hand holding support is extended by KVK wherever needed for quick redressal of the field problems through direct field visits and social media.

Details of yield and economics

Crop	Before Intervention (2016-17)				After Intervention (2021-22)				% Increase over base	
	Area (ac)	Production (Q)	Gross Income (Rs.)	Net income (Rs.)	Area (ac)	Production (Q)	Gross Income (Rs.)	Net income (Rs.)	Production	Income
Redgram	10	55	247500	137500	8	60	354000	246000	9.1	78.9
Groundnut	4	36	144000	74000	2	26	132600	77600	-27.7	4.9
Chillis	-	-	-	-	2	54	702000	462000	-	-
Onion	-	-	-	-	2.0	210	378000	238000	-	-
Dolichos	-	-	-	-	1	51.64	118790	97364	-	-
Marigold	-	-	-	-	2.5	128	384000	135000	-	-
	14			**211500**	**17**			**1255964**	-	**493.8**

Conclusion : The farmer after adopting multiple cropping system in his field, with efficient utilization of all the resources could able to get an income of Rs.12,55,964/- during 2021-22 which is 438.4% more than his base year net income i.e Rs. 2,11,500/- when he was growing only 2 crops in his field without bore well. Thus, the interventions and handholding support by KVK helped the farmer to realize his dreams of getting handsome income from his farm land.

Success Story-2:

Diversified enterprises brought prosperity in life.

Sri. D. Chandra Sekhar Reddy, aged 48 years is a resident of Yerragudi village (Banaganapalle mandal, Nandyal district.). He is holding 4.0 ha of of land under agriculture with 2 bore wells for irrigation. He used to produce Paddy and Maize crops in his total land of 4.0 ha for the past several years. He is a good farmer with education upto SSC and practicing agriculture handed over to him from his ancestors in the same method his predecessors were doing. His soils were alfisols with good drainage facility but low in organic carbon content. He attended few of trainings and interaction meetings conducted by KVK in their village as part of DFI Programme. He got motivated with new crops, varieties, technologies and opportunities for better income being offered by KVK. He has chosen to

diversify his resources for taking up different systems viz., Sericulture and Horticulture in addition to already existing Agriculture and Livestock with him. He was keen to practice almost all the new methodologies and technologies in the selected farming systems with continuous advisory and monitoring from the concerned scientists of KVK.

Technological interventions recommended by KVK :

Rice : New improved resistant varieties of ANGRAU & PJTSAU (Nandyal Sona, Telangana Sona) were adopted with INM and Integrated management of Stem borer and Blast. Green manuring is also being followed. Crop rotation with zero tillage maize in rabi followed.

Maize : High yielding private hybrids, Paired row sowing, IPM for Fall Army Worm, Chemical weed management, mechanical harvesting, ploughing down of stubbles and debris with rotavator for enriching the soil and conserving resources.

Redgram : High yielding variety LRG 52 recommended with IPM for Maruca and Pod fly. Recommended to take up seed treatment and soil application of Trichoderma towards management of wilt disease. Intercropping with millets at 5:1 ratio followed.

Pomegranate : As he is having red sandy soils, with medium depth and good drainage and as arid climate prevails in most of the time in the year, KVK suggested him to go for Pomegranate plantation, as a dry land horticulture crop. The variety Bhagwa was recommended at 4 m x 3 m spacing with IPDM for sucking pests, borers and bacterial blight, under drip irrigation. He was also suggested to use Bio enriched Compost as basal soil application for improving soil carbon and nutrient base. The farmer adopted all the recommended practices and followed even fruit bagging to protect the fruits from pests and diseases and to improve the colour.

Sericulture : As he is having sufficient own family work force, he was suggested to go for Sericulture to some extent in his field, utilizing the Govt. scheme for mulberry plantation and construction of Sericulture shed. KVK facilitated the farmer in getting the practical know how of the technology, mulberry cuttings and silk worm DFLs and linked with department of sericulture for suggestions and problem redressel.

Milch Cattle : Improved fodder variety Super napier cuttings were supplied, Balanced feeding techniques taught, Area Specific Mineral Mixture and Bypass Fat supplementation were given for improving milk production.

Details of yield and economics

Crop	Before Intervention (2016-17)				After Intervention (2021-22)				% Increase over base	
	Area (ac)	Production (Q)	Gross Income (Rs.)	Net income (Rs.)	Area (ac)	Production (Q)	Gross Income (Rs.)	Net income (Rs.)	Production	Income
Rice	7	157.5	236250	89250	3	105	204750	120750	-33	35.29
Maize	3	75	102375	57875	3	93	186000	111000	24	91.8
Redgram	-	-	-	-	2	14	82600	44600	-	-
Pomegranate	-	-	-	-	3	230	575000	323000	-	-
Sericulture	-	-	-	-	2	8	304000	164000	-	-
Buffaloes	5	5500 lit	137500	85000	5	8600	473000	363000	56.4	327.1
	10			**232125**	**13**			**1126350**		**485.7**




Conclusion: The farmer after adopting diversified farming systems and improved technologies as recommended and supported by KVK, with efficient utilization of all the resources and technologies could able to achieve a net income of Rs.11, 26,350/- during 2021-22 which is 485.7% more than his earlier (2016-17) income of Rs. 2, 32,125/- when he was growing only 2 crops in his field and had milch cattle.

Details of innovative methodology, innovative technology and transfer of Technology developed and used during the year by the KVK

Details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

Impact of KVK activities (Not to be restricted for reporting period):

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Production and use of various bio-inputs for natural farming	104	28%	18,000/-/ one village outlet	45,000/- one village outlet.
FAW management in Maize	32	22%	28,000/- per ac.	37,000/- per ac.
Basic & Advanced Tailoring	28	78.57		4500.00
Jute Bag Making	24	45.83		3300.00
Millet Value Added Products	55	32.72		4200.00

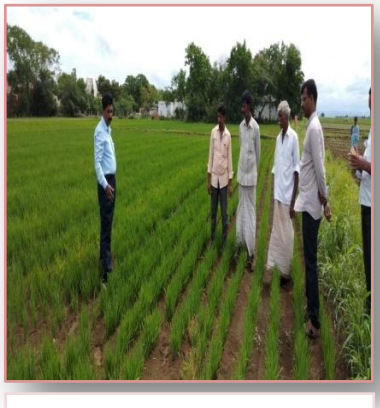
NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

Impact of five select technologies assessed/demonstrated/popularized by the KVK in the district (in QRT format)
Cases of large scale adoption/impact of specific technologies

1. Semi dry Rice cultivation K.C .canal area of Scarce Rainfall Zone of Kurnool district, A.P.

Situation analysis/Problem statement:
Transplanted rice has deleterious effects on the Soil environment and nearly 30% of total Water used (1,400 – 1,800 mm) in rice culture is consumed mainly during Puddling and transplanting Operations. Puddling requires lots Water at a time when there is little Water in the reservoirs, destroys Soil structure and adversely affects Soil Productivity. Therefore, a key concern is how the farmers can avoid Puddling and transplanting operations without yield penalty.

Plan, Implement and Support:
After assessment of technology for three years, the successful results of the technology is considered for large scale adoption in the district. In order to create awareness on semi dry cultivation In Rice trainings were conducted to the farmers, adarsha rythus and extension personnel and results were published in Daily news papers. Extensive coverage through mass media also helped to reach more number of farmers in the district. Organised Demonstrations on semi dry cultivation In Rice in different locations of Kurnool district provided critical inputs i.e seed, herbicides to the selected farmers . During the crop period field visits were organized to the farmers and others farmers from different villages to show the performance of the technology technology.



Intervention: Direct Seeded rice which removes Puddling and drudgery of transplanting the young rice Seedlings provides an option to resolve the adaphic conflict and enhance the Sustainability of rice and Subsequent cropping system. DSR overcomes the problem of Seasonality in labour requirement for rice nursery raising and transplanting operations. DSR facilitates timely establishment of rice and Succeeding crops.

Mean Yield and Economic Returns of Semi Dry rice cultivation:

Particulars	Yield (kg/ha).	Cost of production (Rs)	Net returns (Rs/ha	CB ratio
Semi Dry **Rice**	7453	55000	79154	1:2.43
Farmers practice	7125	71550	56700	1:1.79

- **Output and Outcome:**
- The results revealed that semi dry cultivation In Rice has recorded increased net returns of Rs 22454/ha.
- **This technology has spread very quickly in the district due to:**
- Approx. 50% reduction in seed rate compared to transplanted method is observed in DSR.
- 20-40% of reduction in water usage compared to transplantation method.
- Harvesting can be done in 7 to 10 days ahead.
- As seeding is done by the tractor , nursery and the transplantation labour is not required.
- In the transplantation method we need 10-15 labourers, where as in the direct-seeding method one person per one hour is enough to finish the seeding process.
- Because of the recent advances in improved efficiency of pesticides and herbicides , initial growth phase of the weeds can also be eradicated.
- Optimum plant population can be maintained.

Impact of Intervention:
semi dry cultivation of Rice has spread very quickly not only to the interior pockets of the district. Farmers are reaping good returns due to less cost of cultivation and higher net returns . The impact was spread to different parts the district. Awareness on semi dry cultivation was created and nearly 15-20 % of Command area farmers were adopting the method.

Direct sown paddy with Drum seeder - A success story:

Transplantation is one of the component involving labour, time and money in cultivation of paddy. Due to scarcity of labor in peak season sowings are often delayed resulting in yield reduction due to transplanting of aged seedling and also running short of time for second crop. Changed scenario of resources availability was noticed by the farming community and it lead KVK for introduction of conservation technologies which can be feasible viable and adoptable. Thus drum seeder was chosen for on farm testing in kharif 2008. Eight rowdrum seeder from TNAU was brought and on farm testing was organized in 2 ha with 5 farmers besides on station trail at kvk farm in 2008-09 and 2009-10 and 2010-11.

As seeing is believing farmers were invited to kvk on the day of sowing to build their confidence. Hands on experience was gained by them and sowing with drum seeder was done despite of the disagreement with the fellow farmers. Capacity building on use of weedicides was also done to arrest the weed growth which is a major constraint in direct sown paddy. Duration of the crop reduced by 15 days(135 days) and the yield was enhanced by 10%.This created confidence among them during the first year it self which lead to adoption of this technology in rabi season.

Based upon the success, farmers from nearby villages have purchased five drum seeder from TNAU, Coimbatore for their use with the facilitation of KVK .This technology has attracted all categories of farmers due to easy operation, less weight, line sowing with less seed rate (15 kg / acre) more tillers, early maturity etc., apart from savings in transplanting cost. This paved the way for usage of cono weeder for weeding.

Details of impact analysis of KVK activities carried out during the reporting period

Linkages

Functional linkage with different organizations:

Name of organization	Nature of linkage
ICAR-CRIDA	Capacity building programs on conservation agriculture technologies
ICAR-IIHR	SC-SP, Varietal assessment
ICAR-IIOR	Seed production
ICAR-IIRR	SC-SP
ICAR-IIMR	Seed production

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

List of special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies:

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Soil health management ICM in chillies	**September 2022 September**	**NAARM**	**2,50,000**

AWARDS and RECOGNITIONS

- A.Krishna Murthy, SMS (AH) received " Best Paper Award" during National Livestock Conference organized during 11-13 April 2022 at Visakhapatnam.

- A.Krishna Murthy, SMS (AH) received " RythuSevarathna Award" from Rythumitra Foundation, Telangana on 17.7.2022 at Suryapet

Important Visitors to KVKs during 2022 (with photographs)

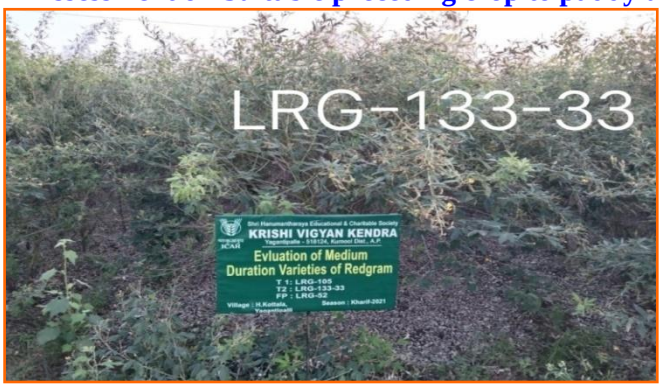
Dr.Kinzang,
Project Manager, SAARC, Agriculture Center,
DHAKA, visited NICRA Demonstrations for Up-scaling of resilient Technologies.

Dr.Mamatha Pradhan and Dr.Anisha Mohan, IFPRI, New Delhi, Visited NICRA activities

PHOTOS

OFTs

Assessment of Suitable preceding crop to paddy under command area (KC canal and Tankfed area)



Evaluation of Medium duration Varieties of Redgram

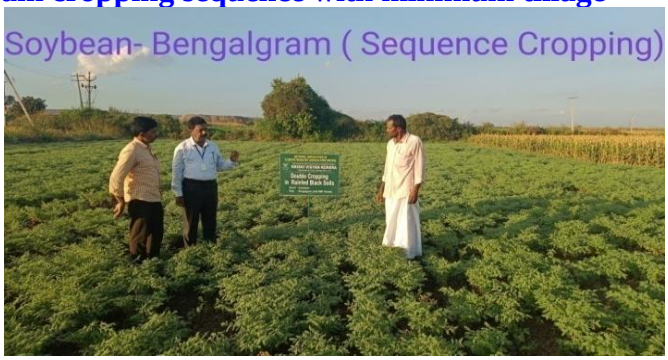
Evaluation of Castor hybrids under Rainfed situation

Performance of Finger millet varieties

Demostration on Zero till Maize cultivation

Demonstration on Redgram + Pearlmillet Inter cropping (1:1)

Demonstration on in Redgram + Setaria- Bengalgram cropping sequence with minimum tillage



Demonstrations on Soybean- Bengalgram Sequences with Minimum Tillage

OFT on Organic Farming

OFT on Assesement of Nanourea

Evaluation of different options for management of Black thrips

OFT on Management of different options for management of Black thrips

A view of OFT plot in Chillis

Effect of IPM and Organic Methods on Pest and Disease management in Setaria

Field visit to OFT on IPM and Organic Methods of Pest and Disease management in Setaria

A view of OFT on Organic Setaria

OFT on Assessing the performance of ridge gourd varieties

OFT-Assessing the performance of okra varieties

OFT on Assessing the performance of onion varieties

OFT Assessment of poultry breeds

OFT on bypass fat supplementation to ram lambs

OFT on supplementation of probiotic yeast

OFT-Assessment of poultry breeds

OFT:1: Assessment Of Nutri Smart Farming Systems

OFT :2: Assessment of Different Coating Methods to Improve Shelf Life of Fruits

FLDS

FLD on INM in Groundnut

FLD on SBNM in Bt. Cotton

FLD on STBN in Maize

FLD on STBNM in Bengalgram

Integrated Pest Management for Fruit fly in Mango

Installing Fruit fly traps in Mango Orchard under FLD on Management of fruit fly

Observing the fruit fly catches in the trap after installation.

Management of Gall midge in Rice

Field view of FLD on Management of Gall midge in Rice

Field visit to FLD on Management of Gall midge in rice

Integrated Management of Pod fly in Redgram

Field visit to FLD on Management of Pod fly in Redgram

Interacting with FLD farmers in Redgram pod fly management

Management of Fall Army Worm in Maize

Observing Pheromone catches of FAW adults in FLD plot

A view of FLD on Maize FAW management

Management of Viral Diseases in Chillis (Kharif, 2021)

Field visit to FLD on viral disease management in Chillis

Discussion with farmers of FLD on viral disease management in Chillis

Integrated Pest & Disease Management in Blackgram

Field visit to FLD on IPDM in Blackgram

A view of FLD on IPDM in Blackgram

Management of wilt and dry root rot in Bengalgram

Field view of FLD on Wilt and Dry root rot management in Bengalgram

Field visit to FLD on wilt and dry root rot management in Bengalgram

FLD on Demonstration of Arka Samrat in tomato

FLD-Demonstration of bunch management practices in banana

FLD on Demonstration of Dolichos bean during the rabi as alternate to other vegetables

FLD-Demonstration of GA on flower yield of chrysanthemum

FLD on Demonstration of management of sigatoka disease in banana

FLD on Demonstration of ridge gourd variety Arka Prasan

FLD on dietary supplementation on prevention of mastitis

FLD on double pg protocol

FLD on double PgF2 alpha protocol

FLD on milk replacer

FLD on mixed fodder production

Demonstration on Millet Based Moringa Biscuit:

Demonstration Of Groundnut Stripping Frame to reduce drudgery of Farm Women :

Demonstration on Nutrigarden For Ensuring Year Long Availability of Vegetables (Nutri – Gardens):

Trainings

Kisan Mela on Jalshakti Abhiyan

NAARM SCSP-Soil test

Off campus trg. on Soil testing

Off campus Trg. on STBNM in Cotton

Soil sampling with spade and pickaxe

Trg . on soil analysis

Trg. on INM

Trg. on Vermicompost production


Bengalgram
Shot on OnePlus
By DBR
10/11/22
1:21 PM


Shot on OnePlus
By DBR
9/30/22
12:58 PM


Shot on OnePlus
Powered by Quad Camera


Shot on OnePlus
Powered by Quad Camera


Shot on OnePlus
Powered by Quad Camera

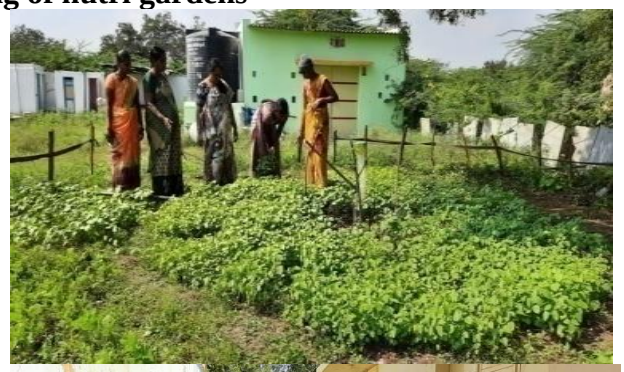

Shot on OnePlus
Powered by Quad Camera


Shot on OnePlus
Powered by Quad Camera

Training Programmes For SHG Women:

Training Programmes on Nutritional Deficiency Disorders Among Pregnant and Lactating mothers

Training Programmes on Importance of raising of nutri gardens



Training Programme on Value Addition to Millets:

Value Addition to Fruits and Vegetables as IG Activity For SHG women:

Value Addition to Tomato as IG activity For SHG Women:

Gender And Nutrition National Network Project Of ICAR:

Training Programme on Value addition To Onion Under ODOP:

Training Programme on Food Processing and value Addition:

Training Programmes On Drudgery Reduction:

Training Programmes On EDP:

Training Programmes On Long Duration Skill Training Programmes On Jute Bag Making :

Training Programmes On Long Duration Skill Training Programmes On Basic&Advanced Tailoring:

Training Programmes For Rural Youth i.e, Nutritional Literacy to Adolescent Boys & Girls of Kasturbha Gandhi Balika Vidyalayas and Govt.High Schools :

Training Programme On Nuricereals, NutriGardens & Nutri Thali To Supervisors & Anganwadi Teachers(EF-F):

Training Programme To Field Staff Of ZBNF On Nutrigardens & Nutri thalis

Other Extension Activities

Diagnostic visit to mango field

Diagostic visit to chilli

Thota badi on chrysanthemum

Diagnostic visit to onion fields

Group discussion-Group discussion on cropping pattern in horticulture crops

Demo on rejuvenation in old and unproductive mango orchards

Diagnostic visit to papaya

Diagnostic visit to brinjalnursery

Diagnostic visit to mango

Diagnostic visit to pomegranate

National Nutrition week
Mahila Kisan Diwas Celebrations:

Poshan Pakwada Celebrations:

National Girl Child Day Celebrations:

Awareness, Training and Demonstrations on Natural Farming





Demonstrations on Natural Farming



Rural Youth programmes

RY-Internship programme on horticulture activities to Govt degree students of Koilakuntla

RY-Internship programme on horticulture activities

RY-Nursery management techniques in vegetable crops

RY-Propagation techniques in horticulture crops

Ry-Propagation techniques in horticulture crops

RY-Propagation techniques in horticulture crops

RY--Propagation techniques in horticulture crops

RY-Propagation techniques in ornamental and fruit crops

RY-Protected cultivation in horticulture crops

RY-Raising of vegetable nursery under shade net