

33rd Convocation

Wednesday, 19th December 2012



Tamil Nadu Agricultural University
Coimbatore



Welcome Address

By

Dr. K. Ramasamy
Vice-Chancellor

**TAMIL NADU AGRICULTURAL UNIVERSITY
COIMBATORE**

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His Excellency the Governor of Tamil Nadu and Chancellor of Tamil Nadu Agricultural University, Honorable Minister for Agriculture, Govt. of Tamil Nadu and Pro-Chancellor of Tamil Nadu Agricultural University, renowned Agricultural Scientist, Dr.S.Ayyappan, Secretary, DARE and Director General, ICAR and the Chief Guest of this occasion, Members of the Board of Management, Members of the Academic, Research and Extension Education Councils, Faculty Members, University Officers, Graduates of the year, Mass Media personnel, Distinguished Guests, Dear Students and their Parents, Ladies and Gentlemen, I take great privilege in extending a warm welcome to the 33rd Convocation of the Tamil Nadu Agricultural University.

Indeed, I feel elated to welcome His Excellency the Governor of Tamil Nadu and Chancellor of this University to this 33rd Convocation. Tamil Nadu Agricultural University is indebted to His Excellency, who has kindly consented to preside over this Convocation.

His Excellency the Governor is admired by all for his vision, commitment, courage and farsightedness. The growth of this University would reach to the peak with the able guidance of His Excellency.

It is a great honour and privilege to whole heartedly welcome the Hon'ble Minister of Agriculture and Pro-Chancellor of the Tamil Nadu Agricultural University to this 33rd Convocation. With a view to get maximum benefit for the farming community, entrepreneurs, academicians and policy makers, he has taken keen interest in making several modifications in the agricultural policies. Tamil Nadu state could see the phenomenal growth in agriculture and is being pointed out by the Central Govt. as a role model, only because of his meticulous planning implemented with his political and multi disciplinary experiences.

I feel honoured and delighted to welcome Dr.S.Ayyappan, Secretary, DARE and Director General, ICAR, who served in the Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries as Founder-Chief Executive of the National Fisheries Development Board. He has also chaired numerous committees, working groups, and task forces in Ministry of Agriculture. Dr.S.Ayyappan is a well known scientist and has published extensively in areas of fisheries, limnology and aquatic microbiology.

I am greatly honoured by extending my warm welcome to our most distinguished Guests, Members of the Parliament,

and Members of the Legislative Assembly. I take pleasure in welcoming the Agricultural Production Commissioner and Secretary, Secretary (Finance), Members of Board of Management, Academic, Research and Extension Education Councils of this University, Officials of the Line Departments, University Officers, Teachers, Scientists, all other Staff Members, Retired Teachers, Progressive Farmers, Graduates and their Parents, Students and Press personnel.

On this great occasion of the 33rd Convocation, I take privilege to articulate the major accomplishments of this University.

Tamil Nadu Agricultural University (TNAU) is one of the most prestigious Universities among the 53 State Agricultural Universities and 4 Deemed Universities of India. The University has been honoured by the public and private institutions and is striving hard to keep up the status and serve as a role model for the whole nation. This University being forerunner in Teaching, Research and Extension, encompasses 9567 human manpower comprising 1197 teaching (12.3%), 1261 non-teaching (12.9%), 2615 grass root employees (26.8%) and 4691 students (48.0%). I am happy to inform that 61% of the student community is female gender.

TNAU, one of the global hubs of excellence, has taken its strides to lead India, in Agricultural academics, research and extension. At present, TNAU is offering the 13 undergraduate degree programs, all of four year duration (eight semesters) in 11 constituent colleges.

During 2012-2013 academic year, a total of 1597 students got admitted in undergraduate programme while 379 candidates in 38 faculties of M.Sc. (Ag.) / M.Tech (Ag.). Of them, 259 are from Agriculture, 44 from Horticulture, 34 from Engineering, 28 from Forestry 11 from Home Science and 3 Dual degree students. As much as 173 candidates comprising 127 Agriculture, 23 Horticulture, 16 for Agrl. Engineering, 5 for Forestry and 2 for Home Science were admitted for doctoral programme. ICAR has also recognized the caliber of the University and assigned with the responsibility of developing e-courses for the agriculture degree programme under National Agricultural Innovation Project. The Directorate of Open and Distance Learning is offering an exclusive undergraduate degree programme (**B. F. Tech.**) open for those interested in farming, besides three PG degree and five PG diploma programmes, one diploma and 21 certificate courses. A total of 463 students have enrolled.

Five software packages were developed and successfully implemented for effective examination data management and processing with user friendly Graphical Interface for easy navigation. TNAU-Examination Management System (TNAU EMS) is new online, integrated, secured and web-enabled examination management software with networking of all constituent and affiliated colleges. The software supports online course registration and approval, Course Teacher assignment and uploading of marks.

Besides, the University has 36 Research Stations for agro technology development and 14 Farm Science Centers (KVKs) for outreach.

The researchable areas / needs of the farmers of the state are ascertained through the Annual Research Workshops, Scientific Workers Conference, and through Research and the Extension Education Councils held annually. Based on the issues raised in the meetings by the officials of the development departments during monthly zonal workshops and the farmers' representatives through Transfer of Technology (TOT) centres, the scientists of the university formulate the need based research projects. The problems are prioritized based on their intensity and availability of manpower. The Research Project Advisory Committee of the University meets regularly and reviews the projects received from the scientists for their relevance to current issues and offers the comments or clear the projects. As much as 1210 University projects are being in operation.

Apart from such University projects, the scientists also compete and obtain projects from the Indian Council of Agricultural Research, Department of Science and Technology, Department of Biotechnology, Government of India, Private Agencies and Foreign Institutions to the tune of 600 lakhs through 73 projects. Untiring efforts of the scientists with team approach resulted in the outcome of 776 crop varieties, 157 farm implements and more than 1500 management technologies. This year too, **13 crop varieties**

(TNAU Rice ADT 50, TNAU Maize Hybrid CO 6, TNAU Sugarcane Si 8, TNAU Coconut ALR (CN) 3, TNAU Papaya CO 8, TNAU Coccinia CO 1, TNAU Bottle Gourd Hybrid CO 1, TNAU Ash Gourd Hybrid CO 1, TNAU Malai Vembu MTP 1, TNAU Mushroom CO (TG) 3, TNAU Niligris Kufri Potato 1 (Kufri Neelima), TNAU Blackgram VBN 7 TNAU Coconut VPM 4 (Kera Keralam), **five agricultural implements** (Areca nut harvester, Manually operated line marker, Tractor operated multipurpose hoist, Improved coconut tree climber and Aerial access hoist for coconut harvesting) and **three management technologies** [Subsurface drip fertigation system, Biocolour from beetroot and Soil Test Crop Response (STCR) based Integrated Plant Nutrition System (IPNS) for agricultural and horticultural crops] have been released for the benefit of the farming community.

Pioneering works on Systems of Rice Intensification, Precision farming, Sustainable Sugarcane Initiative, Biological control of epidemic pests, post harvest processing and value of addition of agriculture produce, automatic weather based cropping system, farm mechanization, biotechnological and nano technological interventions in improving the crop productivity, improvements in biofuel, hi-tech horticultural crop production including protected cultivation are few of the noble contributions of TNAU not only to the state but also to the nation. Research prioritization of the University aims the following:

- Reducing the yield gap in rainfed areas
- Improved cultivars tolerance to biotic and abiotic stress
- Quality grains for health and nutrition
- Cropping systems to suit the climate change
- Mechanization for seed to seed and seed to serve to surmount the labour shortage
- Enhancing seed replacement rate
- Soil water conservation
- Evolving vibrant marketing strategies

All the research activities are triggered in line with the goal of the State Government to achieve the food production of 135 lakh tonnes as well as to triple the income of the farming community to lead a prouder standard of living.

The Directorate of Extension Education plays a major role in transferring technologies to farmers in close collaboration with the State Department of Agriculture. The **State level** seminar on attracting youth towards in agriculture was organized on 29th December 2011 at TNAU to sensitize the youth and to retain them in agricultural activities.

The **Agricultural Technology Information Centre (ATIC)** serves as linkage and coordination centre for dissemination of technologies from TNAU research system to farmers and other users. The Farm Advisory Service & Diagnostic Team consists of multidisciplinary scientists

regularly visiting farmer's field for providing solution to the field level problems and offering technological guidance to the farmers.

Community Radio is an effective tool to disseminate farm technologies to the farming community living around 18 KM from the Radio Station. The instantaneous information on weather, market prices, forecast for sowing in relation to marketability etc., are being broadcast apart from the technical guidance by Scientists, sharing the experiences of farmers form the broadcast content of every day.

Trainings to extension personnel are being conducted on 36 important topics. Trainings are also being organized for the benefit of farm women and self help group members on 43 agriculture and allied topics. Training to probationary Deputy Collectors, Deputy Registrars of Cooperative Societies are also organized through the Training Division. Training on agriculture and allied enterprises are also organized for the benefit of Panchayat Presidents, Councilors in collaboration with Department of Rural Development, Govt. of Tamil Nadu. Training programme on Agricultural Marketing Awareness in collaboration with National Institute of Agriculture Marketing, Jaipur are some of the important events undertaken by the Department of Market Extension for facilitating efficient marketing of agricultural commodities.

TNAU Agri-tech portal holds around three and half lakh pages in Tamil and English with multiple media content.

The Portal (<http://agritech.tnau.ac.in>) has been visited by is 7,52,345 viewers with 450 Daily Visitors, with an average on site time of 12-18 minutes hitting 35-60 pages per day, 2945 e-mails queries and 125-140 new visitors every day. Now the Government of Tamil Nadu has taken up the portal initiative as flagship programme under National e-Governance and Tamil Nadu State e-Governance to share all developmental programmes for the well-being of the farming community.

Dynamic Market Information for 13 important south Indian markets namely Chennai, Bangalore, Coimbatore, Mettupalayam, Hosur, Thalaivasal, Trichy, Kumbakonam, Madurai, Tirunelveli, Oddanchathiram, Cochin and Panruti for 153 difficult commodities including fruits and vegetables are being uploaded regularly in the web. The market price information is also being sent to 42000 farmers through short messaging service. Major trader database has also been uploaded in the website.

Expert System for rice, banana in precision system, coconut, ragi and sugarcane have been developed in English, Tamil, Malayalam and Kannada versions. Expert system for animal husbandry (Cattle and Buffalo, Sheep and Goat and Poultry) is also under development in this centre in the above languages.

TNAU e-extension centre has developed exclusive Knowledge portal for advancing agriculture production and productivity for the Indian farmers in collaboration with IFPRI.

The location specific information has been developed for Thanjavur and Tiruvarur districts and national technologies and global technologies have been loaded in this portal (<http://www.advanceagripractice.in>). The magazine published by TNAU '**Uzhavarin Valarum Velanmai**' is being subscribed by 10,859 members.

The "Domestic and Export Market Intelligence Cell (DEMIC)" was established in the Centre for Agricultural and Rural Development Studies (CARDS) during 2009 to provide market advisory for important agricultural commodities continues to disseminate the forecast before sowing and during harvest for 60 commodities.

Through Department of Trade and Intellectual Property, seven agricultural inventions of TNAU received patent, 23 inventions have been filed and 18 inventions have been identified for their patentability characters for filing. Further, inventions received from the farmers were also filed for patent. In association with the Department of Plant Genetic Resources, 64 crop varieties have been registered under Protection of Plant Varieties and Farmers Rights (PPV&FR) as extant varieties and currently 9 crop varieties have been identified as extant varieties for registration. The Department provided expertise services to Geographical identity (GI) registry for granting GI for agricultural commodities and undertakes registration of agricultural commodities as GI.

Research Achievements

Public and private institutions numbering more than 35 volunteered to enter into MoUs for research and education collaboration.

Notable research achievements made during the last one year are furnished below:

- Seed production (10252 quintals) in 36 breeder seed production centres of TNAU for 175 varieties of different crops such as cereals, pulses, oilseeds, cotton, forage crops and vegetables.
- Planning to install "Automatic Seed Vending Machines" in commercially important places to make available seeds to the customers on his own choice without manual intervention.
- Determination of biochemical and molecular changes associated with seed deterioration in various agricultural, horticultural and silvicultural crops.
- Improving major crop varieties for their tolerance against biotic and abiotic stresses and enhanced nutritional quality through genetic transformation and marker assisted breeding (CO 43, White Ponni and ADT 43 - salinity tolerance, submergence tolerance and drought tolerance).
- Identification of novel Bt genes cry2AX1 expressing remarkable level of resistance to target pests.

- Mango canopy management for 150 percent yield increase in Alphonso mangoes by pruning.
- Successful grafting of persimmon fruits by whip and a tongue method.
- Brinjal grafting technique by using bacterial (or) fusarium wilt and nematode resistant root stock *Solanum torvum* and net house technology for fruit and shoot borer management.
- Identifying most suitable media consortia for the Nilgiris carnation with bio-control agents.
- Development of micro tubers from gloriosa seeds.
- Crop geometry modification to suit mechanization for pulses.
- Moisture stress management by supplemental irrigation for rainfed and rice fallow green gram and black gram using mobile sprinkler and DAP 2% foliar spray.
- Agro Advisories based on bi-weekly medium forecasts of IMD to take up important and strategic decisions like sowing, intercultural operations, irrigation, plant protection measures, harvest and post harvest decisions for the farmers of Coimbatore, Erode and Tiruppur districts.
- Expansion of Automatic weather stations (AWS) to 161 Blocks of Tamil Nadu.
- Distribution of crop boosters viz., TNAU Pulse Wonder, TNAU Maize Maxim, TNAU Cotton Plus, TNAU Groundnut Rich and TNAU Sugarcane Booster to the

farming community besides production and distribution of TNAU coconut tonic and supply to the farmers of Tamil Nadu, Andhra Pradesh and Kerala.

- Production of Vermicompost to the tune of 100 tonnes.
- Evaluation of fertilizer potential of seaweed saps on different crops.
- Exploring microbial resources for nutrient management and soil fertility.
- Selection and development of microbial pigments and its applications in food and textile industries.
- Evaluation of Nano-based agri inputs (seed, fertilizers, herbicides, pesticides etc.), nano food system (encapsulation and packaging), early detection of pests, diseases and nutrient deficiencies and nano-remediation of aquatic and soil pollutants for their efficacy and interactions in soil-water-plant systems.
- Hyperspectral remote sensing for identifying nutrient deficiencies in crops, soil clay mineral identification, land degradation and assessing pest damage & farm level nutrient budgeting in agro-climatic zones of Tamil Nadu.
- Developing technologies for utilization of wastewater from paper mill, tanneries and distilleries for agriculture and other end users and for utilization of municipal solid wastes for sustainable agriculture and bioremediation of contaminated soils in different agro-ecological zones.

- Self-propelled dry land weeder for weeding and interculture in between standing rows of cotton, maize, tapioca, green gram, black gram, chillies and sorghum crops.
- Self - propelled eight row direct rice seeder for sowing pre-germinated rice seeds.
- Clonal technology for propagation of *Melia dubia* and *Dalbergia sissoo* as alternate sources of pulp wood.
- Conversion of plantation residues of Casuarina into biofuel briquettes.
- Proposal for harvesting 18,000 m³ of rain water in TNAU Campus (52,500 m²) to meet nearly 50 % of water demand.
- Mass Production and Release of Papaya Mealybug Parasitoid, *Acerophagus papayae* (> 57.00 lakh) in all the seven Colleges, 36 Research Stations and 14 KVKs.
- Forewarning for Pest and Disease in popular Tamil and English dailies regarding IPM to be adopted for the entire state.
- Monitoring of pest and diseases in soil, plant, water, animal feed concentrate, egg, milk, oil, and food besides studies on occupational health hazards, fixing base line data and monitoring resistance in insects to insecticides.
- Monthly training programmes for popularization of bee keeping.

- Supply of 5694 kg of *Pseudomonas fluorescens* and 3477 kg of Trichoderma viride formulations, 7905 mushroom bed spawns and 91 mushroom mother spawns to the farmers.
- Production of 4250 virus eliminated H226, CO2 and Kunguma Rose tapioca cuttings by meristem culture.

SRI power weeder, solar crop drier and TNAU Stored grain management kit have been commercialized through Agribusiness Development with M/s Basaras Biocon (India) Pvt.Ltd, Chennai, M/s Rich Phytocare Pvt. Ltd, Theni, M/s Unique Fabricators, Coimbatore and M/s Melwin Engineering, Coimbatore besides receiving royalty from three companies (M/s Bhuvicare Pvt.Ltd, Tirunelveli, M/s Nitta gelatin India Ltd, Cochin, M/s Renny Marketing, Coimbatore).

TNAU shoulders the responsibility of fulfilling the requirement of Tamil Nadu farming community with technical support. In view of mitigating the water scarcity in Cauvery Delta Zone, it is proposed to prepare 25,000 liters of Pink Pigmented Facultative Methylo troph (PPFM: Methylobacterium sp.) and supply to farmers with the help of State Department Personnel so as to apply in the flag leaf stage for mitigating water stress in rice.

It gives me immense pleasure that Tamil Nadu Agricultural University is glorified by the gracious support by the Chief Minister of Tamil Nadu.

ACKNOWLEDGEMENT

Before I conclude, I wish to place on record my sincere thanks to His Excellency, the Governor and the Chancellor, Hon'ble Minister for Agriculture and Pro-Chancellor, and the Chief Guest Dr.S.Ayyappan, Secretary DARE and Director General, ICAR for their presence at this Thirty third Convocation. I also thank the distinguished guests for gracing this Convocation. I would also like to thank the members of the Board of Management, Academic, Research and Extension Education Councils for their sustained interest and guidance in the various activities of the University. I thank the mass media who collectively helped us to propagate technologies for the betterment of stakeholders. To the members of the faculties, other staff members and students, I wish to convey my deep sense of appreciation for kind and continued co-operation for the development of the University. I am confident that with involvement and ever growing support from the Government of Tamil Nadu, the University will be in a position to meet its mandates in an appreciable manner. I take the opportunity to congratulate all graduates who are receiving the Degrees and Distinctions.

Once again I welcome you all to this Convocation.



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