

# **42<sup>nd</sup> Annual Report**

**(2012 - 2013)**

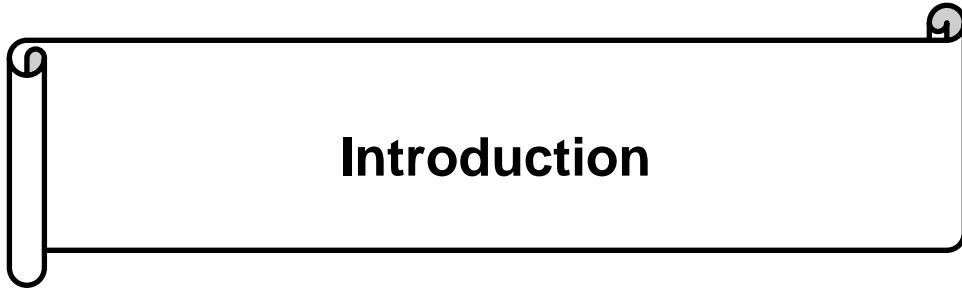


**Dr. M. Chandrasekaran, Ph.D.,  
Dr. S. Murali Krishnasamy, Ph.D.,  
Dr. K. Selvarasu, Ph.D.,  
Dr. P. Murali Arthanari, Ph.D.,**

**DIRECTORATE OF PLANNING AND MONITORING  
TAMIL NADU AGRICULTURAL UNIVERSITY  
COIMBATORE - 641 003**

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# Introduction

## I. INTRODUCTION

“...To feed the humanity is our responsibility”

Tamil Nadu Agricultural University is functioning to fulfill Mahakavi Bharathi's desire based on the motto “Till-Toil-Triumph”. Traditionally, agriculture was the sole primary occupation for life sustenance contributing much to the Nation's GDP. In due course, due to unquenched thirst of human beings, different departments and service sectors emerged. Consequently, the share percentage of contribution of agriculture sector to the National GDP declined. In spite of this, food being the basic necessity to sustain life on Earth, agriculture continued to be the priority sector. Globally, burgeoning population (expected to reach 800 crore in 2024) emphasizes the importance of accelerated increase in food production. Change in food habits has added another challenge in food production. The economic development in various countries across the Globe has increased the food consumption pattern consequently emphasizing the importance of increased food production. In addition to this, awareness on food safety and food security, increasing the production without affecting the natural resources and environment are the new dimensions in agri-business.

In this context, due to expansion of other industries competing for land and water resources reduced the share for use in agriculture. Liberalization and globalization have resulted in tough competition. Hence, Tamil Nadu Agricultural University has the responsibility of empowering the farmers in increasing the food production by developing protocols for export quality standards.

Tamil Nadu Agricultural University is contributing in various spheres such as; education, research, agricultural extension education, agri-business development and intellectual property rights besides rendering

its support for the State and Central Governments' agricultural policy formulation process. Rapid economic development is the primary goal of the XII Five Year Plan. As per State Planning Commission's report, Tamil Nadu Agricultural University has been allocated funds to the tune of Rs 1184 crore for the development of infra-structure. To achieve this, proposals are being sent to Government of Tamil Nadu, Indian Council of Agricultural Research and other International Organisations for funding.

In 2012-13 as a beginning of the XII Five Year Plan the various activities taken up and achievements made are consolidated and presented in seven chapters in this annual report.

### **Agricultural Education**

At National level, among all the State Agricultural Universities, Tamil Nadu Agricultural University has been twice adjudged as the best University. Considering the changing scenario and growing demand for agricultural education, Tamil Nadu Agricultural University has structured its syllabi and implemented in its 12 constituent colleges and eight affiliated colleges. In this context, some of the changes worth mentioning are introduction of new courses syllabi revision, introduction of computer education and online examinations.

Presently, 13 Undergraduate, 39 Post Graduate and 26 Doctoral programmes are offered by Tamil Nadu Agricultural University. In the academic year 2012-13, totally, 925 students were admitted in the constituent colleges of Tamil Nadu Agricultural University. Under the Self supporting scheme, in seven Bachelor of Technology courses, 287 students were admitted. In 2012-13, totally, 402 students in Masters and 174 students in Doctoral programmes were admitted.

In the dual degree course, 1) M. Tech (Food Processing and Marketing) offered at this university and Master of Professional Studies in Food Science and Technology offered by Cornell University, USA and 2) M. Tech Biotechnology and Business Management offered in this university and Master of Professional Studies in Plant Breeding by Cornell University, USA, so far, 32 students have completed these dual degree programmes successfully.

Postgraduate Diploma in Capital and Commodity Markets and Organic Farming, M.Tech in Nanotechnology and M.Tech in Environmental Engineering and Ph.D in Agribusiness Management were also started during 2011 - 12. A Post graduate Diploma programme on Plant health management in collaboration with National Institute of Plant Health Management, Hyderabad was initiated. Ph.D. in Econometrics was re - introduced for in service candidates only.

Memoranda of Understanding (MoU) have been signed with 23 Foreign Universities and 50 National Institutions to help Masters and Ph.D scholars to do extra mural research and to facilitate credit transfer.

The Directorate of Students Welfare of the Tamil Nadu Agricultural University (TNAU), Coimbatore, organized nine on campus and off campus interviews were organised until March 2013. In that 38 organisations from Banking Sector, Seed Industry, Fertilizer Industry, Agro Industry and Non Governmental Organisations participated. Indian Tobacco Company (ITC), Novozyme, Mahindra & Mahindra Ltd, Monsanto, Dupont, Coromandel International, Cadbury, Zuari Agro, Godrej Agrowet among private firms and Union Bank and Bank of India among banking sector are worth mentioning. In this 79 TNAU graduates got placed. Advanced Digital Language Lab and modern Group

Discussion Chamber in the Directorate of Students Welfare helped to improve the soft skills and employability of the graduates. This Directorate facilitated students by providing coaching on Graduate Record Examination (GRE), Test of English as Foreign Language (TOEFL) and International English Language Testing System (IELTS) and guidance to pursue higher studies abroad.

Tamil Nadu agricultural University is offering many correspondence courses through the Directorate of Open and Distance Learning. At present, Diploma programme (1), PG Diploma Programmes (5), PG Degree Programmes (3), Certificate courses (16), B. F. Tech. (Bachelor of Farm Technology) for Farmers are being offered. In B.F. Tech., so far 387 farmers have been admitted.

### **Agricultural Research**

Research activities are carried out in all the 12 colleges and 38 research stations and technology verification for fine tuning is done in 14 Krishi Vigyan Kendras. The outcome of the research is manifested by the release of 12 varieties / hybrids and two agricultural implements during 2012-13.

### **Varieties / Hybrids Released**

(1) Rice CO 51	(7) Tapioca YTP 1
(2) Ragi CO 15	(8) Turmeric CO 2
(3) Greengram CO 8	(9) Sweet Potato CO 5
(4) Groundnut CO 7	(10) Coleus CO 1
(5) Lucerne CO 2	(11) Amaranthus PLR 1
(6) Davana PKM 1	(12) Eucalyptus MTP 1

### **Agricultural Implements (2)**

(1) Tamarind huller	(2) Multi crop multi row weeder
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### **Agricultural Extension**

Through Krishi Vigyan Kendras, to fine tune the varieties and technologies

released, 71 On Farm Testing (OFT), 174 Front Line Demonstrations were conducted, besides 4281 trainings given to extension officers, rural youth and SHGs. Farm advisory service was provided to 13413 farmers. Information Technology based TNAU Agri Tech Portal was developed with more than three lakh pages for the benefit of the farming community.

Weather Forecast and market price forecast information for technical recommendations

Medium range forecasting (for the following 4 days) are being done on the basis of weather parameters obtained from the Automatic Weather Stations for the benefit of farmers of Tamil Nadu to take crop husbandry decisions under weather based farming. Yield increase in different crops ranged between 8 and 15 % and farm income between 10 – 18 % by practicing weather based farming. Also, Domestic and Export Market Intelligence Cell (DEMIC) provides forecasts of prices of agricultural produces before sowing and also prior to harvest. The forecasts are helpful to farmers in deciding the crops to be raised, crop wise area to be cultivated and decisions as harvested produce to be sold immediately or with held for future price rise.

### **Seed production**

In order to have proper supply chain management in seed production in Tamil Nadu, considering the enhancement of seed replacement rate, the Seed Centre in Tamil Nadu Agricultural University coordinates the production of seeds in 36 centres for 175 varieties of various agricultural and horticultural crops. During 2012-13, 15,500 quintal of various types of seeds, 900 quintals of turmeric rhizomes and 26.0 lakh seedlings were produced and distributed.

### **Technologies for increased yield**

The various technologies developed from Tamil Nadu Agricultural University were carried to the farming community through the 14 Krishi Vigyan Kendras, 12 Colleges and 38 research stations. Technologies worth to mention include, System of Rice Intensification (SRI), Sustainable Sugarcane Initiative (SSI), transplantation technology for redgram, introduction of hybrid castor in precision farming system, Nano fertilizers, NUTMOD expert system for recommendation of fertilizers for crops based on soil health status, high density planting in mango, sapota, cashew and banana and briquetting technology for agro wastes.



**University Administration**

## 2. UNIVERSITY ADMINISTRATION

Chancellor	:	His Excellency the Governor of Tamil Nadu Thiru K.Rosaiah 1.4.2012 to 31.3.2013
Pro-chancellor	:	Hon'ble Minister for Agriculture, Government of Tamil Nadu Thiru S. Damodaran 1.4.2012 to 31.3.2013
Vice-Chancellor	:	Dr. P. Murugesu Boopathi Vice-Chancellor From 1.4.2012 to 3.6.2012  Dr. P. Subbian Acting Vice-Chancellor From 4.6.2012 to 26.8.2012  Dr. K. Ramasamy Vice-Chancellor From 27.8.2012 to 31.3.2013

### University Officers

S.No.	Designation	Name	Period	
			From	To
1.	Registrar,	Dr. P. Subbian	01.04.2012	28.02.2013
2.	Registrar i/c	Dr. P. Kalaiselvan	01.03.2013	31.03.2013
3.	Dean, Agricultural College and Research Institute, Coimbatore	Dr. A. Rajarajan	01.04.2012	31.03.2013
4.	Dean, School of Post Graduate Studies, Coimbatore	Dr. C. Udayasooriyan	01.04.2012	31.03.2013
5.	Dean, Horticultural College and Research Institute, Coimbatore	Dr. N. Kumar	01.04.2012	31.03.2013
6.	Dean, Agricultural. Engineering College and Research Institute, Coimbatore	Dr. S. Santhana Bose	01.04.2011	31.03.2012
7.	Dean, Agricultural College and Research Institute, Madurai	Dr. K. Vairavan	01.04.2012	05.10.2012
		Dr. SP. Sundaram	06.10.2012	31.03.2013
8.	Dean, Home Science College and Res. Institute, Madurai	Dr. P. Banumathi	01.04.2012	31.03.2013
9.	Dean, Agricultural Engineering College and Resarch Institute, Kumalur.	Dr. A. Tajuddin	01.04.2012	31.03.2013



10.	Dean, Agricultural College and Research Institute, Killikulam	Dr. R. Ganesan	01.04.2012	28.11.2012
		Dr. M. Ariyavanam kathapillai	29.11.2012	31.03.2013
11.	Dean, Horticultural College and Research Institute, Periyakulam	Dr. V. Ponnuswamy	01.04.2012	31.03.2013
12.	Dean, Anbil Dharmalingam Agricultural College and Research Institute, Trichy	Dr. V. Jayabal	01.04.2012	31.03.2013
13.	Dean, Forest College and Research Institute, Mettupalayam	Thiru P. Durairasu,	01.04.2012	31.03.2013
14.	Director of Research i/c TNAU, Coimbatore	Dr. A. Chandrasekaran	01.04.2012	24.03.2013
		Dr. M. Maheswaran	25.03.2013	31.03.2013
15.	Director, Crop Management, Coimbatore	Dr. S. Jeyaraman	01.04.2011	26.09.2012
16.	Director i/c Crop Management Coimbatore	Dr. P. Muthukrishnan	27.09.2012	11.11.2012
		Dr. M. Premsekar	14.11.2012	31.01.2013
		Dr. K. Velayutham	01.02.2013	31.03.2013
17.	Director, Centre for Plant Breeding and Genetics, Coimbatore	Dr. K. Thiyagarajan	01.04.2012	31.03.2013
18.	Director, Centre for Plant Protection Studies, Coimbatore	Dr. E.I. Jonathan	01.04.2012	31.03.2013
19.	Director, Centre for Plant Molecular Biology, Coimbatore	Dr. R. Samiyappan	01.04.2012	30.06.2012
		Dr. P. Sivasubramanian	01.07.2012	31.03.2013
20.	Director, Centre for Agricultural and Rural Development, Coimbatore	Dr. N. Ajjan	01.04.2012	31.03.2013
21.	Director, Water Technology Centre, Coimbatore	Dr. S. Chellamuthu	01.04.2012	31.03.2013
22.	Director, Agri Business Development, TNAU, Coimbatore	Dr. P. Sivasubramanian	01.04.2012	31.03.2013
23.	Director of Extension Education, TNAU, Coimbatore	Dr. P. Kalaiselvan	01.04.2012	28.02.2013
		Dr. K.A. Ponnusamy	01.03.2013	31.03.2013
24.	Director of Students Welfare, TNAU, Coimbatore	Dr. T. Rathakrishnan	01.04.2012	31.03.2013
25.	Director, Open and Distance Learning, TNAU, Coimbatore	Dr. V. Valluvaparidasan	01.04.2012	31.07.2012
		Dr. P. Kalaiselvan	01.08.2012	31.01.2013
		Dr. P. Santhy	01.02.2013	31.03.2013

26.	Director, Planning and Monitoring, Coimbatore	Dr. G. Kathiresan	01.04.2012	31.03.2013
27.	Director, Tamil Nadu Rice Research Institute, Aduthurai	Dr. T. Jeyaraj	01.04.2012	31.03.2013
28.	Controller of Examinations, TNAU, Coimbatore	Dr. A. Chandrasekaran	01.04.2012	31.03.2013
29.	Comptroller, TNAU, Coimbatore	Thiru P. Chandran	01.04.2012	20.06.2012
		Tmt. A.R. Rajalakshmi	21.06.2012	31.03.2013
30.	Estate Officer, Coimbatore TNAU, Coimbatore.	Thiru D. Kalaiselvan	01.04.2012	31.03.2013
31.	Special Officer, Directorate of NRM	Dr. V. Velu	01.04.2012	31.07.2012
		Dr. S. Jeyaraman	01.08.2012	26.09.2012
		Dr. P. Duraiswamy	27.09.2012	09.11.2012
		Dr. R. Natesan	10.11.2012	31.03.2013
32.	Special Officer, Seed Centre, TNAU, Coimbatore.	Dr. M. Baskaran	01.04.2012	06.01.2013
		Dr. K. Ramamoorthy	07.01.2013	31.03.2013
33.	Special Officer	Dr. T.N. Balamohan	01.04.2012	31.03.2013

### BOARD OF MANAGEMENT

#### List of Board Members during the year 2012-2013

	Chairman and Members	From	To
	<b>Chairman</b>		
1	Dr. P. Murugesu Boopathi, Ph.D., Vice-Chancellor, TNAU, Coimbatore.	01.04.2012	03.06.2012
	Dr. K. Ramasamy, Ph.D., Vice-Chancellor, TNAU, Coimbatore.	27.08.2012	31.03.2013
	<b>Members</b>		
2	Thiru Sandeep Saxena, I.A.S., Agricultural Production Commissioner and Principal Secretary to Government, Agriculture Department, Secretariat, Chennai-600 009.	20.04.2012	31.03.2013
3	Thiru V. Arun Roy, I.A.S., Joint Secretary, Finance Department, Secretariat, Chennai-600 009.	16.06.2012	31.03.2013
4	Dr. K. Manivasan, I.A.S., Commissioner of Agriculture, Chepauk, Chennai-600 005.	20.04.2012	05.09.2012
	Thiru Shiv Das Meena I.A.S., Commissioner of Agriculture, Department of Agriculture, Chepauk, Chennai-600 005.	17.06.2012	19.12.2012
5	Dr. Santhosh Babu, I.A.S., Commissioner of Horticulture and Plantation Crops, Agriculture Complex III Floor, Chepauk, Chennai-600 005	20.04.2012	19.12.2012

6	Thiru M. Senthil, M.E.(Agri.) Chief Engineer (Agrl. Engg.) i/c,Agricultural Engineering Department, 487, Anna Salai, Nandanam, Chennai-600 035.	20.04.2012	31.03.2013
7	Thiru. Gautam Dey, I.F.S., Principal Chief Conservator of Forests, Tamil Nadu Forest Department,No.1, Jeenis Road, Panagal Building, Saidapet, Chennai-600 015.	01.04.2012	31.03.2013
8	Dr. N.V. Nair, Ph.D,Director, Sugarcane Breeding Institute, Coimbatore – 641 007	01.04.2012	31.03.2013
9	Dr. P.P. Ramaswami, Ph.D., 3/66, ‘S’ Block, 19th Street, Anna Nagar, Chennai-600 040.	01.04.2012	31.03.2013
10	Thiru K. Pari, 18-B, Luz Avenue, Mylapore, Chennai-600 004	01.04.2012	31.03.2013
11	Thiru P. Gopal, Ex-M.L.A., 5/151, F-4, Dr. Subbrayan Nagar, Mettur Dam-636 401, Salem District.	01.04.2012	31.03.2013
12	Thiru. Kumar J. Pandian, M.B.A., Managing Director, Pandyan Coffee Curing Works (P) Ltd., 14, Main Road, K.K.Nagar, Madurai-625 020.	01.04.2012	31.03.2013
13	Tmt. Geetha @ Kodiarasi W/o. G. Balathandayuthapani D Block 55, Thozhilalar Illapaguthi Mettur-636 401, Salem District	01.04.2012	31.03.2013
14	Thiru. Pon Muthuramalingam, M.A., B.L., No.13, Thomas Street, Narimedu, Madurai-625 002	01.04.2012	31.03.2013
15	Th. M.K. Muthukaruppannasamy, M.L.A., (Pollachi Constituency),Mettupaavi Post, Vadasithur Via, Pollachi Taluk – 641 202, Coimbatore District	01.04.2012	31.03.2013
16	Thiru K.R. Arjunan, Old No.8/182, New No.9/132, Ketti Village, Ketti (P.O), The Nilgiris-643 215	01.04.2012	31.03.2013
17	Dr. K.P. Ramalingam, B.V.Sc., “Uzhavar Illam”, Rasipuram-637 408, Namakkal district.	01.04.2012	31.03.2013
<b>Member - Secretary</b>			
18	Dr. P. Subbian, Ph.D. Registrar, TNAU, Coimbatore.	01.04.2012	28.02.2013
	Dr. P. Kalaiselvan, Ph.D. Registrar i/c, TNAU, Coimbatore.	01.03.2013	31.03.2013

### **Meetings of the Board of Management held during the year 2012-13**

161<sup>st</sup> Meeting held on 20.04.2012

162<sup>nd</sup> Meeting held on 16.06.2012

163<sup>rd</sup> Meeting held on 05.09.2012

164<sup>th</sup> Meeting held on 19.12.2012

### **Important decisions of the Board of Management**

#### **161<sup>st</sup> Meeting held on 20.04.2012**

- The Board recommended to send the following proposals namely; starting of Diploma course in Agriculture at Polur, Thiruvannamalai District and Diploma course in Horticulture at Sannasipatti, Tiruchirappalli District, new Agriculture Colleges at Trichy District and Namakkal District, to the Government. The proposal for establishment of Agriculture Polytechnic at Pooncholai, Andipatti Village, Palani Taluk, Dindigul District was modified for offering only Diploma course in Agriculture and to be sent to the Government.
- The Board approved and ratified the action of the University in having constituted SC / ST Cell in Tamil Nadu Agricultural University and nominated Nodal Officer in anticipation of the approval of the Board of Management.
- The Board approved and ratified the action taken in having continued 108 University Plan Schemes and 9 (Nine) Temporary Non-Plan Schemes during the year 2012-2013.

#### **162<sup>nd</sup> Meeting held on 16.06.2012**

- The Board noted for information on the announcement made by the Hon'ble Minister for Agriculture in the floor of the Assembly, the establishment of Grape Research Station at Mallingapuram (Anaimalayanpatti) Village, Theni district and submission of the proposal to Government.

- The Board noted for information the announcement made by the Hon'ble Minister for Agriculture in the floor of the Assembly starting of a Diploma course in Agriculture at State Agricultural Extension Management Institute, Kudimianmalai, Pudukottai District during the year 2012-2013 and submission of the proposal to Government
- The Board approved and ratified the action of the University in having issued orders permitting NIA Educational Institutions, Pollachi for offering B.Sc. (Hort.) degree and Diploma course in Horticulture at Vanavarayar Institute of Agriculture, Pollachi from the academic year 2012-13 with certain conditions.

#### **163<sup>rd</sup> Meeting held on 05.09.2012**

- The Board approved modalities for implementing Career Advancement Scheme for the Teaching Staff including Librarians and Directors of Physical Education based on the G.O.(Ms). No.39 dated 01.03.2010 of Agriculture (AU) Department, Chennai and the norms prescribed by ICAR/UGC.

#### **164<sup>th</sup> Meeting held on 19.12.2012**

- Based on the approval given in the 72nd meeting of the Finance Committee held on 15-9-2012, the Board approved the continuation of Venture Capital Schemes in Tamil Nadu Agricultural University.

## MEMBERS OF THE ACADEMIC COUNCIL

Sl. No.	Name and Designation	Period	
		From	To
<b>Ex-officio Chairman</b>			
	Dr. P. Murugesu Boopathi, Vice-Chancellor, TNAU, Coimbatore - 641 003.	01.04.2012	03.06.2012
	Dr. P. Subbian, Acting Vice-Chancellor, TNAU, Coimbatore - 641 003.	04.06.2012	26.08.2012
	Dr. K. Ramasamy Vice-Chancellor, TNAU, Coimbatore - 641 003.	27.08.2012	31.03.2013
<b>Ex-officio Secretary</b>			
	Dr. P. Subbian Registrar, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	28.02.2013
	Dr. P. Kalaiselvan Registrar i/c, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.03.2013	31.03.2013
<b>Members</b>			
1	Thiru Sandeep Saxena, I.A.S., Agricultural Production Commissioner and Principal Secretary to Government, Agriculture Department, Secretariat. Chennai – 600 009.	01.04.2012	31.03.2013
2	Dr. H.V. Nanjappa, Dean, Post Graduate Studies, University of Agricultural Sciences, Bengaluru -560 065.	01.04.2012	31.03.2013
3	Dr. T.R. Gopalakrishnan Director of Research, Kerala Agricultural University Vellanikara, Thrissur – 680 656	01.04.2012	31.03.2013
4	Dr. A. Raja Rajan, Dean, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore – 641 003.	01.04.2012	31.03.2013
5	Dr. C. Udayasooriyan, Dean (SPGS), Tamil Nadu Agricultural University, Coimbatore – 641 003.	01.04.2012	31.03.2013

6	Dr. N. Kumar, Dean, Horticultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013
7	Dr. S. Santhana Bosu, Dean, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013
8	Dr. K. Vairavan, Dean, Agricultural College and Research Institute, Madurai – 625 104.	01.04.2012	30.09.2012
9	Dr. SP. Sundaram, Ph.D., Dean i/c, Agricultural College and Research Institute, Madurai – 625 104.	01.10.2012	31.03.2013
10	Dr. R. Ganesan Dean, Agricultural College and Research Institute, Killikulam, Vallanadu Post – 628 252, Thoothukkudi District.	01.04.2012	28.11.2012
11	Dr. M. Ariyavanamkatha Pillai, Dean i/c, Agricultural College and Research Institute, Killikulam, Vallanadu Post – 628 252, Thoothukkudi District.	29.11.2012	31.03.2013
12	Dr. V. Jayabal Dean, Anbil Dharmalingam Agrl. College and Research. Institute, Navalur Kuttapattu, Tiruchirapalli – 620 009	01.04.2012	31.03.2013
13	Dr.V. Ponnuswami, Dean, Horticultural College and Research Institute, Periyakulam – 625 604.	01.04.2012	31.03.2013
14	Dr.A. Tajuddin, Dean, Agricultural Engineering College and Research. Institute, Kumalur – 621 712, Via. Poovalur, Lalgudi Taluk, Triuchirappalli District.	01.04.2012	31.03.2013
15	Thiru. P. Durairasu, I.F.S Dean, Forest College and Research Institute, Mettupalayam – 641 301.	01.04.2012	31.03.2013

16	Dr. P. Banumathi, Dean, Home Science College and Research Institute, AC&RI Campus, Madurai - 625 104.	01.04.2012	31.03.2013	
17	Dr. V. Chellamuthu, Dean, Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Nedungadu (Post), Karaikal – 609 603	01.04.2012	31.03.2013	
18	Dr. S.Ramasamy, Dean, Adhiparasakthi Agricultural College, G.B. Nagar, Kalavai – 632 506, Vellore District.	01.04.2012	22.11.2012	
19	Dr. S. Nanthakumar, Dean i/c, Adhiparasakthi Agricultural College, G.B. Nagar, Kalavai – 632 506, Vellore District.	15.03.2013	31.03.2013	
20	Dr. A.Chandrasekaran, Controller of Examinations, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013	
21	Director of Research i/c Tamil Nadu Agricultural University, Coimbatore - 641 003	Dr. A.Chandrasekaran	01.04.2012	20.03.2013
		Dr.M. Maheswaran	21.03.2013	31.03.2013
22	Director, Centre for Plant Molecular Biology and Bio-technology, TNAU, Coimbatore - 641 003	Dr. R.Samiyappan	01.04.2012	30.06.2012
		Dr. P.Sivasubramanian	01.07.2012	31.03.2013
23	Dr. N. Ajjan, Director (CARDS), Tamil Nadu Agricultural University, Coimbatore – 641 003.	01.04.2012	31.03.2013	
24	Director of Extension Education, Tamil Nadu Agricultural University, Coimbatore – 641 003.	Dr. P. Kalaiselvan	01.04.2012	28.02.2013
		Dr. K.A. Ponnusamy	1.03.2013	31.03.2013
25	Dr. E.I. Jonathan, Director, Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013	
26	Dr. S. Chellamuthu, Director, Water Technology Centre, Tamil Nadu Agricultural University, Coimbatore- 641 003	01.04.2012	31.03.2013	

27	Director, Crop Management, Tamil Nadu Agricultural University, Coimbatore – 641 003.	Dr. S. Jeyaraman	01.04.2012	14.11.2012
		Dr.M. Premsekhar	15.11.2012	31.01.2013
		Dr.K. Velayutham	01.02.2013	31.03.2013
28	Dr. K.Thiyagarajan, Director, Centre for Plant Breeding and Genetics, Tamil Nadu Agricultural University, Coimbatore – 641 003.	01.04.2012	31.03.2013	
29	Director, Open and Distance Learning, Tamil Nadu Agricultural University, Coimbatore – 641 003.	Dr. V. Valluvaparidasan	01.04.2012	31.07.2012
		Dr. P. Kalaiselvan	1.08.2012	31.01.2013
		Dr. P. Santhy	1.02.2013	31.03.2013
30	Dr. T.Rathakrishnan, Director, Students Welfare, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013	
31	Dr. G. Kathiresan Director, Planning and Monitoring, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013	
32	Dr. P. Sivasubramanian, Director, Agricultural Business Development, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	31.03.2013	
33	Dr. T. Jayaraj, Director, Tamil Nadu Rice Research Institute, Aduthurai – 612 101, Thanjavur District.	01.04.2012	31.03.2013	
34	Dr. T.N.Balamohan, Special Officer, Horticultural College and Research Institute for Women, Navalur Kuttapattu, Tiruchirappalli- 620 009	01.07.2012	31.03.2013	
35	Special Officer Natural Resource Management, Tamil Nadu Agricultural University, Coimbatore - 641 003.	Dr. V. Velu	01.04.2012	31.07.2012
		Dr.S. Jeyaraman	01.08.2012	26.09.2012
		Dr.R. Natesan	27.09.2013	09.11.2012
		Dr.P. Doraisamy	10.11.2012	31.03.2013
36	Special Officer (Seeds) i/c Tamil Nadu Agricultural University,Coimbatore - 641 003.	Dr. M.Baskaran	01.04.2012	6.01.2013
		Dr. K. Ramamoorthy	7.01.2013	31.03.2013



37	Dr. L. Jeevajoithi Professor and Head, Department of Spices and Plantation Crops, Horticultural College and Research Institute, Periyakulam - 625 604.	01.04.2012	31.03.2013
38	Dr. S. Amutha, Professor and Head, Department of Human Development Home Science College and Research Institute, Madurai - 625 104	01.04.2012	31.03.2013
39	Dr. D. Manohar Jesudas, Professor and Head, Agricultural Machinery Research Centre, TNAU, Coimbatore – 641 003.	01.04.2012	11.12.2012
40	Dr. S. Kamaraj, Professor and Head, Department of Bioenergy, Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore - 641 003.	12.12.2012	31.03.2013
41	Dr. A. Velayutham, Professor and Head, Department of Farm Management, Tamil Nadu Agricultural University, Coimbatore - 641 003.	01.04.2012	11.12.2012
42	Dr. K. Velayutham, Professor and Head, Department of Farm Management, Tamil Nadu Agricultural University, Coimbatore - 641 003.	12.12.2012	31.03.2013
43	Dr. A.R. Mohamed Haroon, Professor and Head, Department of Soils and Environment, Agricultural College and Research Institute, Madurai – 625 104	01.04.2012	7.03.2013
44	Dr. K.T. Parthiban, Professor and Head, Department of Silviculture and Agroforestry, Forest College and Research Institute, Mettupalayam – 641 301	01.04.2012	31.03.2013

## **MEETINGS OF THE ACADEMIC COUNCIL HELD DURING 2012-2013**

### **115<sup>th</sup> Academic Council Meeting (20.04.2012)**

### **116<sup>th</sup> Academic Council Meeting (07.05.2012)**

### **118<sup>th</sup> Academic Council Meeting (20.07.2012)**

### **119<sup>th</sup> Academic Council Meeting (18.12.2012)**

The Academic Council met four times during the academic year 2012-13 and the following important decisions were taken.

### **115<sup>th</sup> Academic Council meeting (20.04.2012) approved**

- Establishment of Forest Tribal Research Centre at FC&RI, Mettupalayam
- Starting of new PG courses in Forestry and Home Science
- Starting of new course M.Sc (Agri.) in Plant Genetic Resources
- Starting of new course M.Tech (Agri.) in Geoinformatics
- Allotment of 15% admission of students under ICAR quota.

### **116<sup>th</sup> Academic Council meeting (07.05.2012) approved**

- Recommendation to the Board of Management to start a Diploma course in Agriculture at STAMIN, Kudimianmalai, Pudukottai District during the current year 2012-13.
- Starting a new PG Programme in Energy Management under ODL programme

### **118<sup>th</sup> Academic Council meeting (20.07.2012) approved**

- Introduction of separate application forms for admission under special reservation category in the UG degree programme from 2013-14.

- Withdrawal of relaxation of eligibility norms given to NRI candidates.
- Giving weightage in the OGPA of State Agricultural University students.
- Campus allotment based on the rank and Communal Rotation to PG and Ph.D programme.
- Admission of students from other States under the Open category for PG admission.

### **119<sup>th</sup> Academic Council meeting (18.12.2012) approved**

- Revised syllabus for PAT 501 Mycology (2+1) for M.Sc. (Ag.) in Plant Pathology.
- Relaxation of minimum eligibility marks for admission of Foreign students in TNAU.
- Evaluation pattern for the course 'Project Work' (0+1) for the 2007 - 2011 syllabus for the UG programme
- Inclusion of buffer days after 90 working days in a semester to compensate the holidays declared for UG programmes.
- Norms for Campus transfer of the students of Constituent Colleges and Diploma Institutes
- Conduct of all UG, PG and Ph.D examinations in Handwritten Mode from 2012-13 batch, II semester.
- Revised pattern for conducting re-appearance examinations.
- Institution of Endowments to honour the Chief Guest of 33rd Convocation.
- Collection of tuition and other fees from the Foreign students admitted under India-Africa and India-Afghanistan Fellowship Programme
- Admission of Postgraduate students under Management Quota in Affiliated Colleges.
- Mechanism and guidelines to review the facilities and performances of the affiliated Institutions and facilities to be provided to the Deans deputed from TNAU.

- Implementation of recommendations of Under Graduate Teaching Seminar held on 17.12.2012.

### **33<sup>rd</sup>Annual Convocation of the Tamil Nadu Agricultural University, 2012**

The Thirty Third Convocation of the Tamil Nadu Agricultural University was held on 19th December 2012 at 11.00 am in a grand manner. His Excellency, the Governor of Tamil Nadu and Chancellor of TNAU, Dr.K.Rosaiah Presided over the Convocation and awarded 52 prizes and medals to the outstanding UG, PG and Ph.D graduates. In this convocation, totally 1134 students (813 in person and 321 students in absentia) were awarded various degrees. Dr.P.Subbian, Registrar of the University announced Endowment prizes and Medals. Dr.S.Ayyappan, Secretary, Department of Agricultural Research and Education and Director General, Indian Council of Agricultural Research, Ministry of Agriculture, Government of India, New Delhi was the Chief Guest of the occasion and delivered the Convocation Address. Dr.K.Ramasmy, Vice-Chancellor delivered the Welcome Address.

### **Endowments Instituted during 2012 (XXXIII Convocation)**

#### **Convocation Award**

- 1. Chief Guest Dr. S. Ayyappan Award for the best B.Tech. (Biotechnology) student.
- 2. Dr. R. Samiyappan Award for the Best Ph.D thesis work in Molecular Plant Pathology.
- 3. Dr. A. Mariakulandai Award for best Undergraduate student of AC&RI, Madurai who secures highest marks in Soil Science courses.
- 4. International Extension Forum Award for the best Ph.D student in Agricultural Extension and the best M.Sc. student in Agricultural Extension.

- 5. Dr. N. Nadarajan, Retired Professor of TNAU award for the Best M.Sc. (Agri.) Student in Plant Breeding and Genetics who secures highest marks in Quantitative Genetics subjects.

### **IMPORTANT TOUR PROGRAMMES OF THE VICE-CHANCELLOR**

**(28.08.2012 to 31.03.2013)**

- Participated in the State Planning Commission Meeting at Chennai on 28.08.2012.
- Interacted with the scientists, staff and students of FC & RI, Mettupalayam on 31.8.2012.
- Attended the NADP – State Level Sanctioning Committee (SLSC) Meeting at Secretariat, Chennai on 07.09.2012.
- Participated in the Brainstorming Meeting on Pulses Production at the National Academy of Agricultural Sciences New Delhi on 12.09.2012.
- Attended the Finance Committee Meeting of TNAU at Secretariat, Chennai on 15.9.2012.
- Participated in the State Planning Commission Meeting at Chennai on 20.09.2012.
- Took up review of Sugar cane Research Station, Melalathur and Agricultural Research Station, Virinjipuram on 24.9.2012.
- Participated in the State Planning Commission Meeting at Chennai on 27.9.2012.
- Chaired the Scientific Advisory Committee Meeting of KVK, MYRADA, Gobichettipalayam on 28.9.2012.
- Delivered the Key Note Address in the Tender Coconut Growers Association Meeting at Pollachi on 29.9.2012.
- Made a Field Visit to SYNGENTA – IRRI Collaborative Research Project, at Anamalai, Pollachi and interacted with the scientists, staff and students at AC & RI, Madurai on 01.10.2012.

- Interacted with the scientists at Cotton Research Station, Srivilliputhur and RRS, Aruppukottai, staff and students AC & RI, Killikulam on 02.10.2012.
- Interacted with the scientists, staff and students at ARS, Kovilpatti on 03.10.2012.
- Participated in the Discussion meeting on the Utilization of Revised Budget 2012-2013 under Plan Scheme at Secretariat, Chennai on 12.10.2012.
- Reviewed the progress of Research, Education and Extension activities of FC & RI, Mettupalayam on 01.11.2012.
- Interacted with staff and students, made a field visit and attended Foundation Stone Laying ceremony at HC & RI, Periyakulam on 03.11.2012.
- Participated in the National Banana Seminar at Theni on 04.11.2012.
- Participated in the discussion with APC and Secretary to Government, Agriculture Department, Chennai on 08.11.2012.
- Visited RRS, Aruppukottai and interacted with the staff on 12.11.2012.
- Chaired a Discussion Meeting on the Training Programme Offered by NIRD for TNAU Scientists, at NIRD, Hyderabad on 16.11.2012.
- Delivered a special Lecture at Agarkar Institute, Pune on 18.11.2012.
- Participated in the IRRI – ICAR Meeting on Plan for Research and Development at New Delhi on 19.11.2012.
- Attended the Full Commission meeting of the State Planning Commission under the Chairmanship of Hon'ble Chief Minister of Tamil Nadu on 26.11.2012.
- Made a Field visit to National Pulses Research Centre, Vamban and interacted with the staff members on 03.12.2012.
- Had a discussion with the District Collector, Pudukkottai on 04.12.2012.
- Visited DARS, Chettinad on 05.12.2012.
- Attended State Planning Commission Meeting at Chennai on 06.12.2012.
- 08.12.2012-Visited Chennai to invite His Excellency, the Governor and Chancellor of TNAU for the 33rd Convocation of TNAU.
- Attended Plan Scheme Meeting at Chennai on 13.12.2012.
- Attended FAO Workshop at CRIDA, Hyderabad on 14.12.2012 and 15.12.2012.
- Participated in the Indian Agricultural Universities Association (IAUA)
- Vice-Chancellors' Conference at Jaipur on 27.12.2012.
- Visited Chennai and met His Excellency the Governor of Tamil Nadu and Chancellor of TNAU and discussed agriculture related issues on 01.01.2013.
- Meeting with Agricultural Production Commissioner and Secretary to Government at Chennai to discuss TNAU related issues on 02.01.2013.
- Delivered the Key Note Address in the International Conference at IICPT, Thanjavur on 03.01.2013.
- Attended the Guru Puja at Ramakrishna Mission Vidyalaya in Periyanaickenpalayam, Coimbatore and was the Guest of Honour in the International Conference on Computer Communications and Informations Organised by Sree Sakthi Institute, Coimbatore 06.01.2013.
- Chaired the meeting "Identity Crises in Higher Education : Problem and Perspective in the 65th Annual Conference at AUT, Erode. launched the Matchwood contract farming / farmers' training on Industrial Agroforestry / besides participated in the signing of MoU at FC & RI, Meetupalayam. Inaugurated the Dinamalar Agri Expo at Prem Mahal, Karur on 07.01.2013.
- Attended the International Conference at National Institute of Advanced Studies (NIAS), Bangalore and presented a paper "New Innovations, Technologies and Practices enhancing Agricultural

- Production and Productivity in India” on 08.01. 2013.
- Met the ISRO Chairman; Dr.Radhakrishnan Nair, ISRO on 09.01. 2013.
  - Attended the Krishi Karman Award distribution function Presided over by the President of India at New Delhi on 15.01. 2013.
  - Attended the meeting convened by His Excellency, the Governor of Tamil Nadu at Chennai on 16.01. 2013.
  - Participated and delivered the Special Address during the Workshop, “Attracting and Retaining Youth in Agriculture” at Srimad Andavan Arts Science College, Trichy on 22.01. 2013.
  - Attended the Field Day at Kadamabakudi, Thanjavur on 23.01. 2013.
  - Attended the State Planning Commission meeting at Chennai on 24.01. 2013.
  - Made a Field Visit and had interaction with scientists and staff of SRS, Cuddalore on 25.01. 2013.
  - Attended the SPC Meeting at Chennai on 28.01. 2013.
  - Participated and delivered the Inaugural Address on Bio-tech Interventions in Plant and Microbial Interaction for Crop Sustainability (BPMCS – 2013 - Dept. of Bio-Technology, Periyar University) at Salem on 30.01. 2013.
  - Attended a meeting convened by the DDG (at ICAR), New Delhi on 03.02. 2013.
  - Delivered Key Note Address at the Agricultural Biotechnology Workshop at North Maharashtra Agricultural University, Jalgaon, Maharashtra on 05.02. 2013.
  - Attended the Task Force Meeting on Biological Agents for Agriculture, at Goa on 08.02. 2013.
  - Met the Agricultural Production Commissioner and Secretary to Government, Tamil Nadu – for finalization of Plan for conduct of SWC and NADP Projects for TNAU on 14.02. 2013.
  - Delivered the Inaugural Address at the Uzhavarukku Uyiruttu Uzhavarukku Valvootu – Farmers Expo at Trichy on 15.02. 2013.
  - Attended the Vice-Chancellor’s Conference at ICAR, New Delhi on 19.02. 2013 and 20.02. 2013.
  - Attended the SLSC meeting of NADP at Secretariat, Chennai on 25.02. 2013.
  - Inaugurated the training to Tribal Farmers as part of the INSIMP Launch – at KVK, Sandhiyur on 26.02. 2013.
  - Attended the Vice-Chancellor’s Conference convened by the Chancellor and Governor of Tamil Nadu at Raj Bhavan, Chennai on 04.03. 2013.
  - Made a field visit to AEC & RI, Kumular and Thanjavur District on 09.03. 2013.
  - Took up review of HRS, Thadiyankudisai and HRS, Kodiakanal on 12.03. 2013.
  - Attended the review meeting of Hon’ble Chief Minister of Tamil Nadu at Chennai on 14.03. 2013.
  - Attended NADP – State Level Sanctioning Committee meeting for 2013-at Secretariat, Chennai on 19.03. 2013.
  - Attended the Agricultural Policy and Announcements discussion meeting at Agriculture Department at Secretariat, Chennai on 26.03. 2013.

**DETAILS OF FOREIGN TRAINING / CONFERENCE / MEETING / SYMPOSIUM ETC., ATTENDED BY THE SCIENTISTS**

1. Dr. K. R. Karunakaran, Assoc. Professor(Agrl. Econ. ) attended the ISEE 2012-International Conference on Ecological Economics at Brazil from 29.05.2012 to 01.06.2012 and submitted a paper.
2. Dr. T. Jayaraj, Director, Dr. V. Ravi ,

- Professor (Agronomy), Dr. T. Ramesh, Assistant Professor (Agronomy) and Dr. E. Subramanian, Assistant Professor (Agronomy) visited M/s. Netafim Company at Israel and held technical discussions with the Netafim scientists and also professional tours to agricultural sites at Isreal, from 15.04.2012 to 20.04.2012.
3. Dr. A. Jaya Jasmine, Associate Professor (Horticulture) attended the 5th International Symposium on Tropical and Subtropical Fruits from 18.06.2012 to 20.06.2012 at Guangzhou, China.
  4. Dr. K. Subrahmaniyan, Associate Professor and Head, attended the 2012 South and Central Asia (SCA) Regional Fulbright Alumini Conference from 27.04.2012 to 29.04.2012 at Kathmandu, Nepal.
  5. Dr. K. Angappan, Associate Professor (Plant Pathology) and Dr. N. Manikanda Boopathi, Assistant Professor (Biotechnology) attended the Inception Workshop of BMZ/GIZ sponsored Global Research Project from 01.05.2012 to 04.05.2012 at Asian Vegetable Research and Development Center, Bangkok, Thailand.
  6. Dr. V. Paranidharan, Assoc. Professor (Plant Pathology) attended the Fusarium Laboratory Training At Bari, Italy from 03.06.2012 to 08.06.2012.
  7. Dr. C. Chinnusamy, Professor (Agronomy), Dr. Subbalakshmi Lokanadhan, Professor (Agronomy), Dr. A. Velayutham (Agronomy), Dr. E. Somasundaram, Assoc. Professor (Agronomy) and Dr. P. Murali Arthanari, Associate Professor (Agronomy) attended the 6th International Weed Science Congress from 17.06.2012 to 22.06.2012 at Hangzhou, China.
  8. Dr. R. Velazhahan, Professor (Plant Pathology), attended the 10th Pathology Workshop from 07.05.2012 to 11.05.2012 at Nanning, China.
  9. Dr. N. Varadharaju, Professor and Head and Dr. D. Malathi, Professor (Food Science) attended the four weeks training on 'Controlled environment storage practices and technologies' from 04.06.2012 to 29.06.2012 at Mc Gill University, Canada.
  10. Dr. R. Visvanathan, Professor and Head and Dr. P. Rajkumar, Associate Professor (Agricultural Processing) attended the training offered by M/s. Anton Paar India Pvt. Ltd. , Chennai for a period of one week during last week of May, 2012 and at European Training Centre, Germany from 26.07.2012 to 28.07.2012.
  11. Dr. V. Saravanakumar, Assistant Professor (Agricultural Economics) attended the 19th Annual Conference of European Association and Resource Economics from 26.06.2012 to 30.06.2012 at University of Economics, Prague, Czeh Republic.
  12. Dr. S. Jeyaraman, Director (CMS) attended the workshop on "Remote sensing based information for insurance in emerging economics project – RIICE" from 04.06.2012 to 06.06.2012 at Manila, the Phillipines.
  13. Dr. N. Kumar, Dean (Horticulture) attended the Cocoa agriculture research team meeting on 02.07.2012 at Kraft Foods Offices, U. K.
  14. Dr. M. Jegadeesan, Assistant Professor (Agricultural Extension) attended the workshop cum training in pedagogy skills (Asia region) from 28.05.2012 to 01.06.2012 at Kuala Lumpur, Malaysia.
  15. Dr. P. Balasubramanian, Professor (Biotechnology) attended the Indian-EU Conference-cum-Ministerial meeting

- on India EU Research and Innovation Partnership from 31.05.2012 to 01.06.2012 at Brussels, Belgium.
16. Dr. T. Raguchander, Professor (Plant Pathology), Dr. K. Prabakar, Professor (Plant Pathology) and Dr. D. Saravanakumar, Assistant Professor (Plant Pathology) visited the bio-control laboratories, at Stockholm, Sweden and AGRONNOVA, University of Torino, Italy from 16.06.2012 to 26.06.2012. for presentation and discussion of the proposed new scheme.
  17. Dr. R. Balasubramanian, Professor (Agricultural Economics) attended the 24th Biannual Research and Training workshop from 18.06.2012 to 21.06.2012 at Colombo, Sri Lanka.
  18. Dr. K. R. Karunakaran, Associate Professor (Agricultural Economics) attended the 28th International Conference of Agricultural Economists on the Global Bio-Economy from 18.08.2012 to 24.08.2012 at Brazil
  19. Dr. P. Balasubramanian, Professor (Biotechnology) took part in the panel discussion at Washington DC, USA and attended the 12th International symposium in St. Louis USA, met the leading botanists at M/s. Monsanto Headquarters discussed with Cornell faculty and students, Cornell University, Ithaca, NY from 13.09.2012 to 26.09.2012.
  20. Dr. R. Rabindran, Professor (Plant Pathology) attended the Asia Oceanic Geosciences Society AGU (WPGM) Joint Assembly from 13.08.2012 to 17.08.2012 at Resorts World Convention Centre, Singapore.
  21. Dr. P. Paramasivam, Professor (Agricultural Economics) attended the 3rd Annual Agricultural Model Intercomparison and Improvement Project (AgMIP) Global Workshop from 10.10.2012 to 12.10.2012 at Rome, Italy.
  22. Dr. N. Varadharaju, Professor and Head and Dr. D. Malathi, Professor (Food Science) attended the third six monthly review meeting of RESMISA project from 14.08.2012 to 21.08.2012 at Pokhara, Nepal.
  23. Dr. V. Geethalakshmi, Professor and Head and Dr. A. Lakshmanan, Associate Professor (Environmental Science) visited from 27.08.2012 to 08.09.2012, the Texas A&M University, USA, to complete the modeling assignment related to Clima Rice-II Project
  24. Dr. A. Chandrasekhar, Controller of Examinations and Director of Research i/c, Dr. C. Durairaj, Professor (Agricultural Entomology), Dr. K. Samiayyan, Professor (Agricultural Entomology) and Dr. S. Nakkeeran, Associate Professor (Plant Pathology) attended the 2nd International Symposium on Bio-Pesticides (2nd IS-BioPEN) from 24.09.2012 to 25.09.2012 at Bangkok, Thailand.
  25. Dr. K. N. Selvaraj, Professor and Head, attended the International workshop on Food security and food safety under economic and environmental turmoil from 27.09.2012 to 28.09.2012 at Bangkok, Thailand.
  26. Dr. S. Chandrasekaran, Professor (Agricultural Entomology), Dr. S. Mohankumar, Professor (Biotech. ) and Dr. S. Mohan, Professor (Agricultural Entomology) attended the Australia-India Strategic Research Fund (AISRF) joint workshop from 02.09.2012 to 12.09.2012 at Brisbane, Australia.
  27. Dr. K. Prabakar, Professor (Plant Pathology), Dr. G. Karthikeyan, Associate Professor (Plant Pathology) visited Kabul, Afghanistan. to assess

- the activity on post training evaluation of the trainees and also to assess the facilities to Quarantine Department staff of Ministry of Agriculture, etc. from 01.09.2012 to 03.09.2012.
28. Dr. C. Ravindran, Assistant Professor (Horticulture) attended the first international symposium on jackfruit from 31.08.2012 to 02.09.2012 at Bangladesh Agricultural University, Mymensingh, Bangladesh.
  29. Dr. N. Manivannan, Assoc. Professor (PB&G) and Tmt. B. Meena Kumari, Assistant Professor (PB&G) attended the training programme on Integrated breeding multi-year course (IB-MYC) from 15.10.2012 to 26.10.2012 at Wageningen, The Netherlands.
  30. Dr. P. Subbian, Registrar, visited U. S. A. along with the delegates from Confederation of Indian Industry, New Delhi from 16.09.2012 to 21.09.2012, U. S. A.
  31. Dr. R. Jagannathan, Professor (Agronomy), attended the International workshop on “Land Atmosphere Interactions on regional scale” from 08.10.2012 to 10.10.2012 at Madrid, Spain.
  32. Dr. V. Geethalakshmi attended the 3rd Annual Agricultural Model Intercomparison and Improvement Project (AgMIP) Global Workshop from 10.10.2012 to 12.10.2012 at Rome, Italy.
  33. Dr. Z. John Kennedy, Professor (Agricultural Microbiology) attended the International training programme on Food safety, quality, assurance system and risk analysis-2012 from 29.09.2012 to 08.10.2012 at Ghent University, Belgium.
  34. Dr. C. Sekar, Professor (Agricultural Economics) attended the training related to the CIDA funded scaling up project and also to participate in the 6th Mc Gill Conference on Global Food Security from 14.10.2012 to 15.11.2012 at McGill University, Canada.
  35. Dr. S. Manivasakan, Assistant Professor (Forestry) and Dr. P. Pretheep Kumar, Assistant Professor (Agricultural Entomology) attended the 17th International forestry and environment symposium 2012 from 16.11.2012 to 17.11.2012 at Sri Lanka.
  36. Dr. D. Suresh Kumar, Associate Professor (Agricultural Economics) and Dr. M. Jegadeesan, Assistant Professor (Agricultural Extension) participated in the workshop on “Linkages between agriculture and industry in India” from 08.12.2012 to 09.12.2012 at Chiba, Japan.
  37. Dr. A. Balasubramanian, Associate Professor (Forestry) attended the training on “Applied climate change : Gaining practical skill for climate change adaptation” from 15.10.2012 to 26.10.2012 at Smithsonian Conservation Biology Institute in Front Royal, Virginia, U.S.A.
  38. Dr. S. Mohankumar, Professor (Biotechnology) attended the symposium on IPM for horticultural crops in the tropical world organized by IPM CRSP from 11.11.2012 to 14.11.2012 at Knoxville, Tennessee, U.S.A.
  39. Dr. P. Hemalatha, Assistant Professor (Biotechnology) attended a short course entitled “Molecular breeding course 2012” from 12.11.2012 to 23.11.2012 at IRRI, Philippines.
  40. Tmt. V. Anandhi, Assistant Professor (Computer Science) and Tmt. C. S. Sumathi, Assistant Professor (Computer Science), attended the 4th International conference on information and



- multimedia technology from 21.12.2012 to 22.12.2012 at Kuala Lumpur, Malaysia.
41. Dr. K. K. Kumar, Assistant Professor (Biotechnology) attended one week training for capability enhancement in the area of in vitro culture and genetic engineering of Banana For the period from 10.12.2012 to 15.12.2012 Queensland University of Technology, Australia.
  42. Dr. K. N. Selvaraj, Professor and Head, Department of Intellectual Property, Dr. K. S. Subramanian, Professor and Head, Department of Nano Technology, Dr. N. Natarajan, Professor (SS&T), Dr. C. R. Chinnamuthu, Associate Professor (Agronomy), Dr. K. Gunasekaran, Professor (Agricultural Entomology), Dr. N. Varadharaju, Professor and Head, Dr. G. Sashidevi, Assistant Professor (Home Science), Dr. C. Sekar, Professor (Agricultural Economics), Dr. K. Soorinathasundaram, Professor and Head, Department of Fruit Crops, Dr. A. Subbiah, Assistant Professor (Horticulture), Dr. K. Prabakar, Professor (Plant Pathology), Dr. G. Thiribhuvanamala, Assistant Professor (Plant Pathology) and Dr. D. Amirtham, Assistant Professor (Biochemistry) attended the Annual Review of the IDRC Nano-Film project from 28.01.2013 to 01.02.2013 at Colombo, Sri Lanka.
  43. Dr. P. Pramasivam, Professor (Agricultural Economics), Dr. V. Geethalakshmi, Professor and Head, Agro Climate Research Centre, Dr. R. Krishnan, Associate Professor (Agronomy) and Dr. A. Lakshmanan, Associate Professor (Environment Sciences), Dr. R. Balasubramanian, Professor (Agricultural Economics) and Dr. D. Suresh Kumar, Associate Professor (Agricultural Economics) attended the AgMIP South Asia Regional Projects Kick off Workshop from 12.11.2012 to 16.11.2012 at Colombo, Sri Lanka.
  44. Dr. K. N. Selvaraj, Professor and Head, Department of Trade and Intellectual Property attended the 5th International Congress of Environmental research from 22.11.2012 to 24.11.2012 at UMT, Terengganu (Malaysia).
  45. Dr. N. Anandaraja, Assistant Professor (Agricultural Extension) attended the workshop on “Information and communication technology (ICT) in extension from 03.12.2012 to 07.12.2012 at Dhaka, Bangladesh.
  46. Dr. R. Balasubramanian, Professor (Agricultural Economics) attended the 25th Biannual research and training from 12.12.2012 to 15.12.2012 at Kathmandu, Nepal.
  47. Dr. D. Jawahar, Professor and Head, Dr. D. Amirtham, Assistant Professor (Biochemistry) attended the field visit and to conduct the training programme on “Developing bio-products and food recipes” at Arthacharya Foundation, from 04.01.2013 to 08.01.2013 at Ratmalana, Sri Lanka.
  48. Dr. S. Kamaraj, Professor and Head, Department of Bio-Energy and Dr. N. O. Gopal, Professor (Agricultural Microbiology) attended the Joint project meeting of “US-India JECERDC for development of sustainable advanced lingo-cellulosic Bio-fuel systems” from 28.01.2013 to 31.01.2013 at the University of Florida, Gainesville, U. S. A.
  49. Dr. K. Prabakar, Professor (Plant Pathology), Dr. T. Raguchander, Professor (Plant Pathology) and Dr. D. Saravanakumar, Assistant Professor (Plant Pathology) attended the 17th International Reinhardtsbrunn

Symposium on modern fungicides and antifungal compounds from 21.04.2013 to 25.04.2013 at Fridrichroda, Germany.

50. Dr. P. Santhy, Professor ( SS&AC) and Director i/c, ODL, Dr. G. Jothi Assistant Professor (Agricultural Nematology), Dr. P. R. Renganayaki, Professor (SS&T) attended the Public engagement Meeting and also to present the project outcome with regard to the project on “Seed technology through ODL” from 23.03.2013 to 31.03.2013 at the University of Guelph, Ontario, Canada.
51. Dr. P. Sivasubramanian, Director, Agri –Business Development attended the International Conference on “Sustainable energy and environmental sciences (SEES 2013) from 25.02.2013 to 26.02.2013 at Singapore.
52. Dr. V. Geethalakshmi, Professor (Agronomy) and Dr. A. Lakshmanan, Professor (Environment Sciences) participated and presented papers in the High Level Meeting on National Drought Policy (HMNDP) from 11.03.2013 to 15.03.2013 at Geneva, Switzerland.

**Inventions granted patent and filed for patents**

### 3. INVENTIONS GRANTED PATENT AND FILED FOR PATENTS

#### Invention granted patent

S. No	Inventors	Title of the Invention	Patent Number
1.	Dr. K. Kailappan, Professor, Dept. of Food and Agricultural Processing Engineering, TNAU, Coimbatore.	Process for the production of ready to cook mix and food from pearl millet	250608

S. No	Inventors	Title of the Inventions	Application Number
<b>Inventions filed for Patents</b>			
1.	<b>2012</b> Dr. G. Kathiresan, Director, Planning and Monitoring, TNAU, Coimbatore	Cane Seedlings Pruner	241/CHE/2012
2.	Dr. M. Muthulakshmi Senior Research Fellow, Dept. of Agricultural Nematology, TNAU, Coimbatore	Bio formulation of Egg parasitic fungi ( <i>Engyodontium</i> <i>araneorum</i> ) for control of potato cyst nematodes	399/CHE/2012
3.	Dr. K. Kailappan Professor, Dept. of Food and Agrl. Processing Engg, TNAU, Coimbatore	A thresher cum winnower device	0013/DEL/2012
4.	Dr. S. Prabhu, Assistant Professor, Dept. of Agricultural Nematology, AC& RI, Madurai	Water soluble gel formulation comprising of entomopatho- genic nematodes and it's preparation thereof	5227/CHE/2012
5.	Dr. G. Kathiresan, Director, Planning and Monitoring, TNAU, Coimbatore	Low Cost Triangular Pointer for System of Rice Intensification (SRI)	5113/ CHE/2012
6.	Dr. P. Gomathinayagam, Professor, Dept. of Plant breeding and Genetics, AC&RI, Madurai	Induced Seminal Rooting (ISR) Technique for Rapid and Mass Screening of Rice Genetic Accessions for Deep Root System	161/CHE/2012
7.	Dr. W. Baby Rani, Associate Professor, Dept. of Agricultural Entomology, AC&RI, Madurai	Trap design for efficient trapping of Brinjal shoot and fruit borer, <i>Leucinodes</i> <i>orbonalis</i> (GUENEE)	3070/CHE/2012
8.	Dr. Sangeetha Panicker, TRRI, Aduthurai	Chemical Sterilization Method of Mushroom Spawn Production	2796/CHE/2012

9.	Dr. Ganeshram, Professor, Department of Plant Genetic Resources, TNAU, Coimbatore	Cut grain dip (CGD) method with Rapid Amylose Detection Solution (RADS) for determining amylose content (AC) in Rice	1266/CHE/2012
10.	Dr. R. Murugesan, Director i/c (ABD), TNAU, Coimbatore	Method for the control of sugarcane Red rot disease causing fungus Colletotrichum falcatum using flavonoid compound psoralen isolated from Psoralea corylifolia	3266/CHE/2012
11.	Dr. R. Murugesan, Director (ABD), TNAU, Coimbatore	Synthesis of protein hydrolysates through bacteria extraction from Azolla Biomass	3612/CHE/2012
12.	Dr. R. Murugesan, Director (ABD), TNAU, Coimbatore	Bacterial fermentation process for extraction of protein hydrolysate from yeast biomass	3712/CHE/2012
13.	A.V. Gnanasambandam, Senior Research Fellow, Department of Agricultural Microbiology, TNAU, Coimbatore	Herbal Wine	4535/CHE/2012
14.	Dr. H. Vijaya Ragahavan, Professor, Department of Crop Physiology, TNAU, Coimbatore	PGR Consortia for coconut	1604/CHE/2012
15.	Dr. H. Vijaya Ragahavan, Professor, Department of Crop Physiology, TNAU, Coimbatore	PGR Consortia for Pulse	1609/CHE/2012
16.	Dr. Vincent, Professor, Department of Crop Physiology, TNAU, Coimbatore	Plant Growth Regulator for Groundnut	1605/CHE/2012
17.	Dr. Vincent, Professor, Department of Crop Physiology, TNAU, Coimbatore	Nutrient mix to improve maize yield	1606/CHE/2012
18.	Dr. H. Vijaya Ragahavan, Professor, Department of Crop Physiology, TNAU, Coimbatore	Nutrient mixture to reduce Iron chlorosis in sugarcane	1607/CHE/2012

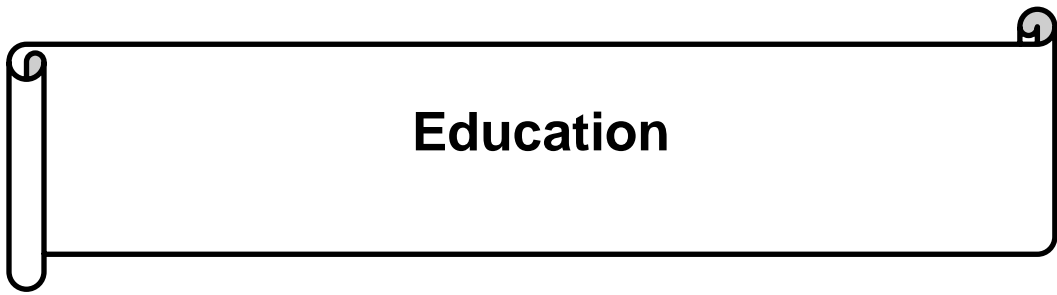
19.	Dr. Vincent, Associate Professor, Department of Crop Physiology, TNAU, Coimbatore	Nutrient mix to increase cotton yield	1608/CHE/2012
20.	Dr. H. Vijaya Ragahavan, Professor, Department of Crop Physiology, TNAU, Coimbatore	Nutrient mix to increase yield in banana	1610/CHE/2012
21.	2013 Dr. G. Kathiresan, Director, Planning and Monitoring, TNAU, Coimbatore	Natural warm water unit	243/CHE/2013
22.	Mr. Shrish yogaraj Ph.D Scholar, TNAU, Coimbatore	Sunshine and Solar Azimuth Altitude angle Recorder and Dual Axis Tracker (SUNSAAR-DAT)	109/MUM/2013
23	Dr. R. Murugesan, Director i/c, Directorate of Agribusiness Development, TNAU, Coimbatore	Mass multiplication technique for pink pigmented facultative microbes (PPFM)	2641/CHE/2013
<b>Private inventions filed for Patent</b>			
1.	Dr. Subashini, Associate Professor, Avinashilingam University, Coimbatore	Cosmeceutial products based on allantoin rich extracts of Pisonia alba	84/CHE/2012
2.	Dr. Subashini, Associate Professor, Avinashilingam University, Coimbatore	Medicinal Products based on allantoin rich extracts of Pisonia alba	85/CHE/2012
3.	Mr. S. Selva Kumar, Dharmapuri	Tractor Drawn Manual Turmeric Rhizome Planter	5370/CHE/2012
4.	Mr. Ram Prasad, Madurai	Isolation of PGPR and production of indole acetic acid for plant growth by the application of Pseudomonas species	4455/CHE/2012

### **Registration of Crop Varieties:**

Application for registering Ethamozhi tall coconut under farmers' variety was sent to PPV&FR Authority

### **Geographical Indication:**

Scientific Report for registering Erode Turmeric under GI protection was submitted.



**Education**

## 4. EDUCATION

### 4.1. SCHOOL OF POST GRADUATE STUDIES

<b>Masters Programs</b>	
<b>M.Sc. (Agriculture)</b>	
1.	Agronomy
2.	Agricultural Economics
3.	Agricultural Entomology
4.	Agricultural Microbiology
5.	Crop Physiology
6.	Plant Breeding and Genetics
7.	Plant Nematology
8.	Plant Pathology
9.	Plant Genetic Resources*
10.	Seed Science and Technology
11.	Soil Science and Agricultural Chemistry
12.	Sericulture
13.	Agricultural Meteorology and Climatology
14.	Master of Business Administration
15.	Biotechnology
16.	Environmental Sciences
17.	Agricultural Extension
18.	<b>M.Sc. (Horticulture)</b>
19.	Floriculture and Landscape Gardening
20.	Fruit Science
21.	Spices, Plantation, Medicinal and Aromatic Crops

<b>M.Sc. (Forestry)</b>	
22.	Forestry
23.	Forest Business Management*
24.	Forest Ecology and Environment*
25.	Silviculture and Agroforestry*
26.	Tree Breeding and Biotechnology*
27.	Wildlife Management*
<b>M.Sc. (Home Science)</b>	
28.	Food Science and Nutrition
29.	Textiles and Apparel Merchandising*
30.	Human Development and Family dynamics*
31.	Family Resource Management and ergonomics*
32.	Home Science Extension and Communication Management*
<b>M.Tech.</b>	
33.	Agricultural Nanotechnology
<b>M.Tech. (Agricultural Engineering)</b>	
34.	Bio Energy
35.	Farm Power Machinery
36.	Agricultural Processing and Food Engineering
37.	Soil and Water Conservation Engineering
38.	Environmental Engineering*



**Newly started courses during 2012 – 13 from the above list**

<b>M.Sc. (Forestry)</b>		<b>M.Sc. (Home Science)</b>	
1.	Plant Genetic Resources	7.	Human Development and Family dynamics
2.	Forestry	8.	Family Resource Management and ergonomics
3.	Forest Business Management	9.	Home Science Extension and Communication Management
4.	Forest Ecology and Environment		M. Tech.
5.	Tree Breeding and Biotechnology	10.	Environmental Engineering
6.	Wildlife Management	11.	Agricultural Nanotechnology

**Doctoral Programs (Ph.D)**

1.	Agri Business Development	14.	Plant Nematology
2.	Agricultural Economics	15.	Plant Pathology
3.	Agricultural Extension	16.	Sericulture
4.	Business Administration	17.	Biotechnology
5.	Agronomy	18.	Farm Power and Machinery
6.	Agricultural Meteorology and Climatology	19.	Bio Energy
7.	Crop Physiology	20.	Food and Agricultural Processing
8.	Environmental Sciences	21.	Floriculture and Landscape Gardening
9.	Soil Science and Agricultural Chemistry	22.	Spices, Plantation, Medicinal and Aromatic Crops
10.	Agricultural Microbiology	23.	Vegetable Science
11.	Plant Breeding and Genetics	24.	Fruit Science
12.	Seed Science and Technology	25.	Forestry
13.	Agricultural Entomology	26.	Food Science and Nutrition

**Admissions**

**Number of students admitted in Post graduate and Doctoral programmes**

<b>Degree Programme</b>	<b>General</b>		<b>SC/ST</b>			
	<b>Boys</b>	<b>Girls</b>	<b>Total</b>	<b>Boys</b>	<b>Girls</b>	<b>Total</b>
M.Sc.	133	146	279	62	34	96
Ph.D.	69	67	136	20	20	40
<b>Total</b>	<b>202</b>	<b>213</b>	<b>415</b>	<b>82</b>	<b>54</b>	<b>136</b>

## Students Enrolled and passed out

### Masters Programme

S. No.	Campus / Department	Number of students enrolled during the academic year 2012 - 13	Number of students enrolled under self supporting programme during the academic year 2012 - 13	Number of students passed out during 2012 - 13	
<b>I.</b>	<b>Agricultural College and Research Institute, Coimbatore</b>				
	Agriculture				
	Agriculture Economics	8	--	8	
	Agriculture Entomology	18	1	17	
	Agriculture Extension	11	--	10	
	Agriculture Microbiology	5	--	7	
	Agriculture Meteorology	5	--	1	
	Agronomy	19	3	18	
	Biotechnology	18	--	19	
	Business Administration	18	--	13	
	Crop Physiology	10	--	5	
	Environmental Sciences	3	--	8	
	Plant Breeding and Genetics	15	1	19	
	Nematology	5	--	7	
	Plant Pathology	14	--	13	
	Seed Science and Technology	12	--	14	
	Soil Science and Agriculture Chemistry	9	2	10	
	Sericulture	8	--	3	
Nanotechnology	5	1	--		
	<b>Total</b>	<b>183</b>	<b>8</b>	<b>172</b>	
<b>II.</b>	<b>Horticultural College and Research Institute, Coimbatore</b>				
	Fruit Science		8	2	9
	Floriculture and Landscape Gardening		11	--	13
	Spices, Plantation, Medicinal and Aromatic Crops		9	1	5
	Vegetable Science		12	1	--
	<b>Total</b>		<b>40</b>	<b>4</b>	<b>27</b>

<b>III.</b>	<b>Agriculture Engineering College and Research Institute, Coimbatore</b>			
	Bio Energy	1	1	5
	Farm Power and Machinery	8	2	5
	Food and Agriculture Processing	12	--	5
	Soil and Water Conservation	10	--	6
	<b>Total</b>	<b>31</b>	<b>3</b>	<b>21</b>
<b>IV.</b>	<b>Dual degree</b>			
	M.P.S. Food Processing and Marketing	1	1	5
	M. Tech Biotechnology and Business Management	1	1	4
	<b>Total</b>	<b>2</b>	<b>2</b>	<b>9</b>
<b>III.</b>	<b>Agricultural College and Research Institute, Madurai</b>			
	<b>Agriculture</b>			
	Agriculture Economics	4	--	3
	Agriculture Entomology	6	--	7
	Agriculture Extension	5	--	5
	Seed Science and Technology	4	--	--
	Agriculture Microbiology	--	--	3
	Agronomy	10	--	8
	Plant Breeding and Genetics	7	1	10
	Plant Pathology	6	1	10
	Soil Science and Agriculture Chemistry	5	--	4
	<b>Total</b>	<b>47</b>	<b>2</b>	<b>50</b>
<b>IV.</b>	<b>Home Science College and Research Institute, Madurai</b>			
	Food Science and Nutrition	2	--	-
<b>V.</b>	<b>Forest College and Research Institute, Mettupalayam</b>			
	Forestry	28	2	--
<b>VI.</b>	<b>Agricultural College and Research Institute, Killikulam</b>			
	Agronomy	4	--	--
	Plant Breeding and Genetics	5	--	--
	Soil Science and Agricultural Chemistry	3	--	--
	<b>Total</b>	<b>12</b>	<b>--</b>	<b>--</b>
<b>Grand Total</b>		<b>345</b>	<b>21</b>	<b>279</b>

### Doctoral Programme

Sl. No.	Campus / Department	No. of candidates Passed out during 2012 - 13	Total No. of students enrolled during academic year 2012 - 13	No. of students enrolled under self supporting programme during academic year 2012 - 13
<b>I.</b>	<b>Agricultural College and Research Institute, Coimbatore</b>			
	<b>Agriculture</b>			
	Agricultural Economics	5	11	2
	Agribusiness and Development Management	6	3	2
	Agricultural Entomology	3	18	1
	Agricultural Extension	4	11	--
	Agricultural Microbiology	5	5	1
	Agronomy	8	14	--
	Biotechnology	4	6	3
	Agricultural Meteorology	--	--	--
	Sericulture	--	--	--
	Crop Physiology	2	2	--
	Environment Sciences	3	6	--
	Plant Breeding and Genetics	9	17	1
	Nematology	--	4	--
	Plant Pathology	4	10	2
	Seed Science and Technology	4	8	1
	Soil Science and Agricultural Chemistry	8	10	1
	<b>Total</b>	<b>65</b>	<b>125</b>	<b>14</b>
	<b>Horticultural College and Research Institute, Coimbatore</b>			
	Floriculture and Medicinal Crops	3	6	1
	Fruit Science	1	6	--
	Spices and Plantation Crops	4	6	--
	Vegetable Science	--	5	--
	<b>Total</b>	<b>8</b>	<b>23</b>	<b>1</b>
	<b>Agricultural Engineering College and Research Institute, Coimbatore</b>			
	Bio Energy	1	2	--
	Farm Power and Machinery	3	4	1
	Food and Agricultural Processing	1	6	--
	Soil and Water Conservation	5	4	--
	<b>Total</b>	<b>10</b>	<b>16</b>	<b>1</b>

II.	<b>Agricultural College and Research Institute, Madurai</b>			
	Agriculture			
	Agronomy	2	--	--
	Plant Breeding and Genetics	3	--	--
	Plant Pathology	2	--	--
	Seed Science and Technology	1	--	--
	Horticulture	1	--	--
	<b>Total</b>	<b>9</b>	<b>--</b>	<b>--</b>
III.	<b>Home Science College and Research Institute, Madurai</b>			
	Food Science and Nutrition	1	2	
IV	Forest College and Research Institute, Mettupalayam			
	Forestry	2	5	
	<b>Grand Total</b>	<b>95</b>	<b>175</b>	<b>16</b>

**Foreign students admitted for Masters program during the academic year 2012 - 13**

Sl.No.	Department	Country	No. of students admitted
1	Agricultural Entomology	Afghanistan	1
2	Agronomy	Afghanistan	2
3	Environmental Science	Yemen	1
4	Plant Pathology	Afghanistan	1
5	Fruit Science	Afghanistan	1
		<b>Total</b>	<b>6</b>

**Foreign students admitted for Doctoral program during the academic year 2012 - 13**

Sl.No.	Department	Country	No. of students admitted
1	Agricultural Entomology	Srilanka	1
2	Biotechnology	Ethiopia	1
3	Plant Pathology	Ethiopia	1
4	Soil Science and Agricultural Chemistry	Ethiopia	1
5	Food and Agricultural Processing	Sudan	1
		<b>Total</b>	<b>5</b>

### 5.5. Students exchange programme

- Mr. Surendhran. A. II Ph.D. student of the Department of Agricultural Economics, TNAU, Coimbatore did a part of his research in the Department of Bio-resource and Economic Trade, under the International Canadian Fellowship for six months.
- Ms. Thangasuja, S. I Ph.D. student of the Department of Plant Breeding and Genetics, TNAU, Coimbatore has been selected for 36 months for her research work under the “International Rice Science Educational Funding 2011” in the International Rice Research Institute, Manila, The Philippines.
- Mr. R. Krishnamoorthy, I Ph.D. student of the Department of Agl. Microbiology, TNAU, Coimbatore has been selected under the “ICAR international educational assistantship” for his research work at Changmung International University, South Korea.

### MoUs signed with Universities / other Institutes in which TNAU students undertake part time and full time research

#### International Institutes

- Cornell University, USA
- University of Adelaide, Australia
- University of South Australia, Adelaide, Australia
- Universita Politecnica delle Marche, Italy
- University of Saskatchewan, Canada
- McGill University, Canada
- Durban University of Technology, South Africa
- International Rice Research Institute, Philippines
- Hebrew University of Jerusalem, Israel
- Volcani Center, Israel
- ‘N’ Parks, Singapore
- Justus Leibig University, Germany
- Leibniz University, Canada
- Chiba University, Japan

#### National institutes

- Defence Research Laboratory, New Delhi
- National Remote Sensing Agency, Hyderabad
- Indian Institute of Spices Research, Calicut,
- Indian Institute of Horticultural Research, Bangaluru
- ICAR Research Complex, Goa
- Assam Agricultural University, Jorhat, Assam
- National Research Centre for Oil Palm, Andhra Pradesh
- Central Institute for Arid Horticulture, Bikaner
- Indian Institute of Pulses Research, Kanpur

#### Private Research and Development Institutions

- Jain Hi Tech Agricultural Institute, Jalgaon, Maharashtra, India
- Barwale Foundation, Hyderabad, India
- Mahyco Research Foundation, Hyderabad, India
- Metahelix, Bangalore, Karnataka, India
- John Deere, Pune, Maharashtra, India
- Rockefeller Foundation, Bangkok, Thailand
- Mahindra and Mahindra, Mumbai, Maharashtra

#### Important visitors

1. 24.1.2012 - Dr. S.S.Gosal, Deputy Registrar, Dr. Gursharan Singh, Dean, (PG Studies) and Dr. (Mrs.) Neelam Grewal, Dean, College of Home Science, reviewed the NRTT project proposals.
2. 20.3.2012 - Dr. V. B. Banumoorthy, Dean, (PG Studies), ANGRAU, Hyderabad discussed about PG education activities.
3. 27.3.2012 - Marc Usunier, International Graduate Recruitment and Liaison

- Officer, College of Graduate Studies and Research, University of Saskatchewan and Ms. Vitoli Chophy, Marketing Manager, University of Saskatchewan, New Delhi, India discussed about PG education activities.
4. 31.7.2012 - Prof. Dr. Matthias Pilz, Director, Centre for Modern Indian Studies, University of Cologne, Germany discussed about PG education activities and to establish collaboration with University of Cologne.
  5. 8.1.2013 - Dr.Prabir, K. Patra, Senior Scientist, Research Institute for Global change, JAMSTEC, Yokohama, Japan delivered, Special Lecture on 'Global Climate Change: Role of human activity, ecosystems and agriculture'.
  6. 11.1.2013 - Dr. Sundaram Gunasekaran, Professor (Food Engineering), University of Wisconsin Madison, USA delivered Special Lecture on Academic opportunities in USA.
  7. 23.1.2013 - Dr. N. Vasudev, Professor and Head, Dept. of Agrl. Economics, ANGRAU, Hyderabad delivered Special Lecture on Foreign Direct Investment (FDI) Policy in India : Expectations and the World's experience.

#### Details of scholarships availed by PG students

S.No.	Particulars	No. of students availed	Scholarship amount (Rs.)
1	Tamil Nadu State Council for Science and Technology	2	12000.00
2	International Rice Research Institute	1	3600.00
3	Pioneer Hybrid International	1	279438.00
4	Indian Council for Agricultural Research	58	4575667.00
5	Council of Scientific and Industrial Research	6	1390886.00
6	ASPEE	2	32400.00
7	SC/ST Higher Education Special Scholarship	149	1170000.00
8	SC/ST Post Metric	159	3157645.00
9	MBC	27	69930.00
10	BC	20	49535.00
11	Denotified Community	8	22675.00
12	University Grants Commission	22	6442973.00
13	Indian cultural Association	-	-
14	Government of Assam	1	16400.00
15	Inspire - DST	16	3543891.00
16	DARE	13	1826889.00
17	Monsanto Beachell Borlaug International	1	3347007.00
18	TNAU Merit	15	125526.00
19	TNAU Research Assistance	11	153287.00
20	Periyar Endowment	2	10000.00
21.	KIADEF	2	20000.00
	<b>Total</b>	<b>516</b>	<b>27379449.00</b>

## 4.2. UNDER GRADUATE EDUCATION

### Students Admission – Degree-wise - (2012-13 Academic Year)

S I . No.	Degree	General		ICAR		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
1	B.Sc.(Agriculture)	105	208	13	17	-	-	118	225	343
2	B.Sc.(Horticulture)	36	84	1	5	-	-	37	89	126
3	B.Sc.(Forestry)	35	12	-	2	-	-	35	14	49
4	B.Tech.(Agricultural Engineering)	36	23	4	-	-	-	40	23	63
5	B.Sc.(Home Science)	10	18	-	-	-	-	10	18	28
6	B.Sc.(Sericulture)	9	20	-	-	-	-	9	20	29
7	B.Tech. (Biotechnology)	-	-	-	-	14	37	14	37	51
8	B.Tech. (Bioinformatics)	-	-	-	-	8	20	8	20	28
9	B.Tech.(Horticulture)	-	-	-	-	9	26	9	26	35
10	B.Tech.(Food Processing Engineering )	-	-	-	-	17	38	17	38	55
11	B.Tech.(Energy and Environmental Engineering),	-	-	-	-	21	31	21	31	52
12	B.Tech.(Agricultural Information Technology)	-	-	-	-	8	20	8	20	28
13	B.S.(Agribusiness Management)	-	-	-	-	12	26	12	26	38
	<b>Total</b>	<b>231</b>	<b>365</b>	<b>18</b>	<b>24</b>	<b>89</b>	<b>198</b>	<b>338</b>	<b>587</b>	<b>925</b>

### Student admission –quota wise (2012-2013)

General	Self supporting	Total	Self supporting				Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Total	
1	General	11	19	7	20	18	39	57	
2	Back ward Class	93	207	35	107	128	314	442	
3	Back ward Class Muslims	7	10	6	5	13	15	28	
4	Most Back ward Class	61	72	25	36	86	108	194	
5	Denotified Notified Class	4	2	-	-	4	2	6	
6	Scheduled Caste	47	39	12	26	59	65	124	
7	Scheduled Caste - Arunthathiyinar	4	9	3	3	7	12	19	



8	Scheduled Tribe	4	7	1	1	5	8	13
9	Indian Council of Agricultural Research	18	24	-	-	18	24	42
10	Others	-	-	-	-	-	-	-
	<b>Total</b>	<b>249</b>	<b>389</b>	<b>89</b>	<b>198</b>	<b>338</b>	<b>587</b>	<b>925</b>

**Students admission – campus wise (2012-13 Academic Year)**

Sl. No.	College	General		ICAR		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
	<b>B.Sc. (Agriculture)</b>									
1	B.Sc. (Agriculture), Coimbatore	33	59	4	4	-	-	37	63	100
2	B.Sc. (Agriculture), Madurai	21	58	3	9	-	-	24	67	91
3	B.Sc. (Agriculture), Trichy	35	41	6	3	-	-	41	44	85
4	B.Sc. (Agriculture), Killikulam	16	50	4	5	-	-	20	55	75
5	B.Sc. (Horticulture), Periyakulam	37	47	-	-	-	-	37	47	84
6	B.Sc. (Horticulture), Trichy	-	38	-	4	-	-	-	42	42
7	B.Sc. (Forestry), Mettupalayam	35	12	-	2	-	-	35	14	49
8	B.Tech.(Agricultural Engineering),Kumalur	36	23	4	-	-	-	40	23	63
9	B.Sc.(HomeScience), Madurai	10	18	-	-	-	-	10	18	28
10	B.Tech. (Biotechnology), Coimbatore	-	-	-	-	14	37	14	37	51
11	B.Tech.(Horticulture), Coimbatore	-	-	-	-	9	26	9	26	35
12	B.Tech. (Bioinformatics), Coimbatore	-	-	-	-	8	20	8	20	28
13	B.Tech.(Food Processing and Engineering), Coimbatore	-	-	-	-	17	38	17	38	55
14	B.Tech.(Energy and Environmental Engineering), Coimbatore	-	-	-	-	21	31	21	31	52

15	B.Tech. (Agricultural Information Technology), Coimbatore	-	-	-	-	8	20	8	20	28
16	B.Sc.(Agribusiness Management ), Coimbatore	-	-	-	-	12	26	12	26	38
17	B.Sc. (Sericulture), Coimbatore	9	20	-	-	-	-	9	20	29
	<b>Total</b>	<b>232</b>	<b>366</b>	<b>21</b>	<b>27</b>	<b>89</b>	<b>198</b>	<b>342</b>	<b>591</b>	<b>933</b>

#### 4.2.1. Agricultural College and Research Institute, Coimbatore

##### Students Admission (Degree wise) - 2012-13

S I . No.	Degree	General		ICAR		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
1	B.Sc.(Agriculture)	33	59	4	4	-	-	37	63	100
2	B.Tech. (Biotechnology)			-	-	14	37	14	37	51
3	B.Tech. (Bioinformatics)			-	-	8	20	8	20	28
4	B.Tech.(Agricultural Information Technology)			-	-	8	20	8	20	28
5	B.S.(Agribusiness Management)			-	-	12	26	12	26	38
6	B.Sc. (Sericulture)	-	-	-	-	9	20	9	20	29
	<b>Total</b>	<b>33</b>	<b>59</b>	<b>4</b>	<b>4</b>	<b>51</b>	<b>123</b>	<b>88</b>	<b>186</b>	<b>274</b>

##### Year wise students admission (2012-13)

##### B.Sc. (Agriculture)

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	32	63	95
2.	II	26	75	101
3.	III	37	64	101
4.	IV	29	67	96

##### B.Tech. (Biotechnology)

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	13	38	51
2.	II	20	45	65
3.	III	12	39	51
4.	IV	18	35	53

**B.Tech. (Bio-informatics)**

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	8	20	28
2.	II	8	22	30
3.	III	7	20	27
4.	IV	5	23	28

**B.Tech. (Agricultural Information Technology)**

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	8	20	28
2.	II	3	22	25
3.	III	5	21	26
4.	IV	15	7	22

**B.S. (Agribusiness Management)**

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	12	26	38
2.	II	11	25	36
3.	III	6	16	22
4.	IV	9	16	25

**B.Sc. (Sericulture)**

SI. No.	Year	Number of students		
		Boys	Girls	Total
1.	I	10	19	29
2.	II	8	20	28
3.	III	-	-	-
4.	IV	-	-	-

**Details of scholarships availed by students**

S. No.	Particulars	No. of students availed	Scholarship amount (Rs.)
1.	SC/ST Fresh and Renewal	94	17,77,920
2.	BC/MBC/DNC Scholarship (General)	383	20,65,802
3.	SC/ST Higher Educational Special Scholarship 2012-2013	37	1,63,025

4.	Tamil Nadu Chief Minister Award Scholarship 2012-2013 (SC/ST)	6	18,000
5.	SC/ST Government of India Scholarship for the year 2012-13	4	24,000
6.	Periyar Endowment Scholarship and Ms.Kokilavani, Ms.Gayathri and Ms.Hemalatha Endowment Scholarship (General)	15	81,000
7.	Vedavalli Endowment Scholarship 2012-13 (General)	2	14,000
8.	National Talent Scholarship	28	2,80,000
	<b>Total</b>	<b>569</b>	<b>44,23,747</b>

### Study Tour

S. No.	Nature of Tour	Period	Places Visited	Number of Students
1.	Study Tour	16.12.2012 and 22.12.2012	Research Station in South Tamil Nadu	107
2.	Study Tour	23.01.2013 and 27.02.2013	Palani Block and Ooty	108
3.	Study Tour	19.01.2013	Forest Nuesery at Iruttupallam and Forest operations at Siruvani range	108
4.	Study Tour	06.04.2013	Agroforestry Models, Forest Management, NTFP collections and Social Forestry at Sundarapuri, Topslip, Sethumadai and Thunakadavu	108
5.	Study Tour	21.02.2013	SPAC Tapioca Products, Poonachi, Bhavani Taluk and Erode District Co-operative Milk Producers' Union at Chithode	55
6.	Practical Schedule	06.01.2013 and 12.01.2013	Research Station in South Tamil Nadu	28
7.	Practical Schedule	11.03.2013	Horticulture Research Station in Ooty	52
8.	Practical Schedule	19.02.2013	M/s Amaravathy Seeds, Dharapuram	73
9.	Study Tour	21.02.2013	Horticulture Research Station in Ooty	51

### Details of students placement in different sectors through TNAU

S. No.	Name of Agency	Number of Students
1.	Sree Annapoorna Foods	1
2.	Rasi Seeds (P) Ltd	4
3.	Cadbury	2
4.	Centek KVK	3
5.	Arohana	6

6.	Shand Group	4
7.	Biosuccess	5
8.	Sathyam Bio	2
9.	Synchromax	2
10.	Dhan Foundation	25
11.	Synthite	5
12.	Zuari	10
13.	Ratan Tata	4
	<b>Total</b>	<b>73</b>

### Sports / Games and Prize Winners

S. No.	Name of the Medal	Organizer	Place and Date	Winners	Rank
1	TNAU- Inter College Tournament	Agricultural College and Research Institute, Madurai	AC&RI, Madurai (08.02.2013 to 12.02.2013)	Over-all Championship for games I Place	I Place
				Men – TNAU, Coimbatore	
2	XIVth All India Inter Agricultural University Sports and Games Meet 2012-13	Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar	Karnataka Veterinary, Ani- mal and Fisheries Sciences University, Bidar (06.03.2013 to 10.03.2013)	Individual Champion – M. Nandhini	I Place
				Athletic Men Overall Champion (Winner)	I Place
				Athletic Women Overall Champion (Runner)	II Place
				Volley Ball – Winner (Men)	I Place

### Students' functions

S. No.	Date	Name of the Function
1	05.09.2012	Club Inauguration
2	23.11.2012 and 24.11.2012	Sangamithra
3	29.12.2012	Release of Pozhil magazine
4	10.01.2013	Pongal Vizha
5	22.02.2013 and 23.02.2013	Cultura
6	09.03.2013 and 10.03.2013	Agronova
7	14.03.2013 , 15.03.2013 and 16.03.2013	Muthamizh Vizha
8	19.04.2013	Annual Sports Meet
9	23.05.2013	Hostel Day
10	30.05.2013	Club Validictory

#### 4.2.2. Agricultural College and Research Institute, Madurai

##### Students Admission (Degree-wise) - 2012-2013

S. No.	Degree	General			Self supporting			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Sc.(Ag.)	45	47	92	-	-	-	45	47	92

##### Year wise Students strength (2012-2013)

##### B.Sc. (Agriculture)

S. No.	Year	Number of students		
		Boys	Girls	Total
1.	I Year	30	62	92
2.	II Year	29	58	87
3.	III Year	25	69	94
4.	IV Year	27	66	93
<b>TOTAL</b>		<b>111</b>	<b>255</b>	<b>366</b>

##### Details of Scholarship availed by students

S. No.	Particulars	No. of students availed (UG and PG)	Scholarship Amount (Rs.)
1.	TNAU – Merit Scholarship (UG)	13	40000
2.	TNAU Corpus fund Scholarship (PG)	1	10000
3.	TNAU – Research Assistantship (Ph.D.)	1	15000
4.	Prize Money Scholarship to Adi-Dravidar Students	23	115000
5.	ICAR National Talent Scholarship (UG)	32	320000
6.	Chikkammal – Kamala Endowment Scholarship (UG)	1	6500
7.	UGC – Rajiv Gandhi National Fellowship (Ph.D. students)	2	43000
8.	GOI-DST Inspire Fellowship (Ph.D. students)	2	488000
9.	Adi-Dravidar Welfare Higher Education Special Scholarship (Fresh and Renewal)	68	544000
10.	Adi-Dravidar Welfare Scholarship	83	1173235
11.	BC and MBC Scholarship (Fresh and Renewal)	208	1286996
12.	Chief Minister Award (UG)	9	27000
13.	TNSC and ST Program Project Scheme Fund	2	12000
14.	Tuition fee concession to first graduate students	99	347420

15.	Chief Minister's Farmers Security Scheme Scholarship	67	
	<b>Total</b>	<b>611</b>	<b>44,28,151</b>

### Education related Awards and Prizes

S. No.	Name of the Award	Name of students	I. D .No
1.	Dr. A. Mariakulandai Medal	Ms. S.T. Meena Priya	11-243
2.	Thiru P. Kakkan Memorial Prize	Mr. Nitish Ranjan Prakash	10-240
3.	Thiruvalluvar Memorial Prize	Ms. Pallavi Sarkar	09-257
4.	Poongundranar Memorial Prize	Ms. Sweta Verma	08-303
5.	MACOSA 81 Award	Ms. N. Dharani	09-221
6.	Dr. P. Rangasamy Gold Medal	Ms. Pallavi Sarkar	09-257
7.	Dr. S. Mahendran Endowment Award	Ms. N. Dharani	09-221
8.	Dr. K. Gunathilagaraj Endowment Award for B.Sc. (Ag.)	Ms. Pallavi Sarkar	09-257
9.	C. Subramanian Memorial Prize for I M.Sc	V. Amsagowri	11-503-101
10.	Thiru Sivasailam Endowment Award for M.Sc. (PB&G)	Ms. S. Christine Latitia	11-511-101
11.	Professor T. Balakrishnan Prize for M.Sc. (SS & AC)	Ms. K. Jeevika	11-515-101

### Study Tour

Sl.No	Places visited	Number of students
<b>1. Industry and Institutional Educational Tour (27.7.2012 to 7.8.2012 and 13.9.2012 to 26.9.2012)</b>		
1.	Kerala Agricultural University, Vellanikara	<b>90 Students</b>
2.	Forest Research Institute, Kerala	
3.	Communication Centre, Mannuthy, Thrissur, Kerala	
4.	Central Sericulture Research and Training Institute, Mysore	
5.	Indian Institute of Horticulture, Bengaluru	
6.	SAFAL Market, Bangalore	
7.	UAS, Bangalore	
8.	VIII Regional Extension Centre, Bengaluru	
9.	Acharya N.G. Ranga Agricultural University, Hyderabad	
10.	National Institute of Plant Health Management, Hyderabad	



11.	National Academy of Agricultural Research Management, Hyderabad	<b>90 Students</b>
12.	National Institute of Agricultural Extension Management, Hyderabad	
13.	Directorate of OilSeed Research, Hyderabad	
14.	Directorate of Rice Research, Hyderabad	
15.	Central Research Institute for Dryland Agriculture, Hyderabad	
16.	Extension Education Institute, Hyderabad	
17.	International Crop Research Institute for Semi Arid Tropics, Hyderabad	
18.	Indian Agricultural Research Institute, New Delhi	
19.	Indian Livestock Research Institute, Karnal	
20.	Wheat Research Institute, Karnal	
21.	Indian Remote Sensing Institute, Dehradun	
22.	Indian Forest Research Institute, Dehradun	
23.	Central Potato Research Institute, Simla	
24.	Y.S.R. Farmer Horticulture University, Solon	
25.	Punjab Agricultural University, Ludhiana	
26.	Water Technology Centre, Indian Agricultural Research Institute, New Delhi	
27.	National Bureau of Plant Genetic Resources, New Delhi	
28.	National Agricultural Sciences Museum, New Delhi	
29.	Central Soil Salinity Research Centre, Karnal	

### **Campus Interviews and Placements (2012-13)**

S. No.	Name of the Agency	Interview Date	Number of Students Selected
1.	Dhan Foundation	20.03.2013 & 21.03.2013	23
2.	ZUARI Agro Chemicals	20.03.2013 & 21.03.2013	4
3.	HDFC	20.03.2013 & 21.03.2013	1

### **Successful Candidates in UPSC Examination**

S. No.	Details	Successful Candidates	Rank	Degree and Batch
1.	IRS	Bhuvaneshwary. J	447	B.Sc(Ag) 2005-2009
2.	IRS	Jeyaseelan. V. P	602	B.Sc(Ag) 2004-2008
3.	IRS	Viji	44	B.Sc(Ag) 2004-2008

### Sports / Games and Prize Winners

S No	Name of the Medal/ Game and Sports	Organizer	Place and Date	Winners	Ranks
1	Hockey and Table Tennis (Men)	TNAU, Inter Collegiate Tournament – 2012-2013 AC & RI, Madurai	08.02.2013 to 12.02.2013	AC & RI, Madurai	Second
2	Ball Badminton, Table Tennis and Volleyball (Women)			AC & RI, Madurai	First
3	Kho-Kho (Women)			AC & RI, Madurai	Second
4	Games - Overall Championship (Women)			AC & RI, Madurai	Second
5	Athletics - Overall Championship (Men)			AC & RI, Madurai	First
6	Individual Championship for Athletics (Men)			S. Poovarasana	First
7	Overall Championship for Games and athletics (Men and Women)			AC & RI, Madurai	First
8	100m Run (Men)			D. Karthik	Second
9	400 m Run (Men)			S. Poovarasana	Second
10	800 m Run (Men)			S. Poovarasana	First
11	1500 m Run (Men)			S. Poovarasana	First
12	5000 m Run (Men)			S. Poovarasana	First
13	Triple Jump (Men)			D. Karthik	First
14	Hammer Throw (Men)			S. Sridhar	First
15	Discus Throw (Men)			A. Rajesh Kumar	First
16	Discus Throw (Men)			S. Sridhar	Second
17	Shotput (Men)			A. Rajesh Kumar	First
18	Javelin Throw (Men)			A. Rajesh Kumar	First
19	100 m Run (Women)			J.S. Monica	Third
20	200 m Run (Women)			P. Anusuya	First
21	400 m Run (Women)			S. Hemapriya	Third
22	1500 m (Women)			J.S. Monica	Second
23	3000 m (Women)			M. Hemapriya	First
24	4x100 m Relay (Women)			AC & RI, Madurai	Second

Nine students participated in XIV All India Inter Agricultural Universities Tournament held at Karnataka Veterinary Animal and Fisheries Sciences University, Bidar (Karnataka) from 06.03.2013 to 10.03.2013.

S.No.	Name of the Student	Year	Event
1	Anusuya. P	IV BSc, (Agri).	Volleyball and Athletics
2	Jeevitha. K	IV BSc, (Agri).	Basketball
3	Sindhuja. T	III BSc, (Agri.)	Volleyball
4	Vennila.M	II BSc, (Agri).	Volleyball
5	Nivetha Devi. C	II BSc, (Agri.)	Basketball
6	Hariprasath. S	IV BSc, (Agri.)	Basketball
7	Karthik. D	III BSc, (Agri.)	Volleyball and Athletics
8	Poovarasana. S	IV BSc, (HSC)	Athletics
9	Vetrivel.M	II MSc, (Agri.)	Kabaddi

S.No	Name of the Medal/ Game and Sports	Organizer	Place and Date	Winners	Ranks
1	Volleyball (Men)	XIV All India Inter Agricultural Universities Tournament, Bidar (Karnataka)	06.03.2013 to 10.03.2013	D.Karthik	First
2	Triple Jump (Men)			D. Karthik	First
3	4x100 mts Relay (Men)			D. Karthik	Second
4	4x100 mts Relay (Women)			P. Anusuya	Second
5	1500 mts (Men)			S. Poovarasana	Second

### Students' Functions

S.No	Date	Name of the Function
1	31.08.2012	Students Club Inauguration and Orientation Programme for 1st year students
2	05.09.2012	Thullal-2012
3	04, 05.01.2013	Talentia-2013
4	08, 09.03.2013	Trekking to hills
5	15, 16.03.2013	Muthamizh Vizha - 2013
6	26.04.2013	Hostel day
7	30.04.2013	Sports day
8	30.04.2013	College day and Club Day

### 4.2.3. Agricultural College and Research Institute, Killikulam

#### Students Admission (Degree-wise) - 2012-2013

S.No.	Degree	General			Self supporting			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Sc.(Ag.)	41	44	85	--	--	--	41	44	85
2.	M.Sc.(Ag.)	14	05	19	--	--	--	14	05	19

#### Year wise Students' strength (2012-2013)

##### B.Sc. (Agriculture)

Sl.No.	Year	Boys	Girls	Total
1.	I Year	41	44	85
2.	II Year	34	31	65
3.	III Year	35	52	87
4.	IV Year	34	43	77
	<b>Total</b>	<b>144</b>	<b>170</b>	<b>314</b>

#### Details of Scholarships availed by Students

S.No.	Name of the Scholarship	No. of Students benefit	Amount (Rs.)
1.	BC/MBC/DNC Scholarship	257	19,40,329
2.	SC/ST Post metric Scholarship	67	11,59,600
3.	Higher Education Special SC/ST Scholarship	31	2,48,000
4.	Chief Minister Awards	11	31,500
5.	ICAR National Talent Award	24	2,40,000
6.	Tamil Nadu Teachers Welfare Award	--	--
7.	Prize Money Award	01	5,000
8.	Tamil Nadu State Special Scholarship	03	30,760
9.	Ganhi Memorial Prize	01	2,000
	<b>Total</b>	<b>395</b>	<b>36,57,189</b>

#### Education related Awards and Prize winning Students

S.No.	Title of the Medal	Awardees
1.	Marimuthu Memorial Medal	Pallavi Singh
2.	Pioneer Batch Medal	Amit Kumar Agrawal
3.	Ilangovan Endowment Medal	Amit Kumar Agrawal
4.	Killikulam Scientists Endowment Medal	Pallavi Singh
5.	FACT Medal	Amit Kumar Agrawal

6.	Pon Essakiappillai Gomathiammal Medal	Anjana, G.
7.	C. Balasubramaniam Medal	Anjana, G.
8.	The Royal Killies Batch Medal	Bala Dithya, T.
9.	The Smart Killies Medal	Samraj . J. M.
10.	Charms Medal	Vikash Kumar
11.	Killikulam Agronomist Medal	Pallavi Singh
12.	Roopavathi Memorial Medal	Bala Dithya,T.
13	S.M.Punniamoorthy-Nagarathinammal Medal	Amit Kumar Agrawal
14	1984 – 88 batch Medal	Amit Kumar Agrawal
15	Silver Jubilee Medal	Pallavi Singh
16	M.A. Peer Mohamed Nazeer Memorial Medal	Ram Pratap Chahar
17	T.Vivekanandan Medal	Sri Devi, G.
18	AGSAR Prize Medal	Gokila, B.

### Study Tour

S.No.	Name of Tour	Period (days)	Places Visited	Year	Number of Students
1.	IIET- Industrial and Institutional Study Tour	26	Bangalore, Hyderabad, New Delhi, Durgapur, Dehradun, Simla, Solan, Kufri, Chandigargh, Ludhiana, Karnal	IV Year	88
2.	Southern Districts Tour	7	Research Stations in Southern districts of Tamil Nadu	III Year	62
3.	Floriculture Research Station	1	Thovalai	III Year	88
4.	State Horticulture Farm	1	Courtallam	IV Year	88

### Sports/ Games and Prize Winners

S.No.	Name of the /event	Organiser	Place and Date	Winners	Rank
<b>Block level tournament (Panchayat Yuva Krida Aur Khel Abhiyan) PYKKA</b>					
1.	400 m run	St. Xaviers Polytechnic College, Seidungallur	13.12.2012	A. Manivannan IV B.Sc.(Agri.)	III Place
2.	Long Jump			A. Manivannan IVB.Sc.(Agri.)	I Place
3.	100 m run			A. Manivannan IV B.Sc.(Agri.)	II Place
4.	100 m run			T. Vaitheeswari III B.Sc.(Agri.)	I Place
				C. Jayapradha IV B.Sc.(Agri.)	II Place
				T. Prabhavathi II B.Sc.(Agri.)	III Place
5.	400 m run			T. Prabhavathi IIB.Sc.(Agri.)	II Place
6.	Long Jump			T. Vaitheeswari III B.Sc.(Agri.)	I Place
				T. Prabhavathi II B.Sc.(Agri.)	II Place
				C. Jayapradha (IV B.Sc.(Agri.)	III Place
7.	Shotput	T. Sasikala III B.Sc.(Agri.)	I Place		
8.	Discus throw	C. Jayapradha IV B.Sc.(Agri.)	I Place		
		T. Sasikala III B.Sc.(Agri.)	II Place		
9.	Volley Ball	Men's team	I Place		
10.	Volley Ball	Women's team	I Place		
<b>TNAU – Inter-Collegiate Tournament</b>					
11.	Cricket Team (Men)	Agricultural College and Research Institute, Madurai	08.02.2013 to 12.03.2012	AC and RI, Killikulam	II Place
12.	Chess Team (Men)			AC and RI, Killikulam	II Place
13.	400 m run			A. Manivannan, IV B.Sc. (Agri)	I Place
14.	Long Jump			A. Manivannan IV B.Sc.(Agri.)	II Place
15.	200 m run			M. Vinothkumar, III B.Sc.(Agri.)	II Place

16.	Discus and Javelin throw	TNAU- Agricultural College and Research Institute, Madurai		G. Vaiyapuri, III B.Sc.(Agri.)	III Place
17.	Shotput			S . N a d e e m Ahmed, III B.Sc.(Agri.)	II Place
18.	4 x 400 m relay			A.Manivannan, IV B.Sc.(Agri.), M. Vinoth Kumar, III B.Sc(Agri.), G.Jeeva Kumar, III B.Sc.(Agri.) C. Kanagaraj, II B.Sc.(Agri.)	II Place
19.	400 m run			T. Vaitheeswari, III B.Sc (Agri)	II Place
20.	300 m run			T. Sasikala, III B.Sc (Agri)	III Place
21.	Javelin throw			T. Prabavathi, II B.Sc.(Agri.)	III Place
22.	1500 m run			K. Abirami, I B.Sc.(Agri.)	III Place
23.	4x100 m relay			C. Jayapradha, IV B.Sc.(Agri.), G. Bharathi, III B.Sc.(Agri.) K.Ponnarasi, Ist B.Sc.(Agri.) T. Vaitheeswari, III B.Sc.(Agri.)	III Place
24.	4x400 m relay			C. Jayapradha, IV B.Sc.(Agri.), G. Bharathi, III B.Sc.(Agri.) T. Prabavathi, II B.Sc.(Agri.), T. Vaitheeswari, III B.Sc (Agri)	I Place
<b>13th All India Inter-Agricultural University Tournament</b>					
25.	Kabaddi and Volley Ball team	Veterinary University, Bidar, Karnataka	26.02.2013 to 13.03.2013	R. Deiveegan II B.Sc.(Agri.)	Participated
<b>Tamil Nadu State Junior Judo Championship</b>					
26.	Judo (78 kg Category)	Chennai		G. Rudhra Devi I B.Sc.(Agri.)	II Place

<b>National Youth and Junior Judo Championship</b>					
27.	Tamil Nadu State Junior Judo team	University Institute of Law and Management Studies, Gurgoan	23.02.2013 to 25.02.2013	G. Rudhra Devi I B.Sc.(Agri.)	

### **Students' Functions**

<b>S. No.</b>	<b>Date</b>	<b>Name of the Function</b>
1.	16.04.2012	Farewell Programme for outgoing IV B.Sc(Ag.) students
2.	02.05.2012 to 08.05.2012	NSS Special Camp
3.	25.08.2012	Orientation day for freshers
4.	22.11.2012	NSS Communal Harmony Rally
5.	21.01.2013	Students Club inauguration
6.	23.01.2013 24.01.2013	and Muthamizh vizha
7.	25.02.2013	Book Fair
8.	07.03.2013 to 09.03.2013	ACOFUN 2013 - Intra Collegiate Cultural Fest
9.	13.04.2013	28th Annual Sports Meet
10.	18.04.2013	28th College Day and Club-Day function
11.	19.04.2013	Hostel Day



#### 4.2.4. Anbil Dharmalingam Agricultural College and Research

Institute, Navalur Kuttapattu,

#### Student Admission (Degree-wise) - 2012-2013

S.No	Degree	General			ICAR			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Sc (Agri)	20	55	75	--	--	--	20	55	75
<b>Total</b>		<b>20</b>	<b>55</b>	<b>75</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>20</b>	<b>55</b>	<b>75</b>

#### Year wise Students' Strength (2012-13)

#### B.Sc (Agriculture)

Sl. No.	Year	Boys	Girls	Total
1.	I Year	20	55	75
2.	II Year	24	49	73
3.	III Year	21	60	81
4.	IV Year	18	60	78
<b>Total</b>		<b>83</b>	<b>224</b>	<b>307</b>

#### Details of scholarships availed by students

S.No.	Particulars	No.of students availed	Scholarship amount ( Rs.)
1.	BC, MBC	178	13,20,435
2.	SC/ST	36	5,99,500
3.	ICAR National Talent Scholarship (UG)	32	3,20,000
4.	TNAU – Kokilavani Gayathri Hemalatha Endowment	3	18,000
<b>TOTAL</b>		<b>249</b>	<b>22,57,935</b>

#### Education related Awards and Prizes

S. No.	Name of the award	Year	Name of the student
1	Rasi Seeds Prize	2009-10 Batch	Ms.Divya, R.
2	Salem Gugai Mrs.G.Sampoornammal Medal	2009-10 Batch	Mr. Surya Prakash
3	Dr.V.S. Subramanyan Prize	2008-09 Batch	Ms. Sumayya Pattassery
4	Dr.C.V.Govindasamy Medal	2008-09 Batch	Ms. Sumayya Pattassery

5	Vadamadurai V.Govindasamy, Western Electronic and Scientific Works, B.V.Velasamy and B.V.Sarojini Velasamy Medal	2008-09 Batch	Ms.Priyadarsani Sahu
6.	Ibrahim Mohammed Dokka Mohammed and Kenana Sugar Company Limited, Bell and Company, Tmt.R.Santha Medal and AVR Sundaram Trust Medal	2008-09 Batch	Ms. Priyadarsani Sahu
7.	Karaikal Siva R.Gurumurthy Iyer Medal	2008-09 Batch	Ms. Sumayya Pattassery
8.	K.Rajukkannu, K.Senthilvel, Meenakshi Ammal and 1995-96 batch students Endowment Medal- Best Outgoing student	2008-09 Batch	Ms.Priyadarsani Sahu
9.	Rajagopalan Padmavathy Medal	2010-11 Batch	Mr. Anbarasan, J.

### Study Tour

S. No	Nature of tour	Period	Places visited	Number of Students
1.	All India study tour	8.10.2012 to 21.10.2012	AndraPradesh N G Renga Agricultural University, Directorate of Rice Research, National Academy of Agricultural Research Management, Directorate of Oilseed Research, Hyderabad, PAU, Ludhiana, IARI, New Delhi, National Agricultural Science Museum, New Delhi, Remote Sensing Institute and Forest Research Institute at Dehradun, Rajasthani kings dynasty, Rock gardens and Pinjore, Agra, Mohal gardens	78
2	Tamil Nadu short tour	30.08.2012 to 12.09.2012	ARS, Aruppukottai, and ARS, Kovilpatti, AC&RI, Madurai and DJ Farms, MRS, Vagari, Jain Farms, Udumalpet, PBS, SBI, CICR, TNAU, Coimbatore CSWCTI, HRS, Ooty, UPASI-Coonor, FC&RI- Mettupalayam, AMRC, Food Processing Centre, Principal Meteorological Observatory- TNAU, Coimbatore, Sago Industry, Anthiyur and Sheep Breeding Station, Mechery, Grow more Bio Tech, Siva Flora Tech-Hosur, TANFLORA, Precision farming in Dharmapuri areas, RRS, Paiyur, Paiyur Fruits Products (P) Ltd, TCRS, Yethapur and Rasi Seeds, Pvt., Ltd., Athur.	78

3	Tamil Nadu short tour (2011 syllabus)	22.2.2013 to 28.2.2013	Maize Research Station, Vagarai AC&RI, Madurai, Cotton Research Station, Srivilliputhur, Regional Research Station, Aruppukkottai, AC&RI, Killikulam Horticultural Research Station, Thovalai, Channa Extraction Factory, Tuticorin Indian Agro foods, Thoothukudi, Agricultural Research Station, Ambasamudram, Agricultural Research Station, Vaigaidam, Dryland Agricultural Research Station, Chettinad, National Pulses Research Centre, Vamban.	73
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### Campus Interviews and Placement

S.No	Name of the Agency	Number of Students
1.	Federal Bank	1
2.	Karur Vysya Bank	8
3.	HDFC Bank	2
4.	Max Hyper Market Pvt Ltd.	2
5.	Zuari Agro Chemicals	4
6.	Bayer	1
7.	Jain Irrigation	1
8.	Salem Spices	1
9.	Arohana Dairy Farm	2
10.	Suguna Foods Ltd.	4

### Sports / Games and Prize Winners

S.No.	Name of the Medal	Organizer	Place and Date	Winners	Rank
1.	Volley ball	Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar, Karnataka	06.03.2013 to 10.03.2013	P. Silambarasan	First

### Students' Functions

S.No	Date	Name of the Function
1.	06.08.2012	Orientation day
2.	14.12.2012	Club Inauguration
3.	31.12.2012	New Year celebration
4.	09.01.2013	Pongal Vizha
5.	20.02.2013	Guest Lecture by Dr.C.Sylendra Babu, IPS
6.	01.03.2013	Muthamizh vizha - 2012
7.	12.04.2013	Club day, College day and Hostel Day

#### 4.2.5. Horticultural College and Research Institute, Coimbatore

##### Students Admission (Degree-wise) – 2012-2013

S. No.	Name of the course	General			Self supporting			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Tech (Hort.)	-	-	-	9	26	35	9	26	35

##### Year wise Students' strength (2012-2013)

##### B.Sc.(Horticulture)

S. No.	Year	No. of students studying		
		Boys	Girls	Total
1.	I Year	9	26	35
2.	II Year	9	28	37
3.	III Year	9	21	30
4.	IV Year	7	20	27
	<b>Total</b>	<b>34</b>	<b>95</b>	<b>129</b>

##### Details of Scholarships availed by Students

S. No.	Particulars	No. of students availed	Scholarship amount (Rs.)
1.	SC Scholarship	15	2,96,640
2.	MBC Scholarship	29	2,33,208
3.	BC Scholarship	15	1,31,600
	<b>Total</b>	<b>59</b>	<b>6,61,448</b>

##### Awards and Prizes

S.No.	Name of the Award	Year	Name of the Students
1.	Selected for Industrial Internship at AVRDC, Taiwan "The World Vegetable Centre"	IV B.Tech (Hort.)	Mr. S.M. Saminathan,
2.	Prakruphi Ratna Award from EXNORA International, Chennai presented by the Mayor of Chennai.	IV B.Tech (Hort.)	Ms. P. Prageetha,

##### Study Tour

S.No.	Nature of Tour	Period	Places visited	Number of Students
1.	Educational Tour	04.10.2012 (I Year)	Visited Grow out Test field at Kannampalayam, Seed Processing Unit at TUCAS and Directorate of Seed Certification	37

2.	Educational Tour	22.01.2013 (I Year)	Forest College and Research Institute, Mettupalayam	37
3.	Educational Tour	11.03.2013 (II Year)	To study the soils of hilly terrain. To observe the influence of withering agents in soil formation, Ooty	37

### Sports, Games and Prize Winners

S.No.	Name of the competition	Organizer	Student	Prize
1.	Agronova	AC & RI, Madurai	Shobana.V I B.Tech (Hort.)	I
			R. Madhubala IV B.Tech (Hort.)	II
			Sayam Bhatia I B.Tech (Hort.)	III
2.	Cassatta		Nandhini. M IV B.Tech (Hort.)	I
			Monicka Reshma R.K. IV B.Tech (Hort.)	I
			Anantha Giri. P III B.Tech (Hort.)	I
3.	Foot ball		Mammon Thomas	II
4.	Ball Badminton		Sayam Bhatia	II
			Selva Kumar. D	II
5.	Table Tennis		Madhubala . R	I
		Sruthilaya. R	I	
		Suganthi. M	II	

### Students' Functions

S.No.	Date	Name of the function
1.	23, 24 November 2012	Sangamithra Day
2.	19 April 2012	Sports Day
3.	23 April 2012	Hostel Day

#### 4.2.6. Horticultural College and Research Institute, Periyakulam

##### Students Admission (Degree-wise) - 2012-2013

S. No	Degree	General		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Total
1.	B.Sc . (Horticulture)	38	49	-	-	38	49	87

##### Year wise Students' strength (2012-2013)

##### B.Sc.(Horticulture)

Year	Boys	Girls	Total
I Year	38	49	87
II Year	28	44	72
III Year	23	51	74
IV Year	35	41	76
<b>Total</b>	<b>124</b>	<b>185</b>	<b>309</b>

##### Details of Scholarships availed by Students

S. No.	Particulars	No. of students availed	Scholarship amount (Rs.)
1.	BC, MBC Scholarship	101	13,04,190
2.	SC/ST Scholarship	56	16,32,180
3.	SC/ST / Loan Scholarship	-	70,615
4.	Chief Minister Award (SC/ST)	4	12,000
5.	ICAR National Scholarship	18	1,80,000
	<b>Total</b>	<b>179</b>	<b>31,98,985</b>

##### Awards and Prizes

S. No.	Name of the award	Year	Name of the student
1	Jaideep kumar memorial award	2012	Prakash.K.

##### Study Tour

S.No	Nature of Tour	Period	Places Visited	Number of Students
1	All India study tour	13.09.2012 to 02.10.2012	Bangalore, Hyderabad, Pune, New Delhi, Jaipur, Shimla, Chandigarh, Amritsar,	76
2	Short tour	02.01.2013 to 08.01.2013	Ramnathapuram, Aruppukkottai, Madurai, Kodaikanal, Killikulam, Thadiyankudisai and Pechiparai	76

### Campus Interview and Placement

S.No	Group	Name of the Agency	No. of Students
1	Proscape	Landscape Pvt. Ltd., Dubai.	2

### Sports / Games and Prize Winners

S.No.	Name of the Medal	Organizer	Place and Date	Winners	Rank
1.	Basket ball (Men)	TNAU	February 2013, AC&RI, Madurai	Mens Group	First
2.	Basket ball (Women)			Womens Group	Second
3.	Chess			Kalaivani. K	Second
4.	Ball Badminton			V.Guhan	Second
5.	Treacks and events 100 Metres, 200 Metres,			M.Theivanai	First
6.	800,1500 Metres, High Jump			M.Theivanai	First
7.	Individual Championship			M.Theivanai	Individual Championship

### Students' Functions

S.No.	Date	Name of the Function
1	08.08.2012	Orientation of freshers (ATHENAS HORTS and Club day Inauguration
2	08, 09.08.2012	National level Agribusiness competitions
3	13, 14.12.2012	Muthamizh vizha
4	14, 15.03.2013	Sanganatham 2013

#### 4.2.7. Horticultural College and Research Institute for Women, Tiruchirappalli

##### Students Admission (Degree-wise) - 2012-2013

S. No	Degree	General		ICAR		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
1.	B.Sc (Horticulture)	-	42	-	-	-	-	-	42	42

##### Students' strength (Year wise and course wise)

Year	Girls	Total
<b>B.Sc (Horticulture)</b>		
I Year	42	42
II Year	37	37
III Year	-	-
IV Year	-	-
Total	79	79

##### Details of Scholarships availed by Students

S.No.	Particulars	Number of students availed	Scholarship amount (Rs.)
1.	BC/ MBC Scholarship	23	1,46,990
2.	SC/ ST Scholarship	5	79,150
3.	SC/ ST Scholarship (Loan)	-	-
4.	Chief Minister Award	-	-
5.	ICAR National Scholarship	-	-
6.	TNAU Special Scholarship	-	-
	<b>Total</b>	<b>28</b>	<b>2,26,140</b>

##### Study Tour

S. No.	Nature of Tour	Period	Places visited	Number of Students
1.	Educational Tour – Tamil Nadu	15.02.2013 to 16.02.2013	Coimbatore and Ooty	37
2.	Educational Tour – Tamil Nadu	27.09.2012 to 28.09.2012	Coimbatore and Ooty	37
3.	Educational Tour – Tamil Nadu	10.03.2013 to 11.03.2013	Pondicherry, Cuddalore, Palur, Vridhachalam	37
4.	Educational Tour	18.03.2013	Thanjavur, Thiruvarur	37



5.	Short Tour-I	05.01.2013	State Horticultural Farm, Srivilliputhur, State Horticultural Farm, Courtalam	37
		06.01.2013	Horticultural Research Station, Pechiparai, Rubber processing unit, Rubber plantation	
		07.01.2013	State Horticultural Farm, Kanyakumari, Floricultural Research Station, Thovalai, Agricultural College and Research Institute, Killikulam	
		08.01.2013	Regional Research Station, Aruppukottai, Agricultural College and Research Institute, Madurai	
		09.01.2013	Agricultural Research Station, Paramakudi, Agricultural Research Station, Ramanathapuram, State Horticultural Farm, Uchipuli, Thangachimadam.	
		10.01.2013	Horticultural Research Station, Kodaikanal	
		11.01.2013	Horticultural Research Station, Thadiyankudisai, Joseph Coffee, Pattiveeranpatti.	
6.	Educational Tour	10.03.2013 to 11.03.2013	1.Organic farm, Aurobindo Ashram, Pondicherry 2.Vegetable Research Station, Palur 3.SIDCO Cashew exports, Kadampuliyur 4.Regional Research Station, Vridhachalam.	

### Students' functions

S.No	Date	Name of the Function
1.	06.08.2012	Orientation day
2.	14.12.2012	Club Inauguration
3.	31.12.2012	New Year celebration
4.	09.01.2013	Pongal vizha
5.	20.02.2013	Guest lecture by Dr. C. Sylendra Babu, IPS
6.	01.03.2013	Muthamizh vizha
7.	12.04.2013	Club day, College day, Hostel day

#### 4.2.8. Agricultural Engineering College and Research Institute, Coimbatore

##### Students Admission (Degree-wise) - 2012-2013

Sl.No.	Degree	General		Self supporting		Total		
		Boys	Girls	Boys	Girls	Boys	Girls	Total
1.	B.Tech. (Food Processing Engineering)	-	-	18	37	18	37	55
2.	B.Tech. (Energy and Environmental Engineering)	-	-	21	31	21	31	52

##### Students' strength (Year wise) 2012-2013

Sl. No.	Year	Boys	Girls	Total
1.	I Year	38	69	107
2.	II Year	40	63	103
3.	III Year	23	42	65
4.	IV Year	46	28	74
	<b>Total</b>	<b>147</b>	<b>202</b>	<b>349</b>

##### Details of Scholarship availed by the Students

S.No.	Particulars	Number of students availed	Scholarship amount (Rs.)
1.	BC /MBC Scholarship	83	7,45,140
2.	SC Scholarship	28	5,53,830
3.	ST Scholarship	1	22,080
4.	Chief Minister Award	1	3,000
5.	Periyar Endowment Scholarship	2	10,000
	<b>TOTAL</b>	<b>115</b>	<b>13,34,050</b>

##### Study Tour B.Tech (Food Process Engineering)

S.No.	Nature of Tour	Period	Places visited	Number of students
1.	Rural Agro Industrial Programme tour	13.03.2013 to 23.03.2013 for 10 days	Thondamuthur	35
2.	All India study tour	20.02.2013 to 06.03.2013 (15 days)	Goa, Mumbai, Ahmadabad,, Jaipur, Haridhvar, Agra Amritsar and New Delhi	35

<b>B.Tech (Energy and Environmental Engineering)</b>				
1.	All India study tour	13.03.2013 to 23.03.2013 for 10 days	Goa, Mumbai, Jaipur, Gurgon, Agra, Haridwar, Dehradun, Amritsar and New Delhi	39
2.	Rural Energy and environmental exposure	20.02.2013 to 06.03.2013 (15 days)	Krishnagiri, Paiyur	39

### **Campus Interviews and placement**

B.Tech. (EEE) Placement	:	16
B.Tech. (EEE) Higher studies	:	07
B.Tech. (FPE) Placement	:	28
B.Tech. (FPE) Higher studies	:	04

### **Sports / Games and Prize Winners**

S.No.	Name of the Medal/ Game or Sports	Organizer	Place and Date	Winners Name	Rank
1.	Hockey	AC &RI Madurai	AC & RI Madurai 08.02.2013 to 12.02.2013	S. Bhupathi Manikandan S.K. Gowtham A. Muthuveeran	I
2.	Cricket			V. Dinesh S. Prakash J. Saravanan	I
3.	Volley ball			M.K. Anbarasan P.N. Sasisudhan B. Manoj Kumar Saamdisilas	II
4.	Foot ball			Ayush Sharma S. Prince Manova B.R. Ganesh Kumar V. Deepak Kumar V. Arunmozhidevan	II
5.	Volley ball			Suganthi	II
6.	Basket ball			V. Harshavarthini R. Vanathi R. Pavithra P.S. Divya	I

**All India Inter Agri-ICAR Sports Athletic events (2012 -2013)**

**Akola – Maharashtra**

<b>S.No.</b>	<b>Name</b>	<b>Event</b>	<b>Place</b>	<b>College</b>	<b>Class</b>
1.	B. Manojkumar	200 Mtrs.	I Place	TNAU, Coimbatore	II B.Tech,(EEE)
2.	B. Manojkumar	Relay – 4 x 100 Mtrs	I Place		
3.	B. Manojkumar	100 Mtrs.	III Place		

**Students functions**

<b>S.No.</b>	<b>Date</b>	<b>Name of the Function</b>
1.	11.09.2013 to 12.09.2013	Calorie '2012'

#### 4.2.9. Agricultural Engineering College and Research Institute, Kumulur

##### Students Admission - (Degree-wise) – 2012-2013

Sl.No.	Degree	General			Self Supporting			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B. Tech. (Agricultural Engineering)	39	23	62	-	1	1	39	24	63

##### Students' strength – (Year wise) 2012-2013

Sl. No	Year	Boys	Girls	Total
1.	I Year	39	24	63
2.	II Year	21	31	52
3.	III Year	26	24	50
4.	IV Year	25	29	54
<b>Total</b>		<b>111</b>	<b>108</b>	<b>219</b>

##### Details of Scholarship availed by Students

S. No.	Particulars	Number of students availed	Scholarship amount
1.	BC	70	5,09,220
2.	MBC	44	3,42,190
3.	DNC Scholarship	2	20,670
4.	SC/ST	40	8,36,020
5.	Chief Minister's Adi Dravider Award	2	7,920
6.	Periyar Endowment Award	2	10,000
7.	National Talent Scholarship – ICAR	9	90,000
8.	Minorities welfare Scholarship	4	95,290
9.	Chief Minister Award	1	3,000
<b>Total</b>		<b>174</b>	<b>19,14,310</b>

##### Details of Students who won the Indian Council of Agriculture Research Junior Fellowship Award

Sl.No.	Subject	Number of students		
		Fellowship	Placement	Total
1.	B. Tech. (Agricultural Engineering.)	2	-	2
<b>Total</b>		<b>2</b>	<b>-</b>	<b>2</b>

### Study Tour

S.No.	Nature of Tour	Period	Places Visited	Number of Students
1.	All India Study Tour	10.03.2013 to 28.03.2013	Bangalore, Pune, Bhopal, Agra, Jaipur, Haridwar, Dehradun, Ludiana, New Delhi,	54

### Campus Interviews and Placement

Sl.No.	Name of the Agency	Number of Students
1.	Mahindra and Mahindra Tractors	1
2.	TAFE Ltd	1
3.	Texmo Pumps	4
4.	Hand In Hand (NGO)	6
5.	John Deere Crop Solutions	1
6.	New Holland India	1
7.	ITC Ltd.	1
8.	Lemken India Agro Equipment Pvt. Ltd.	1
9.	Sonalika International Tractors	3
10.	Mahindra Swaraj	2
11.	SAME Deutz-Fahr India (P) Ltd	1
12.	Parixit Industries Ltd.	3
13.	Dhan Foundation	2
14.	Proscape Group	5
	<b>Total</b>	<b>32</b>

### Sports / Games and Prize Winners

S.No	Winners	Organizer	Place and Date	Rank
1.	Chess (Men)	Agricultural College and Research Institute, Madurai	Madurai 08.02.2013 to 12.02.2013	Fist
2.	Chess (Men)			First
3.	Ball Badminton			Second
4.	Triple Jump			First
5.	200 m Dash			Third

### Students' Functions

S.No	Date	Name of the Function
1.	29.8.2012	Freshers Day
2.	29.8.2012	Club Inauguration Day
3.	26.4.2013	Annual Sports Day
4.	27.4.2013	Hostel Day
5.	27.4.2013	College Day and Club Day
6.	30.4.2013	Fairwell Function to 2007-2008 Batch

#### 4.2.10. Forest College and Research Institute, Mettupalayam

##### Students Admission (Degree-wise) – 2012-2013

S.No.	Degree	General			ICAR			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Sc., (Forestry)	35	12	47	-	2	2	35	14	49

##### Students' Strength (Year wise) 2012-2013

Year	Number of students		
	Boys	Girls	Total
I Year	36	13	49
II Year	20	14	34
III Year	21	06	27
IV Year	23	06	29
<b>Total</b>	<b>100</b>	<b>39</b>	<b>139</b>

##### Details of Scholarships availed by Students

Sl. No.	Particulars	Number of students availed	Scholarship Amount (Rs.)
1.	BC / MBC	94	7,65,036
2.	SC / ST Scholarship	47	7,54,105
3.	SC/ST Loan Scholarship	4	30,000
4.	Chief Minister Adi Dravider Award	1	3,000
5.	Periyar Endowment	2	15,000
6.	ICAR Fellowship	6	5,33,306
7.	TNAU Scholarship	2	2,79,200
	<b>Total</b>	<b>156</b>	<b>23,79,647</b>

##### Study Tour

S.No.	Nature of Tour	Places Visited	Number of Students
1.	South India Tour	Kerala, Tamil Nadu, Karnataka and Andhra Pradesh	29
2.	North India Tour	Himachal Pradesh, Haryana, Utranchal and Delhi	29

##### Successful Candidates in UPSC Examination

S.No	Details	Successful Candidates	Degree and Batch
1.	Indian Forest Service	4	B.Sc. (Forestry) 2012 and M.Sc. (Forestry) 2012

#### 4.2.11. Home Science College and Research Institute, Madurai

##### Students Admission (Degree-wise) - 2012-2013

Sl. No.	Degree	General			Self supporting			Total		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1.	B.Sc.(Home Science)	10	18	28	-	-	-	10	18	28

##### Year wise Students' strength (2012-2013)

S.No	Year	Boys	Girls	Total
1.	I Year	10	18	28
2.	II Year	3	24	27
3.	III Year	2	18	20
4.	IV Year	12	17	29
<b>Total</b>		<b>27</b>	<b>77</b>	<b>104</b>

##### Details of Scholarships availed by Students

S.No.	Particulars	Number of students availed	Scholarship amount (Rs.)
1.	SC –Higher Education Special Scholarship	18	1,44,000
2.	SC Scholarship (Renewal)	20	2,74,410
3.	BC Scholarship (Renewal)	10	35,267
4.	BC Scholarship (Fresh)	1	480
5.	BC First Graduate (Renewal) Scholarship	19	1,46,270
6.	MBC First Graduate (Renewal) Scholarship	6	50,880
7.	SC-Higher Education Special Scholarship (Fresh)	11	88,000
8.	SC Scholarship (Fresh)	4	58,320
9.	BC (First Graduate) (Fresh) Scholarship	9	68,167
10.	MBC (First Graduate) (Fresh) Scholarship	7	57,792
11.	ST Scholarship (Fresh)	1	14,580
<b>Total</b>		<b>106</b>	<b>9,38,166</b>

##### Education related Awards and Prizes won

S. No.	Name of the award	Year	Name of the student
1.	Thiru. P.A.C. Ramasamy Raja prize for highest OGPA in all subjects	2012	Ms S. Logeswari
2.	The student of Home Science College (Madurai) Award for highest OGPA in all subjects	2012	Ms S. Logeswari
3.	Shri. V. Govindasamy Nadar and family Award (FSN) for highest mark in Food Science and Nutrition courses.	2012	Mr Abinandan Omkar Borole
4.	Dr. V.Veeranan Arun Giridhari and Mr. T. Sudhagar Prize for Best Home Science Student	2012	Ms S.Logeswari
5	Shri Govindaraja Mills Award for highest OGPA in Home Science Extension	2012	Mr R Harish Priyadarshan



### Study Tour

S.No	Nature of Tour	Period	Places visited	Year	Number of students
1.	All India Study Tour	10.08.2011 – 08.09.2011 (28 days)	Mysore, Bangalore, Hyderabad, New Delhi, Solan and Chennai.	Final year Home Science	29

### Sports / Games and Prize Winners

**2012-13 Inter Collegiate Sports Competition held at AC and RI, Madurai from 08.02.2013 to 12.02.2013**

S.No	Name of the Medal/ Game and Sports	Winners	Rank
1	Individual Championship for Athletics (Men)	S. Poovarasana	First
2	100m Run (Men)	D.Karthik	Third
3	400 m Run (Men)	S.Poovarasana	Second
4	800 m Run (Men)	S.Poovarasana	Second
5	1500 m Run (Men)	S.Poovarasana	Second
6	5000 m Run (Men)	S.Poovarasana	First
7	Triple Jump (Men)	D.Karthik	First
8	Hammer Throw (Men)	S. Sridhar	First
9	Discus Throw (Men)	A.Rajesh Kumar	First
10	Discus Throw (Men)	S. Sridhar	Second
11	Shotput (Men)	A.Rajesh Kumar	First
12	100 m Run (Women)	J.S. Monica	Third
13	200 m Run (Women)	P. Anusuya	First
14	400 m Run (Women)	S. Hemapriya	Third
15	1500 m Run (Women)	J.S. Monica	Second
16	3000 m Run (Women)	M.Hemavathi	First
17	4x100 m Relay (Women)	AC&RI, Madurai	Second

### Students' functions

S.No	Date	Name of the Function
1	31st August 2012	Students Club inauguration and induction function
2	31st August 2012	Orientation Programme
3	5th December 2012	Thullal
4	4th & 5th January 2013	Talentia-2013
5	15th & 16th March 2013	Muthamizh Vizha - 2013
6	30th April 2013	Sports day
7	30th April 2013	College day
8	26th April 2013	Hostel day

### **4.3. DIRECTORATE OF STUDENTS WELFARE**

The Directorate of Students' Welfare (DSW) is the nodal centre of Students' Counseling and Placement activities for all the constituent colleges of the University. The prime objective of the Directorate of Students' Welfare is to promote capacity building and employability of agricultural graduates. The vision of the Directorate is to build confidence and competence among agricultural graduates to enable them to compete globally and promote job opportunities at national and international levels. The Directorate of Students Welfare has a triple function of Placement, Higher Education in India and Abroad and Career Guidance and Counseling.

#### **Placement**

The Directorate of Students Welfare runs exclusively for the benefit of the students of TNAU and its 12 constituent colleges. The final year Under Graduates and Postgraduates belonging to all disciplines register their names in this Directorate to attend campus interviews.

Campus Interviews are conducted periodically based on the demand from the organization. The organization which recruit agricultural graduates are the leading agro based companies, public and private banking sectors, non-governmental organizations, commodity trading Companies and the corporate sectors. The organizations follow the combinations of written test, group discussion and personal Interview as tools for selection. The employers are facilitated by the Directorate of Students Welfare to select candidates with desired skills. Twenty one campus interviews were conducted during 2012-2013. Totally, 21 agriculture based organizations participated. Through this process 287 agricultural graduates have got placed.

#### **Industrial visit**

The Director and the placement officers of DSW directly visited various multi-national Agro based companies, Banking sectors and NGO's, appraised the activities and requested the company officials for campus interview in addition to correspondence made through different media. These tie-ups pave way for demand driven production of agro-graduates.

#### **Overseas employment**

##### **Overseas employment unit**

Overseas Employment Unit (OEU) was anchored in October, 2005 with a view to provide opportunities for TNAU graduates in the international market.

Campus recruitment was done through telephonic interviews or videoconferencing or campus interview. Graduates were placed under overseas employment in Middle-East (Dubai, Muscat, Kuwait, and Madagascar) and African Countries.

#### **Education abroad**

##### **Dual degree program**

TNAU has signed MOU with Dalhousie University, Canada to offer Dual Degree Program for UG students of B.Sc. (Agriculture), B.Sc. (Horticulture) and B.Tech. (Horticulture) in B.Tech. (Environmental Landscape Horticulture). The program was started in the year 2009-10.

##### **Higher education abroad**

In the recent past, more number of agricultural students were motivated for Higher Education abroad. This directorate provides counseling for higher education not only for domestic but also for abroad to the interested agricultural graduates. The stages of guidance include testing phase, admission phase and visa phase.

The Directorate of Students Welfare offers different programmes and facilitates the students to get different under Graduate and Postgraduate degrees in different countries. The following are some of the outcomes by the Higher Education unit of the directorate of Students Welfare.

S.No	Date	Campus
1.	28.01.2013 and 29.01.2013	AEC & RI, Kumulur and ADAC & RI, Tiruchirappalli
2.	12.02.2013 to 15.01.2013	AC & RI, Madurai and HC & RI, Periyakulam

A two-day ICAR sponsored Workshop on Personality Development: Employability skills was conducted on 22.01.2013 and 23.01.2013 with an objective of facilitating our final year students to communicate with confidence and perform better in group discussions and interviews.

### **Career guidance**

#### **Career guidance workshop 2013.**

Career Guidance Workshop 2013 was organized on 19.02.2013 at Tamil Nadu Agricultural University, Coimbatore in order to facilitate all outgoing undergraduate students to get them prepared for immediate placement or provide opportunity for students to choose their career options. The workshop comprised of motivational talks, soft skill development, higher Education abroad, competitive exams and agricultural entrepreneurship. The programme was designed to suit the current needs in the context of changing scenario in job market for farm graduates. The placement professors of the main campus and constituent colleges attended the workshop. Invited resource persons delivered career guidance talks on different topics.

#### **Career development courses**

Coaching classes for Civil Service Examination are being offered to Agri-graduates of TNAU by outsourcing faculty. Besides, special lectures were arranged periodically by inviting experts in IAS, IPS,

### **Soft skill development program**

The Directorate of Students' Welfare organized communication games and group discussion to enable the III and IV year students communicate with confidence in Group discussions and interviews and plan their career.

IFS and also utilized the series of TNAU alumni who are in the same track. Similar coaching classes are conducted for GRE, TOEFL, IELTS and BEC by the faculty of this directorate besides outsourced faculty.

- To encourage and motivate the students to become successful entrepreneurs, interactive meetings, seminars and workshops were arranged and students from constituent colleges participated and benefited.
- Under Capacity building programme and soft skill development programme resource persons from India and abroad were invited for guest lectures and academic counseling.

### **Students study centre**

The Students Study Centre has a library comprising of more than 1500 books on Civil Service Exams, Common Admission Test and international exams like TOEFL, GRE, GMAT, IELTS and Business English Courses. They are used by UG and PG students. In order that the other campus students too get similar opportunity, a number of books have been transferred to the constituent colleges during the present year. The study centre is equipped with leading newspapers and magazines like The Hindu, Employment News and career related magazines, journals like; Careers 360 and Pudhiya Thalaimurai, Competition Success Review, Chronicle, Wizard and Agriculture and Industrial Survey.

### **Global network**

To facilitate the aspiring students who would like to pursue their higher education abroad, the Directorate created a group ID called The Green Group tnausw2006@yahoo.groups.co.in which enabled the prospective students and the TNAU alumni who are working or studying abroad interact with each other on the latest information on admission procedure, visa etc. There are 822 members in this Special Interest Group. In this context, one has to mention that TNAU alumni are studying or working in USA, U.K, Canada, Australia, New Zealand, Japan, Netherlands, South Korea, Germany,

France and Singapore. The Directorate also maintains a separate database of TNAU alumni who are studying or working in these countries with a view to build up global network.

### **Sanitary unit**

The sanitary unit of the Tamil Nadu Agricultural University comes under the control of the Directorate of Students welfare which maintains the university premises clean and hygienic.

#### 4.4. UNIVERSITY LIBRARY

The University library caters the information needs of teachers, students, research scholars, extension personnel and farmers. The Tamil Nadu Agricultural University library holds a unique position in that, it contributes to the academic excellence and research competence of all segments of the University's academic structure. This year the library received a grant of rupees 20 lakh from Indian Council of Agriculture Research, New Delhi as a special component to procure text book in Agriculture and allied sciences for the benefit of teachers and students.

As per the academic regulation, the library staff are conducting courses in Library and Information Services 501 (0+1) for the first year Post Graduate and First year Ph.D. students, For the benefit of users the library subscribed many online journals and databases and also provides a facility to access the CeRA consortium journals and Krishiprabha online thesis databases. At present the Library has crossed 1,75,000 books and back volumes.

##### Details of Books added

S.No.	Particulars	Numbers
1	Books	1,147
2	Gratis publications	252
3	Journals	1,194
4	News letters	220
5	Reports	40
6	Magazines	666
7	Bound volume of periodicals	503
<b>Total</b>		<b>4,022</b>

##### e-Journals

S.No.	Particulars	Journals
1	Consortium for e-Resources in Agriculture (CeRA)	3051
2	Proquest	6119
<b>Total</b>		<b>9170</b>

##### Online Database

S.No.	Database
1	www.indiastat.com
2	www.delnet.nic.in
3	www.commodityindia.com

### e-Books collections

S.No.	e-Books collections (Package)	No. of Titles
1	<a href="http://www.sciencedirect.com">www.sciencedirect.com</a>	
	e-Books legacy collections	748
2	<a href="http://www.springer.com/ebooks">www.springer.com/ebooks</a>	
	Biomedical and Life Science	560
	Business and Economics	370
	Earth and Environmental Science	285
3	<b>Wiley and Blackwell publishers</b>	
	Agriculture collection	105
	Plant science collection	85
4	<a href="http://www.cabi.org/cabebooks">www.cabi.org/cabebooks</a>	
	CAB e-Books (2005-2012)	365
	Crop Protection Compendium <a href="http://www.cabi.org/cpc">www.cabi.org/cpc</a>	
	Forestry Compendium <a href="http://www.cabi.org/fc">www.cabi.org/fc</a>	

### Collection of the University Library

S.No.	Particulars	Numbers
1	Books	94,041
2	Back volumes	46,431
3	Theses / Dissertations	5,485
4	Reports	268
5	CD ROM	1817

### Library Membership

S.No.	Particulars	Members
1	Under Graduate	408
2	Postgraduate	240
3	Research Scholars	178
4	Staff	292
<b>Total</b>		<b>1,118</b>

### Usage of Library Resources

S.No.	Particulars	Numbers
1	Under Graduate	11,405
2	Postgraduate and Research Scholars	23,673
3	Staff	4,852
4	Visitors from other Institutes	1,173
5	CeRA – users	26,234
6	Digital library users.	2,455
<b>Total</b>		<b>69,792</b>

### Circulation

S.No.	Particulars	Numbers
1	Books issued	18,689
2	Books returned	18,475
3	Books consulted	4,11,030
4	CeRA – request articles received and issued to students	1,247
5	Over due charges	94,176
6	Outside users consultation charges	6,380

### Book Bank Scheme for SC /ST

S.No.	Particulars	Numbers
1	Books	588
2	Members	38
3	Books issued	26

### Activities of library during 2012-2013

- Orientation classes for Ist year Under Graduate students were conducted for two days on 26.07.2012 and 27.07.2012.
- 2010-11 onwards, the PGS 501 Library and Information Services Course was introduced for all Post Graduate and Research Scholars as a compulsory course.
- Book exhibition was conducted from 5th to 7th March 2013. 15 Publishers / Book Suppliers participated in the Book exhibition. Books has been selected our Vice-Chancellor and our University Staff Members to the library.
- e-Books worth Rs. 50 lakhs were subscribed for the use by students and staff.

## 4.5. DIRECTORATE OF OPEN AND DISTANCE LEARNING

### Distance learning programmes

The Directorate of Open and Distance Learning, one of the constituent units of the TNAU started during April 2005 is vested with the responsibility of offering distance learning programmes through correspondence mode viz., Certificate courses, B.F. Tech Degree,

PG Diploma programmes, Diploma and PG Degree programmes for the benefit of various segments of the farming community, entrepreneurs, self help groups and other learners who aspire for correspondence education and interested in establishing agro based industries in rural areas. The following courses are offered:

#### Certificate courses

- Sugarcane production technology
- Vegetable seed production
- Nursery techniques and propagation of horticultural plants
- Mushroom production
- Preservation of fruits and vegetables
- Wasteland development
- Bee keeping
- Vermi-composting
- Repair and maintenance of farm equipments and machineries
- Coconut cultivation technology
- Cotton cultivation technology
- Landscaping and ornamental gardening
- Modern irrigation management
- Bakery and confectionary products
- Medicinal plants
- Flower cultivation

#### Diploma

Multimedia in Agriculture (1 year – 2 semesters)

### UG Degree Programme

#### B. F. Tech. (Bachelor of Farm Technology) (3 years – 6 semesters)

The Bachelor of Farm Technology (B.F.Tech.) is exclusively being offered for the farmers from the year 2010 onwards. It is a pioneering attempt and first of its kind in the global agricultural scenario. The B.F.Tech. degree programme has been structured in such a way that farmers who enroll should have the privilege of being a degree holder and also an expert in scientific agriculture with utmost self-confidence thereby attaining a standing in the society. The eligibility criteria for admission is 10th appeared. Age limit is 27 years and above.

#### PG Diploma Programmes

- Production and quality control in medicinal plants
- Food biotechnology
- Bioinformatics
- Food science and processing
- Energy management

#### PG Degree Programmes

- Master of Business Administration (MBA)
- M.Sc. Environmental Management
- M.Sc (Sugarcane Technology)

#### Research Projects operated

- A NAIP Project entitled “Innovations in Technology Mediated Learning : An Institutional Capacity Building in using re-usable learning objects in Agro-Horticulture” is operated in a consortium mode at DODL, TNAU, Coimbatore as one of the partner institute with financial outlay of Rs. 32 lakhs Dr. V. Valluvaparidasan, P.I. and Dr. P. Santhy, Co-P.I)
- The AUC for the year 2011 – 2012 was completed and sent to the Council



- The 100 RLO's as per the mandate of the project were created and uploaded in the website www.agriLore.com
- A scaling up project on Seed Technology funded by Canadian International Development Agency (CIDA) and University of Guelph, Canada was also operated with TNAU as the Nodal Centre in coordination with three private NGOs with a financial outlay of Rs.33 lakhs (Dr. V. Valluvaridasan - PI and Dr. P. Santhy - Co-PI).
- Three awareness cum linkage meetings were organized and conducted at Madurai (18.12.2012), Theni (20.12.2012) and Dindigul (28.12.2012) with participation of Department of Agriculture and the NGO concerned to ensure marketing of the seeds produced by the beneficiary farmers under this project.
- A NADP Project entitled "Documentation of Agricultural Technologies through video clipping in 3GP format for cloud computing" with the financial outlay of Rs.147 lakhs was implemented and 1712 technologies were prepared in 3 GP format for cloud computing.

### **Educational Media Centre**

This unit is engaged in production of television programmes on agriculture and allied subjects for various development departments periodically for telecasting through Doordarshan Kendra, Chennai. More than 60 video CDs on various subject matter areas were produced by this unit for the benefit of farmers and extension functionaries.

### **List of candidates enrolled during the year 2012 - 2013**

Sl. No.	Course	No. of candidates enrolled
	<b>PG Degree</b>	
1	MBA	17
2	M.Sc. (Environmental Management)	17
3	M.Sc. (Sugarcane Technology)	26
	<b>PG Diploma</b>	
1	Production and Quality Control in Medicinal Plants	3
2	Energy Management	4
	<b>Diploma</b>	
1	Multimedia in Agriculture	18
	<b>B. F. Tech. Degree</b>	105
	<b>Certificate Courses</b>	393

### **Details of awareness campaigns conducted on various places of Tamil Nadu**

Date	Place	Programme
29.05.2012	Pondicherry	Workshop on Export opportunities for value added Agro based products from Tamil Nadu and Pondicherry about Plant Quarantine and SPS for Exporters.
20.03.2013	Annur	Awareness campaign about ODL courses

#### 4.6. CONTROLLERATE OF EXAMINATIONS

Controllerate of Examinations monitors the examination related activities of 13 undergraduate programmes in 17 colleges, 37 postgraduate, 25 doctoral, two diploma and six open and distance learning programmes. It comprises of five sections Viz., Undergraduate programmes, Masters programmes, Doctoral programmes, Diploma programmes and Open and Distance Learning section.

The Controllerate of Examination conducts and monitors the various examination related activities of the above mentioned courses, including evaluation of answer sheets, issuing mark sheets and announcement of results. Details regarding the activities pertaining to Controllerate of Examinations during the academic year 2012-13 are given in the following sections.

#### Under graduate programmes

During the academic year 2012-13, a total number of 5334 students have registered for the courses in thirteen undergraduate degree programmes in 17 colleges covering 1356 courses under Odd and Even semesters. A total of 1356 Question Papers (subject wise) were arranged and examinations were conducted during May - July 2012, September 2012, November - December 2012, and January 2013 for regular, re-appearance, and special Semesters under 1999, 2003, 2007 and 2011 syllaby. A total of 37389 answer scripts were evaluated. The results were declared for a total of 732 students who have successfully completed their course work and issued the transcript cards. The campus and degree wise undergraduate admission and students passed out details during the academic year 2012-13 are furnished in the following table:

**Table-1. Undergraduate students passed out during 2012-2013**

Sl. No.	Degree	Campus	No. of passed out students during 2012-13
1	B.Sc.(Agriculture)	Coimbatore	62
		Madurai	103
		Killikulam	59
		Trichy	62
		Karaikal	32
		Kalavai	18
		Pollachi	17
		Perambalur	24
		Theni	-
	<b>Sub Total (1)</b>	<b>377</b>	
2	B.Sc.(Horticulture)	Periyakulam	66
		Kalavai	6
		Trichy	-
		Pollachi	-
	<b>Sub Total (2)</b>	<b>72</b>	
3	B.Sc.(Forestry)	Mettupalayam	23
4	B.Sc. (Home Science)	Madurai	17

5	B.Tech (Agricultural Engineering)	Kumulur	42
6	B.Tech (Food Processing and Engineering)	Thanjavur	-
		Coimbatore	30
7	B.Tech (Energy and Environmental Engineering)	Coimbatore	25
8	B.Tech (Horticulture)	Coimbatore	24
9	B.Tech (Biotechnology)	Coimbatore	42
10	B.Tech (Bioinformatics)	Coimbatore	30
11	B.Tech (Agricultural Information Technology)	Coimbatore	23
12	B.S. (Agribusiness Management)	Coimbatore	27
13	B.Sc.(Sericulture)	Coimbatore	-
		<b>Sub Total (3)</b>	<b>283</b>
		<b>Total (1+2+3)</b>	<b>732</b>

### Master degree Programmes

During the academic year 2012-2013, 406 students registered for M.Sc. (Agri.), M. Tech. and MBA programmes in first year first semester. A total of 140 Question Papers (subject wise) were prepared for a total of 3563 candidates to write various examinations in 37 disciplines and 95 per cent passed out. In the same year, 382 students of 2011-2011 batch registered for their second year.

For all the courses, the registration cards were approved, attendance and mid semester marks registered in computer. A total of 138 Question Papers (subject wise) were prepared and 395 candidates appeared for final examinations. A total of 380 transcript cards were prepared and issued to the students during the year. Discipline wise details on passed out post graduate students are presented in the following table:

**Table-2. Post Graduate students passed out during 2012-2013**

Sl. No.	Discipline	Passed out during 2012-13	Sl. No.	Discipline	Passed out during 2012-13
1	Agriculture and Rural Management	10	20	Spices and Plantation Crops	6
2	Agricultural Economics	9	21	Vegetable Science	16
3	Agricultural Entomology	29	22	Food Process Engineering	8
4	Agricultural Extension	11	23	Bio-Energy	5
5	Agricultural Meteorology	1	24	Farm Machinery	6
6	Agricultural Microbiology	9	25	Soil Water Conservation	6
7	Agronomy	44	26	Energy and Environmental Engineering	-

8	Biotechnology	19	27	Plant Genetic Resources	-
9	Crop Physiology	4	28	Forest Management	
10	Environmental Science	9	29	Forest Ecology	
11	Plant Breeding and Genetics	33	30	Silviculture and Agroforestry	
12	Nematology	5	31	Tree Breeding and Biotechnology	
13	Plant Pathology	21	32	Wildlife Management	
14	Seed Technology	15	33	Family Resource Management	
15	Soil Science and Agricultural Chemistry	19	34	Home Science	
16	Sericulture	3	35	Human Development	1
17	Nanoscience and Technology	-	36	Textile and Apparel Designing	
18	Floriculture	6	37	Food Science	
19	Fruit Science	7		<b>Total</b>	<b>327</b>

### Doctoral Programmes

During the academic year 2012-13, a total number of 356 students registered in 25 different disciplines in Agriculture, Horticulture, Food Science and Nutrition, Agricultural Engineering and Forestry covering 215 courses under odd and even semesters. A total of 424 question papers were prepared and semester examinations were conducted for the above courses. A total of 2313 answer scripts were evaluated and 225 Class Grade Chart were prepared and issued for the completed semesters.

For second year (2011 batch students) 183 and 180 respectively and for third year (2010 batch students), 183 and 183 numbers respectively, of registration card and statement of marks were issued. Arrangements were made to conduct qualifying examinations for 180 second year students and results were declared. The results were declared for a total of 98 students who successfully completed their Ph.D programme and 82 numbers of transcript cards were prepared and issued during the year. Discipline wise passed out Ph.D. students details are presented in the following table:

**Table-3. Students admitted and passed out during 2012-2013 in Doctoral programmes**

<b>Sl. No.</b>	<b>Discipline</b>	<b>Passed out</b>
1	Agribusiness Management	6
2	Agricultural Economics	6
3	Agricultural Entomology	5
4	Agricultural Extension	3
5	Agricultural Microbiology	5
6	Agricultural Processing and Food Engineering	-
7	Agronomy	9
8	Bio-Energy	1
9	Biotechnology	3
10	Crop Physiology	1
11	Environmental Sciences	2
12	Farm Power and Machinery	2
13	Floriculture and Landscape Gardening	4
14	Fruit Science	3
15	Plant Breeding and Genetics	9
16	Plant Nematology	-
17	Plant Pathology	6
18	Seed Science and Technology	7
19	Soil and Water Conservation Engineering	2
20	Soil Science and Agricultural Chemistry	8
21	Spices, Plantation, Medicinal and Aromatic Crops	1
22	Vegetable Science	2
23	Food Science and Nutrition	3
24	Forestry	4
25	Food Processing Engineering	3
<b>Total</b>		<b>95</b>

### **Diploma Programmes**

Diploma (Agri) programmes are being offered in 13 institutes (which includes 8 constituent institute of TNAU and 5 affiliated institutes). Diploma (Hort.) Programme is being offered at two affiliated institutes. A total of 761 students registered for the courses during the year 2012-13 for Diploma (Agriculture) programme (Table. 4.) and 103 students for Diploma (Horticulture) programme. Out of 530 students registered during 2011-12 students, 298 students completed the courses and were awarded with certificates.

**Table-4. Institute wise student passed out details for diploma programmes during 2012-13**

S.No.	Institutes	Passed Out
1.	SRMVIARD, Coimbatore	39
2.	SIARD, Takkolam	40
3.	TRIARD (Agri.), Perambalur	29
4.	TRIARD (Hort.), Perambalur	29
5.	C. S Institute of Agriculture, Tindivanam	25
6.	M.S.S Institute of Agriculture, Bhavanisagar	43
7.	Institute of Agriculture, Ambasamudram	8
8.	Institute of Agriculture, Aruppukottai	7
9.	VIA (Agriculture), Pollachi	11
10.	VIA (Horticulture), Pollachi	-
11.	Institute of Agriculture, Kovilpatti	15
12.	APAC, Kalavai	26
13.	Institute of Agriculture, Pechiparai	26
14.	Institute of Agriculture, Thanjavur	-
15.	Institute of Agriculture, Kudimiyamalai	-
	<b>Total</b>	<b>298</b>

**Open and Distance Learning**

Three PG degree course viz., Master of Business Administration, Sugarcane Technology and Environmental Management and three PG Diploma courses viz., Bioinformatics, Production and Quality Control in Medicinal Plants, Energy Management and Food Science and Processing were offered. A total of 67

students had enrolled in 2013-13 academic year and results were declared for 43 students (Table. 5.) Final theory examinations were conducted for 86 courses under PG degree and PG diploma programmes for 2010, 2011 and 2012 batch students respectively. The answer papers numbering 210 were evaluated and 550 statements of marks prepared and issued in 2012-13.

**Table-5 Degree wise student passed out details for ODL programmes during 2012-13**

S.No	ODL - Courses	Passed Out
1.	M.Sc. – ENS (Environmental Science)	11
2.	M.Sc. - SCT – (Sugarcane Technology)	19
3.	M.Sc. - SCT – (Sugarcane Technology) Karnal	-
4.	MBA – Master of Business Administration	11
5.	FBT – (PG Diploma in Food Biotechnology)	2
6.	HOR - (PG Diploma in Production and Quality Control in Medicinal Plants)	-
7.	BIF - (PG Diploma in Bioinformatics)	-
8.	FSN - (PG Diploma in Food Science and Nutrition)	-
9.	ENM - (PG Diploma in Energy Management)	-
	<b>Total</b>	<b>43</b>



**Research**

## 5.0. RESEARCH

### 5.1. NEW CROP VARIETIES AND FARM IMPLEMENTS

Tamil Nadu Agricultural University has released the following 12 varieties and two farm implements during 2012-13.

#### **New varieties released**

##### **Agriculture**

##### **Rice Co 51**

Rice CO 51 was evolved from the cross ADT 43 / RR 272 – 1745. It is an early duration (105-110 days), high yielding semi dwarf rice variety suited for Kar / Kuruvai / Sornawari / Navarai seasons. It has moderate resistance to blast, brown plant hopper and green leaf hopper. The rice is white, medium slender with high milling (68.5 per cent) and head rice recovery (63.2 per cent). It also possesses intermediate amylose content (21.6 per cent) and gelatinization temperature with soft gel consistency. This variety has an average yield potential of 6623 kg/ha (10.72 per cent increase over ADT 43) and can yield upto 11,377 kg/ha (Nallampalli, Dharmapuri District) and is found suitable for cultivation as transplanted rice throughout Tamil Nadu except The Nilgiris district.

##### **Ragi Co 15**

Ragi CO 15 a derivative of CO11 x PR 202 matures in 125 days. It has bold grains, non lodging, non shattering and has blast resistance with good amount of protein (11.8 per cent). This variety could yield 2950 and 3461 kg/ha respectively under rainfed and irrigated conditions with a fodder yield of 5030 and 6698kg/ha, respectively. The highest grain and fodder yield obtained were 6775 and 10125kg/ha, respectively. This variety has been found suitable for cultivation in Erode, Salem Dharmapuri and Krishagiri districts during kharif under rainfed and in Thiruvannamalai and Vellore during summer under irrigated conditions. Average yield of this entry over 136 trials had been 3205 kg/ha which is 17.01 per cent more than CO (Ra) 14 (2739 Kg/ha), 21.26

per cent more than GPU 28 (2643 Kg/ha) and 15.74 per cent more than Paiyur (Ra) 2 (2769 Kg/ha).

##### **Greengram Co 8**

Greengram CO 8 variety is obtained from COGG 923 X VC 6040A cross. It is a short duration variety (55-60 days) with determinate plant type and synchronized maturity suitable for single / mechanical harvest. It yields on an average 845 kg/ha (20.2 per cent over Co (Gg) 7) with the highest yield of 1310 kg/ha obtained at Pattukkottai. It is resistant to yellow mosaic disease, stem necrosis and moderately resistant to root rot and sucking pests like aphids and stemfly. It is found suitable for intercropping in maize and redgram under drip irrigation.

##### **Groundnut Co 7**

Groundnut CO 7 is a derivative of the cross ICGV 87290 x ICGV 87846. This variety matures in 100-105 days. It yields 2300 and 2806 kg/ha under rainfed and irrigated conditions respectively, which is 14.4 per cent and 16.5 per cent more than the VRI (Gn 6) variety's yield. The highest yield of 5632 kg/ha was obtained for this variety under irrigated condition. This variety possesses tolerance to drought and moderate resistance to rust and late leaf spot. It has high shelling outturn (71 per cent) and oil content (51 per cent) with acceptable pod traits. It can be grown in all districts of Tamil Nadu except Kanyakumari and Nilgiris.

##### **Lucerne Co 2**

Lucerne CO 2 is a poly cross derivative of CO 1 with higher green fodder yield (130 t/ha/year, 25.9 per cent more than CO 1), more number of stems per crown with soft and dark green leaves. The highest yield obtained was 146 t/ha/year. It also has high crude protein content (23.5 per cent) and dry matter yield



(21.94 t/ha/yr). Profuse flowering observed in this entry leads to enhanced seed yield. It has superior ratooning ability and early flowering resulting in 14 harvests per year. This variety can be cultivated throughout the year under irrigated condition. The foliage is highly palatable, preferred by milch cattle, goat, sheep and horses. First harvest can be taken up at 60-65 days and subsequent harvests in 20-25 days interval. This variety is recommended for Coimbatore, Tiruppur, Erode and Krishnagiri districts. It is not suitable however, for hot and humid areas.

### **Horticulture**

#### **Davana PKM 1**

Davana PKM 1 is a mass selection from the Chinnamanur local which is medium in duration (145 to 150 days) and has high herbage (16.78 t / ha) and oil yield (20.32 kg / ha). Foliage is distinctly silvery green in colour and profuse branching from the base of the plant is normally observed. The first harvest can be taken up in 40 days after transplanting. This variety is found to possess field tolerance to aphids and damping off and fits well for cultivation in Theni, Dindigul, Madurai, Salem, Kanyakumari and Virudhunagar districts.

#### **Tapioca Yethapur 1**

Tapioca Yethapur 1 is erect, tall growing and non branching in nature with shorter inter nodal length and bigger leaves. It is a selection from Thondamuthur local of Coimbatore district and matures in 270-300 days. It has long, cylindrical tubers with brown outer skin, light cream rind and white flesh. It fits well for cultivation in both irrigated and rainfed conditions with an average yield of 49.5 t/ha and the highest achieved yield of 57.0 t/ha. The tuber yielding potential is 35.16 % and 58.38 % more than CO (TP) 4 and H 226, respectively. The starch content is 25 to 27 % and can be cultivated in Salem, Namakkal, Erode, Perambalur, Dharmapuri and Cuddalore

districts under irrigated condition and under rainfed condition with partial irrigation in the vegetative stage.

#### **Turmeric Co 2**

Turmeric CO 2 is a selection from Bhavanisagar local, maturing in 250 -260 days. It has high curcumin content (4.14 %) and high fresh rhizome yield (43.17 tonnes / ha) compared to BSR 2 (26.48 % more rhizome yield). It has moderate resistance to leaf blotch, leaf spot and highly resistant to rhizome rot. It also exhibits field tolerance to thrips, shoot borer, leaf folder and scale insects. Coimbatore, Erode and Salem Districts of Tamil Nadu are found suitable for cultivation during May – June.

#### **Sweet Potato Co 5**

Sweet Potato CO 5 is a clonal selection from CIP 440038, an entry obtained from International Potato Centre (CIP), Peru through AICRP. Tubers have attractive orange flesh with pink skin. The crop matures in 100-110 days. It has a yield potential of 28.59 t/ha which is 37.71 per cent higher than CO 3. It has good  $\beta$ -carotene (20.02 mg/g), dextrose sugar (7.5 mg/g) with a lowest cooking time of 11 minutes. This variety is found suitable for cultivation under irrigated condition during kharif and rabi seasons in the districts of Coimbatore, Salem, Namakkal, Erode and Tirupur.

#### **Coleus Co 1**

Coleus CO 1 is a clonal selection from the germplasm collected from Periyakulam local and matures in 160-180 days. It yields 1.98 t/ha dry tubers with the highest dry tuber yield of 2.5 t/ha. This variety possesses increased forskohlin content and is moderately resistant to root rot and wilt diseases. It also has field tolerance to nematode and mealy bug infestation. It can be grown in all parts of Tamil Nadu, specifically suited to Salem, Erode, Namakkal, Coimbatore, Dindigul, Theni, Thiruvannamalai and Vellore districts.

### **Amaranthus PLR 1**

Amaranthus PLR 1 is a selection from Thiruvannamalai and found suitable for early harvest (20-21 days for greens; 50-55 days for seed to seed). This variety is suitable for growing in all seasons in North Eastern Zone of TamilNadu comprising of Cuddalore, Villupuram, Thiruvannamalai, Kanchipuram, Vellore and Ariyalur districts. It gives a good seed yield (200 kg/ha). It can yield 8984 kg/ha of greens with the highest yield of 11700 kg/ha. This variety is moderately resistant to white rust, Cercospora leaf spot and leaf webber. It is rich in antioxidants and contains nutrients like iron, calcium and vitamins and highly preferred due to the green colour of the entire plant.

### **Forestry:Eucalyptus MTP 1**

It is a large, fast growing multipurpose industrial wood species evolved through selection and evaluation from the seed sources introduced from CSIRO, Australia found suitable for pulp, paper, biomass, energy and plywood industries. It is propagated predominantly through clonal propagation using shoot bud cuttings. It yields 130 tonnes /ha of wood in 5 years under irrigated condition. It can be harvested between 3 and 5 years depending on the need (3 Years – biomass ; 5 years – pulp and paper) and found suitable for both irrigated and rainfed cultivation. It can yield 48 per cent pulp with 19.30 kappa and calorific value is more than 4300 kcal/kg. It can be maintained upto 3 rotations. The highest yield obtained was 320 kg/tree and this entry is found suitable for all districts of Tamil Nadu: and can be grown in all soils except clay and waterlogged condition.

### **Agricultural Engineering**

#### **Tamarind Huller**

Tamarind Huller is a portable and continuous type unit with feed hopper,

beater assembly, sieve and outlet. It reduces the drudgery involved in manual hulling and make the process hygienic. The beater shaft is 25 mm diameter and 1 m long mild steel rod with 20 beaters. A screw of 230 mm diameter is mounted on the shaft for a length of 120 mm for conveying the fruits. A sieve having 10x25 mm openings is fixed below the shaft for a length of 600 mm to remove the hull. At the fruit outlet, a blower and sieve is provided to remove the hull. The entire unit is operated by 1 hp single phase motor which has a capacity of 100 kg/h with a hulling efficiency of 94 per cent. Cost of the equipment is Rs.22,000 and can be operated at a cost of Rs.0.70/kg

#### **Multi Crop Multi Row Weeder**

This unit has 2.2 kW, 2700 rev/min, single cylinder, four stroke, air cooled, horizontal diesel engine as prime mover with a overall dimension of 2170 X 1100 X 800 mm. This unit weighs 134 kg with the options of one, two and three rows. Adjustable spacing between the weeding blades ranges from 300 to 600 mm with externally lugged 600 mm diameter two iron wheels for traction. Iron roller wheel is of 100 mm diameter with adjustable height arrangement for having varied depth and the speed ratio between engine and ground wheels is 150 : 1. This unit is best suited for weeding and inter-cultural operations in between standing rows of crops such as cotton, maize, tapioca, green gram, black gram, chillies, sorghum, vegetables and rice. Cost of operation works out to Rs.2300/ha (including labour required for weeding in intra rows @ 10 women labourers/ha) in dry/garden land crops while it is Rs. 3100 / ha for wet land crops. It has a coverage of 3.5 ac/day (0.18 ha / hour – dry / garden land ; 0.08 ha/ hour – wetland). The cost of the unit is Rs. 63,000.

## 5.2. SALIENT RESEARCH FINDINGS

### **Subsurface drip fertigation system in maize- cotton-maize sequence**

The lateral spacing of 120 cm was found to be ideal for maize-cotton-maize cropping system under sub surface drip fertigation system as it recorded significantly higher growth and good mean yield of maize (7663 kg/ha) and cotton (4155 kg/ha seed cotton yield).

### **Micro-irrigation with fertigation in groundnut**

Irrigating groundnut with micro-sprinkler registered the highest mean yield of 2844 kg followed by sub-surface drip irrigation (2655 kg/ha) and irrigation through surface drip (2493 kg/ha). Application of RDF with 50 per cent P and K as basal by straight fertilizer and the balance P and K and full N as water soluble fertilizer registered higher pod (2685 kg/ha) and haulm yields in groundnut. Among the irrigation treatments, micro-sprinkler method of irrigation to groundnut recorded the highest water use efficiency (4.59 kg/ha/mm). This was followed by sub-surface method of irrigation (4.28 kg/ha/mm). Surface method of drip irrigation recorded the lowest water use efficiency (4.05 kg/ha/mm). Amongst the method of fertilizer application, fertigation at 100 per cent RDF with 50 per cent P and K as basal and the balance NPK as water soluble fertilizer registered the highest water use efficiency (4.59 kg/ha/mm) and was statistically superior to the rest of the methods of fertilizer application.

### **Performance of the Sulphur Oxidizing Bacterial (SOB) inoculants on groundnut**

Seed treatment of groundnut with Sulphur Oxidizing Bacterial (SOB) inoculant @ 1 kg/ha with Rhizobium @ 1 kg/ha + basal application of Gypsum @ 400 kg/ha and soil application of SOB @ 5 kg / ha on 45th Day after sowing enhanced the yield upto 21.0%.

### **Nutrient sources and its levels on the performance of Bt cotton under drip fertigation system**

The highest mean seed cotton yield (3236 Kg/ha) and water use efficiency (4.56 kg/ha/mm) were recorded under 100 per cent RDF as Water Soluble Fertilizer (Urea, 13: 40: 13 and KNO<sub>3</sub>) + Azophosmet.

### **Development and standardization of rooting mixture for raising sugarcane chip bud seedling under SSI technique**

Media containing Cocopeat + Vermicompost + 2% TN Micronutrient Mixture + 1% AM fungi + 0.1% *G. diazotrophicus* was found significantly superior in terms of germination percentage, root length (25.12 cm), shoot length (60.04 cm) and number of leaves (5.53) in sugarcane.

### **Pruning for high density planting in mango cv. Alphonso**

Annual pruning of 12 year old trees by heading back of 20 cm of terminal growth during the rest period was observed to be the best with the highest yield of 67.38 kg tree<sup>-1</sup> and benefit cost ratio of 8.86. The increase in yield under this treatment over control was 43.12 per cent in mango cv. Alphonso.

### **Tertiary branch pruning in cashew**

Pruning tertiary branches every year during June-July can induce more number of current season's shoots followed by a foliar spray schedule. The foliar spray schedule consisted of NPK 19:19:19 @ 1% at new flush stage (August), mono-ammonium phosphate @ 1% + boron 0.1% during flowering (December) followed by third spray of TNAU Panchagavya 3% during fruit set stage (January-February). This technology resulted in higher nut yield of 6.55 kg/tree compared to control (4.0 kg/tree).

### **Defoliation in palmyrah**

In palmyrah, the trees defoliated to the level of 30% had the maximum nungu and neera yield both in male and female palms. The mean increase of neera and nungu was found to be 146.28 and 28.18 per cent respectively, over years. The study revealed that levels of defoliation had influence on various growth characters also. The drought tolerance mechanism of palmyrah trees were not at all affected by the defoliation treatments.

### **Pruning in cocoa**

The tree pruned at medium level (20%) during June-July was found to be effective in increasing the number of flowers per cushion per tree (5.2) and number of fruits per tree (39.24). The light transmission ratio was minimum (9.54 %) in light pruning.

### **Drip fertigation in Cocoa**

Application of 100% RDF (100:40:140 g NPK plant-1 year-1) as WSF through fertigation by drip recorded more pod weight (486.82 g), number of pods / tree (56.87), number of beans / pod (48.62), single bean fresh weight (3.10 g), single bean dry weight (1.24 g) and dry weight of beans / tree (3.429 g) respectively compared to control (100 % of RDF as soil application).

### **Precision production technology for jasmine**

Precision production technology for off-season flowering of *Jasminum sambac* (Gundumalli) was standardized. Instead of pruning the plants during the first week of September was better than pruning in other months enabling the off-season flowering in October to February yields additional flower yield of 590 g / plant. In green house evaluation of three jasmine varieties, Gundumalli yielded 63.43 per cent increased yield. The other two varieties: pichi and mullai did not flower.

Gundumalli when planted in 1.0 x 1.0 /1.5 m recorded increased yield of 9.65 t/ha. In the conventional spacing of 1.25 x 1.25 m, the yield was only 7.8 t/ha. Pichi seedlings when planted in the spacing of 1.6 x 1.6 / 2 m recorded increased yield of 12.06 t/ha compared to the conventional planting at 1.8 x 1.8 m spacing.

### **Precision production technology for marigold**

Precision production technology was standardized for African marigold (*Tagetes erecta* Linn.) which involves the following.

- Raising seedlings in protrays
- Seedling dip: 0.5% *Pseudomonas fluorescens*
- Field preparation – chisel, disc plough, cultivator and rotovator
- Fertigation - 75% RDF at weekly intervals (90:90:75 kg NPK/ha)
- Micronutrients : 0.5% FeSO<sub>4</sub> and ZnSO<sub>4</sub> - through foliar application at 30 and 45 days after transplanting
- Biostimulants: 0.2% Humic acid - through foliar application at 30 and 45 days after transplanting
- Integrated pest and disease management

Adoption of this technology resulted in an increase of 35% flower yield and 38% xanthophyll content.

### **Precision production technology for carnation**

Precision production technology for carnation was standardized which involves growing carnation under aerodynamic greenhouse structure. Following are the key technologies.

- Fumigation - Dazomet @ 30g/m<sup>2</sup>
- Growing in media consortia / sq. m : 10:1:1 of farm yard manure @ 25

kg /m<sup>2</sup>, vermicompost @ 2.5 kg / m<sup>2</sup>, cocopeat @ 2.5 kg /m<sup>2</sup>, biofertilizers viz., Azospirillum, phosphobacteria, Vesicular Arbuscular Mycorrhiza and biocontrol agents viz., Trichoderma viridae, Pseudomonas fluorescens each @ 20 g/m<sup>2</sup>.

- Spacing: 15 x 15 cm (36 plants /m<sup>2</sup>)
- Planting stage: 30 day old rooted cuttings
- Pinching: Single pinch at the 5th node
- Calyx splitting: Spray 0.1 % borax
- Integrated pest and disease management

Adoption of this technology resulted in increase in productivity from 12 flowers/plant to 16 flowers/plant/crop and an increase in proportion of 'A' grade flowers from 70 to 84 %.

### **Turmeric**

Growing finger rhizome with single bud in media containing Cocopeat + Pseudomonas fluorescens has been standardized for obtaining higher rhizome yield of 47.18 t/ha.

### **Coriander**

Cultivation of coriander variety CS 11 for leaf purpose under 50 % shade has been successful giving a yield potential of 6.71 tons leaves per ha as against the cultivation under open condition (3.76 t per ha). The benefit cost ratio was also high at 5.80 as against cultivation under open condition.

### **High solid content fixed dome type cattle dung based biogas plant for power generation in dairy units**

High solid content cattle dung based biogas plants offer numerous advantages over submerged fermentation including high volumetric productivity, high concentration of the products, less effluent generation

leading to easy handling of sludge and less requirement of water.

Five numbers of 4 m<sup>3</sup> fixed dome type high TSC cattle dung based biogas plants were constructed at five farmer's site in and around Coimbatore and Erode districts of Tamil Nadu. The performance evaluation of the plant in terms of gas generation and consumption of gas was carried out continuously and the average biogas production varied from 3.60 to 3.83 m<sup>3</sup>/day. The farmers feed about 90 – 100 kg of cow dung daily in the solid state biogas plant. The performance of fixed dome type with 4 m<sup>3</sup> capacity high solid content cattle dung based biogas plants was satisfactory and the gas production was sufficient for the whole consumption of the farm holder. The pay back period for this type biogas plant is calculated as 6 years. This technology can be adopted with advantages of lesser labour, time and drudgery without reduction in biogas generation.

### **Development of pod breaker for cocoa**

The hand operated pod breaker developed consists of three sets of knives mounted in a frame and a handle. Two set of knives chop the pods at the ends (stem end and apex) to detach the beans from the central placenta to which the seeds are attached. During this operation, the knives made to a curvature of 15 cm and placed perpendicular to the other two sets of knives, giving horizontal cut to the pod simultaneously. Adjustment is made to control the depth of cut so that the knives will cut only the husk not the seeds. The weight of the unit is 10 kg. The unit is placed at a convenient height (75 cm) for ergonomical operation. Results revealed that the unit can operate with a splitting efficiency of 75% and a capacity of 230 kg/h against the traditional method (150 kg/h).

### **Direct paddy seeder for SRI**

A manually operated prototype direct paddy seeder suitable for SRI with optimized levels of variables viz., circular shape of seed metering hole with 7 mm diameter and 0.9 kmh<sup>-1</sup> forward speed of operation has been developed. The unit consists of three numbers of hyperboloid shape seed metering drum of 200 mm diameter, a pair of ground wheels, main shaft and harness.

### **Farm level solar tunnel drier for cocoa**

A solar tunnel dryer of 3 m wide, 2 m length and 2.6 m height covered with 100 micron thick UV stabilized polythene sheet has been developed. A waste fired furnace of 0.45 m width, 0.60 m length for 0.45 m height was constructed with a grate. Trays of size 48 cm x 32 cm and 5 cm depth provided can hold about 3 kg of cocoa beans spread @ 6.5 to 20 kg/m<sup>2</sup> and dried in the tunnel in the temperature range of 43 to 50°C.

This unit can dry cocoa beans from initial moisture content of around 50% to final moisture content of 7-8 % w.b. in 48 hours compared to sun drying. Fuel requirement is 10 kg / hour or 80 kg/ batch of 48 kg. Cost of the tunnel dryer with furnace is Rs.50,000 for a holding capacity of 100 kg.

### **Development of cassava harvester**

A tractor drawn cassava harvester with provision to harvest single or double row is developed. The unit works well with double row in sandy soils and with single row in heavy soils at optimum moisture content. The coverage is 0.08 ha/h for single row and 0.168 ha/h for double row. The undug tuber was 2.5% and damage was less than 1%.

### 5.3. DIRECTORATE OF CROP MANAGEMENT

The directorate coordinates crop management research, training and knowledge transfer in the disciplines of Agronomy, Agricultural Meteorology, Crop Physiology, Farm Management, Sustainable Organic Agriculture and Veterinary and Animal Sciences. Identifying and solving are taken up field problems through inter – disciplinary approach in different agro climatic regions of Tamil Nadu to bring out location specific soil and crop management technologies.

#### Objectives

- To coordinate basic and applied researches that will contribute to the development of strategies for improving the productivity of crops
- To generate integrated crop management technologies for enhancing farm production and income to farmers.
- To minimize abiotic stress and weather based crop production risk by planning and management of agricultural resources and agro advisory service.
- To improve the nutrition, bio-prospect and develop remedial measures for physiological disorders in major crops
- To develop eco-friendly technologies for sustaining soil health, conservation of eco system and promotion of organic farming through technical capacity building.

#### Department of Agronomy

##### Mandate

To impart undergraduate and post graduate education and carryout research in the field of crop production, develop human resources and provide the farm agro advisory services for transfer of technology.

##### Research programmes taken up

In the Department of Agronomy, research is taken up on cropping systems

and cropping pattern, optimization of different components of integrated farming systems suitable for wetlands, garden lands and dry lands including high income generating components such as goat rearing, poultry, fisheries, animal husbandry and vermicomposting and imparting trainings.

Weed management in various crops, evaluation of new herbicide molecules, survey of weed flora in Tamil Nadu and residue studies of herbicides in soil are also taken up.

Research to increase the productivity of millets, agronomic practices to improve the yield of pulses and sunflower, besides, nutritional studies in maize and studies to improve the juice quality in sugarcane are undertaken.

#### Agro Climate Research Centre

##### Mandate

The mandate is to carry out basic and applied research, education, extension and outreach activities on agricultural meteorology including climate change for enhancing farm profits by minimizing the climate and weather based crop production risks.

##### Research programmes taken up

- Research with respect to elevated temperature and its effect on crop production and productivity of rice under different rice ecosystems.
- Developing weather based insurance for major crops like rice, maize and cotton.
- Research on yield forecast, based on the prevailing and anticipated weather.
- Integrated Agro Advisory Service is being provided for the western zone of Tamil Nadu.
- Medium range weather forecast is issued at block level in different districts of Tamil Nadu

- Seasonal forecast is being done for south west monsoon and north east monsoon for all districts of Tamil Nadu.
- Various crop weather models are being employed for crop management practices and these results are being verified and validated.
- Mitigation and adaptation strategies were developed and test verified in Cauvery delta zone and upscaling of the above strategies are in progress.
- Established 224 Automatic Weather Stations at block level and ten weather parameters observed at hourly interval are being posted in TNAU website [www.tawn.tnau.ac.in](http://www.tawn.tnau.ac.in).
- The research activities on climate change are being taken up and future projections are being made for middle and end of the present century.
- Hydrological studies are being taken up in the entire Cauvery basin.

### **Department of Crop Physiology Mandate**

The mandate is to undertake basic and applied research on abiotic stress, nutriophysiology, hormonal physiology, post harvest physiology and herbicide physiology for augmenting the crop productivity and quality and to impart education and technology transfer.

### **Research programmes taken up**

The Department of Crop Physiology has Memorandum of Understanding with National and International organisations and is taking up research as crop boosters, nutrition and post harvest physiological changes. The Specific programmes are given below.

- Physiological and molecular dissection of high temperature tolerance in Rice.
- 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.

- Crop response studies on elevated CO<sub>2</sub> and temperature in black gram genotypes.
- Physiological studies using lipo- chito oligosaccharides (LCO) in maize and soybean.
- Physiological evaluation of bioherbicides on wetland and gardenland weeds.
- Nutriophysiological changes during growth and postharvest behavior of leguminous vegetables due to bioinoculants.
- Physiology of weeds in rice ecosystem.

### **Department of Farm Management Mandate**

- Facilitation for conduct of field research and offering 'earn while you learn programme,' demonstration and training on agricultural technologies and providing quality seeds to farmers are the objectives of the department.

### **Important Activities Seed production**

- Foundation seeds of rice (ADT 43, ADT, 45 and IW Ponni) and green gram (CO 6) have been produced and distributed to the farming community.

### **Vermicompost production**

- Quality organic manure has been produced (vermicompost) to the tune of 110 tonnes and distributed for the benefit the farming community and garden enthusiasts.

### **Fodder production**

- Quality fodder crop namely, Cumbu Napier hybrid grass (CO (CN) 4) was produced and 175 tonnes was sold to the farmers and dairy owners.



**Extension activity**

- Hands on training on vermicompost production , System of Rice Intensification, integrated farming systems, root feeding in coconut, production technologies in maize and cotton were given to 700 farmers, students and extension functionaries.

**Department of Veterinary and Animal Sciences****Mandate**

The mandate is to impart education for the various faculties in the University Main campus and to maintain a model livestock and poultry farms. Besides, clinical services to the farm and private animals and artificial insemination are also done.

## 5.4. CENTRE FOR PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

### Mandate

The mandate is accelerated gene finding and genome annotation using comparative genomics, structural and functional genomics and bioinformatics tools and integration of such knowledge into marker assisted selection that paves way for increasing the crop yield and attaining food security.

The following are research activities taken up in several crop plants.

- Development of drought tolerant high yielding rice lines using marker-assisted breeding and characterizing abiotic stress resistance at molecular level through transgenic approaches is in progress.
- Promising gall midge, bacterial blight and blast resistance rice lines through

molecular marker assisted selection were developed. These are included in multi-location testing.

- Molecular marker assisted selection in mungbean for resistance to mungbean yellow mosaic virus is in progress.
- Marker assisted introgression for low phytate and enhanced proA in maize is in progress
- De novo genome sequencing, fitness, variation and pathogenicity of *Puccinia triticina* through national network program is in progress.
- Development of cotton for improved fiber quality and drought tolerance through marker assisted selection is also in progress through national network research program.

### MoUs signed with other institutions

S.No.	Purpose of MoU	Agency	Duration
1.	Exchange of faculty, administrative staff and researchers, exchange of students, conducting collaborative research, holding joint lectures and symposia and exchange of academic information and materials.	University of Tokyo, Japan	5 years (2012-2017)
2.	Exchange of scholars, research fellows, and post graduate students and scientists, exchange of academic and technological information and materials of mutual interest, organization of joint research programs and other academic exchanges and co-operation agreed by both parties.	Gyeongsang National University, Korea	3 years (2010-2013)
3.	Collaborative research on 'Beating Begomoviruses: Integrated crop management and disease-resistant hot pepper, tomato and mungbean to improve livelihoods in tropical Asia'	AVRDC – The World Vegetable Center, Taiwan	3 years (2012-2015)

## 5.5. CENTRE FOR AGRICULTURAL AND RURAL DEVELOPMENT STUDIES

The Centre for Agricultural and Rural Development Studies (CARDS) was established in the year 1978 as the first multi-disciplinary Centre of the Tamil Nadu Agricultural University to carry out research in socio-economic issues concerning agricultural and rural development. The Centre comprises of four departments viz., Agricultural Economics, Agricultural Extension and Rural Sociology, Agricultural and Rural Management and Trade and Intellectual Property.

### Mission

The mission of CARDS is to acquire and transmit new economic knowledge to stakeholders concerned at various levels to support well informed decision making.

### The main activities of the centre are

- To provide a broad range of educational programs in social sciences which contribute to the development of human capital in the field of Agricultural and Rural Development;
- To coordinate and support research that improves understanding of economic and community development issues, problems and opportunities;
- To provide policy support to state and central government on problems confronting rural development; and
- To foster inter-institutional collaboration at regional, national and international levels for research, training and development in select areas.
- To build capacity in student of agriculture on intellectual property rights, registration varieties and trade related issues.

### Policy Support

- The important objective is to collect statistics and relevant information related to Agriculture and Rural Development Projects in Tamil Nadu.

- Statistics on the cost of cultivation of principal crops of Tamil Nadu being collected by the Department of Agriculture Economics which is a part of this Directorate is used by the Government of India in fixing minimum support price.
- After the institution of the Agriculture Marketing Endowment in the Department of Agriculture Economics since 1983. The State Agricultural Marketing Committee is supporting to promote and strengthen education, research and training on Agriculture Marketing.
- Price forecasting for important crops help the farmers in deciding the area and time of sowing and harvest. To facilitate patenting, this directorate coordinator protections of Intellectual property Rights, related to the findings of TNAU.

### Research Programmes taken up

#### Department of Agricultural Economics

The Department of Agricultural Economics had its beginning in the year 1943 as an Unit of the Agronomy Section of the then Madras Agricultural College at Coimbatore. A full-fledged Department of Agricultural Economics was established on 1-4-1961 based on the recommendations of the Committee of Agricultural Education at Agricultural College and Research Institute in Coimbatore.

This Department is engaged in applied, policy and problem solving research in agriculture and rural sectors covering various fields such as, production economics, agricultural finance, natural resource economics, environmental economics, agri-business and marketing, agricultural planning and agricultural development policy. Based on the relative importance of the issues in agriculture, the Department has been shifting its focus on various issues over years.

### **Research programmes taken up**

The Department of Agricultural Economics is conducting the following research programmes on various aspects of agricultural and rural development problems.

- GOI- Scheme on Study of cost of cultivation of principal crops in Tamil Nadu
- Institution of Endowment Chair in Agricultural Marketing taking up research on marketing problems and training.
- Evaluating the causes and consequences of credit gap in Tamil Nadu- An economic analysis
- SPC Project- Economics of Organic farming in Tamil Nadu.
- Climate change and groundwater dynamics: A hydro-economic analysis of impacts and adaptation in South India- Issues and policies
- Linkage between agriculture and industry in India.
- Integrated assessment of climate change impacts on principal crops and farm household incomes in Southern India
- Conduct of Baseline Survey to study the vulnerability, production risk and farm technology adoption in climate change prone Irrigated Eco-systems in Coimbatore district.
- Costs and returns in milk production: Developing standardized methodology and estimates for various production systems
- Evaluation of major development programmes in Tamil Nadu
- Techno economic feasibility of wood based agro-forestry models in Tamil Nadu funded by NADP
- Climate variability and tank irrigation management in Tamil Nadu: An economic inquiry into impacts, adaptation, issues and policies
- Commodity potential in Tamil Nadu Agriculture – Vision 2023

### **Department of Agricultural Extension and Rural Sociology**

#### **Research programmes taken up**

- Study on training needs of extension workers for effective implementation of extension reforms undertaken, funded by ATMA.
- Impact of Farm School operated under ATMA extension reforms programme.
- A study of Exposure Visits under ATMA- Stakeholders' feedback
- Promoting women entrepreneurship through gender analysis.
- Soil health management behaviour of farmers in Tamil Nadu.
- Impact of land use change on the livelihoods of farmers in Coimbatore and Dharmapuri districts of Tamil Nadu.

### **Department of Agricultural and Rural Management**

#### **Mandate**

This Department functions to address the agricultural development processes in the country by developing efficient human resources through quality education and capacity building programmes.

#### **Research programmes taken up**

- Impact of transferring water out of Agriculture
- Impact of climate change and globalization on safety of fresh produce – governing a supply chain of uncompromised food sovereignty.
- Innovative water saving irrigation and investment priorities for food security and water sustainability in India
- Assessing commodity potential in select districts.

### **Department of Trade and Intellectual Property**

Department of Trade and Intellectual Property was established with an objective

of documenting and imparting skills with respect to patent system, plant varieties registration and other forms of IPRs and trade issues through educational, research and training programmes which are necessary for students, agricultural scientists and other stakeholders.

#### **Activities of the Department**

- Teaching courses in International trade and intellectual property and its management in agriculture and conducting research programmes.
- Listing and identifying the patentable products/processes for filing the patentable products/processes of the TNAU scientists in the patent office and take up follow up action till the products / processes receive patent.
- Renewal of filed patent according to the nature of the patent.
- Documentation of TNAU varieties (agricultural and horticultural crops) and technologies by identifying the crop varieties and major technologies amenable for protection and registration of TNAU varieties as new varieties, extant varieties and farmers' varieties.
- Selection and identification of Geographical Indications (GIs) for agricultural products as per the GI conditions and registration of GI products in the GI registry.
- Furthering the status of inventions filed for patent and request for seeking first examination report and other formalities.

## 5.6. DIRECTORATE OF NATURAL RESOURCE MANAGEMENT

The Directorate of Natural Resource Management is functioning in TNAU, Coimbatore from April, 2010. The Directorate coordinates activities of the Departments of Soil Science and Agricultural Chemistry, Agricultural Microbiology, Environmental Science, Nano Science and Technology and Remote Sensing and Geographic Information System.

The Scientists of this Directorate are serving with an overall objective to conserve and manage the soil, water, and microbial resources to enhance agricultural productivity and improve soil fertility by developing cutting edge technologies.

### Department of Soil Science and Agricultural Chemistry

#### Objectives

- To carry out the fundamental and applied research on soils
- To develop soil based technologies for the increased biomass production in the agricultural lands, degraded lands, waste lands, polluted and contaminated lands
- To assess the quality of water in rivers, tanks, industrial and sewage sources for the irrigation of field, horticultural and tree crops.
- To offer the courses in the different divisions of Soil Science and Agricultural Chemistry
- To exchange information with other scientists and extension staff
- To collaborate with national, international and other research organizations and industries dealing with agricultural inputs like fertilizers and pesticides for undertaking research programmes.

#### Research Programmes taken up

- Resurvey and preparation of soil maps for Tamil Nadu on micro-nutrient status and deficiency

- Research on integrated nutrient management in SRI for targeted higher yields
- Research on integrated nutrition for maintaining soil fertility and increasing yield in maize-tomato crop sequence.

### Department of Agricultural Microbiology

#### Research Programmes taken up

- A total of 14 potential potassium-releasing bacterial species from rhizosphere of rice were identified and the efficiency of K supply to the crop by solubilizing activity was screened. The elite strains, *Bacillus flexis* (KRB-1) and *B. mucilagenosis* (KRM-9) were identified phylogenetically.
- A consortium of plant growth promoting rhizobacteria including *Enterobacter*, *Bacillus megaterium*, *Bacillus pumilus* and *Pantoea dispersa* inoculation through biofertiligation (five split doses through the laterals) for banana found better plant growth and yield along with soil biological activities.
- Addition of nanoclay Bentonite (0.1%) was found effective to enhance the performance of biofertilizer strains in terms of shelf-life and inoculation effects.
- An assessment of carbon sequestering efficiency of two arbuscular mycorrhiza (*Glomus aggregatum* and *G. etunicatum*) revealed that the AM inoculation enhanced the total and active carbon pool of alfisol along with microbial biomass carbon.
- Mutingenin, an antimicrobial principle from leaves of *Mutingia calabura* showed potential antagonistic activity against soil borne plant pathogens (*Fusarium oxysporum* fsp. *lycopersici*, *Pythium*, *Phytophthora*) and against human pathogens (*Staphylococcus aureus*, *E. coli*, *Pseudomonas aeruginosa*, *Candida albicans*).

- An antagonistic termitomyces fungal isolate from termite mounds showed diversified antagonistic activity against several soil fungal pathogens.
- The wine making process from sapota fruits was standardized with strain MTCC181 (*Sacharomyces cerevisiae*). Suitable fruit variety (PKM3) and fermentation conditions for sapota wine were standardized.
- Probiotic porridge was developed from pearl millet using lactobacilli strains. The lactic acid bacterial strains increased the nutritional quality of pearl millet porridge, as compared to naturally fermented porridge.
- Protein hydrolysate from yeast biomass crude protein using proteolytic bacterial strain (*Bacillus megaterium*) was standardized. This protein hydrolysate was assessed for feed supplementation in chicken and the results revealed that an increased weight gain of 29% was achieved as compared to regular feed intake by birds.

## **Department of Environment Science**

### **Research work taken up**

- Results of the field experiments revealed that application of solid waste @ 12.5 t/ha has increased the bhendi and brinjal growth yield.
- Application of solid waste has increased sunflower seed yield (1653 kg/ha) when 10 tonnes of solid waste/ha + 100% recommended dose of fertilizer were applied, Similarly, in turmeric increased rhizome yield (6083.73 kg/ha) was registered when solid waste @ 25 t/ha + 100 % recommended dose of fertilizers was applied.
- In Vellore and Tiruppur districts the chromium content in ground water and soil were analysed.

### **Study on the changes in soil when Oleo resin extracted from curry leaf and marigold**

- Oleo resin extracted from curry leaf and marigold was applied along with treated industrial effluent and solid wastes in improving the crop growth and productivity revealed the following:
- In the first phase of research using treated and untreated waste water by mixing or not mixing ground water in different proportions for irrigating curry leaf was studied. The results indicated that treating waste water under anaerobic condition and irrigating was better than irrigating with ground water in increasing the growth and yield of curry leaf.

### **Strategic evaluation of cocoa cultivation in Tamil Nadu:**

- Cultivation of cocoa has considerably increased the carbon content of soil. The carbon content was relatively more when cocoa was cultivated for seven years (36.8 t/ha) compared to five years (34.8 t/ha). In cocoa fields, the pest population was found increased by 54%, weed density was reduced by 48%. Increased humidity and shading was found to be conducive for pest multiplication and further spread. The bird population had also increased in cocoa plantations.

### **Enriched organic manure production by advanced processing techniques using solid wastes from gelatin industries.**

- Enriched organic manure was produced by using solid wastes from gelatin industries by mixing with other carbonaceous wastes. This could be recycled effectively in agriculture. Applications of decomposed solid waste from gelatin industry (100% C source) at 860 kg had increased the soil carbon sequestration and quality and pod yield of groundnut.

- Study on augmentation of CO<sub>2</sub> in five fast growing tree species viz., teak, Eety, kumil, mahogany and thorn less bamboo were selected. The results indicated that eety and thorn less bamboo cultivated in the fallow lands were found to fix more atmospheric C O<sub>2</sub>.

**Integrated remediation for improving and managing polluted soils/water is in operation in Tirupur, Coimbatore, Erode and Karur Districts.**

- Honorable Chief Minister of Tamil Nadu had announced to suggest remedial measures for the soils polluted with problematic dyeing industry effluents in Tiruppur, Erode, Karur and Coimbatore districts, Tamil nadu Agricultural University was entrusted the job of suggesting remedial measures after analyzing the soil and water samples.
- In Tiruppur, Avinasi and Kangeyam Taluks of Tiruppur district, totally, 6557 survey numbers covering 13307 ha, soil samples and 5742 water samples were collected from 35 villages. The study is in progress.

**Department of Remote Sensing and Geographical Information System**

**Research Programmes taken up**

- **Spectral library compilation for damage symptoms caused by major crop pests:**

Based on the field studies it was found that the spectral reflectance curve of rice hills damaged by pests namely Leaf Folder (LF) and Yellow Stem Borer (YSB) was different from that of the healthy hills. In general, in the damaged hills, there was a decrease in near infra red (NIR) reflectance (770 to 860 nm) while the green (520 to 590 nm) and red reflectances (620 to 680 nm) increased compared to undamaged hills.

The spectral reflectance curve of cotton plants damaged by pests namely thrips, leafhopper and aphids were different

from that of the healthy plants. In general, in the damaged plants, there was a decrease in near infra red (NIR) reflectance (770 to 860 nm) while the blue (400 to 500 nm), green (520 to 590 nm) and red reflectances (620 to 680 nm) increased compared to undamaged plants. The per cent sensitivity of red band to thrips damage was the highest when compared to blue, green and NIR on most of the days of observation in both the variety and hybrid studied. In the sensitivity curve there was an increase in blue followed by a decrease in green, then an increase in red and finally decrease in NIR region on all days of observation. The per cent sensitivity of red reflectance to sucking pest damage was the highest when compared to other bands on most of the days of observation in both the variety and hybrid studied.

**Monitoring and Optimizing farm nutrient flows and stocks as the basis for Integrated Nutrient Management towards breaking crop yield barrier :**

Cash crops, vegetables and paddy received near optimum levels of nutrients in both organic and inorganic forms.

Nutrient application for rainfed and low value crops was sub-optimal and rarely met from external source.

On-farm nutrient recycling was rarely practiced irrespective of zone and farm sizes

The causes for negative / poor nutrient balances identified in different zones were,

i) Soil erosion, ii) Continues cultivation of the same land without adding manure/fertilizer,

iii) Failure to recycle the crop residues generated on-farm, iv) non-inclusion of leguminous crops in the cropping system.

**Development of Spectral Library for Degraded Lands:**

Using Spectroradiometer GER 1500,



spectral reflectance values of degraded lands was collected at different locations of AEZ 4.1 of Tamil Nadu uplands. Among the locations, the degraded status of lands was found to be of three different categories, viz., slight, moderate and severe. It was observed that the ratio of reflectance at 760 and 675 nm (R760/675 ratio) has given a better discrimination between various types of degraded lands. R760/675 values for slight and moderate degraded values were found to be 1.28 and 2.05 respectively. Hence, this ratio can be used for differentiating slight and moderately degraded lands.

### Department of Nano Science and Technology

#### Research Programmes taken up

- Synthesis of laboratory nano-fertilizer composite with improved nutrient use efficiencies of N, S and Zn
- Nano-particle (ZnO) treatment to tubers of *Cyperus rotundus* for facilitating the uptake of herbicide molecules thereby

effective killing

- Preliminary studies on multi-walled carbon nanotubes to enhance rapid uptake of water molecules in groundnut kernels for improved germination
- Micro- and nano-fibres derived from banana pseudostem is found assisting in retention and release of hexanal (biochemical constituent that helps to extend shelf-life of fruits)
- Hexanal formulation spray (0.02%) in the mango orchards (Banglora, Banganapalli, Imam pasant and Alphonso) to retain fruits to the tune of 3 to 4 weeks in the field itself besides improving shelf life both under ambient and cold storage conditions
- Inhibition of post harvest diseases particularly anthracnose by dipping of fruits in hexanal formulation.
- Hexanal spray formulation is found safer to honey bees, natural enemies, earthworms besides MTCC culture

#### On-going Externally Funded Schemes

S.No.	Title of the project	Funding Agency
1.	Enhanced Preservation of Fruits in South Asia using Nano Film	IDRC, Canada
2.	Fabrication of Nano Agri inputs for Groundnut	DST, Nano Mission
3	Nanotechnological strategies for seed invigoration in rainfed groundnut	DST, Nano Mission
4.	Venture Capital Scheme	TNAU
5.	Genetic and Molecular basis of Diamondback moth ( <i>Plutella xylostella</i> L.) resistance to <i>Bacillus thuringiensis</i>	DST (SERB)
6.	Identification of effective insecticidal crystal proteins from <i>Bacillus thuringiensis</i> (Berliner) to spotted pod borer, <i>Maruca testulalis</i> (Geyer) in <i>Dolichos</i> bean (Avarai)	UGC
7.	National Agricultural Innovation Project (NAIP) Training on Nano Science and Technology in Agriculture	ICAR
8	ICAR Fully Sponsored Scheme on “Application of Microorganisms in Agriculture and allied Sector” under the theme of “Nutrient Management, PGPR, Biocontrol”	ICAR

## 5.7. WATER TECHNOLOGY CENTRE

Water Technology Centre (WTC) at Tamil Nadu Agricultural University (TNAU), one among the three centres of India, was established in 1982 to cater to the needs of the southern region in India to strengthen research, extension and teaching in water technology and management.

- Assessment of the available water resources
- Assessing the water requirement of crops
- Drought management in crops
- Development of water management practices for improving the crop productivity with poor quality water and waste water recycling.
- To undertake research and training activities on water management issues.

The Water Technology Centre is an inter-disciplinary unit comprising faculty drawn from the disciplines of Agronomy, Soil Science, Agricultural Engineering, Crop Physiology and Agricultural Economics. The centre is involved in developing package of practices for different crops with the main focal theme on increasing Water Use Efficiency (WUE) with simultaneous increase in crop production. Research on micro irrigation and fertigation, watershed management are being taken up. It is also conducting trainings at National and International levels to extension officials and farmers.

### Research Programmes taken up

#### Project on Groundwater Utilization

- The seasonal recharge for PAP basin was calculated by using water level fluctuation method and it was found that the recharge was more during deficit rainfall years compared to high rainfall years.
- The groundwater potential assessment for

PAP basin (nine blocks) was computed. Out of nine blocks, six blocks are over exploited, two blocks are critical and one block is semi critical.

- The linear programming technique was used to form conjunctive use model to arrive at the optimal allocation of surface and groundwater to maximize the benefit within the frame work.
- The groundwater and soil qualities of PAP basin was analysed and management strategies for maize and chilli crops were recommended and mapping of the groundwater quality was done.

#### National Initiative on Climate Resilient Agriculture

- Groundwater flow direction, groundwater potential and zone budgeting of Vadachithur watershed was analysed by using Visual Modflow software

#### Effect of Growth regulator ‘Invinsa’ on rice

- In rice, the data on rice grain yield (var. ADT 45) during Summer (2012) season indicated that application of XX formulation (1.04 %) at mid-boot stage registered significantly a higher grain yield of 5537 kg ha<sup>-1</sup> which was 22.6 per cent more than the untreated control (4517 kg ha<sup>-1</sup>). In the nursery application trial, application of the same XX formulation at 20 g a.i. ha<sup>-1</sup> 3 days before transplanting recorded 19.6 per cent increase in grain yield (5421 kg ha<sup>-1</sup>) than the untreated control treatment (4531 kg ha<sup>-1</sup>). In Kuruvai (2012) rice crop (var. ADT 48), foliar spray of “Invinsa” formulation during panicle initiation stage recorded an increased yield of 9523 kg compared to the unsprayed control.
- Application of XX1 formulation of

“Invinsa” at 10 g a.i. ha<sup>-1</sup> registered 24.2 per cent more grain yield (9167 kg ha<sup>-1</sup>) over control (7379 kg ha<sup>-1</sup>).

- Soil application of coated HAIP formulation @ 0.98 g a.i ha<sup>-1</sup> showed its supremacy with higher grain yield of 9057 kg ha<sup>-1</sup>, which was 15.3 per cent increase over control.

**Tamil Nadu Irrigated Agriculture Modernization and Water Bodies Restoration and Management (TN-IAMWARM) Project – TNAU**

- During 2012-13, demonstrations were carried out in system of rice intensification (SRI) in an area of 3383 ha and improved production technologies in semi dry rice (210 ha), pulses (4334 ha), groundnut (455 ha), chillies (122 ha) and cotton (25

ha). In addition, precision farming was demonstrated in 227 ha in crops viz., sugarcane, vegetables and turmeric. The results of demonstrations indicated that an average yield of 7018kg/ha was realized under SRI demonstrations against the conventional average of 5458kg/ha (28.6 per cent increase). Demonstration of improved production technologies in pulses, groundnut, chillies and cotton recorded 34.6 per cent (1631 vs 1212 kg/ha), 25.9 per cent (2619 vs 2080 kg/ha), 23.3 per cent (1708 vs 1385 kg/ha) and 36.4 per cent (2369 vs 1738 kg/ha) increase in yield over conventional practices, respectively.

## 5.8. FORESTRY

Forest College and Research Institute is handling 25 externally funded projects which are obtained in a competitive mode from Central and State Governments and other private agencies. Studies are taken up to elucidate information on improved species and plantation materials, evolving cost effective nursery, cultivation and agroforestry practices, usage of effluents in forest tree cropping and evaluation of biofuel crops. The salient findings for the research projects handled by all the departments are as follows:

### Department of Tree Breeding

Established short rotation industrial wood agroforestry demonstration trial in 245 ha by involving 10 clusters with 268 beneficiaries against the targeted area of 200 ha which resulted in the horizontal expansion of 32212.25 ha against the proposed target of 8000 ha. The department has MOU with the following organizations.

- Auromira Energy Company signed MoU for promotion of Energy Plantation as per NAIP model.
- An NGO viz., SMARD Foundation also inked all MoU in order to promote Secondary Timber Forest Products among the grass root level practitioners.
- M/s Vasan Match Splits Factory also entered into MoU in order to promote contract match wood farming in Tamil Nadu. The achievements made as a result of the above MoU are the following
- Identified three new pulp wood species (Melia, Dalbergia and Leucaena) with higher pulp yield (more than 45 per cent) coupled with low kappa number (less than 22).
- Identified new match wood species viz., Anthocephalus cadamba with high stick recovery for Match Wood Industries (more than 14000 sticks per kg of wood).
- Developed low cost clonal technology

and mini clonal technology for Casuarina and disseminated to various stake - holders which resulted in establishment of five decentralized clonal production centers, there by created employment opportunities of 18250 man days per annum to the landless men and women labourers.

- Semi mechanized harvesting system is introduced and as a result, 18 new rural felling groups have been established with adequate capacity building.
- Standardized protocol for value addition of plantation residues into briquettes through appropriate drying and processing technologies. Preliminary discussion was completed to link the value addition industry also into the existing industrial wood agroforestry consortium.

### Department of Silviculture and Agroforestry

- *Thespesia populnea* (Poovarasu), *Pongamia pinnata* (Pungam) and *Acacia auriculiformis* (Kathi chavukku) are found to be promising in terms of initial establishment and growth when treated tannery effluent is used for irrigation along with domestic waste water at 1: 3 ratio.

### Department of Forest Ecology and Environment

- Five fast growing trees namely *Dalbergia sissoo*, *Gmelina arborea*, *Switenia macrophylla*, *Bambusa vulgaris* var. *vulgaris* and *Tectona grandis* were tested for their carbon sequestration potential under waste land condition in Sivaganga district. Among the five species, *Dalbergia sissoo* sequestered high carbon content of 4.5 tons/ha in 3 years of growth.
- The composted sludge + chitin waste +

soil mixture was found to be effective potting media for agroforestry production in case of both *Eucalyptus tereticornis* and *Casuarina junghuhniana* grown in red and black soils.

- Identified 15 genotypes with high yield and bixin content and established Progeny Evaluation Trial of *Bixa orellana* at FC&RI with 34 CPTs

### **Department of Forest Resource Management**

- Survey and selections of CPTs were made in Tamil Nadu. Subsequently, 47 CPTs were identified (46 in Tamil Nadu and one in Chattishgarh). Out of total 47 CPTs, seeds were collected from 30 CPTs. Vegetative propagules were also collected from these trees and tried with propagation methods like cuttings and grafting.

- The success rate of sprouting of cuttings was very low. However, grafting (cleft grafting) was found to be a successful method of vegetative propagation. Seed oil estimation was done for the seeds obtained from various progenies by using Soxhlet apparatus. The oil content ranges from 30.0 per cent to 58.2 per cent. The highest seed oil percentage was recorded from the source TNML-12 (Poianallur of Ariyalur district).

### **Centre of Excellence in Biofuels**

- Five *Jatropha* hybrids namely CJH3, CJH5, CJH9, CJH 12 and CJH13 are in the field for large scale field evaluation. Nursery management techniques are standardized for *Jatropha*.

## 5.9. HOME SCIENCE

The Home Science College and Research Institute at Madurai was established in the year 2000. In this college, under graduate, postgraduate and doctoral programmes are offered besides various research and out reach programmes mentioned below.

- Developing community based approach for prevention of anaemia among young and married rural women in Virudhunagar District by improving the dietary behaviour and reducing iron deficiency anaemia.
- Identification and standardization of spice blends of region specific ethnic cuisines of Tamil Nadu. Under this sixty typical spices based Chettinadu cuisines were identified and 15 of these recipes were standardized and used for the ethnic cuisines preparation.
- Expansion of Drought Tolerant Invader Tree (*Prosopis juliflora*) and its impact on water use and economy
- Promoting occupational health and safety of the women employed in small sea food processing units
  - o Five seafood processing units were selected for the study and 244 women workers were surveyed on their health and nutritional status.
- Drudgery reducing technologies for Tribal families in Sirumalai hill areas of Dindigul district were tried.

- Economic empowerment of SC & ST women on processing of Moringa oleiflora leaves and its products as an income generating activity
- Standardization of selected ethnic fermented foods and beverages by rationalization of indigenous knowledge - High fibredosa:
- Techniques for isolation of maize, banana and cassava starch were optimized and the development of resistant/modified starch was standardized by different methods viz., physical, chemical and enzyme methods.
- Development of technology for resistant / modified starch substituted cereal / millet and pulse blended Bakery and Pasta products

### Other research projects taken up

- Formulation of antioxidant rich snack foods
- A Quality evaluation of apparels of infants and toddlers in Madurai district
- Processing of pummelo (*Citrus grandis* – Syn: *Citrus maxima*) - an under exploited fruit
- Screening of black gram (*Vigna mungo*) varieties suitable for selected South Indian traditional foods
- Standardization of whey based fruit juice blended RTS beverages.
- Value added products from yeast fermented heat-stabilized, defatted rice bran

## 5.10. SEED CENTRE

The seed centre was established in Tamil Nadu Agricultural University during the year 2006.

### Objectives

- To ensure the reach of quality seeds of improved varieties / hybrids to the farmers of all the districts of Tamil Nadu
- Enhancing the seed replacement rate of principal crops to increase the productivity.
- Adoption of improved technology for the improved productivity of seeds.

### Mandate

- Lead and engage in downstream programmes on seed science and quality control.
- Disseminate the values of seed production with integrated approach towards availability of high quality seeds of improved varieties.
- Increasing the seed production based on the needs of the farming community.

- Production and distribution of required quantity of breeder seeds to GOI, State Government and private seed companies.
- Popularizing the TNAU evolved varieties and other promising varieties / hybrids among the farming community.
- Making of promising technologies to reach the entrepreneurs and other stakeholders through innovative trainings, conferences, symposia, etc.

### Seed Production

- Seed Centre is co-ordinating the production of different kinds of seeds in 36 research stations and Krishi Vigyan Kendras of TNAU based on the demand of Central, State and Private Agencies. Currently seed production is being taken up in 170 varieties of TNAU in several agricultural and horticultural crops. The production and distribution details for the year 2012-13 is as follows.

### Breeder / Foundation / TFL Seed indent and supply for the year 2012-2013

Crop	Breeder seed		Foundation / TFL Seed		Total	
	Demand	Supply	Demand	Supply	Demand	Supply
Paddy	875	990	7689	8993	8564	9983
Millets	4	10	52	69	56	79
Pulses	188	185	518	658	706	843
Oilseeds	639	267	63	67	702	334
Cotton	0.80	7	0	1	0.8	8
Forage crops	0.14	1	132	147	132.14	148
Vegetable Crops	-	3	14	17	14	20
Sugarcane (MT)	-	-	660	764	660	764
Turmeric (MT)	-	-	125	136	125	136
<b>Total</b>	<b>1707</b>	<b>1463</b>	<b>9253</b>	<b>10852</b>	<b>10959.94</b>	<b>12315</b>

### Vegetative Propagules

Sl. No.	Crop	Total
1	Planting materials (Nos.)	525395
2	Coconut seedlings (Nos.)	128751
3	Sugarcane (MT)	76.433
4	Turmeric (MT)	13.641

### Trainings conducted during 2012 - 13

Sl. No.	Training
1	Creation of awareness on “Protection of plant varieties and farmers rights”
2	NSRTC Training “Varietal purity - testing of specified traits”
3	Seed testing
4	Ist Annual Seed Workshop

Totally 430 persons benefited by the above programmes

#### Department of Seed Science and Technology

##### Objectives

- To develop human resource in Seed Science and Technology by offering under graduate and post graduate degree programmes.
- To undertake research to develop technologies for quality seed production including processing, storage techniques and varietal identification in agricultural, horticultural and silvicultural crops.
- To organize outreach and capacity building programmes to cater to the needs of stake holders and extension functionaries.

##### Research activities

- Designer seed technology for integrated seed treatment in pulses.
- Organic seed treatments for vegetable crops.
- Biopriming techniques for enhancing seed quality and seed yield in paddy and maize.
- Molecular techniques for identification of genetic purity of cultivars.



## **5.11. DIRECTORATE OF PLANNING AND MONITORING**

The Planning and Monitoring Directorate of TNAU functions as an independent Directorate since January 2003. The major focus of this directorate is on planning, monitoring and evaluation of various development programmes and activities of the Tamil Nadu Agricultural University. As a liaison unit between the university and Government departments, this Directorate processes new research scheme proposals for getting funds from the Government and takes steps facilitating implementation of various schemes for the benefit of the farming community.

This Directorate is also involved in preparing and reporting the monthly progress of various schemes funded by Government of Tamil Nadu. The preparation of Governor's Address, Budget Speech, Citizen's Charter, Policy Note, submission of proposal

for announcements, follow up action on announcements made by His Excellency Governor of Tamil Nadu, Hon'ble Chief Minister of Tamil Nadu, Hon'ble Minister for Agriculture, reports for review are also carried out by this Directorate.

The Directorate of Planning and Monitoring shoulders the responsibility in preparing the annual report of the university both in Tamil and English and send it to the Government of Tamil Nadu for placing on the Table in the Budget Session of Legislative Assembly, every year.

Various day to day activities of the University are published for the information of the stakeholders by way of TNAU News Letter, every month.

## 5.12. DIRECTORATE OF AGRIBUSINESS DEVELOPMENT

The Directorate of Agribusiness Development was established in the year 2007. It is the first of its kind in the Agricultural Universities in India.

### Objectives

- Providing single window access for all agribusiness related activities through consultancy, consortia and incubation programmes.
- Commercialization of TNAU products and technologies and creating market linkages.
- Supporting innovative ventures
- Organizing capacity building programs for various stake-holders to take up agribusiness ventures.

- Organizing periodical seminars and workshops on agribusiness development so as to recommend suitable policies for the consideration of the Government

### Activities

#### Commercialization of Technologies / Products through NAIP-BPD Unit

#### Membership

During the year 2012-13 eight entrepreneurs have been enrolled as members. Details of the enrolled entrepreneurs are as follows

Sl. No	Name and Address of the incubatee	Venture
1.	M/s Escorts Group, Faridabad, Haryana	Farm Machinery Ventures
2.	Eden Nursery Gardens, Mettupalayam	Farm Ventures- Energy plantations
3.	Mr. P.K. Sunil, Thirussur, Kerala	Farm Ventures- Corporate farming
4.	M/s SPAC Tapioca Products (India) Ltd Poonachi, Erode	Farm Venture-Corporate Farming
5.	Mr. VLR Ramraaj, Pondicherry	Farm Venture- Energy plantations
6.	M/s Shapoorji Pallonji & Co Ltd, Mumbai	Corporate Farming in Zambia
7.	M/s Green Well Biotech Pvt Ltd, Hosur	Agri Biotech Ventures
8.	M/s i-5 Biotech Labs, Coimbatore	Agri Biotech Ventures

### MSME Scheme – Financial support provided

#### Financial assistance to incubatees under MoMSME scheme

Technology Business Incubator -TNAU is implementing the “Support of Entrepreneurial and Managerial Development of SMEs through Incubators” of the Ministry of Micro, Small and Medium

Enterprises. It has facilitated financial support to seven incubatees / innovators under the scheme to the tune of Rs. 50.54 lakhs

S.No	Name of the Incubatee	Business Idea	Amount Santioned (Lakhs)
1.	Mr.K.Prabhu Shankar	Batch type Dielectric Dehydration Unit for Cardamom	6.25
2.	Dr.P.Sathiya Moorthi	Ready to Serve Natural Fruit Juice	6.25
3.	Mr.C.S.Aswin Kumar	Neuroprotectine Nutraceutical Products from Withania (Aswagandha) and Mucuna (Velvet Bean)	6.25
4.	Mr.T.Muthukumar	Hydraulically Operated Mobile Coconut Harvester	6.25
5.	Mr. Ashok Rajappan (Health and Taste)	Nutraceutical Drink	6.25
6.	R.Palaneeswar (Jeyppee Biotech)	System for Recording Traceable Farm Activities and Commodity Production	6.25
7.	Neethala Mittu (N.Mittu)	A Buoyant, low cost Machine to remove Aquatic Weeds.	6.25
8.	Mr.A.Thangaraja (Growell Technologies)	Starch Clay Nano Urea	6.25

#### Technology Business Incubator (TBI) Activities

Approval was obtained for the revised budget (Rs. 73.78 lakhs) and new list of equipments from the Department of Science and Technology in the month of January 2013. Steps were initiated for recruiting business manager and other staff. Preparatory works are being carried out for renovation of TBI building and purchase of laboratory equipments and other establishments. TBI-TNAU has rendered all support to its incubatee company- M/s Green Well Biotech Pvt Ltd, Hosur in getting loan to the tune of Rs 70 lakhs.

#### Seed Consortium

So far, 17 leading Seed Companies have become the members of TNAU-Private Seed Sector Research and Technology Consortium. The Technical Committee meeting was convened on 05.05.2012 to fix the license fee for the new TNAU Rice hybrid CO 4 for commercialization. M/s. Rasi Seeds Private Limited, Attur purchased the TNAU Rice hybrid CO 4 on 30th May, 2012 with a payment of Rs. 5.00 lakhs as license fee on non exclusive basis and with an agreement to pay the royalty of four per cent on net sale value.

#### Royalty Received

S. No	Name of the Licensing company	Technology licensed	Amount (Rs.)
1.	M/s Nutricon Health Care Pvt Ltd	TNAU Master Trap	10,171
2.	M/s Libra Innovations Pvt Ltd	TNAU Solar crop Drier	8,995
3.	M/s Nitta Gelatin India Limited	Nutri Gold	51,954
4.	M/s Melwin Engineering	TNAU Stored Insect Management Kit	2,500
5.	M/s Bioseed Research India Pvt. Ltd	cry2Ai gene	1,50,000
<b>Total</b>			<b>2,23,620</b>

### Venture Capital Scheme

Supply of quality inputs in agriculture plays an important role in enhancing the crop productivity. Quality seeds, saplings and other inputs including biofertilizers, biocontrol agents and various kinds of crop boosters have been produced and supplied to farmers at nominal cost in the respective departments and research stations of TNAU through Venture Capital Schemes coordinated by the Directorate of AgribusinessDevelopment.

During 2012-13, a total of 150 Venture Capital Schemes have been operated including three new schemes sanctioned during 2012-13 with a budget provision of 60.00 lakhs. An amount of 35.62 lakhs and 13.11 lakhs have been received as institutional charges and seed money respectively, from various venture capital schemes during 2012-13.

### Training Programme Organized

Sl. No	Training programme/Meeting Organized
1.	Awareness Meeting on Farm Mechanization
2.	TNAU – ICAR- CII Regional Meet
3.	Second stakeholders meeting on Jasmine Growers Development
4.	Professional Development and Technology Orientation Training Programme for Personnel working in Agro-Chemical Industries in association with Interface Agricultural Technologies, Hyderabad
5.	Progressive Agri Entrepreneurs Meet
6.	ICAR – NAIP – National Training on “Fascinating Microbial Biomolecules for Plant and Human Health”
7.	Workshop on Agri Business Opportunities in Food Processing and Biotechnology



**Directorate of Extension Education**

## 6. DIRECTORATE OF EXTENSION EDUCATION

The Directorate of Extension Education was established in the year 1972, in the renowned Tamil Nadu Agricultural University at both National and International level. The Directorate has embarked on facilitating transfer the agricultural Technologies generated from the University for the benefit of farmers and extension workers. The technologies are disseminated in an innovative and simple manner enabling the farmers for better comprehensibility. Directorate of Extension Education is a bridge between the research scientists, extension workers and farmers.

For effective planning and implementation of extension activities, every year the Extension Education Council is organised to extend discuss, deliberate and invite suggestions from various quarters. The report includes the activities carried out by various departments under DEE, namely, KVKs of TNAU, Training Division, Department of Market Extension, Educational Media Centre, Uzavarin Valarum Velanmai, TNAU Community Radio Station 107.4, Agricultural Technology Information Centre (ATIC) , Kissan Call Centre and e-Extension Centre. The extension education programmes taken up during 2012-13 are given below.

### Training Division

#### Details of trainings conducted during 2012-13

S.No	Training held at TNAU	Number of beneficiaries
1	Print Media Capacity Development	30
2	Sugarcane Production Management	26
3	Farm Journalistic Skills Development for Extension Workers	24
4	Value Addition and Marketing of Agricultural Commodities	28
5	Agricultural Development and Public Private Partnership	24
6	Training for IAS officers regarding Role of TNAU in Agriculture	IAS Probationaries
7	Training for Deputy Collector cadre officers regarding Role of TNAU in Agriculture	12 Deputy Collectors
8	State level Farmers' Discussion	326
9	Farmers' Seminar on Banana Cultivation	150

### Post Graduate Diploma in Agricultural Extension Management

In collaboration with MANAGE, Hyderabad, PG Diploma in Agricultural Extension Management course was offered. Totally, 12 participants were benefitted.

### Farm School on AIR

Two training programmes viz., i). Nutrition millets cultivation and 2. Nematode management were conducted. Totally 326 farmers' from Coimbatore,

Erode and Tirupur Districts participated.

### Monthly Zonal Workshops

Monthly Zonal Workshops were organised by Department of Agriculture, Coimbatore and TNAU on every second Tuesday and on every 2nd Wednesdays by Department of Agriculture, Thiruppur district and TNAU. from March 2012 to April 2013 Presentations coupled with demonstrations were conducted every week and by the scientists and the extension officials were

imparted with the latest technologies. Agriculture Officers of Coimbatore and Tiruppur districts and scientists from Tamil Nadu Agricultural University participated.

### **Demonstrations conducted**

#### **Krishi Vigyan Kendras ( KVKs)**

Krishi Vigyan Kendras are functioning in all the districts of Tamil Nadu except Chennai and Tirupur. Out of 30 KVKs in Tamil Nadu, 14 KVKs are under Tamil Nadu Agricultural University and are located in Madurai, Sirugamani, Tindivanam, Vriddhachalam, Vamban, Vrinjipuram, Pechiparai, Sandhiyur, Ramanathapuram, Sikkal, Tirur, Needamangalam,

Aruppukkottai, and Papparpatti, three ICAR KVKs (Kancheepuram, Namakkal, and Sivagangai) under TNAUVAS, 11 ICAR KVKs under Non-Governmental Organizations (NGOs) and two ICAR KVKs ( Coimbatore and Dindigul) under Deemed Universities. All the 30 ICAR funded KVKs in Tamil Nadu are under the technical control of the Directorate of Extension Education, TNAU Coimbatore.

During 2012-13, through the 14 KVKs under Tamil Nadu Agricultural University, the activities taken up and number of beneficiaries are given below:

i	On Farm Trials	88
ii	Front Line Demonstrations	1880
iii	Precision farming activities	47
iv	Exhibitions	337
v	Other extension activities	31822
vi	Total number of beneficiaries	76610
	a. Male	23965
	b. Female	100575
vii	Scheduled Castes / Scheduled Tribes	11286
	a. Male	6605
	b. Female	17891
	c. Total	

#### **Agricultural Technology Information Centre (ATIC)**

During the year 2012-13, people of various categories from different districts of Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Orissa and Maharashtra visited the Agricultural Technology Information centre and the e-Extension centre. This included, 2342 farmers, 532 college students, 46 school students, 7 teachers, 152 officials and 25 experts.

## Exhibitions conducted

Directorate of Extension Education participated in the following exhibitions:

S.No	Name of the Exhibition	Venue	Organisers	Date
1	Govt. Exhibition	Jail Ground Premises, Gandhipuram	TNAU and Ministry of Information and Broadcasting	14.04.2012 to 03.06.2012
2	Agri Intex, 2012	CODISSIA Complex, Coimbatore	TNAU and CODISSIA	30.05.2012 to 03.06.2012
3	Agri-Horti Technology Fair	Vijaya Marriage Hall, Singanallur, Coimbatore	TNAU and Trade Fair India Limited	05.07.2012 to 08.07.2012
4	Pusa Krishi Mela	New Delhi	TNAU and ICAR	06.03.2013 to 08.03.2013

## Other activities

Seed Sales (255 kg)	-	65,520
Tree Killer (173 litres)	-	1,38,400
Books Sold	-	10,505
<b>Total</b>		<b>2,144,25</b>
Farmers Educational Tour performed	-	275
Field level problems addressed	-	412
Cultivation techniques offered	-	687

## Uzhavarin Valarum Velanmai

‘Uzhavarin Valarum Velanmai’ a monthly Tamil Farm magazine of Tamil Nadu Agricultural University, Coimbatore is being published from the Directorate of Extension Education,

TNAU for the benefit of the farming community and other stake-holders. The farm technologies relevant to the month, suggestions and advisory services, farm news and success stories are published.



## Educational Media Centre

Video telecast through DDK, Chennai	48
Video coverages	82
Video programmes produced	492
Video 3GP lessons prepared	303
Video CD lessons duplicated	1078
Video CD lessons sold	403

## Video programmes made during 2012-13

S.No.	Topic	Number of programmes
1.	Documentary film on Pollinators of mustard sunflower	1
2.	Documentary film on little known facts about little bees – A potential pollinator	1
3.	Documentary film on Meliponiculture (culturing of sting less bees)	1
4.	Documentary film on ARS, Bhavanisagar	1
5.	Documentary film on Millets	1
6.	Documentary film on e-velanmai	1
7.	Documentary film on DEMIC	1
8.	Documentary film on Carnation cultivation techniques	1
9.	Documentary film on Arbuscular Mycorrhizal Biofertilizer Production	1
10.	Documentary film on Amla value added products with wild honey	1
	<b>Total</b>	<b>10</b>

**Income generated through video production: Rs. 5,04,100**

### Department of Market Extension

Market Extension Department was established on 14.05.2008 at the Directorate of Extension Education with the objectives of formation of Commodity Groups of farmers, providing technical guidance on production and marketing, arranging Buyer-Seller Meets, Capacity Building programmes to the personnel involved in Government Marketing Directorates, forecasting the prices of commodities to farmers for enabling them for efficient marketing, organising melas for empowering them on efficient marketing, etc. Marketing management trainings are being conducted to the extension officials of Department of Agriculture and other line

departments. During 2012-13, totally, 13 trainings were imparted to 750 farmers and Self Help Group women.

### Kisan Call Centre (KCC)

Kissan Call Centre was established in January 2004. This centre functions on all working days between 6.00 A.M. and 10.00 P.M. Under this scheme any farmer in the country can access by dialling the number 1551 or 1800-180-1551. The objectives are to give suggestions and answer to farmers' queries as and when they need.

In Tamil Nadu, for effective functioning of this Centre, the Directorate of Extension Education under Tamil Nadu Agricultural University was assigned as the Nodal Agency from 17.10.2008.

During 2012, more number farmers utilized the services of this centre and got benefitted. The number of calls received from the farmers during the year was 81136.

‘Velan palkalikhazhaga Vivasayee FM’ Community Radio Station. The following are the programmes

Recorded programmes	348
Uploaded in Portal	285
Special programmes	42

### Activities of e-Extension Centre

#### Precision farming project

The stake-holders of precision farming project were imparted trainings on precision farming, drip irrigation, operation and maintenance of drip system and marketing through the various Research Stations and Krishi Vigyan Kendras.

#### TNAU- Agri-Tech Portal

The TNAU – Agri-Tech Portal comprises of 5 lakh pages on various subjects. Information on Department of Agriculture, Horticulture and Plantation Crops, Forestry, Agricultural Engineering, Animal Husbandry, Fisheries, Agricultural Marketing and Seed certification are being hosted. Important video clippings on production technologies, farm implements and machineries, precision farming, system of rice intensification and producer firms are also hosted and periodically updated.

- The Portal is accessed by 740 – 900 persons (hits) every day and 240 – 290 pages are being visited.

#### Multiple Video conferencing facility of e-Extension Centre.

- Through the video conferencing facility, all the 14 Krishi Vigyan Kendras, 36 Agriculture and Horticulture Research Stations and Colleges totaling 60 were integrated. The scientists, farmers and extension officials can get in touch with each other for discussion and clarification.

#### Dynamic Market Price Information for Agri-Horti producers through mobile phone and internet

- The e-Extension Centre in Tamil Nadu Agricultural University in collaboration with C-DAC, Hyderabad is updating the market price information every day. Presently 48,000 farmers are receiving the price information every day.
- In this programme 13 important markets in South India were included – Cochin, Coimbatore, Ottanchathiram, Chennai, Trichy, Bangalore, Hosur, Kumbakonam, Madurai, Mettupalayam, Panruti, Thalaivasal and Thirunelveli.
- The price information in English and Tamil are being uploaded at 2.00 pm in [www.tnau.ac.in](http://www.tnau.ac.in) and [www.indg.in/india/market](http://www.indg.in/india/market) -
- The whole sale and retail price of 160 commodities (68 vegetables, 36 fruits, 37 flowers 11 aromatic and eight plantation crops) can be obtained.
- The name of the whole sale dealers, contact numbers, commodity dealt-with in all the markets are provided.
- The Scheme was completed on June 2012.

#### Expert System for Agriculture and Animal Husbandry

- With the financial support of ICAR, expert systems were developed for crops such as paddy, sesame, ragi, coconut and banana in English, Tamil, Malayalam and Kannada. In Animal Husbandry expert system on cattle and buffalo, sheep and

goat and poultry were developed in all the above four languages.

**Development of ICT tools for interactive multimedia based agro advisories.**

- In this project, Indian Technologist Association, Chennai Dharmapuri Precision Farming Producers, Farm Advisory Services Ltd., Erode Farmer Producers Company Ltd., and kancheepuram, National Agro Foundation participated.
- Individual farm resource inventory details were collected and updated in the website. Software on information based farm advisory services for sending information through mobile phone has been developed. This project was closed in June 2012.
- NAIP – Mass Media for sharing agro information
- Under the National Agricultural Innovation Project, research on mass media utilization for sharing agro-information was carried out.

- Video modules on Dutch Rose in open field cultivation, precision farming, ultra – High density mango cultivation, organic farming, turmeric processing technologies, mechanised paddy cultivation and Producer Companies were developed.

**TNAU – IFPRI Knowledge Portal**

A Knowledge Portal (<http://www.advanceagripractice.in>) has been developed for advancing agriculture production and productivity for Indian farmers in collaboration with the International Food Policy Research Institute. The portal comprises of information on villages and blocks. The scheme has come to an end in November 2012. During the current year 2012-13, totally 8 trainings were conducted and 888 farmers benefited.

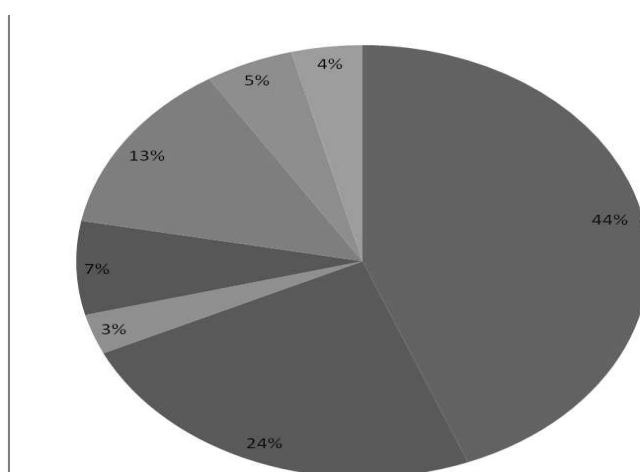


**Funding Sources**

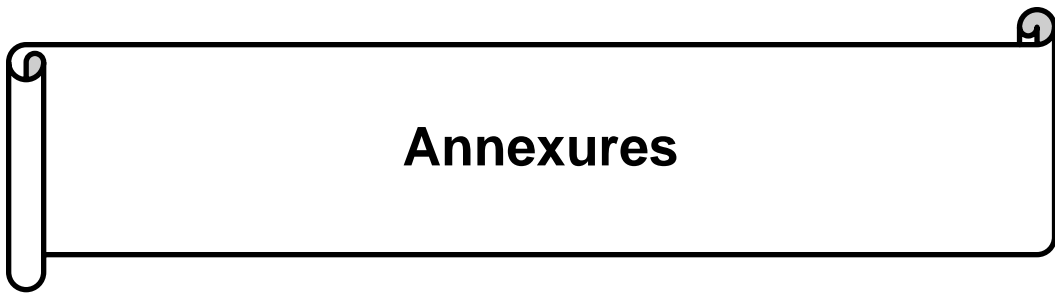
## 7. FUNDING SOURCES

Sl. No.	Particulars	Number of schemes	Expenditure 2012-13 (Lakh Rs.) (unaudited)	(%)
1	Non-Plan	142	15899.08	44
2	Plan	104	8934.58	24
3	IAMWARM	1	1092.45	3
4	NADP	24	2710.81	7
5	ICAR	168	4600.55	13
6	Government of India	203	1898.07	5
7	Private and Foreign	281	1319.47	4
	<b>Total</b>	<b>923</b>	<b>36515.82</b>	<b>100</b>

### Scheme - wise funding amount (%)



- Non - Plan
- Plan
- IAM WARM
- NADP
- ICAR
- Government of India
- Private and Foreign



**Annexures**

## ANNEXURE I

### CIVIL WORKS

<b>LIST OF COMPLETED CIVIL WORKS IN THE YEAR 2012 - 2013</b>		
Sl. No.	Name of the work	Estimate Amount (Rs.)
<b>Tamil Nadu Agricultural University - Coimbatore</b>		
1	Construction of New Centenary building for Paddy Breeding station	10000000
2	Construction of PG Lecture hall in the First Floor of Crop Physiology	3500000
3	Construction of First Floor for additional laboratory at PHTC	2000000
4	Construction of First Floor for UG lecture hall and laboratory to the department of Bio-technology	5000000
5	Construction of additional lecture hall in AEC & RI	6500000
6	Construction of Non- Teaching Staff Quarters (8 unit block)	15500000
7	Construction of First floor for Bio-informatic laboratory - II in the Department of Plant molecular biology	1500000
8	Construction of Staircase and lecture hall in the First floor of ODL building	2950000
9	Construction of first floor building for the department of Vegetable crops over the existing tissue culture laboratory at HC & RI,	2300000
10	Construction of Hi-tech toilet and rest room for students	2700000
11	Construction of farm office near the Glass house farm in Orchard for the Department of Forage Crops	900000
<b>Agricultural Research Station, Bhavanisagar</b>		
12	Providing 6" dia PVC pipeline for irrigation facilities to pungar block	1000000
<b>Horticulture College and Research Institute Periyakulam</b>		
13	Construction of Administrative building second floor	13800000
<b>Agricultural Engineering College and Research Institute Kumulur</b>		
14	Construction of Surface level water tank	1000000
15	Construction of lecture hall (North) in the existing academic block	1530000
<b>Agriculture Research Station, Kovilpatti</b>		
16	Construction of lecture hall I over the existing storage godown building (First Floor)	1000000

<b>Horticulture College and Research Institute (Women) in Anbil Dharmalingam Agricultural College and Research Institute Trichy</b>		
17	Construction of Ladies hostel at HC & RI for Women	8000000
18	Providing water supply sanitary arrangements and additional works to the Auditorium	990000
<b>Regional Research Station, Ambasamudram</b>		
19	Construction of lecture-cum examination hall over the existing TANWA building	1200000
<b>National Pulses Research Centre, Vamban</b>		
20	Construction of Demonstration unit for Goat rearing	400000
21	Construction of Farmers hostel and toilet block	2800000
<b>Vegetable Research Station, Palur</b>		
22	Construction of New Administrative building	5000000
23	Construction of Seed Storage godown	650000
24	Construction of drying yard	500000
<b>Horticulture Research Station, Pechiparai</b>		
25	Construction of Classroom in first floor over the existing building for Diploma Agri Students	800000
<b>Krishi Vigyan Kendra - Ramanathapuram</b>		
26	Construction of Administrative building (Extension)	975000
27	Construction of Administrative building	3700000
<b>Sugarcane Research Station, Cuddalore</b>		
28	Construction of Compound wall	3413000
29	Construction of New Administrative building	5000000
<b>Krishi Vigyan Kendra, Kanyakumari</b>		
30	Construction of Administrative building	5000000
31	Other construction works/ repair works / other works – Totalling 312 Numbers	5,66,19,354
		<b>17,23,57,354</b>



## ANNEXURE II

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