

FOREST COLLEGE & RESEARCH INSTITUTE

TNAU, METTUPALAYAM

ACTIVITIES AND ACHIEVEMENTS

2019

I. Genesis

Realizing the pivotal role the forests play in the economic prosperity and ecological stability of a country, Tamil Nadu Agricultural University started as early as in 1973 a full – fledged department of Forestry as a forerunner to a college of forestry. Though mandated then to carry out research in agroforestry, plantation forestry and exotic forestry the department also assumed the onus of offering a course in agroforestry to the B.Sc. (Agri.) and B.Sc. (Hort.) degree programmes, with drift of time and the concomitant multiplication of problems encountered by the State Forest Departments, Tree Growing Farmers and Wood based industries, the need for enlarging the education and research base was keenly felt. To sub-serve these needs a forest research Station encompassing an area of 200 ha was started in February 1976 as an adjunct to the Department of Forestry in the sylvan surroundings of a reserve forest at Mettupalayam. The station has since been elevated to the status of Forest College and Research Institute in 1990 with the triple mandate of teaching, research and outreach activities

II. The Goals

A. Forestry

- ❖ Improvement, utilization and conservation of forest genetic Resources.
- ❖ Enhancing productivity of timber and non timber yielding species through precision silvicultural practices on an eco-friendly manner.
- ❖ Creation of self reliance in nutritional and food security through multi functional agro forestry systems.
- ❖ Development of technologies for wood product utilization and the associated value addition process.
- ❖ Promotion of effective collaboration and communication among public agencies and private industries towards production, processing conservation and sustainable utilization of forest genetic resources.
- ❖ Ensuring the tree and forest cover increase towards sustainability and climate mitigation processing, research and extension activities.

B. Sericulture

- ❖ Attaining excellence in Sericulture education, research and transfer of technology to the user group for the improvement of their livelihood.

- ❖ Imparting education in the branches of Sericulture and allied activities.
- ❖ Evolving high yielding, disease resistant varieties of mulberry and silkworm races.
- ❖ Improving the cocoon productivity through innovative scientific technologies.
- ❖ Updating the knowledge of the farmers in the field of Sericulture sciences through appropriate extension strategies.

II. Overview of the Institute and Organizational Structure

The Forest College and Research Institute (FC & RI) is located at Mettupalayam in the sylvan surroundings of Jakanari Reserved Forest, about 40 km north of Tamil Nadu Agricultural University (TNAU) main campus, Coimbatore. It is situated over a sprawling expanse of 200 ha of reserved forest, located on the foothills of Nilgiris on the Kotagiri road. The college is perched at an altitude of 300 m with a longitude of 11.19°N, latitude of 77.56°E and enjoys an annual rainfall of 830 mm. The mean maximum and minimum temperature are 32.2°C and 23.2°C respectively.

A. Forestry

As the activity gets intensified, location specific problems warranting solution are also found to be in the ascendancy. Many plantation activities suffer due to non availability of potential varieties suitable to varied edapho-climatic conditions. All these underpin, a strong institutional mechanism in order to create professionalism in forestry education and research to obtain higher yield through sustainable forest and plantation management. In an endeavor to increase opportunities for students and broaden excellence in research and teaching in the areas of precision silviculture, multifunctional agro forestry, value addition technique and clonal propagation techniques of tissue culture and molecular markers in biotechnology as well as boosting support for collaborative, high-impact research, 136th Academic Council approved to establish various departments. During 1998, the departments namely Tree Breeding, Silviculture, Agro-forestry, Forest Soils and Forest Biology were established and these departments were restructured during 2014 as Forest Biology and Tree Improvement, Silviculture and Natural Resource Management Agro-forestry and Forest Products and Wildlife. The established college with various departments quickly established itself as one of the top institution in the country. Faculty members of various departments of FC&RI have made pioneering contributions in a wide array of research areas. The expansion in to various departments also enhances competency of the existing projects and to create new programmes. Expanded research also means more opportunity for students at both the graduate and undergraduate levels, as student research is a hallmark of the FC&RI.

Table 1. Emergence of New Departments and Present Staff Position

Name of the Department	Year of Start - Restructured	No of Staff
Department of Agro -forestry	2014	7
Department of Forest Products and Wildlife	2014	6
Department of Silviculture and Natural Resource Management	2014	5
Department of Forest biology and tree improvement	2014	6
Department of Basic and social sciences	2018	6
Department of Sericulture	2014	11

B. Sericulture

Department of Sericulture was established in 1980 in the Tamil Nadu Agricultural University, Coimbatore. The department was offering Post Graduate Diploma in Sericulture till 1990 to State Department of Sericulture functionaries as part of Human Resource Development. In order to reinforce the sericulture activities through cost effective technologies for improving the social economic status of sericulture farmers, TNAU commenced B.Sc.(Sericulture) degree programme during 2011 and the third SAU to offer this degree programme. M.Sc. (Ag) and Ph.D. Programmes in Sericulture were started in the year 1990 and 2010, respectively. Department of Sericulture was shifted to Forest College and Research Institute, Mettupalayam in July 2014 since then the department has been involved in triple mandate of teaching, research and extension.

II. Education

Under Graduate Programme

A. Forestry

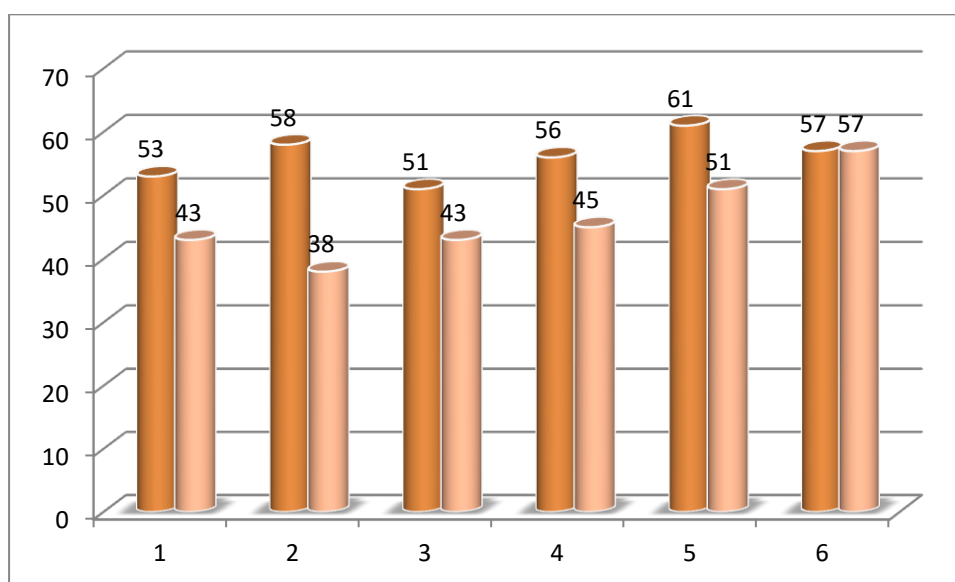
Imparting a high quality education in forestry discipline is highly warranted in order to prepare the students to be entrepreneurial and steep into a variety of perspectives by exploring many areas and intellectual leaders to address the problems and challenges in forestry. TNAU was one among the five SAUs then identified by the ICAR for starting B.Sc (Forestry) programme and professional Forestry Education as a university degree programme was first started in the SAUs in 1985 by ICAR. The forestry education in the university started with trimester system of education incorporating judicial mixture of forestry, agriculture, horticulture, basic sciences, soil science,

animal husbandry, mathematics, engineering etc., with a maximum of 209 credits. This syllabus system was followed for 8 batches. The University from 1992 onwards changed the educational pattern into semester system and accordingly the forestry curricula and syllabi have been changed and updated taking into consideration the needs of various stake holders. B.Sc. (For.) degree programme is offered with 74 courses and credit load of 150 hrs. The expansion, the largest in the more than 45 years history of the department, comes in the context of rapid growth in student enrollment, which is now the largest undergraduate concentration at FC&RI. The plan also reflects recognition of the ever-expanding role of forestry education among the various professional degrees. .

Table 1. Students Enrollment – Bachelor of Forestry

Year	No of Students enrolled	No of students passed	Pass %
2011	60		
2012	60		
2013	60 (53)	43	81
2014	60 (58)	38	65
2015	60 (51)	43	84
2016	60 (56)	45	80
2017	72 (61)	51	83
2018	72 (57)	57	100

Figure 1. Students Enrollment – Bachelor of Forestry



III. The Educational Composition to meet the market demand

A. Forestry

The salient features of the semester based educational system are inclusion of fundamental, technological, management and application oriented courses in forestry. The special feature of the syllabi was inclusion of cafeteria courses wherein the students were able to choose the courses of their interest. Currently, the semester system is continued with paradigm shift in syllabi content and examinational pattern. The University first time introduced the online examination pattern coupled with professional electives in order to create skill and expertise on Forest Management Technologies using the traditional and ICT based technological advancement. The salient features of the current educational system are furnished.

(i) Equipping Skills on Forest Administration

The students stay in a forest division for a period of one semester, in various ranges of forest division to study forest administration, forest management, forest protection, forest utilization and working plan. The students are inculcated with theoretical and practical knowledge and skill in the field of forest management, in functioning and activities of NGO in up-lift of village community around the NGO centre, in Agroforestry model practiced by the farmers through training in KVK, one week duration training in Special Task Force (STF) Camp of Police Department and thus the students are getting better motivation and mind set up for their career in Forest Administration.



(ii) Industrial Tie-up Programme

For the university, there are two aspects to industry tie-ups. The first is developing a regular course curriculum which is in line with industry requirements and the second is where the students take the learnings from industry and link back to themselves for deeper learning and research skills. The current educational system incorporated industrial tie-up programme wherein the student will be attached with the wood based industry and the art of economic and business skill prevailing in the industry is taught to the professional forestry students.

(iii) Professional Electives

The educational system has been upgraded by introducing professional electives in order to create skill and expertise and to develop professionalism in various subjects of forestry. Accordingly, elective courses on tree breeding, Commercial Forestry, Sustainable Agroforestry, Forest Protection, Plantation Forestry and Post Harvest Technology and Tree Improvement have



been inculcated in the syllabi to benefit the graduating forestry students to get specialization at undergraduate level and to pursue the specialization at post graduate level.

(iv) Experiential learning

The under graduate education curriculum has inbuilt mechanism on promoting skill based learning by undertaking course on experiential learning with the objective of promoting entrepreneur skills among the students using forestry based technologies. Most popular training on quality seedling production on commercial basis by in building all techniques is being widely followed by the students. This system of learning also gives benefit sharing to students by the way of selling seedlings, produces, products etc. developed by the students.



v) Project Work

To inculcate the art of research and management skill to the professional forestry student, project works have been incorporated in the syllabus to create self reliance on forestry educational research to the graduating students.



iv) OMR Based Examination

The University has made a shift in examination pattern and introduced the concept of ICT in forestry education. Accordingly, the examination pattern has been shifted from traditional writing based examination system to computer based online examination system which resulted in utility of ICT in forestry education. Then the examination pattern has again been shipped to OMR based examination system to cater to the needs of current competitive examination patterns.

vii) Syllabus revision

The University revises the syllabus of Undergraduate programme once in every four years. During the syllabus revision, the views of all stake holders are sought and based on the National and International demands, the forestry syllabi and curricula is tailored and designed once in every four years for undergraduate educational programme.