IAMWARM

More income per drop of Water

STATUS OF THE PROJECT

Irrigated Agriculture Modernization and Water – Bodies Restoration and Management (IAMWARM) is a multidimensional project that envisages bringing about positive changes in the context of Irrigated Agriculture and Farm ecology & economics, involving multiple stake holders both at facilitation and Implementation levels. The project is proposed to be implemented in 63 sub basins in Tamil Nadu. The Project intends to expand the area under Irrigated Agriculture through effective and efficient Irrigated Water Management practices in order not only to grow more crops per drop, more meat, milk and more fish per drop but also to facilitate the farmer in achieving more income per drop of water that he uses for agriculture. The project formulated with World Bank assistance was approved by the Government with an outlay of Rs.2, 547 crore, over a period of six years from 2007 to benefit 6.17 lakh hectares.

Objective of the Project:

The IAMWARM project aims to improve the service delivery of irrigation systems and productivity of irrigated agriculture with effective integrated water resources management in a sub-basin framework.

Irrigation systems modernisation in a sub-basin framework:

This component seeks to improve bulk water delivery through modernisation of irrigation systems in 63 selected sub-basins with an ayacut of 6.17 lakh hectares. Activities involve tank system modernisation by restoring and repairing water bodies and improving canal irrigation systems through repair and rehabilitation.

Agricultural Intensification and Diversification:

This component builds on the improved bulk water delivery to increase the productivity of agriculture-related activities through improved agricultural intensification and diversification of crops, micro irrigation, Animal Husbandry & Inland Aquaculture.

Institutional Modernisation for Irrigated Agriculture:

It is sought to improve the institutional capacity for irrigation service delivery through the Water Resources Department and the Water Users Associations (WUAs) with technically better designs and in a socially sustainable manner. The Water Users Associations would be utilized to implement Participatory Irrigation Management (PIM) by involving farmers.

Water Resources Management:

The institutional arrangements and capacity for sustainable water resources management is proposed to be improved by the Water Resources Department through the creation of a State Water Resources Management Agency (SWaRMA). Apart from this, water research would be taken up on relevant topics through Irrigation Research Fund (IRF).

Project Implementation (2007-2009)

The project covers an area of 6.17 lakh ha. spread over 63 sub basins out of the 127 sub-basins in the State.

Phase-I - Implementation was initiated during 2007-08 in 9 sub-basins covering an extent of 2.94 Lakh hectare with an outlay of Rs.714.94 crore in respect of all Departments put together. In the first year itself, works have been successfully initiated by all the Departments.

Phase – II -During the financial year 2008-2009, 16 more Sub-Basins with an ayacut of about 0.672 Lakh ha. were taken up with an outlay of Rs.243.25 Crore.

Phase-III - DPR preparation for the 30 Sub Basins have been completed and sent to World Bank for approval. Their observations are being attended to.

Water Resources Department:

In respect of Water Resources Department, for the 9 Sub Basins of the first phase necessary bids have been finalised for 60 packages with an outlay of Rs. 336.979 crore. Works have been commenced in 60 packages. 10 second year packages of PAP have also been commenced at a value of Rs.49.225 crore. For the 16 sub-basins in Phase II selection of agencies are completed in 29 out of 43 packages and works commenced in 21 packages.

Phase-I Sub Basins

Rehabilitation of irrigation infrastructure -9 sub-basins		Proposed	In progress	Completed
a)	Tanks	1495 Nos	915 Nos	172 Nos
b)	Anaicuts	226 Nos	105 Nos	91 Nos
c)	Supply Channels	2851.08 Km	568.14 Km	1379.30 Km

Phase-II Sub Basins

Rehabilitation of irrigation infrastructure -16 sub-basins		Proposed	In progress	Completed
a)	Tanks	312 Nos	65 Nos	1 No
b)	Anaicuts	67 Nos	22 Nos	3 Nos
c)	Supply Channels	413.94 Km	33.55 Km	NIL

Water Users' Association

Under Participatory Irrigation Management elections to nearly 1227 Water Users Associations has been completed in February 2009 and further 1354 WUAs elections are to be held for the III Phase sub-basins in this year 2009.

Agricultural Engineering Department

Micro Irrigation systems have been installed in 4089 hectares and 1078 farm ponds have been constructed. Bids for Farm Mechanisation have been initiated and 643 implements procured are being distributed to WUAs during the current year.

Details of Budget Provision and Expenditure for WRD

(Rs. in Crores)

Sl. No.	Year	Budget allocation (RE/FMA)			Actual Expenditure		
		Tank	Non Tank	Total	Tank	Non Tank	Total
1	2007-08	27.51	34.12	61.63	16.95	17.67	34.62
2	2008-09	163.92	60.74	224.66	141.62	56.36	197.98
	Total	191.43	94.86	286.29	158.57	74.03	232.60

Agriculture Department:

Crop Demonstrations for paddy, pulses, maize, groundnut etc were conducted in 19906 hectares in 25 sub basins. Significant improvement in yield 38% average in paddy (SRI), 53% in Maize and 24% pulses was achieved. An impact area of 184141 hectares has been identified and 145407 hectares was covered.

Exceptional yields were recorded in SRI and Pulses demonstrations i.e.

- ★ Chinnar Sub Basin, Ladapuram Village – Paddy 14370 Kg per hectare as compared to 5613 Kg per hectare in the previous year.

- ★ Arjunanadhi Sub Basin, Ammankoil Patti Village – Pulses (Green gram) 1510 Kg per hectare as compared to 694 Kg per hectare in the previous year

Horticulture Department:

Both by way of Diversification and Transfer of Technology an additional area of 15362 hectares. has been brought under fruits, vegetables and other horticultural crops as on March, 2009 over the 25 sub basins.

Tamil Nadu Agricultural University:

The new System of Rice Intensification (SRI) demonstration was introduced in an area of 2581hectares with an impact area of 10286 hectares. With the SRI technique rice yields have shown 40 to 80 percentage improvement over the conventional practice. In some areas exceptional yields have been achieved.

- ★ In Swethanadhi Sub Basin Anaiyam Patti Village Hybrid Rice recorded 10.4 Tons per hectare under SRI method of cultivation as compared to 6.25 Tons per hectare during previous year.
- ★ Thumbal Village of Upper Vellar Sub Basin using improved production technology of pulses recorded 810 Kg per hectare as compared to 360 Kg per hectare (69% increase in yield) during last year.

Agricultural Marketing:

To assist the farmers to get better price 432 Commodity Groups for diversified crops like Chillies, Maize, Groundnut, Banana etc, have been formed. Memorandum of Understandings between farmers &

companies for different commercial crops like maize, mango, chillies etc., have been facilitated.

Animal Husbandry Department:

To increase the conception rate Infertility and total Veterinary Health Care camps were conducted. To improve milk yield, the availability of green fodder was increased and an additional area of 2668 hectares was brought under fodder cultivation.

Fisheries Department:

The Department has promoted Aquaculture in 232 farm ponds as additional income generating activities. Carp seed rearing in 57 units of net cages has also been promoted. Ten ornamental fish culture units are established to promote rural employment and income to farmers.

The present status of the works in the line departments are as in Table 3

Project Implementation (2009-2010):

During 2009-2010, the Phase III sub-basins covering an extent of 1.84 lakh ha. are proposed to be taken up. The outlay for 2009-10 is Rs. 533.51 crore for all the departments put together. DPRs were prepared and sent to World Bank for approval. Thus most of the works in the sub-basins covering the 3 phases under the IAMWARM project will have been initiated in 2009-2010. The expenditure up to March 2009 is also shown in the tables 1&2

Reimbursement Status

The status of reimbursement for the entire project with details of ACA release is furnished in Table 4

Grant

(Rs. in crores)

Sl. No.	Year	Expenditure under IDA (Tank component)	GOI Grant
1.	2006-07	0.00	0.00
2.	2007-08 (Actuals)	30.23	13.61
3.	2008-09 (Actuals)	186.03	86.55
4.	2009-10 (Proposed)	281.65	126.74
	Total	497.91	226.90

Table 1 - Component wise

Components	Estimate in USD	Estimate in Rs. Crores	Expenditure up to March 2009
A-Irrigation System Modernization	282.83	1273.00	
A1-Tank US$ 241.28 (Rs.1086Cr)			217.87
A2-Other than tanks $ 41.55 (Rs.187Cr)			
B-Agricultural intensification & diversification	166.24	748.00	
B1-Tank $ 117.18 (Rs.527 Cr)			83.22
B2- Other than tanks $ 49.05 (Rs.221Cr)			
C-Institutional Modernization	52.69	237.00	14.49
D-Water Resources Management	5.00	22.50	0.24
E-Project Management Support	8.22	37.50	6.33
Total Base cost	514.98	2318	322.15
Physical contingencies	15.03	67.00	0
Price contingencies	35.99	162.00	0
Total	566.00	2547.00	322.15

The above estimated cost department wise is as below

Table 2 - Department wise

Department	Estimate in USD	Estimate in Rs Crores	Expenditure up to March 2009
Water Resources Organization	348.74	1570.00	238.93
Agriculture	21.79	98.00	7.13
Horticulture	16.17	73.00	21.81
Agri. Engineering	75.40	339.00	18.49
Agri-marketing & Agri- business	20.53	92.50	9.72
TNAU	19.76	88.90	15.66
Animal Husbandry	8.73	39.30	5.77
Fisheries	3.86	17.30	4.64
Total Base cost	514.98	2318.00	322.15
Physical Contingencies	15.03	67.00	0
Price Contingencies	35.99	162.00	0
Total	566.00	2547.00	322.15

Table 3 - Status of activities of Line Departments

Sl. No.	Department	Components	Unit	2007-08		2008-09	
				Program	Acht	Program	Acht (up to March 09)
1.	Agriculture	Crop Demonstrations (Paddy, Maize etc)	Ha	13705	13155	6751	6751
		Financial	Rs. in lakhs	452.220	428.78	392.143	284.23
2.	Horticulture	Area Expansion (Fruits, Vegetables etc)	Ha	6139	6047	9564	9310
		Financial	Rs. in lakhs	659.060	633.01	1615.943	1547.62
3.	TNAU	SRI, Precision Farming etc	Ha	4230	3344	9320	8360
		Financial	Rs. in lakhs	974.260	424.77	2006.14	1140.92
4.	Agri. Marketing	Storage shed drying yards etc	Nos	102	54	* 137	77
		Financial	Rs. in lakhs	883.08	388.54	853.54	583.56
5.	Agri. Engineering	a) Micro irrigation b) Farmpond	Ha Nos	2000 240	2146 240	2000 837	1942 838
		Financial	Rs. in lakhs	2244.980	439.13	1432.54	1409.98
6.	Animal Husbandry	a) Artificial insemination b)Est. of veterinary units	Nos Nos	150000 50	21368 27	319132 38	295878 25
		Financial	Rs. in lakhs	357.14	238.84	432.70	338.32
7.	Fisheries	Aquaculture in Farm ponds	Nos	194	37	418	232
		Financial	Rs. in lakhs	224.690	143.55	320.87	320.78

* Includes spill over works

Table 4 - Details of Reimbursement claimed and ACA released in 2007-08 & 2008-09

(Rs. in Crores)

Sl.No.	Year	Expenditure			Reimbursement Claimed			Claimes Admitted			ACA Released (for claims admitted)		
		Tank	Non Tank	Total	Tank	Non Tank	Total	Tank	Non Tank	Total	Tank	Non Tank	Total
1	2007-08	30.80	27.46	58.26	27.21	25.22	52.43	27.21	24.26	51.47	27.08	24.37	51.45
2	2008-09	192.85	59.83	252.68	173.09	53.84	226.93	172.12	52.67	224.79	40.41	18.96	59.37
	Total	**223.65**	**87.29**	**310.94**	**200.30**	**79.06**	**279.36**	**199.33**	**76.93**	**276.26**	**67.49**	**43.33**	**110.82**

PHYSICAL AND FINANCIAL ACHIEVEMENTS OF LINE DEPARTMENTS

2.1 - WATER RESOURCES DEPARTMENT

Abstract For Phase I & II Sub Basins

Sl. No.	Sub Basin	Total No. of Packages	Total Estimate cost (Rs. In Lakhs)	Packages taken up	Tanks		Anicuts		Supply Channels/Canals		Expenditure (Rs. In Lakhs)	
					Proposed	Achieved	Proposed	Achieved	Proposed	Achieved	During the Year (2008-09)	Up to date
	Phase - I											
	9 Sub Basins	77	42581.80	70	1495	172	226	91	2851.08	1379.30	17306.54	20714.62
	Phase - II											
	16 Sub Basins	43	18445.78	21	312	1	67	3	413.94	0	1072.96	1072.96
	Grand Total	**120**	**61027.58**	**91**	**1807**	**173**	**293**	**94**	**3265.02**	**1379.30**	**18379.50**	**21787.58**

WATER RESOURCES DEPARTMENT

Phase - I Sub basins

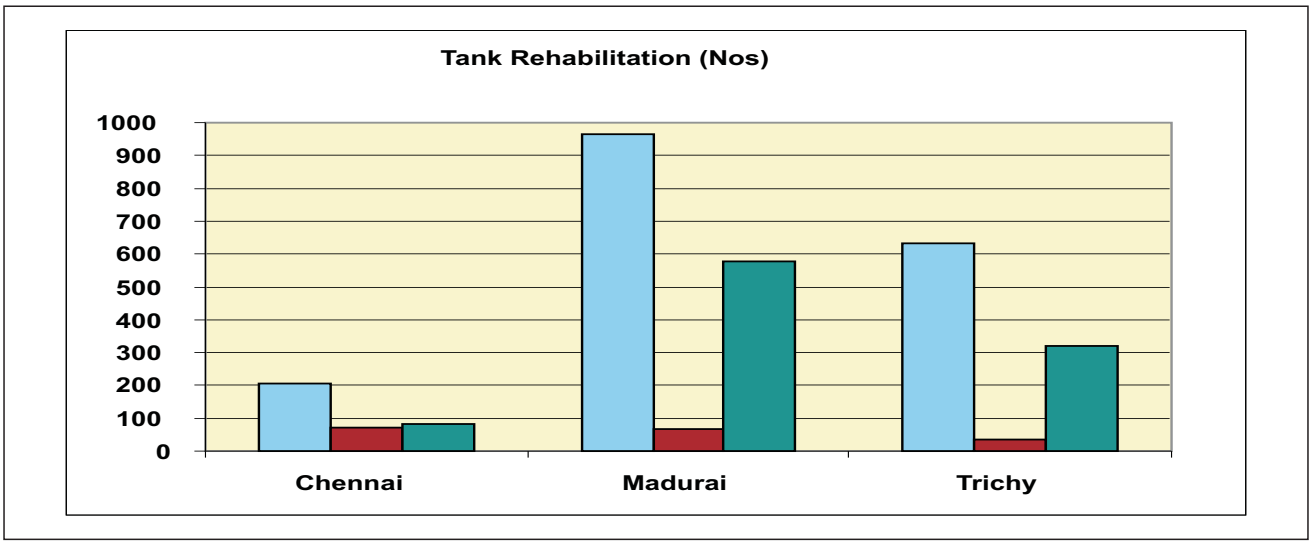
Sl. No.	Sub Basin	Total No. of Packages	Total Estimate cost (Rs. In Lakhs)	Packages taken up	Tanks		Anicuts		Supply Channels/Canals		Expenditure (Rs. In Lakhs)	
					Proposed	Achieved	Proposed	Achieved	Proposed	Achieved	During the Year (2008-09)	Up to date
1	Varahanadhi	12	2387.52	8	137	72	28	13	323.73	155.23	568.44	848.11
2	Upper Vellar	3	2447.70	3	49	34	98	63	253.02	230.53	1898.49	2197.69
3	South Vellar	7	6048.00	7	294	0	29	7	279.81	83.25	2528.20	2749.15
4	Pambar	7	5179.00	7	292	2	20	1	220.70	0	2094.18	2303.01
5	Manimuthar	8	5695.00	8	378	14	31	2	49.88	14.37	2909.91	3159.17
6	Kottakaraiyar	9	4300.90	9	310	50	7	2	199.54	159.57	2493.35	2856.71
7	Arjunanadhi	5	4543.00	2	35	0	13	3	61.51	53.28	1000.91	1093.73
8	Aliyar (PAP)	4	1518.40	4	0	0	0	0	197.03	196.04	1063.30	1453.38
9	Palar (PAP)	12	5755.08	12	0	0	0	0	573.41	425.28	2749.76	4053.67
		10	4707.20	10	0	0	0	0	692.45	61.75		
	Total	**77**	**42581.80**	**70**	**1495**	**172**	**226**	**91**	**2851.08**	**1379.3**	**17306.54**	**20714.62**

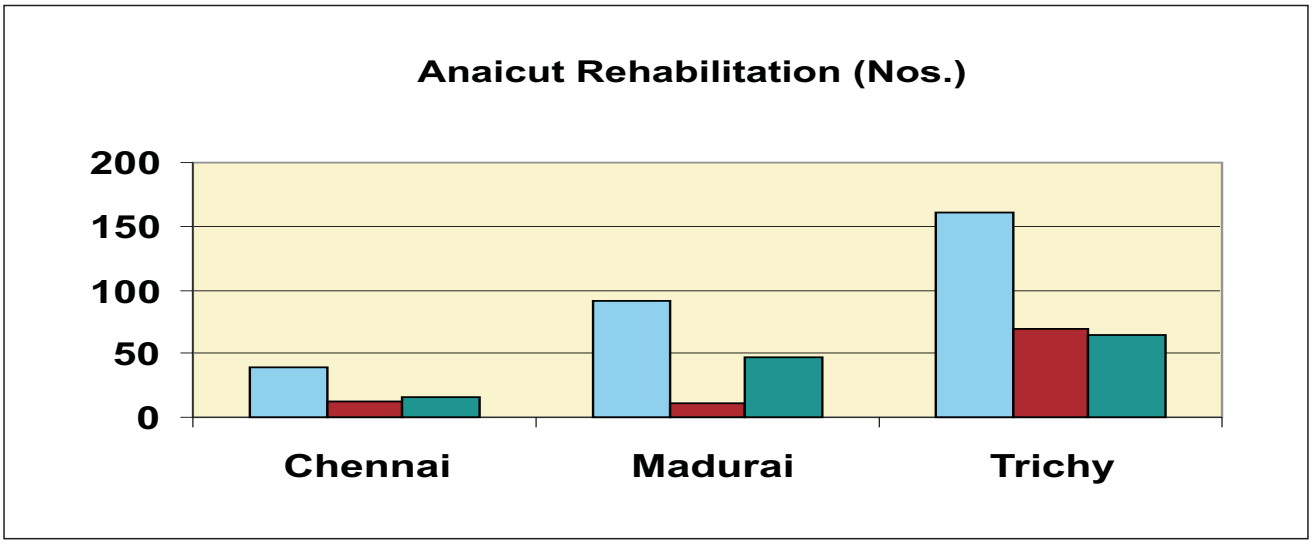
WATER RESOURCES DEPARTMENT

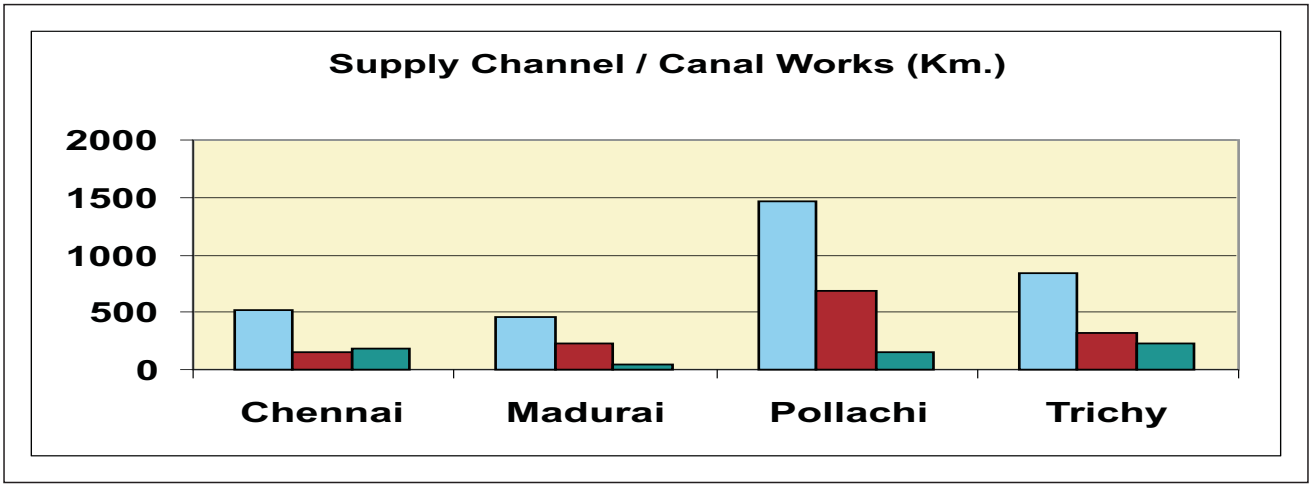
Phase - II Sub basins

Sl. No.	Sub Basin	Total No. of Packages	Total Estimate cost (Rs. In Lakhs)	Packages taken up	Tanks		Anicuts		Supply Channels/Canals		Expenditure (Rs. In Lakhs)	
					Proposed	Achieved	Proposed	Achieved	Proposed	Achieved	During the Year (2008-09)	Up to date
1	Poiney	5	2550.51	2	51	0	0	0	110.17	0	44.41	44.41
2	Koundinyanadhi	2	575.88	1	13	0	0	0	42.10	0	53.62	53.62
3	Pennaiyar upto Krishnagiri	2	682.84	2	6	1	12	0	36.24	0	140.34	140.34
4	Swethanadhi	4	895.00	0	0	0	0	0	0	0	3.98	3.98
5	Anaivariodai	1	220.65	1	16	0	5	0	16.43	0	26.57	26.57
6	Chinnar	2	536.00	1	14	0	4	0	26.74	0	32.03	32.03
7	Agniyar	6	4486.00	1	13	0	3	0	18.60	0	110.00	110.00
8	Ambuliyar	4	2146.00	2	25	0	8	0	19.25	0	80.00	80.00
9	Upper Vaigai	1	201.00	1	10	0	4	0	20.25	0	40.00	40.00
10	Varattar Nagalar	1	157.00	1	7	0	10	3	2.00	0	30.00	30.00
11	Upper Gundar	3	865.00	0	0	0	0	0	0	0	3.86	3.86
12	Therkar	4	2268.40	4	107	0	11	0	102.95	0	175.79	175.79
13	Nichabanadhi	3	1376.00	1	15	0	2	0	3.60	0	43.12	43.12
14	Kalingalar	2	567.50	2	11	0	7	0	10.61	0	140.12	140.12
15	Sindapalli Uppodai	1	122.00	1	6	0	1	0	4.00	0	48.70	48.70
16	Sinkottaiyar	2	796.00	1	18	0	0	0	1.00	0	72.42	72.42
17	Coovum										28.00	28.00
	Total	**43**	**18445.78**	**21**	**312**	**1**	**67**	**3**	**413.94**	**0**	**1072.96**	**1072.96**

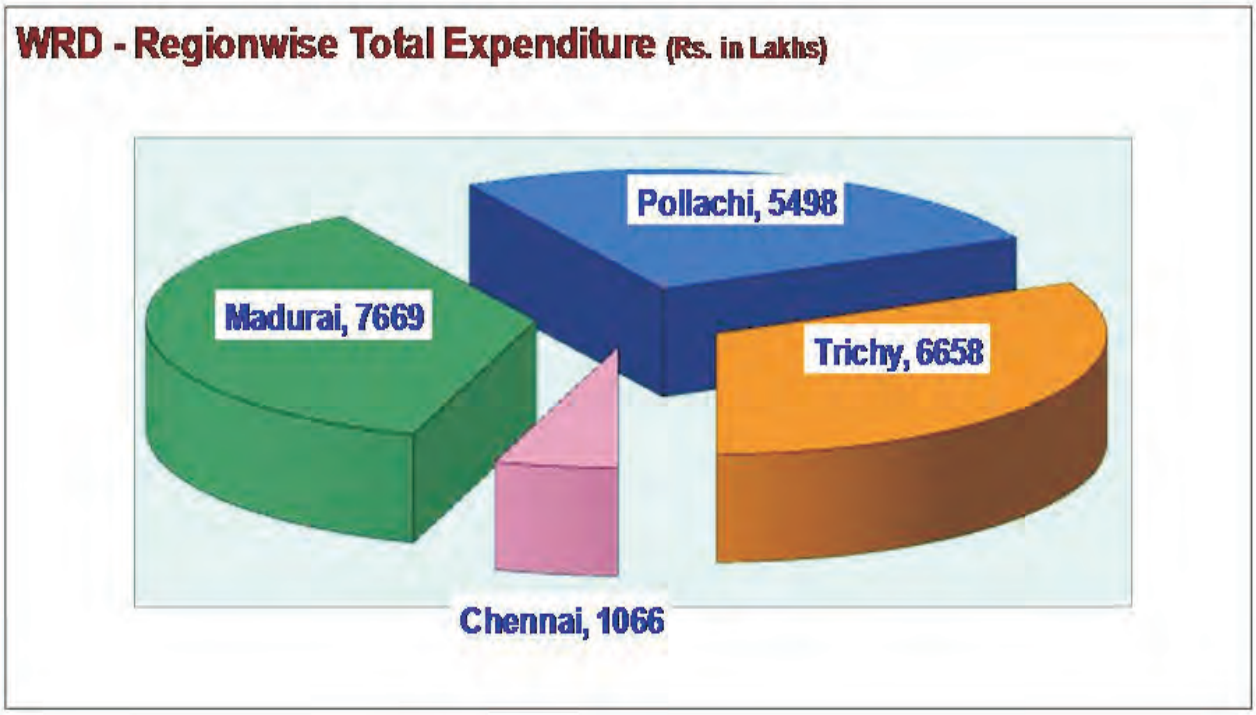
WATER RESOURCES DEPARTMENT – Physical (Regionwise)







Program
Completed
Progress


WRD - Regionwise Total Expenditure (Rs. in Lakhs)
Pollachi, 5498
Madurai, 7669
Trichy, 6658
Chennai, 1066

2.2 - AGRICULTURE DEPARTMENT

Phase I – Physical and Financial Progress (2008-09)

Sl. No	Sub-basins	Crop Demonstrations (Ha.)															Expenditure up to 03/2009 (L. Rs.)
		SRI			Maize			Pulses			Groundnut			Total			
		Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	
1	Varahanadhi	200	200	1425	30	30	310	0	0	0	25	25	250	255	255	1985	15.84
2	Arjunanadhi	250	250	1590	300	300	2480	55	55	525	0	0	0	605	605	4595	18.78
3	Upper Vellar	51	51	375	200	200	2000	40	40	400	0	0	0	291	291	2775	11.59
4	Kottakaraiyar	53	53	462	125	125	1075	21	21	206	0	0	0	199	199	1743	10.68
5	Manimuthar	85	85	700	129	129	1125	26	26	260	0	0	0	240	240	2085	13.23
6	Pambar	40	40	285	48	48	480	60	60	550	80	80	775	228	228	2090	10.50
7	South Vellar	140	140	800	48	48	480	150	150	1460	120	120	1175	458	458	3915	22.57
8	Palar (CBE)	0	0	0	1200	1200	11349	250	250	2488	200	200	1912	1650	1650	15749	52.66
	Palar (Erode)	0	0	0	194	194	1940	0	0	0	0	0	0	194	194	1940	
9	Aliyar	200	200	998	200	200	1980	0	0	0	50	50	425	450	450	3403	25.87
	IAMWARM Cell	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**
	Total	**1019**	**1019**	**6635**	**2474**	**2474**	**23219**	**602**	**602**	**5889**	**475**	**475**	**4537**	**4570**	**4570**	**40280**	**181.72**

AGRICULTURE DEPARTMENT

Phase I – Physical and Financial Progress (Project Total - Up to 2008-09)

Sl. No	Sub-basins	Crop Demonstrations (Ha.)																		Expenditure up to 03/2009 (L. Rs.)
		Paddy Tech. / SRI			Maize			Pulses			Groundnut			Cotton			Total			
		Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	
1	Varahanadhi	200	200	1275	105	108	1095	0	0	0	25	25	10	0	0	0	330	333	2380	24.59
2	Arjunanadhi	830	830	5650	788	788	7360	451	417	4085	0	0	0	300	369	2882	2369	2404	19977	44.18
3	Upper Vellar	451	451	3175	688	701	7010	140	140	1350	85	85	850	0	0	0	1364	1377	12385	49.65
4	Kottakaraiyar	553	553	3962	733	733	6995	1094	766	7581	200	146	1460	0	0	0	2580	2198	19998	41.98
5	Manimuthar	835	835	5950	649	649	6160	951	866	8580	100	100	1000	0	0	0	2535	2450	21690	52.28
6	Pambar	290	290	2003	864	864	8350	1065	1065	10510	305	305	2925	0	0	0	2524	2524	23788	54.98
7	South Vellar	1690	1541	10567	148	148	1430	1025	1025	10130	433	433	4225	0	0	0	3296	3147	26352	88.41
8	Palar (CBE)	0	0	0	1828	1828	17567	250	250	2488	421	399	3292	0	0	0	2499	2477	23347	200.79
	Palar (Erode)	0	0	0	298	338	3356	4	4	40	0	0	0	0	0	0	302	342	3396	
9	Aliyar	200	200	998	200	200	1980	0	0	0	76	73	645	0	0	0	476	473	3623	51.04
	IAMWARM Cell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.60
	Total	**5049**	**4900**	**33580**	**6301**	**6357**	**61303**	**4980**	**4533**	**44764**	**1645**	**1566**	**14407**	**300**	**369**	**2882**	**18275**	**17725**	**156936**	**610.50**

AGRICULTURE DEPARTMENT

Phase II – Physical and Financial Progress (2008-09)

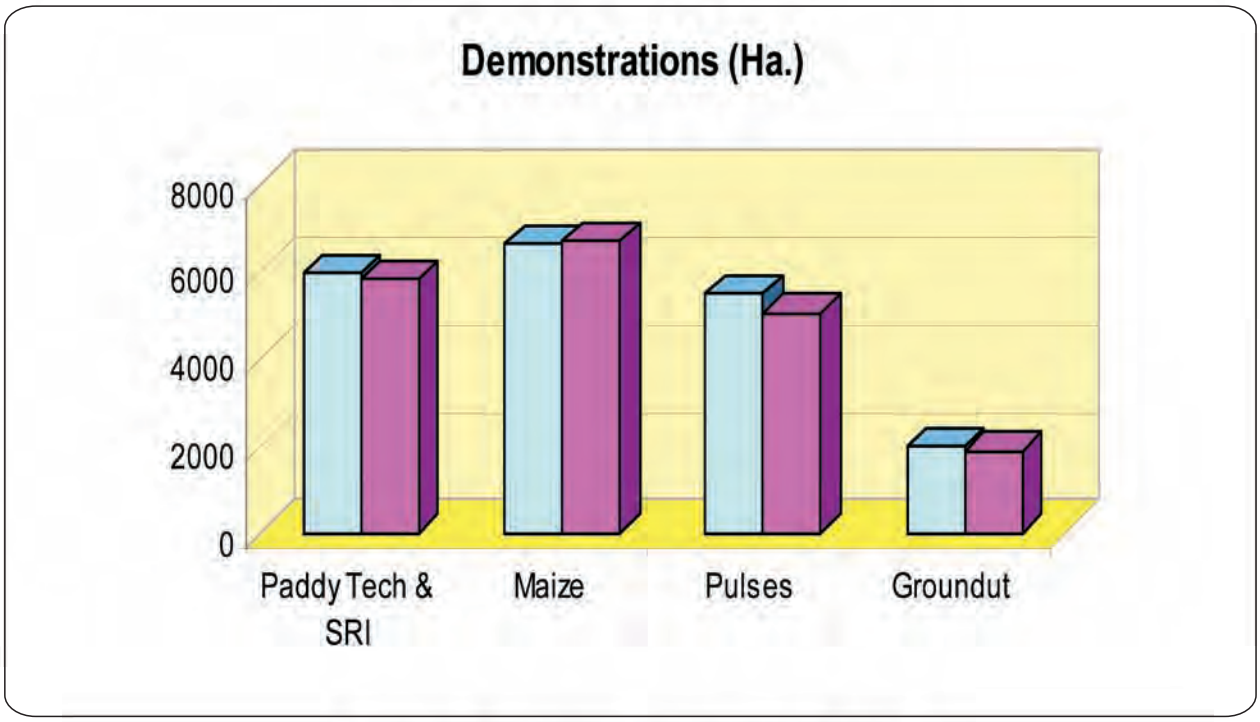
Sl. No	Sub-basins	Crop Demonstrations (Ha.)																		Expenditure up to 03/2009 (L. Rs.)
		SRI			Maize			Pulses			Groundnut			Ragi			Total			
		Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.	
1	Pennaiyar	80	80	560	0	0	0	0	0	0	0	0	0	100	100	**990**	180	180	1550	8.88
2	Swethanadhi	15	15	150	75	75	750	10	10	100	27	27	270	0	0	**0**	127	127	1270	6.11
3	Anaivari Odai	20	20	140	5	5	50	15	15	150	5	5	50	0	0	**0**	45	45	390	2.85
4	Chinnar	60	60	423	15	15	150	20	20	200	0	0		0	0	**0**	95	95	773	6.43
5	Agniyar	150	150	988	80	80	790	105	105	1030	75	75	745	0	0	**0**	410	410	3553	20.97
6	Ambuliyar	120	120	840	22	22	220	62	62	605	50	50	490	0	0	**0**	254	254	2155	11.59
7	Upper Vaigai	10	10	65	5	5	40	15	15	145	0	0	0	0	0	**0**	30	30	250	1.57
8	Varattar-Nagalar	0	0	0	10	10	90	10	10	100	0	0	0	0	0	**0**	20	20	190	0.95
9	Nichabanadhi	50	50	312	30	30	300	30	30	295	0	0	0	0	0	**0**	110	110	907	2.16
10	Kalingalar	30	30	196	10	10	300	30	30	300	0	0	0	0	0	**0**	70	70	796	1.32
11	Sindapalli Uppodai	5	5	35	5	5	50	5	5	30	0	0	0	0	0	**0**	15	15	115	0.71
12	Senkottaiyar	5	5	35	15	15	200	20	20	190	0	0	0	0	0	**0**	40	40	425	1.33
13	Upper Gundar	80	80	560	0	0	0	40	40	385	0	0	0	0	0	**0**	120	120	945	6.66
14	Thekar	200	200	1400	0	0	0	40	40	390	0	0	0	0	0	**0**	240	240	1790	12.16
15	Poiney	70	70	446	50	50	450	70	70	693	125	125	1240	0	0	**0**	315	315	2829	13.67
16	Koundaniyanadhi	20	20	135	20	20	190	30	30	280	40	40	385	0	0	**0**	110	110	990	4.50
17	IAMWARM Cell																			0.65
	Total	**915**	**915**	**6285**	**342**	**342**	**3580**	**502**	**502**	**4893**	**322**	**322**	**3180**	**100**	**100**	**990**	**2181**	**2181**	**18928**	**102.51**

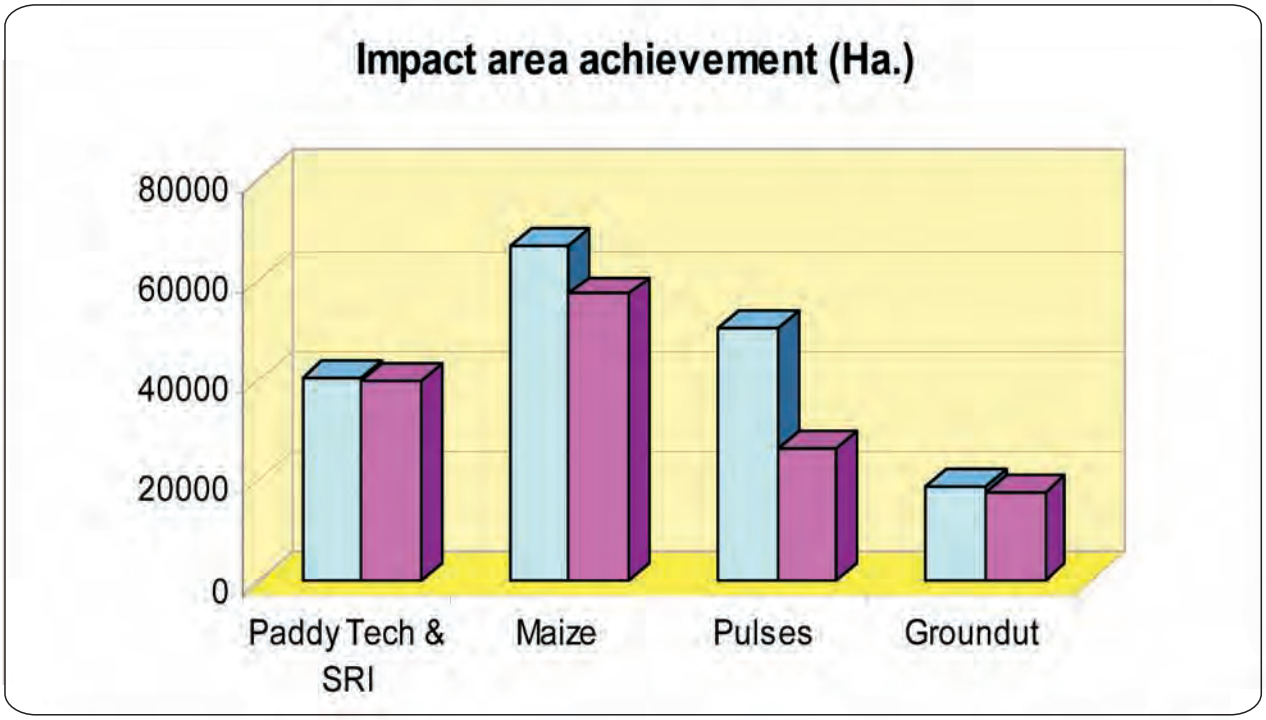
AGRICULTURE DEPARTMENT

Phase I & II – Consolidated Physical and Financial Achmts. (Project total up to 2008-09)

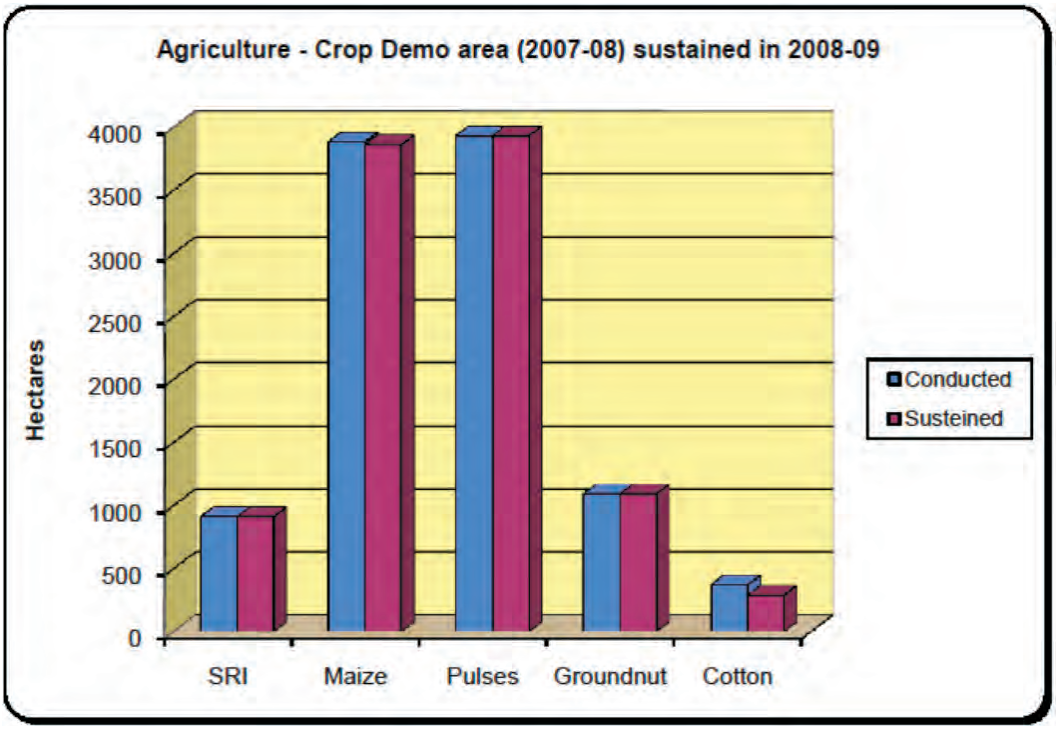
Sl. No.	Activities	Phase I			Phase II			Grand Total		
		Phy	Ach	Imp.	Phy	Ach	Imp.	Phy	Ach	Imp.
I	**CROP DEMONSTRATIONS (Ha.)**									
1	Paddy: a) Technical	4030	2969	20728	0	0	0	4030	2969	20728
	b) SRI	1019	1931	13002	915	915	6285	1934	2846	19287
	Total	**5049**	**4900**	**33730**	**915**	**915**	**6285**	**5964**	**5815**	**40015**
2	Hybrid Maize	6301	6357	53697	342	342	3580	6643	6699	57277
3	Pulses	4980	4533	21523	502	502	4893	5482	5035	26416
4	Groundnut	1645	1566	14647	322	322	3180	1967	1888	17827
5	Cotton	300	369	2882	0	0	0	300	369	2882
6	Ragi	0	0	0	100	100	990	100	100	990
	TOTAL	**18275**	**17725**	**126479**	**2181**	**2181**	**18928**	**20456**	**19906**	**145407**
II	**FINANCE (L. RS.)**									
1	Agri. activities		607.90			101.86			709.76	
2	IAMWARM Cell		2.60			0.65			3.25	
	TOTAL		**610.50**			**102.51**			**713.01**	

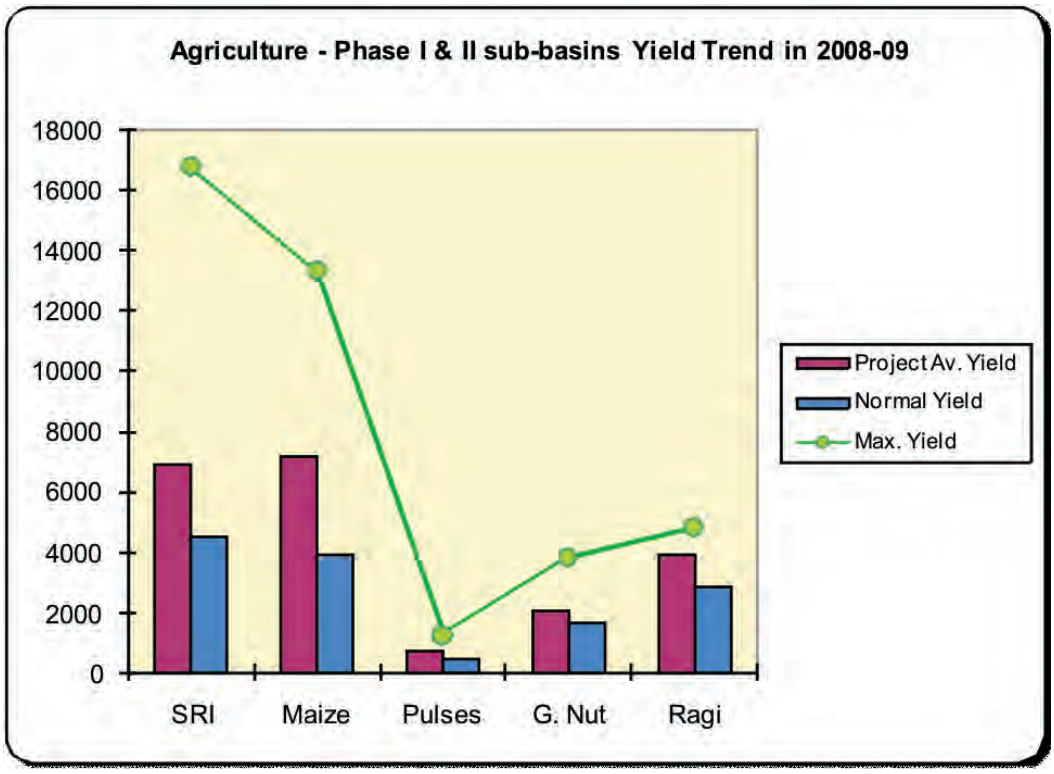
Agriculture Department





Agriculture Department





2.3 - TAMIL NADU AGRICULTURAL UNIVERSITY

Cumulative Project Total and Yearly Progress Report for Phase I (2007 - 08 & 2008 - 09) I & II year

(Area in Ha)

Sl. No.	Sub Basin	SRI			Maize			Rice Fallow Pulses			Others			Precision Farming			Production technology for thronless bamboo			Intercropping of cocoa in coconut			Casuarina saucer planting			Model village and organic farming	
		Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach
1	Varahanadhi	1000	1000	1553	103	103	720	756	756	560	212	212	1090	-	-	-	40	40	25	-	-	-	-	-	-	20	20
2	Upper Vellar	500	500	2275	110	110	630	775	525	2240	270	270	1685	618	-	-	-	-	-	-	-	-	-	-	-	20	20
3	South Vellar	300	300	1397	105	105	575	490	415	2162	46	46	460	50	-	-	-	-	-	-	-	-	-	-	-	20	20
4	Pambar	225	225	1275	59	59	20	487	487	1675	50	50	500	-	-	-	-	-	-	-	-	-	143	123	-	20	20
5	Manimuthar	205	217	1225	50	50	-	205	205	-	96	96	500	72	-	-	-	-	-	-	-	-	-	-	-	20	20
6	Kotakaraiyar	70	70	5	88	76	5	70	20	-	50	50	5	186	-	-	-	-	-	-	-	-	-	-	-	20	20
7	Arjunanadhi	500	496	1879	120	120	876	350	150	-	220	219	700	22	20	-	-	-	-	-	-	-	-	-	-	20	20
8	Aliyar	300	300	1400	-	-	-	270	220	200	96	96	522	350	-	-	-	-	-	400	303	-	-	-	-	20	20
9	Palar	-	-	-	35	35	600	200	200	1000	235	235	1150	625	-	-	-	-	-	-	-	-	-	-	-	20	20
	Total	3100	3108	11009	670	658	3426	3603	2978	7837	1275	1274	6612	1923	20	-	40	40	25	400	303	-	143	123	-	180	180

Yearly Progress Report for Phase I (2008 - 09) II Year

(Area in Ha)

Sl. No.	Sub Basin	SRI			Maize			Rice Fallow Pulses			Others			Precision Farming			Production technology for thronless bamboo			Intercropping of cocoa in coconut			Casurina Saucer Planting method		
		Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp
1	Varahanadhi	616	616	1150	62	62	620	656	656	460	54	54	540	-	-	-	20	20	5	-	-	-	-	-	-
2	Upper Vellar	250	250	1750	-	-	-	425	175	1750	125	125	1250	399	-	-	-	-	-	-	-	-	-	-	-
3	South Vellar	185	185	1295	55	55	550	375	300	2162	46	46	460	50	-	-	-	-	-	-	-	-	-	-	-
4	Pambar	175	175	1225	-	-	-	325	325	1575	50	50	500	-	-	-	-	-	-	-	-	-	60	60	-
5	Manimuthar	175	175	1225	50	50	-	175	175	-	50	50	500	51	-	-	-	-	-	-	-	-	-	-	-
6	Kotakaraiyar	50	50	5	40	28	5	50	-	-	37	37	5	108	-	-	-	-	-	-	-	-	-	-	-
7	Arjunanadhi	250	246	1379	65	65	456	250	50	-	100	99	-	22	20	-	-	-	-	-	-	-	-	-	-
8	Aliyar	100	100	600	-	-	-	100	50	200	-	-	-	40	-	-	-	-	-	300	203	-	-	-	-
9	Palar	-	-	-	-	-	-	200	200	1000	200	200	1050	300	-	-	-	-	-	-	-	-	-	-	-
	Total	**1801**	**1797**	**8629**	**272**	**260**	**1631**	**2556**	**1931**	**7147**	**662**	**661**	**4305**	**970**	**20**	**-**	**20**	**20**	**5**	**300**	**203**	**-**	**60**	**60**	**-**

TAMIL NADU AGRICULTURAL UNIVERSITY

Yearly Progress Report for Phase II (2008 - 09) I Year

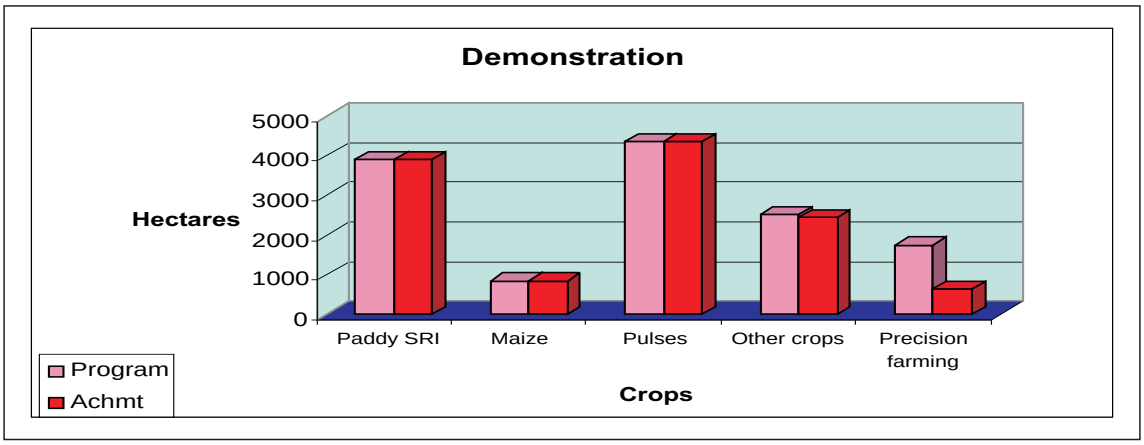
(Area in Ha)

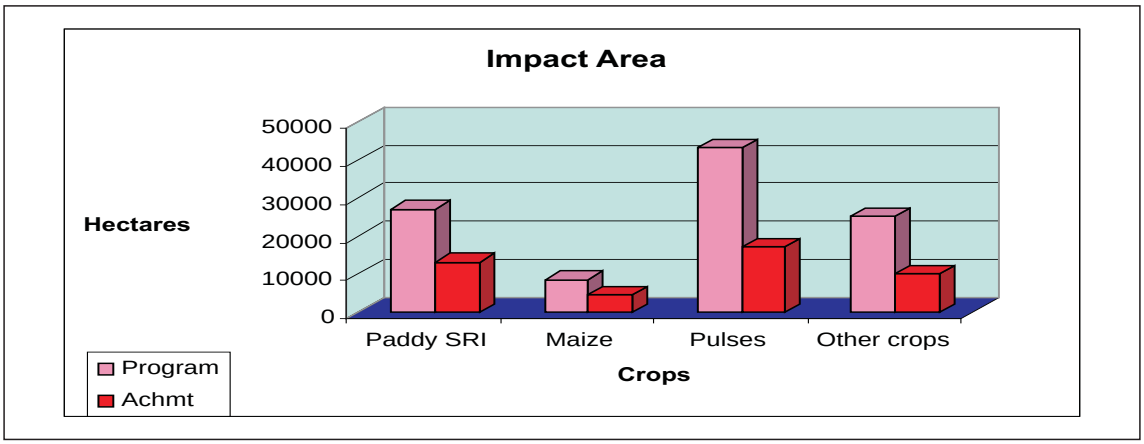
Sl. No.	Sub Basin	SRI			Maize			Rice Fallow Pulses			Others			Precision Farming			Production technology for thronless bamboo			Intercropping of cocoa in coconut			Model village and organic farming			Quality Seed Production	
		Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach	Imp	Tar	Ach
1	Agniyar	100	100	280	-	-	-	100	100	410	-	-	-	-	-	-	25	25	-	150	150	-	10	10	-	10000	10000
2	Ambuliyar	100	100	700	30	30	300	150	150	1500	25	25	250	10	10	50	25	25	50	50	50	100	20	20	-	10010	10010
3	Chinnar	50	50	270	-	-	-	50	10	100	70	45	250	-	-	-	-	-	-	-	-	-	10	8	-	10	10
4	Anaivari Odai	30	30	154	-	-	-	30	10	-	-	-	-	10	-	-	-	-	-	-	-	-	20	15	-	-	-
5	Nichaba Nadhi	80	80	20	30	30	30	90	22	-	40	17	0	15	-	-	-	-	-	-	-	-	10	10	-	10	10
6	Kalilgalar	40	31	-	20	2	-	50	-	-	30	4	-	-	-	-	-	-	-	-	-	-	20	-	-	10	-
7	Sindapalli Uppodai	5	5	4	-	-	-	5	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Senkottaiyar	10	10	-	25	12	-	35	35	-	15	6	-	-	-	-	-	-	-	-	-	-	20	-	-	20	20
9	Therkar	100	100	37	-	-	-	100	30	-	-	-	-	25	-	-	-	-	-	-	-	-	10	10	-	50	35
10	Upper Gundar	30	30	-	15	15	150	30	30	50	30	30	200	5	-	-	-	-	-	-	-	-	10	10	-	10	10
11	Poiny	160	156	250	20	19	20	210	199	270	70	70	460	25	-	-	-	-	-	-	-	-	20	20	-	10	10
12	Koundnaya Nadhi	40	40	250	20	20	200	53	53	230	70	69	700	10	-	-	-	-	-	-	-	-	20	20	-	25	25
13	Varattar Nagalar	-	-	-	20	20	200	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-
14	Upper Vaigai	-	-	-	-	-	-	-	-	-	-	-	-	15	15	-	-	-	-	-	-	-	10	10	-	2	2
15	Swetha Nadhi	25	25	175	-	-	-	25	25	250	71	71	710	5	5	25	-	-	-	-	-	-	20	20	-	-	-
16	Pennaiyar upto Krishnagiri	10	10	13	-	-	-	10	10	-	-	-	-	40	30	-	-	-	-	-	-	-	20	20	-	-	-
	Total	**780**	**767**	**2153**	**180**	**148**	**900**	**938**	**679**	**2812**	**421**	**337**	**2570**	**170**	**70**	**75**	**50**	**50**	**50**	**200**	**200**	**100**	**220**	**173**	**-**	**20157**	**20132**

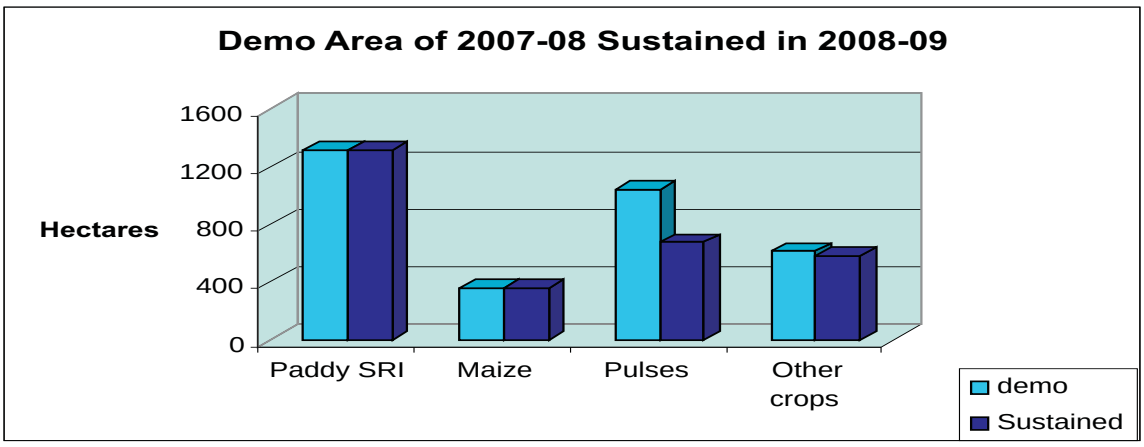
Financial Progress Upto 31.03.2009

(Rs. in Lakhs)

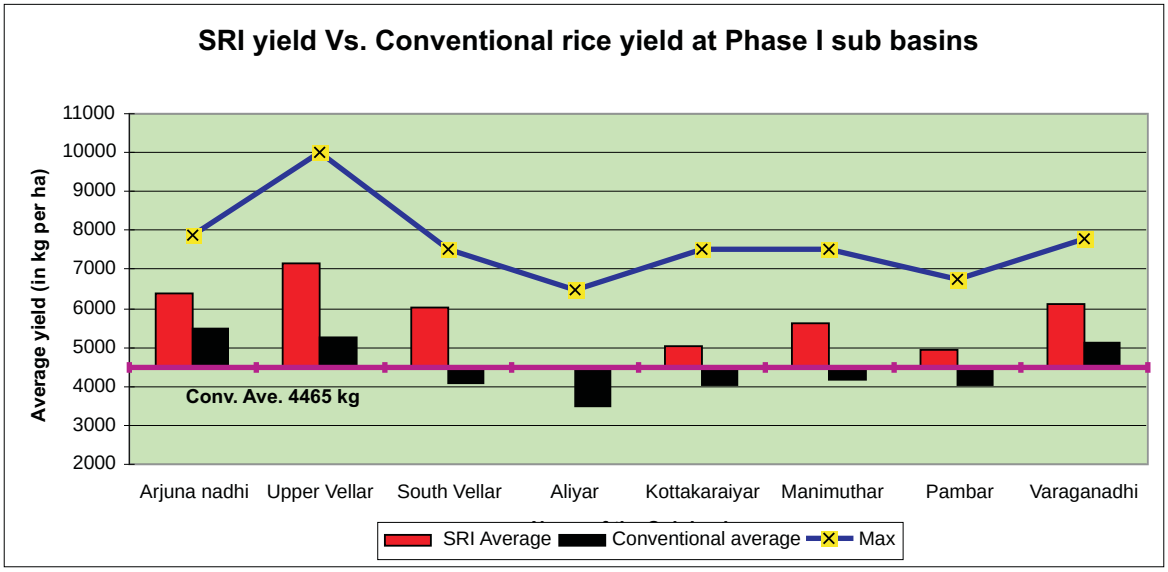
Sl. No.	Sub Basin	2007-08	2008-09	Cummulative Expr. upto 31.03.09
	Phase I			
1	Aliyar	66.53	109.61	176.14
2	Palar	40.48	133.56	174.04
3	Upper Vellar	78.07	163.37	241.44
4	South Vellar	27.00	56.69	83.69
5	Varahanadhi	70.41	92.10	162.51
6	Pambar	33.07	45.27	78.34
7	Kottakaraiyar	23.71	24.33	48.04
8	Manimuthar	22.30	51.03	73.33
9	Arjunanadhi	49.01	50.74	99.75
	IAMWARM Cell	14.19	0.00	14.19
	Total (Phase I)	**424.77**	**726.70**	**1151.47**
	Phase II			
1	Anaivari Odai		6.99	6.99
2	Chinnar		17.34	17.34
3	Agniyar		66.43	66.43
4	Ambuliar		47.74	47.74
5	Upper Vaigai		11.81	11.81
6	Varattar-Nagalar		9.41	9.41
7	Upper Gundar		14.86	14.86
8	Therkar		40.21	40.21
9	Nichabanadhi		31.01	31.01
10	Kalingalar		17.46	17.46
11	Sindapalli Uppodai		2.30	2.30
12	Senkottaiyar		6.07	6.07
13	Coovum		0.00	0.00
14	Pennaiyar upto Krishnagiri		27.62	27.62
15	Poiney		50.88	50.88
16	Koundanyanadhi		25.87	25.87
17	Swathanadhi		20.26	20.26
18	IAMWARM Cell		17.96	17.96
	Total (Phase II)	**0.00**	**414.22**	**414.22**
	Grand Total	**424.77**	**1140.92**	**1565.69**


Demonstration
Hectares
5000
4000
3000
2000
1000
0
Paddy SRI
Maize
Pulses
Other crops
Precision farming
Crops
Program
Achmt


Impact Area
Hectares
50000
40000
30000
20000
10000
0
Paddy SRI
Maize
Pulses
Other crops
Crops
Program
Achmt


Demo Area of 2007-08 Sustained in 2008-09
Hectares
1600
1200
800
400
0
Paddy SRI
Maize
Pulses
Other crops
demo
Sustained

Yield Analysis



The conventional average yield of rice over the 8 sub basins of TN - IAMWARM Project is computed to be 4465 kg/ha.

The highest SRI average was recorded at Upper Vellar (7140 kg/ha) followed by Arjunanadhi sub basin (6375 kg/ha) and Varahanadhi (6122 kg/ha).

A maximum and an average yield of 9987 and 7140 kg/ha were recorded at Upper Vellar sub basin respectively.

The lowest average SRI yield of 4488 kg/ha has been recorded at Aliyar sub basin followed by 4924 kg/ha at Pambar.

2.4 - HORTICULTURE DEPARTMENT

Phase I - Physical and Financial Progress (2008-09)

Sl. No.	Sub-basins	Crops (Ha.)														2nd year Maintenance (Ha.)						Grand Total		Expenditure upto 03/2009 (L. Rs.)
		Fruits		Vegetables		Flowers		Spices		Medicinal		Plantation		Total		Fruits		Plantation Crops		Total				
		Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	
1	Varahanadhi	130	115	546	546	57	57	47	47	0	0	200	200	**980**	**965**	100	110	0	0	**100**	**110**	**1080**	**1075**	183.74
2	Upper Vellar	30	30	400	400	0	0	150	150	0	0	20	20	**600**	**600**	0	0	20	20	**20**	**20**	**620**	**620**	110.17
3	South Vellar	150	150	350	350	0	0	150	150	0	0	200	200	**850**	**850**	50	50	0	0	**50**	**50**	**900**	**900**	127.22
4	Pambar	150	150	275	275	0	0	75	75	0	0	200	200	**700**	**700**	50	50	0	0	**50**	**50**	**750**	**750**	96.14
5	Manimuthar	110	110	275	275	0	0	370	370	0	0	0	0	**755**	**755**	65	15	0	0	**65**	**15**	**820**	**770**	118.85
6	Kottakaraiyar	110	110	255	255	0	0	505	505	0	0	0	0	**870**	**870**	105	57	0	0	**105**	**57**	**975**	**927**	131.01
7	Arjunanadhi	110	110	350	350	0	0	380	380	160	160	0	0	**1000**	**1000**	60	60	0	0	**60**	**60**	**1060**	**1060**	165.64
8	Aliyar	190	190	80	80	0	0	0	0	0	0	390	390	**660**	**660**	0	0	200	200	**200**	**200**	**860**	**860**	88.35
9	Palar - CBE & Erode	150	150	595	595	0	0	70	70	0	0	25	25	**840**	**840**	100	100	50	50	**150**	**150**	**990**	**990**	158.00
	IAMWARM Cell																							0
	Total	**1130**	**1115**	**3126**	**3126**	**57**	**57**	**1747**	**1747**	**160**	**160**	**1035**	**1035**	**7255**	**7240**	**530**	**442**	**270**	**270**	**800**	**712**	**8055**	**7952**	**1179.12**

HORTICULTURE DEPARTMENT

Phase I - Physical and Financial Progress (Project Total - up to 2008-09)

Sl. No.	Sub-basins	Crops (Ha.)														2nd year Maintenance (Ha.)						Grand Total		Expenditure upto 03/2009 (L. Rs.)
		Fruits		Vegetables		Flowers		Spices		Medicinal		Plantation		Total		Fruits		Plantation Crops		Total				
		Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	
1	Varahanadhi	415	320	1021	1014	142	145	72	59	0	0	250	360	**1900**	**1898**	100	110	0	0	**100**	**110**	**2000**	**2008**	278.89
2	Upper Vellar	49	49	755	770	0	0	250	250	30	0	20	40	**1104**	**1109**	0	0	20	20	**20**	**20**	**1124**	**1129**	160.96
3	South Vellar	300	325	800	800	0	0	200	200	0	0	400	300	**1700**	**1625**	50	50	0	0	**50**	**50**	**1750**	**1675**	219.73
4	Pambar	350	320	500	640	0	0	150	115	0	0	400	300	**1400**	**1375**	50	50	0	0	**50**	**50**	**1450**	**1425**	169.58
5	Manimuthar	200	205	545	560	0	0	445	420	0	0	0	0	**1190**	**1185**	65	15	0	0	**65**	**15**	**1255**	**1200**	167.78
6	Kottakaraiyar	270	270	390	465	0	0	805	705	0	0	0	0	**1465**	**1440**	105	57	0	0	**105**	**57**	**1570**	**1497**	195.21
7	Arjunanadhi	292	292	651	651	20	20	380	380	622	622	0	0	**1965**	**1965**	60	60	0	0	**60**	**60**	**2025**	**2025**	251.45
8	Aliyar	405	377	130	130	0	0	60	98	0	0	590	590	**1185**	**1195**	0	0	200	200	**200**	**200**	**1385**	**1395**	136.63
9	Palar - CBE & Erode	330	334	910	951	0	0	170	135	0	0	75	75	**1485**	**1495**	100	100	50	50	**150**	**150**	**1635**	**1645**	227.92
	IAMWARM Cell																							3.98
	Total	**2611**	**2492**	**5702**	**5981**	**162**	**165**	**2532**	**2362**	**652**	**622**	**1735**	**1665**	**13394**	**13287**	**530**	**442**	**270**	**270**	**800**	**712**	**14194**	**13999**	**1812.13**

HORTICULTURE DEPARTMENT

Phase II - Physical and Financial Progress (2008-09)

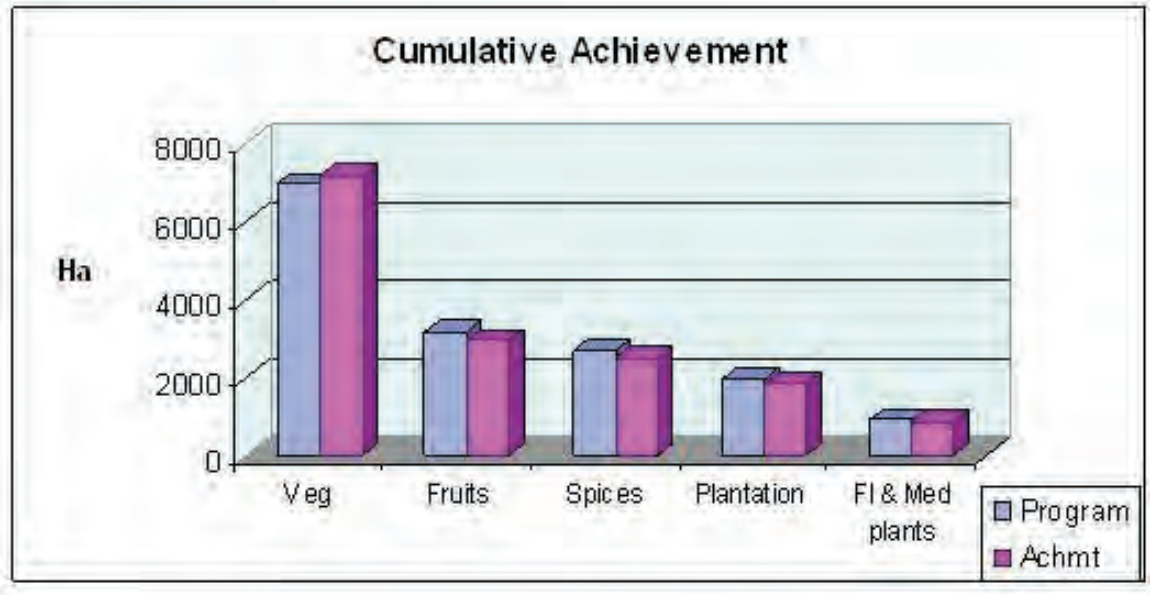
Sl. No.	Sub-basins	Crops (Ha.)														Expenditure upto 03/2009 (L. Rs.)
		Fruits		Vegetables		Flowers		Spices		Medicinal		Plantation		Total		
		Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	
1	Swethanadhi	24	24	135	135	0	0	0	0	0	0	0	0	159	159	**26.66**
2	Agniyar	156	117	138	86	0	0	17	17	0	0	181	150	492	370	**59.60**
3	Ambuliyar	50	15	60	33	0	0	25	15	0	0	50	30	185	93	**27.89**
4	Senkottaiyar	5	5	10	10	0	0	15	15	0	0	0	0	30	30	**4.70**
5	Sindapalli Uppodai	5	5	10	10	0	0	20	20	10	10	0	0	45	45	**5.37**
6	Chinnar	**38**	38	**20**	20	**0**	0	**30**	30	**0**	0	**0**	0	88	88	**12.90**
7	Anaivariodai	0	0	27	27	0	0	0	0	0	0	0	0	27	27	**4.33**
8	Varattar Nagalar	**0**	0	**45**	45	**0**	0	**0**	0	**0**	0	**0**	0	45	45	**6.90**
9	Upper Vaigai	10	10	10	10	0	0	0	0	0	0	0	0	20	20	**4.59**
10	Nishabanadhi	40	30	71	71	0	0	0	0	0	0	0	0	111	101	**27.55**
11	Kalingalar	20	20	30	30	0	0	0	0	0	0	0	0	50	50	**10.21**
12	Upper Gundar	25	25	150	150	22	22	5	5	0	0	0	0	202	202	**30.31**
13	Therkar	65	65	160	160	0	0	0	0	0	0	0	0	225	225	**35.70**
14	Poiney	70	70	240	240	10	10	30	30	0	0	0	0	350	350	**57.23**
15	Koundinyanadhi	15	15	110	110	0	0	0	0	0	0	0	0	125	125	**20.92**
16	Penniyar	40	40	75	75	40	30	0	0	0	0	0	0	155	145	**24.44**
17	IAMWARM Cell															**9.20**
	Total	**563**	**479**	**1291**	**1212**	**72**	**62**	**142**	**132**	**10**	**10**	**231**	**180**	**2309**	**2075**	**368.50**

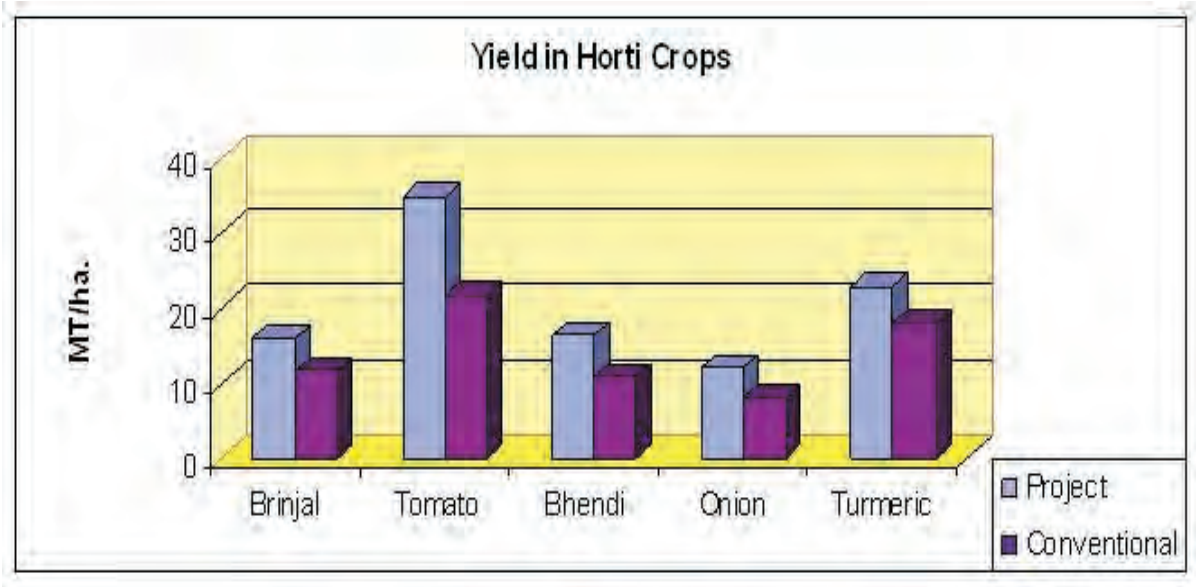
HORTICULTURE DEPARTMENT

Phase I & II Consolidated Physical and Financial Progress (Project Total - up to 2008-09)

Sl. No.	Sub-basins	Crops (Ha.)														2nd year Maintenance (Ha.)						Grand Total		Expen-diture upto 03/2009 (L. Rs.)
		Fruits		Vegetables		Flowers		Spices		Medicinal		Plantation		Total		Fruits		Plantation Crops		Total				
		Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	Phy	Ach	
1	Phase I	2611	2492	5702	5981	162	165	2532	2362	652	622	1735	1665	13394	13287	530	442	270	270	800	712	14194	13999	1812.13
2	Phase II	563	479	1291	1212	72	62	142	132	10	10	231	180	2309	2075	0	0	0	0	0	0	0	0	368.50
3	**Grand Total**	**3174**	**2971**	**6993**	**7193**	**234**	**227**	**2674**	**2494**	**662**	**632**	**1966**	**1845**	**15703**	**15362**	**530**	**442**	**270**	**270**	**800**	**712**	**14194**	**13999**	**2180.63**

HORTICULTURE DEPARTMENT





2.5 – AGRICULTURAL ENGINEERING DEPARTMENT

Phase I (9) and Phase II (16) Sub basins
Physical Progress upto 2008 - 09

Sl. No.	Name of the Component	Unit	Phase I (9 SB)	Phase II (16 SB)	Total
			Year II	Year I	
1	Micro Irrigation	Hec	3888.24	201.40	4089.63
2	Farm Ponds & Water Harvesting Structures	Nos.	674	415	1089
3	Farm Mechanisation	Nos.	378	246	624

AGRICULTURAL ENGINEERING DEPARTMENT

Phase I (9) Sub basins
Physical Progress upto 2008 - 2009

Sl. No.	Description of work	Micro Irrigation (Ha)	Farm Pond & Water Harvesting Structures (Nos.)	Farm Mechanisation (Nos.)
1	Pambar	57.72	100	18
2	South Vellar	52.35	102	25
3	Upper Vellar	217.03	79	38
4	Varaganathi	505.44	49	63
5	Kottakaraiyar	61.64	105	62
6	Manimuthar	60.11	85	71
7	Arjunanadhi	65.02	29	15
8	Palar	1797.87	82	65
9	Aliyar	1071.07	43	21
	Total	**3888.24**	**674**	**378**

AGRICULTURAL ENGINEERING DEPARTMENT

Phase II (16) Sub basins

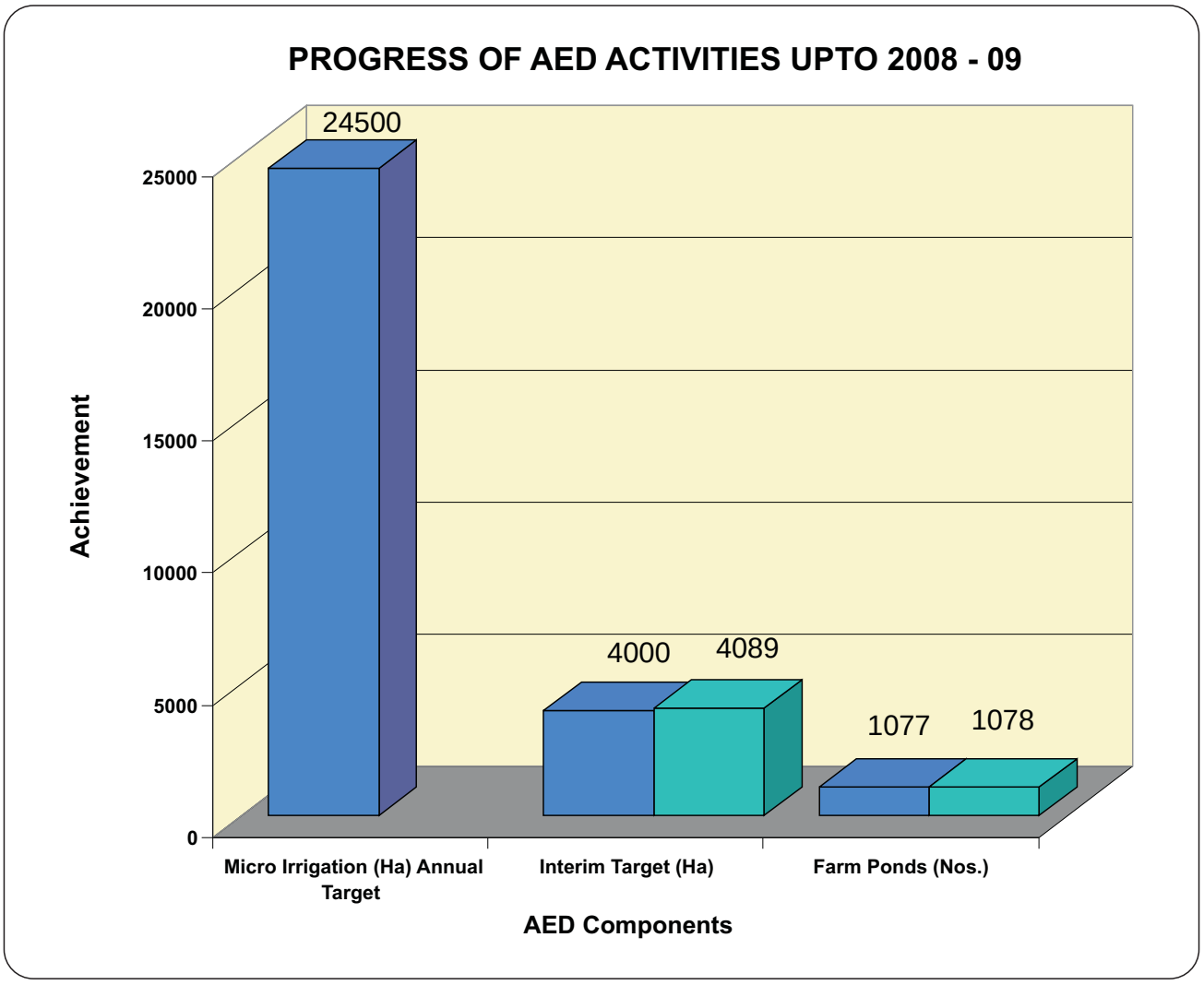
S. No.	Sub-Basin	Micro Irrigation (Ha)	Farm Pond & Water Harvesting Structures (Nos.)	Farm Mechanisation (Nos.)
1	Agniar	8.00	60	33
2	Ambuliyar	12.85	60	18
3	Koundanyanadhi	43.71	50	17
4	Poiney	30.03	40	16
5	Swethanadhi	44.20	40	25
6	Pennaiyar	17.10	50	45
7	Chinnar	3.00	17	35
8	Anavari Odai	0.00	9	7
9	Upper Gundar	0.00	6	11
10	Therkar	0.00	8	14
11	Upper Vaigai	17.98	6	4
12	Varattar Nagalar	6.86	6	4
13	Singottaiyar	13.78	40	6
14	Sindapalli Uppodai	2.70	6	1
15	Kalingalar	1.20	9	3
16	Nichabanadhi	0.00	8	7
	Grand Total	**201.40**	**415**	**246**

Financial Progress Upto 31.03.2009

(Rs. in Lakhs)

Sl. No.	Sub Basin	2007-08	2008-09	Cummulative Expr. upto 31.03.09
	Phase I			
1	Aliyar	74.63	89.74	164.37
2	Palar	132.63	124.24	256.87
3	Upper Vellar	43.08	45.59	88.67
4	South Vellar	15.45	39.41	54.86
5	Varahanadhi	42.40	39.06	81.46
6	Pambar	30.07	33.18	63.25
7	Kottakaraiyar	40.06	32.53	72.59
8	Manimuthar	29.50	30.99	60.49
9	Arjunanadhi	21.99	13.45	35.44
10	IAMWARM Cell	9.32	0.00	9.32
	Total (Phase I)	**439.13**	**448.19**	**887.32**
	Phase II			
1	Anaivari Odai		4.37	4.37
2	Chinnar		10.24	10.24
3	Agniyar		41.21	41.21
4	Ambuliar		30.84	30.84
5	Upper Vaigai		6.73	6.73
6	Varattar-Nagalar		4.64	4.64
7	Upper Gundar		4.91	4.91
8	Therkar		3.96	3.96
9	Nichabanadhi		4.69	4.69
10	Kalingalar		5.58	5.58
11	Sindapalli Uppodai		3.04	3.04
12	Senkottaiyar		19.69	19.69
13	Coovum		0.00	0
14	Pennaiyar upto Krishnagiri		26.52	26.52
15	Poiney		28.58	28.58
16	Koundanyanadhi		22.50	22.5
17	Swathanadhi		25.53	25.53
18	IAMWARM Cell		718.76	718.76
	Total (Phase II)		**961.79**	**961.79**
	Grand Total	**439.13**	**1409.98**	**1849.11**

AGRICULTURAL ENGINEERING DEPARTMENT



2.6 – AGRICULTURAL MARKETING

Physical progress - Details about status of civil works for Phase -I during 2008-2009

Carryover work of 2007-08 (during 2008-09)

Sl. No.	Name of the Sub-Basin	Description of the works	Status of the work
1	Upper velar	Storage Shed - 5 Nos Collection Centre - 2 Nos Pack House - 1 No	Completed Completed Completed
		ABC - 1 No	Completed
2	Aliyar	Drying yard – 2 Nos Storage Shed – 2 Nos ABC - 1 No	Completed Completed Completed
3	Palar	Drying yard - 11 Nos	Completed
		Storage Shed - 13 Nos ABC - 1No	Completed Completed
4	Varahanadhi	Drying Yard - 4 Nos Storage Shed - 4 Nos Collection Centre - 1 No ABC - 1 No	Completed Completed Completed Completed
	Total (new)	**Drying yards – 16** **Storage shed – 24** **Collection centre – 3** **ABC – 4** **Pack house – 1** **Total – 48**	

AGRICULTURAL MARKETING

Physical progress - Details about status of civil works for Phase -I during 2008-2009

Sl. No	Name of the Sub-Basin	Description of the works	Name of the Village	Status of the work
1	South Vellar	Drying yard – 4 Nos. Storage Shed – 4 Nos.	Dhatchinapuram, Perungadu, Enappatti, Karakathikottai Dhatchinapuram, Perungadu, Enappatti, Karakathikottai	Completed Completed. Only Painting and Wiring works in progress.
2	Arjunanadhi	Drying yard – 3 Nos. Storage Shed – 3 Nos.	Appanaikanpatty, Srivilliputhur, Vellur Appanaikanpatty, Srivilliputhur, Vellur	Completed
3	Manimuthar	Drying yard – 4 Nos. Storage Shed – 2 Nos.	Visalyankottai, A.Kalappur, M.Kovilpatty, Anumandankudy M.Kovilpatti, A.Kalappur	Completed Completed. Only Painting and Wiring works in progress.
4	Pambar	Drying yard – 2 Nos. Storage Shed – 2 Nos.	Rangiyam, Thuruvasapuram Rangiyam, Thuruvasapuram	Completed
5	Kottakaraiyar	Drying yard – 2 Nos.	(Kottanaipatti, Perumachery) Pannaiyur, Melanettur	Completed
6	Upper Vellar	Drying yard – 2 Nos.	Olapadi, Kalpakkanur	Completed
7	Varahanadhi	Drying yard – 1 No	(Ramaiyanpalayam) Meledayalum	Completed
8	Palar	Drying yard – 29 Nos.	Vellakoil III, Senapathipalayam II, Paramcher Vazhi, Palayamkottai, Kangeyam (Rettiakadu), Dasarpatti, Poolavadi, Kundadam I, Naranapuram, Suriyanallur, Kasilingampalayam, Nallampalli, Devampadivalsu, Ponnapuram, Kanjampatti, Varathanur, Kulichetti -palayam, Pappankulam, Anikkadavu, Kanialampalayam, Chettipalayam, Vadachittur, Elayamuthur, Vavipalayam, Kumarapalayam, Moongiltholuvu, Senjeriputhur, Mukkdujallipatti, Periyapatti.	Works under progress
		Storage Shed - 31Nos.	Vellakoil III, Senapathipalayam II, Paramcher Vazhi, Palayamkottai, Kangeyam (Rettiakadu), Dasarpatti, Poolavadi, Kundadam I, Naranapuram, Suriyanallur, Kasilingampalayam, Nallampalli, Devampadivalsu, Ponnapuram, Kanjampatti, Varathanur, Kulichettipalayam, Pappankulam, Anikkadavu, Kanialampalayam, Chettipalayam, Vadachittur, Kurichikottai, Kannamma naickanur, Elayamuthur, Vavipalayam, Kumarapalayam, Moongiltholuvu, Senjeriputhur, Mukkdujallipatti, Periyapatti.	

Abstract for carry over and new civil works (2008 – 09)

Sl. No.	Description of the works	2007-08	2008-09		2009-10	G Total
			Carry over	New		
i)	Drying yard	31	16	18	29	**94**
ii)	Storage shed	17	24	11	31	**83**
iii)	Collection Centre	1	3	-	-	**4**
iv)	ABC	5	4	-	-	**9**
v)	Pack House	-	1	-	-	**1**
	Total	**54**	**48**	**29**	**60**	**191**

DISTRICTWISE IEC & CB ACHIEVEMENTS FOR 2008-09

Sl. No.	Name of the Sub-basin	District	Exposure visit outside the state.	Exposure visit inside the state.	Technical education/ Training.	Interface workshop.
Phase I Sub Basins						
1	Varahanadhi	Villupuram	1	1	1	1
2	Upper Vellar	Salem	1	1	1	1
3	South Vellar	Pudukottai	2	1	1	1
4	Pambar	Pudukottai	3	1	1	1
5	Arjunanadhi	Virudhunagar	1	1	1	1
6	Kottakaraiyar	Sivagangai	2	1	1	1
7	Manimuthar	Sivagangai	2	1	1	1
8	Palar	Erode	4	1	1	1
		Coimbatore	3	1	1	1
9	Aliyar	Coimbatore	1	1	1	1
		Total	**20**	**10**	**10**	**10**

AGRICULTURAL MARKETING

DISTRICTWISE IEC & CB ACHIEVEMENTS FOR 2008-09

Sl. No.	Name of the Sub-basin	District	Exposure visit outside the state.	Exposure visit inside the state.	Technical education/ Training.	Interface workshop.
Phase II Sub Basins						
10	Agniyar	Thanjavur.	1	1	1	1
		Pudukottai.	1	0	0	0
11	Ambuliyar	Thanjavur.	1	0		
		Pudukottai.	1	1	1	1
12	Anaivariodai.	Perambalur.	0	1	1	1
13	Chinnar.	Perambalur.	1	1	1	1
14	Swethanadhi.	Salem.	0		1	1
		Namakkal	0	1		
15	Pennaiyar upto Krishnagiri.	Krishnagiri.	1	1	1	1
16	Upper Gundar.	Madurai.	1	1		
		Virudhunagar.			1	1
17	Therkar.	Madurai.		1	1	1
		Virudhunagar.	1			
18	Upper Vaigai	Theni.	0	1	1	1
19	Varattar Nagalar	Theni.	0	1	1	1
20	Kalingalar.	Thirunelveli	0	1	1	1
21	Nichabanadhi.	Thirunelveli	0	1	1	1
22	Sengottaiyar.	Virudhunagar.			1	
		Tuticorin.		1		1
23	Sindapalliupodai	Tuticorin.				
24	Koudinyanadhi	Vellore.	1	1	1	1
25	Poiney.	Vellore.	1	1	1	1
		Total	**10**	**15**	**15**	**15**
Grand Total			**30**	**25**	**25**	**25**

Details about Formation of Commodity Groups Functioning in Phase I sub-Basins (2008-09)

Sl. No	Name of the Sub-Basin	Infrastructure linked with the Commodity Group	Details of Commodity groups formed
1	Arjunanadhi	ABC, Erichanatham	36 (Maize -5,Pulses -5, Chillies -5, Paddy -15, Banana-6)
2.	Kottakkaraiyar	ABC, Purasariodaippu	20 (Ground nut -13, Chillies -7)
3	Manimutharu	ABC, S.R. Pattinam	16 (Ground nut -9, Chillies -4, Paddy -3)
4	Pambar	ABC, Embal	29 (Maize -15,Ground nut -5, Pulses -5, Fruit crops -3, Vegetables -1)
5	South Vellar	ABC, Thiruvarankulam	30 (Maize -4 , Ground nut -6, Pulses - 20)
6	Upper Vellar	ABC, Ethappur	11 (Maize -8, Banana -1,Tapioca -2)
7	PAP – Aliyar	ABC, Manur (Thimanguthu)	24 (Paddy -4, Pulses-4, Ground nut -2, Vegetables -2, Maize -7, Coconut -5)
8	PAP - Palar	ABC, Nilali	64 (Maize -18, Sunflower -20, Coconut-20, Vegetables -6)
9	Varahanadhi	ABC, Kootteripattu (Kolliankulam)	20 (Maize -20)
Total			**250**

Details about Formation of Commodity Groups in Phase II sub-basins (2008-09)

Sl. No.	Name of the Sub-basins (Phase II)	Commodity Groups formed	
1	Agniyar	6	(Groundnut – 1, Maize – 2, Pulses – 3)
2	Ambuliyar	28	(Maize – 28)
3	Anaivariodai	4	(Groundnut – 1, Maize – 2, Gingelly – 1)
4	Chinnar	5	(Groundnut – 1, Maize – 2, Onion – 2)
5	Swethanadhi	12	(Maize – 10, Vegetables – 1, Banana – 1)
6	Upper Gundar	5	(Maize – 2, Pulses – 3)
7	Therkar	8	(Pulses – 7, Gingelly - 1)
8	Varattar Nagalar	11	(Groundnut – 1, Paddy – 1, Pulses – 3, Vegetables – 6)
9	Upper Vaigai	9	(Maize – 5, Vegetables – 3, Banana – 1)
10	Nichabanadhi	4	(Maize – 4)
11	Kalingalar	4	(Paddy – 4)
12	Senkottaiyar	3	(Maize – 3)
13	Sindapalli Uppodai	3	(Maize – 3)
14	Koundinyanadhi	30	(Groundnut – 12, Maize – 10, Pulses – 2, Vegetables – 4, Banana – 2)
15	Poiney	30	(Groundnut – 15, Pulses – 10, Vegetables – 3, Banana – 2)
16	Pennaiyar upto Krishnagiri	10	(Paddy – 2, Ragi – 1, Tomato – 2, Cabbage – 1, Groundnut – 1, Cauliflower – 1, Mint – 1, Brinjal – 1)
	Total	**172**	

AGRICULTURAL MARKETING

Financial Progress Upto 31.03.2009

(Rs. in Lakhs)

Sl. No.	Sub Basin	2007-08	2008-09	Cummulative Expr. upto 31.03.09
	Phase I			
1	Aliyar	30.20	2.73	32.93
2	Palar	120.69	9.43	130.12
3	Upper Vellar	39.00	2.33	41.33
4	South Vellar	34.26	3.68	37.94
5	Varahanadhi	29.64	2.59	32.23
6	Pambar	26.72	5.11	31.83
7	Kottakaraiyar	19.78	3.00	22.78
8	Manimuthar	21.73	3.00	24.73
9	Arjunanadhi	38.46	2.35	40.81
10	IAMWARM Cell	28.06	0.00	28.06
	Total (Phase I)	**388.54**	**34.22**	**422.76**
	Phase II			
1	Anaivari Odai		0.94	0.94
2	Chinnar		1.90	1.90
3	Agniyar		3.00	3.00
4	Ambuliar		3.00	3.00
5	Upper Vaigai		1.00	1.00
6	Varattar-Nagalar		1.00	1.00
7	Upper Gundar		2.00	2.00
8	Therkar		2.00	2.00
9	Nichabanadhi		1.00	1.00
10	Kalingalar		1.00	1.00
11	Sindapalli Uppodai		0.00	0.00
12	Senkottaiyar		1.00	1.00
13	Coovum		0.00	0.00
14	Pennaiyar upto Krishnagiri		2.00	2.00
15	Poiney		1.99	1.99
16	Koundanyanadhi		2.03	2.03
17	Swathanadhi		1.00	1.00
18	IAMWARM Cell		524.48	524.48
	Total (Phase II)		**549.34**	**549.34**
	Grand Total	**388.54**	**583.56**	**972.10**

2.7 - ANIMAL HUSBANDRY DEPARTMENT

PHASE I - 2008 - 09

Sl. No.	Sub basins	Est. of Sub basin Vet. Unit		AI Work			Fodder Cultivation (Ha)		Infert. Camp (Nos)		Deworming of Sheep & Goats		Farmers Interactive Meeting (Nos)		Farmers Training (Nos)	
		Target	Achmt.	Spill over Target 2007 - 08	Target 2008 - 09	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.
1.	VarahaNadhi	11	3	26400	33000	59400	90	90	132	132	100000	31115	84	84	400	400
2	Palar	10	9	25404	30000	49669	450	450	120	120	80000	80000	92	92	400	400
3	Aliyar	2	2	4800	6000	9133	100	100	24	24	100000	100000	14	14	400	400
4	Upper Vellar	10	10	25160	30000	55160	150	150	120	120	120000	120000	32	32	400	400
5	South Vellar	4	4	9775	12000	21775	310	310	48	48	8000	8000	56	56	400	400
6	Pambar	3	2	8443	9000	12681	100	100	36	36	30000	30000	20	20	400	400
7	Kottakaraiyar	3	1	8667	9000	15138	75	75	36	36	0	0	28	28	400	400
8	Manimuthar	4	4	11672	12000	15111	110	110	48	48	0	0	48	48	400	400
9	Arjunanadhi	3	2	8311	9000	17311	120	120	36	36	0	0	44	44	400	400
	Total	**50**	**37**	**128632**	**150000**	**255378**	**1505**	**1505**	**600**	**600**	**438000**	**369115**	**418**	**418**	**3600**	**3600**

ANIMAL HUSBANDRY DEPARTMENT

PHASE II - 2008 - 09

Sl. No.	Sub basins	Est. of Sub basin Vet. Unit		AI Work		Fodder Cultivation (Ha)		Infert. Camp (Nos)		Deworming of Sheep & Goats		Farmers Interactive Meeting (Nos)		Farmers Training (Nos)	
		Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.
1	Agniyar	1	1	2700	2700	30	30	12	12	40000	40000	48	48	200	200
2	Ambuliyar	1	1	2700	2700	20	20	12	12	10000	10000	20	20	200	200
3	Anaivari odai	1	1	2700	2700	10	10	12	12	12000	12000	12	12	200	200
4	Chinnar	1	1	2700	2700	25	25	12	12	18000	18000	20	20	200	200
5	Kalingalar	1	1	2700	2700	20	20	12	12	7000	7000	2	2	100	100
6	Koundinyanadhi	1	1	2700	2700	25	25	12	12	20000	20000	20	20	200	200
7	Nichabanadhi	1	1	2700	2700	50	50	12	12	90000	35340	18	18	200	200
8	Poiney	1	1	2700	2700	30	30	12	12	50000	50000	22	22	200	200
9	Ponnaiyar	1	1	2700	2700	60	60	12	12	30000	14081	16	16	200	200
10	Sengotaiyar	1	1	2700	2700	30	30	12	12	0	0	16	16	200	200
11	Swethanadhi	1	1	2700	2700	40	40	12	12	50000	50000	16	16	200	200
12	Therkar	1	1	2700	2700	30	30	12	12	80000	80000	22	22	200	200
13	Upper Gundar	1	1	2700	2700	0	0	12	12	40000	40000	14	14	200	200
14	Upper Vaigai	1	1	2700	2700	3	3	12	12	12500	12500	16	16	75	75
15	Varratar Nagalar	1	1	2700	2700	20	20	12	12	14000	14000	10	10	50	50
	Total	15	15	40500	40500	393	393	180	180	473500	403641	272	272	2625	2625

ANIMAL HUSBANDRY DEPARTMENT

Phase – I – Cumulative Achievement (2007 – 08 & 2008 – 09)

Sl. No.	Sub basins	Est. of Sub basin Vet. Unit		AI Work		Fodder Cultivation (Ha)		Infert. Camp (Nos)		Deworming of Sheep & Goats		Farmers Interactive Meeting (Nos)		Farmers Training (Nos)	
		Target	Achmt.	Target	Achmt.	Target	Achmt	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.
1.	VarahaNadhi	11	3	66000	66000	140	140	264	264	100000	31115	244	244	800	800
2	Palar	10	9	60000	54265	650	650	240	240	80000	80000	264	264	800	800
3	Aliyar	2	2	12000	10333	150	150	48	48	100000	100000	46	46	800	800
4	Upper Vellar	10	10	60000	60000	285	285	240	240	120000	120000	136	136	800	800
5	South Vellar	4	4	24000	24000	435	435	96	96	8000	8000	144	144	800	800
6	Pambar	3	2	18000	13238	150	150	72	72	30000	30000	64	64	800	800
7	Kottakaraiyar	3	1	18000	15471	80	80	72	72	0	0	80	80	800	800
8	Manimuthar	4	4	24000	15439	145	145	96	96	0	0	128	128	800	800
9	Arjunanadhi	3	2	18000	18000	240	240	72	72	0	0	112	112	800	800
	Total	**50**	**37**	**300000**	**276746**	**2275**	**2275**	**1200**	**1200**	**438000**	**369115**	**1218**	**1218**	**7200**	**7200**

ANIMAL HUSBANDRY DEPARTMENT

ABSTRACT

Sl. No.	Sub basin	Est. of Sub basin Vet. Unit		AI Work		Fodder Cultivation (Ha)		Infert. Camp (Nos)		Deworming of Sheep & Goats		Farmers Interactive Meeting (Nos)		Farmers Training (Nos)	
		Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.	Target	Achmt.
1.	Phase I (2007-08)	50	27	150000	21368	770	770	600	600	0	0	800	800	3600	3600
2.	Phase I (2008-09)		37	150000	255378	1505	1505	600	600	438000	369115	418	418	3600	3600
3.	Phase II (2008-09)	15	15	40500	40500	393	393	180	180	473500	403641	272	272	2625	2625
	Cumulative Total	65	52	340500	317246	2668	2668	1380	1380	911500	772756	1490	1490	9825	9825

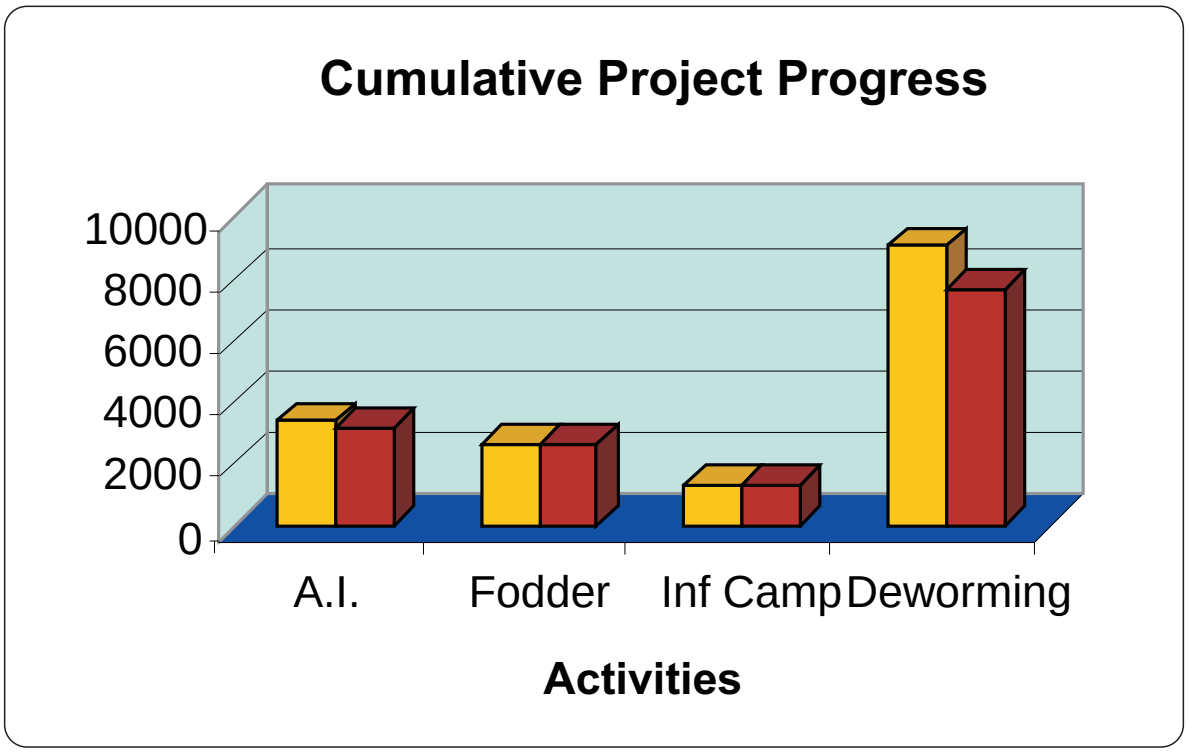
ANIMAL HUSBANDRY DEPARTMENT

Financial Progress Upto 31.03.2009

(Rs. in Lakhs)

Sl. No.	Sub Basin	2007-08	2008-09	Cummulative Expr. upto 31.03.09
	Phase I			
1	Aliyar	12.44	5.80	18.24
2	Palar	37.90	19.83	57.73
3	Upper vellar	36.31	20.05	56.36
4	South Vellar	18.15	10.96	29.11
5	Varahanadhi	55.58	13.22	68.8
6	Pambar	12.17	5.44	17.61
7	Kottakaraiyar	14.86	5.06	19.92
8	Manimuthar	26.13	7.48	33.61
9	Arjunanadhi	19.84	5.64	25.48
10	IAMWARM Cell	5.46	0.00	5.46
	Total (Phase I)	**238.84**	**93.48**	**332.32**
	Phase II			
1	Anaivari Odai		3.61	3.61
2	Chinnar		5.27	5.27
3	Agniyar		5.03	5.03
4	Ambuliar		4.06	4.06
5	Upper Vaigai		2.58	2.58
6	Varattar-Nagalar		3.37	3.37
7	Upper Gundar		2.53	2.53
8	Therkar		3.48	3.48
9	Nichabanadhi		5.31	5.31
10	Kalingalar		2.85	2.85
11	Sindapalli Uppodai		0.00	0.00
12	Senkottaiyar		3.13	3.13
13	Coovum		0.00	0.00
14	Pennaiyar upto Krishnagiri		6.55	6.55
15	Poiney		6.10	6.10
16	Koundanyanadhi		5.53	5.53
17	Swathanadhi		4.32	4.32
18	IAMWARM Cell		181.12	181.12
	Total (Phase II)		**244.84**	**244.84**
	Grand Total	**238.84**	**338.32**	**577.16**

ANIMAL HUSBANDRY DEPARTMENT



2.8 - FISHERIES DEPARTMENT

Phase I – 2008 - 09 - Achievements

Sl. No.	Name of Sub-basin	Aquaculture in Farm ponds	Fish seed Bank	Fish seed rearing in cages	Improvement to Government Fish seed farm
1.	Varahanadhi	2	2	12	1
2.	Upper Vellar	26	1	5	
3.	South Vellar	30	2	10	
4.	Arjunanadhi	6	1		1
5.	Kottakaraiyar	15	2	10	
6.	Manimuthar	25	1	10	
7.	Pambar	40	0	10	
8.	Aliyar	0			
9.	Palar	0			
	Total	**144**	**9**	**57**	**2**

FISHERIES DEPARTMENT

Phase I Sub basins Cumulative Achievement

Sl. No.	Name of Sub-basin	Aquaculture in Farm ponds	Fish seed Bank	Fish seed rearing in cages	Improvements to Government Fish seed Farm	Ornamental Fish culture	Fishing Implement	Fish Kiosk
1	Varahanadhi	19	2	12	1	-	10	2
2	Upper Vellar	38	1	5	-	-	5	-
3	South Vellar	30	2	10	-	-	10	-
4	Arjunanadhi	9	1	-	1	-	15	-
5	Kottakaraiyar	15	2	10	-	-	10	-
6	Manimuthar	27	1	10	-	5	10	-
7	Pambar	40	-	10	-	-	10	-
8	Aliyar	1	-	-	-	2	-	-
9	Palar	2	-	-	-	2	-	-
	Total	181	9	57	2	9	70	2

FISHERIES DEPARTMENT

Phase II – 2008 - 09 - Achievements

Sl. No	Name of Sub - basin	Aquaculture in Farm ponds	Aquaculture in Irrigation Tanks (Ha)	Fish seed rearing in cages	Improvement to Govt. Fish seed farm / Seed Bank	Ornamental Fish culture	Fishing Implement	Fish Kiosk
1.	Koundnyanadhi	18		2	1*		7	2
2.	Poiney	20		10		1	14	1
3.	Upto Krishnagiri	2			1*		5	1
4.	Swethanadhi	4	158				3	1
5.	Anaivari Odai	4	220				2	
6.	Chinnar	9	525				2	1
7.	Agniyar	4	-		1*		5	
8.	Ambuliyar	12	-	5	1*			
9.	Upper Vaigai	-	51			-		
10.	Varattar Nagalar	-	13.6			-		
11.	Upper Gundar	1	55.18			-		
12.	Therkar	4	680.44				9	
13.	Nichabanadhi	3	61					
14.	Kalingalar	1	0					
15.	Sindapalli Uppodai	1	70				1	
16.	Sinkottaiyar	5	163				2	
	Total	**88**	**1485.2**	**17**	**4**	**1**	**55**	**6**

* Nearing Completion

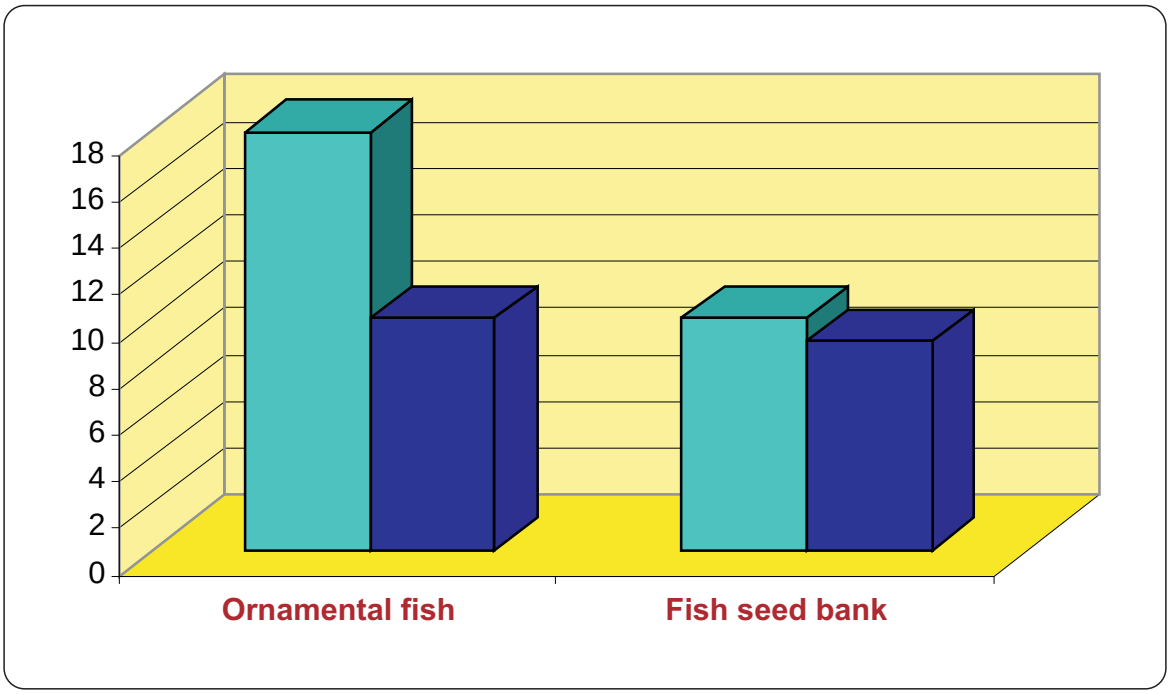
FISHERIES DEPARTMENT

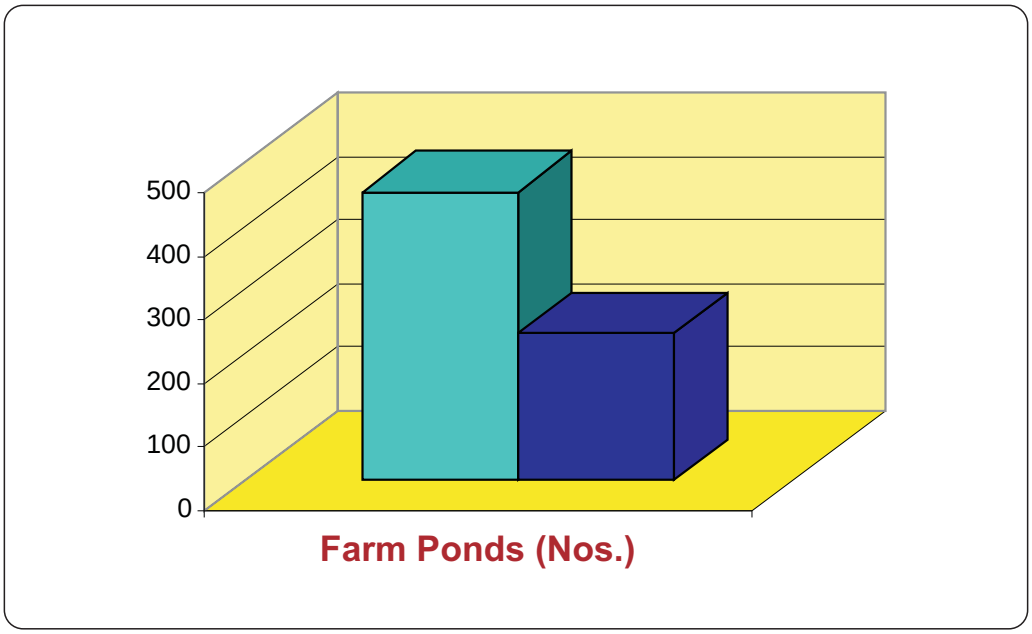
Financial Progress Upto 31.03.2009

(Rs. in Lakhs)

Sl. No.	Sub Basin	2007-08	2008-09	Cummulative Expr. upto 31.03.09
	Phase I			
1	Aliyar	3.83	0.05	3.88
2	Palar	3.95	0.02	3.97
3	Upper Vellar	2.02	11.48	13.50
4	South Vellar	0.97	33.75	34.72
5	Varahanadhi	2.47	37.24	39.71
6	Pambar	1.00	6.31	7.31
7	Kottakaraiyar	0.30	5.35	5.65
8	Manimuthar	9.57	5.43	15.00
9	Arjunanadhi	0.48	33.19	33.67
10	IAMWARM Cell	118.96	0.00	118.96
	Total (Phase I)	**143.55**	**132.82**	**276.37**
	Phase II			
1	Anaivari Odai		2.10	2.10
2	Chinnar		2.93	2.93
3	Agniyar		32.80	32.80
4	Ambuliar		17.81	17.81
5	Upper Vaigai		0.91	0.91
6	Varattar-Nagalar		0.45	0.45
7	Upper Gundar		0.55	0.55
8	Therkar		6.78	6.78
9	Nichabanadhi		1.37	1.37
10	Kalingalar		0.48	0.48
11	Sindapalli Uppodai		0.93	0.93
12	Senkottaiyar		2.22	2.22
13	Coovum		0.00	0.00
14	Pennaiyar upto Krishnagiri		16.38	16.38
15	Poiney		4.90	4.90
16	Koundanyanadhi		53.05	53.05
17	Swathanadhi		2.92	2.92
18	IAMWARM Cell		41.38	41.38
	Total (Phase II)		**187.96**	**187.96**
	Grand Total	**143.55**	**320.78**	**464.33**

FISHERIES DEPARTMENT





Program
Achmt.

GLIMPSES FROM THE FIELD

3.1. WATER RESOURCES DEPARTMENT

Madurai Region
Manimuthar Sub basin
Kalappur Anicut renovated

The works have been executed at an approximate cost of Rs. 75 lakhs. The rehabilitation work includes flood protection wall in downstream of anicut and reshaping of Aruvi and Thiruvandan supply channels. The wastage of water in supply channels is completely arrested and recurring expenditure is also reduced. By reshaping of supply channels, the original designed discharge is restored. With the improvements, the entire ayacutdars of about 356 Ha are assured of supply of water and the entire gap area is completely reduced.

Hanumanthakudi Chinna Kanmoi Groyne is renovated. Good impact has been achieved with the construction of the groyne and length of 350 meters in the supply channels. The yield for the Hanumanthakudi Chinna Kanmoi has increased.

Positive feedback was reported by the farmers in the Gramsabha meetings.

Kottakaraiyar Sub basin
Alimadurai Tank renovated.

It was found out that the tank bund for its entire length had been eroded and was below the standards and out of the five sluices, four were completely in dilapidated condition and the surplus weir had also collapsed. The supply channel and head sluice required rehabilitation.

Strengthening of the tank bund for the entire length, reconstruction of sluices no 1, 2, 3 and 4, reconstruction of surplus weir and repairs to sluice no 5 have been carried out. The desilting of the supply channel and reconstruction of head sluice with screw gearing shutters has been provided. Also, the construction of culvert across the supply channel has been made. All these cost Rs. 33.21 lakh.

Thiru. Viswanathan, President, WUA of this tank had this to say, "The surplus weir has been reconstructed completely with cement concrete. And, during the recent rains, water was stored in the tank for about fifty percent of its capacity. This will be effectively used for its first crop cultivation and by the reconstruction of these structures, water wastage has been arrested completely. We are also planning to cultivate second crop with the balance water". Surely, this is yet another success story which shows how IAMWARM project helped WRD to renovate one of its tanks to the satisfaction of the farming community.

After completion

Pambar Sub basin

Nemmeni Tank bund strengthened.

The existing tank bund has weakened, bed silted up and the storage capacity is considerably reduced. The existing weir and sluice are in dilapidated condition Works worth Rs. 40.00 lakhs have been carried out for strengthening tank bund, reconstructing weir and construction of bathing ghat, desilting supply channel.

Strengthening the Tank Bund – Nemmeni Tank

Reconstruction of Weir

Manimuthar Sub basin
Thuduppur Groyne renovated

There was an open off take in Manimuthar river to feed Thuduppur – Alangudi Kanmoi of Devakottai taluk. And the floods occurred during 2005 have destroyed and completely silted the channel. The bed of the river at that point was eroded up to 1.50m below the channel bed and hence the channel was unable to draw water from the river.

To overcome these, a groyne wall for a length of 25 mts and, retaining wall for a length of 210 meters leading to supply channel from the off take point has been constructed. Also, the bed of the river was leveled for easy drawl of water from the river to the channel and works were completed at a cost of Rs. 29.26 lakh.

On completion of this Groyne, adequate water was drawn to Thuduppur Alangudi tank from the river and the entire ayacut has been stabilized. The ayacutdars of the above tank have appreciated the work done by WRD in the Gram Sabha meeting.

Manimuthar sub basin
N. Mangalam Tank

Weir Reconstructed in N. Mangalam Tank in concrete for a length of 32 meters at a cost of Rs. 7.60 lakhs. The discharging capacity and efficiency of the weir has been improved essentially averting any breach to Bund.
The farmers are greatly appreciative of this.

Trichy Region
Upper Vellar sub basin
Restoration of Alagapuram Anicut

The RR masonry body wall has been reconstructed and upstream and down stream desilting have been done at a cost of Rs. 29.29 lakhs.

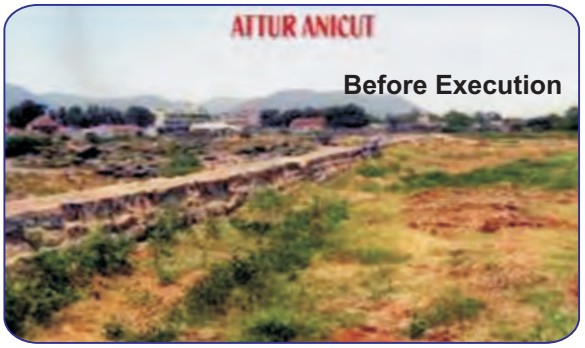
With these, the storage capacity has been enhanced and effective supply of water to direct ayacut has been restored. The recharge of ground water was visible leading to increased agricultural activity.

Upper Vellar Sub basin
Renovation to Attur Anicut

In this anicut, existing body wall and down stream right side apron are damaged. And left side retaining wall is to be extended.The construction of skin wall has been done as well as apron concrete work has been done. Up stream desilting was done and the extension of left side retaining has been carried out.

The effective storage capacity has been improved and supply of water to tank through supply channel has been restored. No. of filling to tank have consequently increased and recharge of ground water has also improved.

The farmers are quite happy with these renovations which remained a dream for 40 years.



South Vellar Sub basin
Sembodai tank strengthened

The existing weir has been in dilapidated condition and no water can be retained in the tank. The bund has also weakened and the tank bed silted up.

Works worth Rs. 7.12 lakhs have been carried out for reconstruction of weir followed by creation of protection wall at vulnerable points.

By reconstructing the weir and strengthening of beds, the leakage of water is completely arrested and the original capacity of the tank has been restored and the ayacut is fully stabilized.

South Vellar sub basin
Pirajapathy Tank strengthened

The existing tank bund has weakened, bed silted up and the storage capacity has been considerably reduced. The supply channel was completely silted up with inadequate carrying capacity. Sluices are damaged and require repair work.

By carrying out these works at the cost of Rs. 8.79 lakh, farmers are happy with reconstruction and repairs to sluices, desilting of supply channel as they get uninterrupted supply of water for cultivation now.

Pambar Sub basin

Arimalam Pudukanmoi renovated

The existing tank bund has become weak with bed silted up storage capacity has become considerably reduced. Strengthening of tank bund has been carried out at Rs. 7.82 lakhs.

Thiru. Muthukumar, one ayacutdar of Arimalam village said “Thanks to IAMWARM project and the Government, the strengthening of tank bund is carried out after long period It restores the original capacity of tank and we are able to go for one more crop. We are grateful to PWD”.

Varahanadhi Sub basin

(i) Keekalur tank gets a facelift

The sources of the tank are from the Kathalampattu tank and from local drainage. Before renovation, the supply channels were fully silted up and filled with scrub jungle.

Works worth Rs. 8.60 lakhs have been carried out. Strengthening of the tank bund and desilting the supply channel have been carried out.

The tank has become surplus during last monsoon and the bund has been strengthened by keeping top width at 3.0m and free board at 1.80m. The tail end farmers can use the tank water for a period of more than 6 months now.

Ayacutdars are happy and welcomed the rehabilitation work.

(ii) Nerkunam tank rehabilitated

The tank bund was very lower and is at knife edge at the top and sluices were damaged and require rehabilitation. This tank bund is located in Thellar block, Vandavasi taluk.

Works worth Rs.19.98 lakhs have been carried out and this involves desilting of supply channel, strengthening the tank bund, reconstruction of 3 sluices and strengthening of weir by providing skin wall.

With these works, the tank has got filled in 3 days even with meager rainfall in the last season. Due to formation of RCC skin wall to the weir, the water leakage has been completely arrested. The three dilapidated sluices have been reconstructed.

The farmers are happy.

After Execution

After Execution
Weir – F.T.L. condition

Therkar Sub basin

Strengthening of Tank Bund with machinery is the order of the day. Farmers are very happy with the good work turned out in Therkar Sub Basin.

Kinnimangalam Tank

Thenpalanji Tank

Kadukkanji Tank

3.2. AGRICULTURE DEPARTMENT AND TNAU

System of Rice Intensification

Rice is the staple food of Tamil Nadu. In Tamil Nadu, rice is cultivated in three seasons namely Season I (April to July), Season II (August to November) and Season III (December to March). Area under rice was 20.8 lakh hectare during 2000-01 and Rice production in the state was 73.66 lakh tonnes during 2000-01. There was an increasing trend in the cost of cultivation over the period of time due to escalation of input prices. Among the cost components, human labour continued to be the major input sharing more than 30 per cent of the total cost, followed by fertilizers at more than 10 per cent. Operational cost incurred by the farmers for production of rice per hectare was Rs. 1012 during 1973-74 and it increased to Rs. 20142 during 2001-2002. Increase in cost was much higher than the income increase as a result there was a decline in benefit-cost ratio. The output-input ratio, which was 2.45 in the year 1973-74, declined to 1.41 in 2000-2001. This implies that increase in cost was much higher than the income increase Therefore, it is imperative that adoption of cost-effective technology has to be promoted for enhancing the benefits of rice production.

In the above situation, it was contemplated by IAMWARM Project to meet the twin demands in rice production i.e., reduction of labour cost, input cost and increase water productivity through large scale adoption of System of Rice Intensification method of rice cultivation in Tamil Nadu. Literature evidences have proved that SRI is capable of labour saving *viz*., reduction in labour requirement for weeding operations, major cost cut in transportation of seedlings and less labourer requirement for transplanting.

In TN-IAMWARM project, the overall performance of SRI during the last year was a 28.3 per cent increase in yield with an improved net income of Rs. 22985 per hectare as against Rs.11,493 per hectare with conventional method, apart from savings in water to the tune of 30 per cent.

The frequent field visits by the Administrators and policy makers to the SRI demonstrations plots under TN IAMWARM and the overwhelming response by the farming community led to the government announcing

to bring 7.5 lakh hectare under SRI in TN on the floor of the Assembly.

During 2008-09, the TNAU besides sustaining 60 per cent of SRI demonstration and impact area (conducted during 2007-08) has added another 10425 hectare and 2919 hectare of SRI is being adopted in I and II phase sub basins respectively.

While Department of Agriculture is sustaining 65 per cent of SRI demonstrations, the impact area covered under SRI was 40015 ha during 2008-09 in both the phases.

SRI demonstration farmers are acting as resource persons or spokesperson on this new method of rice cultivation. A workshop was conducted at Aduthurai in which the beneficiaries of TN-IAMWARM project actively participated and spread the message on SRI.

SRI - Success stories

SRI Farmers of first phase sharing their experiences in the gathering of SRI Workshop organized at Aduthurai

SRI leads to higher productivity.

Thiru.G. Manivasagam, of Kaliyapuram, of Aliyar sub basin is cultivating rice for the past 8 years. Due to meagre profits in rice cultivation, he was contemplating giving up paddy. Because of project intervention, SRI was successfully demonstrated which lead to production of 7.5 tonnes / ha. of rice that resulted in sustenance of rice cultivation in that area.

Farm women training on SRI planting skills.

Adoption of any new technology is often independent by acquirement of skills but this impediment was overridden by TNAU as it gave successful training to farm women in Pennaiyar upto Krishnagiri reservoir sub basin. Hold few seedling in the bundle i.e., half the size of

normal bundle eases taking out of single seedling was the innovation which emerged from the trainee farm women.

Reduction is seed rate – Even a three year child can carry seeds for one acre

Increasing seed cost was a cause of concern among many farmers and normally seed rate is used much in excess than what was required. SRI has successful rectified this anomaly and Thiru. Mohan Karuppiah of Pattamangalam village, Manimuthar sub basin says with pride that his three year old grandson has lifted the seeds (3 kg) for one acre area of rice cultivation. He has recorded increase in yield of 62.5 per cent over the conventional method of rice cultivation.

SRI Demo lead to Mass Adoption in Agniyar Sub Basin

Initially conventional method of rice cultivation was practiced as usual and due to the project intervention SRI has been planted in one Ha. in a week interval. SRI proved its supremacy and led to an increase in yield by 3.01 tonnes per hectare and in value terms it was Rs. 31,850. After seeing this, all farmers in Pannavayal switched over to SRI method of rice cultivation. Thiru. Sreenivasan of Pannavayal village, Agniyar sub basin said the credit goes to TNAU and TN-IAMWARM project.

Square Planting eased intercultural operations on one side and reduced rodent damage on the other side

Thiru. Alagarsamy, Rangium Village of Pambar sub basin is convinced about the SRI method and says that intercultural operations like weeding and fertilizer application were easy by adoption of square planting at wider spacing. Thiru. Sethuraman from Arimalam village of South Vellar sub basin viewed the benefits of SRI from a different pitch i.e., due to adequate spacing, reduction in rat damage was observed in the SRI fields as compared to conventional planted fields.

The Department of Agriculture conducted demonstration at Ladapuram village of Chinnar sub basin in which Thiru.U. Rangasamy reaped 14732 kg/ha and the variety cultivated was BPT 5204. Previously the farmer has harvested 8721 kg/ha only. This is 69% more than the conventional yield. In another instance, by resorting to SRI in ADT (R) 45 variety, Thiru. R. Thavamani, Karambakudi (Agniyar sub basin) village of Pudukottai district has got 10120 kg/ha which is 38 per cent increase over the conventional yield of 6274 kg/ha.

Weeding is the important component in SRI – the science is true says Thiru. Karunanidhi, Kunnur village, Arjunanadhi sub basin.

Thiru S. Karunanidhi followed all the components of SRI and used the weeder as stipulated from 14th day of transplanting. He practically visualized the profused tillering after weeding. His yield has shoot upto 6.30 tonnes per hectare.

SRI suitability has no limits. Higher yields realized with Hybrids – A Success story from Upper Gundar sub basin

Thiru N. Ranganathan, Thangalacherri village of Madurai district, Upper Gundar has followed all the SRI practices i.e., mat nursery, planting of 14 days old seedlings, wider spacing, weeding through conoweeder and nutrient management through LCC and water management for his Hybrid rice CoRH-3. The grain yield recorded was 8480 kg per hectare.

More income per drop of Water

The demonstration conducted by Department of Agriculture at Tmt.P.Vasugi, Nakkampadi village, Sendurai block belonging to Anaivari Odai sub basin has adopted SRI and reaped 16750 kg/ha. by using KRH - 2 rice hybrid. This is 126% more the conventional yield of 7416 kg / ha.

In Upper Vellar sub basin Tmt. J. Saroja a farmer of Abinavam, TN Palayam village has grown KRH – 2 Hybrid variety in village and this reveals the success of SRI over conventional methods, The yield could have come to 5825 kg/Ha and by Project efforts the yield had come to 12500kg/Ha. This would mean as much as 115% more than the usual yield which is a record achievement by any standard.

Concept of Community Nursery popularized SRI in Poiney Sub Basin.

A Community Nursery was established at Velam village, Poiney sub basin with the co operation of Thiru. Athimoolam, President of WUA. The success of SRI has over come the initial inertia and later, SRI was adopted in 21 hectares in the village. All these happened successfully.

101 productive tillers from Single seedling in Nichabanadhi sub basin

Thiru. Pandiyan, Perunkottur village of Sankarankoil taluk, Nichabanadhi came to the Farmers' Grievance Day with a hill of rice plant with 101 productive tillers grown through SRI method demonstrated by TNAU in the IAMWARM project. Seeing is Believing and this clump has spurted the adoption of SRI in the Nichabanadhi sub basin.


நெல்லை

தினத்தந்தி பிப்ரவரி-21, 2009

நெல்லை கலெக்டர் அலுவலகத்தில் நேற்று நடந்த விவசாயிகள் குறைதீர்க்கும் நாள் கூட்டத்தில் நெற்பயிருடன் வந்த விவசாயி.

ஒரு நெல் விதையில் உருவான 101 நெற்கதிர்கள்

விவசாயிகள் குறைதீர்க்கும் கூட்டத்துக்கு வந்த சங்கரன்கோவில் தாலுகா பெருங்கோட்டூர் கிராமத்தைச் சேர்ந்த விவசாயி பாண்டியன், கையில் ஒரு நெல் கதிர் குலையுடன் வந்தார். அவை நெல் சாகுபடியில் ஒரே ஒரு நெல் விதை மூலம் உருவாக்கப்பட்ட ஒற்றை நெல் நாற்றில் 101 கதிர்கள் விளைந்திருப்பதை அவர் ஒற்றை [illegible] காண்பித்து பெருமையாக கூறினார்.

இதை பார்த்த மாவட்ட அதிகாரி கோ. சுகுணாசன், இதைபோன்று அனைத்து விவசாயிகளும் சிக்கனமான முறையில் அவை நெல் சாகுபடியை மேற்கொண்டு அதிக மகசூலை பெற்று லாபம் அடைய வேண்டுகோள் விடுத்தார்.

The demonstration conducted by Department of Agriculture in the field of Thiru. Viswanathan of Pothandavadi village of Varahanadhi sub basin recorded 99 productive tillers in SRI but the rice crop planted by conventional method would result in 25-30 productive tillers only.

Diversifying to Maize

Maize is cultivated mainly for food, fodder, feed and industrial uses. Maize grains are mostly used as a component for animal feeds especially poultry feed. Large and small scale animal feed industries depend on Maize production as maize grains are principal component which constitutes 60% of the feed.

The area under Maize crop in Tamil Nadu during 2006 – 07 was around 1.98 lakhs Ha. with the production level of 7.59 lakhs tonnes. The productivity level was 3838 Kg/Ha.. As per Tamil Nadu Broiler Co-ordination Committee the estimated demand of Maize for poultry feed industry in Tamil Nadu alone is about 12 lakhs tonnes per year. It is mainly grown in Salem, Erode, Coimbatore, Dindigul and Perambalur Districts in Tamil Nadu.

To increase the area under Maize cultivation and to bridge the demand-supply gap, the farmers need to be educated on improved production technologies, hence the latest hybrids and technologies are being popularized through TN IAMWARM Project by TNAU and Department of Agriculture in the various sub basins. Besides for crop diversification, Maize crop is strongly advocated to replace rice owing to its increased water productivity.

More income per drop of Water

The Maize demonstrations have been conducted by using improved hybrids with the latest improved production technologies.

Details of Maize area conducted through TN IAMWARM in Tamil Nadu:

(Area in Ha)

Department	I Phase			II Phase	
	Demo	Impact	Demo (07-08) Sustained in 2008–09	Demo	Impact
Agriculture	6357	61303	3861	342	3580
TNAU	688	3011	361	162	1504
Total	**7045**	**64314**	**4222**	**504**	**5084**

In TN IAMWARM Project at Manimuthar sub basin a special initiative was done to introduce Hybrid Maize in Sivaganga District. Previously farmers were unaware on the Maize production technologies.

As a first step, Interested farmers were taken on exposure visit to Maize Research Station, Vagarai and hands on skill upgradation was given and subsequently a field day was organized at Selliampatti village on 21.01.09.

For the first time, Maize was introduced in an area of 26 Ha. by the intervention of TNAU and marketing tie up was organised by using Apple foundation Piranimitran Madurai.

Using the hybrid seed technology and improved production technology, Thiru. Dhanapal, Selliampatti village of Manimuthar sub basin harvested 4580 Kg/ha of Maize at the first instance and arrangements were made to sell the produce @ Rs. 9 / Kg. The cost of production was worked out to Rs. 17240 / ha and it was found that the C : B ratio of Maize introduction was 1 : 2.4.

A successful crop diversification from rice to Maize was achieved in Varahanadhi sub basin of Villupuram District.

Thiru.S. Mohanraj of Kaspakarainai, Vikravandi block raised COH (M) 5 Maize hybrid as a first time and realized around 5950 Kg / ha by adopting other improved packages viz., seed treatment with *Psedomonas flouresence*, maintaining optimum plant population of 8 plants / m^2 along with INM of 150 : 75 : 75 Kg NPK / ha coupled with 12.5 Kg Mineral mixture / ha.

The Department of Agriculture has conducted a comprehensive Maize demonstration in the field of Thiru.M. Sivalingasamy of Munduvelampatti village in Palar sub basin using the Pioneer hybrid got 13304 kg./Ha. as against the normal of 8041 kg./Ha. by following conventional methods, This a success story by any standards and the one to be followed by everyone.

Another success story emanated by the intervention of Department of Agriculture, the demonstration conducted in the field of Thiru. P. Deepan Chakravarthy, Sundarapandiyam, Watrap block of Arjunanadhi sub basin and the yield recorded was 11200 Kg./Ha. and the hybrid used was NK 62640.

Thiru. K. Arjunarajan of Panaiyur village is another successful maize farmer, who has grown Hishell maize hybrid in in Kalingalar sub-basin in Tirunelveli District. He has obtained a yield of 12360 Kg/Ha. over 5643 Kg./Ha. which he could have obtained by following conventional methods. The credit to this goes to Project and Department of Agriculture officials, who had helped him by providing necessary inputs and technology.

Pulses

Pulses play a vital role in sustainable Agriculture as they are the major sources of dietary protein in the vegetarian diet. The current productivity level of Pulses in India is very low, which could not meet the per capita requirement 80 grams per day as recommended by WHO. The current per capita availability of Pulses is below 40 grams at National level. It is estimated that our country would need 30.3 M T of Pulses by 2020 A.D. Since the population will touch 1350 million by the time. But the pulses production remains stagnated for about 4 decades.

In Tamil Nadu during the year the total area under Pulses is 5.25 Lakhs Ha with a total production of 1.77 Lakh MTs and the average productivity of the Pulses in the State is around 337 kg/ha as against 623 kg/ha at National level. Hence under TN IAMWARM Project a **Pulses Mission** was launched combining the Department of Agriculture, Department of Agricultural Marketing and TNAU.

The reason for low yield, technological interventions needed, post harvest processing and value addition for more income realisation of farmers through Pulses crops were analyzed. A clear strategy of improved Pulses production technology was attempted through TNAU, DoA and value addition by the Marketing Department.

During this year DoA conducted Pulses demonstration in a area of 1104 Ha. with an impact area of 10782 Ha. The area of Pulses demonstration (2007 - 08) conducted is 3931 Ha. which was sustained during this year along with the impact area of 15634 Ha. also. While TNAU demonstrated 3494 Ha. with an impact area of 15176 Ha. The area of Pulses demonstration conducted in a extended of 675 Ha. during 2007 - 08 was sustained during this year because of the convincing income realization by the Farmers.

By adopting all improved packages of practices demonstrated by TNAU through TN-IAMWARM Project Thiru. Devanathan of Panayapuram in Palar sub-basin obtained

1875 Kg/Ha. of Pulses as compared to the conventional yield of 750 Kg/Ha. Most of farmer beneficiaries demonstrated by TNAU in Palar sub-basin got an yield of around 1000-1200 Kg./Ha.

In Agniyar sub basin the Rice Fallow Pulses was introduced by TNAU in the first time in 45 Ha. with 52 farm beneficiaries in Kurunji village. As a measure to reap more benefit by the farmers through value addition at micro level to Mini - Dhall processor mills were produced from the Indian Institute of Pulses Research, Kanpur and supply to the Farmers in Upper Vellar sub basins.

Thiru. M. Mahalingam of Mathur village has grown KM–2 of Greengram in Arjunanadhi sub-basin of Virudhunagar District and obtained an yield of 1300 kg/Ha an increase of 79% over conventional yield of 725 kg/Ha. with the help of Department of Agriculture. Other impact farmers in the village look to this farmer for any guidance in growing Greengram.

Thriu.R. Mani of Ladapuram village in Chinnar sub-basin of Perambalur District with the help of DoA has grown Pulses T-9 Blackgram and has obtained a record yield of 1312 kg/ha an increase of 84% over the conventional method of cropping yield of 710 kg/Ha. Adaption of improved cultivation practices including usage of improved variety has helped him to achieve this increased yield.

3.3. OTHER ACTIVITIES BY TNAU

SRI:

- Workshops were conducted at Coimbatore and Madurai to sensitize the District Collectors and other officials for effective implementation of SRI in TN State.
- A programme was conducted in All India Radio, Trichy comprsing13 lessons on SRI which shared the experience of successful farmers of SRI through IAMWARM project in Phase I and Phase II sub basins.
- The overwhelming success of SRI in larger areas through TN IAMWARM Project made a good in platform to WWF ICRISAT to declare TNAU as host to the III National symposium of SRI from the 1st to 3rd December 2008.
- Best SRI farmers award were bagged by TN IAMWARM farmers for realizing higher yields.

  Tmt. Vijayalakshmi - Varahanadhi.
  Thiru. P. Baskaran - Upper Vellar
- A video documentation on SRI Paddy and Pulses has been prepared by the TNAU for the benefit of farming community.
- The feed back analysis on SRI demonstration conducted in I and II phase sub basins by appointing an expert committee and documentation.
- The feed back analysis on SRI demonstration conducted in I and II phase sub basins by appointing an expert committee and documentation was also prepared which enabled to formulate a revised / modified strategy of SRI.
- A rural artisan training was conducted for the II phase sub basins to empower rural artisans for the fabrication of SRI weeder and marker.
- A workshop on Implementation strategies to increase pulses productivity in Tamil Nadu was conducted at Tamil Nadu Rice Research Institute, Aduthurai on 23.01.09 by involving scientists of TNAU and officials of Department of Agriculture.
- The TNAU scientists and Department of Agriculture officials were given exposure visit to LAM Pulses Research station, Andhra Pradesh on 18.02.2009.

IAMWARM on Wheels:

The more awareness creation activity was also undertaken by IAMWARM on Wheels - a mobile campaign in 16 sub basins.

RAWE:

562 Under Graduate students of Agriculture faculty of TNAU were stayed in the TN IAMWARM sub basin villages area under RAWE (Rural Agricultural Work Experience) Programme to spread and to give hands on training to farmers.

3.4 Horticulture Department

Introduction of Tissue culture Banana

(Convergence of Horticulture, Agricultural Engineering and Agricultural Marketing Departments)

Though Banana occupies a sizable area in Horticulture crops, the dominance of traditional local varieties and the old cultivation practices still by the farmers results in poor yield and low profit, despite the efforts taken by the Horticulture Department to introduce new varieties and the latest crop production technologies to improve the yield and income of the farmers.

The introduction of TC Banana in recent years under TN-IAMWARM Project revolutionized the yield and income of the farmers. Its uniform growth, maturity, size of the fruits, color and its keeping quality attracted the consumer demand which paved the way to fetch more profit per bunch than the local varieties.

With a view to change the traditional practices / varieties by breaking all the local beliefs, TC Banana was introduced first time in a 10 Ha. Clusters (11 farmers) by the efforts taken by the local Horticulture Departmental staff under the Project in 2008-09 in **Keeripatti village**, Attur block, Upper Vellar sub-basin Salem District.

More income per drop of Water

There was no TC Banana cultivation in this village so far. Few farmers of the village were taken for exposure visit under the Project and the group of 11 farmers were impressed about the performance of the TC Banana seen during the exposure visit and came forward to take up the same in their fields. Out of 11 farmers, the following two sample farmers shared their cultivation experience with the local Departmental staff for the benefit of other farmers willing to take up the TC Banana cultivation in future.

1. Thiru.P.Kumarasamy,
   S/o. Periyagoundar,
2. Thiru. G. Prabharan,
   S/o Ganapathi

Both the farmers cultivated G-9 TC Banana in 1 Ha. each. Both have installed drip with fertigation in the Banana field due to the intervention of Agricultural Engineering Department. Planting done on 17.11.2008 in pits.

Weeds were controlled and the fields kept clean. All the package of practices as recommended by the Department are being followed by both the farmers and the Banana trees are in bunching stage which will come for harvest in another 3 months. The above farmers on seeing the performance of the TC Banana and the size of the bunches, expect atleast Rs.200/bunch which is about Rs.80/ more than the local Banana varieties.

The Agricultural Marketing Department officials in co-ordination with the officers of Horticulture Department formed a Commodity Group covering all the banana farmers in the cluster area and necessary arrangements are being done to transport the bunches on harvest either to Koyambedu Market or to SAFAL Market, Bangalore. The cluster farmers are highly satisfied about the performance of the TC Banana. Perhaps this happiness may be doubled on realization of more profit on selling the produce.

The farmers are satisfied with the performance of the TC Banana and willing to continue cultivation in future also. All the cluster farmers got 2500 TC Banana seedlings worth Rs.25,000/- at free of cost from the Horticulture Department under TN-IAMWARM Project.

These two farmers are proud and said that many local farmers are visiting their fields and want to grow T.C. Banana in the next season.

The Chilli Transformation
(Convergence of Horticulture and Agricultural Marketing Departments)

Thellar Block of Thiruvannamalai District is more prone for vegetable crops. Many farmers normally grow traditional local varieties of vegetables and get poor yield and low income when compared to the other innovative farmers who take up the advise given under TN-IAMWARM Project and grow hybrid vegetables and adopt all the latest crop production technologies to get the highest yield and income.

Thiru. M Gandhi, S/o. Thiru. Munusamy, Varadarajapuram, Thennathur village, Thellar block Varahanadhi sub-basins, Thiruvannalai District is such a innovative farmer who took up cultivation of **Namdhari Hybrid NS – 1101** Chilli under area expansion programme in TN-IAMWARM Project in 2008-09 and got the yield of 3.2 MT/Ha. of dry pod due to the efforts taken under TN-IAMWARM Project.

The area expansion done by the farmer was in 0.90 Ha.

The farmer obtained 2.9 MT. of dry pod for 0.90 Ha. Hence the yield per Ha. is 3.2 MT (in terms of green chillies it is 16 MT/ha). The local market rate for the produce is Rs.60/Kg. The local Agricultural Marketing Department officials are guiding and helping the farmer to sell the produce at higher rates through the exporter, M/s.Reliance and through Koyambedu market, Chennai.

The farmer Thiru. M. Gandhi is highly satisfied and astonished that he had never obtained such a high yield. He also assured that he will go in for this hybrid chilli in the ensuing season also and wants to install drip with fertigation.

3.5 Agriculture Engineering Department

3.5.1 From hosiery to agriculture

At a time when farmers are looking for alternate ventures that are pocket-friendly following steep rise in input costs and absence of reliable marketing infrastructure, three hosiery manufactures have taken up agriculture quitting their textile business altogether.

Thiru K. Ganesh (41), his cousin Thiru M. Palanikumar (40), and their uncle Thiru M. Palanisamy (62), all residents of Palavanchipalayam, are now successful banana farmers cultivating 'Grand-9 robusta' variety on a three acre family-owned field.

Passion for agriculture germinated in their minds after they happened to attend an awareness campaign conducted by Agriculture Engineering Department on 'latest agriculture practices and role of agriculture to the country's Gross Domestic Product (GDP) growth' at their hamlet a few months ago.

Enthused by the orientation programme, they then joined the entourage led by officials from agriculture engineering and allied departments which went on a familarisation trip to progressive farms located at Anamalai, Gopichetti-palayam, Chennampatti and Chinnamanur areas.

The trio then plunged into cultivation with subsidy assistance extended by AED and Agriculture departments under the IAMWARM project. The amount has been disbursed towards establishment of micro irrigation systems and for purchase of high quality fertilizers.

With the harvest, Thiru Ganesh, Thiru Palanikumar and Thiru Palanisamy are ecstatic as their 'babes' had given them good yield.

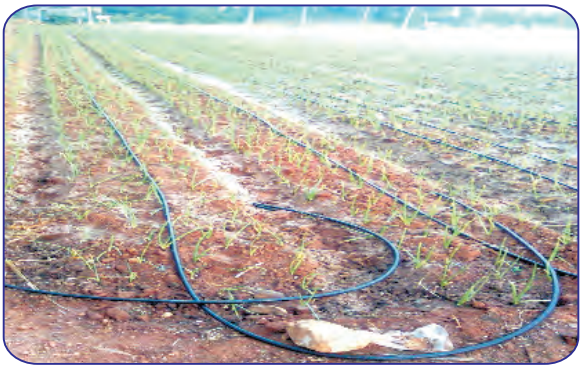
They lavishly commended, “Thanks to adoption of modern irrigation and farming practices as advised by the department officials, we have obtained healthy bunches with each having an average of 120 bananas against the projected average of 100 bananas,” Owing to it, the 'businessmen-turned-farmers' were fetching Rs. 225 a bunch at the local market itself.

This is indeed one of the highest rates received for a bunch of G-9 Robusta variety in this region. Euphoric over the productivity, Thiru Palanisamy and his nephews now plan to expand their area of cultivation by another two acres shortly.

3.5.2 Little Drop To Bigger Reap

Thiru S.Arunachalam is an innovative farmer from Vavipalayam village, Thiruppur taluk, Coimbatore District of Palar Sub Basin. He cultivated vegetables during last year monsoon season.

He came to know about the Drip Irrigation through wall paintings and approached the AED office, Gopichettipalayam. Under their guidance, he installed Drip irrigation system in his farm to cultivate vegetables such as onion (Nasik Red), cauliflower (Namdari 531) and tomato.



During the course of cultivation under drip irrigation system, he realized for himself the multiple benefits of the drip system which are listed below.

1) Saving in water,
2) Reduction in weed growth,
3) Money saving because of minimum labourers
4) Minimal wastage of fertilizer by Efficient application through fertigation unit
5) Qualitative improvement in the size and shape of the produce
6) Increased yield leads to more

Yield Particulars

He has experienced an average increase of 25% more than his previous yield after installing Drip Irrigation System, which is given below. This has fetched more income to this farmer.

Vegetable Variety	Area	Before Installation	After Installation	Percentage Increase
Onion (Bigger Variety)	0.28 Ha	9-11 Tonnes	12-14 Tonnes	30%
Cauliflower	0.40 Ha	8000 Nos	10000 Nos	25%
Tomato	0.16 Ha	1200 Baskets	1500 Baskets	25%
Onion (Smaller Variety)	0.16 Ha	0.80 Ton	1 Ton	25%

3.5.3 More Yield from Lesser Water

Thiru. S. Arunachalam s/o Thiru. Selambara Gounder is a small farmer having 2.50 acres (1.00Hec).of land in SF nos. 186/2A 187/2A and188/2F in Vavipalayam village Pongalur Block.

Till recently, he used to cultivate Onion, Sorghum, Tomato and other vegetable crops in 1.00 hectare area by flood irrigation from the available water in the open well. By this, He was getting only little or average yield and returns were poor.

During 2007-08, he came to know about drip irrigation system which requires lesser quantity of water which is sufficient for better growth of plants and which gets better yields.

This information was collected from wall paintings, publicity boards and handbills provided by the Agricultural Engineering Department Gobichettipalayam sub Division of Erode District.

He visited the fields under cultivation with drip system and interacted with farmers through exposure visit tour arranged by the AEE (AED) Gobi and personally ascertained and got impressed with drip irrigation system.

After this, he had applied for installing drip irrigation system through AED Gobi in the IAMWARM scheme and it was installed in his field in an area of 1.00 Hectare.

After installing the system he was able to irrigate 1.00 Hec field daily with small quantity of water. The weeds were less and the weeding cost is also found to be less. He was able to apply small quantity of fertilizer through drip irrigation system and hence expenditure for fertilizers and labour costs for fertilizer application was much less. And the yield is much better than conventional flood irrigation method. The quality of the produce was also good and fetch more in the market. He found that Onions got damaged due to excess water during rainy seasons but in drip irrigation system the same did not happen.

His success is an example for other farmers to use drip irrigation system of AED.

3.5.4 Towards Profitable Banana

Thiru. M. Muthusamy S/o of A.Muthusamy is a banana farmer from Palavanji Palayam Veeravandi Village Tirupur Circle Coimbatore District.

To know more about Banana cultivation he has gone to Avinasi, Annur and Gobichettipalayam and other areas and found that country variety Bananas are being grown. To harvest this it takes 15 months long time and the growth of this banana is uneven and the irrigation to this crop is directly done. Fertilisers are provided to the crop by men and weeds grow more in between crops. To clear this weed out, he used to employ more men. One banana plant harvests about 20 kilo of produce.

He has attended the exposure visit arranged by the AED department and went on visit a to Pollachi Annai Hills and Gobichettipalayam.

He has found out about Banana cultivation and collected details about the same. To know more about banana cultivation he has gone to Chennampatti Chinnamannur and met banana farmers and collected necessary details. He has chosen the G-9 brand of banana to grow as it is likely to give higher profit.

He has conducted soil and water testing in the Coimbatore Government testing centre. They have prescribed fertilisers since some problems was found to be there.

Through the AED department, under IAMWARM project, he has set up inline dripper with government subsidy. Under this, through disc filter enough water could be sprayed to all crop. The water usage is lesser as well as one could save some electricity as well. Through drip irrigation, we could save the banana crop and we can do our work by ourselves and save the use of labour, he says. The weeds are less in this and the maintenance cost is much less.

As suggested by the horticultural department the fertilizers required for banana has been given in proper time and in proper measure through drip and the banana crop has grown properly and well.

Water through inline dripper and enough fertilizers are given and as a result, banana has grown well. We were able to get more produce and profit through these.

March 2009

The banana crop he had planted in Jan 4 th

2008 was harvested in September, October. It gave good harvest as he had expected and one plant has had on an average of 150 fruits and fetched a price of Rs. 275 and the credit to this goes to working of drip irrigation system.

After the first harvest, he has planted again and the growth so far has been good. 6 months have gone by and these have grown to be trees and at least 150 fruits are expected to be harvested.

It started giving produce in the sixth month itself. It gave more fruits inspite of the fact that his well water was salty.and he has good development. He used the acid to clean the drip instrument in which salt gets formed. To cover the gap, he has used the leaves of the plant and as a result, the sand doesn't get dried and maintains moisture and this has removed weeds and the maintenance cost is less.

Compared to the expenditure he has incurred for the first crop, he has spent only half the amount and he expect the harvest to be more.

He has learnt and benefited much from drip irrigation and he has planted banana crop again our lands and the growth is good.

3.5.5 Extra Income from Farm Pond

Thiru.K.Dharmarathinam, s/o Kumarasamy Gounder of Arthanari Palayam of R. Ponnapuram Pollachi has 3.64 acre land. This land is getting irrigated in Palar sub basin and a part of this is surrounded by bush and part remains a waste. He planned to construct a small pond to save the rain water and to use it during summer days but since it would become a big expenditure he has kept it postponed.

During this time, he came to know about the construction of farm pond by the AED within Rs.40,000 with the farmer's contribution of Rs. 4,000 only.

Based on this, a farm pond has been constructed and because of this the water level in the well has risen and during monsoon failures like the present time, he says that he can go in for cultivation. More over on 24.01.08 1000 fingerlings have been released into the farm pond. On 30.09.08 about 670 fishes have been caught and these fishes had a weight of 250 gms to one kilo. Totally about 375 kilo fishes have been caught and each kilo of fish has been sold at Rs. 30/ with the sales coming up to Rs. 11250. Due to this farm pond, he has earned additional income and he has plans to release more fish fingerlings during June. He plans to get more income and he has expressed this happily while thanking the AED department of Government of Tamil Nadu.

3.5.6 Water Savings from Drip

Thirumathi. K. Subbulakshmi w/o of Kuppuswamy is residing in R Ponnapuram village and she has 12.5 acre of agricultural

land,This land is beingirrigated through participation in Palar WUA in Palar sub basin. She got upset and disturbed because the water usage was more and could not find enough labor to do the work.

In this connection, She went to Ponnapuram WUA and had met the President and asked his guidance as for as what she could in this connection. He told her about IAMWARM scheme and about the 50% subsidy given to drip and Sprinkler irrigation scheme. He had asked her to participate in the IAMWARM meeting and she did that. The engineers who had come to the meeting had suggested to grow coriander leaf with drip irrigation system and she had agreed and grown coriander leaf in her farm with subsidy of Rs. 48700 and at the overall cost of Rs. 1,04,300. In spite of the fact that no one in her area had expressed interest in growing coriander leaf she had grown it with economic usage of water and labor.

She has expressed the hope that she will get good harvest this year and she is thankful to AED Govt. of Tamil Nadu for the same.

She had earned Rs. 30,000 from harvesting the crop twice and her thanks go to AED for making it possible.

3.5.7 Better Returns Through Drip

Thirumathi. E. Radhika w/o of Elangovan is involved in farming in her land at Venuasaputhi Village in Udumalai circle Coimbatore district.

She is utilizing canal irrigation for coconut cultivation. The AED department officials had told her about drip irrigation system with subsidy.

Having satisfied with it she had set up drip irrigation system recognized by the government with Nagarjuna Fertilisers and Chemicals.

She had enjoyed the benefits of water saving and the use of limited labor for cultivation using this system. So far, these drip irrigation systems are functioning well.

3.5.8 Drip Saves Labour

Thiru. V. Jaganathan S/o Venugopal of Venasampatti has farmland in Patthiapatti and is involved in farming activities in that area. In the above area, he grows coconut and vegetables using canal irrigation system.

The AED engineers from Pollachi had told about drip irrigation system of TN IAMWARM and its importance. Having satisfied with it he had set up drip irrigation system with the assistance from Nagarjuna Fertilisers and Chemicals He is benefited by saving water and labor, and the

other benefits of drip irrigation system. These systems are functioning well, he says.

3.5.9 Other Micro Irrigation Responses

Thiru. C.Jagadesan, Thiru.C.Sreenivasan, Tmt. T Lakshmi and Tmt. S. Subathra are farmers.belonging to Kodungal Nagaram of Udumalpet taluk and have farm lands as well as cultivating banana in 2.670 Ha. They have set up drip irrigation system with the help of AED Pollachi and have received many benefits from this drip irrigation system with the following benefits. After setting up the drip system, the weed control system is manageable. Although our land is 300 meters from the well, the water supply to each of the banana plant is streamlined. Water level in the well is above half of its capacity and it is satisfactory. Since no canal irrigation is needed, the requirement of labor is restricted. The banana saplings growth is satisfactory. The fertilizers which dissolve in water can be applied through drip system. We can walk easily into field since the moisure in the field is surrounded only around the plant.

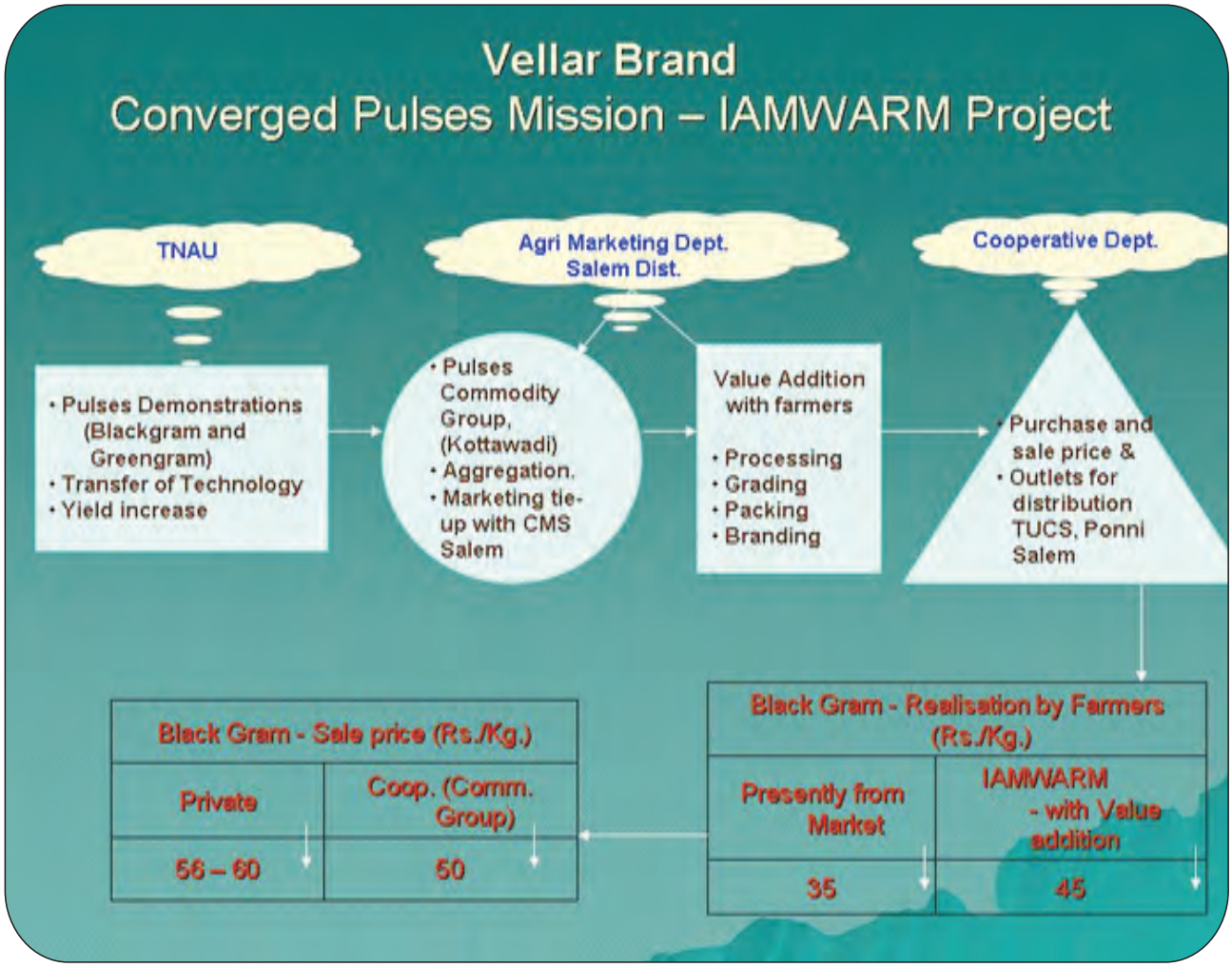
3.6 Agricultural Marketing

Converged Pulses Mission in Upper Vellar sub-basin – Salem District

The actual per capita availability of pulses per day even in the best production year (3.90 lakhs MT in 90-91 year) was 19 gms against the recommended per capita dietary allowance of 36 grams per day. Pulses is also a short duration crop of 65-70 days and the ruling retail price at around Rs.40 per kg. is remunerative. The total water requirement is low and the net water productivity is high. Therefore it was decided that pulses crop should be encouraged to be grown with a seed to plate approach.

An area of 20 Ha. in Kottavadi village has been selected and TNAU has laid pulses demonstrations with supply of inputs, technology etc. The standing crop of pulses ie. blackgram / greengram has been visited at every stage of growth and technical guidance on IPM, INM etc. has been rendered. Meanwhile, Marketing tie-up arrangements have been made with NGGOs Co-operative Society and Swarnapuri Co-operative Stores for purchase of marketable surplus of pulses at Rs.45 per kg. TNAU has also installed a mini-dhall mill for processing at Ethapur.

Accordingly after the harvest, the farmers have processed the seeds in the mini-dhall mill, packed it in polythene packets with IAMWARM logo, 'Vellar Brand' inscription, nett weight, MRP at Rs.50 per kg, 'Farm Fresh' wordings etc. On enquiry it was found that big dhall merchants procure at the rate of Rs.35 per kg for black gram and Rs.36 per kg for greengram through commission agents, process the same in their processing units and sell them at retail points @ Rs.55 per kg for blackgram and Rs.57 per kg for greengram.



The benefit accrued tentatively to Kottawadi village farmers is as follows:

Group	Area of cultivation (Ha.)	Commodity	Local market rate prevailed (Rs./kg)	Procure ment price through co-op. society (Rs./kg)	Add processing loss, transport charges etc. (Rs./kg)	Net profit per Kg	Net Profit / HQ	
							Conven- tional yield @ 750 Kg per Ha.	Project yield @ 1200 kg/Ha.
Kottavadi & other pulses group	20	Black gram / Green gram	31/-	45/-	4/-	10/-	7500/-	12000/-

Farmers are satisfied that an additional income of Rs.7500/- has been obtained for a short duration crop and are determined to extend this effort to more than double the area ie. 50 Ha. during 2009-10.

Chief Secretary to Government of Tamil Nadu releasing 'Vellar Brand' Blackgram during Empowered Committee's 7th Meeting.

Photo of 'Vellar Brand' Blackgram Pockets

Value added Chillies Cultivation – Sivagangai District

Chilli is the dominant commercial crop in Kottakaraiyar and Manimuthar sub-basins of Sivagangai District. Around 3000 Ha. is being cultivated every year and the varieties included 'Samba', 'Kundu', K1 and K2 and the selling / purchasing rates depended on market fluctuations. Added to this is the woes of commission, under weightage, transport, gunny advance etc. Incidentally there is one chilli oil mill operating in nearby Virudhunagar city for the last 30 years but the mill is importing its requirements from Andhra Pradesh farmers incurring additional transport charges commission etc. The reason is Andhra Pradesh farmers are cultivating high oil / oleoresin content chilli varieties like Namdhari 1701 which is suitable for manufacture of chilli oil and export.

First time cultivation of Namdhari 1701 variety of Chillies for chilli oil extraction taken up.

Chillies is a commercial crop in Sivagangai and Virudhunagar Districts for many years but with local variety.

The Project intervened at this stage and brought an area of 800 Ha. under various improved varieties including Namdhari 1701. These areas were supplied with seeds, bio-fertilisers etc. and suitable technology coverage extended during crop cultivation period. The farmers so far were believing that Namdhari variety will not perform well in these areas. But now it has been proved that this variety can come up well. Further, the yield level in the district has increased from 1.5 MT per Ha. to 2 MT per ha. A 'Chilli GrowersSeminar' was organized in the District. The private procurer M/s. VPS Group was also involved. Under infrastructural support, 12 Drying yards, 7 Storage sheds and one Agri Business Centre were also constructed and put to use.

The private procurer ie. M/s. VPS Group has started procurement @ Rs.50 per Kg while the local market has fluctuated and at one moment was around Rs.60 per kg by local commission agents / traders. However, many of the farmers who cultivated Namdhari 1701 variety were particular that they market their produce to the exporter through Project staff. The specific advantages the farmers reported were correct weight, correct moisture content, free transport and no gunny deposit thus saving upto Rs.10 per kg. Thus around 40 MT. of Namdhari 1701

Utilisation of IAMWARM Drying Yard at Ilayangudi for drying of Chillies

variety of chillies is procured so far and the procurement is continuing for each picking. The peak hour demand of chillies by M/s.VPS Group alone is 40 thousand MT. per year and hence there is vast scope to increase the marketing tie-up with them.

Payment being made (4th March 2009) @ Rs.50/Kg by M/s. VPS Group

Even though this is the first year of this variety, Horticulture Department has encouraged the farmers to go in for sizable area under Namdhari 1701 variety and this has been continued through profitable market link up with private procurer.

During next year this effort is expected to cover double the area and procurement of not less than 200-300 MT.

3.7 Animal Husbandry Department

Initial Success in Livestock

Thiru. Velusamy, a farmer belonging to Aranmanai Thottam of Katturpudur, Palar Sub basin has a Jersey cow 4th lactation which was successfully treated for infertility in the infertility camp on12-2-2008. The animal was a repeat breeder and was given treatment and it showed Oestrus symptoms on 4-3-2008 and Artificial Insemination was done. It was also treated with inj. Receptal - 5ml and Inj. Phosphorous – 5ml. The cow was examined for pregnancy on 21-6-2008 and was found to be pregnant. It calved a healthy female calf on 13-12-2008.

One Holstein Friesien cross breed cow belonging to Thiru. Murugesan of Muniyappankovil Thottam, Pullakalipalayam, Palar Sub basin had problem of infertility since 6 months after its first lactation. The animal showed regular oestrus at an interval of 20-25 days and was inseminated artificially and also by natural service.

He brought the cow aged about 2½ years for the infertility camp on 5-9-2008. The animal was examined by specialist and AI was done along with treatment at the camp. The animal was reported as not showing the symptoms of oestrus after the treatment. The cow was examined for pregnancy on 9-1-2009 and was found to be pregnant.

Thiru. R. Nathappan, a farmer belonging to Thatchinapuram, Pudukkottai District, South Vellar Sub basin, has a cow and it was infertile for more than 4 years. It was identified and treated in the infertility camp conducted at Thatchinapuram on 10.01.2008 and follow up was done regularly by VAS Vallathirakkottai. Then it was conceived and calved a Heifer calf. It gives milk and the farmer earns daily income to run his life.

Echampatty is a small village in Perambalur District. Thiru. Govindaraj, Agriculturist, who is having a Agricultural land of 2 Acres in which he is cultivating Paddy, Groundnut in different seasons. Apart from this, he is rearing 3 cows and 20 goats in his land premises. Whenever the regular monsoon and seasonal rain fails, his hopes are only on Livestock which gives regular income for his family.

Tmt. Arunthavam, Women member of family goes to the neighboring area for collecting green grass to feed their animals. Till Thiru. Govindaraj participated in 3 days Farmer training conducted by Animal Husbandry Department in IAMWARM itself, he was unaware of Co3 grass, and there he read the pamphlets distributed about enhancing nutrient management.

He approached the Animal Husbandry Department officials and cultivated in his 30 cents of lands during October 2008. He cultivated with regular watering and weeding practices. Now, he is regularly cutting 160Kg

of grass once in 3 days and feeding his milch animals. The dropped milk yield suddenly boosted up to 8 Litre per cow per day which brings smile in Govindaraj and Arunthavam faces.The secret behind their success is "IAMWARM".

3.8 FISHERIES DEPARTMENT
Aquaculture in Farm Ponds

Farm ponds are excavated primarily for rainwater harvesting, storage and critical irrigation in the farmers field by Agricultural Engineering Department. These farm ponds are well suited for composite fish culture activity. The aquaculture activity paves way for additional income generation to the farmers. Aquaculture was promoted in 232 farm ponds by Fisheries Department and net revenue up to Rs.24,000/- per pond as income to the farmers was obtained by this converged activity. Fish production ranged from 2.5 **tones/ha to 6.5 tones/ha**. The maximum fish production of 6.5tones was achieved in a farm pond at Idaipatti village of Thiru. Gopal in upper Vellar sub Basin. Some very encouraging growths of fish from 250g to 700g were observed in the second phase sub Basin Farm Ponds in a culture period of 3 to 4 months.

1) South Vellar Sub Basin

- **Name of the Farmer –**
  Thiru. P. Palanivel,
- **Fish seed stocked - Catla, Rohu & Mrigal**
- **Culture period - 9 Months**
  Area - 0.10

Harvest Details:

Total Weight of Fish harvested – 510Kg

Production per Ha	- 5.10 tonnes
Max. weight recorded	- 2.5 Kg (Catla)
Gross Revenue	- Rs.38,250/-
Net Profit	**- Rs.21,300/-**
Profit per Ha.	- Rs.2.13 Lakhs

2) Pambar Sub Basin

- Name of the Farmer - Thiru. Umasekara Makeswaran
- Fish seed stocked - Catla, Rohu, Mrigal & Grass carb
- Culture period - 9 Months
- Area - 0.10ha

Harvest Details

- Total Weights harvested - 540Kg
- Production per Ha - 5.40 tonnes
- Max. weight recorded - 2.8 Kg (Catla)
- Gross Revenue - Rs.39,500/-
- **Net Profit - Rs.22,500/-**
- Profit per Ha. - Rs.2.25 Lakhs

Aquaculture in Farm Pond has emerged as **a profitable venture** in the sub basin among the Farmers since the activity besides providing **protein rich fish**, facilitate in **recharging ground water and critical irrigation.**