

TAMILNADU AGRICULTURAL UNIVERSITY

46th RESEARCH COUNCIL MEETING

Agenda No.1

Confirmation of the proceedings of the 45th Research Council meeting

The proceedings of the **45th Research Council** meeting held on **February 3, 2012** were communicated to all the members. If there is no exception to the minutes from the members, it is requested that the Research Council may please confirm the proceedings of the 45th meeting.

Agenda No.2

ACTION TAKEN ON THE RECOMMENDATIONS OF 45th RESEARCH COUNCIL MEETING (FEBRUARY 3, 2012)

a. Suggestions of Thiru. P. Palanivel, Expert Member

1. **Cereals / vegetables / fruit varieties with low glycemic value and high biological quality fibre should be developed (Action: Dean, HC&RI)**

- In the Department of Fruit Crops, during 2012, a red-pulped delicious variety CO 8 was released. This variety is rich in anti-oxidants viz., beta carotene (1.78 mg/100g) and lycopene (2.14 mg/100g). This is highly suitable for consumption as dessert and appears to be having low Glycemic Index (GI) Assessment of this variety for GI is currently being taken up.
- In rice, using gamma rays, mutants with high resistant starch and low GI in the background of ADT 43 were developed and are in the process of evaluation.
- In banana, a hybrid NPH-02-01 was developed, which resembles Nadan banana. This hybrid is tolerant to nematodes and now being tested in MLT. This hybrid is less sweet and assessment of this hybrid for the low Glycemic Index is being taken up.

2. **Processes should be developed for the conversion of conventional food grains like varagu, samai, kuthiraivali, ragi, cumbu, etc., in to high value / convenient food product for marketting on a high brand (Action: P&H, PHTC)**

Value addition of millets has assumed critical importance in the last decade due to socio economic and industrial factors. Value added products like health mixes, bakery products, pasta products and instant food mixes were developed with small millets. Bakery products viz, bread, cookies and cakes were acceptable at 20%, 50% and 30% incorporation levels respectively. Incorporation level of small millets at 30% was acceptable for pasta products like vermicelli and macroni. Infant food mixes were developed with 100% millets and found to be highly acceptable.

3. **Similar to permanent manurial trials, permanent pesticide trials should be laid out to get to know the environmental effect and pest and disease equilibrium of various pesticides / insecticides etc., (Bt cotton increases sucking pests/cotton virus, etc.,) (Action: Director, CPPS)**

By taking up permanent pesticide trial, the impact of pesticides on the residue levels in crops and soil and the equilibrium position of pests and natural enemies can be assessed. Exclusive field and infrastructure are required to confine applied pesticide to targetted location and to avoid drift and movement of pesticides. Considering the varied group of pesticides and their application methods, cost involved in taking up this study is huge. TNAU is in the process of identifying scientific group on funding sources for taking up this study.

4. **The tannery and dyeing industries are using heavy chemicals and the water and water ways are terribly polluted resulting in water/soil damage. Research should be taken-up to find out the ways and means to use botanicals/ Nano chemicals (bio-degradable) for tanning and dyeing purpose replacing the chemicals. (Action: SO, NRM)**
- In the tanning process, a number of chemicals including chromium sulphate is used for the production of quality leathers. In the traditional vegetable tanning, extracts from plants like Acacia, Eucalyptus, Mimosa, Saponins *etc.*, were used until the development of commercial chemical tanning. However, vegetable tanning has been replaced by chemical tanning due to the scarcity and high cost of labour, involved in extracting the vegetable tanning material. The vegetable tanning is still in practice in Dindigul district. More over the chemical tanning is very economical and effective in achieving quality leathers. Therefore, the industries prefer the chemical tanning and dyeing processes.
 - However, efforts are being taken to find out new botanicals (plant extracts) and biodegradable nano-materials for the tanning and dyeing processes.
5. **A process study from planting to harvest in sugarcane cultivation to minimize the “process cost” should be taken-up. (Action: Director, TRRI, Aduthurai)**

Sustainable Sugarcane Initiative (SSI) is a new technology it can improve the land, water and labour productivity and reduce the cost of cultivation and enhance the net income to the farmer.

SSI Principles

- Raising of nursery in protrays using single bud chips.
- Transplanting of young seedlings (25 to 30 days)
- Providing sufficient soil moisture and nutrients through drip fertigation.
- Wider spacing 150cm between rows and 60cm between plants.
- Removal of mothershoot on 25 to 30 days after planting.

Benefits of SSI

- Reduced seed rate (125 kg bud chip / ha) and saved sett materials can be better utilized for economic production.
- Saving in 90% seed cost.
- Improved water use efficiency.
- Possibility of bringing more area under cane with available water.
- More crop per unit area and unit time.
- Saving of one month cane duration since one month old seedlings were used for planting.
- Wider row spacing permitting mechanized operations.
- Reduced cost of cultivation.
- Increased yield and income.

Cost Benefit ratio

Earlier studies undertaken in sugarcane cultivation indicated that mechanization of sugarcane cultivation especially during planting, weeding, earthing up and harvesting reduced cultivation cost considerably.

- Planting with sett cutter cum planter machine for sugarcane cultivation reduced around 25% of manual sett cutting and manual planting.
- The weeding operation done with chemical herbicide like atrazine reduced the cost by 20% as against the manual employment of weeding.
- Intercultural costs by employing power tillers, earthing up by tractor reduced the cost by 25% as against manual employment.
- The employment of harvesting machine for sugarcane though varies according to the machine type and sugar mill rates, a reduction of around 30% cost is expected as against manual harvesting by labourers.
- Similarly, installing micro irrigation facility though it involves high initial cost of cultivation later the same can be adjusted in the subsequent ratoon crops. Any how the indirect savings of water economy, fertilizer usage efficiency, additional yield etc., are numerous.

In a overall situation for sugarcane cultivation, by employing mechanization, the mean cost of cultivation could be reduced by 25 to 30% as against employment of manual labourers.

Scientific intervention

Sugarcane Research Station, Sirugamani have standardized the sugarcane protray nursery production techniques viz., 1. Chip bud treatment using Carbendazim 20 g, Malathion 40 ml, Urea 100 g, water 20 litres for 5000 chip buds with 15 minutes soaking time 2. Protray nursery medium comprising composted coir pith 1 kg, Vermicompost ½ kg for one protray with 50 pits. Sugarcane Research Station (SRS), Sirugamani have developed a hand operated bud chipping machine with the efficiency of taking 350–400 bud chips / hour and also motorized bud chipping machine with the efficiency of taking 4000 bud chips / hour.

Demonstration and material supply from SRS

SRS, Sirugamani have conducted several training programmes to SSI farmers regarding nursery production, planting and management techniques. Special trainings are also given to extension officials, sugar mill staff and farmers regarding SSI techniques. More than two lakhs seedlings were produced and distributed to the farmers. SSI techniques were popularised through magazines, radio and TV. SRS, Cuddalore have imparted training to 480 farmers from Moongilthuraipattu, Cheyyar, Cuddalore and Thirunallur. A total of 2,05,620 chip bud seedlings of the variety CoC (SC) 24 were distributed to the farmers.

Output

In TN-IAMWARM project in villupuram district, by following SSI, the farmer, Th. Poorasamy of Perankulur village harvested cane to a tune of 265t/ha in CoC (SC) 24 variety.

- 6. New tools/implements/machinery should be developed for groundnut harvesting as it is labour intensive without damaging the stalk which has fodder value. (Action: Dean, AEC&RI)**

A self propelled “groundnut combine” is being developed at Agricultural Machinery Research Centre, AEC&RI, for harvesting bunch type varieties grown on raised beds.

7. Dwarf varieties/hybrids in coconut should be developed as labour has become a problem for plucking. (Action: Dean, HC&RI)

- A new dwarf variety for tender coconut was released as TNAU coconut ALR-3 during 2013. Its special features include
 - It is a selection from Kenthali, dwarf coconut genotype originated from Karnataka State.
 - Early flowering dwarf and comes to bearing from third year onwards.
 - Suitable for irrigated coconut belts of Tamil Nadu.
 - A promising genotype for tender nut purpose.
 - Average yield potential - 86 nuts per palm per annum from the stabilized bearing period onwards.
 - Maximum yield potential - 121 nuts per palm per annum.
 - Per cent increase in yield over COD - 34.1
 - Per cent increase in yield over MYD - 37.9
 - It has bright orange coloured nuts with sweet tender nut water.
 - Tender nut water content per nut – 420 ml.
 - Total soluble sugar content - 5.2 per cent.
 - Rich in potassium – 190.21 mg per 100 g
 - Copra yield – 2156 kg per ha
 - Number of nuts required to make 1 tonne of copra – 5195
 - Oil content – 56 per cent.
- Besides, future breeding program only aims at developing dwarf varieties/hybrids only.
- Concentrated work are undertaken to develop hybrids in both the Coconut Research Stations utilizing dwarf genotypes as one of the parents.

8. In order to develop crop varieties/hybrids to meet stake holder need for industrial crops like cotton, sugarcane, cassava, etc., and other crops, regular stakeholder interaction should be organized rather than having discussions with few farmers/end users here and there. (Action: Director, CPBG & Dean, HC&RI)

- The tapioca variety Me 833 has been recommended for consideration and release as Tapioca Yethapur 1 by the State Variety Release Committee (SVRC – 2013). This variety meets the industrial demand of the stake holders. Further, under the NABARD scheme functioning at TCRS, Yethapur, regular stakeholders interactive meeting between farmers, scientists and sago industries are being arranged.
- DEE organized state level farmers' meet precluding the Scientific Workers Conference 2013 to get the picture on the farmers' needs.

9. The research outputs should be up-dated in the websites including the annual report. Irrelevant information shall be removed. (Action: Dean, Agri. & Director, P&M)

TNAU website is being updated on a regular basis. Links to the newer announcements by the Govt. / Policy documents are also provided. Updated Crop Production Guide of Agriculture has been hosted.

b. Suggestions made by Thiru. Venkatramani Govindan

1. Greater use of International Communication Technology (ICT) in agricultural extension education should be ensured. (Action: Dean, Agri.)

Information and communication tools are being extensively used in agricultural extension education. TNAU has the world's largest agricultural knowledge portal <http://agritech.tnau.ac.in>. TNAU also offers other ICT based agricultural extension services viz., video conferencing facility to connect at block level, SMS messages for price and price forecast on daily basis, daily real time weather data at block level at hourly basis, weather forecast for next six days, crop doctor for visual diagnostics for five crops and online resource mapping services on pilot scale.

2. New Genre of agricultural extension methods should be evolved to fulfill farmers' aspirations. (Action: DEE)

- e-extension methods comprising of new media tools like agri portal, expert systems are provided with agricultural information for the benefit of farming community by the e-extension centre of DoEE.
- Daily Dynamic Market Information provides whole sale and retail prices for 160 perishable commodities including 68 vegetables, 34 fruits, 37 flowers, 13 spices and 8 plantation crops of 13 markets of Tamil Nadu, Karnataka and Kerala. Details of 2500 wholesale dealer address and phone numbers are added in the TNAU Agritech Portal. Daily prices information are also given to the farmers through mobile.
- Creative radio programme in different modes are prepared with the help of agricultural experts and the same is being transmitted through Community Radio Station and the same content is being uploaded in TNAU Agritech Portal as well.

3. Farmers should be enabled to receive incentives for the eco-system services provided by them rather than extending subsidies to help them. Eco-system benefits of different cultivation systems should be quantified to help Government to take policy decisions on extending incentives to farmers as done in countries like Japan. (Action: Director, CARDS)

- The eco-system management and eco-system services have received much attention from policy makers for their perceived ability to contribute significantly to natural resources management, environmental sustainability and economic growth and development both in developed and developing economies across world. Valuation is an attempt to assign values in terms of market price or contingent valuation techniques for the goods and services offered by the ecosystem.
- Agriculture has been engaged in ecosystem management. Agricultural farms alter and then manage ecological processes and functions on small and large scales. Farms, individually and in working agricultural landscapes, have ecological, geographic, and economic attributes that influence the stream of ecosystem services they manage and provide. In this process, farms reconfigure ecological attributes to maximize what are known as provisioning services such as, food, fodder, fuel, energy and other commodities supplied by nature. Farmers manage these provisioning services to optimize farm production. Farms

sometimes are associated with soil erosion, nutrient and pesticide runoff, and groundwater depletion also.

- The other services provided by the agricultural farms include environmental beneficial functions. These are the economically beneficial results of ecosystem functions that modulate ecological conditions, such as carbon sequestration, water recharge, food control, pollination, temperature and humidity regulation, and storm water absorption. These services are broadly called as regulating services. Unlike provisioning services, the market value of which is embedded in commodity prices and thus easily measured and monitored, regulating services tend to behave more like non-market public goods. Farms thus have all the incentives to optimize provisioning services available to them, but little and almost no incentive to provide regulating services.
- The different ecosystems where farms operate may include wetland ecosystem including irrigation tanks, watershed ecosystem, agro-forestry, rainfed farming, large scale growing of cultural and economic valued trees, environmental benefits of cropping in different ecosystems, bio-diversity, etc. The farms in these ecosystems generate variety of environmental benefits and negative externalities. Most of the times, the valuation of all these ecosystems services could not be done due to inadequate and non-availability of data, lack of appropriate methodologies etc. Thus, these studies should be done very carefully identifying different services provided and negative externalities generated by the agricultural farms and valuing them without over-/under estimation.
- As suggested, separate studies will be carried out in detail to assess the services provided by the specific ecosystems and explore possibilities for providing incentives to the farmers through Government Missionary. This will also help in the course of time to identify and quantify the negative externalities and ways and means to reduce them.

4. The research methodology should meet the aspirations of new generation of farmers (Action: All University Officers)

- The research methodologies of newly proposed subprojects and externally funded schemes are designed to meet the aspirations of the new generation of farmers emphasizing the local needs.
- In each and every crop, satisfying the mandate of the research stations / college as well to accept the aspiration of the new generation farmers, research programmes are designed and implemented. These programmes are thoroughly discussed at the Dept. level before their submission to University / External Agency for funding.
- The new generation farmers' aspirations of commercialization of Forestry technology has been carried out through creation of six new rural industries located across the state of Tami Nadu. Among them, three rural industries namely, Eden Nursery Garden, Mettupalayam, Kumaran Hi-Tech Nursery, Annur and Sri Vari Plantations, Villupuram had been incubated in the Agri-Business Incubator of TNAU involving commercialization of Clonal technology.
- In rice, present focus is on development of rice cultivars which are non-lodging, high yielding, herbicide tolerant and with market friendly quality rice towards which we have positive leads which will cater to the demands of the new generation of farmers wanting to go for mechanization.
- Farmer Ms.Indirani, Singampatti had cultivated CORH 3 rice hybrid and she is more receptive in receiving our newer technologies.

- Based on the farmers request, the research on the export oriented new crops and flower crops are being taken up to meet out the demand of the new generation of farmers.
- Organic agriculture is being given importance to reduce the pesticide load in the environment and to harvest residue free grain and fodder.
- Hands on trainings are given regularly during farmers meetings and melas for preparation of botanical based pesticides and awareness to use biocontrol agents wherever possible.
- At present, many farmers are growing vegetables and flowers under protected cultivation. In this ecosystem, to reduce the pesticide load, farmers are advised to use monitoring tools like yellow sticky traps, pheromone traps etc., and to take timely plant protection measures with botanicals and biocontrol agents.

c. Suggestions made by Dr. Rani Perumal

1. Transfer of technology should be made cost effective and faster by revitalizing KVKs and Agrl. Technology Management System (Action: DEE)

- The ToT centres of Directorate of Extension Education namely KVKs are effectively involved in disseminating Farm technologies by following various methodologies like skill training, method demonstration, exposure visits etc.,
- Further to make the technology dissemination cost effective, these centres are utilizing different media like Radio, Internet, mobile phone as communication devices. Video conferencing facility is also used in these centres for effective ToT.

2. Farmers should be helped to become Agro-Technologists (Action: DEE / Director, ODL)

- In addition to the packages of practices of crops, innovative trainings for entrepreneurship development covering opportunities for agribusiness, market management, price fixation are being provided by ToT centres (KVKs) of Directorate of Extension Education.
- Vocational training programmes are organized in all the KVKs regularly in order to develop the farmers as Agripreneurs.

d. Suggestions made by Thiru. Manimozhi, JDA, Coimbatore

1. Varieties / hybrids with a yield advantage of 40 to 60 per cent over the existing ones alone are acceptable to the farmers. (Action: Director, CPBG)

- A one-time leap of 25% is achievable by resorting to superior hybrid rice technology. The large scale multi-season testing has demonstrated that the hybrid CORH3 is capable of yielding 25% higher than popular variety, ADT43.
- Rice variety TNAU rice CO 50 has been highly accepted as it has recorded 10 tonnes in several locations of Cauvery Delta region.
- Indica-japonica hybridization programme is being reinvigorated to surpass the plateauing yield.
- TNAU maize hybrid CO 6 had yielded 7400 kg/ha on an average which is about 10% more than that of 900 M Gold under irrigated situation. The yield of the same hybrid went up 19% more than that hybrid under rainfed situation.

2. Pre release survey should be made among the farmers about marketability. (Action: Director, CARDS / Director, CPBG / Dean, HC&RI)

- In the variety development market acceptability and farmers choice are being given importance as detailed below
- Grains with good battering quality in blackgram, bold and shiny seeds in greengram and attractive seed colour in redgram.
- The survey was made among the farmers by giving OFTs to more than 50 locations / villages on large scale at Tanjavur, Tiruvarur and Nagapattinam districts and it was inferred that the new rice culture CB 06 535 is having good marketability like that of ADT 43 which will soon replace ADT 43 with a higher yield levels.
- Details on ART conducted under farmers fields for different pre-release cultures were collected. Interview schedule has been prepared for data collection. Data collection is in progress.

3. Implements such as; low cost coconut climber, sugarcane planter/harvester and paddy harvester suitable for small farms should be evolved to overcome labour scarcity. (Action: Dean, AEC&RI)

- Coconut tree climber is already available at a cost of Rs. 3,000/-
- Reaper binders applicable for small farms are already available commercially.
- Sugarcane machinery for small farms may not be practically feasible. However, machines for individual split up work operations can be developed.

e. Suggestions made by the Vice-Chancellor

1. Greater focus in research should be given for pulses and oil seeds as we are chronically deficit in those crops. (Action: Director, CPBG)

- Breeding programme in development of high yielding varieties has been strengthened and given importance for development of high yielding varieties with biotic and abiotic resistance.
The following high yielding cultures have been identified and are under further stage of evaluation.

MLT			ART		
Crop name	Entries	Special features	Crop name	Entries	Special features
Redgram	CRG 10-07	High yield, tolerant to SMD	Redgram	CRG 10-01	Resistant to SMD
	CRG 10-11	High yield, short duration			
Blackgram	COBG 10-05	High yield, bold seeds, YMV resistant	Blackgram	COBG 759	High yield, Bold seeds, resistant to MYMV
Greengram	COGG 979	Early duration, synchronous maturity, YMV resistant, medium bold seeds 4.8 g /100 seed weight	Greengram	COGG980	Extra early, synchronous maturity, MYMV resistance, bold seeds

2. Research in farm mechanization should be more focused to develop tools, implements and machineries suitable for small farm agriculture. (Action: Dean, AEC&RI)

Power tiller operated as well as small engine operated machines are already available for many small farm operations. However, more machines can be developed on requirement.

3. Seminar on Women in Agriculture should be conducted to benefit women farmers. (Action: Director, CARDS / DEE)

- Seminar cum interactive workshop was organized at TNAU, Coimbatore on 23.11.2013 Around 100 Self Help Group Women members and women farmers attended the workshop. The Chief Guest was Mrs. P.Amutha, I.A.S., the then Chairman, Tamil Nadu Women Development Corporation, Chennai.
- The importance of value addition in agricultural produces was discussed among them for making the SHG groups self dependent. Subsequently, a series of one day workshops were organized at KVKs of Trichy, Tindivanam, Madurai, Virudhunagar, Pudukottai and Dharmapuri districts during 21-27th, March 2013 with the objectives of developing women entrepreneurs through making value added products from rice and pulses milling industry by-products. Totally 180 SHG Women were trained through six workshops. Similar workshops in eight more districts will be conducted during April 2013 / May 2013.
- Urban women empowerment in nursery technologies and value added products on dairy and horticultural produce are given under Swarna Jayanti Shahari Rozgar Yojana (SJSRY) scheme with the help of Salem Corporation to 90 women through KVK, Sandhiyur.

Agenda No.3

New Schemes sanctioned from January 2012 to December 2012

Govt. of India

(Rs. in lakhs)

S.No.	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Identification and Mapping of QTLs linked to Jassid tolerance in cotton	GOI-DBT	Dr. P. Amala Balu Coimbatore	26.07.12 to 26.07.2015	23.25
2.	Exploitation of antibiotics and ACC- deaminase producing PGPR strains against biotic (root rot and wilt) and abiotic stress (parawilt /drought) in cotton	DST (SERC)	Dr.T. Anand Asst. Prof. (Pl.Path) CRS, Veppanthattai	March 2012 to Feb.2015	19.15
3.	Identification of gametocides for emasculation in soyabean and development of mapping population for QTL analysis	UGC Scheme	Dr.T.Kalaimagal Dept. of Pulses, CBE	July 2012- June 2015	9.41
4.	Physiological and molecular characterization of cotton genotypes for drought tolerance	DST- OYS- SERB- GOI	Dr. S. Preetha Dept. of Pulses, CBE	July 2012- June 2015	18.90
5.	Upscaling pulses productivity through micro mission mode farmers participatory approach in thickly SC/ST populated villages in Virudhunagar district of Tamil Nadu	GOI –DST Scheme	Dr.R.Veeraputhiran, Asst. Prof. (Agron.) CRS, Srivilliputtur	2013-2016	15.25
6.	Development of Farm Level Bio-Ripening Chamber for Fruit Ripening	UGC	Dr.C.Indu Rani, Asst. Professor Dept. of F&APE, CBE	1.7.2012 - 30.06.2015	7.56
7.	Design and Evaluation of a Tamarind Fruit Dehuller and Deseeder	DST - SERB	Dr.P.Rajkumar, Associate Prof. (FPE) Dept. of F&APE, CBE	1.11.2012 - 31.10.2014	10.44
8.	Design and Development of Ohmic Heating System for Pasteurization of Liquid Egg White and to Enhance the Functional Properties of Egg White Albumen	DST - SERB	Dr.K.Thangavel, Professor, Dept. of F&APE, CBE	1.11.2012 - 31.10.2014	20.28
9.	Development of Sustainable Advanced Lignocellulosic Biofuel Systems (SALBS)	Indo - US - India consortium	Dr. S.Kamaraj, Professor & Head, Dept.of Bioenergy, CBE	01.11.2012 - 31.10.2017	89.35

10.	Post harvest technology and value addition of Cashew apple	UGC	Dr.P.Geetha, Asst.Professor (FSN) PHTC, TNAU, CBE	1.5.2012 - 1.4.2014	13.24
11.	Ecotourism and the external impacts on Natural Resources, Agriculture, Socio-economics and the Environment	UGC	Dr.C.Sekar, Professor (Agrl. Econ), PHTC, TNAU, CBE	1.7.2012 - 30.6. 2014	6.52
12.	Socio–Economic Impacts of Informal Food Supply System in Tamil Nadu	Indian Coucil for Social Sciences	Dr.C.Sekar, Professor (Agrl. Econ.) PHTC, TNAU, CBE	1.4.2012 - 31.03.2014	8.15
13.	Development of Novel food from Sago-project	Sago serve, Salem	Dr.G.Pushpa Professor (Home sci.) PHTC, TNAU, CBE	1.4. 2012- 31.10.2012	1.65
14.	Promotion and strengthening of Agrl. Mechanization through training, testing and demonstration	Central sector scheme	Dr.D.Manohar Jesudas, Professor, AMRC, TNAU, CBE	1.4.2012- 31.03.2013	1.67
15.	Modern agricultural implements, science and technology transfer to tribal community for sustainable livelihood in the western ghats of CBE	GOI- DST	Dr.K.Rajamanickam Prof., CRS, Aliyarnagar	2012-2015	13.59
16.	Genetic Diversity, population structure and linkage disequilibrium assessment for association mapping studies in coconut	GOI-DST Fast track	Dr. S. Geethanjali Asst. Prof., CRS, Aliyarnagar	2012-2015	15.95
17.	Rice Biofortification with enhanced iron and zinc in high yielding non-basmati cultivars through marker assisted breeding and transgenic approaches	DBT, GOI, NewDelhi	Dr.D. Sudhakar Dept. of Biotech, CBE Dr.S.Rajeswari Dr.S.Robin Dept. of Rice, CBE	Feb'2012 to Feb'2017	178.64
18.	Impact studies on the effect of Bt cotton on the functional microbes in the rhizosphere	DBT, New Delhi	Dr.R.Sridar Dept. of Biotech, CBE	Jan' 2012 to Dec' 2014	19.82
19.	Identification of molecular targets for management of crop pests using RNAi approach	DBT, New Delhi	Dr.S. Mohankumar Dept. of Biotech, CBE	July 2012 to June 2015	50.56
20.	Ensuring food security: harnessing science to protect our grain harvest from insect threats"- Molecular analysis of Phosphine resistance in storage pests	DST, New Delhi	Dr.S. Mohankumar, Professor Dept. of Biotech, CBE	April 2012 to Mar.2015	45.43
21.	Development of Molecular Markers associated with drought tolerance in Barnyard millet (Echinochloa-frumentacea)	UGC, New Delhi	Dr. B. Rajagopal Dept. of Biotech, CBE	2012-2015	8.90

22.	Engineering transcription factors ABI3 and ABI5 in rice for salt and drought tolerance.	DST, New Delhi	Dr. B. Rajagopal Dept. of Biotech, CBE	2012-2015	18.00
23.	Molecular breeding for developing drought tolerant Ahu rice cultivars suitable for upland ecosystem	DBT, New Delhi	Dr. M. Raveendran Dept. of Biotech, CBE	April 2012 - Mar 2015	19.00
24.	Establishment of insecticide free bio – villages at Madurai district involving paddy farmers and SHG women	GOI – DBT, New Delhi	Dr.W.Baby Rani Assoc. Prof. (Agrl. Ento.), CBE	Jan. 2012 Dec. 2014.	9.99
25.	Capacity building and entrepreneurship development of weaker sections through demonstration cum training on high-tech nursery and off-season vegetable production	DST	Dr.S.Mariappan Professor and Head (Hort.), Periyakulam	April 2012 March 2014	12.05
26.	Development of Sea weed liquid fertilizer and bio formulation to improve productivity in agricultural ecosystem	DBT	Dr.K.Sujatha, Assoc. Prof. (SS&T), Madurai	May 2012 April 2015	11.26
27.	Exploration of the diversity and lipid storing capacity of algal isolates of the pristine forest and marine ecosystem and establishment of a repository	UGC	Dr.T.Kalai Selvi, Assoc. Prof. Dept of Agrl Micro., CBE	July 2012 to June 2015	9.74
28.	Biotization – A novel bioinoculant delivery strategy for banana micropropagation	GOI-DST	Dr.M.Senthil Kumar, Asst. Prof. Dept of Agrl. Micro., CBE	Aug. 2012 to July 2015	22.55
29.	Delineation of Cadmium contaminated soil & exploration of bioremediation strategies for removal and for environmental sustenance by harnessing Arbuscular mycorrhizal fungi and PGPR	GOI-DST	Dr. K. Kumutha, Professor, Dept of Agrl. Micro., CBE	Nov. 2012 April 2014	14.90
30.	Bacteriophages A novel Biopreservative for vegetable	GOI-MFPI	Dr.M.Senthil Kumar, Asst. Prof., Dept of Agrl. Micro., CBE	Nov. 2012 to Oct.2014	67.09
31.	Lytic biorational agents against the bacterial wilt disease of Brinjal	GOI-DBT	Dr.M.Senthil Kumar, Asst. Prof., Dept of Agrl. Micro., CBE	Oct. 2012 to Sept. 2015	29.26
32.	Metabolic and molecular profiling of aromatic rice germplasm of India for gaining insights about aroma	DBT- Aroma Project	Dr.S.Robin, Professor &Head, Department of Rice	Oct. 2012- Sept.,2015	19.65
33.	Development of wide compatible restorers in rice through marker	GOI-DBT	Dr.N.Sakthivel, Asst.Professor (PB&G), VRS, Palur	10.9.2012- 9.9.2015	17.97

	assisted backcross breeding				
34.	Identifying new green gram varieties with high yield and Yellow Mosaic Virus (YMV) resistance through Participatory Varietal Selection	UGC	Dr.A.Sheeba, AP (PB&G), RRS, Tirur	July, 2012 June 2015	3.17
35.	Crop response studies on climate change with particular reference to elevated carbon di oxide and interaction with temperature in black gram (Vigna mungo)	UGC	Dr.H.Vijayaraghavan Prof (Crop Physiology) NPRC, Vamban	July, 2012 June 2015	7.64
36.	Spatial distribution of Moisture and nutrients in root zone under drip fertigation in chilies	DST Fast Track, New Delhi	Dr.S.Suganya AP (SS&AC) SWMRI, Thanjavur	July, 2012 June, 2015	13.00
37.	Isolation and Functional Characterization of DREB Transcription Factor from Cynodon dactylon (L.) Pers	DST-Science and Engineering Research Board, New Delhi	Dr .K.Kavitha AP (Plant Pathology) ORS, Tindivanam	July, 2012 June, 2015	23.90
38.	Development of microbial based bioformulations for the management of major fungal diseases in Urdbean	DST-Science and Engineering Research Board, Ne Delhi	Dr.P.Latha AP (Plant Pathology) ARS, Pattukkottai	July, 2012 June, 2015	22.00
39.	Biodiversity of Odonata (Insecta) and the impact of agrochemicals on them in the rice ecosystem of Cauvery delta zone in Tamil Nadu	DST-Science and Engineering Res. Board, New Delhi	Dr. R. Arulprakash AP (Agric. Entomology) ARS, Pattukkottai	July, 2012 June, 2015	18.60
40.	Ecofriendly management of post flowering stalk rot of maize using biocontrol agents.	UGC	Dr.N. Rajnimala Asst.Prof.(Pathology) MRS, Vagarai	2012 - 2015	8.09
41.	Biofortification of Zinc in Maize grain using Mycorrhizal symbiosis	UGC	Dr.C.Bharathi Asst.Prof.(SS&AC) MRS, Vagarai	2012 - 2015	7.76
42.	Evaluation of suitable Integrated Farming System components for wetland situation in Erode district of TN	DST – GOI	Dr.K.Ramah ARS, Bhavanisagar	2012 - 2015	14.50
43.	Quality control arrangement on seeds – development and strengthening of infrastructure facilities for production and distribution of quality seeds	GOI-DAC-scheme	Dr.S.Sundareswaran and Dr.V.Vakeswaran ARS, Bhavanisagar	April 2012 March 2013	37.50
44.	Remote sensing techniques for large scale quantification of nitrogen and water stress in crops	UGC, New Delhi	Dr. S. Pazhanivelan Assoc. Prof. (Agronomy), CBE	July 2012 to June 2015	11.07

45.	Climate change assessing impacts and developing strategies for the agriculture in TN	DST, GOI, New Delhi	Dr. V. Geethalakshmi Professor (Agronomy), CBE	Jan. 2012 to Dec. 2014	65.87
46.	Root zone technology for bioremoval of heavy metals and other toxic contaminants of factory effluents of Tirupur hosiery units using grass species under constructed wetlands	UGC, New Delhi	Dr.C. N. Chandrasekhar Prof. (Crop Physiology)	Aug. 2012 July 2015	8.27
47.	Facilitating wildlife resilient farming and economic empowerment among the tribal's through technological interventions	GOI	Dr. R. Revathi FC&RI, Mettupalayam	3 years	52.56
48.	Developing Bioremediation options for degraded scrub jungle forest of Nilgiri foot hills in Western Ghats (TN)	GOI	Dr. R. Revathi FC&RI, Mettupalayam	3 years	57.99
49.	Review of historic data and information on large mammal movements	GOI	Dr. R. Revathi FC&RI, Mettupalayam	1 year	5.87
50.	Baseline survey on Biodiversity of alien species of Sathyamangalam Reserve Forest	GOI	Dr.K.Baranidharan FC&RI, Mettupalayam	1 year	3.28
51.	Network Project on Harvesting Processing of Tamarind Seed gum	GOI	Dr.A.Balasubramanian FC&RI, Mettupalayam	5 years	135.17
52.	Evolving Suitable TBO's based Climate resilient farming Strategies for Semiarid Regions of TN	GOI	Dr.A.Balasubramanian FC&RI, Mettupalayam	3 Years	51.99
53.	Bioremediation of Water Effluent/ Waste Water Using Already Developed Eucalyptus Clonal Lines through Biodrainage and Biotechnological Approaches	GOI	Dr.A.Balasubramanian FC&RI, Mettupalayam	3 Years	117.28
54.	Establishment of DUS centre at TNAU for papaya	PPV&FRA, New Delhi	Dr. K.Soorianathasundaram, Prof & Head, Dept of Fruit Crops	Dec. 2011 to till date	5.19
55.	Developing DUS descriptors for tree species of Tamarind, Ailanthus, Cadamba and Augmenting Existing reference collection	PPV&FRA, New Delhi	Dr.A.Balasubramanian FC&RI, Mettupalayam	3 Years	86.64
56.	Carbon sequestration potential of Industrial Plantations in farmlands	GOI	Dr.S.Radhakrishnan FC&RI, Mettupalayam	3 Years	49.87
57.	Exploitation of Calophyllum bioresources for climate and industrial suitability	GOI	Dr.S.Radhakrishnan FC&RI, Mettupalayam	3 Years	18.35

58.	Designing Suitable Formulation of Beneficial Microbial Consortia for enhancing productivity of Tree Borne oilseed species	GOI	Dr.M.Tilak FC&RI,Mettupalayam	3 Years	16.51
59.	Promoting Suitable Climate Resilient Agroforestry Strategies for Climate Change Adaptation in Semi – arid Regions of TN	GOI	Dr.A.Balasubramanian FC&RI,Mettupalayam	2 Years	265.95
60.	Evaluation of whole-pea flour and protein-rich pea fractions as a bio-pesticide for the management of insects attacking seeds of trees during storage	GOI – SERB	Dr. P. Pretheep Kumar FC&RI, Mettupalayam	29.05.12 – 28.05.15	11.20
61.	Survey, Documentation and Value Addition Studies in selected NTFPs of Tamil Nadu	GOI –ICFRE	Dr.I. Sekar FC&RI, Mettupalayam	Sep'12 to Oct' 15	15.00
62.	Design and development of Urban Forestry models to combat environmental pollution in Tamil Nadu	GOI	Dr.A.Balasubramanian FC&RI, Mettupalayam	2 Years	169.25
63.	Vermicasting in Bamboo plantations	GOI	Dr. M.Tilak FC&RI, Mettupalayam	2 Years	14.32
64.	Entrepreneurship Development for Rural Unemployed Youth in Thoothukudi District of Tamil Nadu through Sustainable Milky Mushroom Production Technology	GOI-DBT	Dr. M.Jayasekhar, Prof.(Plant Pathology) AC & RI, Killikulam	Jan. 2012 to Dec 2014	14.44
65.	Development of Dwarf and Early Mutant in White ponni Rice using Mutation Breeding	DAE- BRNS – BARC	Dr. M.Arumugam Pillai, Prof. (PBG) AC & RI, Killikulam	April 2012 to Mar.2015	17.00
66.	Development of rural agrl. entrepreneurs by popularizing economic mycology and biotechnology based Programmes in TN	GOI-DBT	Dr. E.G. Ebenezer, Prof (Plt Pathology) AC & RI, Killikulam	Mar.2012 to Feb. 2015	19.80
67.	Introgression of SALTOL gene in drought tolerant CMS background for developing superior hybrids in rice	UGC	Dr. M.Arumugam Pillai, Professor (PBG) AC & RI, Killikulam	July 2012 to June 2015	4.83
68.	Evaluation of real time nitrogen management in aerobic rice under integrated plant nutrient supply system.	DST	Dr. M. Senthivelu Asst. Prof. (Agron) Dept. of Agronomy	Aug. 2012 to July 2015	22.75
69.	Physiological and Molecular Characterization of Cotton Genotypes for Drought Tolerance.	DST	Dr. S. Preetha, Asst. Professor (PB&G)	Aug. 2012 to July 2015	18.90

70.	Technological empowerment and sustainable livelihood security of tribal women through agricultural farm productivity and employment generation activities in Kalrayan hills of Tamil Nadu	DSIR, GOI, New Delhi.	Dr.M.K.Kalarani, Assoc. Prof. (Crop Physiology) TCRS, Yethapur	2012-14	14.00
71.	Generating secured income for farm women through dissemination of hybrid castor production technology	DSIR, GOI, New Delhi.	TCRS, Yethapur	2012-14	14.50
72.	Reinvigoration of agricultural practices among farmers for sustainable crop productivity and alleviating poverty in Vavuniya dist.of SriLanka	India-Sri Lanka Foundation, New Delhi	Dr.V.Rajendran Professor (SWC) TCRS, Yethapur	2012-13	1.50
73.	Cold tolerant rhizobacteria as a bio nematicide for high value crops (black pepper and coffee) at hilly regions	DST-Fast track	Dr.P.Senthilkumar Asst.Prof. (Nem.), HRS, Yercaud	10.8.2012 to 10.8.2015	13.00
74.	Fertilizer Potential of Seaweed Saps on Different Crops	CSMCRI, Gujarat	Dr.S.Mani Professor (SS&AC) Dr.V.P.Duraisami Professor (SS&AC) Dept. of SS&AC, CBE	April, 2012 March, 2014	54.92
75.	Carbon sequestration potential of rice ecosystem	UGC, New Delhi	Dr.R.K.Kaleeswari, Prof. (SS&AC), CBE	Feb.2011 to Jan, 2014	9.28
76.	Crop and Genotypic Variation-A tool to enhance Phosphorus use Efficiency for sustainable cropping in low Phosphorus soils	DST-SERB	Dr.S.Meena Professor (SS&AC) Dr.P.Malarvizhi Prof.(SS&AC) Dept. of SS&AC, CBE	Mar, 2012 to Feb, 2015	33.29
77.	Enhancing the productivity of textile industry pollutes soils of Noyyal river basin, Tamil Nadu	UGC	Dr.K.M.Sellamuthu Dr.R.Sridar Dr.V.P.Duraisami Dr.S.Mahimairaja Dept. of SS&AC, CBE	Aug, 2012 to July, 2015	8.17
78.	Surface modification of nano Zero Valent Iron (nZVI) for improved reactivity and performance against ground water contaminants	UGC	Dr. M. Prasanthrajan, Assistant Professor Dept. of ENS, CBE	01.07.2012 to 31.06.2015	6.01
79.	Region based recommendation to improve coconut production in Tamil Nadu through Remote Sensing and GIS	CDB	Dr. Balaji Kannan Asst. Prof., (SWCE) Dept. of RS&GIS, CBE	Two years from 01.10.2012	10.85
80.	Fabrication of Nano Agri inputs for Groundnut	DST Nano Mission	Dr. K.S. Subramanian Professor, Dept. of NST, CBE	2011-2014	64.26

81.	Nanotechnological approaches in seed invigoration of rainfed groundnut	DST – Nano Mission	Dr. N. Natarajan, Prof., Dept. of NST, CBE	2012-2015	27.00
82.	Establishment of TILLING resources in chosen pulse crops through next generation sequencing technologies	DBT	Dr. S. Ganesh Ram Dr. A. John Joel Dept. of PGR, CBE	2012-13 to 2016-17	51.96
83.	“Grants in Aids” for organising trainings for creation of awareness among farmers about the provisions of the Protection of Plant varieties and farmers rights Act 2001	PPV&FRA	Dr. A. John Joel Dr. S. Ganesh Ram Dept. of PGR, CBE	2013	0.80
84.	Minimizing the global warming potential of flooded paddy using Methanotrophs	DST, New Delhi	Dr.V.Davamani Asst. Professor (ENS) HC&RI, Periyakulam	2012-13	14.72
85.	Climate change assessing impacts and developing adaptation strategies for the agriculture in TN	DST, New Delhi	Dr.V.Davamani Asst. Professor (ENS) HC&RI,Periyakulam	2012-2014	65.87
86.	Organization of District level seminar on cashew	GOI	Dr. S. Jeeva, Professor (Hort) RRS, Vridhachalam	2012	130.50
87.	Production forecast Survey on cashew	GOI	Dr. S. Jeeva, Professor (Hort) RRS, Vridhachalam	2012	30.39
88.	Cashew Training Programme	GOI	Dr. M.S.Aneesa Rani, Assoc. Prof. (Horti) RRS, Vridhachalam	2012	131.80
89.	Identification of high beta carotene pearl millet (Golden millet) to enhance the nutritional security	UGC, New Delhi	Dr.P.Sumathi Dept. of Millets, TNAU, Coimbatore	2012 – 2015	10.13
90.	Development of high culm strength, bold seeded and compact type genotypes in kodomillet suitable for mechanical harvesting	UGC, New Delhi	Dr.A.Subramanian Dept. of Millets, TNAU, Coimbatore	2012 – 2015	9.63
91.	Developing guidelines for conduct of test for distinctiveness, uniformity and stability in small millets(finger millet, foxtail millet, kodo millet, little millet, barnyard millet and proso millet)	PPV&FRA	Dr.A.Nirmalakumari Dept. of Millets, TNAU, Coimbatore	2012 - 2013	7.40
92.	Evolution of high yielding and nutrient rich oat variety suitable for value addition	GOI	Dr.A.Nirmalakumari Dept. of Millets, TNAU, Coimbatore	2012 - 2015	22.60
93.	Remote sensing information for crops and insurance in emerging economics		Director, CM, CBE	18.7.2012 to 31.3.2015	1.80

94.	Development of quality control standards for important medicinal crops	Medicinal Board	Dr. P.R. Renganayaki, Prof. (SST) ARS, Vaigai Dam	2012 - 2015	22.49
					3001.55

ICAR

(Rs. in lakhs)

S.No	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Development of e-courses for B. Tech (Agricultural Engineering) degree programme	NAIP, ICAR	Dr.S.Santhana Bosu, Dean (Agrl. Engg.),CBE	1.1.2012 - 31.03.2014	76.60
2.	Management of cashew stem and root borer (CSRB) – Under Unforeseen Res. Needs	Directorate of Cashew Research (DCR), Puttur, Karnataka	RRS, Vridhachalam	2012-13	2.34
3.	Tribal sub plan scheme for Castor	ICAR, New Delhi	Dr. V. Rajendran Professor (SWC) Dr.S.R.Venkatachalam Assoc. Prof. (PB&G) TCRS, Yethapur	2011-12	7.50
4.	Study on the dietary antioxidant consumption among the adults and the effect of cooking and processing on the activity of antioxidants	ICAR, New Delhi	Dr.T.Padmini, Professor & Head (AFT) HSC&RI, Madurai	July 2012 – June 2015	10.18
5.	Value added products from yeast fermented heat stabilized defatted rice bran	ICAR, New Delhi	Dr. P.S. Geetha, Assistant Professor HSC&RI, Madurai	July 2012 – June 2015	12.21
6.	Development of Technology for Resistant / Modified Starch substituted cereal / Millets and Pulse blended Bakery and Pasta Products	ICAR, New Delhi	Dr.M.Illamaran Assistant Professor HSC&RI, Madurai	July 2012 - June 2014	37.96
7.	Drudgery reducing technologies for tribal families in Sirumalai Hill areas of Dindigul district	ICAR, New Delhi	Dr. P. Parimalam Assoc.Prof & Head (FRM), HSC&RI, Madurai	March 2012 to Feb.2014	13.56
8.	Economic empowerment of SC and ST women on processing of moringa leaves and its products as an income generating activity	ICAR, New Delhi	Dr. S. Parvathi Prof. and Head (HEX) HSC&RI, Madurai	Oct. 2012- Sept. 2014	20.97
9.	Preparation of value added products using composite flour (Training)	ICAR, New Delhi	Dr.S.Jesupriya Poornakala Asst. Professor (HDT), HSC&RI, Madurai	July 2012 – March 2013	0.48
10.	Training on Nano Science & Technology in Agriculture	NAIP – ICAR	Dr. K.S. Subramanian Prof. & Head, Dept. of NST, CBE	2011-12	5.30
					187.10

State Government

(Rs. in lakhs)

S.No	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Creation of Soil Nutrient Database through ICP Analysis and Issue of Soil Health Card	NADP	Dr.A.R.Mohamed Haroon, Prof. and Head, Dept. of Soil and Environment, Madurai	April 2012 Mar. 2013	74.90
2.	Empowering the farmers on the technology of sub surface drip fertigation system on southern agro climatic zone of TN	NADP	Dr.R.Babu, Associate Professor (Agronomy) Madurai	Oct. 2012 Sept. 2013	30.70
3.	Composting techniques for the management of water hyacinth infestation in surface water bodies of Tiruvarur district	ATMA	Dr.K. Saravanan AP (SS&AC) TRRI, Aduthurai	Jan. 2012 to Dec., 2012	1.00
4.	Development of nutrient mixture for raising chip bud seedling nursery under SSI technique	ATMA	Dr. E. Jamuna AP (Agrl Micro) SRS, Cuddalore	April, 2012 Mar. 2014.	2.47
5.	Production of quality breeder and foundation seeds/planting materials of high yielding forage crop varieties and organizing demonstrations on forage production technologies	TN/RKVY-ANHB	Dr.A.Balakrishnan Prof. and Head ARS, Vaigai Dam	2012-13	1.50
6.	Accelerated fodder development programme (AFDP) – Production of quality Breeder and foundation seeds / planting materials of high yielding forage crop varieties and organizing demonstration on forage production technologies	NADP	Dr.V.Vakeswaran ARS, Bhavanisagar	Jan. 2012 March 2013	2.50
7.	Production and Supply of Foundation Seeds in Pulses by TNAU	NADP (RKVY)	Dr.J.Renugadevi Dr.G.Sasthri ARS, Bhavanisagar	Dec 2011 to March 2013	7.39
8.	Farmers participatory seed production demo and training on pulses and oilseeds 2012-13	NADP	Dr.V.K.Duraisamy and Dr. G. Sasthri ARS, Bhavanisagar	Dec 2012 to March 2013	0.85
9.	Sustainable integrated farming system for different agro climatic zones of Tamil Nadu	NADP (RKVY)	Dr. P.A.Saravanan ARS, Bhavanisagar	2011-2013	8.34
10.	Evaluation of glyphosate as post-emergence weed management technique in turmeric to tide over labour scarcity	ATMA	Dr. V.K. Duraisamy ARS, Bhavanisagar	2012-13	0.50
11.	Management of aquatic weeds through weedicides in Kalingarayan canal region of Erode district	ATMA	Dr.V.K.Duraisamy ARS, Bhavanisagar	2012-13	0.75

12.	Seed yield maximization techniques in Fodder cowpea CO (FC) 8	ATMA	Dr.V.Vakeswaran ARS, Bhavanisagar	Till March 2013	0.50
13.	Documentation of mealybug diversity in Erode district	ATMA	Dr.P.A.Saravanan ARS, Bhavanisagar	2012-2013	0.50
14.	Standardization of filling media and depth of the protray wells for raising redgram seedlings	ATMA	Dr. K. Ramah ARS, Bhavanisagar	2012-2013	0.50
15.	Management of foliar diseases (Leaf spot and blotch) in turmeric (<i>Curcuma longa</i>)	ATMA	Dr.S.Maruthasalam ARS, Bhavanisagar	2012-2013	0.25
16.	Integrated crop management for controlling <i>Striga asiatica</i> in sugarcane	ATMA	Dr.S.Natarajan ARS, Bhavanisagar	2012-2013	0.50
17.	Demonstration cum training on upscaling of turmeric protray seedlings	ATMA	Dr. P. Hemalatha ARS, Bhavanisagar	2012-2013	0.50
18.	Accelerated fodder development programme	NADP	Dept. of Forage Crops	2012-13	50.00
19.	Cultivation Techniques of Different Fodder Crops and method of Preservation	SFDS - AH&VS	Dr. K.Iyanar Asst. Prof. (PBG) Dept. of Forage Crops	2012-13	5.00
20.	Evaluation of TNPL Captive and Farm Forestry Plantations	TNPL	Dr.K.T.Parthiban FC&RI, Mettupalayam	Oct 2012 to Mar' 13	14.00
21.	Farmers Participatory Approach for Hybrid Castor with onion Intercropping through Drip Fertigation.	NADP (RKVY)	Dr.V.Rajendran Professor (SWC) Dr.S.R.Venkatachalam Assoc. Prof. (PB&G) TCRS, Yethapur	2012-13	15.00
22.	Production and supply of Foundation seed of pulses by TNAU	NADP (RKVY)	Dr. P. Arutchenthil, Assistant Prof. (PB&G) TCRS, Yethapur	2012-13	1.54
23.	Farmers Participatory seed production demonstration and trainings on pulses and oil seeds	NADP/ RKVY	Dr. V. Rajendran Professor (SWC) Dr.S.R.Venkatachalam Assoc. Prof. (PB&G) TCRS, Yethapur	2012-13	0.65
24.	Promotion of quality seed production in green manures	NADP	SO(Seeds), CBE	2013-15	105.20
25.	Production and supply of foundation seeds of pulses by TNAU	NADP (RKVY)	Dr.C.Swaminathan, Prof. and Head and Dr.P.Arunachalam Asst. Prof. (PBG) DARS, Chettinad	2012-13	1.55
26.	Farmers participatory seed production demo on pulses and oilseeds	NADP	- do -	2012-13	0.64
27.	Standardization and value addition of IWMUST – Municipal Solid Waste Compost for its Quality and Effect on Soil and Crops	State Govt.	Dr.S.Avudainayagam Professor Dept. of ENS, CBE	April 2012 – March 2015	23.32

28.	Production of quality breeder and foundation seeds/ planting materials of high yielding forage crop varieties and organizing demonstrations on forage production technologies	NADP (RKVY)	Dr.A. Kalamani, Prof.& Head,Dept. of Forage Crops, TNAU, Cbe.	January 2012 to March 2013	1.50
29.	Implementation of Special Package to mitigate the water stress in standing paddy crops in Cauvery Delta Zone at TRRI, Aduthurai with sub centre SRS, Sirugamani	M-NADP-28	Director, TRRI, Aduthurai	Dec. 2012 to Mar.2013	148.50
30.	Studies on the non flowering and poor performance of tamarind in forests and wastelands of Tamil Nadu	Department of Forest, Tamil Nadu Forest Dept., Chennai,	Dr.V.Ponnuswami Dean (Horticulture), HC&RI,Periyakulam	2012-2014	11.32
					511.87

Foreign Agency

(Rs. in lakhs)

S.No.	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Can Seasonal climate forecasts improve food security in Indian ocean rim Countries in a variable and changing climate?	CSIRO, Australia	Dr. V. Geethalakshmi Professor (Agronomy) Dr. A. Lakshmanan Professor (ENS), CBE	Dec. 2012 March 2015	30.95
2.	Beating Begomoviruses: Better Livelihood for Farmers in Tropical Asia with Begomovirus Resistant Tomato, Hot pepper and Mung bean and Integrated Disease Management	BMZ Germany	Dr. S.Rajesh, Asst Prof (Biotech) AC & RI, Killikulam	Aug. 2012 to July 2015	41.88
3.	Enhanced Preservation of Fruits in South Asia using Nano-film	IDRC, Canada	Dr. K.S. Subramanian Prof. & Head, Dept. of NST, CBE	1.3.2012 to 31.8.2014	449.00
4.	Evaluation of NIAS gene bank sorghum genetic resources (mini core accessions) under tropical climate conditions	NIAS, Japan	Dr.S.Sivakumar Dept. of Millets, TNAU, Coimbatore	2012 - 2014	5.38
					527.21

Private Agency

(Rs. in lakhs)

S.No	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Bio-efficacy of Acephate 50% + Bifenthrin 10% WG on Cotton	M/s. GSP Crop Science Pvt. Ltd., Ahmadabad	Dr.M.Shanthi Professor (Ento) CRS, Srivilliputtur	2012-2013	2.58

2.	Evaluation of proprietary plant nutrients in irrigated cotton	Tropical Agro system (India) Pvt. Ltd., Chennai	Dr.R.Veeraputhiran, Asst. Prof. (Agron.) CRS, Srivilliputtur	2012-2013	2.40
3.	Making tractor based solution for puddling rice fields	Mahindra & Mahindra	Dr.D.Manohar Jesudas, Professor, AMRC, TNAU, CBE	1.4.2012-30.09.2012	2.68
4.	Evaluation of Rallis Fungicide RIL 012/f1 (75% WG) for compatibility with Quinalphos 25% EC and Mancozeb 75% WP on groundnut.	Private Agency Rallis India Ltd.	Dr. J. Sheela Assoc. Prof. CRS, Aliyarnagar	2012	0.97
5.	Haploids induction for rapid homozygosity to accelerate breeding programs in Cocoa	Kraft Food Cadbury R&D Team	Dr.R.Gnanam Dept. of Biotech, CBE	2013 - 2018	48.93
6.	Bio Efficacy of the plant energizer and yield booster FLORA of for yield and agronomic performance on Jasmine (Jaminum sambac)	M/s Devi Biotech Pvt. Ltd., Madurai	Dr.A.Ramar, Ph.D., Assoc. Prof. (Hort.), Periyakulam	Aug. 2012 May 2013	0.60
7.	Evaluation of efficacy of Cyantraniliprole 10% (W/V) OD against insect pests of Bitter gourd, Ridge gourd and Water melon	M/s. DuPont India Pvt. Ltd	Dr.D.S.Rajavel, Professor (Agrl.Ento.), Madurai	Aug. 2012 March 2014	6.21
8.	Evaluation of bio-efficacy of Emamectin Benzoate 5 WG against insect pests of redgram, okra, cabbage and bengalgram and Alika 247 ZC against insect pests of onion and tomato	M/s Syngenta India Limited, Coimbatore.	Dr.R.K.Murali Baskaran, Professor and Head Dept. of Agrl. Ento. Madurai	Sept. 2012 Feb. 2015	11.00
9.	Studies on the Fixation and Release of Phosphorus in different soils under the influence of soil conditioners	Borregaard SEA Pte Ltd., Singapore (Pvt.)	Dr.P.P.Mahendran, Assoc. Prof. (SS&AC), Madurai	Sept. 2012 Mar. 2014	5.00
10.	Biological testing of sulfoxaflor 3.75% w/v (3.4% w/w) + chlorpyrifos 37.5% w/v (33.6% w/w) SE against sucking and lepidopteran pests of rice	Dow AgroSciences India Limited, Mumbai	Dr.N.Muthukrishnan, Professor, Dept. of Agrl. Ento., Madurai	Sept. 2012 May 2014	3.85
11.	Biological testing of methoxyfenozide 24 % SC w/v (21.8% w/w) against lepidopteran pests of groundnut and bore pests of sugarcane	Dow AgroSciences India Limited, Mumbai	Dr.N.Muthukrishnan, Professor, Dept. of Agrl. Ento., Madurai	Sept. 2012 Aug. 2014	7.25
12.	Farmers Field school (FFS) on Safe handling of pesticides and proper use of pesticide applicators in Madurai District	M/S Dow Agro Sciences, Mumbai	Dr.P.Chandramani Assoc. Prof. (Agrl.Ento.), Madurai	Nov. 2012 Oct. 2014	7.30
13.	Bio-efficacy testing of biofertilizer (TAGBIONIK) on rice	Private Agency	Dr.K. Kumar Prof., Dept of Agrl. Micro., CBE	Aug. 2012 to July 2013	1.32

14.	Testing of rice hybrids and varieties developed by Nuziveedu Pvt.Ltd. and KRIBHCO seeds Ltd.,	Pvt. Agency scheme	Dr.S.Robin, Professor &Head, Department of Rice	June,2012-March, 2014	4.67
15.	Evaluation of Paddy and Pigeon Pea farmers varieties	National Innovation Foundation-India, DST, Ahmedabad	Dr.S.Robin, Professor &Head, Department of Rice Dr.S.Geetha, Professor &Head NPRC,Vamban	Aug. 2012-July,2013	0.60
16.	Field Evaluation of JUMP START(Penicillium bilaii, a phosphate solubilizing fungus) in Rice	Pvt. Agency scheme	Dr.V.Ravichandran, Asst.Professor (CRP) Department of Rice	July,2012-June,2013	2.02
17.	Evaluation of Nuziveedu rice entries for their performance under field conditions	Nuziveedu Seeds Pvt. Ltd.	Dr.K.Raja, AP (SS&T) TRRI, Aduthurai	Nov. 2012 Mar. 2014	3.50
18.	Evaluation of Bioefficacy of Thiamethoxam 25 WG against sucking pests in rice nursery and Virtako 1.5 G against pest complex in sugarcane	Syngenta India Ltd.,	Dr.V.G.Mathirajan, AP (Entomology) SWMRI, Thanjavur	Sept. 2012 Aug. 2013	3.60
19.	Evaluation of rice hybrid entries (Bayer rice hybrid entries) for their performance under field conditions	Bayer Crop Science	Dr.K.Raja, AP (SS & T) TRRI, Aduthurai	Sept., 2012 Aug. 2013.	1.15
20.	Evaluation of Targa Super 5 EC a post emergence herbicide for the control of grassy weeds in blackgram	Dhanuka Agritech Ltd., New Delhi	Dr.T. Ramesh, AP (Agron) TRRI, Aduthurai	2012-13	1.15
21.	Effect of three different Mycorrhizae formulations of Novozymes on sugarcane growth and yield enhancement	Novozymes, Bangalore	Dr.S. Panneerselvam, Prof (Agronomy) SRS, Sirugamani	April, 2012 Mar. 2013	5.10
22.	Training on Seed production technology	CIDA project	Dr.P.R.Renganayaki, Prof. (SST) ARS, Vaigai Dam	April, 2012 March, 2013	6.30
23.	Field Evaluation of plant nutrients viz, Tagbio, Humacid and Tagbumper on Tomato growth and yield characters	Private scheme	Dr.V.Sivakumar ARS, Bhavanisagar	March 2012 to Mar.2013	2.40
24.	Testing of new plant growth regulator Forchlorfenuron (Sitofex) in pigeonpea	Private scheme	Dr.K.Ramah ARS, Bhavanisagar	2011 -2013	1.25
25.	Bio-efficacy evaluation of new combination herbicide (PHI 625 14% SE) on weeds of direct seeded rice	PI Industries Ltd., Haryana	Dr. C. Chinnusamy Professor (Agronomy), CBE	Jan. 2012 to March 2013	7.01
26.	Evaluation of Clomazone 50 EC for bio-efficacy, phytotoxicity and residues in sugarcane and on succeeding crops	FMC India Ltd., Bangalore	Dr. C. Chinnusamy Professor (Agronomy), CBE	Jan. 2012 to Dec., 2014	17.98

27.	Bio-efficacy evaluation of Bensulfuron methyl 60% DF on phytotoxicity, soil physico - chemical and biological properties in rice and their residual effect on succeeding crops	Crystal Crop Protection Pvt. Ltd., New Delhi	Dr. C. Chinnusamy Professor (Agronomy), CBE	July 2012 to Dec. 2013	10.16
28.	Bio-efficacy evaluation of Flumioxazine 50% SC for weed control in soybean and their effect on succeeding crops	Sumitomo chemical India Pvt. Ltd., New Delhi	Dr.P.Murali Arthanari Asst. Prof. (Agronomy), CBE	Oct. 2012 to Sept. 2014	8.44
29.	Bio-efficacy and phytotoxicity evaluation of Quizalofop ethyl 5% EC for weed control in groundnut and onion and their effect on succeeding crop	Crystal Crop Protection Pvt. Ltd., New Delhi	Dr. P. Murali Arthanari Asst. Prof. (Agronomy), CBE	Aug. 2012 July 2013	7.04
30.	Bio-efficacy and phytotoxicity evaluation of herbicides viz., F7121 and F8032 for the control of weeds in soybean and its residual effect on succeeding crop	FMC India Ltd., Bangalore	Dr. P. Murali Arthanari Asst. Prof. (Agronomy), CBE	Sept. 2012 Aug. 2014	9.87
31.	Residue studies of Halosulfuron methyl and its combinations with chlorimuron ethyl and metribuzin in Sugarcane crop.	Crystal Crop Protection Pvt. Ltd., New Delhi	Dr.P.Janaki Asst. Prof. (SS & AC), CBE	Jan. 2013 to Dec. 2014	6.65
32.	Bio-efficacy and Phytotoxicity of Paraquat dichloride 24% SL on weed control in Grapes & Potato.	Crystal Phosphates Ltd., New Delhi	Dr.C.Chinnusamy Professor (Agronomy), CBE	Jan. 2012 to Dec. 2012	6.53
33.	Evaluation of bio-efficacy, phytotoxicity and residue of glufosinate ammonium in tea and on soil physico-chemical properties	Crystal Phosphates Ltd., New Delhi	Dr.C.Chinnusamy Professor (Agronomy), CBE	Jan. to Dec. 2012	6.76
34.	Bioefficacy evaluation of Humic granules (Pasumai gold granules) on productivity and quality of rice	M/s. Gem Agro, Salem	Dr.S.Radhamani Asst. Prof. (Agronomy), CBE	Dec. 2012 Nov. 2013	2.80
35.	Evaluation of Water Soluble Fertilizers under Surface and Sub surface drip fertigation systems on cane yield and quality in Sugarcane	M/s NFCL, Hyderabad	Dr. N. Asokaraja Professor & Head, (Agronomy), CBE	Dec. 2012 to Dec. 2014	9.91
36.	Evaluation of Water Soluble Fertilizers under drip fertigation system for Tissue Culture Banana (Grandnaine)	M/s NFCL, Hyderabad	Dr. N. Asokaraja Professor & Head, (Agronomy), CBE	Dec. 2012 Dec. 2014	8.41
37.	Spatial distribution of moisture and nutrients in root zone underdrip fertigation in chillies	Private agency	Dr.S.Suganya Asst. Prof. (SS&AC) SWMRI, Thanjavur	July 2012 to June -2015	13.00

38.	Productivity Improvement through innovative Technologies in pulses	Private agency	Dr.K.Parameswari Asst. Professor (SST) SWMRI, Thanjavur	July 12 to June 14	5.04
39.	Evaluation of bioefficacy of thiamethoxam 25WG against sucking pests in rice nursery and virtako 1.5 G against pest complex in sugarcane	Syngenta India Ltd., Coimbatore	Dr.V.G.Mathirajan Asst. Professor (Ento.) SWMRI, Thanjavur	Sept.2012 to Aug.2013	3.60
40.	Evaluating the Efficacy of HERBOLIV+ to control Wild Animal intrusion in farmlands and its effect on crop and soil	Private agency	Dr. R. Revathi FC&RI, Mettupalayam	01.09.12 - 30.04.13	2.71
41.	Remote sensing information for crop insurance	IRRI	Dr.P.Kannan Asst. Prof. (SS&AC) DARS, Chettinad	2012-15	1.80
42.	Promoting Azolla cultivation among small and marginal farmers	NSTT, Mumbai	Dr.A.Lakshmanan, Prof. Dept. of NST, CBE	2011-2013	27.83
43.	Scheme on Effect of three different mycorrhizae formulations of Novozymes on Sugarcane growth and yield enhancement	M/s Novozymes South Asia Pvt.Ltd., Bangalore	Dr.S.Panneerselvam Professor and Head, SRS, Sirugamani	April 2012 to Mar.2013	5.10
44.	Selection of a best genotype in marigold with good flower yield and xanthophyll content from the existing germplasms	Synthite Industries, Kerala,	Dr.V.Ponnuswami Dean (Horticulture), HC&RI,Periyakulam	2012-2014	11.82
45.	Nutrient management in horticultural crops using Tropical agro chemicals	Tropical Agro System India (P) Ltd.,Chennai	Dr. V. Ponnuswami Dean (Horticulture), HC&RI,Periyakulam	Aprl,2012- March,2013	4.00
46.	Testing the bioefficacy of Met 25 EC against sucking pests in chilli and Brown Plant hopper in rice and Taegro against soil borne diseases in chilli	Private Agency	Dr.K.Suresh Dr. B.Usha Rani HC&RI,Periyakulam	2012-13	3.20
47.	Testing the Bioefficacy of Lambda Cyhalothrin 4.9% CS against insect pests of Cardamom and Pomegranate	Private Agency	Dr. K.Suresh Professor, HC&RI,Periyakulam	2012-13	5.30
48.	Evaluation of suitable eco-friendly management practices for the control of pod borers of redgram	Private Agency	Dr.V.Rajaram, Prof. & Head, RRS, Aruppukottai	Apr. 2012 to Mar 2014	2.42
					213.85

International and public sector institutes

(Rs. in lakhs)

S.No	Title of the Project / Scheme	Name of the Scheme	Name of the PI & Location	Period	Budget
1.	Agriculture for Improved Nutrition and Health (A4NH)	ICRISAT	Dr. J. Sheela, Assoc. Prof., CRS, Aliyarnagar	2012-2015	2.00

2.	Safeguarding Asian Rice Production From a Rapidly Warming Climate	IRRI, Philippines	Dr. M. Raveendran Dept. of Biotech, CBE	May 2012 – April 2015	30.86
3.	Designer seed Technology (Productivity Improvement through innovative technology in Pulses)	NABARD (FIPF)	Dr. K. Parameswari, AP (SST) SWMRI, Thanjavur	July, 2012- June, 2014	5.04
4.	Improving the Livelihoods of smallholder farmers in drought prone areas of sub-Saharan Africa and South Asia through enhanced grain legume production and productivity	ICRISAT	Dr.K.R.Karunakaran ASP (Econ) TRRI, Aduthurai	01.04.12 to 31.3.2015	2.08
5.	Sustainable Sugarcane Initiative (SSI) - An unique system to enhance the water productivity in sugarcane under farmers' fields.	NABARD	Dr. B.J. Pandian, Professor and Head, IAMWARM Cell, WTC, TNAU, Coimbatore.	July, 2012 July, 2014	42.49
6.	Popularization of Sustainable Sugarcane Initiative (SSI) method	NABARD training	Dr.K.Ramah ARS, Bhavanisagar	2012-2013	0.42
7.	Demonstrating the efficacy of foliar spray of cassava tonic in Erode, Salem and Namakkal district	NABARD- FIPF	Dr.V.Rajendran Professor (SWC) TCRS, Yethapur	2012-13	6.93
					89.82

Agenda No.4

NEW ACTIVITIES UNDERTAKEN

a. Release of varieties, agrl. Implements and management technologies-2013

A total of 14 technologies comprising varieties / hybrids (Five in agricultural crops, six in horticultural crops, one tree crop and two agricultural implements) were approved by the University Technology Release Screening Committee (UTRSC) for consideration and approval by the 43rd State Variety Release Committee for State Release. List of the identified technologies for release during 2013 are listed below

Sl. No.	Technology identified for release by SVRC 2013
1.	Rice CO 51 – Dept. of Rice
2.	Ragi CO 15 – Dept. of Millets
3.	Greengram CO 8 – Dept. of Pulses
4.	Groundnut CO 7 – Dept. of Oilseeds
5.	Lucerne CO 2 – Dept. of Forage Crops
6.	Davana PKM 1 – HC&RI, Periyakulam
7.	Tapioca YTP 1 – TCRS, Yethapur
8.	Turmeric CO 2 – Dept. of Spices
9.	Sweet Potato CO 5 – Dept. of Vegetables
10.	Coleus CO 1 – Dept. of Med. Plants
11.	Amaranthus PLR 1 – VRS, Palur
12.	Eucalyptus MTP 1 – FC&RI, Mettupalayam
13.	Tamarind Huller – AEC&RI, Kumulur
14.	Multi crop multi row weeder – AEC&RI, Kumulur

b. Newer initiatives taken in Directorates / Colleges / Stations / Depts.-2013

Dept. of Biotechnology, CBE

The major focus of research programs at Centre for Plant Molecular Biology is towards manipulating biotic and abiotic stress tolerance and nutritional quality of major crop plants through genetic transformation and marker assisted breeding. During 2012, eight new research programs have been initiated to improve major crops viz., rice and vegetables for tolerance against drought, salinity, diseases, insect pests and to improve nutritional quality. The new research programs undertaken at this centre are being funded by Department of Biotechnology, New Delhi, UGC, New Delhi, DST, New Delhi and IRRI, Philippines.

Dept. of Microbiology, CBE

Patents filed

- Herbal wine (File No.4535/CHE/2012)
- Microbial process of extraction of red pigment from fungus and its application in food and textiles
- Microbial process of extraction of purple pigment from fungus and its application in food and textiles

Dept. of Forage crops, CBE

National Crossing Programme in Cumbu Napier hybrid – 2012: Coimbatore is the lead centre of this programme. Fresh crosses were effected involving elite germplasm accessions of fodder cumbu and the crossed seeds after maturity will be distributed to the participating centres of AICRP on FC for taking up trials during *kharif* 2013.

National Poly cross breeding programme in Lucerne: A new Poly cross breeding programme in Lucerne has been initiated at this centre during *rabi* 2011-12 as participating centre. The other centres involved in this programme are AAU, Anand, BAIF, Pune and MPKV, Rahuri.

Dept. of Nanoscience, CBE

- The ICAR has provided an opportunity to TNAU to draft a proposal on “A Platform on Nano Mission in Agriculture” to be included in the 12th Five Year Plan for the nation with a budget approved outlay of Rs. 200 Crores (2012-17).
- Organized Inception Workshop For the IDRC Project “Enhanced Preservation of Fruits by Nano Film” (April 24-27, 2012) involving University of Guelph, Canada, TNAU, Industrial Technology Institute (ITI), Sri Lanka and Myrada
- Organized a Seminar on “Canada – India Partnership – Present & Future” by Dept. of NST on 10.2.2013 involving Dr. David Malone, IDRC President, Canada

Dept. of Agronomy, CBE

Established a separate ‘Organic farming unit’ in the Dept. of Agronomy since December 2012.

ARS, Kovilpatti

- In the AICRPDA- NICRA Scheme, a custom hiring centre was established in Muthukrishnapuram village (Thoothukudi District). Land preparation, sowing and weeding implements were demonstrated to the farmers.
- A tractor mounted boom sprayer was purchased in the AICRPDA- NICRA Scheme and demonstration was conducted on-station to give water spray on green gram and cotton during the prolonged drought condition that prevailed during Rabi 2012
- A non-recording rain gauge was installed at Muthukrishnapuram village to quantify the rainfall in the village and to study the spatial variability in distribution

- In the WHT-NICRA Scheme, experiments were conducted at Black soil farm, ARS, Kovilpatti to study the effect of biochar application on soil moisture retention, soil biology and carbon build up in maize and cotton
TCRS, Yethapur
- Exploration for collection of land races / farmer varieties of castor in collaboration with DOR, Hyderabad has been initiated during January, 2012. 69 accessions of land races were collected for utilization in the breeding programme.
- Intercropping of onion in hybrid castor was promoted among the farmers of Salem and Namakkal districts. Totally 40 demonstrations were laid out, 20 trainings and 10 field days were conducted in Salem and Namakkal districts
- Generating secured income for farm women through dissemination of hybrid castor production was initiated during June, 2012. This project aims at increasing the income of self help group farm women through production of hybrid castor as sole crop in Salem and Namakkal districts. 30 front line demonstrations were conducted with YRCH1 hybrid castor
- Cassava tonic foliar spray project was operated in Erode, Namakkal and Salem Districts to prove the effect of cassava tonic foliar spray in tapioca crop. Fifteen FLD on cassava tonic (5 /district) was conducted and six trainings were organized. Irrespective of the locations foliar spray of micronutrient formulation at 21 days interval upto 5 MAP was recorded more yield per ha (42.0 to 48.0 t/ha) and starch (28.5 to 30.5 %). Incidence of cassava mosaic disease was almost nil due to smell of fermented cassava tonic.

FC&RI, Mettupalayam

- Introduction and Demonstration of mixed Tree Model – Melia + Casuarina
- Evaluation of Populus and Salix species for different Agro climatic regions in Tamil Nadu
- *Acrocarpus fraxinifolius* has been identified as a source of pulpwood and plywood and the species is now incorporated in systematic evaluation experiments
- Subabul as a source of raw material for biomass based power generation has been initiated in association with Auromira Biomass Energy, T. Kallupatti unit
- Promoted Vision carbon neutral – A joint initiative for promotion of Carbon Neutral Schools / Institutions by FC&RI- TNAU and CII-Yi. This is a Novel program promoted through the PPP mode of collaboration with Confederation of Indian industries
- Established International research collaboration with University of Guelph Canada, Smithsonian Conservation Institute, USA and University of Prince Edward Island.
- Promoting climate Resilient Farm forestry mechanism for semi-arid regions of Tamil Nadu.
- Developing biodiversity monitoring and assessment of Tamil Nadu Forest in collaboration with Smithsonian conservation institute, USA and Tamil Nadu Forest Department
- Developed FCRI as a Nodal Coordinating Centre for DUS testing in trees species of Neem, Karanj and Jatropha.
- Studies on carbon sequestration potentials of fast growing trees under waste land condition is being initiated.

- Initiated research to study Urban Pollution and its mitigation through forestry trees.
- Initiating collaboration with Central Petroleum Chemicals Limited (CPCL), Chennai for mitigation of refinery pollution.
- Proposed the following major thrust of research related to climate change mitigation being a core committee member in State Action plan for climate change (SPACC) – work group Forest and Biodiversity.

S.No	Research Programs	Institutes Involved	Approx. Budget	Plan period	Location and area of coverage
1	Developing and promoting climate resilient agroforestry and farm forestry methodologies for mitigating climate change	FC&RI, Mettupalayam NGOs	10.25 Crores	12 th -13 th plan	Semi arid regions of Tamil Nadu 500 acres
2	Promotion of region specific tree plantation for higher carbon sequestration under climate change affected situation in Tamil Nadu	FC&RI, Mettupalayam Forest Dept. Institute of Forest Genetics and Tree Breeding	13.48 Crores	12 th -13 th plan	All Agroclimatic regions of Tamil Nadu
3	Long term monitoring of forest biodiversity due to climate change	FC&RI, Mettupalayam Tamil Nadu Forest Dept. Botanical Survey of India	1.38 Crores	12 th -13 th plan	All forest types of Tamil Nadu
4	Estimating carbon sequestration potential of different forest types in Tamil Nadu through long term observation plots	FC&RI, Mettupalayam Tamil Nadu Forest Department	3.50 Crores	12 th -13 th plan	All forest types of Tamil Nadu
5	Estimation of biodiversity and Conservation of endangered / over exploited trees in agroforestry settings in Tamil Nadu	FC&RI, Mettupalayam Botanical Survey of India	2.30 Crores	12 th -13 th plan	All agroclimatic regions of Tamil Nadu
6	Urban forestry and carbon sequestration potential in Tamilnadu	FC&RI, Mettupalayam	1.80 Crores	12 th -13 th plan	All city corporations of Tamil Nadu
7	Assessing pest and diseases incidences in Tamil Nadu forest due to climate change	FC&RI, Mettupalayam Tamil Nadu Agricultural University, Coimbatore	78.00 Lakhs	12 th -13 th plan	All forest types of Tamil Nadu
8	Assessing invasive species in forest due to climate change	FC&RI, Mettupalayam Tamil Nadu Agricultural University, Coimbatore	1.50 Crores	12 th -13 th plan	All forest types of Tamil Nadu
9	Assessing Micro floral diversity under the climate change Scenario	FC&RI, Mettupalayam	80.00 Lakhs	12 th -13 th plan	All forest types of Tamil Nadu
10	Training and Capacity building on Forest and climate change adaptations	FC&RI, Mettupalayam Tamil Nadu Forest Dept. Institute of Forest genetics and Tree Breeding	2.50 crores	12 th -13 th plan	All districts of Tamil Nadu

HSC&RI, Madurai

- The following four new M.Sc (Home Science) degree programme have been started during this academic year by the respective departments.
 - a) M.Sc (Home Science) in Family Resource Management and Ergonomics
 - b) M.Sc (Home Science) in Human Development and Family Dynamics

- c) M.Sc (Home Science) in Textile and Apparel Merchandizing
d) M.Sc (Home Science) in Extension Communication and Entrepreneurial Development

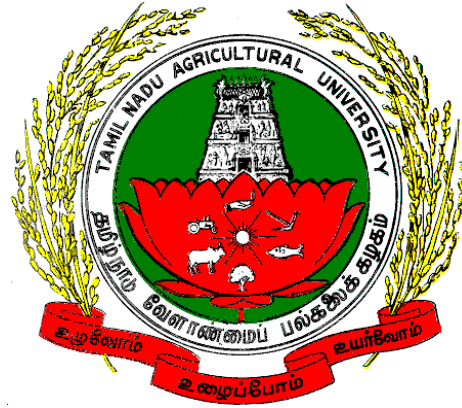
List of MoUs signed between TNAU and other academic institutions and private companies from January 2012 to December 2012

Sl. No.	Name of the institutions / companies / firms with which MoU signed	Name of the project / study / scheme etc.	PI incharge of the project	Duration (with date of commencement)	Budget (Rs. in lakhs)
1.	Norwegian Institute for Agricultural and Environment Research (Bioforsk) and Tamil Nadu Agril. University (TNAU)	ClimaAdapt: Adaptation to climate change: An integrated science stakeholder approach to develop Adaptation framework for Water and Agriculture sectors in Andhra Pradesh and Tamil Nadu states of India	Dr. V. Geethalakshmi and Dr. A. Lakshmanan	June 2012 to May 2016	310.00
2.	Tamil Nadu Agricultural University (TNAU) and Public Works Department (PWD)	Clima Adapt: Adaptation to climate change: An integrated science stakeholder approach to develop Adaptation framework for Water and Agriculture sectors in Andhra Pradesh and Tamil Nadu states of India	Dr. V. Geethalakshmi and Dr. A. Lakshmanan	June 2012 to May 2016	273.00
3.	Biotechnology Industry research Assistance council (BIRAC), New Delhi	Transfer of Technology from QUT, Australia for Bio-fortification and Disease Resistance in Banana	Dr. P.Bala-subramanian	Nov. 2012 to Nov. 2018	113.30
4.	IRRI, Philippines	Safeguarding Asian Rice Production From a Rapidly Warming Climate	Dr.M.Raveendran	May'2012 – April'2015	30.86
5.	Kraft Foods – Cadbury Research and Development Team	Haploids induction for rapid homozygosity to accelerate breeding programs in Cocoa (<i>Theobroma cacao</i> L.)	Dr.R.Gnanam	1-4-2013 to 31-3-2018	48.93
6.	Integrated Waste Management for Urban Services Tamil Nadu Ltd. (IWMUST) Private Company HO at Chennai	Standardization and value addition of IWMUST – Municipal Solid Waste Compost for its Quality and Effect on Soil and Crops	Dr.S.Avudainayagam Professor Dept. of Env. Sciences, TNAU, Coimbatore	April 2012 – March 2015	23.32

7.	Young Indians - Confederation of Indian industries, Coimbatore chapter	Vision carbon neutral – A joint initiative for promotion of Carbon Neutral Schools / Institutions by FC&RI	Dr.A.Bala-subramanian FC&RI, Mettupalayam	2013-2015	19.32
8.	MYRADA Arivalayam CIDORR (Centre for Institutional Development Organizational Reforms & Research) – NGO	Enhanced Preservation of Fruits in South Asia (IDRC, Canada)	Dr. K.S. Subramanian Professor, Dept. of Nanoscience & Tech, Coimbatore	1.3.2013 to 31.8.2014	449.00
9.	Synthite industries Limited, Synthite Valley, Kolencherry, Kerala	Selection of best genotypes and development of a production technologies for maximizing the flower, seed and xanthophylls yield in marigold	Dr.K.Vanangamudi Prof. (SST) Dept. of SST, CBE	2012-13 to 2014-15	30.08
10.	M/S. Novozymes South Asia (P). Bangalore	Nutri – physiological changes during growth and post harvest behaviour of leguminous vegetables due to bioinoculants	Dr. P. Jeyakumar Professor (Crop Physiology)	Dec. 2012 to Nov. 2014	8.68
11.	M/s. T. Stanes & Co., Coimbatore	Physiological evaluation of bio herbicide on wetland and garden land weeds	Dr. S. Vincent Assoc.Professor (Crop Physiology)	August 2012 to July 2013	2.86
12.	IFPRI, Regional Office, New Delhi	Supporting knowledge management for Indian Agriculture	Dr.E.Vadivel Professor	1.11.2011 to 30.11.2012	19.50
13.	Kraft foods UK R&D Limited	Research on Sustainable Cocoa Production in Tamil Nadu, India	1.Dr.N.Kumar, Dean (Hort.), HC&RI, CBE 2.Dr. P. Paramaguru, Prof. and Head, Dept.of Spices and Plantation Crops, HC &RI, CBE	01.04.2013 to 31.03.2018	248.93
14.	Central Salt and Marine Chemicals Research Institute, Gujarat	Fertilizer Potential of Seaweed Saps on Different Crops	Dr. S. Mani Professor (SS&AC) Dr. V.P.Duraisami Professor (SS&AC)	April, 2012 to March,2014	54.92
15.	Coconut Development Board, Kera Bhavan, Kochi	Region based recommendation to improve coconut production in TN through Remote Sensing and GIS	Dr. Balaji Kannan Assistant Professor (SWCE), Department of Remote Sensing and GIS, TNAU, Coimbatore	01.10.2012 to 31.09.2014	10.84
16.	M/s. Rasi Seeds	Production and marketing of "TNAU Rice Hybrid CO 4"	Dr.S.Robin Professor & Head, Dept. of Rice, TNAU, CBE	10 Years 30.5.2012	5.00

46th RESEARCH COUNCIL MEETING

23rd April, 2013



AGENDA NOTES

**DIRECTORATE OF RESEARCH
TAMILNADU AGRICULTURAL UNIVERSITY
COIMBATORE – 641 003**

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