Action Plan 2009 – 2010

Vamban colony ,
Pudukkottai - 622 303
Tamil Nadu, South India.

I.GENERAL INFORMATION

1	Name and Address of Krishi Vigyan Kendra with Phone, Fax and Email	:	Krishi Vigyan Kendra, Tamil Nadu Agricultural University Vamban colony , Pudukkottai - 622 303 Tamil Nadu Phone : 04322 - 290321 Email : kvkvamban@tnau.ac.in
2	Name and Address of host organization with phone, Fax and Email	:	Tamil Nadu Agricultural University, Coimbatore - 641 003 Phone : 0422 – 2431222 Fax : 0422 – 2431672 Email : vc@tnau.ac.in
3	Name of the Programme Coordinator	:	Dr. N.Ramamoorthi, Ph.D.
	Residence Phone No.		04322 – 291408
	Mobile No.		94863 – 91717
4	Year of Sanction	:	2000 (NATP)

5 Major Farming Systems/Enterprises

Agriculture and Agroforestry are the main occupations for the people. Other enterprises like sheep rearing, goat rearing, dairy in combination with Silvipasture system are also practiced in their farming system.

Cropping system

The farmers of the district usually cultivate single crop in a year under rainfed situation. However, under irrigated condition, two or three crops are raised. Rice-Rice is the major cropping system in the district. Groundnut-Pulses is another system under garden land condition. Similarly, vegetables and oilseeds are also included in the system. Apart from this, area under sugarcane is expanding due to the existence of sugar industry and the banana cultivation is also spreading very fast in view of high returns.

Major crops

Rice, Jowar, ragi, small millets and pulses are the major food crops, while groundnut, sugarcane, cotton, banana and chillies are important commercial crops cultivated in the district. However, rice is the predominant food crop whereas groundnut is the major commercial crop in the district, which occupies 45 and 27 per cent of total cropped area respectively. Next to those, Pulses occupies 3.5 per cent of total cropped area followed by banana (2.8%) and sugarcane (2.3%).

Livestock and poultry

The total live stock population of the district is about 9.801 lakhs, of which cattle population accounts for 41 per cent, whereas, goat and sheep population accounted for 27 per cent and 11 per cent respectively.

Forestry

This district is one of the richest resources for the forest wealth. About 5.2 per cent of the geographical area comes under forest of which reserved forest accounts for 79 per cent of total forest area. Major crops covered are Eucalyptus and casuarina.

Agricultural marketing status

There are about nine regulated markets available in the district. The major crops handled are rice, groundnut, chilies, sorghum, millets, cashew nut, pulses and vegetables.

6 Name of Agro Climatic Zone

The Pudukkottai district is drought prone and is one of the developing districts which lies in southern zone. It is situated in Central part of Tamil Nadu. It consists of coastal plain stretching for 39 km, about 89-90 km width. The total geographical area is about 4,66,329 ha comprising of nine taluks. The population, according to 1991 censes, was 13.27 lakhs of which 14.35 per cent from Urban and 85.65 per cent from rural area. The elevation is 400 MSL.

7 Soil Type

The district has a variety of soil types, major portion of soil is classified in to Entisol group i.e., red lateritic loamy soil. The problem soils accounts for 11 per cent of the total area of which 38 per cent of the area is covered by coastal sands.

8 Annual Rainfall

The Pudukkottai district receives rainfall from both Southwest monsoon and Northeast monsoon. The former generally spreads from early June to the end of September and the later from October to December. The average annual rainfall of the district is about 676.7 mm. Nearly 44 per cent of the total rainfall is received during Northeast monsoon and 38 per cent during the Southwest monsoon. The rainfall is very less during winter; summer receives 13 per cent of rainfall.

9. Staff strength

	Programme Coordinator	Subject Matter Specialists	Programme Assistant	Admn. Staff	Drivers	Supporting staff	Total
Sanctioned	1	6	3	2	2	2	16
Filled	1	6	3	2	2	2	16

9 a. Details of Staff

Sl.No	Sanctioned Post	Name of the incumbent	Designation	Pay Scale (Rs)	Joining date	Permanent/ Temporary	SC /St/ Physically Handicapped	Source of Salary (KVK / HO)
1	Programme Coordinator	Dr.N.Ramamoorthi	Plant Breeding and Genetics	16400-450-20900-500-22400	01.02.08	Permanent	-	KVK
2	Subject Matter Specialist	Dr.P.Balasubramani	Horticulture	12000-420-18300	25.05.06	Permanent	SC	KVK
3	Subject Matter Specialist	Dr.T.Senthil kumar	Agrl. Engg)	8000-275-13500	09.12.04	Permanent	-	KVK
4	Subject Matter Specialist	Dr.R.P.Soundrarajan	Agrl. Entomology	8000-275-13500	03.09.07	Permanent	-	KVK
5	Subject Matter Specialist	Dr.R.Saravanakumar	Home Science	8000-275-13500	01.12.04	Permanent	-	KVK
6	Subject Matter Specialist	Dr.S. Umesh Kanna,	Forestry	8000-275-13500	27.06.05	Permanent	-	KVK
7	Subject Matter Specialist	Dr.S.Maragatham	Soil Science & Agrl.Chemistry	8000-275-13500	09.12.04	Permanent	-	KVK
8	Programme Assistant	Tmt.A.Manikavalli	Ent.Science	5500 -175-9000	04.06.07	Permanent	-	KVK

9	Computer programmer	Dr.K.Thirunavukkarasu	Veterinary	5500/- consolidated	22.08.05	Temporary	-	KVK
10	Farm Manager	Miss.S.Abirami	Plant Breeding and Genetics	5500 -175-9000	02.07.07	Permanent	-	KVK
11	Accountant/Superintendent	Tmt.R.Vijaya	Accountant/Superintendent	5700-175-9200	16.04.05	Permanent	-	KVK
12	Stenographer	Th.A.Gunasekaran	Assistant	4000-100-6000	19.04.04	Permanent	-	KVK
13	Driver – Jeep	Th.L.Kulandaisamy	Driver – Jeep	4300-100-6000	12.09.05	Permanent	-	KVK
14	Driver – Tractor	Th.A.Adaikalam	Driver – Tractor	3200-85-4900	05.05.04	Permanent	-	KVK
15	Supporting staff	Th.C.Thanaraj	PUSM	2610-60-3150-65-3540	05.05.04	Permanent		KVK
16	Supporting staff	Th.K.Subramaniam	PUSM	2660-60-3200	05.05.04	Permanent		KVK

10. Plan of Human Resource Development of KVK Personnel during 2008-09

S.No.	Discipline	Area of Training Required	Institutions where training is offered	Approximate duration (days)
1	All disciplines	Effective communication skills	MANAGE, Hyderabad.	5
2	All disciplines	Concerned subjects	ICAR institutes	Will be finalized based on the announcement as and when made by the ICAR

11. Infrastructure

i] Total Area (ha) with KVK along with Survey Numbers

Area cultivated (ha)	Area occupied by building and roads (ha)	Area with demonstration units (ha)
16.08	6.00	0.55

ii) Buildings

Admn. Building			Trainees hostel			Staff Quarters			Details of demonstration		
Plinth area (m^2)	Cost (Rs)	Year of Constn.	Plinth area (m^2)	Cost (Rs)	Year of Constn.	No. Plinth area (m^2)	Cost (Rs)	Year of Constn.	Name	Plinth area (m^2)	Cost (Rs)
-	-	--	305	30 lakhs	2002	- -	-	-	-		

iii) Vehicles

Type of vehicle	Model	Actual cost (Rs)	Total Kms/Hrs run	Present status
Jeep TN 55 K 4693	Mahindra Bolero - LX	4,90,851	31750 km	Good
Tractor TN 55 F 9655	Tafe - MF	2,65,950	1826 hrs	Good
Power Tiller TN 55 F 7341	VST	1,13,500	543.5 hrs	Good
Two wheeler	Hero Honda Splendor +	39, 970	4025 km	Good

Iv) Equipments and AV aids

Sl.No	Nature of the equipment	Date of purchase	Cost (Rs)	Condition
1	Over Head Projector	28.03.2002	20,000.00	Working
2	Screen	28.03.2002	5,000.00	Working
3	Portable generator	30.05.2001	40,660.00	Working
4	Telephone line and Intercom	30.03.2002	20,000.00	Working
5	Photocopier (small)	30.03.2002	1,25,000.00	Working
6	Power tiller	31.10.2002	1,13,500.00	Working
7	Tractor	30.03.2002	2,65,950.00	Working
8	Furniture	25.05.2001& 30.03.2002	1,97,760.00	Good
9	Library books	30.03.2002	60,000.00	Good
10	Public addressing system	30.03.2002	39,358.00	Working
11	Exhibition material and display boards	30.03.2002	25,330.00	Good
12	Computer with accessories	31.03.2002	1,76,400.00	Working
13	IBM Thinkpad laptop	19.10.2006	38,700	Working
14	Sanyo LCD projector	18.10.2006	58650	Working

12. Details of SAC meeting Conducted during 2007-2008 and proposed during 2008 -09

Sl.No	Date	
	Conducted during 2007-2008	Proposed for 2008 -09
1.	NIL	12.8.08

II . PLAN FOR TECHNICAL ACTIVITIES

1. Operational area details for 2008-09

Sl. No	Taluk	Name of villages	Major crops & enterprises being practiced	Major problems identified	Identified thrust areas
1.	Pudukkottai	Pudukkottai, Kunnandarkovil, Ponnamaravathi	Paddy, Cashew, Jack, Cotton, Groundnut, Sugarcane, pulses, Maize, ragi, cumbu, vegetables, Agroforestry and Milch animals	Micronutrient deficiency, salt water, Sub soil hard pan, water scarcity. Poor water management.	Training, Off-campus demonstrations, FLD, OFT, Veterinary campaign Introduction of New varieties in Maize. Precision farming in Vegetables
2.	Kandarvakottai	Kandarvakottai	Cashew, Sugarcane, Groundnut, Maize,ragi, Banana, Pulses, Agroforestry	Cashew stem& root borer, Internode borer, Early shoot borer, Nutrient deficiency	Trainings, Demonstrations, FLD, Introduction of New varieties in Maize, Precision farming in Vegetables and Banana
3.	Manalmelkudi	Manalmelkudi	Paddy, Sugarcane, Cashew, Groundnut, Gingelly, Pulses	Cashew stem & root borer, Salinity and alkalinity	Training, Off campus training, Demonstrations,
4.	Avudaiyarkovil	Avudaiyarkovil	Paddy, Cashew, Coconut, Pulses	Weed menace in semi dry rice, Eriyophite mite, Redpalm weevil	Training, Off campus training, Field level demonstrations,
5	Keeranur	Keeranur, Viralimalai	Paddy, Sugarcane, Groundnut, Pulses, Sorghum, Cumbu, ragi	Salinity and alkalinity, Nutrient deficiency, poor availability of paddy seeds	Training, demonstrations FLD, seed village

6	Alangudi	Thiruvarankulam , Arimalam, Karambakudi	Banana, Sugarcane, pulses, Maize, Gingelly, Groundnut, Paddy, Jasmine, Jack, coconut, Crossandra, Brinjal, Greens, Cashew, Mulberry, and Agroforestry	Powdery mildew, Cashew stem& root borer, mites in flower crops, Micronutrient deficiency, Water scarcity, Sugarcane weed menace, Forest tree crop seedling availability, Vegetables local varieties and Fruit and shoot borer problem in Brinjal, bhendi, Fruit borer in Jack, Poor water management, labour problem	Training, Off-campus demonstrations, FLD, OFT, Precision farming in Vegetables and banana. Introduction of New varieties in Maize
7	Illuppur	Illuppur, Annavasal	Paddy, Cotton, Pulses, Groundnut, Gingelly	Sub soil encrustation, Micronutrient deficiency, Flower Drop	Training, Demonstrations, FLD
8.	Thirumayam	Thirumayam	Paddy, Coconut, Sugarcane, Gingelly, Pulses,Cucumber	Button shedding coconut, Salinity and alkalinity, Nutrient deficiency, poor availability of paddy seeds	Trainings, demonstrations, FLD, OFT, seed village
9.	Aranthangi	Aranthangi	Paddy, Cashew, Sugarcane, Groundnut, Agroforestry	Cashew stem& root borer, early shoot borer, weeds in direct seeded rice, Improper fertilizer application in groundnut, Poor water management in sugarcane, poor availability of paddy seeds	Training Demonstrations OFT, seed village

Summary of List of thrust areas for the KVK for 2008-09

1. Natioal Horticultural Mission - Effective training on horticultural crops cultivation techniques
2. Precision farming – Drip and Fertigation of vegetables
3. Establishing seed villages - Paddy and Ground nut
4. Eco- friendly approaches for pest management in major crops
5. Farm women drudgery reduction – Introduction of farm machineries for paddy and groundnut
6. Modern techniques in rice cultivation – SRI
7. New crop introduction – Sunflower and Maize
8. Post harvest technology for various food groups
9. Farming system management in dry areas (Forestry, Animal Husbandry, Horticulture, Sericulture etc.,)

Table 2. Abstract of interventions proposed based on the prioritized problems during 2008-09

S. No	Crop/ Enterprise	Identified Problem	Interventions				
			Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	*Others
1	Paddy	1. Scarcity in irrigation water. 2. Due to unpredictable rainfall timely sowing is difficult in direct sowing. 3.Single crop cultivation of paddy during samba can not benefit the farming community	-	1.Demonstrations Direct paddy seeder 2.Demonstrations of upland paddy seeder 3.Farm mechanization – Drudgery reduction in Paddy transplanting	1.Use of Direct paddy seeder Use Row maker in SRI 2.Transplantry Aerobic use of Rice seeder 3.Preparation of Supplementary foods 4.Weaning food preparation	1.Demonstration of direct paddy seeder	Crop diversification Trainings, demonstration, leaflet
2.	Ground nut	1.Demand of seeds during sowing season 2. Due to unpredictable rainfall timely sowing is difficult in direct sowing. 3.Labour problem during harvest 4.Improper insecticide application	1. Evaluation of insecticide application time and method for the management of pod borer in ground nut		Plant protection techniques in ground nut		Training Demonstration Printing of leaflets and pamphlets
2.	Sunflower	1.Unaware of importance of sunflower cultivation		1.Introduction of new improved variety in Sunflower (CO 4) and maximizing the yield by new technologies	1.Cultivation techniques of Sunflower		Training Demonstration Printing of leaflets and pamphlets

3.	Sesame	1.Problem due to pest and diseases 2.Use of Local varieties		1.Introduction of new variety of Sesame TMV .6	1.Cultivation of Sesame – An alternate crop for water scarcity		Trainings, demonstration, leaflet
4.	Banana	1.Poor quality planting materials 2.Low yield and quality. 3.Unrenumerative price 4.Loss due to natural calamaties	1..Demonstration on management of banana Psuedostem weevil by pseudostem injection 2.Testing of TC banana G9 variety with existing Poovan cultivar/ robusta cultivar		1.Pest and disease management in banana 2.Cultivation practices of banana		Demonstration of Tissue culture Banana under drip and Fertigation system in KVK demonstration unit
5.	Brinjal	1.Nursery diseases and poor germination 2.Use of local varieties 3.Poor availability of hybrid seeds 3.Pest and diseases		1.Demonstration on Use of Pheromone trap for the management of shoot and fruit borer in brinjal	1.Management of Pests and diseases in brinjal		Training Demonstration Printing of leaflets and pamphlets
6.	Jasmine	. 1.Poor nutrient management and poor yield 2.Micronutrient deficiency 3.Poor marketting facilities	1.Study on foliar nutrition in Jasmine		1.Nutrient management in jasmine		Trainings, demonstration, leaflet
7.	Casuarina	1.Low productivity 2.Poor quality seedlings	1.Saucer planting of Casuarina		1.Saucer planting of Casuarina		Trainings, demonstration, leaflet
8.	Cattle	1.Poor management 2.Poor health care 3.Poor weight gaining types		1.Deworming of calves	1.Deworming of calves		Demonstration, Mass media

3.Details of technology assessment and refinement

Sl.No	Problem idendified	Technology for assessment	No. of On Farm Trials
1.	Poor flower yield due to inadequate and improper nutrient management by the farmers in the area	1. Fertilizer dose of 60:0120: 120 g NPK/plant + foliar spray (DAP 2%, MOP 100 g, Ferrous sulphate 50 g, boric acid 30 g, planofix 10 ml in 10 lit of water – 7 times)	5
2.	Poor yield (girth) due to poor growth of the trees	1.Saucer planting of improved casuarina clone seedlings	5
3.	Testing of TC banana G9 variety with existing Poovan cultivar/ robusta cultivar	1.TC (G9) with normal planting (5x7) 2.Drip irrigation and fertigation 3.Bunch covering and precision farming	5

Sl.No	Problem idendified	Technology for refinement	No. of On Farm Trials
1.	In ground nut, after harvest 20 per cent of the matured pods are observed as damaged due to the pests,pod borer (earwig)	1.Application of dust formulation prior to sowing 2.Application of wettable powder formulation (WP) during 60th and 80th day @ 2.5 kg/ha 3.Application of wettable powder formulation (WP) in the mouth (opening for irrigation) of each plot (regular plot size 3 x 3 m or 4 x 4 m) during last 2 irrigation For 3 x 3 plot size – 2.2 g per plot with 1110 plots/ha 4.For 4 x4 plot size – 4 g per plot with 625plots/ha	5

PLAN OF ON FARM TESTING IN CASE ASSESSMENT FOR 2008 – 09

OFT -1 – Study on foliar nutrition in Jasmine

1. Title of the technology to be assessed	Study on foliar nutrition in Jasmine
2. Agro-ecological zone	Southern zone of Tamil Nadu
3. Production System	Irrigated – red soil
4. Problem definition	Poor flower yield due to inadequate and improper nutrient management by the farmers in the area
5. Problem cause diagram	1. Low soil organic matter content in the soils 2. Low nutrient use efficiency
6. Number of farmers and area affected in the operational village	40 per cent jasmine cultivating farmers in Alangudi and Aranthangi area of Pudukottai
7. Rationale for proposing the refinement	➢ No standard recommendation for foliar nutrient in jasmine

8. Technology options for refinement along with justification

Sl. No.	Technological options	Details of Technology	Source of technology	Justification
a.	Farmer's practice	Not applying recommended dose of fertilizer as foliar nutrients		
b.	Technology selected for assessment			
	Technology option 1	➢ Recommended dose of fertilizer application and foliar application	TNAU	
	Technology option2 (assessment)	➢ Fertilizer dose of 60:0120: 120 g NPK/plant + foliar spray (DAP 2%, MOP 100 g, Ferrous sulphate 50 g, boric acid 30 g, planofix 10 ml in 10 lit of water – 7 times)	TNAU	Foliar spray to improve flower yield and quality
	Technology option 3	--		

9. Parameters to be measured in relation to the technology

Flower yield, 100 flower yield weight, extent of flowering

Details of farmers

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	5	1 ha

10. Budget for Assessment	

Critical inputs for demonstration			
Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
Urea	650 kg	5.02/kg	3263.00
DAP	6 kg	9.73/kg	58.38
MOP	4 kg	4.60/kg	18.40
FeSo4	2 kg	7.0/kg	14.00
Boric acid	1 kg	55/kg	55.00
Planofix	2 lit	395/lit	790.00
Soil analysis	10 numbers	25/sample	250.00
Water analysis	10 nos'	10/sample	100.00
Plant samples	30 samples	10/sample	300.00
TOTAL			4848.75

OFT - 2 – Testing on Saucer planting of Casuarina over conventional planting

1. Title of the technology to be assessed	Testing on Saucer planting of Casuarina over conventional planting
2. Agro-ecological zone	Southern zone of Tamil Nadu
3. Production System	Forestry ecosystem
4. Problem definition	low yield (girth) due to poor growth of the trees
5. Problem cause diagram	1. Selection of poor planting materials 2. Non adoption of improved planting materials 3. Poor maintenance of tree population 4. Reduction in yield
6. Number of farmers and area affected in the operational village	150 farmers, 1000ha
7. Rationale for proposing the assessment	➢ To improve the yield of the casuarina, increase the girth of the stem by adopting saucer planting and use of improved clones

8. Technology options for refinement along with justification

Sl. No.	Technological options	Details of Technology	Source of technology	Justification
a.	Farmer's practice	Conventional line planting	--	
b.	Technology selected for refinement			
	Technology option 1 (already recommended practice)	➢ Planting of seedlings in line	Forestry Dept., Tamil Nadu	
	Technology option2 (assessment)	➢ Saucer planting of improved casuarina clone seedlings	Forestry Dept., Tamil Nadu	Use of improved clones released by Tamil Nadu Forestry Plantation Corporation and adoption of saucer planting for higher bio mass production
	Technology option 3	--		

9. Parameters to be measured in relation to the technology

Height of the trees, Diameter at breast height level, standing volume of the trees

Details of farmers

Sl. No.	Name of village	No. of farmer	Area (ha)
1	Alangudi tk.	5	1 ha

10. Budget for Assessment

Critical inputs for demonstration

Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
Casuarina seedlings	2500	2/seedling	5000.00

OFT -3 –Testing of TC banana G9 variety with existing Poovan cultivar/robusta cultivar

1. Title of the technology to be refined	Testing of TC banana G9 variety with existing Poovan cultivar/ robusta cultivar
2. Agro-ecological zone	Southern zone of Tamil Nadu
3. Production System	Horticulture
4. Problem definition	Poor crop stand , pest and disease problem
5. Problem cause diagram	1. Poor planting material 2. Improper nutrient management 3. Pest and disease problem 4. Poor crop stand and irregular shooting
6. Number of farmers and area affected in the operational village	50 farmers, 25 ha
7. Rationale for proposing the assessment	➢ Pairing and prolinage ➢ Un-healthy planting materials

8. Technology options for refinement along with justification

Sl. No.	Technological options	Details of Technology	Source of technology	Justification
a.	Farmer's practice	❖ Local suckers ❖ Improper fertilizer management	--	
b.	Technology selected for assessment			
	Technology option 1 (already recommended practice)	❖ Healthy sword suckers ❖ Pairing and prolinage ❖ Furrow irrigation/basal irrigation ❖ 210:35:450 g/plant dose of fertilizer	TNAU-State Horticulture department	
	Technology option2 (assessment)	❖ TC (G9) with normal planting (5x7) ❖ Drip irrigation and fertigation ❖ Bunch covering and precision farming	TNAU	To increase yield and to improve quality of fruits
	Technology option 3	--		

9. Parameters to be measured in relation to the technology

Yield, individual bunch weight, days taken for first harvest, number of marketable bunches, cost economics

Details of farmers

Sl. No.	Name of village	No. of farmer	Area (ha)
a	Kulamangalam, Kadavarayanpatti, Kothakottai, Vattanviduthi, Keeramangalam	5	1 ha

10. Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost(Rs.)	Total Cost(Rs.)
TC Banana planting material	4000 nos	Rs.12	48000.00
Healthy sword sucker	1500	Rs.5	7500.00
Total			55500.00

PLAN OF ON FARM TESTING IN CASE REFINEMENT FOR 2008 – 09

OFT - 1 – Evaluation of insecticide application time and method for the management of pod borer in ground nut

1. Title of the technology to be refined	Refined insecticide application method and time for the management of pod borer (earwig) in ground nut
2. Agro-ecological zone	Southern zone of Tamil Nadu
3. Production System	Oilseed – groundnut (Irrigated)
4. Problem definition	In ground nut after pod formation the subterranean pest pod bug (earwig) and termite are the major problem which cause considerable yield loss. After harvest 25 per cent of the matured pods are observed as damaged due to the pests.
5. Problem cause diagram	1. In ground nut pod bug, termites, leaf caterpillars are major problems. 2. For the control of leaf caterpillars and *Spodoptera* farmers are adopting spraying 2 rounds of chemicals and managed them effectively. 3. The damage caused by the pod bug and termite are not able to control as the regular application method and time is not effective for the management
6. Number of farmers and area affected in the operational village	50, 15 ha (40acres)
7. Rationale for proposing the refinement	➢ Application of dust formulation of chemical at 40th day (as recommended) was not afforded control against the subterranean pest. Since, the pod bug damage started during pod development and pod maturity stage. ➢ Applying chemicals to the soil after pod formation, i.e. after 60-70 days is difficult due to the dense foliage coverage in the plots.

8. Technology options for refinement along with justification

Sl. No.	Technological options	Details of Technology	Source of technology	Justification
a.	Farmer's practice	Spraying of insecticides during pod development and pod maturity stage		
b.	Technology selected for refinement			
	Technology option	➢ Application of dust	TNAU & Dept. of	

	1 (recommended practice)	formulation in the soil prior to sowing ➢ Application of dust formulation in the soil during 40th day (Malathion 5D or Endosulfan 4D 25kg/ha)	Agriculture, Tamil Nadu	
	Technology option2 (refined practice)	➢ Application of same dust formulation prior to sowing ➢ Application of wettable powder formulation (WP) during 60th and 80th day @ 2.5 kg/ha ➢ Application of wettable powder formulation (WP) in the mouth (opening for irrigation) of each plot (regular plot size 3 x 3 m or 4 x 4 m) during last 2 irrigation For 3 x 3 plot size – 2.2 g per plot with 1110 plots/ha For 4 x4 plot size – 4 g per plot with 625plots/ha	--	Application of chemical during 40th day is not effective for the control of the pod bugs.The pods are damaged after development and maturity stage i.e. 60-80 days. After 60 days the foliage will cover densely in the field and it is not possible to spray or dust in the foliage. Hence, it is suggested and refined the technique to incorporate the wettable powder formulation (WP) @ 2.5 kg/ha during last 2 irrigation (60-80th. days) at the mouth of the plots
	Technology option 3	--		

9. Parameters to be measured in relation to the technology

In each technology, the damage caused by the pod borer was assessed after harvest of the ground nut pods. The damaged and undamaged pods are sorted out and yield loss will be assessed based upon the weight of the pods. A represented sample of 1kg pods are taken in each technique and assess the per cent pod damage.

Details of farmers

Sl. No.	Name of village	Name of farmer	Area (ha)
a.	Varappur	5 farmers	2 ha

10. Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost(Rs.)	Total Cost(Rs.)
Plant protection chemicals	4 litre	375/lit	1500.00
	150 kg Dust formulation	16.66/kg	2500.00
	10 kg WP	450/kg	4500.00
Total			8500.00

4.DETAILS OF FRONTLINE DEMONSTRATIONS

PLAN OF FRONT LINE DEMONSTRATIONS FOR 2008-09 INCLUDING OILSEEDS, PULSES, COTTON, CEREALS, HORTICULTURAL CROPS, PLANTATION CROPS, COMMERCIAL CROPS AND ENTERPRISES

FLD -1- Introduction of new variety in Sesame (TMV 6)

Technology to be demonstrated	Introduction of new variety of Sesame
Production System	Ground nut – Sesame – Black gram
Season of the demonstration	Rabi
Problem definition	
Crop / Enterprise	Sesame
District average yield	350 kg / ha
Potential yield	550 kg / ha
Farmers yield	400 kg / ha
Reasons for yield gap	Use of local varieties, adoption of improper management practices
Prioritized problem	Repeated use of local varieties
Objective of the demonstration	To Introduce a new improved variety in Sesame(TMV 6)
Rationale for selection of the technology	Un awareness of improved variety of Sesame
Details of the Technology to be demonstrated	
Name of the Technology	Introduction of new variety of Sesame
Source of Technology	TNAU, Coimbatore
Year of release	-
Attributes of Technology	Yield improvement
Parameters to be measured in relation to the technology	Yield
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	13	5 ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
Seed	25 kg	40 / kg	1,000.0
T.viride	100 g	100 / kg	10.00
Azospirilum	60 pack	6 / pack	390.00
Phospho bacteria	60 pack	6 / pack	390.00
MN mixture	62.5 kg	36 / kg	2,250.00
Urea	231 kg	5 / kg	1,155.00
SSP	719 kg	5 / kg	3,595.00
MOP	191 kg	5 / kg	955.00
Total			9,745.00

FLD -2 - Introduction of new improved variety in Sunflower (CO 4) and maximizing the yield by new technologies

Technology to be demonstrated	Introduction of new improved variety in Sunflower (CO 4 and maximizing the yield by new technologies
Production System	Groundnut – Sunflower – Black gram
Season of the demonstration	September - October
Problem definition	
Crop / Enterprise	Sunflower
District average yield	-
Potential yield	1500 kg / ha
Farmers yield	1200 kg / ha
Reasons for yield gap	Un awareness of improved variety,NAA spray,Borax spray and bee hives for efficient pollination
Prioritized problem	
Objective of the demonstration	To Introduce a new improved variety in Sunflower (CO 4)
Rationale for selection of the technology	Un awareness of improved variety of Sunflower
Details of the Technology to be demonstrated	
Name of the Technology	Introduction of new improved variety in Sunflower (CO 4)and maximizing the yield by new technologies
Source of Technology	TNAU, Coimbatore
Year of release	-
Attributes of Technology	To improve growth of plants by overcoming MN deficiencies , higher seed set and yield over existing varieties
Parameters to be measured in relation to the technology	Yield
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	10 farmers	1 ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
Seed	28 kg	55 / kg	1540.00
Bee hive	10 no's	300 / unit	3,000.00
NAA	1120 gm	400 / lit	448.00
Borax	1 kg	60 / kg	60.00
		Total	5048.00

FLD - 3 – Pruning and training of age - old fruit trees

Technology to be demonstrated	Pruning and training of age - old fruit trees
Production System	Horticulture crops
Season of the demonstration	October to November
Problem definition	
Crop / Enterprise	Mango, Cashew, Sapota, Guava, Amla and jack
District average yield	--
Potential yield	Mango – 10t/ha, Cashew – 3kg/tree, Sapota – 20t/ha, Guava – 20t/ha, Amla – 90kg/tree, jack – 30t/ha
Farmers yield	Mango – 7t/ha, Cashew – 2kg/tree, Sapota – 15t/ha, Guava – 12t/ha, Amla – 75kg/tree, jack – 20t/ha
Reasons for yield gap	Incidence of insect pest shoot and fruit borer cause yield and quality reduction in brinjal fruits
Prioritized problem	Higher yield reduction and decrease in the quality of harvested fruits
Objective of the demonstration	➢ To increase the quality aspects of fruits and yield
Rationale for selection of the technology	
Details of the Technology to be demonstrated	
Name of the Technology	Pruning and training of age old fruit crops trees
Source of Technology	TNAU
Year of release	--
Attributes of Technology	Stimulate tuning of heavy bearing
Parameters to be measured in relation to the technology	No. of fruits, quality of fruits, yield
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Thiruvarangulam, Alangudi blocks	10	4 ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost(Rs.)	Total Cost(Rs.)
Pruning and training implements	10 each	600	6000.00
Chemical inputs	10 kg	455/kg	4550.00
Fertilizers Urea Super phosphate Potash FYM	 250 500 300 8 tonnes	 5.02 3.48 4.6 500/tonne	 1255.00 1740.00 1380.00 4000.00
		Total	18925.00

FLD -4- Demonstration on Use of Pheromone trap for the management of shoot and fruit borer in brinjal

Technology to be demonstrated	Sex pheromone traps for the management of shoot and fruit borer, *Leucinodes orbanilis* in brinjal
Production System	Pulses - Vegetables (irrigated)
Season of the demonstration	Rabi 2008
Problem definition	
Crop / Enterprise	Brinjal
District average yield	--
Potential yield	25 t / ha
Farmers yield	17 t / ha
Reasons for yield gap	Incidence of insect pest shoot and fruit borer cause yield and quality reduction in brinjal fruits
Prioritized problem	Brinjal is the major vegetable crop in the area and shoot & fruit borer cause severe problem. Higher yield reduction and decrease in the quality of harvested fruits
Objective of the demonstration	To demonstrate eco-friendly technique for the management of the shoot & fruit borer
Rationale for selection of the technology	To decrease chemical pesticides load in the brinjal ecosystem
Details of the Technology to be demonstrated	
Name of the Technology	Pheromone approach for the management of insect pest
Source of Technology	TNAU – Dept. of Horticulture, Tamil Nadu
Year of release	-
Attributes of Technology	low cost technology, easily adoptable, non - chemical method
Parameters to be measured in relation to the technology	- Damage assessment in number of plants affected during vegetative stage - assessment of damage in the harvested fruits by the insect pest - number of adults trapped in the pheromone traps during the cropping period

Details of Farmers proposed			
Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	10 farmers	4 ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost(Rs.)	Total Cost(Rs.)
Plastic pheromone traps	50	30	1,500.00
Leucinodes pheromone lures	100	50	5,000.00
		Total	6,500.00

FLD -5 - Demonstration on management of banana Psuedostem weevil by pseudostem injection

Technology to be demonstrated	Management of pseudostem weevil using TNAU–banana injector
Production System	Horticultural crops
Season of the demonstration	Rabi 2008
Problem definition	
Crop / Enterprise	Banana (Robusta, Nendran and Poovan)
District average yield	--
Potential yield	40 t /ha
Farmers yield	22 t /ha
Reasons for yield gap	In banana pseudostem weevil is one among the major problem causing severe yield reduction
Prioritized problem	Application of chemicals in the soil or spraying on the plants will not effective for the management of pseudostem weevil
Objective of the demonstration	➢ To demonstrate site specific pseudostem injection for the management of weevil
Rationale for selection of the technology	To decrease unnecessary pesticide usage as spraying on the non-target portions like leaf or soil
Details of the Technology to be demonstrated	
Name of the Technology	Pest management in banana - Pseudostem injection in banana
Source of Technology	TNAU
Year of release	-
Attributes of Technology	low cost technology, site specific, easily adoptable
Parameters to be measured in relation to the technology	- Assessing the number of plants damaged by the pseudo stem weevil
Details of Farmers proposed	

Sl. No.	Name of village	Name of farmer	Area (ha)
1.	Alangudi block	10 farmers	4 ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost (Rs.)	Total Cost(Rs.)
Pseudostem injector	10	700	7,000.00
Plant protection chemical	100 litres	350	35,000.00
		Total	42,000.00

FLD -6 - Demonstration on management of pulse beetle in storage pulses through TNAU storage device

Technology to be demonstrated	Management of pulse beetle, bruchid *Callosobruchus* sp. In storage pulses using TNAU – two in one model traps
Production System	Storage in household and farm
Season of the demonstration	Rabi 2008
Problem definition	
Crop / Enterprise	Storage pulses
District average yield	--
Potential yield	--
Farmers yield	--
Reasons for yield gap	--
Prioritized problem	The stored pulses *viz*., blackgram, greengram, cowpea is affected by the pulse beetle. The vigour and quality of pulses stored for seed purpose become reduced. The pulse seeds stored for seed purpose and culinary purpose were damaged. Further, the seeds stored for culinary purpose can not be applied with any chemical insecticides.
Objective of the demonstration	➢ To demonstrate non-chemical method for the management of pulse beetle
Rationale for selection of the technology	To avoid chemical insecticides in the storage pulses, to get good quality seed materials
Details of the Technology to be demonstrated	
Name of the Technology	Pest Management in stored pulses
Source of Technology	TNAU
Year of release	-
Attributes of Technology	Non-chemical method, low cost technology, easily adoptable
Parameters to be measured in relation to the technology	➢ Number of beetles collected in each trap at different pulse crops in the farmers dwelling
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	20 farmers	4ha

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
TNAU - two in one model traps	40	150	6000.00

FLD -7 - Demonstration of 8 row Direct Paddy seeder

Technology to be demonstrated	Demonstration of 8 row Direct Paddy seeder
Production System	Paddy
Season of the demonstration	Oct – December
Problem definition	
Crop / Enterprise	Paddy
District average yield	7.5 t/ha
Potential yield	2.5 t/ha
Farmers yield	More population & Lesser spacing
Reasons for yield gap	Less yield & Labour shortage
Prioritized problem	To Introduce of Direct paddy seeder
Objective of the demonstration	To overcome the labour shortage problem
Rationale for selection of the technology	Easy operation , less seed rate
Details of the Technology to be demonstrated	
Name of the Technology	Direct paddy seeder
Source of Technology	TNAU
Year of release	2001
Attributes of Technology	Increased yield lesser seed rate ease of operation
Parameters to be measured in relation to the technology	Number of tillers per hill. Number of productive tiller per hill. Yield comparison

Details of Farmers proposed				
SL.N	Village		No. of farmer	Area (ha)
1.	Thalinji		8	3.2
2.	Koovathupatti		1	0.4
3.	Kovilveerakudi		1	0.4
Budget for Assessment				
	Critical inputs for demonstration			
S.no	Name	Qty	Amount Rs.	Total Cost Rs.
1.	8 row Direct Paddy seeder *	2 No	9,400.00	18,800.00
2.	Paddy seed	80 kg	15.00	1,200.00
			Total	20,000.00

* The Unit will be kept in KVK for further demonstration.

FLD -8- Demonstration of Aerobic seed drill for upland paddy

Technology to be demonstrated	Demonstration of Aerobic seed drill for upland paddy
Production System	Paddy
Season of the demonstration	Oct – December
Problem definition	
Crop / Enterprise	Paddy
District average yield	-
Potential yield	-
Farmers yield	More population
Reasons for yield gap	To reduce and over come labour shortage
Prioritized problem	To Introduce upland paddy seeder in direct sown area
Objective of the demonstration	To increase the yield
Rationale for selection of the technology	To over come labour shortage
Details of the Technology to be demonstrated	
Name of the Technology	Aerobic Rice seeder
Source of Technology	TNAU
Year of release	2007
Attributes of Technology	Line snorts
Parameters to be measured in relation to the technology	Yield parameters and Growth Characters

Details of Farmers proposed				
SL.N	Village		No. of farmer	Area
1.	Piranthini		5	2 ha
2.	Veeramangalm		5	2 ha
	Total			4 ha
Budget for Assessment				
	Critical inputs for demonstration			
S.no	Name	Qty	Amount Rs.	Total Cost Rs.
1.	Aerobic Rice seeder Up land Paddy*	2 No	10,000.00	20,000.00
			Total	20,000.00

* The Unit will be kept in KVK for further demonstration.

FLD- 9 - Demonstration of Tractor drawn seed drill for groundnut

Technology to be demonstrated			Demonstration of Tractor drawn seed drill for groundnut	
Production System			Groundnut	
Season of the demonstration			July – August	
Problem definition				
Crop / Enterprise			Groundnut	
District average yield			-	
Potential yield			-	
Farmers yield			-	
Reasons for yield gap			No line sowing	
Prioritized problem			To over come labour shortage	
Objective of the demonstration			To introduce tractor drawn seed drill	
Rationale for selection of the technology			To introduce labour shortage problem.	
Details of the Technology to be demonstrated				
Name of the Technology			To overcome labour shortage	
Source of Technology			TNAU	
Year of release			1999	
Attributes of Technology			Line snorts	
Parameters to be measured in relation to the technology			Plant population and Yield parameters	
Details of Farmers proposed				
SL.N	Village		No. of farmer	Area
1.	Kothakottai		5	2 ha
2.	Vankidakkulam		5	2 ha
	Total			4 ha
	Critical inputs for demonstration			
10	Name	Qty	Amount Rs.	Total Cost Rs.
1.	Tractor drawn seed drill*	1No	35,000.00	35,000.00
			Total	35,000.00

* The unit will be kept in KVK for further demonstration.

FLD – 10 – Deworming of Calves

Technology to be demonstrated	Deworming of calves with Anthelmintics
Production System	Animal Husbandry
Season of the demonstration	Throughout the year.
Problem definition	
Crop / Enterprise	Cattle –Calves
District average yield	-
Potential yield	-
Farmers yield	-
Reasons for yield gap	-
Prioritized problem	Stunted growth of calves due to worm infestation , Delayed maturity in heifer calves.
Objective of the demonstration	To enhance growth rate, Early maturity of heifer calves.
Rationale for selection of the technology	Lack of awareness in deworming of calves among the farmers
Details of the Technology to be demonstrated	
Name of the Technology	Deworming of calves
Source of Technology	-
Year of release	-
Attributes of Technology	Easy to adapt. Mortality due to worm infestation to be reduced
Parameters to be measured in relation to the technology	Growth rate, Age at Maturity,
Details of Farmers proposed	50 farmers -100 calves
Villages	Vallathirakottai, Venkitakulam and Thatchinapuram

Budget for Assessment

Critical inputs for demonstration

Name	Qty	Unit cost (Rs.)	Total Cost (Rs.)
1) Albedazole suspension 2.5% w/v 2) Oxyclozanide suspension 3.4%w/v	5+5=10 litres	300 / =	3000 / =

FLD – 11 - Value addition in Guava

Technology to be demonstrated	Preparation of value added products from Guava
Production System	Horticultural crops
Season of the demonstration	December - April
Problem definition	
Crop / Enterprise	Guava
District average yield	-
Potential yield	-
Farmers yield	-
Reasons for yield gap	➢ Poor income ➢ Low literacy level ➢ Unemployment Lack of knowledge in income generation
Prioritized problem	Huge quantity of guava fruits are simply wasted during season
Objective of the demonstration	To increase the utilization of guava fruits for consumption in the form of various value added products
Rationale for selection of the technology	Value addition is the alternate source for preservation of guava fruits when surplus quantity is produced
Details of the Technology to be demonstrated	
Name of the Technology	Preparation of value added products from Guava
Source of Technology	CFTRI,Mysore
Year of release	-
Attributes of Technology	Easy method of preparation, low cost technology, longer shelf life, high cost
Parameters to be measured in relation to the technology	- Knowledge gained on post harvest of guava - Quantity increase in utilization - Improvement in socio – economic condition
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Alangudi block	20 numbers	-

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost(Rs.)	Total Cost(Rs.)
Sugar	100 kg	16/kg	1600.00
Citric acid	4 kg	150/kg	600.00
Sodium benzoate	2 kg	150 / kg	300.00
Colour & Essence	4 lit	250 / lit	1000.00
750 ml Bottles and cap	200 numbers	1000	1000.00
		Total	4,500.00

FLD – 12- Farm mechanization – Drudgery reduction in Paddy transplanting

Technology to be demonstrated	Introduction of Four row drum seeder
Production System	Paddy
Season of the demonstration	October to December
Problem definition	
Crop / Enterprise	Paddy
District average yield	3.5 t / ha
Potential yield	6.0 t / ha
Farmers yield	3.0 t / ha
Reasons for yield gap	Less yield & Labour shortage
Prioritized problem	Drudgery in Paddy transplanting
Objective of the demonstration	To reduce the drudgery of farm women during transplanting
Rationale for selection of the technology	Direct sowing is the alternate technology for transplanting
Details of the Technology to be demonstrated	
Name of the Technology	Introduction of Four row drum seeder
Source of Technology	TNAU,Coimbatore
Year of release	2001
Attributes of Technology	Easy operation, Lesser seed rate
Parameters to be measured in relation to the technology	- Discomfort rate - Cost of labour - Labour efficiency - Time and money saving
Details of Farmers proposed	

Sl. No.	Name of village	No. of farmer	Area (ha)
1.	Thiruvarankulam block	10 farmers	4

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost	Total Cost
Four row drum seeder*	2	8,000	16,000

* The Unit will be kept in KVK for further demonstration.

FLD – 13 – EDP – Home care products preparation

Technology to be demonstrated	Preparation of Detergent powder and Liquid soap
Production System	-
Season of the demonstration	January – December
Problem definition	
Crop / Enterprise	Home care products
District average yield	-
Potential yield	-
Farmers yield	-
Reasons for yield gap	-
Prioritized problem	Lack of income to Farm women during lean period
Objective of the demonstration	To provide income to Farm women during lean period
Rationale for selection of the technology	Preparation of Home care products provides income to Farm women throughout the year
Details of the Technology to be demonstrated	
Name of the Technology	Preparation of Home care products
Source of Technology	-
Year of release	-
Attributes of Technology	Easy method of preparation ,more demand , longer shelf life and good marketability
Parameters to be measured in relation to the technology	- Knowledge gained on Preparation of Home care products - Improvement in socio – economic condition - Time and money saving
Details of Farmers proposed	

Sl. No.	Name of village	Name of farmer	Area (ha)
1.	Thirumayam block	20 farm women	-

Budget for Assessment			
Critical inputs for demonstration			
Name	Qty	Unit cost	Total Cost
Detergent powder			
Blue detergent	40 kg	25 / kg	1,000.00
Soda	40 kg	20 / kg	800.00
Soap solution	10 l	50 / l	500.00
Perfume	500 ml	50 / l	250.00
Total			2,550.00
Liquid Blue			
Acid slurry	20 kg	60 / kg	1,200.00
Caustic soda	8 kg	100 / kg	800.00
Urea	5 kg	5 / kg	25.00
Perfume	1 l	250 / l	250.00
		Total	2,275.00

5. Details of Training activities

5a. Plan of training programmes for farmers/farm women during 2008-09

Crop / Enterprise	Major problem	Objective of training programme	Training Title	Skill component involved	Duration	No. of Courses	Number of participants	Specify FLD/OFT in relation the programme
Pulses	Storage pests	To create awareness about storage pest management by eco- friendly methods	Storage pest management in pulse crops	Learning about the extend of damage and organic ways to manage the storage pests	One day	2	100	Demonstration on management of pulse beetle in storage pulses through TNAU storage device
Ground nut	Pest And Diseases problem	To manage the pest and diseases	Plant protection techniques in ground nut	To create knowledge about improved pest and diseases management methods	One day	2	100	Evaluation of insecticide application time and method for the management of pod borer in ground nut
Groundnut	Labour shortage	To introduce tractor drawn seed drills & Groundnut Strippers	Use of seed drill & Groundnut strippers	-	One day	2	100	Demonstrations on Tractor drawn seed drill
Paddy	Labour shortage	To Introduce Direct paddy seeder	Use of Direct paddy seeder	-	One day	3	150	Demonstrations on Direct paddy seeder

Paddy	Wider spacing Transplant	To introduce Row marker	Use Row maker in SRI Transplanting	-	One day	3	150	-
Paddy	Line sowing	To introduce Aerobic Rice seeder	Use of Aerobic Rice seeder	-	One day	2	100	Demonstrations of upland paddy seeder
Paddy	Unawareness in Importance of High nutrients foods	To introduce High nutrient Supplementary foods	Preparation of Supplementary foods	Knowledge gaining in Supplementary foods preparation	One day	3	75	Farm mechanization – Drudgery reduction in Paddy transplanting
Paddy	Lack of knowledge in value addition of Rice and its by - products	Value addition of Rice and its by - products	Weaning food preparation		One day	3	75	Farm mechanization – Drudgery reduction in Paddy transplanting
Sunflower	Low yield	To introduce new variety	Introduction of new improved variety in Sunflower (CO 4 and maximizing the yield by new technologies	Gaining Knowledge about new improved variety in Sunflower	One day	2	50	Introduction of new improved variety in Sunflower (CO 4) and maximizing the yield by new technologies
Sesame	Low yield	To introduce new variety	Introduction of new variety of Sesame TMV .5	Gaining Knowledge about new improved variety	One day	3	75	Introduction of new variety of Sesame TMV .5

Banana	Insect pest attack	To manage the Insect pest in banana	Pest and disease management in banana	To know about various symptoms of Pest and diseases and their management	One day	2	100	Demonstration on management of banana Psuedostem weevil by pseudostem injection
Brinjal	Damage caused by pests and diseases	To manage the pests and diseases	Management of Pests and diseases in brinjal	To gain knowledge regarding life history, damage and management of pests and diseases	One day	2	100	Demonstration on Use of Pheromone trap for the management of shoot and fruit borer in brinjal
Jasmine	Poor nutrient management and poor yield	To impart knowledge about proper soil and foliar nutrients management	Nutrient management in jasmine	To get knowledge about soil and foliar fertilizer application	One day	2	100	Study on foliar nutrition in Jasmine
Jasmine	Poor nutrient and Low yield	To improve the yield and quality	INM in flower crops	To know about the nutrient amnegement	One day	2	100	Study on foliar nutrition in Jasmine
Banana	Difficulties in irrigation management	To create the awareness about efficient use of available water	High density planting of banana	To know about the efficient use of available water	One day	2	100	Testing of TC banana G9 variety with existing Poovan cultivar/robusta cultivar

Banana	Low yield and poor quality	To improve the yield and quality aspects of banana	High tech cultivation of banana	To learn recent techniques of banana cultuivation	One day	1	50	Testing of TC banana G9 variety with existing Poovan cultivar/robusta cultivar
Casuarina	Low yield	To improve the timber yield	Saucer planting of Casuarina	To get the knowledge of new method of planting	One day	3	150	Saucer planting of Casuarina
Cattle	Worm infestation	Awareness in Deworming	Deworming of calves	Gaining Knowledge about Deworming	One day	2	50	Deworming of calves
Cattle	Improper management of Calves	Proper management of Calves	Deworming of calves	Learning managemental practices of calves	One day	2	50	Deworming of calves
Guava	Low literacy level and Lack of knowledge in income generation		Value addition in guava		One day	3	75	Value addition in guava
Home care products	Lack of income to Farm women	To provide income to Farm women	Home care products preparation	Skill development in Home care	One day	2	40	Farm mechanization – Drudgery

	during lean period	during lean period		products preparation				reduction in Paddy transplanting
Forestry	Water scarcity and Low yield	To improve the timber yield	Introduction of drought tolerant tree species for commercial cultivation	To get the knowledge of drought tolerant tree species	One day	2	100	-
Agrl.Engineering	Water scarcity, Low water use efficiency	To provide knowledge for efficient use of irrigation water	Drip and sprinkler irrigation system	To gather knowledge regarding efficient use of irrigation water	One day	2	100	-

5.b Plan of training programmes for rural youth during 2008-09

Crop / Enterprise	Major problem	Objective of training programme	Training Title	Skill component involved	Duration	No. of Courses	Number of participants	Specify FLD/OFT in relation the programme
Sesame	Low yield	To introduce new variety	Introduction of new variety of Sesame TMV .5	Gaining Knowledge about new improved variety	One day	1	50	Introduction of new variety of Sesame TMV .5
Tractor	Lack of knowledge	To familiarize repair & maintenance of tractor & Power tiller	Repair and maintenance of Tractor and Power tiller	-	3 days	1	20	
Paddy		Value addition of Rice and its by – products	Masala powder preparation		One day	2	100	Farm mechanization – Drudgery reduction in Paddy transplanting
Casuarina	Low yield	To improve the timber yield	Saucer planting of Casuarina	To get the knowledge of new method of planting	One day	1	50	Saucer planting of Casuarina
Jasmine	Poor nutrient and Low yield	To improve the yield and quality	INM in flower crops	To know about the nutrient amnegement	One day	2	100	Study on foliar nutrition in Jasmine
Banana	Low yield and poor quality	To improve the yield and quality aspects of banana	High tech cultivation of banana	To learn recent techniques of banana cultuivation	One day	1	50	Testing of TC banana G9 variety with existing Poovan

								cultivar/robusta cultivar
Cattle	Improper feeding practices	Feeding of calves with balanced feed	Deworming of calves	Learning of feeding of calves	One day	2	50	Deworming of calves
Guava			Value added guava blended fruit products		One day	2	50	Value addition in guava
All disciplines	Unaware of utilization of farm waster	To use farm waste for Agrl.uses	Organic farming	To know about Organic farming techniques	One day	2	100	-
Home Science	Lack of knowledge in Post harvest technology	To create awareness about PHT of Agrl. products	Post harvest technology of Agrl. products	Skill development PHT of Agrl. products	One day	5	250	-
Agriculture	Low income during lean season	To create awareness about IFS	Integrated farming system	To know about IFS	One day	1	100	-

5c. Plan for Training Programmes for Extension Functionaries during 2008-09

Crop / Enterprise	Major problem	Objective of training programme	Training Title	Skill component involved	Duration	No. of Courses	Number of participants	Specify FLD/OFT in relation the programme
Paddy	Labour shortage	To introduce Direct paddy Seeder	Use of Direct paddy seeder in Paddy cultivation	-	One day	1	30	Demonstration of Direct paddy seeder
Ground nut	Pest And Diseases problem	To manage the pest and diseases	Plant protection techniques in ground nut	To create knowledge about improved pest and diseases management methods	One day	2	100	Evaluation of insecticide application time and method for the management of pod borer in ground nut
Paddy	Lack of knowledge in value addition of Rice and its by - products	Value addition of Rice and its by - products	Weaning food preparation		One day	3	75	Farm mechanization – Drudgery reduction in Paddy transplanting
Banana	Insect pest attack	To manage the Insect pest affecting banana	Pest and disease management in banana	To know about various symptoms of Pest and diseases and their management	One day	2	100	Demonstration on management of banana Psuedostem weevil by stem injection

Cattle	Worm infestation	Awareness in Deworming	Deworming of calves	Gaining Knowledge about Deworming	One day	2	50	Deworming of calves
Sunflower	Low yield	To introduce new variety	Introduction of new improved variety in Sunflower (CO 4 and maximizing the yield by new technologies	Gaining Knowledge about new improved variety in Sunflower	One day	2	50	Introduction of new improved variety in Sunflower (CO 4) and maximizing the yield by new technologies
Sesame	Low yield	To introduce new variety	Introduction of new variety of Sesame TMV .5	Gaining Knowledge about new improved variety	One day	3	75	Introduction of new variety of Sesame TMV .5

5d. Plan of Vocational training programmes for Young Farmers (Rural Youth) during 2008-09

Crop / Enterprise	Major problem	Objective of training programme	Training Title	Skill component involved	Duration	No. of Courses	Number of participants	Specify FLD/OFT in relation the programme
Tractor / Power tiller	Lack of technical knowledge	To develop technically known Drivers	Operation and maintenance of Tractor and Power tiller	-	30 days	1	150	-
Guava	Low literacy level and Lack of knowledge in income generation		Value addition in guava		One day	3	75	Value addition in guava
Casuarina	Lower yield	To improve the timber yield	Saucer planting of Casuarina	To get the knowledge of new method of planting	One day	3	150	Saucer planting of Casuarina

5e . Plan for sponsored training Programmes during 2008-09

Crop / Enterprise	Major problem	Objective of programme	Training Title	Skill component involved	Duration	No. of Courses	Number of participants	Sponsoring Agency
Rural Development	Poor income due to lack of knowledge	To create awareness about the technologies	1.Nursery technology 2. Flower cultivation 3. Vegetable cultivation 4. Mushroom production 5. Vermicompost production 6. EDP-Home care products	Gaining knowledge about the commercial aspects of the technologies	2 days	5	25 each	Govt. of Tamilnadu
Soil and water management	Lack of knowledge in irrigation and soil conservation	To create knowledge about irrigation and soil conservation techniques	1.Soil conservation 2.Irrigation management	Knowledge improvement in irrigation and soil conservation techniques	2 days	5	25 each	Govt. of Tamilnadu
Paddy / pulses / Groundnut	Un awareness of quality Seed production	To create knowledge regarding Quality seed production	1. Quality seed production	Knowledge Gaining in Quality seed production techniques	2 days	5	50 each	Govt. of Tamilnadu

6. Details of Extension Programmes planned for 2008-09

Month	Block & village	Extension Programme	Specify FLD/OFT in relation to the programme	Expected number of participants		
				Farmers/Farm women/Rural youth	Extension Personnel	Total
April	Pudukkottai	Method demonstration	Value addition in Guava	25	-	25
May	Keeranur	Group meeting	Introduction of new improved variety Sunflower CO.4 & maximizing the yield by new technologies	40	3	43
June	Thirumayam	Field demonstration	Demonstration of 8 row Direct Paddy seeder	50	2	52
July	Alangudi	Method demonstration	EDP – Home care products preparation	25	-	25
August	Vadakadu	Method demonstration	Demonstration on management of banana psuedostem weevil	30	2	32
September	Alangudi	Group meeting	Introduction of new variety in Sesame TMV.5	35	2	37
October	Vadakadu & Keeramangalam	Field demonstration	Demonstration of Aerobic seed drill for upland paddy	50	2	52
November	Thiruvarankulam	Meeting and demonstration	Demonstration on Use of pheromone trap for the	40	2	42

			management of shoot and fruit borer in brinjal			
December	Karambakudi	Meeting	Deworming of calves with Anthelmintics	100	-	100
January	Arimalam	Field day & Method demonstration	Demonstration of 8 row Direct Paddy seeder & Introduction of Four row drum seeder	50	4	54
February	Aranthangi	Method demonstration	Value addition in Guava	25	-	25
March	Thiruvarankulam	Method demonstration	Testing of TC banana G9 variety existing Poovan / Robusta	50	2	52

7. Details of Seeds / Planting Material/ Livestock / Bio products to be produced during 2008-09

Sl.No.	Category	Crop / Enterprise	Variety / Breed	Quantity (kg / No)
1	Production and supply of seed materials			
	Cereals			
	Oilseeds	Ground nut	VRI - 2	700 kg
		Sesame	TMV - 3	1000 kg
	Pulses	Black gram	VBN - 5	900 kg
	Vegetables			
	Flower crops			
	Others (Specify) Green manures	Sun hemp	Co .1	150 kg
2	Production and supply of Planting materials			
	Fruits			
	Spices			
	Vegetables			
	Forest species			
	Ornamental crops			
	Plantation crops	Coconut	ECT	2000 Nos
	Others (Specify)			
3	Production and supply of bio-products			
	Bio agents	Vermicompost		5000 kg
	Bio fertilizers			
	Bio pesticides			
4	Production and supply of livestock material			
	Cattle			
	Sheep			
	Goat			
	Fisheries			
	Others (Specify)			

8. Activities of soil, water and plant testing laboratory

Year of establishment	Expenditure in Rs. (lakhs)	No. of soil samples planned to be analyzed and reported	No. of water samples planned to be analyzed and reported	No. of plant samples planned to be analyzed and reported	Remarks if any
2005	-	1250	250	250	-

9. Details of process documentation planned for 2008-09 in relation to output, outcome and impact

Sl. No.	Title of document	Expected date of submission
	- NIL -	

10. Details of print media coverage planned for 2008-09

Sl.No.	Nature of literature/publications and no. of copies	Proposed title of the publications
1.	Booklet – 250	Eco – friendly management strategies for vegetable pest and diseases
2.	Booklet – 250	Pest management in pulse crops
3.	Booklet – 250	Disease management in cows
4.	Booklet – 250	Forage crops cultivation techniques
5.	Booklet – 250	Preparation of supplementary and weaning foods
6.	Booklet – 250	Processing and preservation of Fruits
7.	Booklet – 250	Preparation of Masala powder
8.	Booklet - 250	Preparation of Banana products
9.	Booklet - 250	Silvipasture technologies for dry tracts
10.	Leaflet – 250	Softwood grafting in Cashew
11.	Leaflet – 250	Care of pregnant and Parturient cows
12.	Leaflet - 250	Feeding Management of Cows
13.	Pamphlet - 250	Beekeeping
14.	Pamphlet – 500	Processing & preservation of mushrooms
15.	Pamphlet - 500	Jack products
16.	Booklet - 100	Paddy cultivation implements
17.	Booklet - 100	Rain water harvesting technologies
18.	Phamplet – 250	Accident prevention tips for tractor operators
19.	Phamplet – 250	Safe operation of threshers
20.	Pamphlet - 200	Mass multiplication of Eucalyptus through cuttings
21.	Pamphlet- 200	Mass multiplication of Pepper through cuttings

22.	Pamphlet- 200	Vegetative propagation of Casuarina through sprigs.
23.	Pamphlet- 200	Physical, mechanical and chemical control of stem borer in silk cotton
24.	Pamphlet- 200	Saucer planting of Eucalyptus and Casuarina
25.	Booklet- 100	Bio diesel plants Jatropha and Pungam

11.Details of electronic media coverage planned for 2008-09

Sl.No.	Nature of media coverage and the no. of activities	Proposed title of the programmes to be telecast / broadcast
1.	All India Radio	Layout of orchards with multi-tier system
2.	All India Radio	Useful technologies for wasteland development
3.	All India Radio	Groundnut cultivation implements
4.	All India Radio	Accident prevention tips for tractor operators
5.	All India Radio	Nutrient deficiency and their reclamation in horticultural crops
6.	All India Radio	Importance of organic farming in fertility maintenance
7.	All India Radio	Tellichery Goat Rearing
8.	All India Radio	Profitable Papaya Cultivation
9.	Doordharsan	Precision Farming of Vegetable crops
10.	Doordarsan	Safe operation of agricultural machines
11.	Doordharsan	Making of Bamboo crafts

12. Nature of collaborative activities planned for 2008-09

Thrust area	Collaborating Organisation	Nature of activities*	No. of activities
SRI	Department of Agriculture	Demonstration of SRI and LCC based nutrient management	3
Low cost poly tunnel for rooting of cuttings	TAFCORN	Establishing poly tunnels with locally available materials	1
Integrated Farming System	RRS, TANUVAS	Training and field visit	1
Mechanization	Department of Agricultural Engineering	Demonstration of Agricultural implements and machines	3
Mulberry cultivation	Department of Sericulture	Off campus training	1
Infertility treatment	Department of Animal Husbandary	Campaign	4
Pisciculture in farm ponds	Department of fisheries	Training and field visit	1
Hardening of vegetatively propagated fruit crops	Department of Horticulture	Establishing shade house for hardening elite clonal materials	1
Creating awareness about E – media	M.S.Swaminathan Research Foundation	An introduction to electronic media – Microsoft Office	1

*Specify the activity like training, meetings, seminars, campaigns, workshops

13. Activities proposed under Farmers Field School (FFS) – Detailed proposal is to be provided in the following format

Title of FFS

Problem definition

Main Objectives of FFS: - NIL -

Scientific rationale of FFS:

The learning process involved in FFS :

Priorities of FFS:

Budget details:

14. Schedule for creation of Database at KVK during 2008-09

S. No	Name of Database	Content of Database	Expected date of Completion
01	Resource inventory of the District	1. Nine fold classification of land 2. Number and size of operational holdings 3. Weather parameters of the district. (for a minimum period of ten years) 4. Details of soil profile 5. Detailed cropping pattern (for a minimum period of ten years) 6. Area, production and productivity of major crops 7. Details of livestock wealth in the district 8. Production and productivity of livestock produces 9. Area under irrigation from different sources 10. Seasonal availability of labour 11. Trend in wholesale price of major crop and livestock products (for a minimum period of ten years) 12. Details on input agencies 13. Details on infrastructural facilities available for production, post harvest and marketing 14. Details of institutional credit facilities 15. Any others relevant to district	15.02.2009

Data required since inception of the KVK			
1.	Farmers Database	Details of farmers	
2.	Technology Inventory for the District	Details of suitable technologies for a district with their details	15.02.2009
3.	Database for Technologies assessed and Refined	Technologies taken up for assessment and refinement with their attributes	
4.	Frontline Demonstrations Database	Details of crops and enterprises along with technologies identified for demonstration	
5.	Training Database	Details of training programmes across all categories and types of participants	
6.	Database of Extension Programmes	Details of extension activities conducted with types of participants	
7.	Seeds and Planting Material Database	Details of crops along with varieties produced and sold	
8.	KVK Inventory of Assets	Details of inventories including all assets explaining year of purchase, present condition etc.	
9.	KVK Accounts Database	Various accounts along with their sanction, expenditure etc.	

15. Are there any activities planned for production and supply (Either buy back or directly farmer to farmer) of seeds/ planting material/Boo-agents etc. In villages (other than KVK farm) so that public private partnership is utilized. Please give details in the following format

Sl.No	Seeds/ planting material / Bio-agent etc.	Name of the public-private partnership arranged	Quantity of output expected (Qtl).
	- NIL -		

16. What is the extent of cultivable wasteland in your district? Are there any specific activities planned to be implemented in these wastelands by the KVK during 2008-09. Please give details.

Extent of cultivable wasteland in Pudukkottai district is 14,246 hectares

Sl.No	Name of activity	Extent of coverage's	
		No.of Farmers	Area(ha)
1	Training / Demonstration to 2 acre beneficiaries (through District Administration)	90	80.0

*individual/SHGs/farmers' associations/corporate/institutions/private agencies etc.

17. National Horticulture Mission (NHM) is being implemented through out the country. You are requested plan for implementing some of the activities envisaged in NHM in your district in collaboration with district head of department of horticulture. Please give details of any such plans for 2008-09

Pudukkottai district is covered under National Horticulture Mission (NHM).KVK scientists will provide technical knowhow and impart trainings to the farmers and extension functionaries. Under NHM, a sum of Rs.17,34,600 / - has been sanctioned for conducting the training the programme to the farmers on the focus crops such as fruits – Mango, banana, cashew, amla, Vegetable – chilies and Flower crop – jasmine. Out of this, during 2007 -08 two fruit crops were completed by providing training to 1,200 farmers and the expenditure incurred was Rs.8,26,000 / =. The remaining targeted programme will be conducted during 2008 -09.

18. Whether ATMA is functioning in your district?

YES, ATMA is functioning in Pudukkottai District. For the year 2007–08, a total budget of Rs.80,000 has been allotted and the trials of various disciplines are in progress.

If yes, what type of coordination and collaboration does your KVK is proposed to have during 2008-09?

Allotment of budget and trials are not yet allotted from the Collectorate, Pudukkottai for the year 2008 – 09.

If Yes, whether Strategic Research and Extension Planning (SREP) has been prepared?

Yes. Strategic Research and Extension Planning (SREP) has been prepared.

19. What type of Scientist-Farmer linkages are proposed by your KVK for 2008-09?

1. National Horticultural Mission – tour, Interaction with farmers and field scientists
2. Farmers tour to TNAU, Coimbatore for Scientist – Farmer interaction
3. IAMWARM – Exposure visit, campaigns and field days
4. Farmers - Scientists interaction through ATMA.
5. Precision farming – tour, Interaction with farmers and field scientists
6. Scientist-Farmer interactions during field days

20. Please give details of activities planned, other than those listed above.

- Training to farmers under NHM on particular Horticultural crops
- Implementing Precision Farming (Drip and Fertigation) of Vegetables and Banana in the District in 60 hectares (Funding from NHM and state Part II schemes)
- Implementing State seed village Scheme
- Implementing FLDs of ATMA
- Macro Management Mode Training to the Extension functionaries
- Implementing IAMWARM World Bank project in South Vellar river sub basin of Pudukkottai district.

III.ACTION PLAN FOR FARM ACTIVITIES

1.Financial status of revolving fund and plan for its utilization

Opening balance as on 01.04.2007	Expenditure incurred during 2007-08	Receipts during 2007-08	Closing balance as on 31.03.2008	Proposed expenditure during 2008-09	Proposed receipts during 2008-09
1,90,181.25	1,21,958.00	2,14,700.75	2,82,924.00	1,25,000.00	2,25,000.00

2.Physical status of revolving fund and plan for its utilization

Crop / Variety	Opening stock position of materials* As on 1.4.2007	Quantity produced during 2007-08	Quantity sold during 2007-08	Closing stock position as on 31.03.2008	Expected production during 2008-09	Expected number of beneficiaries
Blackgram VBN(Bg)-4	-	326 kgs	326 kgs	-	250 kgs	25
Blackgram VBN(Bg)-5	-	-	-	-	500 kgs	50
Greengram VBN(Gg)-2	-	-	-	-	250 kgs	25
Groundnut VRI-2	-	-	-	-	1200 kgs	30
Sunhemp – CO 1	-	-	-	-	100 kgs	10
ECT coconut seedlings	50	2885 no.	1743 no.	1142 no	4000 no.	10

* Product may include seeds, planting material, bio agents/fertilizer, livestock and samples analysed.

3.Plan for utilization of Revolving Fund (2008-09)

Amount to be invested (Rs.)	Purpose	Expected production	Approximate value of the produce (Rs.)
18,000	Seed production in pulses	1000 kgs	45,000
12,000	Seed production in Groundnut	1200 kgs	30,000
40,000	Seedlings production	4000 no.	1, 00, 000

4. Status of KVK farm and Demonstration units

No. of blocks	Area (acre)	Source of irrigation	Season	Crop/enterprise/ demonstration units	Size (no. of units/area)	Expected output	
						Quantity (kgs)	Value (Rs.)
A_2	1.0	Bore well	Rabi/summer 2008-09	Sunhemp	-	50	1,250
A_3	2.0	Bore well	Rabi/summer 2007-08	Blackgram	-	500	22,500
B_2	1.0	Bore well	Rabi/summer 2007-08	Sunhemp	-	50	1,250
C_5	Nursery	Bore well	Rabi/summer 2007-08	Coconut seedlings	2,000 no.	1,600	40,000

IV. PLAN FOR FINANCIAL MANAGEMENT

Table 26. Details of Budget utilization (2007-08) and Proposed during 2008-09

Sl. No.	Particulars	2007-08			2008-09
		Sanctioned	Released	Expenditure	Budget Proposed
1	Pay & Allowances	31,00,000		36,50,296	40,00,000
2	Traveling allowances	1,00,000		63,810	1,00,000
A. Recurring Contingencies					
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2,17,000	38,87,046	1,67,000	2,17,000
B	POL, repair of vehicles, tractor and equipments	1,12,000		1,12,000	1,12,000
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	91,000		71,760	91,000
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	84,000		84,000	84,000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	88,000		88,000	88,000
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	42,000		37,000	42,000
G	Training of extension functionaries	28,000		8,975	28,000
H	Maintenance of buildings	28,000		14,000	28,000
I	Establishment of Soil, Plant & Water Testing Laboratory	-		-	-
J	Library	10,000		10,000	10,000
TOTAL (A)		39,00,000		43,06,841	48,00,000

Table 26. (Continued)

Sl. No.	Particulars	2007-08			2008-09
		Sanctioned	Released	Expenditure	Budget Proposed
B. Non-Recurring Contingencies					
1	Works (Please Specify)				
	i)				
	ii)				
	iii)				
	iv)				
2	Equipments including SWTL & Furniture (Please Specify)				
	i) Computer				1,00,000
	ii) UPS				50,000
	iii)				
	iv)				
	v)				
3	Vehicle (Four wheeler/Two wheeler, please specify)				
	i)				
	ii)				
4	Library (Purchase of assets like books & journals)				
TOTAL (B)					1,50,000
C. REVOLVING FUND					
D. RAIN WATER HARVESTING UNIT		-	-	-	
GRAND TOTAL (A+B+C+D)		39,00,000	38,87,046	43,06,841	49,50,000

SUMMARY OF TARGETS SET FOR NUMBER OF INTERVENTIONS TO BE IMPLEMENTED DURING 2008-09

S. No	Particulars of intervention	Target	
		No. of technologies	Number of Trials
01	Technologies to be assessed	3	15
02	Technologies to be refined	1	5
03	Front Line Demonstration	Area(ha)	Number of Demonstrations
	Oilseeds	10	33
	Pulses	-	20
	Cereal Crops	12	30
	Horticultural Crops	12	50
	Plantation Crops		
	Commercial Crops		
	Enterprises	1	20
04	Training Programmes	Number of Courses	Number of Participants
	Farmers and farm women	42	1640
	Rural Youth	9	320
	Extension personnel	15	480
	Vocational programmes	7	375
	Sponsored programmes	15	75
05	Extension Programmes	Number of Programmes	Number of Participants
		12	507

S. No	Particulars of intervention	Target	
		Quantity (kg) / Number	Number of Farmers
06	Production and supply of seed materials		
	Cereals		
	Oilseeds	Ground nut (VRI . 2) - 700 kg	12
		Sesame TMV. 3 - 900 kg	325

	Pulses	Black gram (VBN . 5) - 900 kg	112
	Vegetables		
	Flower crops		
	Others (Specify)Green manures	Sun hemp (CO.1) - 150 kg	
07	Production and supply of planting materials		
	Fruits		
	Spices		
	Vegetables		
	Forest species		
	Ornamental crops	Coconut (ECT) - 2000 no	50
	Plantation crops		
	Others (Specify)		
08	Production and supply of bio-products		
	Bio agents	Vermicompost – 5000 kg	120
	Bio fertilizers		
	Bio pesticides		
09	Production and supply of livestock material		
	Cattle		
	Sheep	NIL	
	Goat		
	Fisheries		
	Others (Specify)		
10		Number	Number of Farmers
i)	Number of soil samples to be analyzed	1250 no	800
ii)	Number of water samples to be analyzed	250 no	250
iii)	Number of plant samples to be analyzed	250 no	250