Demonstration of Paddy variety CO (R) 51 with ICM practices

Variety	No. of Demo	Cluster – Village	Season
CO (R) 51	10 (4ha)	Kasankottai - Kasankottai	Kharif



NPK Status (kg/ha)					
N	Р	К			
68.00	3.55	104.50			

Technology Demonstrated

Demonstration of Paddy CO (R) 51 variety

Seed treatment with *Pseudomonas fluorescence* @10g/kg of seed

Soil application of Pseudomonas fluorescence @2.5kg /ha and Foliar spray with TNAU Pf 1 liquid formulation @ 5ml/lit.

Setting up of pheromone trap 12 Nos. / ha.

Soil test based fertilizer application

Problems

- Use of old varieties like ADT 36
- Incidence of leaf folder (20%) and stem borer (30%)
- Occurrence of bacterial leaf blight and blast during samba season
- Low yield (3.56 t/ha)



Demonstration of Paddy variety CO (R) 51 with ICM practices



FLD-1

Particulars	No. of tillers / plant	Blast incidence (%)	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	16.2	1.16	51.50 (16% yield increase)	31403	61192	29788	1.94
Check (ADT 36)	15.3	13.96	44.50	30298	53436	23138	1.76





Demonstration of Paddy variety CO (R) 51 with ICM practices



Conclusion

FLD-1

CO (R) 51 resulted in 16% increased yield with the net return of Rs.30,000/-. This variety may be further demonstrated for horizontal spread.

Upscaling measures (2017-18)

Planned for upscaling CO (R) 51 in an area of 20 ha. with the collaboration of Department of Agriculture.

Demonstration of ICM in cotton



Problems

- Shedding of square buds and immature bolls (22%)
- Yield loss due to reddening of leaves (Mg deficiency)
- Low yield due to bacterial blight
- Less number of bolls/ plant (20-40)
- Non adoption of IPM and INM
- Low yield (8 q/ha.)

Hybrid	No. of Demo	Cluster-Village	Season			
RCH 2	10 (4 ha.)	Nagamangalam - Eleri	Kharif			
Technology Demonstrated						
Nipping	of terminal b	ud				
Applicati mixture	Application of biofertilizer 2kg/ha & MN mixture 12.5kg/ha					
Soil test	based fertiliz	er application				
Foliar spray of cotton plus @ 5kg/ha twice at flowering and boll formation stage						
Foliar spray of NAA 40 ppm at 60 th & 90 th DAS						
Yellow sticky trap @ 12 nos./ha						
Setting up of pheromone trap with lure @12 nos./ha.						

NPK Status (kg/ha)					
Ν	Р	К			
68.15	3.50	92.35			
		Contd			



Demonstration of ICM in cotton

Particulars	Sympodial branches/ plant	Bolls/ plant	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	10.4	54.6	14.4	34215	89796	52581	2.54
Check	8.9	34.6	10.1	34114	61110	26996	1.79

Conclusion

About 40% increased yield was obtained due to the ICM practices adopted in cotton. Pheramone trap and sticky traps are more effective in containing major pests in cotton

Upscaling measures (2017-18)

Planned for upscaling ICM in cotton in an area of 50 ha. with the collaboration of Department of Agriculture and CCI, Coimbatore

Demonstration of ICM in cashew



Problems

- Cultivation of old varieties of seedling origin
- Lack of adoption of soil and water conservation measures
- Yield loss due to tea mosquito bug, stem borer and anthracnose disease
- Under utilization of resources
- Low existing population (90-100/ha.) as against the recommended (200/ha)
- Low yield (600kg/ha.)

Season	Cluster-Village	No. of Demo
Kharif	Ponparappi- Ponparappi	10 (4ha)

Technology Demonstrated

Gap filling with VRI 3 grafts

Pruning during August –September month

Strengthening of field bunds Staggered trenches (dimension : length 2m, width 0.3 m and depth 0.4m) @10/ac. Mulching with locally available farm waste

Foliar spraying of boron 0.1% at flowering time

Foliar spraying of MAP 1 % at flowering time

Foliar spraying of Panchakavya 3% at flowering time

IPM for tea mosquito bug and stem borer

IDM for Anthracnose – COC 2.5g/lit.





Demonstration of ICM in cashew

Particulars	Tea mosquito bug incidence (%)	Cashew stem & root Borer Incidence (%)	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	6.6	2.5	6.42 (8 % yield increase)	30330	79452	19122	2.62
Check	23	7.6	5.96	30660	69072	38412	2.52

Conclusion

The yield increase due to the adoption of ICM practices in cashewnut is 8%. Further yield increase of upto 30 % will be realized after three years once the gap filled plants starts yield.

Upscaling measures (2017-18)

Planned for upscaling ICM in cashew in an area of 100 ha. in collaboration with Department of Horticulture and Agrl. Engineering Dept.

FLD-4 Demonstration of Chilli hy	brid CO(ch)	1 with l	CM pra	actices
A CONTRACT A CONTRACT OF A CONTRACTACT OF A CONTRACTACT OF A CONTRACTACTACTACTACTACTACTACTACTACTACTACTACTA	Cluster-Vill	age	Season	No. of Demo
	Nagamangal Nagamanga	am - Iam	Rabi	10 (2ha)
	Techr	ology Demo	onstrated	
	Demonstration	of Chilli hyb	b <mark>rid CO (</mark> cl	h) 1
	Seed treatment with <i>Pseudomonas</i> 10g/kg of seed			
	Soil test based fertilizer application			
	Weed management			
	Basal application of <i>Pseudomonas</i> 2.5 kg/ha			
	Foliar spraying of IIHR Vegetable special@ 1.5kg/ha twice at the time of flowering			
	Yellow & blue s	ticky trap @	2 12 nos./	ha
Problems	Setting up of pl @12 nos./ha (S	neromone tr Spodoptera)	rap with l	ure
 Lack of knowledge in high yielding variety / hybrid 		NPK Stat	tus	
Incidence of Powdery mildew, leaf spot and fruit rot	N	Р		К
 vveed infestation Low vield (2t green + 1.2t dry pods/ha.) 	81.30	3.20		94.15
,				Contd



Demonstration of Chilli hybrid CO(ch)1 with ICM practices

Particulars	Fruit rot infected fruits/plant (%)	No. of fruits /plant	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	3.79	91	30.99 (13% yield increase)	112132	371880	259748	3.32
Check	5.59	76	27.53	108640	330300	221660	3.04

Conclusion

CO (ch)1 Chilli hybrid resulted in 13% increased yield over the private hybrids. The major problems like thrips incidence and fruit rot also less in CO (ch)1

Upscaling measures (2017-18)

Planned for upscaling chilli hybrid CO (ch) 1 in an area of 10 ha. with the collaboration of Department of Horticulture.

Introduction of Lablab variety CO(Gb) 14 with ICM practices



0	D	ems

- Growing of long duration low yielding vegetables like chilli, brinjal, bhendi
- Less market price of brinjal, bhendi and thereby low income

Cluster-Village	Season	No. of Demo
Kasankottai – Naduvalur	Kharif	10 (2 ha.)

Technology Demonstrated

Introduction of bush type lablab CO 14

Seed treatment with *Pseudomonas* 10g/kg of seed

Seed treatment with Rhizobium 500 g/ha

Soil test based fertilizer application

Yellow sticky trap @ 12 nos./ha

Foliar spraying of IIHR vegetable special 1.5 kg/ha







Introduction of Lablab variety CO(Gb) 14 with ICM practices



Particulars	No.of pods per plant (Nos.)	Height of the plant (cm)	Yield (t/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	24.7	72.6	8.44	126970	253080	126110	3.96

Conclusion

Being a new crop farmers showed keen interest in raising lablab. It could yield 8.4 t/ha. In a short duration of 100-110 days. With the good price of Rs.30/kg, farmers could realize the BCR of 3.96.

Upscaling measures (2017-18)

Planned for upscaling Lablab variety CO (Gb) 14 in an area of 20 ha. with the collaboration of Department of Horticulture.

Demonstration of small onion variety CO(On) 5 with ICM practices



Problems

- Bulkiness of seed onion bulbs and its high cost
- Use of low yielding varieties
- Heavy thrips incidence (20-40 per plant)
- Yield reduction (20 %)
- Small size bulbs

No. of Demo	Cluster – Village	Season
10 (2 ha)	K.Mettu theru - Karaipakkam	Rabi

Technology Demonstrated

Introduction of onion CO(On)5

Seed treatment with *Pseudomonas* 10g/kg of seed

Soil application of *T.viride* @2.5kg/ha.

Maize as a border crop to minimize thrips incidence

Soil test based fertilizer application

Yellow sticky trap @ 12 nos./ha.

NPK Status (kg/ha)					
Ν	Р	К			
93.15	3.42	87.55			
		Contd			



Demonstration of small onion variety CO(On) 5 with ICM practices





Particulars	No. of bulbs/plant	Bulb weight (g)	Yield (q/ha.)	Gross cost (Rs./ha,.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	6.4	14.6	12.96 (14% yield increase)	82070	199200	117130	2.43
Check	6.8	10.8	11.37	86590	170100	83510	1.96

Conclusion

CO (On) 5 could replace the bulk purchase of seed bulbs. By adoption of ICM practices including nursery raising and transplanting could resulted in 14 % yield increase with the high BCR of 1:2.43.

Upscaling measures (2017-18)

Planned for upscaling CO (On) 5 in an area of 10 ha. with the collaboration of Department of Horticulture.

Demonstration of grafted Brinjal with ICM practices

No. of Demo	Cluster – Village	Season
5 (1 ha)	Silal - Vanathirayanpattinam	Rabi



Problems	Technology Demonstrated
 Incidence of bacterial wilt (21 %) 	Brinjal grafts
 Shoot and fruit borer incidence (30 %) 	(rootstock - <i>Solanam torvum</i> with local patteswaran variety)
 White fly incidence (32 %) 	Removal & destruction of affected shoots and fruits
 Leaf spot incidence (18 %) 	Satting up of Dharamana tran @ 12naa /ha
 Insidence of little leaf(0%) 	Setting up of Pheromone trap @ 12nos./ha
	Yellow sticky trap @12nos./ha
• Low yield (15-16 t/ha.)	Spraying of Azardiractin 300 ppm <i>Contd</i>



Demonstration of grafted Brinjal with ICM practices

Particulars	Bacterial wilt affected plants (%)	Shoot & fruit borer incidence (%)	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	3	14.8	37.89 (9% yield increase)	103860	347760	243900	3.35
Check	18	29.66	34.74	101184	313470	212286	3.10

Conclusion

There was a considerable reduction in number of plants affected by bacterial wilt due to grafts. There was a 9% increase in yield due to ICM practices (Yield continues..)

Upscaling measures (2017-18)

Planned to upscale after necessary skill upgradation of farmers on grafting of brinjal

Demonstration of ICM practices in tuberose



Problems

- Lack of awareness on bulb treatment
- Bulb rot incidence (8-10 %) at initial establishment
- Improper nutrient management
- Weed infestation
- Severe infestation of nematode
- Bud borer damage (15-20 %)
- Yield loss to an extent of 30%

No. of Demo 5 (1 ha)	Cluster – Village Silal - Silal	Season Rabi			
Technology Demonstrated					
Bulb treatment wit bulb.	th <i>Pseudomonas</i> 10g	ı/kg of			
Application of <i>P.fluroescence</i> 4 lit./ha along with drip / FYM					
Soil application of	<i>T.viride</i> @2.5kgha.				
Neem cake @250k	g/ha.				
Application of <i>Paecilomyces lilacinus</i> 4lit/ha.					
Marigold intercrop	Marigold intercropping @10:1				



Demonstration of ICM practices in tuberose



Particulars	Nematode Gall Index (1-5 scale)	Corm rot (%)	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha)	BCR
Demo	2.3	2.02	11.05 (16 % yield increase)	100340	330600	230260	3.29
Check	3.18	12.67	9.49	99550	283700	184150	2.85

Conclusion

FLD-8

ICM practices adopted in tuberose could resulted in less bulb rot and nematode incidence and thereby increase yield by 16%.

Upscaling measures (2017-18)

Planned for upscaling ICM in tubersose in an area of 10 ha. with the collaboration of Department of Horticulture.

Demonstration of Sugarcane variety Co 0212 for yield and income potential



No. of Demo	Cluster – Village	Season
5 (1 ha)	K.Mettu Theru – K. Mettu Theru	Rabi

Problems

- Use of old variety CO 86032
- Lack of knowledge on new varieties
- Red rot incidence (18 %)
- Inter node borer incidence (14%)
- low cane yield (75 t/ha.)

Technology Demonstrated

SSI technology

Spraying of TNAU sugarcane booster @10kg/ha

Soil test based nutrient management

IPDM for internode borer and red rot disease





Demonstration is Under Progress (Vegetative stage)



Demonstration of Black gram as intercrop in Cashew Gardens



Problems

- Under utilization of resources
- Low existing population (90-100/ha.)
- Lack of knowledge about intercrop and their varieties
- Yield loss due to tea mosquito bug, stem borer and anthraconse

No. of Demo	Cluster – Village	Season			
10 (4 ha)	Ponparappi – Sirukalathur	Kharif			
Technology Demonstrated					
Cultivation of Black gram VBN(Bg) 6 as intercrop in Cashew garden					
Pseudomonas soil application	Pseudomonas seed treatment – 10g /kg of seed + soil application @1kg /acre				
Foliar spray of pulse wonder @ 5 kg/ha – 2 sprays at flowering and pod formation stage					
Setting up of yellow sticky trap for the management of sucking pests – 12Nos./ha					
IIHR sealer cum healer for the management of Stem borer in main crop (Cashew)					





Demonstration of Black gram as intercrop in Cashew Gardens

Particulars	No. of pods/plant	Disease incidence %(YMV)	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	46.4	1.50	3.6	18090	46779	28689	2.60
Check	There is no check / other intercrop to compare						

Conclusion

Cultivation of blackgram as intercrop in cashew plantations is resulted in additional earning of around Rs.30,000/ha. It also enriches soil by nitrogen that would improve the yield in cashew also.

Upscaling measures (2017-18)

Planned for upscaling Blackgram as intercrop in cashew gardens in an area of 50 ha. with the collaboration of Department of Agriculture and Horticulture.

Drought management in cotton





FLD- 11

Hybrid	No. of Demo	Cluster-Village	Season
RCH 2	5 (2 ha.)	Nagamangalam - Karupilakattalai	Kharif

Problems

- Occurrence of severe drought
- Less number of bolls (20-30)
- Poor boll bursting
- Lack of knowledge about IPM and INM
- Yield loss due to reddening of leaves
- Shedding of square buds and immature bolls
- Low yield (7 q/ha.)



Technology Demonstrated

PPFM spray 0.1% at flowering and boll formation stage (2 spray)

NAA 10 PPM at flowering and boll formation stage (2 spray)







Drought management in cotton

Particulars	Sympodial branches	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	10.4	16.6 (71 % yield increase)	36226	99540	63314	2.74
Check	9	9.7	34355	58080	23725	1.70

Rainfall from January to March	88 mm
--------------------------------	-------

Conclusion

By the timely spray of PPFM (1%), the farmers could rescue their crops until further shower, the demo farmers felt happy in recovering their crop and ensuring yield and income.

Upscaling measures (2017-18)

Necessary arrangements will be made to upscale this technology if drought occurs in the coming year.

Demonstration of multicut fodder sorghum CO FS 31



Problems

- Green fodder scarcity during summer season
- Low milk yield
- Low yield of existing fodder
- Waste or rejection by animals is high
- Unawareness of newly released fodder variety

Technology Demonstrated

Demonstration of multi cut fodder sorghum CO (FS) 31





Demonstration of multicut fodder sorghum CO FS 31

Particulars	No. of leaves/plant	Yield (q/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	97	178 (12 % yield increase)	41972	88900	46928	2.12
Check	89	159	41773	79700	37927	1.92

Conclusion

CO 31 (Fodder Sorghum) resulted in 12% increase in fodder yield. Good palatability was also observed.

Upscaling measures (2017-18)

Planned for upscaling multi cut fodder sorghum COFS 31 in an area of 10 ha. with the collaboration of Department of Animal Husbandry.

Demonstration of integrated feed management in low milk yielding milch cow





No. of Demo	Cluster – Village	Season
10	K.Mettu Theru – Sembiyakudi	

Technology Demonstrated

Balanced feeding of mixed fodder

Grant supplement @ 2packets/ animal/day for 2 months

Low cost concentrated feed preparation

Deworming with albendazole 3 months interval

Problems

- Non availability of green fodder
- High feed cost and poor feeding practices
- Lack of knowledge on deworming
- Low milk yield
- Low economic return





Demonstration of integrated feed management in low milk yielding milch cow

Particulars	Milk Yield (lit./day)	Gross cost (Rs./cow)	Gross return (Rs./cow)	Net return (Rs./cow)	BCR
Demo	10.0 (25% milk yield increase)	3417	8358	4941	2.44
Check	8.0	2937	5932	2995	2.02

Conclusion

The Integrated feed management practices viz., balanced feeding of mixed fodder, periodical deworming and supply of grant supplement could resulted in increased milk yield and ensures cow general health.

Upscaling measures (2017-18)

Planned for upscaling Integrated feed management in dairy cow with the collaboration of Department of Animal Husbandry.

Demonstration of area specific mineral mixture in dairy animal

No. of Demo	Cluster – Village
20 animals	K.Mettu Theru – Sembiyakudi



Problems

- Poor fertility
- Low body weight
- Poor quantity and quality of milk

Technology Demonstrated

Administering area specific mineral mixture in dairy animal @ 1kg/animal/month (33 gm/day) Contd...



Demonstration of area specific mineral mixture in dairy animal



Particulars	Onset of estrus (%)	Milk Yield (lit./day)	Gross cost (Rs./cow)	Gross return (Rs./cow)	Net return (Rs./cow)	BCR
Demo	70	9.12 (5 % milk yield increase)	7690	16490	8800	2.14
Check	10	8.7	7499	13842	6343	1.84

Conclusion

Administering the cows with areas specific mineral mixture resulted in 5% increased milk yield. The early and timely estrus is also observed.

Upscaling measures (2017-18)

Planned for upscaling area specific mineral mixture in dairy animal through PPP mode with the collaboration of Department of Animal Husbandry.

Demonstration of oral pellet vaccine in backyard poultry



No. of Demo	Cluster – Village
250 birds	Ponparappi – Sirukalathur

Problems

- Ranikhet disease incidence and thereby heavy mortality especially in summer
- Less production
- Less income

Technology Demonstrated

Oral pallet vaccine of ranikhet disease after 15 days of hatching and thereafter at 3 months interval *Contd...*

Demonstration of oral pellet vaccine in backyard poultry



Particulars	Mortality (%)	Weight at 6 th month (kgs)	Gross cost (Rs./250 birds)	Gross return (Rs./250 birds)	Net return (Rs./250 birds)	BCR
Demo	0	1.2	27500	75000	47500	2.72
Check	18	1.1	27500	56375	28875	2.05

Conclusion

FLD-15

Administering oral pellet vaccine is easy operation and effective in protecting chicks from Ranikhet diseases.

Upscaling measures (2017-18)

Planned for upscaling oral pellet vaccine in backyard poultry through campaign with the collaboration of Department of Animal Husbandry.

Demonstration of composite fish culture in farm pond

No. of Demo 10 (1 ha.) Cluster – Village

K.Mettu Theru – Sembiakudi





Demonstration of composite fish culture in farm pond

Particulars	Test weight at 60 th day (g)	Test weight at 120 th day (g)	Yield (kg/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	210	525	5280	183124	528080	344956	2.88
Check	178	390	3850	165130	385000	219870	2.33

Conclusion

The farmers are happy with the performance of composite fish culture. The proper stocking density and feed management resulted in higher yield of 5280 kg/ha.

Upscaling measures (2017-18)

Planned for upscaling composite fish culture in farm pond through campaign with the collaboration of Department of Fisheries.

Demonstration of composite fish culture with stunted yearlings





No. of Demo	Cluster – Village	Season
3 (0.4 ha.)	Ponparappi – Keelamaligai	Rabi

Problems

- Under utilization of farm ponds
- Improper feeding practices
- Short period of water bodies

Technology Demonstrated

- Composite fish culture using catla, rogu, mirgal and feeding on weight basis
- Rearing of advanced fry /fingerlings at higher stocking density (2-3 lakhs/acre) fed with natural feed for 10-12 months
- Stocking the stunted fingerlings @ 2000 nos./ acre in main pond results in vigorous growth

Contd..



Demonstration of composite fish culture with stunted yearlings

Particulars	Test weight at 60 th day (gm)	Test weight at 120 th day (gm)	Yield (kg/ha.)	Gross cost (Rs./ha.)	Gross return (Rs./ha.)	Net return (Rs./ha.)	BCR
Demo	280	715	3200	135000	384000	249000	2.84
Check	150	410	2050	112000	246000	134000	2.20

Conclusion

The concept of stunted yearlings offer a good solution to rear fish in short / temporary bodies as the fish can attain a weight of 715 gm in 4 months.

Upscaling measures (2017-18)

This technology will be upscaled in atleast 20 farm ponds in collaboration with Department of Fisheries.