

Front Line Demonstrations

The field demonstrations conducted under the close supervision of the scientists are called Front line demonstrations (FLDs) because the technologies are demonstrated for the first time by the scientists themselves before being fed in to the main extension system. The main objective of FLDs is to demonstrate latest crop production technologies and its management practices in the farmer's fields under different agro climatic regions and framing situations.

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	283	110.0	-
Pulses	153	70.0	-
Cereals	20	20.0	-
Vegetables	-	-	-
Other crops	25	10	-
Total	481	210.0	
Livestock & Fisheries	-	-	-
Other enterprises	56	22.4	-
Total	56	22.4	-
Grand Total	537	232.4	-

Follow-up of FLDs implemented during previous years

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Paddy	Resource conservation	Direct seeding in rice with drum seeder	Trainings, front line demonstration, exposure visits, field days	369	5271	> 5000 ha per annum
2	Paddy	Resource conservation	Transplanting of paddy with transplanter	Trainings, front line demonstration, exposure visits, field days	55	414	785
3	Groundnut	Varietal evaluation	Improved variety - Dharani	Trainings, front line demonstration, exposure visits, field days	41	92	321
4	Tomato	Water and nutrient management	Fertigation through drip system	Trainings, front line demonstrations, exposure visits, field days	37	95	178

5	Hybrid Napier fodder	Fodder management	Demonstration CO-4 variety	Trainings, front line demonstrations	6	45	2.5
6	Tomato	Water conservation	Polythene mulching	Trainings, front line demonstrations	6	21	10.0
7	Mango	Micro nutrient management	Spraying of Mango special @ 5g/lit before and after flowering	Trainings, demonstrations, field days	10	80	80
8	Mango	Fruit drop management	Spraying of Planofix @ 2ml/10lt and multi-K @ 10g/lit at peanut and marble stage	Trainings, demonstrations, field days	6	40	40
9	Chrysanthemum	Weed management	Spraying of pre emergence herbicide Pendimethalin @ 1.0Kg a.i /ha	Trainings, demonstrations, field days	6	50	50
10	Brinjal	IPM	Erection of WOTA traps@ 25/ha and spraying of neem oil 1500ppm @3ml/lit	Trainings, demonstrations, field days	5	60	60

Details of FLDs implemented during the current year (Information is to be furnished in the following three tables for each category i.e., cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Source of funds	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
						Proposed	Actual	SC/ST	Others	Total	
1	Groundnut	ICM	Dharani variety, Optimum seed rate (150kg/ha) Soil test based nutrient management (application of gypsum) Weed management using herbicides	Kharif 2017	NMOOP/ICAR	30ha	30ha	24	66	90	No shortfall
2	Redgram	ICM	LRG-52 (wilt & SMD resistant) IPM for pod borer	Kharif 2017	NFSM/ICAR	20ha	20ha	10	37	47	No shortfall
3	Redgram	Nutrient management	Potassium (60kg per ha) and Zinc (25kg per ha)	Kharif 2017	ICAR	10ha	10ha	7	13	20	No shortfall
4	Greengram	ICM	WGG-42 variety, Chemical Weed management, Soil test based nutrient management	Kharif 2017	NFSM/ICAR	10ha	10ha	23	-	23	No shortfall

5	Groundnut	ICM	Dharani variety, Optimum seed rate, Soil test based nutrient management (application of gypsum), Chemical weed management	Rabi 2017	NMOOP/ICAR	40ha	40ha	32	61	93	No shortfall
6	Sunflower	ICM	KBSH-53 variety, Soil test based nutrient management, chemical weed management	Rabi 2017	NMOOP/ICAR	40ha	40ha	32	68	100	No shortfall
7	Greengram	ICM	WGG-42 & IPM-2-14 variety, chemical weed management, Soil test based nutrient management	Rabi 2017	NFSM/ICAR	20ha	20ha	7	38	45	No shortfall
8	Blackgram	ICM	TBG-104 variety, chemical weed management, Soil test based nutrient management	Rabi 2017	NFSM/ICAR	30ha	30ha	6	59	65	No shortfall
9	Sugarcane	Weed management	Chemical weed management	Rabi 2017	ICAR	10ha	10ha	9	16	25	No shortfall
11	Mango	Micronutrient management	Mango special	Rabi 2017	ICAR	20	25	5	20	25	No shortfall
12	Mango	Fruit drop management	Growth regulators	Rabi 2017	ICAR	10	10	2	8	10	No shortfall
13	Brinjal	IPM	Integrated Pest management	Rabi 2017	ICAR	10	20	5	15	20	No shortfall
14	Chillies	Nutrient management	Soil test based fertilizer application	Rabi 2017	ICAR	20	20	10	10	20	No shortfall

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Groundnut	KhariF 2017	Rainfed	Red soils	Low	Medium to high	High	Groundnut	II FN of June	1 st week of October		
Redgram	KhariF 2017	Rainfed	Red soils	Low	Medium	High	Redgram	1 st week of June	I FN of January		
Redgram	KhariF 2017	Rainfed	Red soils	Low	Medium	High	Redgram	1 st week of June	I FN of January		
Greengram	KhariF 2017	Rainfed	Red sandy soils	Low	Medium	Medium to high	Fallow	II FN of July	Last week of September		
Groundnut	Rabi 2017	Irrigated dry	Red sandy soils	Low	Medium to high	Medium to high	Paddy/groundnut	2 nd FN of November	II week of March		
Sunflower	Rabi 2017	Irrigated dry	Sandy clay soils	Low to Medium	Medium to high	Medium to High	Paddy/groundnut/sugarcane	II FN of December	II FN of March	-	-
Greengram	Rabi 2017	Irrigated dry	Red sandy soils	Low	High	Medium to high	Paddy/groundnut	Last week of November	1 st FN of February		
Blackgram	Rabi 2017	Irrigated dry	Sandy clay soils	Low to Medium	Medium to high	Medium to High	Paddy	2 nd FN of November	1 st FN of February		
Sugarcane	Rabi 2016	Irrigated dry	Sandy clay soils	Low	Medium to high	Medium to high	Sugarcane	1 st week of January	December	-	-
Sugarcane	Rabi 2017	Irrigated dry	Sandy clay soils	Low	High	Medium to high	Sugarcane	February	January		
Mango	Rabi/Summer 2015-16	Irrigated and Rainfed	Red sandy soils	Low	Medium	Medium	Mango	10-18 years aged plantation	IInd FN of May, 2016 to IInd FN of June, 2016	-	-
Mango	Rabi/Summer 2015-2016	Irrigated and Rainfed	Red sandy soils	Low	Medium	Medium	Mango	10-18 years aged plantation	IInd FN of May, 2016 to IInd FN of June, 2016	-	-

Brinjal	Rabi/Summer 2015-2016	Irrigated and Rainfed	Red sandy soils	Low	Medium	High	Groundnut	IInd FN of Jan, 2016 to 1 st FN of Feb,2016	IInd FN of April, 2016 to 1 st FN of June, 2016	-	-
Chillies	Rabi 2016	Irrigated	Red soils	Low	Medium	High	Groundnut	IInd FN of Oct, 2016 to IInd FN of Nov,2016	IInd FN of March, 2016 to IInd FN of April, 2016	-	-

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Dharani variety performed better than Kadiri-6 in both the seasons. Tolerant to drought and bud necrosis. Good shelling percentage and uniform maturity of pods.
2	KBSH-53 recorded good yields than private hybrid, Sunbred-275. Preemergence application of Pendimethalin resulted in control of weeds at critical stages of crop growth. Spraying of boron at ray floret opening stage increases the seed set and reduced the ill filled grains and leads to more yields in sunflower
3	WGG-42 performed better than LGG-460 during kharif season. WGG-42 and IMP-2-14 performed better than LGG-460 during Rabi season. Both the varieties are resistant to Yellow Mosaic Virus, but LGG-460 is susceptible. Pre emergence application of pendimethalin effectively controlled weeds up to 25-30 days after sowing. Thiodicarb effectively controlled Spodoptera resulted in good yields.
4	TBG-104 is resistant to YMV and performed better than LBG-752. Pre emergence application of pendimethalin effectively controlled weeds up to 25-30 days after sowing. Thiodicarb effectively controlled Spodoptera resulted in good yields.
5	LRG-52 performed better than LRG-41 variety. It also resistant to wilt as well sterility mosaic virus. Three chemical sprays with Neem oil, Chlorpyrifos + Dichlorvos followed by Thiodicarb at bud initiation, flowering and pod formation and maturation stages effectively controlled pod borer.
6	Basal application of Potassium (60kg per ha) and Zinc (25kg per ha) resulted in good yields when compared to farmers practice.
7	Pre emergence application of Atrazine @ 5kg followed by metribuzine 1.0 kg + 2,4-D amine salt @ 2.5 kg per ha was effectively controlled up 60days and resulted in good yields. Chemical weed control helps in reduction in cost of cultivation and also overcomes labour shortage.
8	Micronutrient sprays helped to obtain higher quality fruit production and also high market price
9	Use of planofix and 13-0-45 is beneficial for not only controlling fruit drop but also improving crop yields and quality.
10	Use of WOTA traps not only reduced the pest population but also in saving cost on pesticides by decreased number of pesticide sprays. It also helped to get high quality yields.
11	Soil test based fertilizer application is useful in reducing indiscriminate use of inorganic fertilizers and also saving cost on fertilizer. It is also helpful in improving crop yields through soil application of micronutrients like Zinc, Boron etc.

Farmers' reactions on specific technologies

S. No	Feed Back
1	Farmers expressed that marketing problem with Dharani variety even though it is good yielder.
2	Spraying of Boron micro nutrient is difficult in adoption.
3	The new varieties of greengram and blackgram performed well and resistant to YMV
4	LRG-52 was resistant to wilt but observed sparse incidence of sterility mosaic
5	Pre emergence application of Pendimethalin in Pulses and Oilseeds effectively controls weeds up to 25-30DAS results in low cost of cultivation and reduction of dependency on labour for weeding
6	Fruit quality was superior in demonstration than that in farmers practice
7	Demonstration helped to reduce the fruit drop
8	WOTA traps reduced the insect damage and also saved the cost on pesticides
9	Cost Minimization on chemical fertilizer dosage as per soil health cards and higher net returns with increased yields

Extension and Training activities under FLD

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	6	03.10.17, 10.10.17, 23.01.18, 09.02.18, 15.03.18, 02.04.18	251	Dr.L.Prasanthi, Dr.Takur, Principal Scientists, RARS, Tirupati, ADAs, AOS, AEOs, MPEOs and ATMA officers from respective mandals from the Dept of Agriculture participated in the programmes
2	Farmers Training	17	08.06.17, 24.06.17, 05.07.17, 06.07.17, 14.07.17, 09.11.17, 07.11.17, 11.11.17, 21.11.17, 11.12.17, 23.12.17, 10.02.18,	747	Dr. TCM Naidu, Associate Director of Research, RARS, Tirupati, ADAs, AOs and ATMA officers participated in the programmes
3	Media coverage	17	08.06.17, 22.08.17, 03.10.17, 15.03.18, 21.11.17, 24.06.17, 05.07.17, 09.11.17, 23.01.18, 14.07.17, 11.09.17, 10.10.17, 12.11.18, 07.11.17, 23.12.17, 09.02.18, 10.02.18,	-	-
4	Training for extension functionaries	-	-	-	-

FLD on Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit				
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
Sericulture	Demonstration of G4 Mulberry Variety	6	6	60	60	0											
	Fertilizer management in Mulberry based on soil testing	25	25	55	50	5											
	Integrated pest management of uzi in silk worm rearing	25	25	76	68	24	4	6	8400	35112	26712	3.1	7600	30600	23000	3.0	

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Drudgery Reduction Technology to farmwomen	Demonstration of three tyned weeder	11	Drudgery Time saving Economic Output	By using three tyned weeder for weeding drudgery was reduced by 40 per cent. Labour saving of 6 members/acre amount of Rs.1400/-	Heavy drudgery while weeding
	Demonstration of protective clothing	35	Health hazards	55% of the health hazards problems were found to be reduced by using of protective clothing	Health hazards while agricultural operations without wearing of protective clothing.
	Demonstration of dung collector	20	Drudgery reduction technology to dairy women	Drudgery reduction noticed 69 per cent by using of dung collector, time saved up to 15-20 minutes in 4 to 5 animal shed area and easy for handling	Heavy drudgery while collection of dung and cleaning of animal shed
	Demonstration of Gloves and coats for bhendi growers	10	Health hazards	By using of Gloves and coats while plucking of Bhendhi is reduced drudgery 40 per cent skin and respiratory problems reduced to 55 per cent is noticed. After demonstration	Health hazards while plucking of Bhendi

Mango	NICRA	Integrated Nutrient Management	Spraying of mango special @5g/ltr before and after flowering			25	25														
Tomato	NICRA	Production management	Arka Samrat	650	595	10	4.0	750	600	650	595	7.8%	190344	649650	459306	2.41	196344	594999	398655	2.03	
Tomato	NICRA	In situ soil moisture conservation	Plastic mulching	667	566	5	2.0	697	637	667	566	17.3%	183844	565800	381956	2.07	221344	666510	445166	2.01	
Tomato	NICRA	Integrated Pest Management	Erection of WOTA traps and neem oil	741	595	20	8.0	761	721	741	595	24.5%	149000	197600	48600	1.33	153300	158667	5367	1.04	
Paddy	NICRA	Resource conservation	Direct seeding with drum seeder	RNR 15048	RNR 15048	10	4.0														
Paddy	NICRA	Improved variety	RNR 15048 variety	RNR 15048	Chintoo (Private variety)	18	8.0														
Groundnut	NICRA	Drought tolerant variety	Dharani variety	22.5	18.8	10	4.0	25.5	19.5	22.5	18.80	19.7%	70825	135000	94175	1.91	67625	112800	69175	1.66	

Intercropping of Mango and Field bean	NICRA	Intercropping	TFB-1 field bean			10.0	4.0												
Intercropping of Tomato and Marigold	NICRA	Intercropping	Pusa Basanathi			20	8.0												
Mango	NICRA	NRM	Green manuring with Sunhemp			40	40												

FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Dairy	Fodder Production	CO-4	30	30	54.2	42.4	27.8%			65250	108400	43150	1.66	63685	84800	21115	1.33
	Fodder Production	COFS 31	50	50													
	Heat stress management	Installation of foggers	5	5	540	405	33.3%			47800	108000	60200	2.26	36000	80100	44100	2.23
Poultry	Back yard poultry rearing/ Income generation	Rajasri Birds	20	20	1780	900	97%			8130	11620	3490	1.43	6340	7100	760	1.12