

**Agenda Item No.1****Item No. 01****Chairman's Opening Remarks about KVK****a) Establishment details:-**

<b>S. No</b>	<b>Particulars</b>	<b>Details</b>
01	Name of the KVK	ICAR - Krishi Vigyan Kendra Ramanathapuram
02	Postal address of the KVK	Krishi Vigyan Kendra, Collectorate Complex, Sethupath Nagar, Ramanathapuram – 623 503 Tamil Nadu.
03	Telephone number/Fax/E-mail and Web site address of the KVK	Phone : 04567-232639 Fax: 04567-230250 Email : <a href="mailto:ramnadkvk@tnau.ac.in">ramnadkvk@tnau.ac.in</a> Web: <a href="http://www.kvkramnad.org">www.kvkramnad.org</a>
04	Name of the Host Organization	Tamil Nadu Agricultural University
05	Postal address of the Host Organization	Tamil Nadu Agricultural University Coimbatore – 641 003.
06	Telephone number/Fax/E-mail and Web site address of the Host Organization	Ph: 0422 - 6611522 Fax: 0422- 6611433 Email : <a href="mailto:dee@tnau.ac.in">dee@tnau.ac.in</a> Web: <a href="http://www.tnau.ac.in">www.tnau.ac.in</a>
07	Sanction Order Details	F.No:S(i)/2002-AE-II(Pt.) Feb5,2004 of the Deputy Director General(AE), ICAR, Krishi Anusandhan Bhawan, New Delhi.
08	Name of the Programme Coordinator	Dr. C. Rajamanickam, Ph.D.,
09	Total land area with the KVK in ha.	16.80 ha

**Mandate:-**

The overall mandate of the KVK is to develop and disseminate location specific technological modules at district level through Technology Assessment, Refinement and Demonstration and to act as Knowledge and Resource Centre for agriculture and its allied activities. The specific activities to carry out this mandate are:

- Conducting on-farm testing to identify the location specificity of agricultural technologies under various farming systems
- Organizing frontline demonstrations to establish production potential of various crops and enterprises on the farmers' fields
- Organizing need based training of farmers to update their knowledge and skills in modern agricultural technologies related to technology assessment, refinement and demonstration, and training of extension personnel to orient them in the frontier areas of technology development.
- Creating awareness about improved technologies to larger masses through appropriate extension programmes
- Production and supply of good quality seeds and planting materials, livestock, poultry and fisheries breeds and products and various bio-products to the farming community.
- Work as resource and knowledge centre of agricultural technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.

**b) Staff details :-**

S. No	Sanctioned Post name	Name of the incumbent	Designation	Discipline	Qualification	Pay Scale	Date of joining	Permanent/ Temporary
01	Programme Coordinator	Dr. R. Rajamanickam	Programme Coordinator	Horticulture	Ph.D.,	15600 - 39100 + GP 8000	04.09.2015	Permanent
02	Agri. Engineering	<b>Vacant</b>	Subject Matter Specialist	-	-	-	-	<b>Vacant</b>
03	Horticulture	<b>Vacant</b>	Subject Matter Specialist	-	-	-	-	<b>Vacant</b>
04	Soil science	<b>Vacant</b>	Subject Matter Specialist	-	-	-	-	<b>Vacant</b>
05	Pl. Protection (Ag.Ento/Pl.Path)	Dr. J. Ramkumar	Subject Matter Specialist	Agri. Entomology	Ph.D.,	15600 - 39100 + GP.7000	02.05.2013	Permanent
06	Home Science	Dr. S. Arokiamary	Subject Matter Specialist	Home Science	Ph.D.,	15600 - 39100 + GP.7000	08.04.2015	Permanent
07	Agronomy	<b>Vacant</b>	Subject Matter Specialist	-	-	-	-	<b>Vacant</b>
08	Prog.Asst (Comp)/ T-4	Tmt.G.Namagirilakshmi	Programme Assistant (Comp)	Computer Science	B.Sc., (Comp.Sci)	9300-34800 + GP.4400	10.12.2008	Permanent
09	Prog.Asst (Lab Tech.)/T-4	<b>Vacant</b>	Programme Assistant (Tech)	-	-	-	-	<b>Vacant</b>
10	Programme Assistant / FarmManager	<b>Vacant</b>	Farm Manager	-	-	-	-	<b>Vacant</b>
11	Assistant	<b>Vacant</b>	Superintendent	-	-	-	-	<b>Vacant</b>
12	Jr. Stenographer	Th. N. Gunaseelan	Assistant	Commerce	B.Com	5200-20200 + GP.2800	22.10.2007	Permanent
13	Driver	Th. M.Gurumoorthy	Driver	-	-	5200-20200 + GP.2400	04.03.2016	Permanent
14	Driver	<b>Vacant</b>	Supervisor	-	-	-	-	<b>Vacant</b>
15	Supporting staff	<b>Vacant</b>	PUSM	-	-	-	-	<b>Vacant</b>
16	Supporting staff	Tmt. T. Dhanavalli	PUSM	-	-	4800-10000 + GP.1300	16.09.2010	Permanent

## **Agenda Item No. 02**

### **Constitution of SAC and self introduction by SAC members and invitees**

The following is the constitution of Scientific Advisory Committee Meeting

<b>Sl.No</b>	<b>Name &amp; Designation</b>	<b>Particular</b>
1	Dr. K. Ramasamy, Vice Chancellor, Tamil Nadu Agricultural University, Coimbatore – 641 003.	Chairman of Scientific Advisory Committee
2	Dr. YG Prasad Director, ATARI, Zone -X CRIDA Campus, Santoshnagar, Hyderabad – 500 059.	Member
3	Dr. H. Philip, Director of Extension Education(i/c), Tamil Nadu Agricultural University, Coimbatore – 641 003.	Member
4	Dr. M. Maheswaran, Director of Research (i/c), Tamil Nadu Agricultural University, Coimbatore – 641 003.	Member
5	Dr.A.K.Abdul Nazar Scientist Incharge, CMFRI, Mandapam Camp, Ramanathapuram Dist.	Member
6	Th. L. Sornamanickam Joint Director of Agriculture (i/c), Ramanathapuram	Member
7	Th. J. Rajendran Deputy Director of Horticulture (i/c), Ramanathapuram	Member
8	Er. R. Thomas Executive Engineer (AED), Ramanathapuram	Member

<b>Sl.No</b>	<b>Name &amp; Designation</b>	<b>Particular</b>
9	Dr. T. Mohan, Regional Joint Director of Animal husbandry, Ramanathapuram	Member
10	Th. P. Issac Jayakumar Deputy Director of Fisheries Ramanathapuram	Member
11	Tmt.P. Mariammal General Manager, District Industries Centre, Ramanathapuram	Member
12	Tmt. S. Jawaharibai Deputy Director of Agriculture (FTC) & Nodal Officer ATMA, Paramakudi	Member
13	Th. K. S. Suresh Babu Lead Bank Manager, IOB, Ramanathapuram	Member
14	Th. S. Mathiazhagan District Development Manager, NABARD, Ramanathapuram	Member
15	Programme Executive, AIR, Madurai	Member
16	Station Director, Doordharshan Kendra Madurai	Member
<b>Farmers Representatives</b>		
17	Mr. K. Jahir Hussain S/o. Kasim, Thinaikulam, Thirupullani block, Ramanathapuram	Member
18	Mr. T. Siva S/o. Thavasi, Vazhuthur, Mandapam block, Ramanathapuram	Member

<b>Sl.No</b>	<b>Name &amp; Designation</b>	<b>Particular</b>
19	Mrs. M. Maragathammal W/o. Murugesan Pukkulam , Thirupullani block Ramanathapuram	Member
20	Mrs. K. Jayamani W/o. Kannusamy Peraiyur , Kamuthi block Ramanathapuram	Member
21	Dr. N. Sathiah Professor and Head Coastal Saline Research Centre Ramanathapuram	Member
22	Dr. C. Rajamanickam Programme Co-ordinator, ICAR – Krishi Vigyan Kendra, Ramanathapuram.	Member Secretary - Scientific Advisory Committee

**Agenda Item No. 03**

Action taken report on the previous SAC meeting

## **Agenda Item No. 04**

### **Overall progress report and action plan for forthcoming season**

#### **Agro climatic zone**

1.	Agro climatic region and zone	East coast Plain & Hills District – South coast , Tamil Nadu region (Zone II)		
2.	Rainfall (mm)	<b>Year</b>	<b>Average</b>	<b>Actual</b>
		2013	827	800.1
		2014		1349.5
		2015		978.75
		2016		239.1
		2017		72 (upto Oct'2017)

#### **Geographical details**

Ramanathapuram district has a long coastline of around 260 km. The coastal areas are flanked by Beach ridge complex-sand dunes, swamps and backwater. The sand flat is another feature of the coast comprising of clays and silts, often inundated by seawater and encrusted with salt. This district is bounded on the north by Sivagangai and Pudukottai districts, on the east and south by the Bay of Bengal, and on the west by Thoothukudi and Kamarajar districts. The district headquarters is located at Ramanathapuram.

Geographical area	4, 08, 957 ha
Latitude	9 <sup>0</sup> 05'-9 <sup>0</sup> 56' N
Longitude	78 <sup>0</sup> 13'-79 <sup>0</sup> 26' E

#### **Weather**

The district has a tropical climate and is hot and dry. The weather is pleasant during the December & January. Usually mornings are more humid than afternoons.

#### **Rainfall**

The mean annual rainfall of the district is 827 mm with Summer, South West monsoon, North east monsoon and winter contributing 14, 17, 60 and 9 per cent of the total rainfall, respectively.



## Temperature

The district has tropical climate. The mean temperature ranging from 22.3°C to 37.8°C.

## Relative Humidity

The relative humidity of the district is on an average between 79 and 84%.

## Taluks of the district

Ramanathapuram district comprises of eight taluks viz.,Kadaladi, Kamuthi, Muthukulathur, Paramakudi, Ramanathapuram, Rameswaram and Thiruvadanai, Keelakarai.

S.No	Name of the Taluk	Total area (ha)	Taluk HQ
1.	Paramakudi	73794	Paramakudi
2.	Rameshwaram	9048	Rameshwaram
3.	Ramanathapuram	77499	Ramanathapuram
4.	Thiruvadanai	81461	Thiruvadanai
5.	Mudhukulathur	48085	Mudhukulathur
6.	Kadaladi	61223	Kadaladi
7.	Kamuthi	57847	Kamuthi
8.	Keelakarai	38345	Keelakarai
	Total	<b>4,47,302</b>	-

## Details of revenue villages, panchayats & hamlets of the district

In Ramanathapuram District there are 11 Blocks viz., Kadaladi, Kamuthi, Muthukulathur, Bogalur, Nainarkoil, Paramakudi, Ramanathapuram, Thiruppullani, Thiruvadanai, R.S.Mangalam and Mandapam.

S.No	Name of the block	Total no. of revenue villages	Total no. of Panchayats	Total no. of hamlets
1.	Ramanathapuram	25	25	120
2.	Paramakudi	34	39	163
3.	R.S.Mangalam	41	35	325
4.	Thiruvadanai	57	47	310
5.	Kamuthi	49	53	346
6.	Nainarkoil	36	37	113
7.	Bogalur	23	26	91
8.	Mudukalathur	38	46	169
9.	Kadaladi	53	60	285
10.	Thiruppullani	25	33	240
11.	Mandapam	19	28	200
	Total	400	429	2362

## Soil type of Ramanathapuram district

The soils of Ramanathapuram district can be assorted into the main types viz., clay, coastal alluvium, sandy loam, alluvium, sandy and red soil, clay and black cotton soil and the same were believed to have been derived from the Archaen gneisses where calcareous formation are abundant. Calcium carbonate concretions of various sizes and shapes are present in majority of the black soil area and this affects the fertility of the soils. Clay soil, as a whole, constituted about 45 per cent of the total soil. River alluvium includes alternate layers of sand and clay for a huge thickness. River alluvium occurs in areas bordering the Vaigairiver. Coastal alluvium occurs in Kadaladi, R.S.Mangalam, Mandapam, Ramanathapuram, Thiruppullani and Thiruvadana blocks. There are vast stretches of saline and alkaline soils found in the coastal blocks. Rameswaram Island contains mainly sandy soil. The fertility status of soil showed that nitrogen status of soil is low in all blocks and phosphorus status of soil is also low in all blocks with the exception of Thiruppullani, Kamudhi and Kadaladi blocks where it is medium. The potash content of soil is high in all the blocks. The mineral resources of the soil include gypsum, limestone and magnesium. While Mudukulathur and Keelakarai regions account for sizable deposits of gypsum, Rameswaram Island contains large quantities of limestone deposits.

It could be noticed from the table that about 45 percent of the area is clay soil followed by coastal alluvial soil (17.45 percent), sandy loam soil (15.54 percent) and alluvial soil (10.70 percent) in that order.

### Distribution of Soil Type in Ramanathapuram District (in hectares)

S.No	Soil Type	Area	Percentage
1	Sandy soil	7328	1.79
2	Clay soil	182463	44.52
3	Sandy clay soil	22138	5.40
4	Alluvial soil	43769	10.70
5	Sandy loam soil	63602	15.54
6	Coastal alluvial soil	71357	17.45
7	Red soil	18390	4.50
	<b>Total</b>	<b>408957</b>	<b>100.00</b>

### Area under different Problem Soil Categories

In spite of alluvial soil present in the district, scenario of agricultural production is not showing an encouraging trend because of prevalence of problem soils. Out of 2,06,290 ha. of area, about 54.42 percent alone could be considered as normal soil, 29.28 percent as moderately acidic and 12.40 percent as moderately alkaline soil types.

S.No	Details of soil	Area	Percentage
1	Normal soil (pH7.5 – 8.5)	112263	54.42
2	Moderately alkaline soil (pH 8.6 – 9.0)	25589	12.40
3	Alakaline soil (pH >9.0)	691	0.33
4	Moderately acidic soil (pH 6.0 – 6.5)	60399	29.28
5	Acidic soil (pH > 6.0)	1614	0.78
6	Moderately Saline (EC 1.0 -3.0)	2121	1.04
7	Saline Soil (EC > 5.0)	3613	1.75
<b>Total</b>		<b>2,06,290</b>	<b>100.00</b>

### Major cropping pattern of Ramanathapuram district

In Ramanathapuram district mainly rice based cropping system was followed. The major crops and the cropping systems are given below

- ✓ Rainfed rice –Fallow
- ✓ Rainfed rice – Cotton
- ✓ Rainfed rice – Gingelly
- ✓ Rainfed rice – vegetable
- ✓ Semi dry rice – fallow
- ✓ Rainfed - Chilli
- ✓ Groundnut - fallow
- ✓ Groundnut -vegetable

## Area under major crop and their production and productivity

S.No	Major crop	Area (ha)	Production (mt)	Productivity (kg/ha)
1.	Paddy	13140	365000	2760
2.	Millets	4296	8192	1320
3.	Pulses	4243	2192	550
4.	Groundnut	4516	4732	2012
5.	Cotton	2022	1668	825
6.	Coconut	9046	14000 nuts / ha	1266 lakh nuts
7.	Chilli	21461	1737	810
8.	Coriander	1910	485	254

### Major thrust areas

- Dissemination of saline and drought tolerant, high yielding rice varieties suitable for rainfed situation
- Weather based agro advisory service for major crops in Ramanathapuram district.
- Improve the soil fertility by soil breeding.
- Management practices to overcome water logging and salinity conditions of rice cultivation
- Enhancing the productivity of pulses and groundnut by adopting improved production technologies.
- Popularizing the coconut tonic to maximize yield in coconut.
- Focus may be given to conserve the ground water by adopting water harvesting methods such as formation of farm ponds, check dams etc.
- Improve the livelihood of farming community through popularizing the allied enterprises viz., backyard poultry, slatted goat rearing and mushroom production, low cost vermicomposting, enriched farm yard manure and coir composting.

## ii) Details of problems and thrust areas (2016-17)

Sl. No.	Name of the operational village	Crop / Enter prises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Manjakollai	Cluster Bean	<ul style="list-style-type: none"> <li>• Non availability of high yielding varieties</li> <li>• Yield gap</li> </ul>	Assessment of Cluster Bean varieties suitable for Ramanathapuram district	OFT
2.	Chinna akiramesi	Bhendi	<ul style="list-style-type: none"> <li>• Local cultivars susceptible to YMV</li> <li>• Hot weather – incidence of thrips, jassids, whitefly &amp; mealybug</li> <li>• Low yield</li> </ul>	Assessment of Bhendi hybrids tolerant to Yellow Vein Mosaic Virus disease in Ramanathapuram district	OFT
3.	Mummudisathan	Drum stick	<ul style="list-style-type: none"> <li>• Less area under moringa cultivation</li> <li>• Less adoption of moringa cultivation in sandy loam soil</li> <li>• Lack of awareness about the nutritive value of moringa</li> </ul>	Assessment of Suitable Moringa Varieties for Ramanathapuram district	OFT
4.	Keelaramanadhi	Chilli	<ul style="list-style-type: none"> <li>• Water scarcity, Intermittent drought, Low yield</li> </ul>	Assessment of High density planting design under drip irrigation system for chilli crop	OFT
5.	Manjakollai, A. Puthur	Paddy	<ul style="list-style-type: none"> <li>• Non availability of rice varieties tolerant to sodicity.</li> <li>• Lesser yield and returns from rice crop</li> </ul>	Assessment of rice varieties tolerant to sodic soils in Ramanathapuram district	OFT
6.	Chinna Akiramesi	Finger Millet (Ragi)	<ul style="list-style-type: none"> <li>• Lack of knowledge on blast resistant varieties.</li> <li>• Intermittent drought results in low yield.</li> </ul>	Assessment of blast resistant ragi varieties	OFT
<b>Front line demonstrations</b>					
1.	Manjakollai Meyanendhal	Amaranthus	<ul style="list-style-type: none"> <li>• Lack of knowledge in high yielding varieties</li> <li>• Yield gap, daily income</li> </ul>	Demonstration of Amaranthus PLR 1 (Sirukeerai)	FLD

Sl. No.	Name of the operational village	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
2.	Muthuchellapuram	Chilli	<ul style="list-style-type: none"> <li>• Micronutrient deficiency</li> <li>• Pest and diseases incidences</li> <li>• Low yield</li> </ul>	Demonstration of ICM practices in Ramanathapuram Mundu chilli	FLD
3.	Muthuchellapuram	Cotton	<ul style="list-style-type: none"> <li>• Sucking pest problem – leafhopper, whitefly, Aphids, mealybug, Mite &amp; bollworms</li> </ul>	Demonstration of IPM Practices in cotton	FLD
4.	Malangudi & Muthuchellapuram	Cotton	<ul style="list-style-type: none"> <li>• Lack of awareness on growth promoters</li> <li>• Drought induced</li> <li>• crop stress</li> </ul>	Demonstration of foliar growth promoter cotton plus	FLD
5.	Vazhuthur	Coconut Shredder	<ul style="list-style-type: none"> <li>• Lack of awareness on improved crop residue management techniques</li> <li>• Damage to standing crop due to burning</li> </ul>	Demonstration of tractor operated shredder for recycling coconut fronds	FLD
6.	Chinna Akiramesi , Mummudisathan	MPS	<ul style="list-style-type: none"> <li>• Terminal drought under rainfed condition</li> <li>• Coarse textured soil with undulating topography</li> </ul>	Popularization of Mini Portable Sprinkler to mitigate drought in groundnut	FLD
7.	Thoruvalur, Ramanathapuram	Fodder	<ul style="list-style-type: none"> <li>• Non availability of green fodder round the year compelled farmers to depend on roughages</li> </ul>	Demonstration Of Multi-Cut Fodder Crops	FLD
8.	Manjakollai & Muthuchellapuram	Paddy	<ul style="list-style-type: none"> <li>• Deterioration of soil health due to continued irrigation with poor quality water and buildup of sodicity</li> </ul>	Up scaling use of gypsum as a soil ameliorant	FLD
9.	China Akiramesi	Paddy	<ul style="list-style-type: none"> <li>• Leaf folder, stem borer, Anaikomban &amp; Blast</li> </ul>	Demonstration of IPDM practices in paddy	FLD
10.	Vazhuthur	Coconut	<ul style="list-style-type: none"> <li>• Under utilization of inter space in below 5 years of plantation.</li> <li>• Lack of knowledge on intercropping &amp;</li> <li>• low income</li> </ul>	Demonstration of suitable vegetable crops for intercropping in coconut gardens	FLD
11.	China Akiramesi	Paddy	<ul style="list-style-type: none"> <li>• BPT 5204- Blast Susceptible</li> <li>• Yield loss due to terminal drought</li> </ul>	Demonstration of Rice Variety TKM 13	FLD

Sl. No.	Name of the operational village	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
12.	Manjakollai	Paddy	<ul style="list-style-type: none"> <li>Imbalanced application of fertilizers</li> <li>Low net income</li> </ul>	Demonstration of INM practices for semidry rice	FLD
13.	Malangudi	Chilli	<ul style="list-style-type: none"> <li>Lack of effective moisture conservation Practices</li> <li>Low Water Use Efficiency</li> </ul>	Demonstration of Plastic mulching technology	FLD

### b. Details of target and achievements of mandatory activities (2016-17)

1. OFT				2. FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
6	4	30	20	13	8	110	80
3. Training				4. Extension Programmes			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
30	25	900	841	500	458	2600	2520
5. Seed Production (Qtl.)				6. Planting materials (Nos.)			
Target		Achievement (q)		Target		Achievement	
Vegetables		Rs.403/-		-		-	
Cumbu Napier		Rs.1660/-/-		-		-	
Azolla		Rs.20/-		-		-	
Amla		Rs.2410/-		-		-	
Cookies / mango / jam / squash		Rs.13631/-		-		-	
Equipment hiring charges		Rs.300/-		-		-	
Training hall rent		Rs.2250/-		-		-	
7.Livestock, poultry strains and fingerlings (No.)				8. Bio-products (Kg)			
Target		Achievement		Target		Achievement	
-		-		Vermicompost – 75 kg		Rs.750/-	

**c). Major outcome of Technology Assessment and Refinement (in bullet form only) (2016-17)**

**1. Assessment of Cluster Bean varieties**

The cluster bean variety MDU -1 recorded the highest yield of 13.32 t / ha when compared to Pusa Naubahar (8.58 t/ha) and local variety (6.82 t/ha). The height of plant also around 130 -145 cm in 90 -100 days after sowing.

Incidence of powdery mildew also less in MDU -1 when compared with Pusa Naubahar and local check. No. of harvest also high. Lodging is the major problem in MDU 1 variety.

Even though because of high yielding quality and less incidence of powdery mildew the variety is getting momentum among farmers.

**2. Assessment of Bhendi hybrids tolerant to Yellow Vein Mosaic Virus disease**

The assessment trials were taken at Chinna Akiramesi village of Nainarkoil block. Three bhendi varieties were assessed. Among them, Co (Bh) 4 performed well and recorded the average yield of 91.10 q / ha. The Yellow Vein Mosaic disease incidence also almost Nil in Co (Bh) 4.

Another variety Kashi Kranti recorded poor yield (29.33 q/ha) and 29.33 per of vein clearing disease also noticed. The crop condition was good up to 20 days after germination. After that, the crop was severely affected by vein clearing disease.

The vegetable growing farmers of Chinna Akiramesi village are much convinced with the performance of Co (Bh) 4 variety.

**3. Assessment of Suitable Moringa Varieties**

The assessment was taken at Mummudisathan village. The moringa variety PKM 1 recorded the highest yield of 20.25 t / ha followed by Bhagya variety (18.75 t/ha), whereas the local check recorded the lowest yield of 12.50 t / ha.

Similarly, the PKM -1 recorded the highest values in terms of growth parameters like fruit length (63.4 cm) and number of fruits per plant (81.0) followed by Bhagya (58.3 cm; 75).

Regarding BC ratio, PKM-1 registered the highest ratio of 3.11 followed by bhagya (2.97) and local check (1.87).



Because of fast growing nature the PKM-1 moringa very is much suitable in Ramanathapuram condition.

#### **4. Assessment of High density planting design under drip irrigation system for chilli crop**

Chilli var. K-2 used this demonstration. The drip system laid in double paired row have recorded the highest pod yield of 845 kg/ha followed by drip laid in paired row system (796 kg/ha) and single row system (410 kg/ha).

The chilli var. K-2 was assessed in all drip system.

#### **5. Assessment of rice varieties tolerant to sodic soils**

The assessment was implemented in Manjakollai and A. Puthur villages with three paddy varieties like TRY-3, CSR – 43 and Gangavathi sona. Better germination was recorded in assessment fields. But 20 days after germination (at sixth leaf stage), the crop was dried due to failure of NE monsoon.

Hence, the present OFT will be continued this year (2017-18).

#### **6. Assessment of blast resistant ragi varieties**

The assessment trials was taken with two finger millet varieties viz., CO – 15 and ML 365 at Chinna Akiramesi village.

Due to failure of NE monsoon during 2016-17, the crop was completely dried 15 days after germination.

#### **d). Major outcome of Frontline Demonstrations (in bullet form only) (2016-17)**

##### **1. Demonstration of Amaranthus PLR 1 (Sirukeerai)**

The Amaranthus var. PLR -1 sirukeerai recorded the highest yield of 7.63 t/ha with the BC ratio of 2.23.

The local check recorded the lowest yield of 5.92 t/ha and BC ratio of 1.60. The increased yield of 28.6 % was recorded with PLR 1 when compared with local check.

Farmers were very much convinced about the PLR – 1 variety and it will be popularized by KVK during the ensuing season.

##### **2. Demonstration of ICM practices in Ramanathapuram mundu chilli**

Ramanathapuram mundu chilli (Local variety) was used for this demonstration. Technologies like installation of Yellow sticky traps @ 12/ac, pheromone traps @ 5/ac and spraying of neem soap @ 10 gm/litre, *Pseudomonas* @ 5 gm / litre, Arka vegetable special @ 5g/lit of water were demonstrated.

The demo plot recorded the highest pod yield of 1.26 t/ha with the BC ratio of 2.96 whereas check registered the lowest yield of 1.10 t/ha and BC ratio of 2.45. The yield was increased about 14.33 % in demo plot over the check.

**Farmers feedback:** Spraying Arka vegetable special is much useful for rectifying micronutrient deficiency. Placement of traps in community approach is much effective for trapping the insects. Incidence of sucking pest & fruit borer is very low and fruit quality also good in demo plots.

### **3. Demonstration of IPM Practices in cotton**

The demonstration was done at P. Muthuchellapuram village. The technologies viz., Installation of yellow sticky trap (12 nos/ac), pheromone traps (5 nos./ac) and spraying of neem soap (10gm/lt) was demonstrated. The demo plot recorded the seed cotton yield of 9.96 kg/ha with the BCR of 2.29 and the check variety recorded 8.30 kg/ha.

### **4. Demonstration of foliar growth promoter cotton plus**

The spraying of cotton plus was done at flowering and boll formation stage (2.5 kg/ac) of cotton crops at Malangudi and P. Muthuchellapuram villages.

Reduced flower shedding of cotton was observed in demo plots.

The highest yield of 8.94 q/ha was recorded in demo plots and it was 8.53 in local check

### **5. Demonstration of tractor operated shredder for recycling coconut fronds:**

Tractor operated coconut shredder was used for this demonstration. Tractor drawn coconut shredder recorded the highest shredding efficiency of 1800 kg per hr whereas the chaff cutter (check) recorded the lowest shredding efficiency of 100 kg/hr.

This shredded materials were used for compost making.

Because of high shredding efficiency and less time consumption farmers are very much satisfied about coconut shredder. But cost of the machine is so high.

### **6. Popularization of Mini Portable Sprinkler to mitigate drought in groundnut**

Five acres of groundnut crop has been covered under the demonstration at Chinna Akiramesi village of Nainarkoil block. The MPS was operated for about 15 hours in each one acre field. The average yield

recorded was 10.25 q/ha with the BCR of 1.94. The local check recorded yield of 8.20 q/ha with BCR of 1.47.

In the demo plot, 60 per cent of irrigation water was saved.

**Farmers feedback:** MPS is an user friendly and even women farmer can move the unit from place to place. It saves the irrigation water and increases water use efficiency.

### **7. Demonstration of Multi-Cut Fodder Crops**

Totally 2.5 acres of green fodder demonstration plots including CO (CN) 5, velimasal & CO (FS) 29 (fodder bank) was established at Sitharkottai, Vani, Thoruvalur, Panaikulam villages with the participation of 10 farmers.

The average yield recorded with CO (CN) 5, CO (FS) 29 & Velimasal was 6.2 t, 2.5 t & 4 tonnes respectively.

### **8. Up scaling use of gypsum as a soil ameliorant**

Gypsum was applied as basal in demo plots as per the soil test report. The FLD was implemented with farmers variety. Crop failed to establish owing to inadequate rainfall. Hence, the demo is not completed and FLD will be carried out to during the year 2017 – 18.

### **9. Demonstration of IPDM practices in paddy**

The demonstration was implemented in the TKM-13 paddy sown fields. Sowing was taken up after seed treatment with *Pseudomonas*. Crop failed to establish owing to inadequate rainfall. Hence, the demo is not completed

### **10. Demonstration of suitable vegetable crops for intercropping in coconut gardens**

Sowing of bhendi var. Arka Anamika and ash gourd var. PLR 1 was taken up in the interspaces of coconut garden of below 5 years old. Due to failure of NE monsoon, both crops were dried at vegetative stage.

### 11. Demonstration of Rice Variety TKM 13:

At Chinna Akiramesi and Malangudi villages demo plots were established with the participation of 10 farmers. Sowing was taken up during second fortnight of September, 2016. But due to failure of monsoon the crop was completely dried at establishment stage itself.

### 12. Demonstration of INM practices for semidry rice

Gypsum and MN mixture were applied in demonstration plots during last ploughing. Crop failed to establish owing to inadequate rainfall hence demo is not completed and FLD carried out to during the year 2017 – 18.

### 13. Demonstration of Plastic mulching technology:

The critical inputs were purchased and demonstration was not implemented due to poor crop stand. Hence, the present FLD will be carried out during this year (2017-18).

### 14) Integrated farming system (IFS):

During 2016-17, the following IFS models are identified and the missing components were supplemented by KVK, Ramanathapuram.

Sl. No.	Name of the farmer	Existing Components	Intervention made by KVK
1.	Mr. T. Siva S/o. Thavasi Vazhuthur Mandapam Block	<b>Model – I</b> <b>Major crop:</b> Coconut <b>Other components:</b> desi cows (4 nos.), goats (25 nos.), rabbits, desi chicken (50 nos.), fodder crops (CO (CN) 4, CO (CN) 5, CO (FS) 29, Agathi, Soundal), vegetable crops, Mango & Neem trees, Fish pond,	Vermibag (1 No.) Azolla Tray (1 No.) Honey bee Colony (1 No.)
2.	Mr. Elamvazhuthi Ariyanendhal Paramakudi block	<b>Model – II</b> <b>Paddy based IFS</b> <b>Major crop:</b> Paddy <b>Other components:</b> vegetable crops, desi cows (4 nos), goat (10 nos.), desi chicken (15 nos.), Agathi & Soundal	Vermibag (1 No.) Azolla Tray (1 No.) Honey bee Colony (1 No.)

3.	Mr.K.Ganapathy Kavarankulam Thoruvalur Ramanathapuram	<b>Model – III</b> <b>Major crop:</b> Paddy <b>Other components:</b> vegetable crops, cow (5 nos.), goat (10nos.), desi chicken (12 nos.)	Vermibag (1 No.) Azolla Tray (1 No.) Honey bee Colony (1 No.)
<b>Sl. No.</b>	<b>Name of the farmer</b>	<b>Existing Components</b>	<b>Intervention made by KVK</b>
4.	Mr.Thangavel S/o. Kathiresan Mummudichathan Nainorkoil bolck	<b>Model – IV</b> <b>Major crop:</b> Coconut <b>Other components:</b> Paddy, vegetable crops, desi chicks (13 nos.), cow (3 nos.), goat (14 nos.)	Vermibag (1 No.) Azolla Tray (1 No.) Honey bee Colony (1 No.)
5.	Mr.S.R.M.Karthikeshwaran S/o.MuthuAmbalam Pandigudi (post) Thiruvadanaï (TK) Thiruvadanaï block	<b>Model – V</b> <b>Major crop:</b> Paddy <b>Other components:</b> vegetable crops, forestry crops, cow (2 nos.), goat (5 nos.)	Vermibag (1 No.) Azolla Tray (1 No.) Honey bee Colony (1 No.)

#### Outcome of the IFS

Name of the component	Yield potential	Income generated
Azolla	First harvest done: 2 weeks after seeding Yield: 1/2 kg per day	Mostly the participant farmers used azolla for their own livestock.  Milk yield increase up to 20% when azolla (300 gm/day) was supplemented with dry fodder and concentrated feed.  Income generated by sales as seed: Rs. 3000/year
Vermicompost	Yield: 1400 kg/cycle. No. of cycle per year: Five	Apart from their own use, farmers are selling 100 kg of vermicompost per month.  Cost/Kg: Rs. 10/kg Income generated per year: 100x10x12=Rs.12,000/-  By selling worms: Cost/kg: Rs. 300/- Income generated per year: Rs. 5000/-
Apiary	First yield: 3 months after installation of beehive. Subsequent harvest: every two months. But	Honey yield: 0.75 kg / hive / harvest No. of harvest /yr: 5-6 Cost of Honey: Rs. 300/kg Income generated per year:

	the duration may vary depending upon the flowering season  No. of harvest done /year: 5-6	Rs. 1125 - 1350/yr/hive
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### 15) Farmers Field School (2016-17)

Crop	Title	Place & Total no. of participant	Technologies covered
Brinjal	IPT in Brinajl	Manjakollai & 30 farmers	Seed treatment, nursery techniques, Fertiizer and irrigation management, IPDM practices etc.  No. of demontrations done: 3 nos Total no. of class covered: 14 nos.

### e). Details of Training Programmes conducted

#### Activities carried out during the period 2016-2017

Category	Major thematic areas covered	No. of courses	No. of participants
On campus	Livestock Production and Management- azolla cultivation, Value addition Milky mushroom	4	206
Off campus	Production and use of organic inputs, Integrated Pest Management, Productivity enhancement in field crops, stress management, use of seed drill sowing, green house production technology, Livestock feed and fodder production, Nutrition and Food Security.	16	474
Extension personnel	Integrated pest management - Usage of newer molecules of insecticides	1	52
Rural youth training Programmes	Mushroom cultivation, Azolla production,	2	114
Vocational Programmes	Production technology and value addition in coconut, Vermi compost production, Mushroom production and value addition, soil health management and health cards.	4	181

**f) Extension Programmes conducted**

Category	No of Programmes	No of farmers	No .of Extension Personnel
Advisory Services	127	135	21
Diagnostic Visits	112	527	43
Field Day	1	68	3
Scientists' visit to farmers field	45	180	18
Method Demonstration	27	452	38
Celebration of important days / programmes	7	902	115
Exposure visits	2	43	3

**g) Major extension activities (2016-17)**

Extension Activity	No. of activities	Participants		
		Farmers	Extension Functionaries	Total
Advisory Services	127	135	21	156
Animal Health Camp	1	53	3	56
Awareness Campaign	7	Mass		
Celebration of important days / programmes	7	902	115	1017
Diagnostic Visits	112	527	43	570
Exhibition	2	Mass		
Exposure Visits	2	43	2	46
Farmers Visit to KVK	201	1005	48	1053
Field Day	1	68	3	71
Group discussion	45	135	16	151
Kisan Ghosthi	1	74	5	79
Kisan Mela	1	212	42	254
Lecture delivered	21	383	18	401
Mahila Mandal conveners' meeting	-	-	-	-
Method Demonstration	27	452	38	490
Scientists' visit to farmers field	45	180	18	198
Seed treatment / Replacement campaign	-	-	-	-
Self Help Group Conveners meetings	-	-	-	-
Seminar	-	-	-	-
Soil health Camp	1	212	42	254
Workshop	-	-	-	-
Technology Week	-	-	-	-
Others if any (Pl.specify)	-	-		

#### h) Other extension activities (2016-17)

Particulars	Number
Animal health camps	1
Phamlets	8
Booklets	2
Books	-
Electronic media	1
Extension Literature	10
Leaflets/folders	5
News paper coverage	31
Popular articles	5
Radio Talks	5
Soil health camps	1
Technical Articles	9
Technical Bulletins	3
Technical Reports	8
TV talks	3
Others if any (Pl. specify)	-
Total	

#### i) Production and supply of technology products

Category	Major crops /livestock/ fisheries strains / bio-products produced and supplied	Quantity (q)	Value (Rs.)	Number of farmers
Seed Materials – Varieties (Quintal)	-	-	-	-
Planting Materials – Varieties (Number)	Vegetables	1000 seedlings	403	11
Ornamental plants	-	-	-	-
Bio Products (kg)	Vermicompost	75 kg	750	9
Others (specify)				
Cumbu Napier	Cumbu Napier slips	-	1660	8



Azolla	Azolla	-	20	1
Amla	Amla	-	2410	15
Cookies / mango / jam / squash	Cookies / mango / jam / squash	-	13631	34
Equipment hiring charges	Equipment hiring charges	-	300	3
Training hall rent	Training hall rent	-	2250	3

### j) Convergence and linkages (2016-17)

Sl.No	Organization	Type of linkage
1	ICAR Institutions <ul style="list-style-type: none"> <li>• CMFRI</li> <li>• ICAR KVK's</li> </ul>	<ul style="list-style-type: none"> <li>• For organizing linkage training programmes</li> <li>• For TOT tie-up</li> </ul>
2	State Agricultural University and Research Centre, Plant Clinic Centre and KVK's	<ul style="list-style-type: none"> <li>• Exchange of experts as resource person for training programme</li> <li>• For updating research establishment in the respective field so as to meet out the needs the beneficiaries</li> </ul>
3.	State Department of Agriculture	<ul style="list-style-type: none"> <li>• To organize collaborative training programme and mela.</li> <li>• Capacity building training to the extension functionaries</li> <li>• Joint diagnostic survey, field visit and participation in meeting</li> </ul>
4.	State Department of Horticulture	
5.	State Department of Fisheries	
6.	State Department of Animal Husbandry	
7.	State Department of Forestry	
8.	Soil Test Laboratory of different places	

SI.No	Organization	Type of linkage
9.	NGO's <ul style="list-style-type: none"> <li>• DHAN Foundation</li> <li>• Community Development Centre</li> <li>• Mohammed Sathak Polytechnic</li> <li>• Seyathu Ammal Trust</li> </ul>	<ul style="list-style-type: none"> <li>• Co-ordinating training programme organized by KVK</li> <li>• Expert lecture</li> <li>• Method demonstration</li> </ul>
10.	Banking sectors <ul style="list-style-type: none"> <li>• NABARD (DDM)</li> <li>• IOB</li> <li>• LDM of IOB</li> <li>• Pandiyan Grama Bank</li> </ul>	<ul style="list-style-type: none"> <li>• To share knowledge on financial availability in order to equip the self employment activities of the trainees</li> <li>• To give training to the beneficiaries of banking sectors.</li> </ul> <p>To adopt villages</p>
11.	Other Rural Development Agencies <ul style="list-style-type: none"> <li>• DPAP</li> <li>• NADP</li> <li>• NICRA</li> <li>• ATMA</li> <li>• TN-IAMWARM</li> </ul>	<ul style="list-style-type: none"> <li>• To provide location based training to the beneficiaries</li> <li>• Transfer of technology purpose</li> <li>• To reduce the area under wasteland</li> <li>• Construction of farm pond and check dams to improve the water use efficiency (NICRA)</li> <li>• Scientist – farmers interaction (ATMA)</li> <li>• Demonstration on improved production technologies.</li> </ul>

**k) Soil and water analysis (2016-17)**

Category	No. of samples		No. of farmers	No. of villages	Amount realized (Rs.)
	Farmers in which OFT/FLD were implemented during the reported period	Other Farmers			
Soil	19	3	22	1	-
Water	-	-	-	-	-
<b>Total</b>	<b>19</b>	<b>3</b>	<b>22</b>	<b>1</b>	<b>-</b>

**l) Human Resources Development (2016-17)**

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.R.Rajasekaran	Programme Co-ordinator	Attended the 4 <sup>th</sup> MDP programme for newly KVKs PC.(Phase I)	NAARM, Hyderabad	20.04.2016 06.05.2016
		Attended the 4 <sup>th</sup> MDP programme for newly KVKs PC.(Phase II)	KVK, Baramati, Maharashtra	11.05.2016 20.05.2016
		Attended the NMSA training programme on Integrated Farming System	Uzavar Mandram, Ramnad	25.05.2016
		To attend the 4 <sup>th</sup> MDP training (Phase –III) for newly joined Programme Co-ordinators for KVKs	ICAR-ATARI, Bangalore	05.06.2016 11.06.2016
		To attend the 82 <sup>nd</sup> Scientific Workers Conference.	TNAU, Coimbatore	04.07.2016 06.07.2016
		Implementation of skill training and development programme by Tamil Nadu Open University	Tamil Nadu Open University Campus, Chennai.	11.07.2016 13.07.2016

		To attend the meeting on Creating awareness on production and marketing of pulses in the International Year of Pulses-2016 organized by Assistant Director of Agriculture, Muthukulathur block of Ramanathapuram district.	KR Pattinam, Muthukulathur	24.08.2016
		To attend the TNAU Staff Management system training programme.	TNAU, Coimbatore	11.01.2017 12.01.2017
Dr.R.Rajasekaran	Programme Co-ordinator	To attend training on Invigorating Extension through ICT tools	e-Extension, TNAU, Coimbatore	06.02.2017- 08.02.2017
		To attend the Annual Action plan meeting for ATMA district	Nilgiri, Ooty	27.02.2017 01.03.2017
Dr.C.Rajamanickam	Subject Matter Specialist (Hort.)	Attended and presented Annual Review Workshop (ARW) for the year 2015-16 at KVK, Ambalavayal, Kerala.	KVK, Ambalavayal, Wayanad, Kerala	18.4.2016 24.4.2016
		Participated and presented Science Tamil Agriculture Conference -2 organised by Department of Social Sciences, ADAC&RI, Tiruchirapalli on 5.5.2016 & 6.5.2016 (2 days)	ADAC&RI, Tiruchirapalli	05.05.2016 06.05.2016

		Attend the Second National Conference on Agricultural Scientific Tamil was held at TNAU, Coimbatore on August 5 & 6, 2016.	TNAU, Coimbatore	04.08.2016 07.08.2016
		Attended First Annual Workshop on “Consortium of Industrial Agroforestry” on 20.9.2016 at Forest College and Research Institute, Mettupalayam	Mettupalayam	19.09.2016 21.09.2016
		Attended 2 <sup>nd</sup> KVK Symposium held at TNAU, Coimbatore	TNAU, Coimbatore	06.03.2017 09.03.2017
Dr.J.Ramkumar	Subject Matter Specialist (Agrl.Ento.)	To attend NMSA training on “Integrated farming system” organized by Department of Agriculture.	Mudukulathur	08.06.2016
Er.I.Seegan Paul	Subject Matter Specialist (Agrl.Engg.)	To attend the Training Programme on Biogas Technology at TNAU Coimbatore from 12.6.2016 to 15.6.2016	TNAU, Coimbatore	11.07.2016 15.07.2016
Dr.S.Arokiamary	Subject Matter Specialist (H.Sc.)	To attend National Seminar on “Functional Foods to achieve Nutritional and Health Security” organized by the Department of Food Science and Nutrition, H.Sc. & RI, Madurai and Indian Institute of Crop Processing Technology (IICPT).	Agricultural College and Research Institute, Madurai	19.09.2016

		Attended a National Workshop on “Agricultural Extension and Nutrition Linkages: Towards Nutrition Security and Better Health” organized by Home Science College & Research Institute, Madurai and National Institute of Agricultural Extension Management, MANAGE, Hyderabad from 27.02.2017 to 01.03.2017 (Three days)	Home Science College and Research Institute, Madurai	27.02.2017 01.03.2017
		Attended a three days training on “Capacity building on Food Processing” organized by Home Science College & Research Institute, from 14.3.17 to 16.3.17.	Home Science College and Research Institute, Madurai	14.3.17 to 16.3.17
Tmt.G.Namagirilakshmi	Prog.Asst. (Comp.)	To attend training on Invigorating Extension through ICT tools	e-Extension, TNAU, Coimbatore	06.02.2017- 08.02.2017

**b) Action plan in brief for the next season(s) – 2017-18**

Sl. No.	Name of the operational village	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Manjakollai	Paddy	<ul style="list-style-type: none"> <li>Poor / Under utilization of traditional rice varieties</li> <li>Lack of awareness of the therapeutic properties of traditional rice varieties</li> <li>Limited use of traditional rice varieties</li> </ul>	Assessment of glycemic responses of traditional paddy varieties	OFT
2.	Muthuchellapuram Malangudi	Cotton	<ul style="list-style-type: none"> <li>Heavy incidence of mealybug in summer irrigated cotton.</li> <li>Lack of awareness on management of mealybug</li> </ul>	Assessment of management practices for <i>Phenococcus solenopsis</i> in summer irrigated cotton	OFT
3.	Valanthai, Neeravi	Chilli	<ul style="list-style-type: none"> <li>Yield gap</li> <li>Use of private hybrids</li> </ul>	Assessment of chilli varieties	OFT
4.	Manjakollai	Rice	<ul style="list-style-type: none"> <li>Non availability of rice varieties tolerant to sodicity.</li> <li>Lesser yield and returns from rice crop</li> </ul>	Assessment of rice varieties tolerant to sodic soils in Ramanathapuram district	OFT
5.	Muthuchellapuram Malangudi	Chilli	<ul style="list-style-type: none"> <li>Severe incidence of die-back and anthracnose disease.</li> <li>Low marketability</li> <li>Heavy yield loss.</li> </ul>	Demonstration of IDM practices for chilli diseases with special reference to anthracnose	FLD
6.	Manjakollai, Chinna Akiramesi	Brinjal	<ul style="list-style-type: none"> <li>Desi variety susceptible to BSFB.</li> <li>Indiscriminate</li> </ul>	Demonstration of IPM practices for brinjal shoot and fruit borer	FLD

			<p>use of insecticide for managing BSFB.</p> <ul style="list-style-type: none"> <li>• Yield loss.</li> </ul>		
7.	Muthuchellapuram	Cotton	<ul style="list-style-type: none"> <li>• Labour Shortage</li> <li>• Lower output by manual harvest</li> <li>• Drudgery</li> </ul>	Demonstration of cotton plucker	FLD
8.	Malangudi	Paddy	<ul style="list-style-type: none"> <li>• Pest incidence due to poor storage facility.</li> <li>• Lack of knowledge on new technology</li> </ul>	Demonstration of super grain bag to store paddy grains	FLD
9.	Manjakollai, Chinnaakiramasi, Pandiyur	Bhendi	<ul style="list-style-type: none"> <li>• Lack knowledge in high yielding varieties</li> <li>• Yield gap</li> </ul>	Demonstration of COBH – 4 bhendi variety	FLD
10.	Pandiyur, Manjakollai	Brinjal	<ul style="list-style-type: none"> <li>• Micronutrient deficiency</li> <li>• Pest and diseases incidences</li> <li>• Low yield</li> </ul>	Demonstration of ICM practices in Brinjal	FLD
11.	Pandiyur, Kamuthi, Peraiyur	Coriander	<ul style="list-style-type: none"> <li>• Moderate yield and single Harvest</li> <li>• Non adoption of short duration multi harvest variety</li> </ul>	Demonstration on Arka Isha variety of Coriander for higher yield	FLD



**c). Major outcome of Technology Assessment and Refinement (in bullet form only) 2017-18**

**1) Assessment of glycemic responses of traditional paddy varieties:**

Identification of participant farmers is in progress.

**2) Assessment of management practices for *Phenococcus solenopsis* in summer irrigated cotton:**

Identification of participant farmers is in progress

**3) Assessment of chilli varieties:**

Farmers are identified. Seeds of TNAU Chilli hybrid 1 were purchased and Arka Harita supply order was placed.

**4) Assessment of rice varieties tolerant to sodic soils in Ramanathapuram district:**

TRY 3 paddy seeds were purchased. Supply order was placed to purchase of paddy varieties like CSR 3 & Gangavathi sona. Participant farmers were identified

**d). Major outcome of Frontline Demonstrations (in bullet form only) 2017-18**

**1) Demonstration of IDM practices for chilli diseases with special reference to anthracnose:**

Identification of participant farmers is in progress

**2) Demonstration of IPM practices for brinjal shoot and fruit borer:**

Identification of participant farmers is in progress

**3) Demonstration of cotton plucker:**

Identification of participant farmers is in progress.

**4) Demonstration of super grain bag to store paddy grains:**

Arrangements were made to purchase super grain bag. Identification of participant farmers is in progress.

**5) Demonstration of COBH – 4 bhendi variety:**

Seeds were purchased and distributed to the participant farmers.

**6) Demonstration of ICM practices in brinjal:**

Supply order was placed to the purchase of inputs like Arka vegetable special, pheromone traps and neem soap etc. participant farmers were identified

**7) Demonstration on Arka Isha variety of Coriander for higher yield:**

Coriander seeds purchase is in progress.

**8) Demonstration of Plastic mulching technology:**

Plastic mulching sheet was purchased. Participant farmers selection is in progress.

**9) Up scaling use of gypsum as a soil ameliorant:**

Supply order was placed for the purchase of gypsum. Participant farmers were identified.

**e). Details of Training Programmes conducted****Activities carried out during the period 2017-2018**

<b>Category</b>	<b>Major thematic areas covered</b>	<b>No. of courses</b>	<b>No. of participants</b>
On campus	Integrated Crop Management, Value addition, Women empowerment, Production Technology of Horticultural crops, Integrated Pest and Disease Management, Livestock Production and Management, Soil Health and Fertility Management, Crop Production, Farm machinery and its maintenance.	1	28
Off campus	Production and use of organic inputs, Integrated Pest Management, Productivity enhancement in field crops, stress management, use of seed drill sowing, green house production technology, Livestock feed and fodder production, Nutrition and Food Security.	7	224
Special Programmes	Salkalp Si Siddhi	1	251
	Parthenium Awareness Campaign	1	28
	World Honey bee day	1	26
	Swatchhta Hi Sewa	5	385

**f) Extension Programmes conducted (2017-18)**

Category	No of Programmes	No of farmers	No .of Extension Personnel
Advisory Services	92	122	31
Diagnostic Visits	52	69	18
Field Day	-	-	-
Scientists' visit to farmers field	72	101	12
Method Demonstration	8	45	11
Exposure visits	-	-	-

**h). Major extension activities (2017-18)**

Extension Activity	No. of activities	Participants		
		Farmers	Extension Functionaries	Total
Advisory Services	92	122	31	153
Agri mobile clinic	-	-	-	-
Animal Health Camp	-	-		
Awareness Campaign	8	Mass		
Celebration of important days	-	-	-	-
Diagnostic Visits	52	69	18	87
Exhibition	3	Mass		
Exposure Visits	-	-	-	-
Ex-trainee Sammelan	-	-	-	-
Farm Science Club	-	-	-	-
Farmers rally	-	-	-	-
Farmers Visit to KVK	52	61	3	64
Field Day	-	-	-	-
Film Show	-	-	-	-
Group discussion	13	258	9	267
Group meeting	5	85	7	92
KisanGhoshi	-	-	-	-
KisanMela	-	-	-	-
Lecture delivered	6	Mass		
MahilaMandal conveners' meeting	-	-	-	-
Method Demonstration	8	45	11	56
Scientists' visit to farmers field	72	101	12	113
Seminar	-	-	-	-
Soil health Camp	-	-	-	-
Workshop	-	-	-	-

Technology Week	-	-	-	-
Others if any (Special programmes)	8	Mass		
<b>Total</b>	<b>319</b>	<b>741</b>	<b>91</b>	<b>832</b>

**h) Other extension activities (2017-18)**

<b>Particulars</b>	<b>Number</b>
Animal health camps	-
Phamblents	2
Booklets	-
Books	-
Electronic media	-
Extension Literature	2
Leaflets/folders	1
News letter	-
News paper coverage	10
Popular articles	5
Radio Talks	4
Soil health camps	-
Technical Articles	5
Technical Bulletins	-
Technical Reports	1
TV talks	1
Women Health Camps	-
Others if any (Pl. specify)	-

### Other Special Programmes (2017-18)

Activity or Programme	Physical details (no. of programmes, participants, area etc.)	Financial outlay (Rs.lakh)	Team members involved
FFS on ICM in Jasmine	No. of classes: 14 No. of Participants:20	0.30	All SMS
Integrated Farming System	3 Units	0.30	All SMS
Entrepreneurship development in value addition of millets (EDP)	Hands on training on value addition in millets at KVK, Ramanathapuram Exposure visit cum training at HC& RI, Madurai Exposure visit cum training at IICPT, Tanjore Exposure visit cum training at PHTC, Coimbatore	2.27	All SMS
Sea weed cultivation	Sea Weed Cultivation, Processing and Marketing for additional income generation to improve the economic status of coastal village community	1.00	All SMS

**Externally funded Activities (continuing / expected during 2017-18):**

Activity or Programme	Program duration	Funding agency	Physical details (No. of programmes, participants, area etc.)	Financial outlay (Rs. lakh)	Team members involved
Salkalp Si Siddhi	One day	ICAR	311 Farmers	0.80	All SMS
Pre Rabi 2017-18	One day	ICAR	500 Farmers	0.80	All SMS
World Soil day	One day	ICAR	100 Farmers	0.50	All SMS
Jai Kisan Jai Vigyan Diwas	One day	ICAR	100 Farmers	-	All SMS
Parthenium Awariness Campaign	One day	ICAR	100 Farmers	-	All SMS
World Honey bee day	One day	ICAR	100 Farmers	-	All SMS
Swatchhta Hi Sewa	16 days	ICAR	Farmers, students, public and officials	-	All SMS

**k) Target for Soil and water analysis (2017-18)**

Category	No. of samples		No. of farmers	No. of villages
	Farmers in which OFT/FLD were implemented during the reported period	Other Farmers		
Soil	50	20	60	10
Water	50	20	60	10
<b>Total</b>	<b>100</b>	<b>40</b>	<b>120</b>	<b>20</b>

### Human Resource Development Programmes (2017-18)

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr.C.Rajamanickam	Programme Co-ordinator	Crop residue management	ATMA, Department of Agriculture, Ramanathapuram at Uthirakosamangai	1.08.17
		National Tamil Science Conference	TNAU, Coimbatore	11.8.17-14.8.17
		Scientific Workers Conference.	TNAU, Coimbatore	17.8.17 to 18.8.17
		Zonal level Capacity Building Training programme to Officers under Mission on Sustainable Dry land Agriculture organized by.	State Department of Seed Certification at AC & RI, Madurai	12.5.17
		National Conference on Horticultural Crops of Humid Tropics - Diversification for Sustainability	IIHR -CHES, Chettalli and Society for Promotion on Horticulture Journal, Bengaluru	19.5.17 to 23.5.17
Dr.J.Ramkumar	SMS (Agrl.Ento.)	TN-IAMP project planning workshop	WTC, TNAU, Coimbatore	27.07.17 28.07.17
		International symposium on Sucrosymm '2017	TNAU, Coimbatore	18.9.17 to 21.9.17
Dr.S.Arokiamary	SMS (H.Sc.)	Four days training on "Biogas Technology" at Biogas Development and Training Centre, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore.	TNAU, Coimbatore	21.8.17 to 24.8.17

### Training for Farmers/ Farm Women (2017-18)

Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Rice	Unaware of nursery preparation for machine planting	Preparation of MAT/TRAY nursery for machine planting in rice	Training - FLD
2.	Rice	Weeds	Physical, chemical and mechanical weed control in rice	Training - FLD
3.	Rice	Drought	Management of Drought in rice	Training - OFT & FLD
4.	Ground nut	Unawareness of new technology Non adoption of nutrient management Low soil fertility	Improvement of soil fertility by nutrient management & addition of organics	Training - OFT
5.	Coconut	Under utilization of interspaces in coconut gardens	Intercropping in coconut gardens	Training - OFT
6.	Bhendi	Low yield and lack of awareness of high yielding varieties and hybrids	ICM practices for bhendi	Training - FLD
7.	Vegetable cowpea	Low yield and lack of awareness of high yielding varieties and hybrids	Production technology for vegetable cow pea	Training - FLD
8.	Poultry	Poor egg & meat production	Backyard poultry production	Training - FLD
9.	Sorghum	Low yield, Lack of technical knowledge in Sorghum value addition, Low Market value for sorghum	Home scale entrepreneurship development through value addition in sorghum	Training - FLD
10.	Cumbu	Low yield, Lack of technical knowledge in cumbu value addition	Home scale entrepreneurship development through value addition in Cumbu	Training - FLD
11.	Rice	Leaf folder incidence	Management tactics for rice leaf folder	Training - OFT
12.	Rice	Pest and disease	Integrated pest and disease management	Training - FLD



Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
13.	Chilli	Fruit borer incidence	Management tactics for chilli fruit borer	Training - OFT
14.	Rainfed Ground nut	Micronutrient deficiency	Importance of Micronutrients in groundnut	Training - FLD
15.	Rainfed Ground nut	Micronutrient deficiency	Micronutrient deficiency and its management in Groundnut	Training - FLD

#### Training for Rural Youth (2017-18)

Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Watermelon	Lack of awareness on improved technologies	Importance of growth regulator spray in enhancing productivity in water melon	Training - FLD
2.	Poultry	Poor egg & meat production	Backyard poultry production	Training - FLD
3.	Coir waste	Coir waste unutilized	Decomposing of coir dust with <i>Pleurotus</i>	Training
4.	FYM	Availability is less	Enriched FYM	Training
5.	Maintenance & usage of seed drill	Depth of sowing, maintenance and usage	Tractor owner and driver	Training
6.	Tuberose	Profitable crop not cultivated	Cultivation aspect of tuberose	Training
7.	IFS	Low income	Integrated farming system: Establishment of backyard poultry shed. Establishment of composite fish culture unit. Supply of annual moringa PKM 1 Vermi Composting	Training
8.	Mobile portable sprinkler	Less water availability	Demonstration of MMS	Training and demonstration

### Trainings for Extension Personnel (2017-18)

Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Crop Production	Drought management in rice	Agronomic management of drought in rice	Training
		Management of problem soil	Management of problem soil	Training
3.	Home Science - Dietetic management	Nutritional security through low cost feeding	Nutritional security through low cost supplementary feeding	Training
4.	Horticulture	ICM in Horticultural crops	Supply chain management in Horticultural crops	Training
5.	Livestock Production & Management	Poor egg & meat production	Backyard poultry production	Training
6.	Plant Protection	Pest incidence	Recent advances in plant protection	Training

### Vocational trainings

Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Nature of interventions proposed to be implemented
1.	Crop Production	Recycling of organic waste	Recycling of organic waste	Training
2.	Home Science	Entrepreneurship development	Value added products for Entrepreneurship development	Training
		Shorter shelf life of fresh coconut( one month), low market value (Rs.5 /nut) , lack of technical knowledge on virgin coconut oil production	Processing and Preservation of Virgin Coconut oil	Training
4.	Horticulture	seedling production techniques	seedling production techniques	Training
5.	Livestock Production & Management	Poor egg & meat production	Backyard poultry production& slatted goat rearing, turkey rearing	Training
6.	Plant Protection	Pest incidence, Mushroom	Mass multiplication of Bio control agent and mushroom production techniques	Training

### Sponsored trainings (2017-18)

Sl. No.	Crop / Enterprises	Major problems faced	Thrust areas identified to tackle the problems	Sponsoring agency	Nature of interventions proposed to be implemented
1.	Home science	Shorter shelf life of fresh coconut ( one month), low market value (Rs.5 /nut) , lack of technical knowledge on virgin coconut oil production	Processing and Preservation of Virgin Coconut oil	ICAR/ NABARD	Training
2.	Green fodder	Lack of availability of green fodder	Increase the fodder production by introduction of CO (CN)-4 fodder grass	NABARD	Training
3.	Backyard poultry & Turkey rearing	Low income from agricultural crops	Popularization of BYP	NABARD	Training
4.	Slatted goat rearing	Low income from agricultural crops	Popularization of SGR	KVK	Training
5.	Milky mushroom production	Low income from agricultural crops & unprofitability in paddy straw mushroom	Popularization of milky mushroom	KVK	Training

### Revolving Fund Status (2014-15,2015-16 , 2016-17 upto Sep'2017)

Year	Opening balance as on 1 <sup>st</sup> April of previous year	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of current year
2014-2015	309242	321527	54466	576303
2015-2016	576303	46818	78759	544362
2016-2017	544362	65147	466331	143178
2017-2018 (upto Sep'17)	143178	6668	0	149846

## Utilization of KVK funds -2016-17

S. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	9908000		9908134
2	<b>Traveling allowances</b>	160000		154291
3	<b>Contingencies</b>			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	400000	12145917	396731
B	POL, repair of vehicles, tractor and equipments	175000		127622
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	70000		33605
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	25000		33639
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	184000		145193
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	81000		80735
G	Training of extension functionaries	20000		19876
H	Extension activities	25000		25644
I	Maintenance of buildings	50000		49431
J	Farmers field school	30000		28596
K	Integrated Farming System	30000		27362
L	EDP / Innovative activities	30000		28626
M	Soil water testing & issue soil health cards	100000		72539
N	Display Boards	10000		9996
O	Library	10000		9874
	<b>TOTAL (A)</b>	<b>11308000</b>		<b>11151894</b>
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>			
2	<b>Equipments including SWTL &amp; Furniture</b>			
	<b>Office Automation</b>	300000		209695
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)	800000		800000
4	<b>Library</b> (Purchase of assets like books & journals)			
	<b>TOTAL (B)</b>	<b>1100000</b>		1009695
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>12408000</b>		<b>12161589</b>

## Utilization of KVK Funds 2017-18

Sl.No.	Particular	Allotment	Exp	Balance
A.	<b>Recurring Items</b>			
	Pay & Allowances	9300000	3824074	5475926
	Traveling Allowns.			
	a. Field activities & programmes	125000	20439	104561
	b. Training Programmes			
	<b>Total</b>	<b>9425000</b>	<b>3844513</b>	<b>5580487</b>
	<b>A. Office contingencies</b>			
	a. Stationary, Telephone, postage and other expenditure on office running, publication of newspaper	400000	129940	270060
	b. POL, repair of vehicles, Tractor & equipments including hiring of vehicle	175000	81113	93887
	<b>B. Technical Programme</b>			
	a) Rs.150/-per person per day towards food and refreshment for KVK training programmes for farmes/extension personnel	894000	4050	889950
	b) Teaching materials for tarining and demonstration	0	1205	-1205
	c) Training of Extension Functionaries	0	0	0
	d) Publication of extension literature for farmers and extension functionaries	0	0	0
	e) Honorariuk for trainers	0	0	0
	f) On Farm Testing (Problem oriented)	0	4080	-4080
	g) Front Line Demonstration on major crops including oil seeds & Pulses, fodder crops, animal husbandry, fisheries etc.	0	0	0
	h) Kissan Melas/Frmes Fair (at KVK Farm)	0	29900	-29900
	i) Library (purchase of newspaper, journals, etc.)	0	1176	-1176
	j) Maintenance of farm	0	0	0
	K) Enterpreneruship development Programme (EDP)/IFS/FFS	0	0	0
	l) Soil Testing Refil and Printing of Soil Health Card	0	0	0
	C. Tribal Sub - Plan (TSP Compenent)	0	0	0
	<b>Total (A)</b>	<b>1469000</b>	<b>251464</b>	<b>1217536</b>
B.	<b>Non recurring</b>			
	Works	0	0	0
	Furniture & Equipments	0	0	0
	Vehicle	0	0	0
	<b>Total Non-recurring (B)</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>GRAND TOTAL (A+B)</b>	<b>10894000</b>	<b>4095977</b>	<b>6798023</b>

Receipt: Rs.27,24,000/- (F.No.ATARI/4-2(3)/2017-18 dated 28.06.2017)

**Agenda Item No. 05-****Salient achievements in detail**

S. No	Title	Problem identified	Technology Intervention Undertaken	Mode of Implementation	Outcome	Action for up-scaling / recommendation of the outcome
1	National Innovative on Climate Resilient Agriculture (NICRA)	<ul style="list-style-type: none"> <li>• Drought</li> <li>• Short duration rice varieties</li> <li>• Crop diversification</li> </ul>	<ul style="list-style-type: none"> <li>• Constructions of farm ponds and Deepening of farm ponds</li> <li>• Constructions of check dams</li> <li>• Widening of water flowing channel</li> <li>• PPFM spray</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnostic visits</li> <li>• Meeting</li> <li>• Trainings</li> <li>• Short duration paddy seeds and other agricultural and horticultural crops seeds distribution</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of farm ponds and deepening of two community farm ponds that saved nearly 80 percent of runoff water. This water will be used for crop during the critical period as supplemental irrigation. Terminal stress was mitigated for paddy.</li> </ul>	Given below
2	Pink Pigmented Facultative Methylopro (PPFM) Spray	<ul style="list-style-type: none"> <li>• Drought</li> </ul>	<ul style="list-style-type: none"> <li>• PPFM Spray</li> </ul>	PPFM Spray	<ul style="list-style-type: none"> <li>• Spraying of PPFM the crop through stomata and produces the growth promoting hormones and certain enzymes which keep the crop greener for 15-20 days and thus providing a situation to escape the temporary drought. If sufficient rain received in due course the crop could survive and come to yield.</li> </ul>	Given below

### **1) \*National Innovative on Climate Resilient Agriculture (NICRA)**

Rain Water Harvesting and Recycling for Supplemental Irrigation was attempted by Krishi Vigyan Kendra, Ramanathapuram under NICRA project at Kalari and Melamadai villages in Ramanathapuram district, where crop failure is a regular phenomenon due to drought. Agriculture in these villages is mainly depending on the North East monsoon rains. Hence, the following works for rain water harvesting under Natural Resource Management of NICRA were undertaken at a cost Rs.9.50 Lakhs. Deepening (Repair and renovation of farm ponds) of two community ponds was done at water flowing channel of Ayyanur ponds at Kombuthi village and rain water was harvested and saved. This water will be utilized for chilli and paddy crops during ensuing season. During that period mini portable sprinklers were used to pump water from the farm ponds and irrigated the paddy & chilli fields. Due to farm ponds intervention the crops harvested successfully.

### **2) PPFM Spray**

Krishi Vigyan Kendra operating at Ramanathapuram has taken up spraying of pink pigmented facultative methylophilic bacteria (PPFM) on standing rice crop in all the blocks of Ramanathapuram covering 1000 hectares as an initial cluster demonstration. The district received only 86-149 mm of rainfall during the last three months due to monsoon failure. The PPFM (200 ml diluted in 200 litres of water per acre) when sprayed on rice crop, the bacteria catch the escaped methanol from leaves and use them as a carbon source and resist production of acetylene which is the major cause for leaf senescence of the crop. In addition the PPFM enters the crop through stomata and produces the growth promoting hormones and certain enzymes which keep the crop greener for 15-20 days and thus providing a situation to escape the temporary drought. If sufficient rain received in due course the crop could survive and come to yield.

## **Agenda Item No.06**

### **Interactions and discussions**

<b>Sl.No</b>	<b>SAC Members</b>	<b>Suggestions</b>
1.	Joint Director of Agriculture, Ramanathapuram	<p>At present, KVK Ramanathapuram is providing technical guidance during the monthly zonal workshops and for field level problems. This is to be continued.</p> <p>Skill demonstrations may kindly be provided to Farmers Training Centre - convener farmers. So, that technical skill demonstration can spread in villages easily.</p> <p>Hands on training on the operation of machines like paddy transplanter, combined harvester, rotavator, power weeder, seed drill maintenance <i>etc</i> may be given to farmers at KVK.</p> <p>Village based training on technical subjects may be given to farmers and extension functionaries in latest technologies like PPFM spray, Redgram transplantation <i>etc</i>.</p> <p>Trials may be conducted by KVK in selecting suitable paddy varieties for Ramanathapuram district. For example suitable variety for replacing BPT-5204 may be tried (At present ADT(R)49 is recommended. But seeds are not available in sufficient quantity.)</p> <p>Trainings on the importance of millet production and value addition may be given</p> <p>Training on Mushroom culture and vermicompost may be given to farmers.</p> <p>Model may be developed on Integrated Farming System at KVK for farmers to see directly and get training on them.</p> <p>Drought management technologies may be evolved and training may be given in this aspect.</p>



		<p>Training on Bio-control agents, Bio pesticides, organic manures may be given</p> <p>Technologies suitable to Ramanathapuram district in irrigation management, Pest management and Nutrient management</p> <p>Trials may be arranged in cotton (Masipattam) to control cotton mealy bug studies.( This is a big problem every year.)</p> <p>In BPT-5204, Laksmi disease (smut) occurred in large scale in 2011-12. Training may be given in prophylactic measures to be taken to contain this disease.</p>
2.	Deputy Director ( Horticulture) , Ramanathapuram	<p>New improved drought tolerant chilli variety alternate to local mundu may be introduced.</p> <p>Training on saline soil reclamation technologies may be given to extension functionaries.</p> <p>Institutional intervention by the KVK may be adopted for supply of chilli and tomato seedlings through pro tray</p> <p>Training on Kitchen garden &amp; terrace garden may be given to the homer makers and SHG</p>
3.	Executive Engineer , Department of Agriculture Engineering, Ramanathapuram	Training on seed drill sowing and hydraulic adjustment in tractors may be given to the tractor owners and drivers.
4.	JDA (Animal Husbandry) Ramanathapuram	<p>Training on backyard poultry to be promoted</p> <p>Training on livestock production management to be promoted</p>
5.	Assistant Director of Fisheries (South) , Ramanathapuram	<p>Promoting prawn culture in farmers field may be included in KVK activity to improve the farm income.</p> <p>Promoting fish culture in farm pond</p>
6.	Assistant Director of Fisheries (North) , Ramanathapuram	<p>Training may be given to promote sea weed cultivation</p> <p>Promoting Inland Fish culture</p>
7.	AGM ( NABARD), Ramanathapuram	CO (CN) – 4 fodder grass may be popularized by demonstration.

		<p>Saline tolerant azolla may be identified and introduced among farmers of Ramanathapuram district.</p> <p>Training of improved rearing technologies for milch animals is to be given to increase the milk yield.</p> <p>Dry land crops like maize, sorghum and small millets may be introduced in alternate to rice and cotton</p>
8.	Project Director, ICDS , Ramanathapuram	Training and awareness campaign may be given by KVK scientist to alleviate mal nutrition

### **Agenda Item No.07**

Finalization of action points

### **Agenda Item No.08**

Any other agenda with the permission from the Chairman



