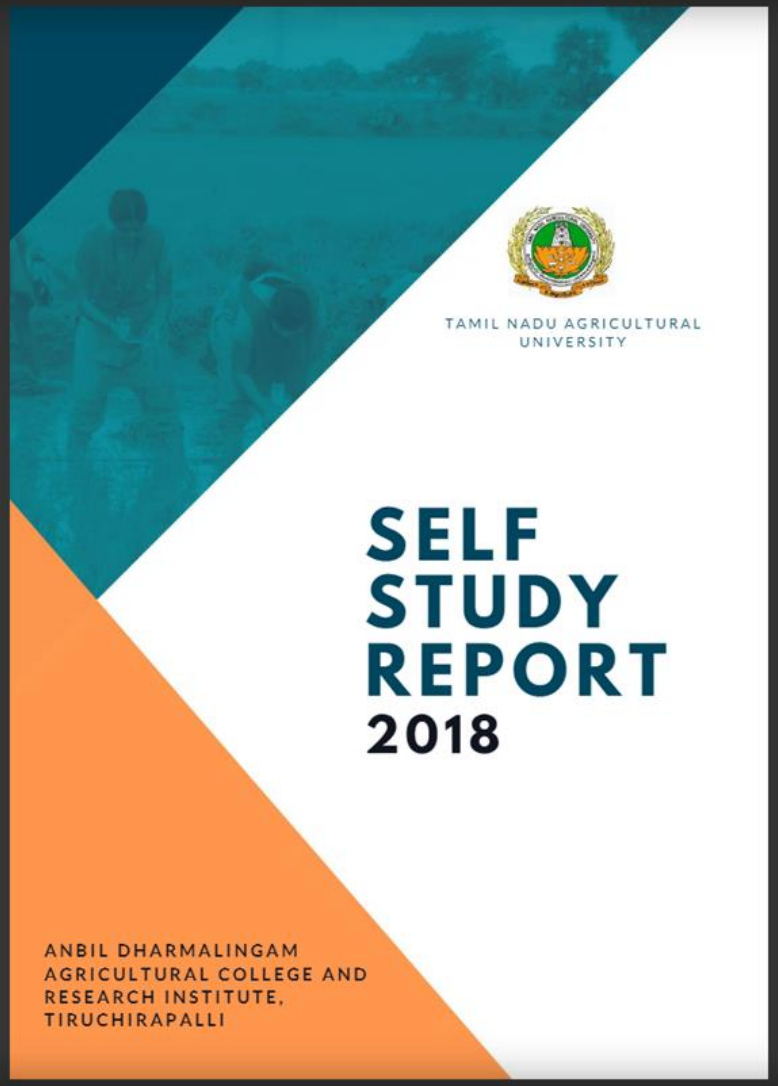


EXECUTIVE SUMMARY

Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI) is a constituent college of Tamil Nadu Agricultural University. It was first started in Kumulur, Lalgudi Taluk of Trichirappalli district with an annual intake of 40 students in the year 1989. Later, the college was shifted to Navalur Kuttapattu, Srirangam Taluk of Trichirappalli District in 1992, to the erstwhile Soil Salinity Research Centre campus.

The college has five departments viz., Agronomy, Soil Science & Agricultural Chemistry, Plant Breeding and Genetics, Plant Protection and Social Sciences. The college offers one undergraduate programme, B.Sc. (Hons.) Agriculture and Postgraduate programmes in Agronomy, Soil Science, Genetics and Plant Breeding and Entomology. There are 51 teaching, 3 lab assistants, 18 technicians and 26 provincial skilled mazdoors supporting the administrative, teaching, research and extension activities of the college. The Centre of Excellence on Soil Health and Farm Women Knowledge Centre are also functioning from this College.

The B.Sc (Ag) programme has been offered at the Anbil Dharmalingam Agricultural College and Research Institute, Navallur Kutapattu, since its inception in 1992. The B.Sc. (Hons.) Agriculture was started in the year 2017. Currently, there are 412 students undergoing UG programme in this college and of this 37 per cent are boys. Among the students, 19 are nominated by ICAR, New Delhi.

A Students Club is functioning at the College. Students select leaders to manage the activities of 12 clubs. Each club focuses on improving the skill of the students. Students take part in competitions organized by institutions within the State and in other States at national level sports and academic events.

The Department of Plant Breeding and Genetics was started in ADAC & RI., Trichy in 1989 with the twin objective of developing quality manpower in Plant Breeding and Genetics and to cater the needs of farmers of the region by development of suitable varieties in different crops. Post Graduate (PG) Program was started in this Department during 2014-15. In PG program, 13 core courses and 6 allied courses are offered. So far, a total of eight PG students have graduated from this Department.

The Department of Agronomy was established in 2011. The post graduate programme in Agronomy was started during 2015 -16. The centre has six core faculty trained in different disciplines for teaching PG programme. The research programs mainly focus on designing crop management technologies using agronomical, biological and engineering tools in sodic soils.

The M.Sc. (Ag.) programme with specialization in Agricultural Entomology was started during the academic year 2014 -15. The department has well trained core faculty members in different areas of entomology. So far, 10 students have completed and 11 students are currently undergoing the PG programme.

During 2011, at ADAC&RI, Department of Soil Science and Agricultural Chemistry was established and the Masters Degree Program in Soil Science was started during 2013. The students are admitted to the M.Sc. (Agri) Soil Science & Agrl. Chemistry / M.Sc. in Soil Science program through TNAU common entrance test conducted by TNAU since 2013. The Department offers 12 major courses, 3 supporting courses, 6 compulsory non credit courses and 3 allied courses during first year of the course work. During the second year, students conduct research work based on key research problem identified at various scientific forums. The Department has collaborative research and teaching programs with leading Agricultural Industries like EID Parry Ltd., Kothari Sugars, Chemplast etc in the form of fellowships and industrial exposure etc. Few students get the fellowships based on merit as student SRF/JRF to carry out the research projects.

Till date 1354 students have been graduated from this college. Several alumni are working as agricultural scientists, academicians, and officials in private and public institutions and as agri- entrepreneurs. Notably, this college has produced six IAS and IPS officials, respectively and four IRS and IFS officials, respectively. Among the eight students who completed M.Sc in Genetics and Plant Breeding, two are pursuing Ph.D. Program, two are working as Senior Research Fellows, one as Technical Officer in IIHR, Bangalore and one as Agricultural Officer, Department of Agriculture, Govt. of Kerala. Since 2013, fifteen students completed the master's degree in Soil Science and about four students are placed in different organizations as teaching faculty and research scholars in Academic and Research Institute.

The College has released three high yielding rice varieties (TRY 1, TRY (R) 2 and TNAU Rice TRY 3), one Ragi variety (TRY 1) and one Guava variety (TRY 1), all with good tolerance to sodicity. The rice variety TRY 3 and ragi variety TRY 1 are very popular among the farming community. Several technologies have been developed and significant among them are technologies for reclamation of sodic soils – gypsum, spent wash and alternative sources, reclamation of alkali water using gypsum bed technology and development of agro forestry using spot reclamation auger technology.

ADAC & RI, TIRUCHIRAPALLI

IPDM for Onion and Chillies have also been developed. Instant Residue Diagnosis on Crop, Plant sample has been sent for patent approval. Weed management techniques for paddy and pulses and integrated farming system suitable for problem soils of Tamil Nadu were developed by the college. The college was awarded 'Best College' of Tamil Nadu Agricultural University by TNAU during the year 2014.

ADAC & RI, TIRUCHIRAPALLI

Contents

SELF STUDY REPORT FOR COLLEGE

6.5. Self Study Report for the College

Genesis of the College

Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI) is a constituent college of Tamil Nadu Agricultural University. It was first started in Kumulur, Lalgudi Taluk of Trichirappalli district with an annual intake of 40 students in the year 1989. Later, the college was shifted to Navalur Kuttapattu, Srirangam Taluk of Trichirappalli District in 1992, to the erstwhile Soil Salinity Research Centre campus. In 1995, a new academic block was constructed with class rooms and laboratories in the same campus and the college was shifted to the block. The college has five departments viz., Agronomy, Soil Science, Plant Breeding and Genetics, Plant Protection and Social Sciences. The college offers one undergraduate programme, B.Sc. (Hons.) Agriculture and Postgraduate programmes in Agronomy, Soil Science, Plant breeding and genetics and Entomology. However, advance research, education and extension activities are carried out in 23 subject disciplines. There are 51 faculty members. They constitute the prime scientific manpower to cater to the academic and research needs, serve the farming community and contribute to agricultural development. Besides there are three lab assistants, 18 technicians and 26 provincialized skilled mazdoors supporting the administrative, teaching, research and extension activities of the college.

6.5.1 College Administration

The overall administration of the academic, research, extension and other activities of the college including infrastructure development is done by the Dean of the College and he is duly assisted by various teaching, technical and non-technical members of the institution.

6.5.1.1 College Dean's Office Establishment

S. No	Particulars		Response
1.	Whether Dean's post is sanctioned as per ICAR model Act/ UGC guidelines	:	YES
2.	Date of Selection of current Dean	:	23-09-2017
3.	Mode of Selection	:	Appointment
4.	Tenure	:	3 years
5.	Total No. of Staff in Dean's office	:	
a	Technical	:	19
b	Non-technical	:	2
7.	Infrastructure facilities (Details on infra and networking facilities available)	:	Computers with Intel core available in the Dean's Office with UPS Facility. Copier facility also available under networking mode with Wifi connectivity. CCTV cameras at college and hostels have been installed for effective monitoring of staff, students and visitors.

The college has Dean's office, Dean's chamber, office for PA to Dean and Education Cell. There are three superintendents and three assistants supporting the work of the office of the Dean. Besides, 13 technical staff and two non-technical staff are posted in the office of the Dean. Estate unit, Health centre and physical education units are directly monitored by the Dean of the college. Office of the Dean is equipped with computer, copier, intercom facility and it is enabled with Wi-Fi facility. Biometric attendance system is followed in this College to monitor the attendance of the staff. The office is enabled with CCTV camera surveillance.

Manpower at Dean's Office

Sl. No.	Name of the Post	No. of Posts
1.	Dean	1
A. Establishment		
1.	P.A./P.S. to Dean	1
2.	Superintend (Administrative)	1
3.	Superintend (Academic)	1
4.	Superintend (Accounts)	1
5.	Assistants	3
7.	Permanent Un Skilled Mazdoor (Messenger)	1
8.	Driver	2 + 2*
9.	Farm Manager (Asst. Prof.)	1**
10	Junior Assistant[$]	1

** Two drivers are permanent employees, while two drivers are engaged on consolidated salary*

*** Asst Professor (Farm Manager) working in the Department of Agronomy*

$ He is also in charge of farm store keeping

6.5.1.2 Monitoring Mechanism for Quality Education (On-line)

TEACHING

The registration of courses for each semester is made through online mode. The conduct of theory and practical classes are reviewed by Heads of the Departments and the Dean.

Undergraduate degree programme

Mid semester, practical and final theory examination are conducted to assess the students

Assignments are given to students in each course related to the curriculum

Model examinations are conducted to the students during the first year

Feed back on course content and teaching is taken from the students at the end of every semester. The feed acted is acted upon.

External system of evaluation followed for both theory and practical of each course

Academic counseling is given for a group of students (10 Nos) by the assigned staff counselors.

Year coordinator meets the respective batch students every week during the assigned time to coordinate the activities.

Post Graduate degree programme

The unannounced, Quiz announced, Quiz practical and final theory examinations are conducted to evaluate the students.

Periodic assignments, term papers, presentation of advancements in a particular science related to course curriculum are done by the students on each course.

The qualifying examination is conducted at the end of the course work to evaluate the students understanding about the various courses.

The thesis submitted by the M.Sc (Ag) and Ph.D scholars are evaluated by one and two external experts, respectively.

The final thesis viva-voce for the doctoral programme is conducted through public defence mode.

Each registered course of post graduate programme is evaluated by the students of the batch about content and its delivery

RESEARCH

Student Research

Presentation of outline of research work and finalization by Advisory Committee with inputs from faculty members, Heads of the Department and the Dean.

The students' research work is monitored by the chairman of the advisory committee on daily basis

Midterm evaluation and final evaluation of research work of the students are made by Advisory Committee

The periodical review of research work of all the post graduate students is made by the Dean, School of Post graduate Studies/Dean of the college

Publications of research work in peer reviewed well rated journals is mandatory. Presentation in research confluences, publication of popular articles, books and book chapters are evaluated

Faculty Research

The research project approval committee evaluates the research proposals at college level.

The progress in each research project is periodically monitored

Review of progress of research work pertaining to University Research Projects, External funded projects and AICRP is done by the Dean, Technical Directors, Director of Research and the Vice Chancellor.

Submission of annual report for ongoing and completion reports for closed projects.

Progress of research is reported every month in the monthly report of the individuals and the Heads of the Department.

EXTENSION

Monitoring committee to assess occurrence of pests and diseases in the nearby locality of Tiruchirappalli district.

Assessment and management of salt affected soils of Tamil Nadu

Participation in exhibitions conducted by the Government, Private and Non-Governmental organizations.

Field visit by team of scientists on need basis to diagnose the problem and provide appropriate recommendations.

Standard Examination evaluation pattern for undergraduate programme (UG)

Mid semester, practical and final theory examinations are conducted to evaluate the performance of the students. Optical Mark Recognition (OMR) based mid-term examinations are conducted to increase the efficiency of the examination system. Assignments, demonstration and hands on experience for individual / group experiments are evaluated.

Post Graduate Programme

Unannounced quiz, announced quiz and practical and final theory examinations are conducted to evaluate the theoretical and practical understanding of the subjects. Term paper presentation and seminar presentation are also made to test the presentation skills of the students. Further, mock test and model qualifying examination are also conducted to improve their performance.

Impact of monitoring on students excellence in academics, research and extracurricular activities

Academic

Higher academic performance of students with improved OGPA

Improved enrollment of students in post graduate programme

Participation and selection for higher education in National and International Institutes.

Participation and selection in competitive examinations.

Improved placement record of the students

Research

Publications of research results in peer reviewed journals by the UG and PG students and faculty members

Winning research proposal and bagging awards for outstanding research by the faculty members

Patenting of new findings by the student

Extracurricular

Participation in national level NCC and NSS programme and bagging of national awards

Participation in sports and cultural activities at state and national levels and working towards achieving excellence and awards

Measures taken to improve the quality of education, research and extension in the college

Education

- Guest lectures are arranged for the students in the diversified areas related to agriculture
- Industrial and Institute visit related to the course by the students in each course.
- Term papers and assignments presentation at UG and PG level
- Experiential Learning Programmes are developed with enterprise orientation
- Industrial tie-up programmes are arranged in the important areas of agriculture
- Recognition / awards are given for the best M.Sc. and Ph.D. theses at the university level in various fields
- Institution of medals, awards at university level for the best performanceof UG/PG students/Scholars

Research

- Exposure to students and scientists for handling advanced equipments
- Encouraging active participation in National & International seminars, workshops, conferences etc.,
- Mandatory publication of two research articles in high impact factor journals for submission of Ph.D thesis.
- Organizing national level seminars / workshops
- Recognition / awards for the best M.Sc. and Ph.D. theses and medals and awards for the best performed PG students/Scholars.

- Thesis writing workshop for Post graduate and research students for improving the skills of the students to write international standard theses/ articles.

Extension

- RAWE/ Student READY programme to understand the problems and prospects of the farming community,
- Conducting brainstorming sessions for group approach.
- Conducting group discussion
- Models and video modules preparation
- PRA to be conducted to assess the resources availability in the village to improve the socio-economic status of the village.
- Data collected from the farmers could help to draw suitable strategy for the farmers' welfare. Training programmes to farmers and farm women on various fields like., value addition, marketing and supply chain, FPOs, crop insurance, etc.

Funds received from external agencies for the development of the college in the past 5 years

- Farmers training hostel is being constructed from NADP funds
- Modernized Dining constructed for students from NABARD
- ICAR Grants are received for improvement of class rooms, laboratories and hostels.
- Farm Women Knowledge Centre from NADP funds
- Food Processing Centre

The details of external funded projects operated in the College are enclosed in **Annexure 6.5.1.2. Additional Information about Monitoring Mechanism for Quality Education**

Monthly Meetings

The Dean of the college conducts meeting of Heads of the Department every month, and monitors the progress in teaching, research and extension activities of each department to plan the programme for the next month. He also monitors, guides and evaluates the activities of the department. Heads of the department conduct the meeting of faculty members of the respective department, evaluate the activities of the previous month and plan the activities for the next month. The Dean of the college conducts meeting of the course teachers during the middle and end of the semester for monitoring and evaluation of the undergraduate and post graduate courses. He also receives the teaching file for every semester and evaluates it.

Monthly Report

All the faculty members of the college have to prepare the monthly report of the teaching, research and extension activities and send the same to the respective Head of the Department every month. The Head of the Department monitors and reviews the activities of each faculty. The Head of the department submits the monthly report of the respective department to the Dean of the college. Dean in turn monitors and reviews the progress of activities of the department.

Annual Reports

Annual reports are prepared for the college based on the teaching, research and extension education activities performed during the year. The reports are used for measuring the performance of the college during the particular year and used for preparation of action plan for the next year.

Year Coordinator meeting

Faculty members of the college have been nominated by the Dean of the college to look after the academic matters of a particular year of the degree programme. They meet the students in the scheduled hours and monitor and guide the academic activities of the students. They also motivate the students to participate in co-curricular and extra-curricular activities.

Student Academic Counselors

A faculty member who has been nominated by the Dean of the college counsels a group of students allotted to him. He counsels the students in academic, career and personal matters. He also monitors the performance of the students during the semester and guides them to improve it.

Student Evaluation

The Dean of the college conducts students meeting every semester. He receives the feedback from the students and gives direction to the faculties. The students are providing feedback about the course teachers who have handled the classes during particular semester in a prescribed proforma. The feedback of the students is analyzed and the inadequacies are addressed.

Outcome of the Monitoring Mechanism

The monitoring mechanism is helpful to the students and faculties to improve themselves and perform effectively in the teaching, research and training environment.

6.5.1.3 CC/Board of Studies

For the Under-graduate degree programme, syllabus is revised once four years with the objective to incorporate the latest development in each field and to equip the students to meet the challenges of national/international level competitive examinations for higher studies and job placement. To start with the revision process, syllabus revision meeting is conducted at the Department level under the guidance of the Head of the Department. The newly designed syllabi and recommendations are presented in the forum of Heads of the department of the concerned subject of various campuses at TNAU, Coimbatore. In-turn the Heads of the department present it to the Deans concerned. Finally, with all revisions and recommendations, it will be presented for final approval of the Board of studies and Academic council at University level.

Whether the CC in the Department level is in place?

Board of studies meeting for the faculty of Agriculture is convened at AC&RI, Coimbatore and attended by the Dean of the college and Heads of the Department.

Whether the BoS at the college level is in place?

No. The college participates in the BOS for faculty of Agriculture convened at AC&RI, Coimbatore

Agendas submitted by the college in BoS in the last five years

Agenda for Board of studies is placed by the Dean (Agriculture) Coimbatore by receiving inputs from the colleges.

6.5.1.4 Anti Ragging Cell

The faculty members of this institution are unanimously and unequivocally committed to prevent ragging of first year students and several measures are taken by this institution to ensure a pleasant and encouraging environment for first year students. The Academic Counsellor for the senior students reinforce the ill effects of ragging first year students and discourage students from doing such acts. Round the clock supervision of first year students hostel and classroom activities, educating the students about the avenues available for seeking assistance, in case they are ragged, dos and don'ts in the campus, guest lecture from experts are some of the measures done to prevent ragging. Specific activities carried out are given below;Anti-ragging cell is formed to monitor and control the ragging activities in the college campus.

The students have to give undertaking in the prescribed proforma for not involving in the ragging activities. The students also register themselves in the anti-ragging portal (www.antiragging.in) formed by University Grants Commission (UGC).

The anti-ragging banners are also placed in the hostels and college. The students are educated about the Ragging prevention act.

Parent teacher meeting with the freshers' are conducted every year during the admission days and are explained about the ragging rules and preventive measures taken.

Regular meetings are conducted with the senior students and are sensitized with the ragging rules and consequences of ragging.

The anti-ragging cell email ID **(adacantiraggingcell@gmail.com)** has been circulated among the students to register complaints about the ragging activity in the campus if any.

The students also submit their undertaking in the http://antiragging.in

Anti ragging Committee

Chairman - Dean, ADAC&RI, Tiruchirappalli

Co - Chairman - Dean, HC&RI(W), Tiruchirappalli

Member - Professor and Head, Departments of Agronomy, Soil Science, Plant Breeding and Genetics, Plant Protection and Social Sciences. Staff Advisor, ADAC & RI, Staff Advisor (HC & RIW), Professor (Education), ADAC & RI, Professor (Education) (HC & RIW), all Year Coordinators of both colleges, Warden, Deputy Warden (Boys) and Deputy Warden (Girls)

First year students are placed in a separate hostel in the college to prevent ragging activities. Further, anti-ragging duty is assigned to the faculty from the day of admission up to the orientation day in two shifts (7.00 am to 5.00 pm and 5.00 pm to 7.00 am). Anti-ragging duty is assigned every year to all faculty members to monitor the college and hostel premises 24 hours for 30 to 45 days.

Awareness meeting is organized every year with police official from the Ramji Nagar Police station (nearest Police Station) about the legal consequence of ragging. Besides, technical personnel from the various fields are invited to give guest lecture on anti-ragging.

The students have to give undertaking in the prescribed form for not involving in the ragging activities. The students also register themselves in the anti-ragging portal (www.antiragging.in) formed by University Grants Commission (UGC). The anti-ragging

banners are also placed in the hostels and college. The students are exposed to the Ragging Prevention Act. Parent teacher meeting with the first year students are conducted every year during the admission days and are explained about the ragging rules and preventive measures taken. Regular meetings are conducted with the senior students and are sensitized with the ragging rules and consequences of ragging.

6.5.1.5 Biological waste disposal facility

Efforts are taken for effective recycling of waste and proposer disposal of the waste that could not be recycled. The primary activity involves composting plant waste and proper collection, segregation and disposal of waste. The biodegradable wastes are disposed in the compost yard, composted and recycled. Around 2 tonnes of wastes are generated every year. The food waste is sold to vendors having piggery units. In labs and offices, segregation bins are provided to recycle different kinds of wastes. All hostels are provided with incinerators to discard the wastes. Biological samples of plant materials are disposed in the compost yard. Dead animals are buried by digging deep pits and covered with soil near the compost yard after post mortem.

Bio waste disposal facility

At ADAC&RI, the solid wastes generated in different locations are collected through bins kept separately for biodegradable and non bio degradable wastes. The waste from students hostels, administrative buildings, class rooms and quarters are collected and placed in a bio composting yard established in the college. In addition, the farm waste, and animal dung are also collected and heaped in the bio compost yard. Here, these wastes are composted with the microbial inoculum available in the unit of Environmental Science and converted into manure. In addition, the animal wastes generated are also converted into quality vermicompost and it is used for crop trials.

Biomedical Waste Disposal

Agreement has been made with Medicare Systems, Tiruchirapalli for disposal of biomedical waste at the College Health Centre

Wastewater Management

The wastewater released from the campus is passed through a natural reed bed system established with *Typha* and is good enough to be released in the environment.

Green Initiatives at the Campus

A green campus demonstrates its commitment to ecological sustainability through its academic programs, its research, its campus life, and its physical operation. "Campus Greening" is a concept which stands for the efforts to establish environmentally sustainable practices in educational institutions the world over.

Teaching and Learning practices

The ample use of paper by students and faculties in making notes, study materials, assignments, projects etc are avoided through presentation and slide show method of teaching. Electronic Projectors are facilitated to carry on this type of teaching learning process.

Designing of syllabus related to greening management

Environmental Sciences is a mandatory course for undergraduate programmes, in which the study of all branches of education. Syllabuses related to green management are taught. Compulsory teaching of Green Management as a subject will create an awareness among the students. The students will know the importance of greening. Students are given with environmental issues related projects.

Ban on use of plastic bags in the campus

No use of plastics in the college premises is implemented by replacing the plastic cups and plates, poly bags in canteens with disposable paper cups, plates and paper bags.

Encouraging Tree planting on important days

Students, faculties and other workforce are encouraged to plant trees during important days like Independence day, republic day, World Environment, Forest Day etc.

Solar Energy

Initiatives have been taken to install Roof Top Solar Power Plants under Renewable Energy Service Company (RESCO) scheme of the Solar Energy Corporation of India. Roof Top Solar Power Plants will be installed in Academic Block, Boys Hostel, Girls hostels, Library Block and Guest House.

No use of Vehicles

For creating pollution free environment inside the campus, students are advised not to use petrol and diesel vehicles. Most of the students are using bicycles.

Landscaping and tree planting has helped transform the campus into a lush green campus.

Trees were planted at this campus during the last 10 years . Trees have helped reduce the ambient temperature by ~3 degrees in the campus and increased the biodiversity

6.5.1.6 Institutional Ethics Committee for Experiment on Animals

Experiments on animals are not conducted in this campus; hence this committee is not applicable for this campus.

6.5.1.7 Committee for Prevention of Sexual Harassment of Women at Work Places

Members of the Committee for Prevention of Sexual Harassment of Women

Chairman - Dr M. Maheswari, Project Director FWKC and Chairman for Complaints Committee (Sexual Committee) ADAC& RI, Tiruchirappalli

Members - Dr. M. Manimekalai, Professor (Tamil), Dept of Social Sciences,

Dr. S. Rathika, Asst Prof (Agronomy), Dept of Agronomy,

Dr. O. Ajitha, MBBS, Medical Officer,

Mrs. A. Sarojini Devi, Superintendent, Office of the Dean, ADAC & RI

Complaints can also be communicated through Email: ***womenadacri@gmail.com***

The Committee for Prevention of Sexual Harassment of Women has been formed to address all grievances pertaining to sexual harassment of women (teaching and non-teaching staff and labourers) at the ADAC&RI, Tiruchirappalli. The committee consists of Professor as chairman and four members. There was no complaint on sexual harassment in the college during the last five years. However, details on Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and a preamble of the act and seeking remedy under this Act were clearly explained to the staff and farm workers.

6.5.2 Faculty

The college has 51 faculty members in various disciplines to undertake the education, research and extension activities. They have necessary qualification and have enriched themselves over the years by undergoing, training programmes in teaching, research and education, undertaking University and externally sponsored research programmes and participation in conferences and seminars. Various approaches are followed by the teachers so that students are able learn and get hands on experience on various aspects of agriculture. The teachers from nearby research stations and colleges are also deputed to this college to handle courses based on the necessity.

6.5.2.1 Faculty Strength

Details of Faculty Members Strength in the College

Faculty	Sanctioned	In-position
Teaching Faculty	56	51

6.5.2.2 Faculty Profile (department-wise)

The existing faculty strength of the departments is sufficient for academic requirements of the college. The faculties of allied discipline are also posted in the main department. The faculties of the department handled both undergraduate and post graduate courses. The faculties from the nearby research stations are also deputed to handle the courses if required.

Department wise Faculty Strength

Sl. No.	Departments	Teaching Staff required			
		Professor	Assoc. Prof.	Asst Prof.	Total
1.	Department of Agronomy	3	1	5	9
2.	Department of Soil Science and Agricultural Chemistry	5	1	6	12
3	Department of Plant Protection	3		5	8
4	Genetics & Plant Breeding + (Seed Science & Technology, Horticulture)	4	1	3	8
5	Department of Social Sciences	5	1	6	12
Total		20	6	25	51

One Teaching Assistant for Animal Husbandry on contract basis is offering courses. One Professor (Tamil), One Assistant Professor each for Agricultural Entomology, Food Science and Nutrition and Soil and Water Conservation from other campuses are offering courses in this College.

6.5.2.3 Credentials of the Faculty

Almost all faculty members of the college are Ph.D holders. The college has the adequate proportion of experienced and young faculty members. They worked in research stations, Krishi Vigyan Kendras (KVKs)and colleges of the university at different levels. Many faculty members in this college have received awards for their excellence in teaching and research activities. The details of qualification, experience and professional licensure and certification and demonstrated competencies are detailed in Annexure 6.5.2.3.

6.5.2.4 Technical and Supporting Staff

The technical staff are attached with the office of the Dean for administrative convenience and they are allotted to the other Departments whenever need arises. Farm labourers are attached with the Department of agronomy and they are allotted to the other Departments based on the requirement.

The administrative and accounts staff are centralized in the College and are operating under the direct control of the Dean, as a part of Dean's office. There are four Lab Assistants in this College and they assist in conduct of practical classes and research. Five Assistant Agricultural Officers / Supervisors are working in this College and they assist in the research and field activities of different departments. There are 26 Permanent Un Skilled Mazdoors (PUSMs) performing the role of filed assistants in the College. Eight labourers are engaged as casual labourers for performing the duty of messengers / attendant / security in the campus.

The details on staff involved in managing centralized facilities such as Library, Students Welfare, Students Hostel and College Estate, are given in the Annexure.

6.5.3 Learning resources

Undergraduate teachers are provided with the computer / tablets to access the online open courseware and online portal to use it for the curriculum delivery. Faculty members access various resources for use in teaching, research and extension activities. Students are also encouraged to access various Apps in Agriculture and also practise data analysis for research using analytical packages.

Commodity databases

The database service provides daily price of 181 agricultural products from 3200 markets which will be useful to develop daily risk estimation exercise.

Learning resources are texts, videos lessons, software, and other ICT enabled material that teachers use to help students to meet the expectations for learning defined by ICAR recommended curriculum. Information on the following shall be submitted.

6.5.3.1 College Library (digital)

New Library was inaugurated on 5th December 2017 (expanded with the funding from the Government of Tamil Nadu) and it was constructed at a cost of 3.86 Crore. To enhance and enrich the knowledge of the students and scientists, a well equipped modern Library is available with a total collection of 14154 text books, which include back volumes, reference books, etc., Necessary steps have been initiated for accessing online journals in the CeRA (Consortium for e-recourse in Agriculture) of National Agricultural Innovation Programme.

Location of the library

The common library is located adjacent to the Anbil Dharmalingam Agricultural College and Research Institute and Horticultural College and Research Institute for Women. The college library has one deputy librarian, one library assistant. It is enabled with the Wi-Fi of two Mbps. The library has the sufficient number of books and journals for the students and faculty members to conduct teaching and research. It has 12,324 books, 1,830 reference books, 17 national journals, 108 video lessons, 15 magazines and four national newspapers and 35 post graduate and Ph.D theses.Online periodical and research journals are accessed through CeRA. The open access journals are also accessed through Directory of Open Access Journals (DOAJ). Internet facility is available in the library with 2 Mbps band width. The library also has one server and three computers for browsing purpose. The college library has the seating capacity of 80 with the air condition facility.The library is digitalized by Koha Open Sources Library Automation Software with university library web Online Public Access Catalog (OPAC) facility. The library has 20 publications in the field of agriculture and allied subjects.

The college library has the e-book access facility to access from CAB e-Books, Indian e-Books, Science direct e-Books, CeRA-Science Direct, e-Books, Springer e-Books. It also has the provision of access of J-Gate plus (CeRA Journals), KrishiKosh e-theses. Indiastat, Delnet and Commodity India e-databases can also be accessed in the library.

Stocking Arrangements at Library

Particulars	Sq.Ft.	Seating Capacity / Stack Racks
Reading Hall	2650 sq.ft (25'x104')	60 Nos.
(ii) Stock Section	1334 sq.ft. (23'x58')	24 Racks
Own Book Reading Centre	200 sq.ft (8'x25')	12 Nos.
Video Library	220 sq.ft (10'x22')	8 Nos.
Periodicals Section	1218 sq.ft. (21'x58')	12Racks
Reference Section Reading Hall	1484 sq.ft. (14'x106')	36nos.
PG Lecture Hall	1296 sq.ft (24'x54')	25nos.

Collection of volumes on different subjects

There are 12,324 text books and 1,830 reference books available in the library in the disciplines of Agronomy, Horticulture, Soil Science, Plant Breeding & Genetics, Crop Physiology, Biotechnology, Plant Protection, Floriculture, Social Science, Biochemistry, Entomology, Microbiology, Fruits & Vegetables, Agro Forestry, Medicinal Plants, Statistic Engineering, Food Science, Animal Husbandry, English, Tamil and General Knowledge.

Central Library and Information System

S.No.	Particulars	Numbers
1.	Internet server	1
2.	Computers for Reading hall	2
3.	Heavy duty photocopiers	1
4.	Computerized issue and catalogue systems	1 (OPAC)
5.	Wi-Fi facility in the college/library/hostels	8 Mbps in college & hostels 2 Mbps in library
6.	CCTV monitoring system for library	4
7.	Broad band internet connectivity with minimum speed of 1Gbps	8 Mbps in college

Opening Hours: The library works from 8.00 am to 6.00 pm on week days and 8.15 am to 2.00 pm on Saturday (except second Saturday).

Journals and Other Sources

Subscription of Journals of National and International repute	National Journals – 17 Nos International Journals –Accessed through online data base
National Dailies	2
Magazines etc.	15 Numbers
Library Automation	Koha Open Sources Library Automation Software

6.5.3.2. Laboratories, Instructional farm, Workshop, Diary Plant, Veterinary Clinic, Hatchery, Ponds etc.

All the major departments have their own laboratory for the conduct of practical classes for UG and PG students. The machineries and equipments in each laboratory are presented in this section.

S. No	Particulars	Numbers
1.	Laboratory	19
2.	Instructional Units	5
3.	Animal Husbandry Unit	1
4	Production units	5
5.	Meteorological Observatory	1
6.	Engineering workshop	1

Land area of the College

The land area of the College is 75 acres.

Land Utilization Pattern

S. No	Particulars	Acres
1.	Main Building / Hostels / Residential Quarters (Including roads)	14.0
2.	Playground & other amenities	9.5
3.	Farm Area, including godown / stores/farm roads	51.5

Farm facilities:

The Department of Agronomy maintains a farm of 34 acres.

Instructional Farm (No of farms)

The farm area, including godown / stores/farm roads is 51.50 acres focusing on instructional farm, research and seed production with an average cropping intensity of 273 per cent. The farm has three open wells and six bore wells. Model instruction units of integrated farming system, goat farming, poultry farming and livestock farming are available in the farm. Presently the farm has two blocks with well laid fields for taking up research. The instructional farm has required tools and implements for use and demonstration to students and for research use. The farm has two tractors and one power tiller. It also has cultivator, rotovator, Full and half cage wheels, Levellers, Disc plough, Disc harrow, Chisel plough and Rice transplanter. The department wise / section wise allocation of land is given below. Rice is the major crop grown in the farm. Besides, for taking up of research in other crops, green gram, ragi, cotton, barnyard millet are grown. For undergraduate students, five acres of instructional farm is maintained for taking up crop production. The profit derived out of this is given back to the students in earn while you learn mode. Type of Integrated farming followed is Direct Integration of poultry cum fishery.

Pond: Size – 30m x 30m.

Department / Section-wise land allocations (acres)

S. No	Particulars	Acres*
1.	Agronomy & Farm Forestry	14.15
2.	Entomology	1
3.	Genetics & Plant Breeding + (Seed Science & Technology)	08
4.	Horticulture**	0.5
5.	Soil Science and Associated Departments	2
6.	Plant Pathology	1
7.	Animal Sciences	5
8.	Biochemistry and Physiology	1
9.	Agricultural Engineering	2
10.	Total	34.65

* Area allocated for research, extension, seed production purposes and bulk crop

** Horticulture facilities available under HC&RI (W) is being utilized

No of laboratories / units available 32 nos.

The details of laboratory / units available in the College are enclosed in the Annexure 6.5.3.2.

Department of Agronomy

The students are given hands on training on crop management practices, crop cultivation, collection and analysis of meteorology data, integrated farming, use of farm machinery and equipments etc. The details about the machineries and equipments are given in Annexure

Animal Husbandry Unit

The farm is also having a veterinary unit spread over five acres. Cattle, goat and poultry species are maintained in the veterinary unit. The average farm receipt per year is around Rs.8 lakhs.

Rearing system

Cattle – intensive system

Goat – Semi Intensive system

Poultry – intensive system.

Housing system

Cattle – Single row system of conventional housing

Goat – Mud floor system and slatted floor system of housing

Poultry – Deep litter system of housing.

Income generation

Income generated through

Sale of milk

Sale of goats to the farmers for rearing

Sale of poultry for meat.

Fodder Cultivation

Fodder Sorgum, Cumbu Napier,CO-4 fodder grass, Subabul and Hedge Lucerne are maintained.

Hatchery unit

Mini hatchery is functioning with the capacity of 600 eggs.

Other equipments installed are Milking machine, manual and electrical chaff cutter, total mixed ration machine and electrical brooder.

Department of Plant Breeding and Genetics

Students are given hands on training on dissection and identification of floral parts of crops and plants, emasculation, crossing and selfing techniques of major crops. They are also given hands on training on tissue culture medium preparation, aseptic practices, explants preparation, culturing bacteria, isolation of plasmid DNA and electrophoresis, Amplification of DNA using PCR. The students are given training on seed moisture estimation, physical purity analysis and testing seed vigour in the classes of seed technology. The details about the laboratories and equipments are given in Annexure.

Department of Plant Protection

The students are given training on identification pests and diseases in various crops, infestation of nematodes, symptoms of damage, pest and disease management techniques, use of traps, pest surveillance, apiary, rearing silkworm, production and use of biocontrol agents etc. The details about the laboratories and equipments are given in Annexure.

Department of Soil Science and Agricultural Chemistry

This department has laboratories for teaching soil science and agricultural chemistry, microbiology, environmental science and biochemistry. Students are given hands on training on soil profile and description, soil classification with GIS mapping, application soil test based fertilizer recommendation, soil testing, biofertlizers, vermicomposting, microbial growth, identification of different microorganisms, fermentation techniques etc. The details about the laboratories and equipments are given in Annexure.

Department of Social sciences

A computer centre, language laboratory and an AV lab are managed by this Department. Students are given hands on training on preparation and use of AV aids, preparation of business plan, use of softwares for data analysis, personality development, career planning , improving soft skills, use of mathematical models – growth rates, deign of experiments, market analysis, economics of farming and crop production etc. The details about the laboratories and equipments are given in Annexure.

6.5.3.3. Student READY / In-Plant Training / Internship / Experiential Learning Programmes:

Student READY Programme has been implemented in this college for B.Sc.,(Hons.) Agriculture/ B.Sc. (Ag.) programme. This programme includes five components i.e. Experiential Learning, Rural Awareness Work Experience (RAWE), Industrial Attachment, Hands-on Training/Skill Development and students projects. Through this programme, students are given hands on experience and practical training in agricultural and allied areas. This programme helps to build confidence, skill and acquire Indigenous technical knowledge on agriculture and social systems.

Rural Awareness Work Experience (RAWE)

Rural Agricultural Work Experience programme is organized every year for the under graduate students of TNAU during the Seventh Semester of Final Year with the credit load of 0+6. It is organized by the Department of Social Sciences.

Placement in Divisional Agriculture Offices.

NGO Placement

Placement in villages/ Farms and

Objectives

To provide opportunities with the students for studying the rural situations

To give opportunities for gaining direct farm experience by personally visiting the farm holdings and for interacting with farmers.

To gain experience about the extension activities carried out by the development departments, non- governmental organizations and private agencies.

The students are to RAWE learning concepts, learning agriculture as a system, different components of agriculture and allied activities, farm management issues, conducting method demonstrations, conducting campaigns, organizing exhibitions, report preparation, and sharing of experience

During their stay at the villages the students are facilitated to learn the day to day farming activity of farmers as well as other farmers and about general village conditions of the identified blocks in the district.

Students placement for RAWE

Students were placed in Tiruchirappalli, Thanjavur, Thiruvarur, Nagapattinam, Karur, Villupuram, Salem, Dharmapuri, and Krishnagiri districts.

Industrial Attachment

Industrial Attachment provides inplant/office/hands on experience about the managerial and commercial aspects of business. Interaction with experienced entrepreneurs / managers enables them to learn more about the practical aspects of business and also motivates the students to become entrepreneurs. Thus, industrial attachment acts as platform to mould and match the young graduates with the changing environment.

The Objectives of the Industrial Attachment Programme

To provide hands on experience with the students about the managerial and commercial aspects of business.

To create an opportunity to interact with real world business environment.

To develop the entrepreneurial skills of graduates in agriculture.

To motivate the students to take up new agribusiness ventures, and

To change the attitude of the students from being job seekers to job creators.

In the process of industrial attachment, after orientation, a group of 6-8 students are allotted to various agribusiness firms and the students spent 17 days in their respective firms to learn various managerial aspects of running a business firm. The programme is for a period of 17 days during the seventh semester.

The Students were placed in the following Agro-Industrial Firms for their Industrial Attachment Programme.

Sugarcane industry, Fertilizer industry, Bio- fertilizer production unit, Vermicomposting yard, Food Processing Units, The students interacted with the officials of the firm and university officials during their AITP.

During the Industrial attachment programme, the students are exposed to the following aspects:

Overall planning and execution of activities of agribusiness firms, Managerial practices followed in production, marketing, fiancé and human resource management,Record keeping and accounts and Challenges faced by agribusinesses

Experiential Learning Programme (ELP)

Following experiential Learning modules are offered by the various departments in this college.

Experiential learning modules and courses offered in the college

Faculty	Module and courses	Year	Department
Agronomy	Development of Integrated Farming System	2016-17	Agronomy
Animal Husbandry	Commercial Broiler and Layer production	2016-17	Agronomy
Soil Science	Farm Advisory service on Soil, Water and Plant nutrition	2013- 14	Soil Science and Agricultural Chemistry
Environmental Science	Composting Technology	2016-17	Soil Science and Agricultural Chemistry
Entomology	Commercial Bee Keeping	2014-17	Entomology
Pathology	Commercial Mushroom Production	2014-17	Plant Protection
Agricultural Economics	Managerial Skills for Agribusiness	2015-16	Social Sciences
Agricultural Extension	Behavioural Skills	2016-17 2017-18	Social Sciences
Horticulture	Commercial Landscaping Gardening	2016-17	Plant breeding and genetics
Biotechnology	Commercial Plant Tissue Culture	2014-15	Plant breeding and genetics
Plant breeding and genetics	Management of Plant Genetic Resources and Special Methods of Breeding	2013-14	Plant breeding and genetics

Under Graduate Research projects

The under graduate project work is a part of the curriculum wherein students are given choices to select the subject area on which they can carry out a project work with defined objectives with a total five credit registered as APW 401 Project work.

Number of Projects Done by UG Students

S.No	Year	No of Projects
1.	2013 –14	26
2.	2014 –15	24
3.	2015 –16	21
4.	2016 –17	26
5.	2017 -18	37

6.5.3.4. Curricula Delivery through IT (smart class rooms / interactive board etc.)

No of smart classrooms in the college	8
Classrooms and Halls with wi-fi	4 UG and 4 PG
Classrooms with computers and projectors	4 UG and 4 PG
Classrooms with interactive boards	One

How many practical labs have IT facilities to explain the methodologies 11 (AV, GD Chamber and Computer)

Measures taken to instruct the students on IT facilities

Students are instructed to refer to web sources like e-book, e-journals to collect information for their term papers and class room assignments

Students are instructed to use you- tube as additional source for presenting the term papers

Students are trained on video production techniques, art of photography and website development

There are four lecture halls available for undergraduate teaching, are equipped with computers and LCD projectors. Further, these halls are enabled with wi-fi facility to access internet during teaching. Further, an audio visual laboratory is available with public addressing system, projector, smart board and a display board for the purpose of demonstration. The ICT tols for various courses are as follows;

Diagnosis and Remedy

Soil and Crop specific Fertilizer recommendations using NUTMON, F Apps and DSSIFER

Nutrients Deficiency identification in crops and Foliar correction measures using VDK

Computer based Crop Doctor Tool

Planning

Delineation and classification of soil and land use in satellite imageries by using GIS

Weather based Apps and websites for meteorological information

Web Portals – IMD,TNAU – Tamil Nadu Agricultural Weather Network (TAWN)

Bio analysis

Analyzing growth of microbes using Spectrophotometer and Gas Chromotography

Mini fermentor application for fermentation analysis

Biosensor for microbial solution assessment and Biological oxygen demand (BOD)

Malditof for Microbial analysis

Automic Absorption Spectrophotometer for heavy metal analysis

Technology transfer

Preparation of videos and audio programmes for transfer of technology

E – extension Methods

Farm business management

Business Plan preparation using software

Excel based farm planning tools – Linear Programming

Excel based analysis – seasonal index, trend, cyclical, index numbers, market integration, investment analysis, budgeting,

Google form based survey and online tests and other online consumer survey

Market information – Kisan Suvidha App, Ulavan App, and other Apps

Learning resources

Video lectures

Web based - Climate smart agriculture, Seed Portal, NBPGR website (seed bank),Bioversity, Web page.

ICRISAT Training Manuals

Kisan web portal

Exposure to websites relevant for export and domestic market - APEDA, Commodity Boards, Ag Mark Net

Research

Statistical analysis using MSTAT, AGRISAT and IRRI/CROPSTAT

Excel based statistical analysis, TNAU STAT and HAU – OPSTAT website for data analysis

Soft Skills

Video lessons - stress management

Online test - attitude, emotional intelligence,

Online resources – mock interview, Group Discussion, CV preparation and IELTS, TOEFL and other competitive exams

6.5.4. Student Development:

Student Development at the College directs its educational efforts at fostering the intellect and character of students by integrating in-class and co-curricular experiences. To accomplish this, the College provides a wide range of educational experiences through programs and activities that complement and support the academic experience in the classroom. The student fora and other activities also help to develop leadership qualities, partnership and team spirit.

6.5.4.1. Student Intake and Attrition

Student intake and attrition in UG and PG programmes

Name of the Degree Programme	Actual student admitted in last five years						Attrition (%)					
Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
B.Sc.(Hons.) Agriculture/ B.Sc.(Ag.)	75	110	110	124	120	115	6.6	10	10.9	12.9	15.8	9.5
M.Sc.(Ag)	--	05	17	18	23	24	--	0	17.6	11.1	12.5	8.3

Nearly 85 percent of the undergraduate and postgraduate students are continuing the programme after joining in this college. The students are given counselling through their academic counsellor and year coordinator to retain the programme. Discussions are held on how to design their carer based on agriculture and all options for employment, research, entrepreneurship etc., are explained to the students. However, an average of 11 percent of the students move out of the undergraduate programme and 10 percent from post graduate programme every year. The major reason for attrition of the undergraduate students is due to securing seats in medicine and engineering programmes in the first year or in the second year. The main reason for post graduate student attrition is due to getting employment during their study.

6.5.4.2. Average Number of students in Theory and Practical Classes

The batches of students are organized to ensure better delivery of information, encourage students' participation in classroom activities such as discussions, presentation, etc., and better monitoring and tutoring.

Students Strength in Theory and Practical Classes

S.No	Name of the programme	Average number of Students in theory class	Average number of Students per batch in Practical class
1.	B.Sc.(Hons) Agriculture	103	35
2.	M.Sc(Ag) in Soil Science	6	6
3.	M.Sc(Ag) in Agronomy	5	5
4.	M.Sc(Ag) in Entomology	6	6
5.	M.Sc.(Ag) in Genetics and Plant Breeding	5	5

6.5.4.3. Admission Process:

Under graduate programme

The students are admitted to undergraduate programme through Tamil Nadu Agricultural University single widow counselling process in the college. Candidate who have passed all the subjects in academic stream of the qualifying examination with 10+2 years of schooling under Board of Higher Secondary Education of Government of Tamil Nadu / Central Board of Secondary Education / Council for the Indian School Certificate Examination / other State Government Boards/ other International Boards that are recognized are eligible to apply for counselling. Single window counselling system is being followed for all degree programs and campus allotment. Separate counselling is conducted for academic and vocational streams. Candidates are called for counselling in the order of merit. Candidates' allotment is made based on order of merit as per the communal reservation, available vacancies in the degree programme and college. Candidates have to opt for a degree and college available at the time of counselling. The entire process of admission, i.e., online application, counselling and allotment are made through portal http://tnauonline.in

Post graduate programme

The candidates are selected based on the Common Screening and examination conducted by the Tamil Nadu Agricultural University. They are allotted based on merit by their order of preference and vacancies in each discipline and college. They are eligible to apply for two subjects.

6.5.4.4. Conduct of Practical and Hands on Training

Agronomy

Field visits to farmers' field with specific problem is arranged to understand the seriousness and the magnitude of the specific problem. Besides visit to central institutes, visits to institutes with well equipped laboratories are arranged to expose the students to the latest developments in the concerned field.

Soil Science and Agricultural Chemistry

Hands on trainings are provided to students for

Soil profile digging and horizon wise description

Soil sampling

Compost making from crop residues

Delineation and classification of soil and land use based on satellite imageries developed by using GIS

Plant Breeding and Genetics

Dissect the floral parts of crops / plants like ; Rice, Sorghum, Pearl millet, Finger millet, Green gram, Black gram, Cow pea, Sunflower, Tridax, etc., individually, assemble them and the same is evaluated.

To make the students thorough with the botanical features of different crops, they were made to collect herbarium specimens of crops belonging to different families, and explain the features of randomly chosen specimen in the practical classes.

Hands on training are provided for the students on the following aspects viz. preparation of stains, preservatives and development of permanent slides of mitosis and meiosis stages, studying mitotic and meiotic cell divisions, induce mutation in various crops, hybridization followed by selection in various crops, to study the floral biology of rice, maize, pigeon pea, pearl millet, cotton, jute, castor, groundnut, sesamum, sunflower, green gram, black gram, bhendi, tomato, chillies, pollen morphology and pollen sterility studies in various crops like; rice, maize, sorghum, pearl millet, cotton, castor, green gram, black gram, bhendi, tomato, chillies.

Hands on training is given for emasculation, crossing and selfing techniques of crops viz., rice, maize, sorghum, pearl millet, cotton, jute, castor, groundnut, sesamum, sunflower, greengram, blackgram, bhendi, tomato, chillies.

Biotechnology

The students either individually or in groups are provided hands on training on the following aspects *viz.*,

preparation of tissue culture medium, aseptic practices, explant preparation, culturing bacteria, isolation of plasmid DNA and electrophoresis, Amplification of DNA using PCR.

micro-propagation of rose, banana and tapioca, initiation of callus culture and co-cultivation with *Agrobacterium*, isolation of plant genomic DNA, analysis of transgenic plants based on GUS assay and PCR, DNA fingerprinting using RAPD markers

Under Experiential learning, the students are individually exposed to the principles and practices in micro-propagation of select crop plants. A group of two to three students have their own choice of crops / plants ; for example rose, tapioca, Ginger, West Indian cherry, eucalyptus, sugarcane, bamboo etc., and carried out micro-propagation based on standard protocols. They are successful in obtaining multiple shoots for most of the crops chosen and finally finish the experiential learning course when the tissue culture plants are still in the hardening phase

Seed Science and Technology

Hands on trainings are given on;

seed dormancy breaking treatment, seed pelleting, seed hardening and seed priming treatment, cotton delinting, tomato seed extraction, paddy seed quality up gradation through egg floatation technique, emasculation and dusting in cotton and paddy.

Seed moisture estimation, Physical purity analysis, Seed germination and seedling evaluation, quick viability test, seed vigour test, seed health test, electrophoresis for varietal identification / genetic purity assessment, seed field inspection and report preparation

Horticulture

Hands on training are given on:

planning, layout and planting of horticultural crops, preparation of potting mixture, potting and repotting of plants, preparation of growth regulators and method of application in horticultural crops, propagation through layering and cutting.

Propagation through budding, grafting and top working, propagation through specialized plant parts, micro propagation protocols and hardening,

nutrient and irrigation management practices, bearing habits and training practices in horticultural crops, pruning practices in horticultural crops, maturity indices for various horticultural crops,

post harvest handling practices viz., grading, sorting and packing techniques, varietal identification, selection of planting material and important cultural practices viz., training and pruning in fruits and plantation crops.

Forestry

Hands on training

forest nursery layout and techniques, tree seedling production techniques of timber, pulp wood, match wood, ply wood, fodder trees, tree borne oil seeds

estimation of volume and biomass of timber and wood, forest project preparation using economic tools and contract tree farming.

agroforestry model establishment, clonal propagation of important pulp wood species, tree seedling planting, water harvesting, soil conservation and plantation management techniques and value addition of non timber forest produce

Plant Protection

To facilitate effective operation of the equipments and instruments like HPLC, GC, PCR, AAS, etc., by the students for their research, hands on training in operational procedures is given to the students under the course on basic concepts of laboratory techniques in their Curriculum.

Training on Beekeeping, Sericulture and Bio-Control agents production is also imparted to the students.

Apart from the regular curriculum Students are also provided training on pest diagnosis.

Agricultural Economics

Farm planning and budgeting

Estimation of resource use efficiency, optimum combination of enterprises, cost of cultivation, marketing and farm business income

Marketing operations, practices in various markets

Export procedures

Assessing, acquiring and allocating finance

Case studies and data analysis using computers and Excel

Patents, GI and Trade Mark Registry for getting insights about intellectual property rights in the field of agriculture

Agribusiness management

Hands on training in

preparation of business plan,

marketing programmes

investment analysis

Agricultural Extension

The students are given hands on training in

Identifying and analyzing problems faced by farmers,

conduct group discussion to improve the farmers knowledge, skill and attitude,

preparing various audio-visual aids, power point presentations.

preparing news stories, success stories, script writing for radio and Television.

brain storming sessions to develop innovative and creative ideas

Role playing and simulation games to understand the various situation/ conditions of farmers

developing leadership qualities among students

project implementation and programme development

Food Science and Nutrition

In the Food science and Nutrition course offers practical experience and exposure to the students on

Post Harvest Management, Food Processing, Value addition, Food quality control and Safety aspects.

Analytical work related to physical, chemical and microbial characteristics of food also carried out by the students individually or in group based on the availability of the scientific apparatus.

The fruit and vegetable processing unit and bakery unit in Food processing Incubation cum Training centre in the college is well equipped to provide to train the students.

Quality control procedures in food processing units

English

Hands on training to improve

Listening skills – ways to overcome barriers of listening

Speaking skills – pronunciation, dialogue, public speaking, presentation, conversation

Reading skills – skimming, scanning, Survey, Question. Read, Review and Recite (SQ3R)

Writing skills – letters, precis, note taking, note making and report writing

Comprehension – integrated skills

Soft Skills – Life skills, Communication skills, Employability skills, Corporate skills

Life Skills –Attitude, Emotional Intelligence, Interpersonal Skills, Self development

Communication Skills – Verbal, Business, Group Dynamics, Kinetics

Employability Skills – Interview and Group Discussion

Corporate Skills – Leadership skills, Negotiation Skills, Time Management, Stress management

Computer Science

Hands on training is given on

Documentation - report preparation

Database management

c) Analytical skills – data analysis using mathematical and statistical functions, use of statistical software packages

d) Graphical and pictorial presentation of results

e) Interpretation skills – reporting results

f) Presentation skills – power point applications

g) Network and internet applications

6.5.4.5. Examination and Evaluation Process:

Undergraduate programme

The students are evaluated middle of the semester as well as end of the semester by mid semester and final examination. Besides, the students are also evaluated continuously by class exercises and assignments.

Mid Semester Examinations

The mid semester examination commences on 52nd class working day of each semester. The examination is conducted during the class hours. The mid semester examination is for 20 marks for theory and practical subjects and 40 marks for either theory or practical subjects. The examination is conducted for 60 minutes for theory and practical courses and 90 minutes for either theory or practical courses. The mid semester examination is conducted based on Optical Mark Recognition (OMR) sheets and evaluated by the Controller of Examinations of the university. The question papers are prepared and answer sheets are evaluated by the Controller of Examination.

Final Practical Examination

The final practical examination commences from 91st class working day of the semester. The final practical examination is for 40 marks. The examination contains 25 marks for identifications/experiments/field work/lab work/calculation /short notes/critical analysis /case studies, 5 marks for assignments, 5 marks for viva-voce and 5 marks for continuous evaluation by record work. External Examiner nominated by Controller of Examinations prepares the question paper and conduct the examination. The external examiners evaluate the students' answer sheets, conduct the viva-voce and finalize the marks and send it to the Controller of the Examinations.

Final Theory Examination

The final theory examinations are conducted after the closure of semester. The examination schedule and question papers have been prepared by the university and send the same to the college. The question papers for the final examination have been prepared by the external question paper setters within and outside the university. The final examination is for 40 marks for theory and practical courses and 60 marks for either

theory or practical courses. The multiple choice questions in the final examination question paper have to be answered in the Optical Mark recognition (OMR) sheets. The descriptive answers are to be answered in the main answer sheet. The OMR sheets and answer sheets are sent to the controller of examination by sealed cover. The student identity in the answer papers are removed and bar code is provided for each answer sheet. The final answer papers are evaluated by the examiners nominated by controller of examinations.

Continuous Evaluation

The students are evaluated continuously throughout the semester by giving exercise/assignments/calculations/case studies. The reports/records are documented by the students and evaluated by the course teachers/external examiners.

B. Post graduate programme

The post graduate programmes are conducted in trimester system. The students are evaluated three times in a semester. The unannounced quiz, announced quiz and final examinations are conducted in a trimester. Besides the students have to pass in the qualifying examination conducted after completion of course work. The students have to complete one credit seminar and research work for the completion of course

Unannounced quiz

The quiz is conducted without any prior announcement after 18 working days of the trimester. The unannounced quiz is conducted for 10 marks for a period of 30 minutes in any one of the theory class for a period of thirty minutes. The course teacher prepares the question paper and evaluates the answer papers of unannounced quiz.

Announced Quiz

The announced quiz is conducted after 35 working days of the trimester. The announced quiz is conducted for 20 marks for a period of one hour. The course teacher prepares the question paper and evaluates the answer papers of announced quiz.

Final examination

The final examination is conducted at the end of the semester. The final examination is conducted for 60 marks in which theory examination is for 40 marks and practical examination is for 20 marks. The course teacher prepares the question paper and evaluates the answer paper of final examination.

Qualifying examination

The qualifying examination has been conducted after completion of the major course work of the post graduate programme. The examination is conducted during the fourth

trimester of the masters' programme. The postgraduate students who have successfully completed the qualifying examination will be admitted to the candidacy of the degree. The question papers are prepared by the external examiners from the other universities. Similarly, answer papers of the qualifying examination is also evaluated by the external examiners. The candidate has to secure 70 percent of the marks to get pass in the examination.

Credit seminar

The student has to complete credit seminar for the completion of masters' programme. The students deliver the seminar in the subject of specialization. The seminar can be attended by all the postgraduate students and faculty of the college. The seminar has been evaluated by the chairman and advisory committee.

Examination and Evaluation Process

The students are evaluated based on the mid-term, final theory and practical examination for each subjects. The results of the course are indicated by the grade points ranging from 0 to 10. The minimum grade point of 6.00 has to be secured for the successful completion of a course. Securing a grade point less than 6.00 in a course will be treated as 'F' and the grade point will be zero for calculating the GPA/OGPA. An Overall Grade Point Average [OGPA] of 6.50 shall be the minimum requirement for the award of Degree for Under Graduate programmes and 7.00 and 7.50 for Post Graduate and Ph.D programmes, respectively. Besides, the students are also evaluated continuously based on the performance of practical exercises in each class. They are evaluated based on participation, involvement and performance in each programme in the Student READY programme.

The detailed evaluation processes are enclosed in Annexure 6.5.4.5.

6.5.4.6. NCC/NSS/RVC Units

Participation in NCC and NSS activities encourage the students to contribute for national development with the sense of patriotic commitment. NCC/NSS programmes make the student respect for diversities in religion, language, culture, ethnicity, life style and habitat to install a sense of National unity and social cohesion. These programmes improve the ability to participate in community development and other social programme.

NCC Activities

The National Cadets Corps (NCC) unit present at ADAC & RI, Tiruchirappalli comes under 5/2 company, 2 TN Battalion, Group Head Quarter, Tiruchirappalli, Tamil Nadu, Pondicherry and Andhaman Nicobar Directorate. Cadet strength of this unit is 52.

Presently 31 boys and 21 girls are enrolled in NCC programme and undergoing NCC 101- National Cadet Corps (0+1) course. It is a three years programme in six semesters. Associate NCC Officer Lieutenant Dr. T. Ramesh is in-charge of this NCC unit. Selection of cadets for enrolling NCC is being done based on physical fitness with the help of army staff.

NCC cadets undergo compulsory institutional training and also attending minimum of two Combined Annual Training Camps (CATC) outside the campus. During camps, cadets get exposure on drill, weapon training, physical training, yoga practice, sports and games competitions, firing practice and cultural activities. Students also have theory classes about leadership qualities, personality development and health and hygiene with the help of specialized persons in different fields. Students also participate in centrally organized camps like National Integration Camps (NIC) and All India Nilgiris Trek which provided more confidence and opportunities to interact with other state students and sharing their cultures and knowledge.

During second and third year, cadets appear for NCC B and C certificate exams, respectively. NCC cadets of this institute have secured top ranks at 2 TN Bn NCC Unit level in certificate exams. The B and C certificates holders get bonus marks (upto 5 marks) in uniformed service recruitments. Cadets who have C certificate with A or B grade will be eligible for direct recruitment in Army Officers selection without appearing UPSC written exam.

Cadets participate in the International Yoga Day celebration on 21st June, every year and learn about the benefits of yoga practice. NCC cadets of this institute received all India Meritorious Cadet Welfare Society scholarship in the last two years.

NCC cadets also get involved in social service activities like; conducting blood donation camps, tree planting, creating awareness on Clean India Campaign, campus cleaning, visiting and donating goods to nearby orphanage and old age homes.

NSS Activities

The National Service Scheme (NSS) unit present at ADAC & RI, Tiruchirappalli since 1992 comes under Tamil Nadu Agricultural University, Coimbatore. NSS volunteers strength of this unit is 173. Presently 55 boys and 118 girls are enrolled in NSS programme and undergoing NSS 101 - National Service Scheme (0+1) course. It is a two years programme in four semesters. The overall objective of NSS is "Personality development of the students through community service". Dr.S.Rathika is in-charge of this NSS unit. Selection of students for enrolling in NSS is voluntary.

NSS volunteers undergo compulsory 'Special camping programme' in the adopted village for a period of seven days. During camps, the NSS volunteers are actively involved

in the activities *viz*., cleaning of village surroundings, road sides, temples and ditches, desilting of ponds, tree planting, kitchen and terrace gardening, fire rescue and safety programme, agricultural conference and exhibition, soil health camp, health camp, eye camp, veterinary camp, legal aid camp, empowerment of rural youth programme, awareness procession against alcohol and tobacco, Workshop on 'Natural Resource Conservation', Dengu fever awareness rally, Awareness on 'Traditional Food and Healthy life', Environmental awareness programme, Sports and games for village children's, digital learning to the village people, orphanage and old age home visit to provide emotional support, promotion of health awareness, sanitation and human diseases through songs, street play and other community development programme which provide opportunity to understand and relation to the community, identify the needs in the community and to develop solutions, gained skills in mobilizing community participation, social and civic responsibilities, acquire leadership qualities and democratic attitude.

NSS volunteers participated in the regular social service activities like conducting blood donation camps, health awareness camp, environmental awareness camp, tree planting, creating awareness on Clean India Campaign, campus cleaning, self employment programme, visiting and donating goods to nearby orphanage and mental ill homes.

NSS volunteers are participating in the International Yoga Day celebration on 21st June of every year and learning about the benefits of yoga practice. NSS volunteers are also participating and celebrating IndependenceDay, Republic Day, World Earth Day, World Environment Day, International Youth Day, World Women's Day, World Forest Day, World Meteorological Day, World Blood Donors Day, Youth Awakening Day and Constitution Day, Observance of National Unity week, National Integration week, National Productivity Week and programmes which motivate them to do national duties and services. Finally, NSS programme is to prepare the NSS volunteers for the democratic, self disciplined and self-reliant way of life. The NSS activities are listed in Annexure 6.5.4.6.

6.5.4.7. Language Laboratory

It is required of any student to have a good command of the language for communication purposes, with clarity and accuracy being vital for effective and efficient communication. What helps one to acquire such proficiency in a language is the process and the method of learning that language. Mention which of the types of Conventional, Lingua Phone, Computer Assisted Language Laboratory and Multimedia Hi-Tech Language Laboratory are being used for language teaching in the college.

The Group Discussion (GD) chamber is spread over a floor area of 400 Sq ft. It is well equipped with advanced configurations computers. The systems are loaded with interactive CDs which cater to the needs of the UG and PG students in the directions of communication skills, career skills and national and international competitive examinations like; CAT, MAT, TOEFL, GRE, IELTS and BEC. The students are given hands on experience with the study materials both in the regular classes and in the informal discussions in the Computer Centre. The students are also trained in the advanced writing skills in terms of assignments and term papers with the help of the guidelines of the interactive CDs. The learning outcome of the students is commendable. The students feel at home with the uses of the study material related to group discussion, interview skills, brain storming, simulation and negotiation skills. Mock group discussions and mock interviews are periodically held in the coming up group discussion chamber. The required facilities for CALL (Computer Assisted Language Laboratory) will come to a full shape by the end of the current year.

6.5.4.8. Cultural Center

The college has a cultural centre (students club) accommodated in an area of 19.2 sq. m exclusively powered to explore and equip the students for multi-varied cultural activities. The various domains of students' club of ADAC&RI, Trichy are

Dramatic society

Debating society (Tamil & English)

Fine Arts, Music, Short film and photography club

Tamil Illakiya Mandram

Hiking Society

Planning forum & placement cell

National Service League

Agri-Horti Society

FORTAG- Souvenir

Alumini Association

Dramatic society is organizing cultural events for the students both inter collegiate and intra collegiate level. Every year this society conducts Freedom, an intercollegiate cultural competition for the students. Students are encouraged to participate in inter-college cultural programmes like Talentia, Cultura, Agronova and Fishfest.

Debating society conducts debates and organizes quiz for the welfare of the students in Tamil and English.

Fine arts, music, short film and photography conducts students' inter college photographic competitions.

Tamil Illakia mandram facilitate students to express their language talent through the conduct of Muthamizh vizha.

Hiking society plans to conduct various trekking programs to different hill stations

Planning forum & Placement cell conducts workshop on personality development and other soft skills that will enrich the capability of our students to perform their best in interviews.

Agri-Horti society members involve in creating aesthetic value of the campus.

FORTAG-Souvenir society is involved in the preparation and release of college magazine by accommodating all the necessary data required.

Alumini association is conducting alumini meet and inviting alumini members to give guest lectures, student interactive meetings and curricula development.

The club activities of the college

2015-16

Former President Dr. A. P. J. Abdul Kalam's birthday was celebrated as "Youth Awakening Day" in our college on 15.10.2015 by organizing various competitions and screening of the documentary film encompassing his commitment, hard work and success formula.

The Students' Club was formed for the year 2015-16 with newly elected office bearers on 14th December, 2015. Mrs. S. Rajeswari, IPS, Superintendent of Police, Tiruchirappalli presided over the function and inaugurated the Students' Club activities. The function was graced by an array of cultural programmes and memorable events.

The New Year - 2016 was greeted with gather of events hoping for a year full of new progresses, successes and achievements. The New Year's Eve was organized with cultural extravagance on the evening of 31st December, 2015.

The harvest festival, pongal, was celebrated to give importance on our cultural heritage and recognizing the laborious effort of our farm workers. Traditional games and cultural programmes were organized for staff, students and farm labourers.

Our students participated in AMETHON 2016, an international food, agribusiness & rural development summit from January 15th to 16th held at IIM, Ahmedabad. They participated in more than 15 events and 4 workshops led by eminent speakers and had insightful discussions.

The 67th Republic Day was celebrated by flag hoisting and NCC students' parade followed by the Republic Day address by our beloved Dean.

Students participated in the competition organized by a popular agricultural magazine "Malarum Velanmai" at Coimbatore on 29.01.2016. Our students won several prizes in the competition.

Our students also participated in the Agri Unifest 2016 organized at the Odisha Agricultural University from 1st to 4th February, 2016 and brought laurels to our institution.

Students took part in PRABANDHAZ'16 organized by the ABM students of Department of Agricultural and Rural Development, CARDS, TNAU, Coimbatore on 5th and 6th February, 2016 and won more than six prizes in various competitions.

The students were exposed to various kinds of competitions, viz., inter-class competition in the name of "Kondattam – Plethora of Talents" and was conducted on 10th and 11th February 2016. Nikandros '13 and Estrellas '13 emerged as winners. Thiru. V. Arun Roy, IAS, Registrar & Acting Vice Chancellor of Tamil Nadu National Law School, Tiruchirappalli delivered the Special Address and honoured the winners.

The XVI All India Inter Agricultural University Sports and Games Meet 2016 was organized in TNAU, Coimbatore during February, 2016. In this great event, our student Ms B. Preethi, IV B.Sc. (Ag.) bagged the gold medal in shot put. Ms Priyadharshini and Ms Mirdhula were in the team getting runner up in Kho-Kho and Ananthu was in the team of runner up in Kabbadi.

Our students participated in AGRONOVA'16 conducted at TNAU, Coimbatore on 5th and 6th March, 2016 and brought laurels to the institution.

Muthamizh Vizha, a celebration of Iyal, Isai and Natakam components of Tamil literature was conducted by our college "Tamil Ilakiya Manram" on 17th and 18th March, 2016 and provided feasts for the intellect, eyes and ears. The function was inaugurated by the eminent speaker Thiru. Marabin Mainthan Muthaiah followed by the Kaviyarangam presided by Poet Thiru. Vivega. Pattimanram was organized with eminent speakers and it was moderated by Professor Madhu and his team. The function was also adorned by Mrs. Revathi Kirubakaran's Vazhakadu Manram, Dr. Parthibaraja's Naatupura Kalaivizha, Swaralaya's Orchestra and our students' cultural programmes.

Our students participated in large numbers in a Spiritual Symposium 2016 on 10.4.2016 organized at National College, Tiruchirappalli.

Annual Sports Meet 2016 was conducted on 21st April, 2016 with various events. Staff Vs Students match in Cricket was conducted on 20th April, 2016 as a part of Annual Sports Meet.

Series of guest lecturers were organized for the betterment of students' career which included:

A lecture on "Climate change adoption through agro textiles" was given on 8th December, 2015 by Dr. Gowri Raman, Former Chief Scientist, Gujarat Agricultural University.

A lecture on "Accelerated Learning for Success" was given on 9th December, 2015 by Mr. Sivakumar, Executive Director, Arrow Agri Pvt. Ltd, Chennai.

A lecture on "Financial Management" was given on 14th March, 2016 by Mr. N. Sakthivel, Manager, State Bank of India.

A lecture on "Opportunities in Banking Sector" was given on 15th March, 2016 by Dr. L. S. Raman, Ret ired General Manager, UCO Bank.

A lecture on "Environmental Awareness & Forest Conservation" was given by Mrs. Sangamithrai & Mr. A. Selvaraju, "Grow Great", an NGO in connection with Forest Day on 21st March 2016.

Tamil Ilakkiya Manram has come out with a new monthly magazine "Kaiyezhuthu Prathi – Marutha Mozhi" to encourage the poetic, artistic, literary and handwriting skills of the students. The best articles were selected in each month and prizes were given to them.

The Planning Forum & Placement Cell has opened a Study Centre in the name of "Learning Window – Add Pages to your life" an extra – curricular study centre in the college premises to inculcate the reading habit among the student community.

2016-17

A Programme on Elocution, Essay and Poem writing for School Students was conducted on 29th December,2016

College level function called Kondattam was celebrated with different cultural programmes and competitions on20th and 21st February 2017 to expose their talents in the cultural events

Guest Lecture on Opportunities in Banking Sector was arranged on 15th March, 2017

Muthamizh Vizha'17 was celebrated with the components of Iyal, Isai and Nadakam on 16th and 17th March, 2017.

2017-18

Annual Sports Meet was conducted in order to explore the capacities of students in different events of sports on 5th April, 2017.

Hostel Day, Club Day & College Day '17 was celebrated on 27th April ,2017

The 67th Republic Day was celebrated by flag hoisting and NCC students' parade followed by the Republic Day address by our beloved Dean.

Students participated in the competition organized by a popular agricultural magazine "Malarum Velanmai" at Coimbatore on 29.01.2016. Our students won several prizes in the competition.

Our students also participated in the Agri Unifest 2016 organized at the Odisha Agricultural University from 1st to 4th February, 2016 and brought laurels to our institution.

Students took part in PRABANDHAZ'16 organized by the ABM students of Department of Agricultural and Rural Development, CARDS, TNAU, Coimbatore on 5th and 6th February, 2016 and won more than six prizes in various competitions.

The students were exposed to various kinds of competitions, viz., inter-class competition in the name of "Kondattam – Plethora of Talents" and was conducted on 10th and 11th February 2016. Nikandros '13 and Estrellas '13 emerged as winners. Thiru. V. Arun Roy, IAS, Registrar & Acting Vice Chancellor of Tamil Nadu National Law School, Tiruchirappalli delivered the Special Address and honoured the winners.

The XVI All India Inter Agricultural University Sports and Games Meet 2016 was organized in TNAU, Coimbatore during February, 2016. In this great event, our student Ms B. Preethi, IV B.Sc. (Ag.) bagged the gold medal in shot put. Ms Priyadharshini and Ms Mirdhula were in the team getting runner up in Kho-Kho and Ananthu was in the team of runner up in Kabbadi.

Our students participated in AGRONOVA'16 conducted at TNAU, Coimbatore on 5th and 6th March, 2016 and brought laurels to the institution.

Muthamizh Vizha, a celebration of Iyal, Isai and Natakam components of Tamil literature was conducted by our college "Tamil Ilakiya Manram" on 17th and 18th March, 2016 and provided feasts for the intellect, eyes and ears. The function was inaugurated by the eminent speaker Thiru. Marabin Mainthan Muthaiah followed by the Kaviyarangam presided by Poet Thiru. Vivega. Pattimanram was organized with eminent speakers and it was moderated by Professor Madhu and his team. The function was also adorned by Mrs. Revathi Kirubakaran's Vazhakadu Manram, Dr. Parthibaraja's Naatupura Kalaivizha, Swaralaya's Orchestra and our students' cultural programmes.

Our students participated in large numbers in a Spiritual Symposium 2016 on 10.4.2016 organized at National College, Tiruchirappalli.

Annual Sports Meet 2016 was conducted on 21st April, 2016 with various events. Staff Vs Students match in Cricket was conducted on 20th April, 2016 as a part of Annual Sports Meet.

Series of guest lecturers were organized for the betterment of students' career which included:

A lecture on "Climate change adoption through agro textiles" was given on 8th December, 2015 by Dr. Gowri Raman, Former Chief Scientist, Gujarat Agricultural University.

A lecture on "Accelerated Learning for Success" was given on 9th December, 2015 by Mr. Sivakumar, Executive Director, Arrow Agri Pvt. Ltd, Chennai.

A lecture on "Financial Management" was given on 14th March, 2016 by Mr. N. Sakthivel, Manager, State Bank of India.

A lecture on "Opportunities in Banking Sector" was given on 15th March, 2016 by Dr. L. S. Raman, Ret ired General Manager, UCO Bank.

A lecture on "Environmental Awareness & Forest Conservation" was given by Mrs. Sangamithrai & Mr. A. Selvaraju, "Grow Great", an NGO in connection with Forest Day on 21st March 2016.

Tamil Ilakkiya Manram has come out with a new monthly magazine "Kaiyezhuthu Prathi – Marutha Mozhi" to encourage the poetic, artistic, literary and handwriting skills of the students. The best articles were selected in each month and prizes were given to them.

The Planning Forum & Placement Cell has opened a Study Centre in the name of "Learning Window – Add Pages to your life" an extra – curricular study centre in the college premises to inculcate the reading habit among the student community.

2016-17

A Programme on Elocution, Essay and Poem writing for School Students was conducted on 29th December,2016

College level function called Kondattam was celebrated with different cultural programmes and competitions on20th and 21st February 2017 to expose their talents in the cultural events

Guest Lecture on Opportunities in Banking Sector was arranged on 15th March, 2017

Muthamizh Vizha'17 was celebrated with the components of Iyal, Isai and Nadakam on 16th and 17th March, 2017.

2017-18

Annual Sports Meet was conducted in order to explore the capacities of students in different events of sports on 5th April, 2017.

Hostel Day, Club Day & College Day '17 was celebrated on 27th April ,2017

Orientation Day was celebrated on 25th October, 2017 to welcome the freshers and to familiarize them to the different environment of this institute

Awareness Lecture on "De Stress to Be You're Best" was organized for the benefit of students on 11th November, 2017.

NABARD interaction meeting was organized on 4th December, 2017, where-in the UG students interacted with officials regarding the banking examinations, job opportunities in banking sector and entrepreneurship development

Students participated in the Inter college cultural competition of Agri-Unifest selection at TNAU, Coimbatore on 6.1.2018& 7.1.2018 and three students were selected in the competitions of quiz, mime and skit

The students set their own standards, strived to reach them and elevated ourselves to higher planes. Learning and evolving, the effort will never cease. The year as every other, was exciting, challenging and invigorating. Each day has given the students scope to learn and question to reflect and introspect.

Winning positions in various Sports Competitions

S.No	Year	Name of the Event	Name of the Competition	Position
1	2013	Shot put (W)	Tamil Nadu Agricultural University Inter – Collegiate tournament held at Agricultural College & Research Institute, Madurai from 08-02-2013 to 12-2-2013.	III Place
		Discus Throw (W)		III Place
		Javelin Throw (M)		II Place
		100 m run (M)		
		Long Jump (M)		
		Relay Team(M)		
2	2014	Shot put (W)	Tamil Nadu Agricultural University Inter – Collegiate tournament held at our own Institute (Anbil Dharmalingam Agricultural College & Research Institute), Tiruchirappalli from 23-02-2014 to 28-2-2014	I Place
		Discus Throw (W)		I Place
3	2015	Triple Jump (W)	Tamil Nadu Agricultural University Inter – Collegiate tournament held at Agricultural College & Research Institute, Madurai from 15-02-2015 to 22-2-2015.	II Place
		Shot put (W)		III Place
		Discus Throw (W)		III Place
		60 m run		III Place
4	2016	Shot put(W)	The 16thAll India Inter Agricultural Universities Sports & Games was conducted at TNAU from 22-02-2016 to 26-02-2016.	I Place
		Kabaddi (M)		Runner-up
		Kho-Kho(W)		Runner-up
		Kho-Kho(Women team)	Invitation Tournament held at RVS Agricultural College, Tanjavur on 10-09-2016 & 11-09-2016.	Winners
5	2017	Badminton (M) singles	1stInter University Sports Festival was held at Central Law School,	Winners
		Badminton (W) doubles	Tiruchirappalli on 23-04-2017 & 24-04-2017.	Winners
6	2018	Kho-Kho(Women team)	Tamil Nadu Agricultural University Inter – Collegiate tournament held at Agricultural College & Research Institute, Coimbatore from 16-04-2018 to 20-4-2018	Winners
		Relay 4 x 400		
		400 m		
		800 m		

Organization of University inter-collegiate tournament

Tamil Nadu Agricultural University Inter – Collegiate tournament was organized at our own Institute (Anbil Dharmalingam Agricultural College & Research Institute), Tiruchirappalli from 23-02-2014 to 28-2-2014. One thousand eight Hundred students from constituent and affiliated colleges participated in this tournament. Nearly forty officials involved for officiating matches in different sports and games.

6.5.4.9. Personality Development

The students, in parallel with their studies, are to develop skills and capabilities to shape their future. To facilitate the students in improving their employability and career skills, the Placement cell of ADAC&RI, Tiruchirappalli is conducting various workshops and Motivational talks Soft Skills Development, Personality Development, and Career Counseling and also facilitates the students in getting trained for specific examinations like Banking Examinations, Group I Services Examinations and the like.

A course on comprehension and communication skills in English is offered to the Students in the First year which includes functional grammar in Standard English with a scope of learning the communication and comprehension skills and vocabulary for TOEFL and IELTS Examinations.

Personality development and soft skill development programmes are regularly conducted in the campus with the view of enhancing the personality as well as the soft skills of the students.

Personality and Career Development Programmes

Title of the Workshop	Year
Workshop on Personality Development and Employability Skills, 29th and 30th March 2014 (ICAR-Dev Grant)	2014
Employability Skills workshop, 21th - 22ndMarch 2015 (ICAR-Dev Grant)	2015
Motivational Workshop, 23th - 24th March 2015 (ICAR-Dev Grant)	2015
Motivational Talk on "Banking Opportunities & Civil Services Guidance" 1st Sep 2015	2015
Faculty members of this college conducted Workshop for Resume preparation for IV B.Sc (Ag) students	2016

Personality Development Workshop was conducted on 11th and 12th March 2017 for IV B.Sc (Ag) students for improving their knowledge and skills on career planning and for participation in Interviews and group discussions.	2017
Dr Selvam, Principal, Sathyabama Institute of Management, Chennai interacted with IV B.Sc (Ag) students on Career Planning and Employment in Banks on 13th April 2017	2017
Career Planning Workshop 2017 was conducted for the II and III year B.Sc (Ag) and B.Sc (Horti) students of ADAC & RI and HC & RIW, Tiruchirappalli on 29 July 2017	2017
Personality Development Workshop was conducted for the IV B.Sc (Ag) and IV B.Sc (Horti) students on 20th January 2018 .	2018
TIME, Trichy conducted Orientation Programme for Competitive Exams and Management courses	2018
U2CAN, Trichy conducted an orientation programme, to students on Opportunities for higher studies abroad and guide them for preparation for competitive exams such as IELTS, GRE, GMAT, TOEFL, SAT and PTE on 6.3.2018	2018

6.5.5. Physical facilities

6.5.5.1. Hostels:

Accommodation Facilities in various Hostels

S. No	Hostel	No of rooms	Size (Ft)	No of Students	Additional facilities
1	**Boys:**			43	Reading room in all hostels,
	Vaigai Illam	28	20 x 15		TV Hall in all hostels
2	Thamirabharani Illam	51	17 x 10	133	Cloth drying yard
3	**Girls:**			110	Hostel is equipped with mosquito protection by net/ windows
	Bhavani Illam	34	18 x 10		
4	Amaravathi Illam	38	13 x 13	133	

Mess facility Two Dining halls for boys and girls separately.

Boys seating capacity: 200 nos

Girls seating capacity: 250 nos

Infrastructure

Wifi connectivity – 2 Mbps supplied to the hostels

Power supply generator (56.25KVA)

Amenities available in the Hostel

S. No	Particulars	Description
1	Drinking water	3 RO systems in boys hostels
		2 in girls hostels.
2	Indoor stadium,	2 Table tennis court,
		1 Shuttle court, chess boards
		1 Gymnasium room for Boys
3	Electric Incinerator	3 Nos installed and functioning in Girls hostel
4	Finger print system for attendance	2 Nos, separately for boys and girls hostels
5	IP camera	5 Nos in boys hostel
		4 Nos in girls hostel
6	Transport	Tata Ace -1 No;
		Bolero Jeep (Pick-Up van) - 1 No
7	Enough toilets	Yes
		The boys' hostels have 19 bath rooms and 24 toilets for the convenience of students.
		The girls' Hostels have 27 bathrooms and 23 toilets for the convenience of the students.

Functioning of Mess

The student mess representatives of different years constitute a functional team in running the mess in a very effective manner. A centralized kitchen is functioning on campus and the food is distributed to the dining hall attached with different hostels. Modernized kitchen with steam cooking facility has been created to provide hygienic food.

Procurement for Mess

In a participatory manner, the students themselves are involved in the purchase processes leading to a great deal of transparency. Milk is purchased from Aavin, rice and groceries are from wholesale dealers and vegetables from public market in Trichy.

Mess Menu & Mess rate

The hostel menu is decided by the students and finds revision based on the students feed- back in a periodical manner. The mess functions on dividing system. The daily mess rate during the year averaged to Rs. 65/day. The mess bill after preparation is presented to the mess representatives for any queries/clarifications, only after addressing them the mess bill is being posted every month.

Hostel Amenities

All the hostels are provided with safe drinking water using Reverse Osmosis system, CCTV surveillance, biometric attendance, WiFi connectivity, day and night security, mosquito net fixed on hostel room windows, TV room, Guest rooms for parents, incinerator for sanitary water disposal, floor cleaning machine etc.,

Students Welfare Committee

Students Welfare Committee with the Dean, ADAC&RI as Chairman and Dean HC&RI(W) as Co-Chairman meets once in six months to discuss the various issues related to hostel and students welfare. Issues and grievances are sorted in a democratic manner after discussing with the student representatives. A continuous feedback is in place to resolve issues as well as in deciding the mess menu.

Hostel connected activities

Hostel day is celebrated once in every year

Hostel best rooms been selected once every year and prizes awarded

Games conducted for the students and hostel employees on the eve of hostel day

Health care unit

Objectives

To provide First- Aid for the patients during their sudden illness. All emergency care is given to the students, staffs and labors. A special care is given to the girl's students and women's staff regarding their health issues arising.

Nearly 8,500 patients (From Nov'13-Jan'18) were benefited regarding their health issues. (ie) for ***Medical Management, Nursing Care, Psychological Support, Guidance and Counseling.***

Infrastructure

Building consisting of three rooms, an outpatient room, Pharmacy & ward with toilets (Separate for male / female patients) Wards & toilets have been renovated & constructed from ICAR grants of Rupees 5.5 Lakhs

Outpatient room with following facilities

Provided with an examination couch

Created a ward provided with 4 beds

BP apparatus (digital / manual)

Weighing machine, Digital thermometer

Nebulizer for using inhalation medicines available

Vaporizer for steam inhalation.

Dressing materials – minor cuts and injuries

Pharmacy

All medicines are purchased from TNMSC, Ltd.,Trichy.

Basic medicines like

Antipyretics, Antibiotics, Antispasmodics, Antiulcerants, Antidiarrheals, Antiemetic etc., are available.

Facilities for giving I.V. injections and fluids available.

Suture needles and suture materials are available for doing minor suturing.

Activities

Medical history has been collected from each student at the time of their admission for the future reference in the emergency condition.

A health card is provided to the students (girls) for tracking the menstrual cycle.

BP monitoring chart is recorded for the hypertensive patients.

FRIST – AID KIT has been issued to all hostels for the student's emergency use

Towards creating a healthier society by popularizing preventive measures our team of healthcare unit of ADAC&RI have organized awareness programs on various issues of health and hygiene.

Awareness programme

Organized an awareness camp on Diabetic Disease and Management and it was held in the auditorium between 8.30am to 1pm and 119 members were benefited

Organized an awareness programme for the benefit of our students & staffs regarding measures to eradicate Dengue, Malaria, Chickenguniya & Swine Flu etc.

Organized an awareness programme for the vision health in ADAC&RI, HC&RI Trichy campus. Nearly 250 were benefited through this eye camp, they identified that 85 members has problems in sight, 3 has cataract & I with nerve disorder. Medicines for the needy were distributed at the camp itself.

Organized an awareness programme on DESTRESS for the benefit of our students and staff to promote Health and wellness in this campus.

In coordination with National Service Scheme (NSS)

Conducted free general Medical Camp at Navalur Kuttapattu, Ariyavur & Navallur.

Actively participated in blood donation camp.

Awareness Lectures

Self Hygiene

Measures to take care during Menstruation

How to stay safe and healthy in summer.

Significances of immunization for children (outdoor)

Nutritious food for Healthy Living in women and children.

Prevention is better than cure

How to maintain a Health issue – women

Tobacco and its toxicity.

Introduction to Swatch Bharat .

Right way to combat diseases and illness – Cleanliness.

Healthcare team is here to provide Practical Support and to help and encourage patients (students, staff, and labors) to take more responsibility for their own health.

6.5.5.2. Examination hall

Particulars about Examination Halls

S. No	Particulars	Facilities Available
1	No. of examination halls	Two (80 x 30 ft) (60x 40 ft)
2	Capacity	The capacity of each examination hall is 100 seats.
3	Facilities available	*Wifi* enabled hall for the conduct of Online examination
4	Infrastructure/ amenities	Water, washrooms and students' cabinet facilities are available.

The college has two examination halls with the capacity of 100 seating capacity each with chairs, writing desks, electrical lights and fan. The halls are enabled with wifi facility for the conduct on online examinations.

6.5.5.3. Sports and Recreation Facilities

Considering the health and its role in overall development of student community, physical education course has been made mandatory and form a part of the course curriculum. A separate course on Physical Education with 0+1 credit (PED 101) is offered for I and II B.Sc., (Ag.) students with 68 practical classes to the students spread over four semesters and Yoga for Human Excellence with 0+1 credit (PED 102) with 34 practical classes for two semesters as a part of their curriculum.

The students are facilitated to equip themselves for all types of physical exercises during the classes and in other play hours to keep them physically fit and healthy. In addition, the skill development in any one of the games like badminton, ball badminton, basketball, cricket, football, hand ball, kabbadi, kho-kho, table tennis, volleyball and athletics is contemplated in the physical education programme. Ground preparation, cleaning and maintenance are regularly done for ready use by the students. Regularly matches are conducted for students during the festival time like club inauguration,

Independence day, Republic day, Pongal festival, Sports day and coaching games are organized for the students to improve their skills using ground facility.

Sports Facilities

Outdoor grounds of the College

Sports Facilities	No. of Playgrounds
Football Field	1
Cricket Field	1
Volleyball Court	1 (Men) & 1 (Women)
Basketball Court with flood light	1
Kabaddi Court	1
Ball Badminton Court	1 (Men) & 1 (Women)

Track & Field:

400 metres standard Track is available with 8 lanes.

Long Jump Pit -1

Shot Put rim -1

Discus Throw rim - 1

Management and maintenance of grounds, cleaning and access to resources

Indoor Games

Table Tennis

Carrom

Daily routine work Regular Sports Activities:

PED 101 Physical Education course is being conducted up to IV semester which is mandatory. (0+1 credit)

Four classes per week are conducted.

PED 102 Physical Education on YOGA course is being conducted on every Saturday up to II semester for I year.(0+1 credit)

Regular practices in all disciplines also take place with a view to participate in outside tournaments such as TNAU-Inter Collegiate Tournament, attending selection trials to represent TNAU sports teams to participate in the All India Inter Agricultural Universities Sports and Games etc.,

Students fitness centre is also available at the hostel building

6.5.5.4. Auditorium:

Details of the College Auditorium

Does the college has auditorium	Yes
Year of construction and capacity	2013 550 (Ground floor) + 200 (Balcony)
Infrastructure and amenities available in auditorium	Area: 1248 m^2 550 cushion seats, Audio system LCD projector 125KV generator connectivity Separate dressing rooms and rest room facilities
How frequently the auditorium Is used and purposes for being used	Frequently used for college day, club day, hostel day, orientation day, students' functions, NSS, NCC programmes, motivational guest lectures, VIP addresses to students, yoga classes, farmers interaction meetings etc.,
No of events organized in the auditorium (last 5 years)	45 events

6.5.5.5. Exhibition Hall / Museum

The college has an exhibition hall to exhibit technologies developed by the college and those relevant brought from other areas are placed in the exhibition hall in the form of models, charts, live specimen for benefit of students, farmers and extension personnel. Research scholars, extension staff, students and farmers access information about the activities of the institution. Every year RAWE students exhibit models on modern as well as traditional technologies practiced by the famers at their place of stay. New technological models will be replaced every year. Vice- Chancellor, Board Members, University officials have also visited and provided suggestions for the improvement. Nearly one thousand School and College students visited in this exhibition for the past five years.

6.5.6. Research Facilities

The college has well equipped laboratories to conduct research in the field of agriculture. It has five department namely, agronomy, soil science and agricultural chemistry, plant protection, plant breeding and genetics and social sciences to coordinate the research activities. It receives funds from International Rice Research

Institute (IRRI), Indian Council of Agricultural Research, Department of Biotechnology, Bhabha Atomic Research Centre, Tamil Nadu News Prints Limited and private agencies.

6.5.6.1. Postgraduate Laboratories and Equipments

a. Research Facilities of Department of Agronomy

The Agronomy PG laboratory was started in 2015, with the main focus on doing agronomical research in salt affected soils. The size of the laboratory is 960 square feet (40' x 24' ft). The lab is well equipped with working table and instruments.

Instruments available are;

Electronic balance, Centrifuge Flame photometer, Refrigerator, Hot air oven, UV-VIS spectrophotometer, Weighing balance, Water bath, Leaf area meter, Conductivity meter, pH meter, Automatic N estimation system and Single distillation unit

The sources of funds were NADP scheme, ICAR grants and Private agency scheme. The funds were used for the purchase of inputs for field experiments, chemicals for the lab and repair of instruments.

b. Research Facilities of Department of Plant Breeding and Genetics

Classrooms and Laboratories facilities for PG programmes

S. No	Particulars	Number	Remarks
1	**Classrooms** - Modern lecture hall equipped with LCD projector	1	
2	**Functional laboratories**	1	350 sq ft
a	Well equipped Laboratory.	1	250 sq ft
b	Glass house	1	250 sq ft
c	Shade net facility		

List of Equipments

Particulars	Number
Equipments	
pH meter	1
PCR machine	1
Gel Documentation system	1
Electronic Balance	1
Microtome	1
Stereo microscope	1

Stereo microscope	1
Ultrascope	1
Microscope	70*
Binocular microscope	2*
Electronic moisture meter	2*
Electronic balance	4*
Seed Germinator	1*

** Equipments used from UG laboratory*

Equipments available in Molecular Biology and Seed Science and Technology laboratories are also used for PG research.

Since the inception of PG program in the Department of Plant Breeding and Genetics during 2014-2015, the recurring contingencies available under various schemes were effectively utilized for PG program. Recurring contingencies of various externally funded projects sponsored by Stress Tolerant Rice for Africa and South Asia (STRASSA) sponsored by IRRI, Philippines, Board of Nuclear Sciences, Bhabha Atomic Research Centre, Mumbai and ICAR extramural scheme were utilized for the PG program.

C. Research Facilities of Department of Soil Sciences and Agricultural Chemistry

The list of Instruments available in PG lab of the Department of Soil Science & Agricultural Chemistry is given below.

Instruments Name	Nos.
Electronic Top pan balance (0.001 g / 1 mg capacity)	1
Electronic balance (Avery)	1
Hot air oven	1
pH Meter	1
EC Meter	1
Flame Photometer	1
UV-Visible spectrophotometer (Double beam)	1
Atomic Absorption spectrophotometer	1
Water analysis kit	1
Digestion block	1
Nitrogen Analyser (Kjelplus)	1
Chlorophyll meter	1
Hot Plate	1
Distilled water unit	1

Automatic Double glass distillation unit	1
Water Bath	1
Mechanical Shaker	1
Centrifuge	1
Refrigerator	1
Digital Water purifier (RO unit)	1
Machanical stirrer	1
Sand bath	1
Vacuum pump	1

Well-equipped post graduate laboratory having dimensions of 65 ft x 20 ft with 1300 sq.ft as its size for carrying out analytical part. Around 8 work tables of 1.9 m x 0.8 m size sufficient to occupy 32 students at a time to carry out analytical procedures in a very accurate manner. This lab has sufficient space to keep all the laboratory glasswares, chemicals (AR grade) along with voluminous equipments like Plant sample grinder, mechanical shaker, RO unit, distillation unit, refrigerator, plant and soil sample storage cabinets, distillation units of around six numbers and all the required apparatus like core sampler, soil sampling tools, burette stands, pipette stands, suction pump, mechanical stirrer and filter stands. In addition to the instruments listed above, the instruments and equipments available in the COE in Sustaining Soil Health (Listed below) is also being used for the PG students teaching and the research work.

Instruments / Equipments	Unit (no)
Photometer	1
Water Purifier system (Milli pore)	1
Wet sieve and dry sieve for soil aggregate system	1
Soil Core Sampling unit	1
Pressure Plate Apparatus	1
LC-MS/MS	1
FT-IR	1
Open Top Chamber (4 units)	1
CLPP-Microbial Community Analyzer	1
Gas Chromatograph coupled with mass spectrophotometer (GC-MS/MS)	1
Deep Freezer	1
UV-Visible double beam spectrophotometer	1
Refrigerated Centrifuge	1
Atomic Absorption spectrophotometer	1

The instruments and equipments purchased in the non recurring contingencies and glasswares purchased under recurring contingencies of the above said schemes have been effectively used by the students for their research programme over and above the regular project activities. From the cost of personnel of the Private schemes viz., EID parry, Clima Adapt, Chemplast and TNPL, the PG/PhD students were provided with fellowship for carrying out research work on merit basis.

d. Postgraduate Laboratories and Equipments for Plant Protection

Particulars	Number	Dimension
Toxicology Laboratory	1	40" x 33"
PG Laboratory	1	53"x32"
Apiary unit	1	80"x60"
Glass House	1	52" x 22"
Shade net facility	1	25"x25"

Toxicology Laboratory

Name of the Instrument / Equipment	Numbers
GC system	1
HPLC	1
Hot air oven	2
Refrigerated centrifuge	1
Deep Freezer	2
Muffle Furnace	1
Turbovap	1
Gel Documentation System	1
Autoclave	1
Photo spectrophotometer	1
Double distillation Unit	1
Laminar Air flow Chamber	1
Degassing Facility	1
Vacuum flash evaporator	1
Refrigerator	2
Sonicator	1
Microscope	1
Electronic balance	1

A Toxicology laboratory with amenities is available exclusively for conducting bio assays and residue analysis

PG Laboratory

Name of the Instrument / Equipment	Numbers
Hot air oven	2
B.O.D. Incubator	2
Eppendorf centrifuge	1
Centrifuge (50 ml)	1
PCR Machine	2
Image Analyser	1
Photo spectrophotometer	1
Nanodrop Spectrophotometer	1
Flame photometer	1
Phosphine gas generator	1
Plant growth chamber	1
Insect cages	4
Desiccators	1
UVtrans illuminator	1
pH Meter	1
Refrigerator	1
Refrigerated centrifuge	1

Centralized laboratory

S. No	Name of the Instrument / Equipment	Numbers
1.	Ice Making Machine	1
2	Atomic Absorption Spectrophotometer	1
3.	Gas Generator	1
4.	UV-Vis-Spectrophotometer	1
5.	Refrigerator	1
6.	Gel Electrophoresis unit	1

Two laboratories *viz.*, toxicology and PG laboratory which are exclusively available for the conduct of PG research in pesticide residues, bio control, mass rearing of bio control agents and storage studies. A Centralized laboratory housing specialized equipments is also utilized for PG research. A well-established apiary unit with bee hives of Indian,

Italian and Stingless bees are available and is being utilised for conducting studies on honey bees.

A Government of India – DST Fast rack scheme on "Management of insecticide resistance in storage pests of rice using molecular tools" was operated in the Department from 2013 – 2016. Funds under recurring contingency were spent on consumables like plant samples , laboratory chemicals and reagents , accessories for processing residues samples, purchase of standards, glass wares and plastic wares for students research.

e. Department of Social Sciences

Totally 10 post graduate students (2016 – 18 batch) belonging to Agricultural Economics (5), Statistics (2) and MBA (3).are doing their PG programme research work under the guidance of faculty members in this Department.. The students are using the computer facilities in the computer centre and accessing online journals and databases for their research work. EXCEL, Minitab, Grittle, STRATA, SPSS and LIMDEP are made available to the students for data analysis.

f. Farm Women Knowledge Centre

As women's contribution in agriculture is immense, to enhance the knowledge of farm women in scientific technologies on key areas of agriculture and horticulture, the "Farm Women Knowledge Centre" is established at Anbil Dharmalingam Agricultural College & Research Institute, Tiruchirappalli with the funding of Government of Tamil Nadu under NADP (RKVY). This Centre brings in an amalgamation of varied technologies developed in the University for the betterment of farm women by imparting regular trainings/ demonstrations.

Mission of the Centre

To bestow entrepreneurial skill in agri-horti business on farm women for their sustainable livelihood and empowerment.

The Farm Women Knowledge centre has been equipped with training hall and other infrastructure facilities required to organize trainings in the fields of value addition of millets, fruits and vegetables, bee keeping, mushroom cultivation, vermicompost production, backyard poultry, goat rearing and horticultural nursery techniques.

Training modules have been worked out for all the above components. The training information is broadcast through AIR, and newspapers and in addition, the respondents are selected through discussion with state governments' line department officials. Hands on trainings are provided to the potential and interested farm women on above agro technologies for two to three days depending on the necessity which will improve their confidence, knowledge and skill.

6.5.6.2. Research Contingency received by the college

Funds from the University, externally funded schemes and resources from venture capital schemes are used for conducting undergraduate and post graduate education activities, wherever applicable. Adequate funds are available for meeting recurring expenses for conducting classes.

Research contingencies received by the college for the past five years

(Lakh Rupees)

S.No	Source of Funds	2012-13	2013-14	2014-15	2015-16	2016-17
1.	University Fund	4.15	1.63	2.13	2.11	1.17
2.	AICRP	6.67	6.66	5.06	3.60	7.87
3.	Research Projects	46.07	7.56	10.15	32.92	35.84
Total		56.89	15.85	17.34	38.63	44.88

6.5.7. Outcome/Output

Continuous efforts are taken to monitor the performance of students in examinations of the University, co-curricular activities, sports, employment and career growth. Discussions are regularly held with the alumni to get their feedback based on employment, their performance in competitive exams, job selection process etc. They are invited to share their experience with the students. Based on the interaction with alumni, their performance details are collected and updated regularly.

6.5.7.1. Student Performance in National Examinations:

Student Performance in National Examinations

Particulars	2012-13	2013-14	2014-15	2015-16	2016-17
JRF	3	3	6	2	4
SRF	-	-	1	1	-
NET	-	-	1	2	-
Competitive exams	42	51	45	47	39

6.5.7.2. Students Placement Profile

Students of Anbil Dharmalingam Agricultural College and Research Institute and Horticultural College and Research Institute for Women, Trichy jointly formed an alumni association in the name of "Trichy Agri and Horti Alumni Association (TAAHAA) and the association was registered under section 10 of certification of registration of the Tamil Nadu. TAAHAA contributed money for construction of entrance arch in ADAC&RI, Trichy.

Students placement detail between 2009-10 and 2014-15

Particulars	2010-14	2011-15	2012-16	2013-17	2014 - 18
Number of students graduated	78	68	67	89	-
Number of students secured jobs*	8	16	22	24	-
Number of students gone for higher studies (MSc/Management degree programs)	31	18	27	23	One student cleared JNU entrance exam
Number of students secured jobs in corporate sector	35	23	14	23	-
Number of students joined in the coaching centre for competitive exam preparation purpose.	4	11	4	19	-

** Students who have secured jobs in Job fair*

ADAC & RI UG students who joined civil services during 2013 - 18

Name	Civil Services	Year
Shenbagapriya	IFS	2013
Zahira Begum	IFS	2013
K. M. Abharna	IFS	2013
A.Kulathugan	IAS	2016

Students into Management studies at National Institutions

Year	Name	Program	Institution
2013-14	Bhawna Nirmal	PGDM	IIM, Ahmedabad
	Nitesh Kumar Mishra	PGDM (ABM)	MANAGE, Hyderabad
	I.Prasanth		
2014-15	Nivetha Nirmal Kumar	PGDM (ABM)	MANAGE, Hyderabad
	Rakesh Ranjan Naik		
	AfshinRahman		
2015-16	Rajsesh Debanath	PGDM	IIM, Ahmedabad
	D. Tamil Selvan	PGDM (ABM)	
	Amit Prakash Behera		MANAGE, Hyderabad
	Bharat Banshvarti		
	Swapna Merlin	PGDLS	ASHOKA University, Delhi
	VipinYadav	PGDM (ABM)	MANAGE, Hyderabad
	D.Gayathiri	MBM (Agri.)	ANAND Agricultural University, Gujarat
2016 - 17	BheemSainDaiya	MBM (Agri.)	Navasari Agricultural University, Gujarat

ICAR / JNU - Junior Research Fellow

Year	Name of the Student	Subject	Institute
2013-14	K.Prabakaran	Plant Genetic Resources	IARI, New Delhi
	Menaka Kannaiyan	Plant Genetic Resources	IARI, New Delhi
2015-16	P. Poonguzhali	Biotechnology (JNU –JRF)	TNAU, Coimbatore
	M.Hemapriya	Crop Physiology	UAS, Bangalore
	N.Kaviya	Agricultural Microbiology	GB Pant Agricultural University
2016 - 17	D.Gayathiri	MBA (Agri.)	Anand Agricultural University
	S. Deepika	Agricultural Microbiology	UAS, GKVK, Bengaluru
	Bheem Sain Daiya	MBA (Agril .Economics.)	Navasari Agricultural University, Gujarat
2017-18	S.Kamali	Biotechnology (JNU –JRF)	Waiting for seat allotment

A large number of students are studying PG programmes in TNAU and other SAUs on their own or with NTS fellowships or from private agencies. A substantial number of students in the recent years are preparing for competitive examination for civil services and banks

6.5.7.3. Awards/Recognitions/Certificates

Award Received by the College

ADAC&RI received Best College Award Awarded by Tamil Nadu Agricultural University (TNAU) during the year 2014

Award Received by the Staff and Students

S.No	College/Student/Staff	Name of the Award	Organization	Year
Awards Received by to the Research Scholar				
1.	K.S. Sivabalan Research Scholar, Agrl. Extension	Scientist Associate Award	Society for Scientific Development in Agriculture and Technology (SSDAT)	2014
3.	K.S. Sivabalan Research Scholar, Agrl. Extension	Best Paper Award	Directorate of Rice Research, Hyderabad	2014
Awards Received by the students				
1.	Dr.R. Visvanathan, Professor (Agrl. Processing)	Best Teacher Award	Tamil Nadu Agricultural University, Coimbatore.	2013
2.	Dr.T. Eevera, Assistant Professor (Seed Tech.)	Best Oral Presentation Award	National Conference on Recent Trends in Plant Biotechnology, organized by Department of Plant Sciences, Bharathidasan University, Tiruchirappalli	2013
3.	Dr. L.Karthiba, Asst. Professor (Plant Pathology)	Brig. Anil Adlakha Award for Best Ph.D Thesis in Rice	Tamil Nadu Agricultural University, Coimbatore.	2013
4.	Dr.C. Sekar, Professor (Agrl. Economics)	Excellence for the Best Professor Award 2013	Malarum Velanmai's 13th year Anniversary Agri. Festival	2014
5.	Dr. P. Janaki, Associate Professor (SS&AC)	Tamil Nadu Young Women Scientist Award	Tamil Nadu Science and Technology Council, Dept. of Higher Education, Govt. of Tamil Nadu	2014

6.	Dr.R.Visvanathan, Professor (Agrl. Processing)	ICAR - Bharat Ratna Dr.C.Subramaniam Award for Outstanding Teacher 2014	Indian Council of Agricultural Research, New Delhi.	2015
7.	Dr.T.Ramesh, Assistant Professor (Agronomy)	Best Research Paper Award	National Agricultural Tamil Science Congress, Madras Veterinary College, TANUVAS, Chennai.	2015
8.	Dr.L.Karthiba Assistant Professor (Plant Pathology)	Best Poster Award	National Symposium, at AC&RI, Madurai.	2015
9.	Dr.T.Ramesh, Assistant Professor (Agronomy)	Commendation Certificate and Medal	Outstanding Performance, in All India Trekking Camp Malayatoor, Kerala.	2015
10.	Dr.A.Subramanian, Associate Professor (Plant Breeding and Genetics)	Best Poster Award	Third International Symposium on Coconut Research and Development at CPCRI, Kasaragod.	2016
11.	Dr.T.Ramesh, Assistant Professor (Agronomy)	Appreciation Certificate	Pre commission training at OTA, Kamptee from All India level Pre- commission training NCC group, Tiruchirappalli.	2016
12.	Dr.A.Subramanian, Associate Professor (Plant Breeding and Genetics)	As a Team Leader won Best AICRP Centre Award	AICRP Centre Award for AICRP (Palms) Aliyar Nagar centre CPCRI, Kasaragod.	2016
13.	Dr.R.Parimalrangan, Assistant Professor (Agrl. Economics)	Best paper Presentation	National Seminar in Tamil – Ariviyal Tamizhil Velanmai- held at ADAC&RI, Tiruchirappalli.	2016
14.	S. Pandarinathan Assistant Professor (Bio chemistry)	Best Teacher Award	Human Care Human Rights Protection	2016
15.	Dr.S.Rathika, Assistant Professor (Agronomy)	Best Book Award	Agriculture Scientific Tamil Society, New Delhi	2016
16.	Dr.S.Rathika, Assistant Professor (Agronomy)	Young Faculty Award	Education Expo TV (EET CRS) , Kolkata, India	2017
17.	Dr.S.Rathika, Assistant Professor (Agronomy)	Best Popular Article	Agriculture Scientific Tamil Society, New Delhi	2017

18.	Dr.S.Rathika, Assistant Professor (Agronomy)	Best Poetry Award	Agriculture Scientific Tamil Society, New Delhi	2017
19.	Dr. P. Balasubramaniam Prof (SS&AC)	Best Poster Award	National Seminar on Climate resilient Agriculture: Sustaining Livelihood security held at S.K.Rajasthan Agrl. University, Bikaner	2017
20.	Dr. L. Karthiba, Asst. Professor (Plant Pathology)	Award for Best Oral Presentation	National Conference on Advances in Plant Pathology by University of Mysore, Mysore	2017
21.	Dr.M.Selvamurugan. Asst. Prof (Environmental Science)	Albert Nelson Marquis Lifetime Achievement Award	Marquis Biographies Online, Berkeley Heights, New Jersey, USA	2017
22.	Dr. L. Karthiba, Asst. Professor (Plant Pathology)	Dr. M.J. Narashimhan Academic Merit Award	Indian Phyto-pathological Society (IPS) and TNAU South Zone, Sugarcane Breeding Institute, Coimbatore.	2017
23.	S. Pandarinathan, Assistant Professor (Bio chemistry)	Best Faculty Award-2017	Indian Academic Researchers Association, Tiruchirappalli.	2017
24.	Dr. L. Karthiba, Asst. Professor (Plant Pathology)	Best Woman Scientist Award	National symposium on Indian Society of Mycology and Plant Pathology, Akola (MS), Udaipur.	2017
25.	Dr.M.Selvamurugan. Asst. Prof (Environmental Science)	Best Poster Award	Fifth National Seminar, SKRAU, Bikaner, Rajasthan	2017
26.	Dr. L. Karthiba, Asst. Professor (Plant Pathology)	PR Verma Award	Annual Conference and National symposium of Indian Society of Mycology and Plant Pathology, Navsari, Gujarat	2017
27.	Dr.M.Selvamurugan. Assistant Professor (Environmental Science)	Young Scientist Award	Green Reap Welfare Society,Adilabad, Telangana	2017
28.	Dr.D.Periyar Ramasamy, Assistant Professor (Agrl. Extn.)	Best Paper Presentation Award	Interactive Workshop on Farmer Producer Companies: Status and Strategies for Sustainable Functioning held at AC&RI, Madurai	2017

29.	Dr.T. Eevera, Assistant Professor (Seed Tech)	Best poster presentation Award	XIV National Seed Seminar on "Food security through augmented seed supply under climate uncertainties" organized by Indian Society of Seed Technology, IARI, New Delhi	2017
30.	Dr.D.Periyar Ramasamy, Assistant Professor (Agrl. Extn.)	Best Participant Award	Training Programme on Extension Strategies for Nutrition Sensitive Agriculture to Address Sustainable Development Goals held at IARI, New Delhi	2017
31.	Dr.K.M.Shivakumar, Professor (Agrl. Economics)	SKOCH -Order of Merit Award	SKOCH Consultancy Services, New Delhi	2017
32.	Dr.K.Geetha, Assistant Professor (FSN)	Data Representation Award	ICAR-Central Institute of Post Harvest Engineering and Technology (ICAR-CIPHET), Ludhiana	2017
33.	Dr.K.M.Shivakumar, Professor (Agrl. Economics)	SKOCH Transformational Innovation Award	SKOCH Consultancy Services, New Delhi	2017
34.	Dr. G. Ravi, Professor (Agrl.Entomology)	Letter of appreciation for organizing International conference	Director, SABRC, Chennai	2018

Medals Received by Undergraduate Students

S. No	Medals / Awards	Medals Winners(With OGPA)				
		2012-13	2013-14	2014-15	2015-16	2016-17
Title of the Medal						
1	Rasi Seeds Prize (Highest OGPA in Seed Science and Technology courses in B.Sc.(Ag.))	Divya, R, BSA-09-618 [OGPA: 9.55]	Bhawna Nirmal, BSA 10-606 [OGPA: 9.85]	Subhasree Priyadarsini [OGPA: 9.20]	P.Vinitha, BSA-12-678 [OGPA: 9.05]	N.Kaviya, 2013004033 [OGPA: 9.10] S.Lalatendu Bidayadhar Mohapatra, 2013004108 - [OGPA : 9.10]

2	Salem Gugai Mrs. G. Sampoornammal Medal (Highest OGPA in Crop Physiology courses in B.Sc.(Ag.))	Surya Prakash, BSA-09-673 [OGPA: 9.75]	Maria Jolly, BSA 10-683 [OGPA: 9.55]	Meenambigai . C [OGPA: 9.85]	Sandra Joseph, BSA 12-640 [OGPA: 9.80]	S.Lalatendu Bidayadhar Mohapatra, 2013004108 [OGPA : 9.80]
3	Dr.V.S. Subramanyan Prize (Highest OGPA in Agrl. Extension courses in B.Sc.(Ag.))	Sumayya Pattassery, BSA-08-685 [OGPA:9.35]	Lydia Pramitha, J BSA 09-428 [OGPA: 9.60]	S.Pavithra, [OGPA : 9.63]	M.Zakira Kanam, BSA-11-674	Sandra Joseph, BSA-12-640 [OGPA: 9.40]
4	Dr.C.V.Govindasamy Medal (Highest OGPA in all Plant Pathology courses in B.Sc.(Ag.))	Sumayya Pattassery, BSA-08-685 [OGPA:9.73]	Divya, R, BSA-09-618 [OGPA: 9.75]	Dhanapriya, M [OGPA : 9.21]	Afsin Rahman, BSA-11-602 [OGPA: 9.59]	Salina. S, BSA-12-669 [OGPA: 9.61]
5	Vadamadurai V.Govindasamy, Western Electronic and Scientific Works, B.V.Velasamy and B.V.Sarojini Velasamy Medal, (Highest OGPA in all Agrl. Entomology courses in B.Sc.(Ag.))	Priyadarsani Sahu, BSA-08-652 [OGPA: 9.67]	Mufeeda, T.P, BSA 09-641 [OGPA: 9.15]	R.C. Rajalakshmi,[OGPA : 9.44]	C.Meenambigai, BSA-11-635 [OGPA: 9.47]	Kiruthiga. G, BSA-12-621 [OGPA: 9.64]
6	Ibrahim Mohammed Dokka Mohammed and Kenana Sugar Company Limited, Bell & Company, Tmt.R.Santha Medal and AVR Sundaram Trust Medal (Highest OGPA in all Agronomy courses in B.Sc.(Ag.))	Priyadarsani Sahu, BSA-08-652 [OGPA: 9.34]	Valarmathi, T, BSA 09-679 [OGPA: 9.14]	Ms. Bhawana Nirmal [OGPA:9.13]	C.Meenambigai, BSA-11-635 [OGPA: 9.09]	Salina. S, BSA-12-669[OGPA: 9.32]

7	Karaikal Siva R.Gurumurthy Iyer Medal, (Highest OGPA in all Agrl. Extension and Agrl. Economics courses in B.Sc.(Ag.)	Sumayya Pattassery, BSA-08-685 [OGPA: 9.55]	Divya, R , BSA-09-618 [OGPA: 9.34]	Nitesh Kumar Mishra [OGPA : 9.37]	M.Zakira Kanam BSA-11-674 [OGPA: 9.25]	Sandra Joseph BSA-12-640 [OGPA: 9.37]
8	K.Rajukkannu, K.Senthilvel, Meenakshi Ammal and 1995-96 batch students Endowment Medal- Best Outgoing student, (Student who secured the highest OGPA in B.Sc.(Ag.))	Ms.Priyadarsani SAHU, BSA-08-652 [OGPA: 9.36]	Divya, R, BSA-09-618 [OGPA: 9.32]	Maria Jolly [OGPA : 9.03]	i) V. Indhumathi, BSA-11-625 [OGPA: 9.15] ii) C.Meenambigai, BSA-11-635 [OGPA: 9.15]	M.Hemalatha , BSA-12-609 [OGPA: 9.30]
9	Rajagopalan Padmavathy Medal, (Men's individual Championship during the Annual Sports Day)	Anbarasan, J. BSA-10-603	J.Anbarasan I.D. No. BSA-10-603	P.Karthick	---	Sugandhan P.M., 2014004014
10.	Nagachi Rengasamy Padmanaban Karampaiyar Medal, Highest OGPA in Agriculture Economics courses in I, II and III year	---	---	---	P.Dhanya Christina BSA-11-621 [OGPA: 9.20]	S.Lalatendu Bidyadhar Mohapatra, 2013004108 [OGPA : 9.25]

6.5.7.4. Employability

Placement cell of ADAC&RI is taking all efforts to improve the employability skill of the students. The students are trained in various skills by the professional experts. Two faculty members in English working in the college conduct many sessions on preparation of Resume, participation in interview and group discussion. The Academic counselors also periodically interact with the students and motivate them to prepare for competitive exams, better career options and also to perform better. Experts in guidance for competitive exams – quantitative analysis, reasoning, language skills etc are invited to conduct special sessions to students to improve their skills. Alumni also regularly interact with the students and share their experience.

As a consequence of the sustained efforts of the faculty members in the college and the own initiate of the students several alumni are successfully serving in various walks of life and have brought good name to the institution. About twenty students are serving in civil services in this State and in other state and central government organization at top management level. Alumni are working as scientists in national and international agricultural organizations. Several alumni are also working in this University and effectively contributing to the human resource development process. Some of the alumni joined the private sector have resigned from the service and have become agripreneurs. A considerable segment of the alumni are working in state agriculture department and financial institutions.

The experience gained by students in Rural Agricultural Work Experience, Agro Industrial Tie Up Programme, NGO placement and interaction with officials of State Agriculture department, increases the confidence level of the students and the understanding the organizational culture that is essential for polite and fruitful interaction. Classroom interactions, discussions with officials and experts during guest lectures provide opportunities to update rules and regulations, polices of the government, role of private sector, which are useful in discharging their duties. The field visit, short tours and All India Study Tour expose students to development in various parts of the State and country, which widens their thought process and enables them to look for better career options. Interaction with alumni and faculty members motivates them to perform self-analysis (SWOC) and initiate measures to improve themselves, plan for preparing for competitive exams and so on.

Participation in intercultural competitions, inter college sports, University and inter University competitions within and outside the State enables students to understand their strength and weakness and where they stand when compared to their peers. The experience gained in these activities enriches their confidence and motivates them to perform better in future through better preparation.

6.5.9. Certificate

Annexure - 6.5.1.2.

Externally Funded Projects operated in the college 2013-14 to 2017-18

Year	Title of the project	Funding agency	Budget (Lakhs)
2013-14			
	Evaluation of RIL-166/F1 (10+240g/l)SE for its efficacy, phytotoxicity and residue against important weeds in wet direct seeded rice	Rallis India Ltd, Bangalore	6.62
	Standardization of lateral spacing and Chemigation techniques in drip irrigated rice	Netafim Irrigation India Pvt. Ltd., Coimbatore	7.50
	Evaluation of Targa Super 5 EC, a post-emergence herbicide for the control of grassy weeds in irrigated Black gram	Dhanuka, Agritech Ltd., New Delhi	1.15
	Mitigating abiotic stress and enhancing resource use efficiency in pulses in rice fallow condition	NFBSFARA, ICAR, New Delhi	34.50
	Strengthening of Digital Library Under NARS(e-Granth)	NAIP-ICAR	66.0
	Development of low phytate soybean [(*Glycine max* L. (Merr.)] through induced mutagenesis.	Board of Research in Nuclear Sciences, BARC, Mumbai	18.83
	Development of waxy and non waxy foxtail millet genotypes suitable for Assam and Tamil Nadu	DBT, New Delhi	18.45
	Enhancing the productivity and value addition of millets through knowledge transfer and skill demonstrations"	Govt. of Tamil Nadu	28.00
	Upscaling popularization of Littlemillet in Javadu Hills of Thiruvannamalai district, Tamil Nadu for enhancing the livelihood of tribal farmers	Najbhai Rattan Tata Trust, Mumbai	32.12
	Enhancing the productivity and value addition of millets through knowledge transfer and skill demonstrations	Govt. of Tamil Nadu	28.00
	GOI-DAC scheme – Quality control arrangement on seeds – development and strengthening of infrastructure facilities for production and distribution of quality seeds at	Ministry of Agriculture, GOI	25.00

	Seed Centre, TNAU, Coimbatore (E 28 QX) Main centre, Sub Centre: 2. ADAC & RI, Tiruchirappalli.		
	Production and supply of Foundation seed of pulses by TNAU.	NADP	30.12
	Management of salt affected soils and use of Saline water in Agriculture.	ICAR-ACRIP	56.50
	Management of Insecticides resistance in storage pests of rice using molecular tools	DST	15.50
	Mitigation of methane emission through enhanced methane oxidation and rhizosphere engineering under rice eco-system.	UGC	13.78
	Environmental quality assessment in the use of Paperboard industry (TNPL Unit II) wastewater for agro-forestry system	TNPL	49.20
	Eco-friendly utilization of distillery effluent and value added products from sugar and distillery industrial wastes in agriculture and its effect on soil, crops and ground water quality	EID Parry (I) Ltd.,	21.00
2014-15			
	Development of high culm strength, bold seeded and compact plant type genotypes in Kodo millet suitable for mechanical harvesting	UGC, New Delhi	9.63
	Developing vermicompost production unit and conducting training on solid waste management through vermiculture	VCS	1.65
	Molecular and functional characterization of Casparian strip membrane domain proteins (CASPs) in rice for salinity stress tolerance	UGC-MRP	14.20
	Engineering rice for enhanced resistance against bacterial and fungal diseases by silencing the negative regulators of innate defense response	GoI-DBT	3.70
	Promotion of quality seed production in Green manure	NADP	3.72
	Back office for Agro marketing intelligence and business promotion centre	NADP	28.00
	Management of salt affected soils and use of Saline water in Agriculture.	ICAR-ACRIP	54.00
2015-16			
	Strengthening of tissue culture unit at ADAC&RI, Try	MIDH-NHM	19.90

	Identification ofgametocides for emasculationin soybean and development of mapping populations for QTL analysis	UGC, New Delhi	9.40
	Management of salt affected soils and use of Saline water in Agriculture.	ICAR-ACRIP	71.10
2016-17			
	Exploring the feasibility of drip irrigation for kuruvai paddy and summer vegetable cultivation under sodic soil with saline water	Netafim Irrigation India Pvt. Ltd., Coimbatore	33.96
	Exploring the feasibility of drip irrigation for *kuruvai*paddy and summer vegetable cultivation under sodic soil with saline water	Netafim Irrigation India Pvt. Ltd.	3.96
	Development of photo-thermo insensitive and yellow mosaic resistant pre-breeding lines in Mungbean (*V. radiata* L.) and Urdbean (*V. mungo* L.).	ICAR, New Delhi	15.70
	Enhancing the livelihood status of tribal women through technological interventions of trainings on Non –Wood Forest Products -	DSIR, DST New Delhi	16.50
	Developing Agribusiness Models Linking Farmers Groups and Farmer Producers Organizations to Markets through Value Chain Management	ICAR	160.0
	Operational Maintenance of the Food Processing Incubation cum Training Centre (FPTC) of GoTN at ADAC&RI, Tiruchirappalli by TNAU on self supported mode-2016 - 2019	Govt. of TN Scheme	5.00
	Management of salt affected soils and use of Saline water in Agriculture.	ICAR-ACRIP	57.20
2017-18			
2	Remote sensing based information for crop coverage, yield estimation and drought monitoring	NADP	3.10
	Management of salt affected soils and use of Saline water in Agriculture.	ICAR-ACRIP	68.90

Annexure 6.5.1.4

Anti-Ragging Duty details of the Staff Members

Academic year	Period	Staff (Nos.)
2013-14	25.07.2013 to 23.08.2013	40
2014-15	30.07.2014 to 31.08.2014	53
2015-16	27.07.2015 to 31.08.2015	53
2016-17	01.08.2016 to 01.09.2016	69
2017-18	31.08.2017 to 07.11.2017	59

Guest Speakers on Anti-Ragging

S.No	Date	Guest Speaker
1.	23.08.2013	Dr.G. Krishnamohan, Ph.D., Consultant, Crop Protection (Agri), Syngenta, Coimbatore
2.	11.09.2014	Mr. Badhiri Shesathri Chief Operating Officer Kizhakku Pathippagam, Chennai
3.	03.08.2015	Mr. Ravichandran, Joint Registrar of Cooperative Society, Tiruchirappalli
4.	01.09.2016	Mr.V.Prasanna, Senior Divisional Operation Manager, Indian Railways, Tiruchirappalli
5.	25.10.2017	Thiru. Subramanian, M.Sc. (Ag) Assistant General Manager (RASMECC), State Bank of India, Zonal Office, Tiruchirappalli

Annexure 6.5.2.3.

Faculty Credentials

Faculty staff details

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
Dr.R. Sridar, Dean	Ph.D	32 years 8 months	Agrl. Microbiology	2	40

Department of Agronomy

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
Dr. G. Srinivasan Professor & Head (Agronomy)	Ph. D	23	Agronomy	-	Research Papers – 41 Research notes - 7 Symposium / Conference / Seminar Papers – 21 Popular Article - 3

Dr.Vishwanathan Professor (Agri. Eng)	Ph.D. in Agrl. Engineering	33Years 4 months	Agrl. Process Engg.	8	Research Articles National – 48 International-57
	Research notes – 18, Presented in seminars / conferences& Abstracts in proceeding -135, Chapters in the books -3, Popular articles: English – 22, Tamil -23,Technical Reports / Manuals / Books / Book chapters :,English- 23 ,Tamil -7,**Citations – 1551,h index – 21,i10 index - 31**				
Dr.S. Avudaithai, Professor (Agronomy)	Ph. D	20 years, 5 months,17 days	Agronomy	5	30
Dr.S.Somasundaram Assistant Professor (Agronomy)	Ph. D (Agronomy)	11 years 9 months	Irrigation water managements	2	Research Paper - 10
Dr.S.Anandha krishnaveni Assistant Professor (Agronomy)	Ph. D (Agronomy)	8 Years	Weed Management	8	14
Dr.T.Ramesh Assistant Professor (Agronomy)	Ph.D.,	8 years 1 month 22 days	Rice Agronomist and Meteorology	13	Research Papers - 31
Dr.S.Rathika	Ph.D.,	8 years 1 month 22 days	Weed management and Farming system	10	Research Paper – 30 Conference paper – 23

Assistant Professor (Agronomy)						Books – 5 Books with out ISBN – 5 Books chapter with ISBN - 3 Book Chapter with out ISBN-4 Manuals -12 Popular articles – 83 Pamplets / leaflets - 32
Dr.S. Nithila, Assistant professor (Crop Physiology)	Ph.D.	8 years 2 months	Crop physiology	2		Books (ISBN)-3 Books Chapter (ISBN)-5 Research articles (NAAS > 5.0)-11 Research articles- (NAAS < 5.0)-1 Conference/Seminar / Symposium papers -4 Nos.
Dr.M.Marimuthu Associate Professor(Food Science and Nutrition)	Ph.D	13 Years	Food Science and Nutrition	-		-

Department of Soil Science and Agricultural Chemistry

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
Dr. P. Santhy, Project Director (Soil Health) & Professor (SS&AC)	PhD in Soil Science and Agricultural Chemistry	32 years	Long Term Experiments on soil fertility and nutrients management P and K fertilization for crops through organic and inorganic sources	2	Books: 3 Research articles:75
Dr.P.Balasubramaniam, Professor and Head (SS&AC)	PhD in Soil Science and Agricultural Chemistry	26 years	Developed expertise through participation and presentations in Trainings, conference as a lead speaker and invited speakers and working with different research projects funded by ICAR, DST, NADP and Private Industry	7	Books:4 Research articles:30 Invited lecture:5
Dr.M.Maheswari, Professor (Environmental Science)	Ph.D in Environmental Science	28 years	Training and Workshop at Foreign countries : 3 Seminar / Conference attended : 29 University Research Projects Handled : 11 Externally Funded Research Projects handled : 29	5	Books Chapter (ISBN) : 3 Book (without ISBN) : 2 Research articles- International : 5 National : 32 Conference/ Seminar/

			Student Guidance – (Environmental Sciences) : 17		Symposium papers : 60 Popular articles /pamphlet/ leaflet : 20 .
Dr. T. Thilagavathi, Professor (SS&AC)	PhD in Soil Science and Agricultural Chemistry	23 Years	-	-	Book chapter 1 Research article 24 -
Dr. M. Sundar Professor (Agrl. Microbiology)	Ph.D. in Agricultural Microbiology	23 years	Bio fertilizer Production technology and fermentation technology	-	Book 8 Research articles 24 -
Dr. P. Janaki, Associate Prof (SS&AC)	PhD in Soil Science and Agricultural Chemistry	13 years	Plant chemistry and nutrition Herbicide residues in environment	5	Books: 4 Research articles:41 Invited lecture:6
Dr. G.Gomadhi Asst. Prof (SS&AC)	Ph.D in Soil Science and Agricultural Chemistry	13 Years	Land evaluation. Developed expertise by attending in Training on GIS and Ph.D	-	Research Atcles:10 Popular Articles: 3 .

Dr.T.Sherene Jenita Rajammal Asst. Prof (SS&AC)	Ph.D.	11 years	Soil Science and Agricultural Chemistry -	11	International -30 National -4 Books -10
Dr.J.Ejilane Asst. Prof (AGM)	Ph.D	9 years	Agricultural Microbiology	Scientist recognition award -2012 –TNAU- for getting externally funded scheme	International:2 NAAS rating:4.20 , IMPACT FACTOR: 5.464 National:2
S.Pandarinathan Assistant Professor (Bio Chemistry)	NET [Biochemistry] &M.Phil [Biochemistry]	Previous Institutions =5½years Present University= 13 years and 2 months.	Plant Biochemistry [Amylose, Enzymes, Proteins etc.,]	3	5
Dr.A.Alagesan Assistant Professor (Agronomy)	Ph.D PDF (Taiwan)	16	Agro ecology, Micrometeorology, Crop growth Modeling and Climate science	-	25

Dr.M.Selvamuru gan, Assistant Professor (Env. Sciences)	PhD inEnvironment al Science	3 years	-	2	Res. Articles 17 -

Department of Plant Breeding and Genetics

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
Dr. T. Kalaimagal Prof & Head	Ph. D.	23 years	Plant Breeding and &Genetics	3	Books chapters with ISBN:2 Book chapters without ISBN:13 Research papers : 49 Papers presented seminar / symposium / conference : 44 Research articles : 8
S. Kumar Professor (Horti)	Ph. D.	29 years	Horticulture	-	Research articles : 20 Popular articles : 41
Dr. M. Murugesh Professor (For.)	Ph. D.	21 years	Forestry	--	Research articles : 22
Dr. L. Arul Professor (Biotech)	Ph. D.	21 years	Biotechnology	1	Research articles : 20

Dr. A. Subramanian Assoc. Prof. (PB&G)	Ph. D.	13 years	Plant Breeding and Genetics	2	Research articles : 34
Dr.T.Thirumurugan Asst. Prof. (PBG)	Ph. D.	8 years	Plant Breeding and Genetics	--	Research articles : 12 Popular articles : 2
Dr. S. Chitra Asst. Prof. (PBG)	Ph. D.	8 years	Plant Breeding and Genetics	--	Books with ISBN:3 Books chapters with ISBN:8 Research articles: 9 Research notes : 2 Papers presented seminar / symposium / conference: 20 Popular articles: 5
Dr. T. Eevera Asst. Prof. (SST)	Ph. D.	8 years	Seed Science and Technology	3	Books with ISBN:2 Book without ISBN : 2 Research articles : 18 Popular articles : 04 Book chapter: 03

Department of Plant Protection

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
Dr. C. Gailce Leo Justin Professor & Head	Ph.D., (Entomology)	29 years 6 Months	Entomology	1	Book Chapter (with ISBN): 2 Book Chapter (without ISBN): 8 Book (without ISBN) : 4 Research articles : 42 Review Articles : 2 Conference/ Seminar papers: 48 Popular articles: 49
Dr. P. Pandiyarajan, Prof.(Micro. biology)	Ph.D., (Micro. biology)	36 Years	Microbiology		Book Chapter (with ISBN): 1 Book Chapter (without ISBN): 2 Research articles – International 1 Research articles – National 4 Conference/ Seminar papers: 1
Dr. G. Ravi, Professor (Ag Entomology)	Ph.D.	23 Years	Entomology	10	Book Chapter (with ISBN): 3 Book Chapter (without ISBN): 5 Book (without ISBN) 2 Research articles – International 3 Research articles – National 18

					Research Notes : 23 Conference/ Seminar papers: 33 Popular articles: 142
Dr. P. Yasodha Asst. Prof. (Ento.)	Ph.D., (Entomology)	9 Years	Entomology	1	Book Chapter (with ISBN): 10 Nos. Research articles – International :15 Nos. Research articles – National : 10 Nos. Research Notes : 23 Nos. Conference/ Seminar papers: International : 5, National : 11 Nos. Popular articles: 12 Nos.
Dr. K. Chitra Asst. Prof. (Pl. Patho.)	Ph.D (Plant Pathology)	9 Years	Plant Pathology		Research articles (NAAS > 5.0): 1 No. Conference/Seminar / Symposium papers : 2 Nos. Poster papers : 2 Nos.
Dr. L. Karthiba Asst. Professor (Pl. Patho.)	Ph.D (Plant Pathology)	3 years 6 months	Plant Pathology	10	Book Chapter (with ISBN): 2 Nos. Book (without ISBN) : 2 Nos. Research articles – International :5 Nos. Research articles – National : 5 Nos. Research Notes : 23 Nos.

					Conference/ Seminar papers: International : 5, National : 11 Nos.
					Popular articles: 2 Nos.
Dr.G.Jothi	Ph.D (Nematology)	13 years	Nematology	-	Books (ISBN): 7 Nos.
Asst. Prof (Nematology)					Research articles (NAAS > 5.0): 2 Nos.
Dr. T. Senthilkumar	Ph.D.,	9 Years	Nematology		Research articles (NAAS > 5.0): 1 No.
Asst. Professor (Nematology)	(Nematology)				Conference/Seminar /
					Symposium papers : 2 Nos.
					Poster papers : 2 Nos.

Department of Social Sciences

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
S.D.Sivakumar	Ph.D.	29 Years	Agribusiness Management		Research Articles 41
Prof and Head	(Ag. Econ)				
	FDPM at IIM Ahmedabad				
R. Salvadi Easwaran	Ph.D.	29 Years	Agrl. Economics	-	Research Articles -1
Professor (Agrl. Economics)	(Ag. Eco)				Manuals - 17

P.Balasubramaniam	Ph.D. (Agrl.Extension.)	24 years	Extension Management and Use of ICTs		Books -7
Professor					Manuals -2
(Agrl.Extension.)					Aricles - 2
U.Arulanandu	Ph.D. (Ag. Eco)	23 years	Statistics	-	Article : 1
Professor (Statistics)					
M.Manimekalai	Ph.D (Tamil)	20 years	Tamil	-	Articles : 14
Professor (Tamil)					Books : 2
					Course Manuals:3
S. Selvam	Ph.D (Agricultural Economics)	20 years 6 month	Market intelligence specialist	-	Books Chapter (ISBN)-4
Professor					Books (CAS/CAFT / without ISBN)-5
(Agricultural Economics)					Book
					(Chapter without ISBN)-12
					Research articles-8
					Conference/Seminar / Symposium papers -6
					Manuals – Teaching/training/ e-course-4

					Pamphlet/leaflet-7
C.Velavan Associate Professor (AR&M)	Ph.D (Agricultural Economics)	13 years 4 Months	Agricultural Marketing and Agribusiness management	-	Books:3 Book Chapters: 3 Articles:12 Popular articles: 5
S. Padma Rani Assistant Professor (Agricultural Economics)	Ph.D (Agricultural Economics)	13 years	Agricultural Economics	2	Books (ISBN)-1 Book Chapters with ISBN-2 Books without ISBN-3 Book Chapters without ISBN-2 Research articles – 4 Seminar/Conference paper-1 Technical bulletin-1 Teaching Manual- 5.
K. Geetha Assistant Professor (Food Science and Nutrition)	Ph.D	11 years 8 months	Food Science and Nutrition	1	Books (ISBN)-1 Books Chapter (ISBN)-1 Books (CAS/CAFT / without ISBN)-2

					Book (Chapter without ISBN)-3 Research articles-3 Conference /Seminar / Symposium papers-9 Manuals – Teaching /training / e-course-1 Pamphlet /leaflet-14 Popular/News paper-35
K.Thangaraj Assistant Professor (English)	PhD	16 years	English		Books -1 Book Chapters-10 Course Manuals-5 Research Journals -8 Audio lesson -1 Conference/Seminar papers-15
G. Vanitha Assistant Professor (Computer Science)	M.Tech (CSE)	11 years	Computer Science and Engineering	02	Conference paper – 2 Book (with ISBN) – 3 Manuals – 08 Research papers - 5

S Gurunathan Assistant Professor (Agrl Econ)	Ph.D	8 years 2 months	Agricultural Economics		Research Papers-5 Book Chapters-6
D.Periyar Ramasamy Assistant Professor (Agricultural Extension)	Ph.D	3 Years and 6 Months	Agricultural Extension	2	Research Articles-2 Book-1 Book chapter -5 Conference paper - 1
R. Parimalarangan Assistant Professor (Agricultural Economics)	Ph.D	3 Years and 6 Months	Agricultural Economics)	1	Research articles:3 Numbers Book Chapter:5 Numbers Conference paper - 1

Library

Name and Designation	Highest qualifications received	Work experience	Professional expertise, licensure and certifications	Honors, awards	Publications
S. Thilakar, Deputy Librarian	Ph.D.,	23 years	Library & Information Science	2	Research Article – 2 Conference /Seminar / Symposium papers -3

Annexure 6.5.2.4

Details on Staff Managing Centralized Facilities

S. No	Particulars	Number
Library Staff[#]		
1.	Deputy Librarian (Associate Prof. cadre)	1
2.	Library Asstt./Clerk	1
3.	Shelf Assistant*	2
Students Welfare[#]		
1.	Deputy Director Physical Education (Assoc. Prof. cadre)	1
2.	Attendant (Markers)	2
Hostel Staff		
1.	Chief Warden (Dean)	1
2	Warden (Professor)	1
3	Deputy Warden (Asst Prof) - Male 1 and Female 1	3
4	Residential Tutor Male 1 (Asst Prof.) and Female 1 (SRF)	2
5	Accountants Officer (Retd AO) (Consolidated)	1
6	Assistants (Consolidated)	2
7	Care taker/Asstt. (Male-1, Female-1) (Consolidated)	2
Estate Branch[#]		
1.	Assistant Executive Engineer (Civil)	1
2.	Junior Engineer (Civil)	1
3	Electrical Foreman	1
4	Mechanic Grade II	1
5	Skilled Assistant Grade II	1
6	Technical Assistant (Electrical) (Consolidated pay)	1
7	Technical Assistant (Civil) (Consolidated pay)	1
8	Electrician (Consolidated pay)	1

[#] *Under the administration of the Dean*

Divisions / Departments / Sections – Requirements

Sl. No.	Details	No. of Rooms	Dimensions(in ft)
1.	Office of Head	5	24x12 with wash room facility
2.	Faculty Rooms	12	12x10 + 18x12
			24x10 depending on the strength of each department.
3.	Clerical / technical staff	12	Centralized office
5.	Laboratories	12	30x 60 Larger dept. will have two
6.	Field / Lab Stores	5	1. Agronomy
			2. Genetics& Plant Breeding
			3. Soil Science
			4. Horticulture
			5. Pests & Chemicals
7.	Green house / poly house / Nursery facilities (Hort. Deptt.)	½ acre	Facilities available in the Horticultural College and Research Institute for Women, Trichy are used.

Infrastructure facilities - Central Facilities

Sl. No.	Details	No. of Rooms	Dimensions (in ft)
1.	Dean Office	1	28 x 23
2.	P.A. Room	1	9 x 9
3.	Committee Room with video conferencing facility	1	39 x 29
4.	Assistant Administrative Officer including staff	1	23 x 19
5.	Assistant Accounts Officer including staff	1	18 x 18
6.	Assistant Academic Officer including staff	1	18 x 18
7.	Exam Hall (300 capacity)	2	78 x 28
8.	Placement Cell	1	20 x 20
9.	Smart Lecture Halls	4	38 x 28
			(100 capacity)
10.	Auditorium	1	156 x 83
11.	Library/Book Bank	1	4300 sq ft
12.	Hostels including Mess, Gym/Indoor, Reading Room, Warden Room, Store etc.	1 (boys)	150
		1 (girls)	150
13.	Canteen	1	29 x 20
14.	Wash room (with toilet & urinary facilities)	10	20 x 12 (keeping ladies requirements)
15.	Parking space		70 x 25
			56 x 15
			55 x 23
16.	Farm stores, threshing yards including implements and tractor sheds	One core complex	
17.	**Vehicles**		
	Car	1	
	Jeep / Car staff	2	
	Bus	1	
	Pickup van	1	
	Motor Bikes	2	
	Minibus (30 capacity)	1	
	Tractors	2	
18.	Drinking water and irrigation facilities		As per requirements
19.	Vehicles shed	2	52 x 26
			45 x 28

Annexure 6.5.3.2.

Instructional Laboratories / Units of the College

Sl.No	Laboratory / Unit	Sl.No	Laboratory/ Unit
	Agronomy		**Soil Science**
1.	UG laboratory	18.	UG laboratory
2.	PG Laboratory	19.	PG Laboratory
3.	Meteorology observatory	20.	Microbiology laboratory
4.	Animal Husbandry unit	21.	Environmental Science laboratory
5.	Engineering Workshop	22.	Vermicompost Unit
6.	Interated Farming System		**Plant Protection**
	Plant Breeding and genetics	23.	UG Entomology laboratory
7.	UG laboratory	24.	PG Entomology Laboratory
8.	PG Laboratory	25.	UG Pathology laboratory
9.	Green house unit	26.	Nematology Laboratory
10	Glass house unit	27.	Toxicology Laboratory
	Biotechnology laboratory	28.	Pseudomonas production unit
11.	Plant Molecular Biology laboratory	29.	Bio fertilizer production unit
12.	Tissue culture laboratory	30.	Mushroom unit
	Seed technology laboratory	31.	Apiculture unit
13	DNA Finger Printing Laboratory	32.	Sericulture unit
	Social Sciences		
14.	Language laboratory		
15.	Computer lab		
16.	Audio Visual Lab		
17.	Food Processing unit		

Annexure – 6.5.4.5

Allotment of Marks for undergraduate and post graduate programme evaluation

Undergraduate Programme

Sl. No.	Particulars	Requirements	Allotted Marks
1.	Attendance	Minimum of 80 % separately in theory and practical	Pre-requisite for writing the final practical examination (Evaluated by external examiner)
2.	Record	Continuous evaluation	
3.	Assignment	a. Presentation / Comprehension	1 mark (evaluated by course teacher)
		b. Written part	2 marks (evaluated by external examiner)
		c. Questions	2 marks (evaluated by external examiner)
4.	Written part	a. Identification / spotter	5 marks (evaluated by external examiner)
		b. Experiments / field work / lab work / calculation	10 mark (evaluated by external examiner)
		c. Short notes / critical analysis	10 marks(evaluated by external examiner)
		d. Case study	5 marks (evaluated by external examiner)
5.	Viva voce	Minimum of 5 questions	5 marks (evaluated by external examiner)

Masters Programme

No.	Particulars	Master's degree
1.	Evaluation of students performance	
	Examinations	
	Unannounced Quiz	10 marks
	Announced Quiz	20 marks
	Final Examination	60 marks (40 Theory and 20 marks Practical)
	Term paper	10 marks
	Grading	Quantitative (in 10 point scale)

Qualifying Examination	
Major, Minor and specialized	One paper
ii. Question paper setting	External
iii. Evaluation	External
iv. Viva voce	No
v. Qualifying Marks	70%
Grading	OGPA
Seminar	Internal
b. Research evaluation	Internal
Thesis	
I Evaluation	One external examiner
ii. Viva voce	Internal by Advisory committee

Lab/field equipment for Agronomy and Agroforestry

Particulars	Availability
Crop Cafeteria	½ acre land
	small implements like spade, hoe, khurpi, darati etc.
Museum for identification of seeds, fertilizer, weeds, commonly used agro-chemical and medicinal and aromatic plants etc.	Storage bottle
	Herbarium posting material
Field of sowing method, fertilizer application, irrigation and soil productivity and yield estimation	Small equipment/ implement
Irrigation water measurement, bulk density etc.	
Equipment	**Number**
Hot air oven	2
Moisture box	30
Moisture meter	1
Weighing Balance	1
Seed Germinator	Equipment available in Seed Tech lab is used
Conductivity Meter	1
pH Meter	1
Water Bath	1

Shaker	1
Chlorophyl Meter	1
Drip and Sprinkler System	2
Sprayer	3
Spring Balance 50 Kg	1
Top Pan Balance 1 kg capacity	1
Top Pan Balance 2 kg capacity	1
Meter Scale	10
Tape	2
Double glass distillation unit	1
Student Monocular microscope	1
Refrigerator 285 litres	1

Lab / Field Equipments for Agrometeorology

Items	Numbers
Thermometer Max	2
Thermometer Min	2
Digital Anemometer	-
Cup Anemometer	2
Pan Evaporimeter	1
Soil thermometer	
5 cm.	-
10 cm.	1
15 cm.	1
Rain gauge	1
Self recording Rain gauge	1
Sunshine Recorder	1
Stevenson's Screen	1
Thermograph	-
Hygrograph	1
Soil Heat Flux Plate	-
GPS	1
AWS (optional)	1
Lysimeter (optional)	1

Luxmeter	1	
Solar Pyranometer	1	

List of instruments Animal Husbandry Unit

S. No	Instrument	Numbers Available	Remarks
Dairy and Poultry			
1.	Incubator cum Hatcher	1	Used from FWKC
2.	Brooder machine	1	Used from FWKC
3.	Feeder	1	
4.	Waterer	1	
5.	Debeaker	1	
6.	Milking Machine	1	
7.	Milking bucket	1	
8.	Milking can	1	
9.	Animal and bird identification tools	Available as required	
10.	Chaff cutter	1	
11.	Lactometer	1	
12.	Castrator	1	
13.	Electrical dehorner	1	
14.	Common medicated device	1	
15.	Cattle crate	1	
16.	Vaccinator	1	
17.	Shearer	1	
18.	Egg candling machine	1	
	Animal Sciences including Fisheries		
1.	Analytical balance	1	Used from Agronomy Lab
2.	Hot Air oven	1	Used from Agronomy Lab
3.	Micro Kjeldhal N digestion & distilled Apparatus	1	Used from Agronomy Lab
4.	Willy mill Grinder	1	Used from Agronomy Lab

5.	Platform Balance	1	Used from Agronomy store
6.	Gerber centrifuge unit	1	
7.	Distilled water unit	1	Used from Agronomy Lab

Soil Science and Agricultural Chemistry + (Microbiology, Environmental Sciences, Biochemistry)

S. NO.	Items	Numbers			Total
		Soil Science	Microbiology	Environmental Science	
	Size of Lab (in Feet)	78.5 x 30	49 x 25	40.5 x 19.25	-
	Electronic Top pan balance (0.1 g capacity)	4	-	-	4
	Electronic Top pan balance (1 mg capacity)	-	4	1	5
	Hot air oven	2	2	2	6
	pH Meter	1	2	2	5
	EC Meter	1	1	1	3
	Flame Photometer	1		1	2
	Visible spectrophotometer	1	-	1	2
	Hot Plate	1	-	-	1
	Distilled water unit	1	2	1	4
	Water Bath	2	1	1	4
	Rotary Shaker	1	1	-	2
	Binocular Microscope*	-	28*	-	28
	BOD Incubator	-	1	1	2
	Autoclave	-	3	2	5
	Laminar Air Flow	-	2	1	3
	Microwave oven	-	2	-	2
	Digestion block**	-	-	-	-
	Buoycos Hydrometer	2	-	-	2
	Infiltrometer	2	-	-	1
	Hydraulic conductivity meter	1	-	-	1
	Atterberg's limitsmeter	-	-	-	-
	Nitrogen Analyser***	-	-	-	-

23	Electronic Top pan balance (0.01 g capacity)	1	-	1	2
24	Electronic Top pan balance (1 g capacity)	-	1	1	2
25	Magnetic stirrer	1	-	-	1
26	Stirrer	2	-	-	2
27	Sand bath	1	-	1	2
28	Centrifuge	1	1	1	3
29	Vortex mixer	-	1	-	1
30	Trinocular Stereoscopic zoom Microscope	-	1	-	1
31	Hiloop Auto sterilizer (LPG Gas)	-	1	-	1
32	Refrigerator	-	2	-	2
33	Water activity meter (NAIP)	-	1	-	1
34	Gas Chromatograph model Varian star CX	-	1	-	1
35	Colori meter	-	1	-	1
36	Soxhlet Extraction apparatus full sets 500 ml (Guna make)	-	1	-	1
37	Vertical slab gel system (65-05) Bio tech	-	1	-	1
38	Low temperature culture storage facility	-	1	-	1
39	Deep freezer	-	1	1	2

**25 monocular and 3 binocular microscopes are available for students use*

*** Available in Soil Science PG lab is used for UG classes*

**** Nitrogen distillation units of 48 Nos are available in UG Soil Science lab for estimation of N. Semi-automated N analyser available in Soil Science PG lab is used for UG classes*

Agriculture Engineering Machineries for farm Management

Items	Numbers	Remarks
Working models of MB plough, Disk plough and indigenous plough	2 sets each	MB and Disc Ploughs available
Working model of different harrows	Actual	Only Disc harrow available
Seed drill	01	Not in working condition

Different types of threshing drums	As per requirement	Not available
Working models of reaper & mowers	0	Not available
Different types of sprayers and dusters	As per requirement	Only hand operated knapsack sprayer available
Cut model of CI & SI engine		Not available
Cut model of Tractor	01	Only tractor as model is available

Department of Plant Breeding and Genetics

Laboratory facilities at Department of Plant Breeding and Genetics

Subject	Infrastructure available	Number	Size (sq.ft.)
Plant Breeding and Genetics	UG Laboratory	1	1800
	PG laboratory	1	300
	Crop cafeteria	1	47.5 cents
	Green house	1	6.5 cents
	Glass house	1	719
Biotechnology	Plant Molecular Biology laboratory	1	1000
	Tissue culture laboratory	1	144
Seed Science and Technology	DNA Finger Printing Laboratory	1	1500

Faculty space in Department of Plant Breeding and Genetics

Details	No. of Rooms	Dimensions(in ft)
Office of Head	1	9.5x19
Faculty Rooms	2	5 x 5 feet each
Faculty Rooms	1	10 x 10
PG students room	1	10x10

Lab / Field Equipments in Plant Breeding and Genetics Laboratory

Items	Nos.
Microscope	70
Binocular microscope	2
Electronic Moisture Meter	2
Electronic Balance	4
Seed Germinator	1
2D Gel Electrophoresis system with power supply	1
Gel Documentation Unit with UV-Trans illuminator	1

PCR machine	1
Micro centrifuge	1
Multipurpose Digital Shaker	1
Water bath	1
Test tube Rotator	1
Rotary Mixture	1
Heating blocks	1
Water purification system	1
Refrigerator	1
Analytical balance	3
Autoclave	1
Computer and laser printer	1
Deep freezer -20°C	1
Deep freezer -80°C	1
Hot air oven	2
Hot plate cum stirrer	2
Liquid nitrogen can	1
Microwave oven	1
PH meter	2
Micro-pipettes	8
Seed moisture meter	2
Seed cleaner cum grader	1
OSAW Hot air seed drier	1
Illuminated purity work board	2
Seed Trier	3
Plastic trays	20
Boerner divider	1
Indosaw Riffle divider	1
Electronic balance	3
PH meter	2
EC meter	2
Specific gravity separator	1
Wooden pallet	3

Sieves	5
Desiccators	3
Hot air oven	2
Seed grinding mill	1
Gamet divider	1

Lab / Field Equipments in Biotechnology Laboratory

Items	Nos.
Hot Air Oven	2
Centrifuge	1
Growth Chamber	1
Distillation Assembly (Ultra pure water production facility available)	1
Air conditioners – 2 tonnes	4
Laminar flow chamber (Six foot)	2
Air curtain	1
Cooler (4 – 8 °C)	1
-20° C refrigerator	1
Liquid Nitrogen can	1
Autoclave	1
UPS power pack (3.5 Kva)	1 set
PCR machine	1
UV Transilluminator	1
Micro-pipettes (0.5-10 µL, 10-100 µL, 100-1000 µL, 1-10 mL)	4
Gradient PCR	2
UV/Vis Spectrophotometer	1
Refrigerator (-20°C)	1
Refrigerator (4-8°C)	1
Digital pH meter	1
Electronic Balance	2
Gel Documentation system	1
Gel Electrophoresis system	1 set

Lab / Field Equipments in Horticulture

Items	Nos.
Secateurs	30 Nos.
Grafting and budding knife	10 Nos.
Hand Refractometer	The equipments / instruments available in the Dept. of Plant Breeding and Genetics, ADAC&RI, Dept. of Soil Science and Agrl. Chemistry, ADAC & RI., Trichy and Food Science Laboratory, ADAC & RI, Trichy are used.
Digital Refractometer	
Oven	
Refrigerator	
Electronic Weighing Balance	
Pan Balance (1 kg & 10 kg. capacity each)	
Deep Freezer	
pH Meter	
Fruit crusher	
Grinding and Mixing Machine	
Distillation Assembly	

Department of Plant Protection

Lab / Field Equipments in Entomology Laboratory

Instrument & Size	Number
Binocular Microscope	20
Insect Box	100
Insect collection Nets	60
Collection Bottles	100
Insect Collection Big Boxes for Museum (1 for each order)	30
Insecticides for showing students/representative for each group	30
Stereomicroscope	2
Electronic Balance	1
Soxhlet Extraction equipment	2
Bee keeping equipment	3
Oven	2
Patters Tower	3
Sprayers	5
Light traps	2
Fumigation chamber	1

Slides/cover slips	150
pH meter	1
Compute with printer	1
Centrifuge	1
Rearing cages	10
Pipetting system	1
Storage Rack	5
Vortex Mixer	1
Laminar air flow	1
Hot air circulator unit	1
AC	1
Incubator	1
Double Distillation unit	1
Heating facility	1
Vaccum circulation facility	1
Dessicator	1
Homogenising Facility with Two Jars of small size capacity	1
Degassing Facility	1
Stand for Separating funnel	5
Suction apparatus with suction funnel	1
Instrument display Facility (9'x2.5'x3')	1
Reagent display Facility (6'x1.5'x2.5')	1
Residue sample processing facility (7'x2.5'x3')	1
Chemical storage facility (9'x5'x3')	1
Lab Deep Freezer Cum refrigerator LG with Stabilizer	1
Hot air oven	1
Rotary Vacuum flash Evaporator	1
Electronic Balance	1
Gas Chromatograph (Model: Agilent ,7890A)	1
High performance Liquid chromatography (HPLC) Model: stimadzu prominence	1
Insect storage facility (18"x12"x3.5")	39
Insect Display facility (18"x12"x3.5")	20
Insect Specimen Tube Cabinet	1

Protection Cage	2
Specimen storage facility (185 Litres)	1
Microscope Storage Facility (6'x3'x1½')	1
Binocular student microscope	1
Magnoscope	1
Insect setting board	25
Dissection microscope	35
Refrigerator	3
Insect growth chamber	1
Insect rearing cage (30x30x45 cm)	3
Insect rearing cage(45x45x55 cm)	1
Dissecting tray(30x23x5cm)	13
Observation bee hive	1

Lab / Field Equipments in Plant Pathology Laboratory

Instrument	Number
Microscope compound with photo display arrangement	3
Sterob-inocular	5
Sample processing Board (Dry preservation of samples)	5
Wet preservation Jars	20
Autoclave	2
Oven	3
Deep Freezer	1
Centrifuge (3000 rpm)	1
Refrigerator	2
Water bath	-
Electronic balance	3
Weighing machine	1
Incubator	1
Occular meter	1
Stage micrometer	1
Camera Lucida	-
Fermentor	2
Blender	1

Lab / Field Equipments in Nematology Laboratory

Instrument	Number
BoD	1
Growth chamber	1
Laminar Air flow Chamber	1
Stereo zoom microscope	4
Sieves	10
Fermentor	1

Lab / Field Equipments in Apiary Unit

Instrument	Number
Centrifuge (Remi R 8-c)	2
Spectrophotometer Laman 1000B)	1
BOD Incubator(Newlab)	1
Indian Bee Hives	21
Italian Bee Hives	3
Bee Hive Stands	37
Bee Colonies	31
Mini Honey processing unit	1
Wax melting unit	1
Bee Veils	2
Smoker	5
Honey extractor	2
Mini Honey testing kit	1
Honey processing unit	1
Posters	11

Lab / Field Equipments in Mushroom Laboratory

Instrument	Number
Autoclave	1
Oven	1
Refrigerator	1
Laminar	5
Packing machine	1
Humidifier	1
Laminar (Vertical)	2
Laminar(Horizontal)	3

Computer lab for Computer Science, Economics, Mathematics and Statistics

Items	Numbers	Remarks
Computers	33	The Department of Social Sciences is equipped with 8 Mbps bandwidth wi-fi- connectivity. All the computer systems used in the department are well connected with 8 Mbps wi-fi with separate receiver dongles. These systems are connected with computer peripherals like printers, scanners and photo copying facilities.
		The department has a laboratory with a seating capacity of 40 with 33 Intel core i3-3220 preloaded Windows 8 Professional computers all connected with 8 Mbps wi-fi and 15 of them are fixed with separate wi-fi receiver dongles.
Camera	2	
Softwares	SPSS,	Additional software are planned to be purchased for analysis
	E-views,SAS, LIMDEP, SYSTAT	
	Business Proposal Tool (software)	
Wi-fi	8 Mbps	All the computer systems used in the department of Agricultural Economics are well connected with 8 Mbps wi-fi with separate receiver dongles.

Equipments in Audio Visual Laboratory

Items	Nos.	Remarks
LCD Projector	2	The AV Lab is equipped with 8 Mbps bandwidth wi-fi-connectivity. Two LCD projectors are used for conducting the class and presentation.One is exclusively for interactive teaching.
		The AV Lab has a seating capacity of 40.
Camera(SLR) with zoom, wide angle, tele photo lens	1	The camera is used for giving hands on training to the students on photography in the course Agricultural methodology and transfer of agricultural technology.
Video camera with tripod, lighting accessories and editing facility	1	Hands on training is provided for making agricultural technological videos to students and also provided with editing softwares.
Computer (workstation) with editing softwares	1	A computer is placed in the AV lab and equipped with various editing software like, Window movie maker, filmora are used for the preparation of agricultural technological videos.
Digital voice recorder	-	Voice recorders are used to record the interview with farmers, scientists and extension personals in the process of transfer of agricultural technologies.
Audio recording mixing consoles	-	Facility available at AC & RI, Coimbatore is shown and explained to students during a specific visit for AV facilities at AC & RI, Coimbatore
Computation Softwares for statistics	SPSS, SAS, LIMDEP, SYSTAT	Additional software are planned to be purchased for analysis

Equipments in Language Laboratory (30 x 30 ft size – fifty seats)

Items	Nos.	Remarks
Headphone	6	Computers available in the computer centre are used
LCD with screen	1	
LED TV 52'"	1	
Audio systems	1	
Podium	1	
Software on stress management, communication skills, yoga, IELTS, TOFEL, GRE, CAT		

Equipments in Food Science Lab Details

Instrument	Available
Refrigerator	1
Muffle furnace	1
Weighing balance	4
Water bath	2
Hot air oven	2
Pulper	2
Juice extractor	1
Spectrophotometer	1
Microwave oven	1
Baking oven	1
Poly pouch sealer	1
Crusher	1
Masala grinder	1
Dehydrator	1
Pulveriser	1
Oven cookery utensils	10
Extruded machine	1
Pressure cooker	2
baking oven	1
Idli maker	2
Popping machine	1
Cabinet drier	1
Food processor	1
Hand mixer	1
Fruit juice / mill	1
Corking machine	1
Utensil for cooking and serving	50nos
Refractometer	3 nos
Thermometer	1
LPG gas stove (2 Burner)	2
Induction stove	1

Boiler	1
Double jacketed kettle	1
Auto clave	1
Blanching unit	1
Mixing tank	1
Bottle filling machine	1
Working table	2
Water purifier	1
Foil sealer	1
Tray dryer	1
Storage unit	1
Planetary mixer	1
Dough kneader	1
Bread slicer	1
Gas baking oven	1
Baking tray and moulds	21nos
Working table	2
Hand sealing machine	1
Dough sheeter and Baking accessories	1

Annexure-6.5.4.6

NCC Activities during 2013 - 18

Participants	Event	Venue	Date
Twenty nine cadets	Combined Annual Training Camp	Jamal Mohamed College, Tiruchirappalli	14.11.2012 to 23.11.2013
Twenty nine cadets	Annual Training Camp	Nehru Memorial College, Puthanampatti, Tiruchirappalli	04.06.2013 to 13.06.2013
240 cadets from all over the state	Training camp	ADAC&RI, Tiruchirappalli	09.08.2014 to 19.08.2014
Preethi, II year cadet	The All India Nilgiris Treck for girls	NCC group, Coimbatore	22.05.2014 to 29.05.2014
NCC Officer	Pre- commission training	Kamptee, Maharashtra	15.09.2014 to 13.12.2014
Fourteen NCC cadets	C certificate exam	ADAC&RI, Tiruchirappalli	2014-15
Sixteen cadets	CATC camp	Boiler Plant Boys Higher Secondary School, Kailasapuram, Tiruchirappalli-14	22.05.2015 to 31.05.2015
All NCC cadets	Yoga training	ADAC&RI, Tiruchirappalli	15.06.2015
All NCC cadets	International Yoga Day celebration	ADAC&RI, Tiruchirappalli	21.06.2015
Nineteen NCC cadets	CATC cum IGC-RDC	Boiler Plant Boys Higher Secondary School, Kailasapuram, Tiruchirappalli	25.09.2015 to 04.10.2015
All NCC cadets	NCC Day	ADAC&RI, Tiruchirappalli	24.11.2015
KrishnaSai, II year Cadet	Special National Integration Camp (NIC)	KIET College, Korangi, Andhra Pradesh	15.10.2015 to 26.10.2015
All NCC cadets	Gourd of Honour given to the Superintendent of Police	ADAC&RI, Tiruchirappalli	11.12.2015
NCC Officer	All India Trekking Camp	22 Battalion, Kerala	19.12.2015 to 26.12.2015

AR Sethupathi, R. Gowtham, K Ramkumar and A Karthik, II year NCC cadets	Meritorious NCC Cadet Welfare Society Scholarship	NCC Unit, Trichirappalli	25.04.2016
Thirteen cadets of 1st year	CATC camp	Bishop Heber College, Trichirappalli	30.05.2016 to 8.06.2016
All NCC cadets	International Yoga Day	National College, Trichy	21.06.2016
Five second year cadets	IGC- RDC Camp	Boiler plant boys higher secondary school, Trichy	25.09.2016 to 04.10.2016
All NCC cadets	NCC day celebration	Shanthivanam mental ill home, Seethapettai village, Tiruchirappalli	27.11.2016
Fifteen cadets of III year	CATC cum DTE Launch II camp	Periyar Maniyammai University, Vallam, Thanjavur	19.12.2016 to 28.12.2016
All NCC cadets	weapon training	NCC unit Trichirappalli	13.02.2017 to 14.02.2017
21 NCC cadets	CATC cum TSC camp	NIT, Trichy	05.06.2017 to 14.05.2017
11 cadets from third year & one cadet from second year	CATC cum RDC II camp	GTN college, Dindigul	08.09.2017 to 17.09.2017
All NCC cadets	Youth Awakening Day function and rally [Birth anniversary of Dr. A.P.J.Abdul Kalam]	ADAC&RI, Tiruchirappalli	14.10.2017
26 NCC cadets	Blood donation camp	NCC unit Trichirappalli	4.11.2017
All NCC cadets	NCC day celebration	ADAC&RI, Tiruchirappalli	30.112017
All NCC cadets	Tree planting programme	ADAC&RI, Tiruchirappalli	16.12.2017

Major NSS activities of NSS volunteers during 2013 – 18

S.No	Event	Venue	Date
2013-14			
1.	NSS Special Camp	Navalur Kuttappattu village, Tiruchirappalli	02.05.2012 to 08.05.2012
2.	NSS Special Camp	K.Kallikudi, Manikandam Block, Tiruchirappalli	27.05.2013 to 02.06.2013
3.	Road Rally on 'Stop Child Labour'	Trichy to Dindigul Road Near K.Kallikudi village	13.09.2014
4.	Health is Wealth Campaign	K.Kallikudi Village, Tiruchirappalli	27.09.2014
5.	National Unity Day	ADAC&RI, Tiruchirappalli	31.10.2014
6.	Blood Donation Awareness Campaign	K.Kallikudi village, Tiruchirappalli	08.11.2014
2015			
1.	Beautification of Lawn	ADAC&RI, Tiruchirappalli	07.03.2015
2.	AIDS awareness programme	Inamkulathur, Tiruchirappalli	14.03.2015
3.	Woman Health Care Programme	Inamkulathur, Tiruchirappalli	21.03.2015
4.	Blood donation and organ donation awareness Lecture	ADAC&RI, Tiruchirappalli	02.04.2015
5.	Food Wastage Awareness Programme	ADAC&RI, Tiruchirappalli	11.04.2015
6.	NSS Special Camp Programme	Ariyavur village, Tiruchirappalli	23-5-2015 to 29-5-2015
7.	Communal Harmony Rally	Navalur Kuttappattu village, Thiruchirappalli	13.06.2015
8.	International Yoga Day Celebration	ADAC&RI, Tiruchirappalli	21.06.2015
9.	Mega Tree Planting Programme	ADAC&RI, Tiruchirappalli	05.06.2015
10.	No Plastics Campaign	Navalur Kuttappattu village, Tiruchirappalli	13.06.2015
11.	National Integration Program	ADAC&RI, Tiruchirappalli	22.08.2015
12.	Blood Donation Camp	ADAC&RI, Tiruchirappalli	31.08.2015

13.	Dengue Awareness Programme	Inamkulathur, Tiruchirappalli	12.09.2015
14.	NSS Day Celebration	ADAC&RI, Tiruchirappalli	24.09.2015
15.	Non Violence Day	ADAC&RI, Tiruchirappalli	02.10.2015
16.	Swachh Bharath programme	ADAC&RI, Tiruchirappalli	10.10.2015
17.	Youth Awakening Day	ADAC&RI, Tiruchirappalli	15.10.2015
18.	National Unity Day	ADAC&RI, Tiruchirappalli	31.10.2015
19.	Polythene Eradication Programme	ADAC&RI, Tiruchirappalli	28.11.2015
20.	AIDS Awareness Lecture	ADAC&RI, Tiruchirappalli	05.12.2015
2016			
1.	Free Eye Camp	ADAC&RI, Tiruchirappalli	06.02.2016
2.	Personal Hygiene and Health Camp	ADAC&RI, Tiruchirappalli	05.02.2016
3.	Swachh Bharath Programme	ADAC&RI, Tiruchirappalli	12.02.2016
4.	International Forest Day and Water Day	ADAC&RI, Tiruchirappalli	21.03.2016
5.	World Earth Day	ADAC&RI, Tiruchirappalli	22.4.2016
6.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	28.04.2016
7.	NSS Special Camp Programme	Ariyavur village of Manikandam Block of Tiruchirappalli District.	24.5.2016 to 30.5.2016
8.	World 'No Tobacco' day	ADAC&RI, Tiruchirappalli	31.5.2016
9.	Rally on Anti-Tobacco Awareness procession	Navalur Kuttapattu, Tiruchirappalli	31.5.2016
10.	World Environment Day Celebration	ADAC&RI, Tiruchirappalli	5.6.2016
11.	Rally on Environmental Awareness	Navalur Kuttapattu village, Tiruchirappalli	5.6.2016
12.	Yoga Camp	ADAC&RI, Tiruchirappalli	14.6.2016

13.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	25.6.2016
14.	International Yoga Day	ADAC&RI, Tiruchirappalli	21.6.2016
15.	Polythene Eradication Camp	ADAC&RI, Tiruchirappalli	2.7.2016
16.	Personal Hygiene and Health Camp	ADAC&RI, Tiruchirappalli	3.8.2016
17.	International Youth Day'	ADAC&RI, Tiruchirappalli	12.8.2016
18.	Independence Day	ADAC&RI, Tiruchirappalli	15.8.2016
19.	Sadbhavana Diwas	ADAC&RI, Tiruchirappalli	19.8.2016
20.	SwachhtaPakhwara programme- Clean the College campus and Swachhata Pledge	ADAC&RI, Tiruchirappalli	20.08.2016
21.	Tiranga March	ADAC&RI, Tiruchirappalli	22.8.2016
22.	Swachhta Pakhwara programme - Awareness rally on "Cleanliness for healthy life"	ADAC&RI, Tiruchirappalli	27.08.16
23.	Visit to Old Age Home	Kangaru Karunai Illam, Ariyavur, Tiruchirappalli	9.9.2016
24.	Orientation Class	ADAC&RI, Tiruchirappalli	10.9.2016
25.	Blood Donation Camp	ADAC&RI, Tiruchirappalli	17.9.2016
26.	NSS Day	ADAC&RI, Tiruchirappalli	27.9.2016
27.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	1.10.2016
28.	Youth Awakening Day	ADAC&RI, Tiruchirappalli	15.10.2016to 17.10.2016
29.	Visit to Old Age Home	Kangaru Karunai Illam, Ariyavur, Tiruchirappalli	26.10.2016
30.	National Unity Week	ADAC&RI, Tiruchirappalli	1.11.2016
31.	Campaign on Mushroom production Techniques	ADAC&RI, Tiruchirappalli	5.11.2016
32.	Flower Knitting Training	ADAC&RI, Tiruchirappalli	5.11.2016
33.	Campaign on Apiculture	ADAC&RI, Tiruchirappalli	12.11.2016

34.	Visit to Old Age Home	ADAC&RI, Tiruchirappalli	15.11.2016
35.	Greeting Card and Bouquet Making Training	ADAC&RI, Tiruchirappalli	19.11.2016
36.	Observance of National Integration Week	ADAC&RI, Tiruchirappalli	25.11.2016
37.	Constitution Day	ADAC&RI, Tiruchirappalli	26.11.2016
38.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	3.12.2016
39.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	10.12.2016 & 17.12.2016
2017			
1.	Soil Health Camp'	ADAC&RI, Tiruchirappalli	8.2.2017
2.	Campaign on Vermicompost Production Techniques	ADAC&RI, Tiruchirappalli	11.2.2017
3.	National Productivity Week	ADAC&RI, Tiruchirappalli	12.2.2017.to 18.2.17
4.	'Seed Balls' Making programme	TELC Kemstown School, Tiruchirappalli	19.2.2017
5.	Organic farming and Vermicompost Production for School Children	ADAC&RI, Tiruchirappalli	22.2.2017
6.	Women's Day	ADAC&RI, Tiruchirappalli	5.3.2017
7.	Chamfest'17	NSS Unit, St. Joseph College, Tiruchirappalli	23.2.2017
8.	Green Campus Programme	ADAC&RI, Tiruchirappalli	20.3.2017
9.	World Forest Day	ADAC&RI, Tiruchirappalli	21.3.2017
10.	World Meteorological Day	ADAC&RI, Tiruchirappalli	23.3.2017
11.	Voluntary Blood Donor Registration Camp	ADAC&RI, Tiruchirappalli	25.3.2017
12.	State Level Intercollegiate and Cultural Meet - 'VOLS SPL-2K17'	NSS Unit of Bharathidasan University and Bishop Heber College, Tiruchirappalli	26.3.2017
13.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	1.4.2017 & 8.4.2017

14.	World Earth Day	ADAC&RI, Tiruchirappalli	22.4.2017
15.	State Level "Traditional Cultural Competition"	State Government and State NSS Cell, Chennai	5.5.2017
16.	NSS Special Camp	Ariyavur village, Tiruchirappalli	23.5.2017 to 29.5.2017
17.	International Day of Yoga	ADAC&RI, Tiruchirappalli	21.6.2017
18.	Participation in District Level Competition on AIDS Awareness	Tamil Nadu State AIDS Control Society and District AIDS Prevention and Control Unit (DAPCU), Tiruchirappalli	17.6.2017
19.	Blood Donation	Govt. Hospital Blood bank, Tiruchirappalli	3.7.2017
20.	Environment Awareness Camp	ADAC&RI, Tiruchirappalli	8.7.2017
21.	World Blood Donors Day	ADAC&RI, Tiruchirappalli	14.7.2017
22.	Vermicompost Production Techniques'	ADAC&RI, Tiruchirappalli	15.7.2017
23.	Swachhata Shapath- Pledge on Cleanliness	ADAC&RI, Tiruchirappalli	4.8.2017
24.	Orientation Class for the Freshers	ADAC&RI, Tiruchirappalli	10.9.2017
25.	Clean and Green Campus	ADAC&RI, Tiruchirappalli	23.9.2017
26.	NSS day Celebration	ADAC&RI, Tiruchirappalli	26.9.2017
27.	Campaign on "New Kattalai" canal	ADAC&RI, Tiruchirappalli	5.10.2017
28.	Third State level Yogasana competition	ADAC&RI, Tiruchirappalli	7.10.2017
29.	Youth Awakening Day& Youth Awakening Day Rally	ADAC&RI, Tiruchirappalli	14.10.2017
30.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	28.10.2017
31.	National Unity Week	ADAC&RI, Tiruchirappalli	31.10.2017
32.	Blood Donation Camp	ADAC&RI, Tiruchirappalli	4.11.2017
33.	Health Awareness Programme	ADAC&RI, Tiruchirappalli	11.11.2017

34.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	18.11.2017
35.	Preparatory work on Lawn Making	ADAC&RI, Tiruchirappalli	25.11.2017
36.	Constitution Day Pledge	ADAC&RI, Tiruchirappalli	27.11.2017
37.	Awareness Camp on FIRST AID	ADAC&RI, Tiruchirappalli	9.12.2017
38.	Tree Seedlings Planting	ADAC&RI, Tiruchirappalli	16.12.2017
2018			
1.	State Level Intercollegiate and Cultural Meet'VOLS SPL-2018	Bharathidasan University and Bishop Heber College, Tiruchirappalli	5.1.2018
2.	Clean and Green Campus Programme	ADAC&RI, Tiruchirappalli	6.1.2018 & 24.2.2018.
3.	Campaign on "Vermicompost Production"	ADAC&RI, Tiruchirappalli	3.3.2018.
4.	Campaign on "Apiculture"	ADAC&RI, Tiruchirappalli	10.3.2018.
5.	Campaign on "Mushroom Production"	ADAC&RI, Tiruchirappalli	17.3.2018
6.	World Water Day	ADAC&RI, Tiruchirappalli	22.3.2018
7.	Visited the "Shanthivanam" Mentally Challenged Home	ADAC&RI, Tiruchirappalli	24.3.2018
8.	Medical Awareness Camp	ADAC&RI, Tiruchirappalli	24.3.2018

SELF STUDY REPORT FOR UNDER GRADUATE PROGRAMS

6.4. Self-Study Report for Undergraduate Programme

6.4.1.Brief History of the Degree Programme

Name of the programme B.Sc (Hons) Agriculture / B.Sc (Ag)

Year of start B.Sc (Hons) Agriculture- 2017; B.Sc (Ag.) – 1989

Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI) is a constituent college of Tamil Nadu Agricultural University. It was first started in Kumulur, Lalgudi Taluk of Trichirappalli district with an annual intake of 40 studentsin the year 1989. Later, the college was shifted to NavalurKuttapattu, Srirangam Taluk of Trichirappalli Districtin 1992, in the erstwhile Soil Salinity Research Centre campus. In 1995, a new academic block was constructed with class rooms and laboratories to which the college was shifted in the same campus.

The college has five departments offering undergraduate courses for B.Sc. (Hons.) Agriculture and postgraduate programmes in Agronomy, Soil Science, Plant breeding and genetics and Entomology. However, advance research, education and extension activities have been carried out in 23 subject disciplines. There are 51 faculty member who constitute the prime scientific manpower requirement to cater to the needs of the farming community and to contribute for agricultural development. Besides there are three lab assistants, 18 technicians and 26 provincialized skilled mazdoors supporting the administrative, teaching, research and extension activities of the college.

Objectives of the programme

To produce graduates with better understanding of agriculture and allied sciences and technologies for sustainable agricultural production.

To impart agricultural education to the students' community by creating a sustained platform.

Accomplishments

The college was awarded 'Best College' of Tamil Nadu Agricultural University (TNAU) during the year 2014. Total number of 1354 students has graduated in this college since inception. The alumni from this college are working in Agriculture Department Government of Tamil Nadu, State Agricultural Universities (SAU), Agriculture Research Service (ARS), public and private sector banks and private agribusiness firms. About 20 alumni of this college are serving in various capacities in the Indian civil service.

Three rice varieties suitable for saline and alkaline soils namely TRY 1, TRY 2, and TRY 3 were released from the college. Further, a saline and drought tolerant ragi variety namely TRY 1 and guava variety TRY 1 were also released from the college.

The IPM modules for the management of pests and diseases of onion and chilli were developed, evaluated and demonstrated under Farmers Participatory Approach in Trichy, Dindigul and Perambalur districts. Onion IPM module developed through IPM CRSP scheme has been incorporated in the Crop Production Techniques of Horticultural Crops 2013 published by Government of Tamil Nadu and Tamil Nadu Agricultural University for adoption by farmers.

Technologies for Alkali soil with irrigation Gypsum bed technology for alkali water treatment, Drip fertigation to sugarcane in alkali soils using alkali water, Drip irrigation to vegetables in alkali soil using amended alkali water, Sodic soli reclamation technology using distillery spent wash and integrated farming system suitable for problem soils areas of Tamil Nadu were developed by the college.

6.4.2. Faculty Strength

Details of Faculty Members Strength in the College

Sanctioned Faculty	Faculty in Place	Vacant Position	Faculty Recommended by the ICAR /UGC/VCI other regulatory bodies
Professors	20	2	03
Associate Professors	6	2	08
Assistant Professors	25	1	34
Total Teaching Faculty	51	5	45

The faculty strength is well above the ICAR recommended faculty strength and it is sufficient to handle undergraduate courses. However, the teachers from nearby research stations and colleges are also deputed to this college to handle courses based on the necessity.

Faculty Profile (department-wise)

The existing faculty strength of the departments is sufficient for academic requirements of the college. The faculty members of allied discipline are also posted in the main department. The faculty members of the department handled both undergraduate and post graduate courses. The faculty members from the nearby research stations are also deputed to handle the courses if required.

Departments	Teaching Staff required			
	Professor	Assoc. Prof.	Asst Prof.	Total
Department of Agronomy	**3**	**1**	**5**	**9**
Agronomy including	2		4	
Agro-meteorology				
Crop Physiology			1	
Food Science and Nutrition		1		
Agricultural Engineering	1			
Department of Soil Science and Agricultural Chemistry	**5**	**1**	**6**	**12**
Soil Science and Agricultural Chemistry	3	1	2	
Agricultural Microbiology	1		1	
Environmental Sciences	1		1	
Agronomy			1	
Biochemistry			1	
Department of Plant Protection	**3**		**5**	**8**
Entomology	2		1	
Pathology			2	
Nematology			2	
Microbiology	1			
Genetics & Plant Breeding + (Seed Science & Technology, Horticulture)	**4**	**1**	**3**	**8**
Plant breeding and genetics	1	1	2	
Biotechnology	1			
Agro forestry	1			
Horticulture	1			
Seed Science and Technology			1	
Department of Social Sciences	**5**	**1**	**6**	**12**
Agricultural Economics	2		2	
Agricultural Extension	1		1	
Agricultural and Rural Management	1	1		
Statistics	1			
Computer Science			1	
Food Science and Nutrition			1	

English		1	
Dy Librarian	1		1
Dy Director Physical Education	1		1

Department wise Faculty Strength

One Teaching Assistant for Animal Husbandry on contract basis is offering courses

One Professor (Tamil), One Assistant Professor each for Agricultural Entomology, Food Science and Nutrition and Soil and Water Conservation from other campuses are offering courses in this College

6.4.3. Technical and Supporting staff

The technical staff are attached with the office of the Dean for administrative convenience and they are allotted to the other Departments whenever need arises. Farm labourers are attached with the Department of agronomy and they are allotted to the other Departments based on the requirement.

Technical and Supporting Staff

Divisions / Departments / Sections	Assistant *	Lab Asst.	AgrlAsst / Supervisor	Field Asst**	Attendant/ Messenger***	Total
Total		4	4	26	8	42

*The administrative and accounts staff are centralized in the College and are operating under the direct control of the Dean, as a part of Dean's office. Details given in Table

** Field assistants are Permanent Un Skilled Mazdoors (PUSMs)

*** Casual labourers are engaged as Attendant/Messenger /Security/watch and ward

Details on some Centralized Facilities

S. No	Particulars	Number
Library Staff[#]		
1.	Deputy Librarian (Associate Prof. cadre)	1
2.	Library Asstt./Clerk	1
3.	Shelf Asstt.*	2
Students Welfare[#]		
1.	Deputy Director Physical Education (Assoc. Prof.)	1
2.	Attendant (Markers)	2

Hostel Staff		
1.	Chief Warden (Dean)	1
2.	Warden (Professor)	1
3.	Deputy Warden (Asst Prof) - Male 1 and Female 1	3
4.	Residential Tutor Male 1 (AsstProf) and Female 1 (SRF)	2
5.	Accountants Officer (Retd AO) (Consolidated)	1
6.	Assistants (Consolidated)	2
7.	Care taker/Asstt. (Male-1, Female-1) (Consolidated)	2
Estate Branch[#]		
1.	Assistant Executive Engineer (Civil)	1
2.	Junior Engineer (Civil)	1
3.	Electrical Foreman	1
4.	Mechanic Grade II	1
5.	Skilled Assistant Grade II	1
6.	Technical Assistant (Electrical) (Consolidated pay)	1
7.	Technical Assistant (Civil) (Consolidated pay)	1
8.	Electrician (Consolidated pay)	1

[#] *Under the administration of the Dean*

6.4.4. Classrooms and Laboratories

Classrooms	4
Functional laboratories / units	28
Instruments available	Given below
Farm facilities	Given below
Workshops	1

Class rooms:

Four ICT enabled class rooms with a seating capacity of 110 each are available for taking classes for the B.Sc. (Hons) Agriculture/ B.Sc.(Ag) courses. The class rooms are equipped with LCD Projector Computer, podium with public address system and wifi facility.

All the major departments have their own laboratory for the conduct of practical classes for UG and PG students. The machineries and equipments in each laboratory are presented in this section.

Central instrumentation facilities available No

Land area of the College

The land area of the College is 75 acres. The land utilization pattern is as follows;

Land Utilization Pattern

Particulars	Acres
Main Building / Hostels / Residential Quarters (Including roads)	14.0
Playground & other amenities	9.5
Farm Area, including godown / stores/farm roads	51.5

Farm facilities:

The Department of Agronomy maintains a farm of 34 acres

Instructional Farm

The farm area, including godown / stores/farm roads is 51.50 acres focusing on instructional farm, research and seed production with an average cropping intensity of 273 per cent. The farm has three open wells and six bore wells. Model instruction units of integrated farming system, goat farming, poultry farming and livestock farming are available in the farm. Presently the farm has two blocks with well laid fields for taking up research. The instructional farm has required tools and implements for use and demonstration to students and for research use. The farm has two tractors and one power tiller. It also hascultivator, rotovator, Full and half cage wheels, Levelers, Disc plough, Disc harrow, Chisel plough and Rice transplanter. The department wise / section wise allocation of land is given in table. Rice is the major crop grown in the farm. Besides, for taking up of research in other crops, green gram, ragi, cotton, banyard millet are grown. For undergraduate students, five acres of instructional farm is maintained for taking up crop production. The profit derived out of this is given back to the students in earn while you learn mode. Type of Integrated farming followed is Direct Integration of poultry cum fishery

Pond: Size – 30m x 30m

Department / Section-wise land allocations (acres)

Particulars	Acres*
Agronomy & Farm Forestry	14.15
Entomology	1
Genetics & Plant Breeding + (Seed Science & Technology)	08
Horticulture**	0.5
Soil Science and Associated Departments	2
Plant Pathology	1
Animal Sciences	5
Biochemistry and Physiology	1
Agricultural Engineering	2
Total	34.65

** Area allocated for research, extension, seed production purposes and bulk crop*

** Horticulture facilities available under HC&RI (W) is being utilized

No of laboratories / units available 28 Nos.

Instructional Laboratories / Units available for Undergraduate Programme

Sl.No	Laboratory / Unit	Sl.No	Laboratory/ Unit
	Agronomy		**Social Sciences**
1.	UG Laboratory	14.	Language Laboratory
2.	Meteorology Observatory	15.	Computer Laboratory
3.	Animal Husbandry Unit	16.	Audio Visual Laboratory
4.	Engineering Workshop	17.	Food Processing Unit
	Plant Breeding and genetics		**Plant Protection**
5.	UG Laboratory	18.	UG Entomology Laboratory
6.	Green House Unit	19.	UG Pathology Laboratory
7.	Glass House Unit	20.	Nematology Laboratory
	Biotechnology laboratory	21.	Toxicology Laboratory
8.	Plant Molecular Biology Laboratory	22.	Pseudomonas Production Unit
9.	Tissue Culture Laboratory	23.	Bio Fertilizer Production Unit
	Seed technology laboratory	24.	Mushroom Unit
10.	DNA Finger Printing Laboratory	25.	Apiculture Unit
	Soil Science	26.	Sericulture Unit
11.	UG Laboratory		
12.	Microbiology Laboratory		
13.	EnvironmentalScience Laboratory		

6.4.5. Conduct of Practical and Hands-on-Training

The practical class is for two and half hours. Students have to do the activities by themselves so as to gain skill. Faculty members ensure that all the students involve themselves in the process. The students have to include their observations and views in the record note, which is also evaluated in the practical exam.

No of students per batch: 35

Field visits/ visit to renowned institutes, industries, progressive farms:

a. Agronomy

Field visits are arranged to understand the seriousness and magnitude in a real world situation. Besides visit to central institutes, other institute/private companies which are having innovative technologies are being visited by the students to know the frontier technologies in that area.

Details of field and exposure visits arranged for the UG students:

Exposure Visit Arranged to Undergraduate Students

Tour	Period	Places Visited	Number of Students
Short Tour (2010-11 Batch)	29.07.2013 to 11.08.2013	ARS, Aruppukottai and ARS, Kovilpatti, AC&RI, Madurai & DJ Farms, MRS, Vagari, Jain Farms, Udumalpet, PBS, SBI, CICR-TNAU, CS&WC & TI, HRS, Ooty, UPASI-Coonor& FC&RI-Mettupalayam, AMRC, Food Processing Centre, Principle Meteorological Observatory-TNAU, Sago Industry, Anthiyur& 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 (P) farm	81
Study tour (2011-12 batch) V semester	15.07.2013 to 21.07.2013	TRRI, Aduthurai, Faculty of Agriculture, Annamalai university, RRS, Vridhachalam, Sivasakthiseeda, srimushanam , RRS&KVK, Vridhchalam, TCRS, Yethapur, HRS, Yercaud, KVK, Sandhiyar, KVK, Sandhiyur, KVK, Papparpatty, Farmers Precision Farming Fields, RRS, Paiyur, ARS, Bhavanisagar, Bannariamman sugar Factory, TNAU, Coimbatore, SBI, Coimbatore, CICR, Coimbatore, FC &RI, Mettupalayam, UPASI,	69

		KVK, Coonoor, HRS, Ooty, ARS, Aliyarnagar, MRS, Vagakarai.	
Study tour (2012-13 batch) IV semester	10.02.2014 to 16.02.2014	CTRI Research station, Vadasanthur, Maize Research Station, Vagarai, HRS, Kodaikanal, Coddee board, Thattiyankudisai, HRS, Thattiyankudisai, HC&RI, Periyakulam, ARS, Vaigaidam, CRS, Srivilliputhur, ARS, Kovilpatti, HRS, Pechiparai, FRS, Thovalai, AC &RI, Killikulam, RRS, Ambasamudram, Coastal Salinity Res. Centre, KVK, Rammad, ARS, Paramakudi, AC&RI, KVK, Madurai, DARS, Chettinad, NPRC, KVK, Vamban.	70
Study tour (2012-13 batch) V semester	01.09.2014 to 07.09.2014	TRRI,Aduthurai, Faculty of Agriculture, Annamalai university, RRS, Vridhachalam, Sivasakthiseeda, srimushanam , RRS&KVK, Vridhchalam, TCRS, Yethapur, HRS, Yercaud, KVK, Sandhiyar, KVK, Sandhiyur, KVK, Papparpatty, Farmers Precision Farming Fields, RRS, Paiyur, ARS, Bhavanisagar,	70
Study tour 2013-14 batch) I V semester	26.02.2015 to 04.03.2015	HC&RI, Periyakulam, ARS, Vaigaidam, CRS, Srivilliputhur, ARS, Kovilpatti, HRS, Pechiparai, FRS, Thovalai, AC &RI, Killikulam, RRS, Ambasamudram and TNAU Coimbatore	94
Study tour 2013-14 batch) V semester	01.09.2015 to 07.09.2015	TRRI,Aduthurai, Faculty of Agriculture, Annamalai university, RRS, Vridhachalam, Sivasakthiseeda, srimushanam , RRS&KVK, Vridhchalam, TCRS, Yethapur, HRS, Yercaud, KVK, Sandhiyar, KVK, Papparpatty, Farmers Precision Farming Fields, RRS, Paiyur, ARS, Bhavanisagar,	93
Study tour	02.03.2016 to 08.03.2016	CTRI Research station, Vadasanthur, Grape Research Station, Theni, HC & RI, Periyakulam, CRS, Srivilliputhur, ARS, Kovilpatti ,HRS,	98

2014-15 batch) semester		Pechiparai, RRS, Tirupathisaram, KVK, Tirupathisaram, FRS, Thovalai, RRS, Ambasamudram, AC & RI, Killikulam, RRS, Aruppukottai, ARS, Paramakudi, Coastal Salinity Res. Centre, KVK, Ramnad ,AC & RI, KVK, Madurai, DARS, Chettinad and NPRC, KVK, Vamban	
Study tour 2015-16 batch) IV semester	20-03-17 to 26-03-17	NPRC, KVK, Vamban, DARS, Chettinad, AC & RI, KVK, Madurai, RRS, Aruppukottai, ARS, Kovilpatti, AC & RI, Killikulam, RRS, Tirupathisaram, KVK, Tirupathisaram, FRS, Thovalai, , RRS, Ambasamudram, CRS, Srivilliputhur, HC & RI, Periyakulam, CTRI Research station, Vadasanthur, TNAU, Coimbatore and SBI, Coimbatore	108

b. Soil Science and Agricultural Chemistry

No of students per batch	35
Hand on training during classes	Hands on trainings are provided to students for
	Soil profile digging and horizon wise description
	Compost making from crop residues
	For delineation and classification of soil and land use in satellite imageries by using GIS
Field visits/ visit to renowned institutes, industries, progressive farms,	Exposure visit to
	To STL, PTL FTL and Fertilizer mixing unit
	To study of soil profiles in red soil areas in and around Viralimalai
	To Dept. of Remote sensing and GIS
	To study of soil profile at different regions near areas near by TNPL

c. Plant Breeding and Genetics

Agricultural Botany	Hand on training was provided to the students duri practical classes to dissect the floral parts of crops like Rice, Sorghum, Pearl millet, Finger millet, Gree Black gram, Cow pea, Sunflower, Tridax etc.
	The students were made to dissect the floral parts individually, assemble them and the same was eval

	To make the students thorough with the botanical features of different crops, they were made to collect herbarium specimens of crops belonging to different families, and were made to explain the features of randomly chosen specimen in the practical class.
Genetics and Cytogenetics	Hands on training for preparation of stains, preservatives and development of permanent slides of mitosis and meiosis stages.
	Hands on training studying mitotic and meiotic cell divisions
Principles and Methods of Plant Breeding	Hands on training to induce mutation in various crops
	Hands on training for hybridization followed by selection in various crops
Breeding of Field and Horticultural crops	Hands on training to study the floral biology of rice, maize, pigeonpea, pearl millet, cotton, jute, castor, groundnut, sesamum, sunflower, greengram, blackgram, bhendi, tomato and chillies.
	Hands on training for pollen morphology and pollen sterility studies in various crops rice, maize, sorghum, pearl millet, cotton, castor, greengram, blackgram, bhendi, tomato and chillies.
	Hands on training was given for emasculation, crossing and selfing techniques of crops viz., rice, maize, sorghum, pearl millet, cotton, jute, castor, groundnut, sesamum, sunflower, greengram, blackgram, bhendi, tomato, and chillies.
Principles of Biotechnology	The students were individually or in groups were provided hands on training on the following aspects *viz*., preparation of tissue culture medium, aseptic practices, explant preparation, culturing bacteria, isolation of plasmid DNA and electrophoresis, Amplification of DNA using PCR
Applied Plant Biotechnology	The students were individually or in groups were provided hands on training on the following aspects *viz*., Microprogation of rose, banana and tapioca, initiation of callus culture and co-cultivation with *Agrobacterium*, isolation of plant genomic DNA, analysis of transgenic plants based on GUS assay and PCR, DNA fingerprinting using RAPD markers

Commercial Plant Tissue Culture	Given the commercial significance of this course, the students were individually exposed to the principles and practices in micropropagation of select crop plants. A group of two to three students had their own choice of crops plants examples, rose, tapioca, Ginger, West Indian cherry, eucalyptus, sugarcane, bamboo etc., and carried out micropropagation based on published protocols. They were successful in obtaining multiple shoots for most of the crops chosen and finally finished the experiential learning course when the tissue culture plants were still in the hardening phase.
Principles and Practices of Seed Production	Hands on training on seed dormancy breaking treatment, seed pelleting, seed hardening, seed priming treatment, cotton delinting, tomato seed extraction, paddy seed quality up gradation through egg floatation techniques were given.
S Seed Quality Regulation and Storage	Hands on training on seed moisture estimation, Physical purity analysis, Seed germination, seedling evaluation, quick viability test, seed vigour test, seed health test, electrophoresis for varietal identification / genetic purity assessment, seed field inspection and report preparation, emasculation and dusting in cotton and paddy
H Horticulture	The following hands on training are given to the students
	Planning, layout and planting of horticultural crops
	Preparation of potting mixture, potting and repotting of plants
	Preparation of growth regulators and method of application in horticultural crops.
	Propagation through layering, cutting, budding, grafting, top working, specialized plant parts
	Micropropagation protocols and hardening
	Nutrient and irrigation management practices
	Bearing habits and training practices in horticultural crops.
	Pruning practices in horticultural crops.

	Maturity indices for various horticultural crops
	Post harvest handling practices viz., grading, sorting and packing techniques.
PProduction Technology of Fruits and Plantation crops	Hands on training of following aspects are given
	Mango, Sapota, Grapes and Citrus - varietal identification, selection of planting material and important cultural practices viz., training and pruning
	Banana – varietal identification, selection of planting material and important inter - cultural practices viz., desuckering and propping
	Papaya and guava - varietal identification and important cultural practices
	Post harvest handling practices of important tropical fruit crops.
	Tea Coffee Rubber, Cocoa and Cashew – identification of species and varieties – nursery practices – training and pruning - processing
	Coconut, Arecanut and oil palm - identification of varieties – mother palm and seed nut selection – nursery practices– management of nutrient deficiencies – processing
PProduction Technology of Vegetable and spice crops	Hands on training on
	Identification and description of varieties in rose, jasmine, chrysanthemum, crossandra, marigold, tuberose cut rose, anthurium, carnation and gerbera.
	Media preparation and potting of cut flowers
	Lawn and lawn making
	Identification of important trees, shrubs, creepers, annuals, biennials and herbaceous perennials used in garden.
	Identification of medicinal and aromatic plants – study on economic parts used and their products
	Propagation techniques of senna, periwinkle, glory lily, aswagandha, phyllanthus medicinal coleus, isabgol, aloe, medicinal Dioscorea and Solanum
	Identification of species/varieties and propagation techniques of ocimum, eucalyptus, davana, mint, lemon

	grass, palmarosa, vetiver, citronella and geranium were given
IIIntroduction to Forestry	Hands on training forest nursery layout techniques, tree seedling production techniques of timber, pulp wood, match wood, ply wood, fodder trees, tree borne oil seeds
	Hands on training Estimation of volume and biomass of timber and wood
	Hands on training Forest project preparation
AAgro Forestry	Hands on training tree seedling production techniques of timber, Clonal propagation pulp wood species, match wood, ply wood, fodder trees and tree borne oil seeds
Forest Resource Management	Hands on training Tree seedling planting, water harvesting, soil conservation and plantation management techniques
	Hands on training Value addition of non timber forest produce

d. Plant Protection

No of students per batch	35
Hand on training during classes	To facilitate effective operation of the equipme instruments like HPLC, GC, PCR, AAS, etc.by the for their Demonstrated and hands on tra operational procedures are given to the students
	Training on Beekeeping, Sericulture and Bic agents production is also imparted to the studen
	Students are also provided training on pest diagn
Field visits/visit to renowned institutes, industries, progressive farms,	Exposure visit to IICPT, Indian Institute of Crop Pr and Technology, Thanjavur.
	Bio-Control Laboratories at TNAU, Coimbatore.
	Exposure visit to Plant Quarantine Station, Inter Airport, Trichy
	Exposure Visit to Department of Nanotechnolog Coimbatore.
	Visit to NPRC, Vamban to study Pest of Pul Sugarcane Research Station, Sirugamani.
	Exposure Visit to NRCB, National Research Ce Banana, Pothavur, Trichy.
	Exposure visit to Periyakulam, Thadiyankudi Kodaikanal for diagnosis of pest of Horticultural c

e. Social Sciences:

Faculty	Practical and hands on training being conducted
Agricultural Economics	Third year and Final Year students were taken up to the organizations like Director General of Foreign Trade for getting exposure on Export and International trading procedures
	Students were frequently take up to offices like Patents, GI and Trade Mark Registry for getting insights about intellectual property rights in the field of agriculture
Agri-business Management	Case Studies
	Guest lectures and visit to agribusiness firms
Agricultural Extension	The students are given hands on training in the practical's viz., students are taken to the farmers field to understand the real problems faced by farmers.
	Students are formed with groups to have group discussion to improve their knowledge, skill and attitude
	Students are trained to prepare various audio-visual aids and the same will be presented in the class room
	Students are preparing PPT for the class room presentation to enhance and improve their presentation skills
	Students are trained to prepare news stories, success stories, script writing for radio and TV
	Regular brain storming session is being conducted for the students to develop innovative and creative ideas
	Role playing and simulation games are practiced to understand the various situation/ conditions of farmers
	Regular motivational lectures are being arranged to develop students leadership qualities
	Students are taken to various organizations related to subject for the hands on experience for the project and product development
Food Science and Nutrition	In the Food science and Nutrition course offers practical experience and exposure to the students Post Harvest Management, Food Processing , Value addition, Food quality control and Safety aspects.

	Analytical work related to physical, chemical and microbial characteristics of food also carried out by the students individually or group wise based on the availability of the scientific apparatus. The fruit and vegetable processing unit and bakery unit in Food processing Incubation cum Training centre in AnbilDharmaligamAgricultutral College and Research Institute,Tiruchirappalli -620 009 is well equipped to provide to cater the needs of the students. Various outdoor visits such as food processing units, quality control units, NABL laboratories will also be undertaken as a part of curriculam. Apart from these the students also trained and encouraged to take up research in the related field.
English	The GD chamber is equipped with a multipurpose computer centre with the systems of advanced configurations. The systems are loaded with interactive CDs which caters to the needs of the UG and PG students in the directions of communication skills, career skills and national and international competitive examinations like CAT, MAT, TOEFL, GRE, IELTS and BEC. The students are given hands on experience with the study materials both in the regular classes and in the informal discussions in the computer centre. The students are also trained in the advanced writing skills in terms of Assignments and term papers with the help of the guidelines of the interactive CDs. The learning outcome of the students is commendable. The students feel at home with the uses of the study material related to group discussion, interview skills, brainstorming, simulation and negotiation skills. Mock group discussions and mock interviews are periodically help in the coming up group discussion chamber.
Computer Science	The centre is used for conducting practical classes for UG students which will function between 9.00 a.m. to 5.00 a.m. on all working days.

	Students avail this facility for preparing assignments and collecting study materials etc. for their courses and class assignments. Computer centre is also equipped with LCD projector and screen which will help in conducting practical classes in an efficient manner. Students also make use of this facility for presentation of their assignments, projects etc. Special lectures are delivered through video conferencing by renowned speakers.

6.4.6. Supervision of students in UG programme

Name of the programme	B.Sc.(Hons.) Agriculture/B.Sc.(Ag)
UG research – APW 401 Project work (0+4)	2 per faculty (Maximum of 8-12 per Department)
No of students intake	5
No of supervisors	5

For UG research programme, students are given orientation towards conducting field and laboratory experiments. Individual students will be conducting field and laboratory experiments which will expose them towards principles and methodology of scientific experimentation. The faculty will explain and guide them step by step on the research methodology and statistical procedures.

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

The feedback is received from students, parents, employers, farmers, industries, entrepreneurs, agricultural officials and NGOs. The feedback is used to improve the curriculum, curriculum delivery, evaluation process, hostel management, development of student amenities and library facilities.

Stakeholder	Feedback
Students	The students give their feedback about the courses and the method of delivery at the end of each semester through e-feedback forms.
Parents	Parents give their feedback in parent teachers meeting
Employers, those who come for campus placements banks, companies	The feedback given by the employers during and after the selection process from the main campus are communicated to the college.

Farmers	The farmers visiting the college for extension services give their opinion.
Industries	The industries which are visited by the students during their field trip and industrial tie- up programme give their feedback
Entrepreneurs	The entrepreneurs who take the students for RAWE programme give their feedback
Agricultural officials / allied	The department officials who take the students for RAWE give the feedback about the programme
NGOs	NGOs who attach the students for RAWE give the feedback about the programme

6.4.8. Student intake and attrition in the programme for last five years

Name of the Degree Programme	Actual student admitted in last five years						Attrition (%)					
Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
B.Sc.(Hons.) Agriculture/ B.Sc.(Ag.)	75	110	110	124	120	115	6.6	10	10.9	12.9	15.8	9.5

Nearly 11 percent of the undergraduate students left the programme during the last five years. The students leave the programme mainly during the first year of the undergraduate programme. The main reason for attrition is to secure admission in medical and engineering programme.

6.4.9. ICT Application in Curricula Delivery

ICT Equipments	Details
No of computers	4 Nos. UG Lecture hall
Networking facilities	Yes
Wi-fi enabled classrooms and Halls	4
Projectors, i-pads, interactive boards,	Four projectors are available
AV labs, videoconferencing	Yes
Expert system App for farmers	Yes

There are four lecture halls available for undergraduate teaching,are equipped with computers and LCD projectors. Further, these halls are enabled with wi-fi facility to access internet during teaching. Further, an audio visual laboratory is available with public addressing system, projector, smart board and a display board for the purpose of demonstration.

Diagnosis and Remedy

Soil and Crop specific Fertilizer recommendations using NUTMON, F Apps and DSSIFER

Nutrients Deficiency identification in crops and Foliar correction measures using VDK

Computer based Crop Doctor Tool

Planning

Delineation and classification of soil and land use in satellite imageries by using GIS

Weather based Apps and websites for meteorological information

Web Portals – IMD,TNAU – Tamil Nadu Agricultural Weather Network (TAWN)

Bio analysis

Analyzing growth of microbes using Spectrophotometer and Gas Chromotography

Mini fermentor application for fermentation analysis

Biosensor for microbial solution assessment and Biological oxygen demand (BOD)

Malditof for Microbial analysis

Automic Absorption Spectrophotometer for heavy metal analysis

Technology transfer

Preparation of videos and audio programmes for transfer of technology

E – extension Methods

Farm business management

Business Plan preparation using software

Excel based farm planning tools – Linear Programming

Excel based analysis – seasonal index, trend, cyclical, index numbers, market integration, investment analysis, budgeting,

Google form based survey and online tests and other online consumer survey

Market information – Kisan Suvidha App, Ulavan App, and other Apps

Learning resources

Video lectures

Web based - Climate smart agriculture, Seed Portal, NBPGR website (seed bank),Bioversity, Web page.

ICRISAT Training Manuals

Kisan web portal

Exposure to websites relevant for export and domestic market - APEDA, Commodity Boards, Ag Mark Net

Research

Statistical analysis using MSTAT, AGRISAT and IRRI/CROPSTAT

Excel based statistical analysis

TNAU STAT and HAU – OPSTAT website for data analysis

Soft Skills

Video lessons - stress management

Online test - attitude, emotional intelligence,

Online resources – mock interview, Group Discussion, CV preparation and IELTS, TOEFL and other competitive exams

Annexure -I

Lab/field equipment for Agronomy and Agro-forestry Laboratory

Particulars	Availability
Crop Cafeteria	½ acre land
	small implements like spade, hoe, khurpi, darati etc.
Museum for identification of seeds, fertilizer, weeds, commonly used agro-chemical and medicinal and aromatic plants etc.	Storage bottle
	Herbarium posting material
Field of sowing method, fertilizer application, irrigation and soil productivity and yield estimation	Small equipment/ implement
Irrigation water measurement, bulk density etc.	
Equipment	**Number**
Hot air oven	2
Moisture box	30
Moisture meter	1
Weighing Balance	1
Seed Germinator	Equipment available in Seed Tech lab is used
Conductivity Meter	1
pH Meter	1
Water Bath	1
Shaker	1
Chlorophyl Meter	1
Drip and Sprinkler System	2
Sprayer	3
Spring Balance 50 Kg	1
Top Pan Balance 1 kg capacity	1
Top Pan Balance 2 kg capacity	1
Meter Scale	10
Tape	2
Double glass distillation unit	1
Student Monocular microscope	1
Refrigerator 285 litres	1

Lab / Field Equipments for Agrometeorology Unit

S. No.	Items	Numbers
1.	Thermometer Max	2
2.	Thermometer Min	2
3.	Digital Anemometer	-
4.	Cup Anemometer	2
5.	Pan Evaporimeter	1
6.	Soil thermometer	3
7.	Rain gauge	1
8.	Self recording Rain gauge	1
9.	Sunshine Recorder	1
10.	Stevenson's Screen	1
11.	Thermograph	-
12.	Hygrograph	1
13.	Soil Heat Flux Plate	-
14.	GPS	1
15.	AWS (optional)	1
16.	Lysimeter (optional)	1
17.	Luxmeter	1
18.	Solar Pyranometer	1

Animal Husbandry Unit

The farm is also having a veterinary unit spread over five acres. Cattle, goat and poultry species are maintained in the veterinary unit. The average farm receipt per year is around Rs.8 lakhs.

Rearing system

Cattle – intensive system , Goat – Semi Intensive system, Poultry – intensive system.

Housing system

Cattle – Single row system of conventional housing, Goat – Mud floor system and slatted floor system of housing. Poultry – Deep litter system of housing.

Income generation

Income generated through,Sale of milk,Sale of goats to the farmers for rearing, Sale of poultry for meat.

Fodder Cultivation.

Fodder sorgum, cumbu Napier co4 fodder grass, Subabul and Hedge Lucerne are maintained.

Hatchery unit

600 eggs capacity of mini hatchery is functioning.

Other equipments installed are Milking machine, manual and electrical chaff cutter, total mixed ration machine and electrical brooder.

Self Study Report of College & Programmes at ADAC & RI, Trichirappalli

Instruments of Animal Husbandry Unit

S. No	Instrument	Numbers Available	Remarks
Dairy and Poultry			
1.	Incubator cum Hatcher	1	Used from FWKC
2.	Brooder machine	1	Used from FWKC
3.	Feeder	1	
4.	Waterer	1	
5.	Debeaker	1	
6.	Milking Machine	1	
7.	Milking bucket	1	
8.	Milking can	1	
9.	Animal and bird identification tools	Available as required	
10.	Chaff cutter	1	
11.	Lactometer	1	
12.	Castrator	1	
13.	Electrical dehorner	1	
14.	Common medicated device	1	
15.	Cattle crate	1	
16.	Vaccinator	1	
17.	Shearer	1	
18.	Egg candling machine	1	
Animal Sciences including Fisheries			
1.	Analytical balance	1	Used from Agronomy Lab
2.	Hot Air oven	1	Used from Agronomy Lab
3.	Micro Kjeldhal N digestion & distilled Apparatus	1	Used from Agronomy Lab
4.	Willy mill Grinder	1	Used from Agronomy Lab
5.	Platform Balance	1	Used from Agronomy store
6.	Gerber centrifuge unit	1	
7.	Distilled water unit	1	Used from Agronomy Lab

Soil Science and Agricultural Chemistry Laboratory + (Microbiology, Environmental Sciences, Biochemistry)

S. No.	Items	Numbers			Total
		Soil Science	Microbiology	Environmental Science	
	Size of Laboratory (in Feet)	78.5 x 30	49 x 25	40.5 x 19.25	-
1.	Electronic Top pan balance (0.1 g capacity)	4	-	-	4
2.	Electronic Top pan balance (1 mg capacity)	-	4	1	5
3.	Hot air oven	2	2	2	6
4.	pH Meter	1	2	2	5
5.	EC Meter	1	1	1	3
6.	Flame Photometer	1		1	2
7.	Visible spectrophotometer	1	-	1	2
8.	Hot Plate	1	-	-	1
9.	Distilled water unit	1	2	1	4
10.	Water Bath	2	1	1	4
11.	Rotary Shaker	1	1	-	2
12.	Binocular Microscope*	-	28*	-	28
13.	BOD Incubator	-	1	1	2
14.	Autoclave	-	3	2	5
15.	Laminar Air Flow	-	2	1	3
16.	Microwave oven	-	2	-	2
17.	Digestion block**	-	-	-	-
18.	Buoycos Hydrometer	2	-	-	2
19.	Infiltrometer	2	-	-	1
20.	Hydraulic conductivity meter	1	-	-	1
21.	Atterberg's limitsmeter	-	-	-	-
22.	Nitrogen Analyser***	-	-	-	-
23.	Electronic Top pan balance (0.01 g capacity)	1	-	1	2
24.	Electronic Top pan balance (1 g capacity)	-	1	1	2
25.	Magnetic stirrer	1	-	-	1
26.	Stirrer	2	-	-	2
27.	Sand bath	1	-	1	2
28.	Centrifuge	1	1	1	3
29.	Vortex mixer	-	1	-	1
30.	Trinocular Stereoscopic zoom Microscope	-	1	-	1
31.	Hiloop Auto sterilizer (LPG Gas)	-	1	-	1

32.	Refrigerator	-	2	-	2
33.	Water activity meter (NAIP)	-	1	-	1
34.	Gas Chromatograph model Varian star CX	-	1	-	1
35.	Colori meter	-	1	-	1
36.	Soxhlet Extraction apparatus full sets 500 ml (Guna make)	-	1	-	1
37.	Vertical slab gel system (65-05) Bio tech	-	1	-	1
38.	Low temperature culture storage facility	-	1	-	1
39.	Deep freezer	-	1	1	2

**25 monocular and 3 binocular microscopes are available for students use*

*** Available in Soil Science PG lab is used for UG classes*

**** Nitrogen distillation units of 48 nos are available in UG Soil Science lab for estimation of N. Semi-automated N analyzer available in Soil Science PG lab is used for UG classes*

Agriculture Engineering Machineries for farm Management

Items	Numbers	Remarks
Working models of MB plough, Disk plough and indigenous plough	2 sets each	MB and Disc Ploughs available
Working model of different harrows	Actual	Only Disc harrow available
Seed drill	01	Not in working condition
Different types of threshing drums	As per requirement	Not available
Working models of reaper and mowers	0	Not available
Different types of sprayers and dusters	As per requirement	Only hand operated knapsack sprayer available
Cut model of CI & SI engine		Not available
Cut model of Tractor	01	Only tractor as model is available

Laboratory facilities at Department of Plant Breeding and Genetics

Subject	Infrastructure available	Number	Size (sq.ft.)
Plant Breeding and Genetics	UG Laboratory	1	1800
	PG laboratory	1	300
	Crop cafeteria	1	47.5 cents
	Green house	1	6.5 cents
	Glass house	1	719
Biotechnology	Plant Molecular Biologylaboratory	1	1000
	Tissue culture laboratory	1	144
Seed Science and Technology	DNA Finger Printing Laboratory	1	1500

Faculty space in Department of Plant Breeding and Genetics

Details	No. of Rooms	Dimensions (in ft)
Office of Head	1	9.5 x 19
Faculty Rooms	2	5 x 5 feet each
Faculty Rooms	1	10 x 10
PG students room	1	10 x 10

Lab / Field Equipments in Plant Breeding and Genetics Laboratory

Items	Nos.
Microscope	70
Binocular microscope	2
Electronic Moisture Meter	2
Electronic Balance	4
Seed Germinator	1
2D Gel Electrophoresis system with power supply	1
Gel Documentation Unit with UV-Transilluminator	1
PCR machine	1
Micro centrifuge	1
Multipurpose Digital Shaker	1
Water bath	1
Test tube Rotator	1
Rotary Mixture	1
Heating blocks	1
Water purification system	1
Refrigerator	1
Analytical balance	3

Autoclave	1
Computer and laser printer	1
Deep freezer -20^{0}C	1
Deep freezer -80^{0}C	1
Hot air oven	2
Hot plate cum stirrer	2
Liquid nitrogen can	1
Microwave oven	1
PH meter	2
Micro-pipettes	8
Seed moisture meter	2
Seed cleaner cum grader	1
OSAW Hot air seed drier	1
Illuminated purity work board	2
Seed Trier	3
Plastic trays	20
Boerner divider	1
Indosaw Riffle divider	1
Electronic balance	3
PH meter	2
EC meter	2
Specific gravity separator	1
Wooden pallet	3
Sieves	5
Desiccators	3
Hot air oven	2
Seed grinding mill	1
Gamet divider	1

Lab / Field Equipments in Biotechnology Laboratory

Items	Nos.
Hot Air Oven	2
Centrifuge	1
Growth Chamber	1
Distillation Assembly (Ultra pure water production facility available)	1
Air conditioners – 2 tonnes	4
Laminar flow chamber (Six foot)	2
Air curtain	1
Cooler (4 – 8 °C)	1
-20° C refrigerator	1
Liquid Nitrogen can	1
Autoclave	1
UPS power pack (3.5 Kva)	1 set
PCR machine	1
UV Transilluminator	1
Micro-pipettes (0.5-10 µL, 10-100 µL, 100-1000 µL, 1-10 mL)	4
Gradient PCR	2
UV/Vis Spectrophotometer	1
Refrigerator (-20°C)	1
Refrigerator (4-8°C)	1
Digital pH meter	1
Electronic Balance	2
Gel Documentation system	1
Gel Electrophoresis system	1 set

Lab / Field Equipments in Horticulture

Items	Nos.
Secateurs	30 Nos.
Grafting and budding knife	10 Nos.
Hand Refractometer Digital Refractometer Oven Refrigerator Electronic Weighing Balance Pan Balance (1 kg & 10 kg. capacity each) Deep Freezer pH Meter Fruit crusher Grinding and Mixing Machine Distillation Assembly	The equipments / instruments available in the Dept. of Plant Breeding and Genetics, ADAC&RI, Dept. of Soil Science and Agrl. Chemistry, ADAC & RI., Trichy and Post Harvest Technology laboratory, ADAC & RI., Trichy are used.

Lab / Field Equipments in Entomology Laboratory

Instrument & Size	Number
Binocular Microscope	20
Insect Box	100
Insect collection Nets	60
Collection Bottles	100
Insect Collection Big Boxes for Museum (1 for each order)	30
Insecticides for showing students/representative for each group	30
Stereomicroscope	2
Electronic Balance	1
Soxhlet Extraction equipment	2
Bee keeping equipment	3
Oven	2
Patters Tower	3
Sprayers	5
Light traps	2
Fumigation chamber	1
Slides/cover slips	150
pH meter	1
Compute with printer	1
Centrifuge	1
Rearing cages	10
Pipetting system	1
Storage Rack	5
Vortex Mixer	1
Laminar air flow	1
Hot air circulator unit	1
AC	1
Incubator	1
Double Distillation unit	1
Heating facility	1
Vaccum circulation facility	1
Dessicator	1
Homogenising Facility with Two Jars of small size capacity	1
Degassing Facility	1
Stand for Separating funnel	5
Suction apparatus with suction funnel	1
Instrument display Facility (9'x2.5'x3')	1
Reagent display Facility (6'x1.5'x2.5')	1
Residue sample processing facility (7'x2.5'x3')	1
Chemical storage facility (9'x5'x3')	1
Lab Deep Freezer Cum refrigerator LG with Stabilizer	1
Hot air oven	1
Rotary Vacuum flash Evaporator	1
Electronic Balance	1
Gas Chromatograph (Model: Agilent ,7890A)	1

High performance Liquid chromatography (HPLC) Model: stimadzu prominence	1
Insect storage facility (18"x12"x3.5")	39
Insect Display facility (18"x12"x3.5")	20
Insect Specimen Tube Cabinet	1
Protection Cage	2
Specimen storage facility (185 Litres)	1
Microscope Storage Facility (6'x3'x1½')	1
Binocular student microscope	1
Magnoscope	1
Insect setting board	25
Dissection microscope	35
Refrigerator	3
Insect growth chamber	1
Insect rearing cage (30x30x45 cm)	3
Insect rearing cage(45x45x55 cm)	1
Dissecting tray(30x23x5cm)	13
Observation bee hive	1

Lab / Field Equipments in Plant Pathology Laboratory

Instrument	Number
Microscope compound with photodisplay arrangement	3
Sterobinocular	5
Sample processing Board (Dry preservation of samples)	5
Wet preservation Jars	20
Autoclave	2
Oven	3
Deep Freezer	1
Centrifuge (3000 rpm)	1
Refrigerator	2
Water bath	-
Electronic balance	3
Weighing machine	1
Incubator	1
Occular meter	1
Stage micrometer	1
Camera Lucida	-
Fermentor	2
Blender	1

Lab / Field Equipments in Nematology Laboratory

Instrument	Number
BoD	1
Growth chamber	1
Laminar Air flow Chamber	1
Stereo zoom microscope	4
Sieves	10
Fermentor	1

Lab / Field Equipments in Apiary Unit

Instrument	Number
Centrifuge (Remi R 8-c)	2
Spectrophotometer Laman 1000B)	1
BOD Incubator(Newlab)	1
Indian Bee Hives	21
Italian Bee Hives	3
Bee Hive Stands	37
Bee Colonies	31
Mini Honey processing unit	1
Wax melting unit	1
Bee Veils	2
Smoker	5
Honey extractor	2
Mini Honey testing kit	1
Honey processing unit	1
Posters	11

Lab / Field Equipments in Mushroom Laboratory

Instrument	Number
Autoclave	1
Oven	1
Refrigerator	1
Laminar	5
Packing machine	1
Humidifier	1
Laminar (Vertical) and hrizontal	5

SELF STUDY REPORT FOR POST GRADUATE PROGRAMS

6.4. Self Study Report for Masters Programme in Genetics & Plant Breeding

6.4.1. Brief History of the Degree Program

Name of the Program	M.Sc. (Ag.) Genetics & Plant Breeding / M.Sc. (Ag.) in Genetics and Plant Breeding
Year of start	2014-15

Objectives.

To conduct Post Graduate students research programs.

To evolve high yielding sodicity tolerant varieties of rice and millets.

To develop inbuilt resistance to both abiotic and biotic stresses in rice to stabilize the yield level.

To produce and distribute nucleus and breeder seeds in different crop varieties.

To impart quality Post-graduate education to produce skilled manpower in Plant Breeding and Genetics.

To undertake research activities aimed at developing high yielding sodicity tolerant varieties of rice, pulses and millets to cater to the need of farming community.

Accomplishments:

The Department started offering Masters Degree Program in Genetics and Plant Breeding in the year 2014-15.

A total of eight M.Sc. students have passed out from the department. Three sodicity tolerant rice varieties have been released. Diverse greengram genotypes identified for hybridization and evolution of suitable greengram genotypes for sodicity. Research activities have been initiated for development of sodicity tolerant millets like sorghum, ragi and barnyard millet. A total of 5.0 tonnes of breeder seed of TRY 1 and 1.86 tonnes of breeder seed of TRY 3 were supplied to State Department of Agriculture during the past five years. The projected area coverage is 1.4 lakh hectares under TRY 1 and 37,365 hectare under the variety TRY 3 in Tamil Nadu.

The Department is functioning with one Professor (PBG) and one Professor (Biotechnology), one Associate Professor and two Assistant Professors with specialization in Plant Breeding and Genetics and one Assistant Professor with

SELF STUDY REPORT FOR POST GRADUATE PROGRAMS

6.4. Self Study Report for Masters Programme in Genetics & Plant Breeding

6.4.1. Brief History of the Degree Program

Name of the Program	M.Sc. (Ag.) Genetics & Plant Breeding / M.Sc. (Ag.) in Genetics and Plant Breeding
Year of start	2014-15

Objectives.

To conduct Post Graduate students research programs.

To evolve high yielding sodicity tolerant varieties of rice and millets.

To develop inbuilt resistance to both abiotic and biotic stresses in rice to stabilize the yield level.

To produce and distribute nucleus and breeder seeds in different crop varieties.

To impart quality Post-graduate education to produce skilled manpower in Plant Breeding and Genetics.

To undertake research activities aimed at developing high yielding sodicity tolerant varieties of rice, pulses and millets to cater to the need of farming community.

Accomplishments:

The Department started offering Masters Degree Program in Genetics and Plant Breeding in the year 2014-15.

A total of eight M.Sc. students have passed out from the department. Three sodicity tolerant rice varieties have been released. Diverse greengram genotypes identified for hybridization and evolution of suitable greengram genotypes for sodicity. Research activities have been initiated for development of sodicity tolerant millets like sorghum, ragi and barnyard millet. A total of 5.0 tonnes of breeder seed of TRY 1 and 1.86 tonnes of breeder seed of TRY 3 were supplied to State Department of Agriculture during the past five years. The projected area coverage is 1.4 lakh hectares under TRY 1 and 37,365 hectare under the variety TRY 3 in Tamil Nadu.

The Department is functioning with one Professor (PBG) and one Professor (Biotechnology), one Associate Professor and two Assistant Professors with specialization in Plant Breeding and Genetics and one Assistant Professor with

specialization in Seed Science and Technology. All the faculties are well qualified and have undergone advanced trainings in labs abroad. Post Graduate program was started in this Department during 2014-15. In Post Graduate program 13 core courses are offered by faculties of this Department. Six allied courses (one each in Biochemistry, Physiology and Library and information services, two in Statistics) and two *e-courses viz*., Disaster management and Agricultural research, research ethics and rural development programs are offered by faculties sourced from other Departments.

So far, a total of eight PG students have passed out from this Department (2015-16 and 2016-17 passed out). Among the eight, two are pursuing Ph.D. Program, two are pursuing research in Rice crop as Senior Research Fellows, one is serving as Technical Officer in IIHR, Bangalore and one is employed as Agricultural Officer, Department of Agriculture, Government of Kerala.

In addition, Under Graduate students are also encouraged to pursue carrier in Plant Breeding and Genetics. A UG student of this college (Miss. Vinitha Jeyaprakash, 2012-16 batch), is pursuing M.Sc. in Plant Sciences with specialization in Plant Breeding and Genetics at Wageningen University, Netherlands).

Based on the research efforts done in the Department, three high yielding rice varieties (TRY 1, TRY (R) 2 and TNAU Rice TRY 3), one Ragi variety (TRY 1) and one Guava variety (TRY 1), all with good tolerance to sodicity have been released. The rice variety TNAU Rice TRY 3 and ragi variety TRY 1 are very popular among the farming community. A total of 5.0 tonnes of breeder seed of TRY 1 and 1.86 tonnes of breeder seed of TRY 3 were supplied to State Department of Agriculture. The projected area coverage is 1.4 lakh hectares under TRY 1 and 37,365 hectares under the variety TRY 3 in Tamil Nadu.

A farm woman Mrs. Prasanna of Thirupalai village of Madurai district bagged Tamil Nadu Chief Minister's Special Award of 5 lakhs and the medal worth Rs.3,500/- for 2014-15 by cultivating TRY 3 variety by adopting System of Rice Intensification (SRI) technique and recorded an yield of 16,115 kg/ hectare.

6.4.2. Faculty Strength

Faculties strength in Department of Plant Breeding and Genetics , ADAC&RI comprises of two Professors (one in Plant Breeding and Genetics and one in Agricultural Biotechnology), one Associate Professor (Plant Breeding and Genetics) and three Assistant Professors (two in Plant Breeding and Genetics and one in Seed Science and Technology) (Table 1).

The faculties are specialized in various crops with diverse expertise in advanced research and international research exposure.

The post graduate course curriculum comprises of one year course work and one year research work under an allotted supervisor.

Eleven major courses of Genetics and Plant Breeding are offered in the first year of course work spread over the first three trimesters followed by second year with additional three trimesters for research work, with best faculty-student ratio of 1:1.25.

Table 1. Faculty strength of Department of Plant Breeding and Genetics

S. No.	Sanctioned Faculty	Faculty place	inVacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor*	2	--	1
2.	Associate Professor*	1	--	1
3.	Assistant Professor*	2+1	--	2+1

*Involved in both PG and UG teaching, University research and additional responsibilities (Year coordinators , Hostel Warden etc.).

6.4.3. Technical and Supporting staff

The technical staff available in the general pool of ADAC&RI is used on need basis. However, for conduct of practical classes, the concerned faculty along with the highly experienced Permanent Unskilled Muzdoors (PUSMs) makes the necessary arrangements (Table 2).

Table 2. Technical and Supporting staff strength of Department of Plant Breeding and Genetics

Supporting Technical staff	No. and their responsibilities
Assistant	0
Lab Assistants	0
Field Assistants / PUSMs	3*
Technical expertise - outsourcing from other national and international organizations/ guest speakers/ experts	--

** Out of three field assistants / PUSMs, services of two are used for crossing purpose, maintenance of crop cafeteria, collection of crop specimen for practical classes, fixing of flowers for cytogenetics studies and for recording of biometrical observations like plant height, number of productive tillers, number of leaves etc, of experimental plots and to arrange class rooms. Both the PUSMs are highly trained and are having 15-20 years of experience in dealing with crop breeding activities. One literate field assistant is involved in typing of monthly reports, annual reports, crop scientist's meet report, mark list typing and other official documents. All these field assistants are sourced from farm section of Department of Agronomy, ADAC & RI., Tiruchirappalli.*

6.4.4. Classrooms and Laboratories facilities

A modern lecture hall equipped with LCD Projector and computer, and a practical laboratory is available for Post Graduate teaching. The Post Graduate laboratory is well equipped with Centrifuge, PCR machine, gel electrophoresis and documentation unit, pH meter, microscopes, microtome, etc. In addition, cultivable wetland, garden land, glasshouse, shade net houses are available for conducting research experiments (Table 3). A well established crop cafeteria with drip irrigation facility is available to raise crops for instructional purposes, round the year.

Table 3. Laboratories facilities for PG Program in Department of Plant Breeding and Genetics

a. Functional laboratories		
Item	**Nos.**	**Dimension**
PG laboratory	1	300 sqft.
Glass house	1	250 sqft.
Shade net	1	250 sqft.
b. Instrumentation of laboratories		
Equipment		**No. available**
pH meter		1
PCR machine		1
Gel Documentation System		1
Electronic Balance		1
Microtome		1
Stereo microscope		1
Compound Microscope		5
Ultrascope		1
Microscope		70*

Binocular microscope	02*
Electronic moisture meter	02*
Electronic balance	04*
Seed germinator	01*

Equipments available in Molecular Biology and Seed Science and Technology laboratories are also used for PG research

** Equipments used from UG lab are also used for PG research*

c. Farm facilities

An area of 2.0 ha wetland and 0.5 ha of garden land is available for conducting experiments.

d. Work shop / instructional units / Demonstration units :

A crop cafeteria is maintained in an area of 1900 sq ft . Crops are raised through out the year for demonstration and instructional purposes for both UG and PG students. Post graduate students practice emasculation, artificial pollination and selfing techniques of cereals, pulses, fibre crops and oil seeds.

6.4.5. Conduct of practical and hands-on-training

Post graduate Program in Plant Breeding and Genetics was started in the Department Plant Breeding and Genetics in the year 2014-15. On an average, five students are allotted each year to pursue PG program. They are provided with hands on training on crop hybridization, cytological and molecular breeding techniques, biometrical techniques, mutation breeding techniques for crop improvement. They visit state and national level organization involved in germplasm storage, quarantine implementation and biodiversity conservation as part of their study program. They also undertake exploration trips to natural forest ecosystem for exposure on collection of wild crop related species for germplasm conservation course. The course wise hands on trainings imparted are as follows

GPB 601 General Genetics

Hands on training are given to induce physical and chemical mutation, probit analysis for LD_{50} survival percentage.

Hands on training are given for preparation of stains, preservatives and development of permanent slides of mitosis and meiosis stages.

GPB 607 Breeding Cereal and Fodder crops

The students dissect floral parts of rice, wheat, maize, sorghum, pearl millet, ragi, and other small millets, forage grasses and legumes to understand the floral biology.

Hands on training is given for emasculation, crossing and selfing techniques of crops *viz*., rice, maize, sorghum, pearl millet, ragi, and other small millets, forage grasses and legumes.

Hands on training is given for pollen morphology and pollen sterility studies in various crops like, rice, maize, sorghum, pearl millet, ragi, and other small millets, forage grasses and legumes.

GPB 602 Cytogenetics, Reproductive Embryology and Developmental Genetics

Hands on training is given for preparation of stains, preservatives and development of permanent slides of mitosis and meiosis stages.

GPB 606 Applied Concepts of Crop Breeding

Students are trained to handle the segregating generations like F_2, F_3 etc. in rice so that they gain firsthand knowledge about handling segregating generations.

Hands on training for handling mutant population is imparted making the students adept in handling the mutant population and also selecting beneficial mutants from them.

GPB 608 Breeding Pulse and Oilseed crops

Students are trained to collect flowers of pigeonpea, greengram, blackgram, cowpea, soybean, castor, groundnut, sesamum and sunflower at appropriate stage and dissect their floral parts.

Hands on training is given for emasculation, crossing and selfing techniques of crops *viz*., pigeonpea, greengram, blackgram, cowpea, soybean, castor, groundnut, sesamum, and sunflower.

Hands on training is given for pollen morphology and pollen sterility studies in various crops like, pigeonpea, greengram, blackgram, cowpea, soybean, castor, groundnut, sesamum, and sunflower.

PGS 604 Basic Concepts in Laboratory Techniques

Hands on training is given on various buffer and stock solution preparation, extraction with soxhlet and condensation, electrophoresis, Pollen viability analysis, quick seed viability assessment, usage of spectrophotometer, sterilization related equipment like autoclave, microwave oven and laminar air flow chamber usage.

GPB 604 Principles of Quantitative Genetics and Biometrical Techniques in Plant Breeding

Students were trained to execute plant breeding analyses *viz*., genetic variability analysis, genetic diversity analysis, multivariate analysis, line x tester analysis, diallel

analysis, generation mean analysis using oftwares *viz*., GENSTAT, AGRES, IRRISTAT, INDOSTAT, TNAU STAT for techniques in Plant Breeding, using model data.

GPB 605 Biotechnological Tools in Plant Breeding

The students are provided hands on training on the following aspects *viz*., preparation of tissue culture medium, aseptic practices, explant preparation, culturing bacteria, isolation of plasmid DNA and electrophoresis, Amplification of DNA using PCR.

The students are provided hands on training on the following aspects *viz*., Microprogation of rose, banana and tapioca, initiation of callus culture and co-cultivation with Agrobacterium, isolation of plant genomic DNA, analysis of transgenic plants based on GUS assay and PCR, DNA fingerprinting using RAPD markers.

GPB 609 Breeding Fibre and Sugar crops

Hands on training is given to study the floral biology, emasculation and pollination techniques in cotton and also to estimate cotton fibre length.

Hands on training is given for identifying maintainer and restorers Evaluation of cotton cultures of different species for insect and disease resistance and evaluating the germplasm of cotton for yield, quality and resistance parameters.

GPB 610 Mutation Breeding

Hands on training is given for inducing mutation using chemicals, screening for mutants and evaluation of mutant lines and identification of mutants in M_2 generation.

Students estimate LD_{50} for chemical mutagens, EMS and MMS.

Students were trained for safety handling of chemical mutagens.

GPB 613 Germplasm Collection, Conservation, Exchange and Quarantine

Hands on training is given for identifying wild relatives of crop plants and preparation of herbarium for agricultural and horticultural crops.

PGS 602 Technical Writing and Communication Skills

Students are trained to make oral presentations, consolidation and scientific presentation of data to improve their oral and written communication skills.

They are trained on photography so as to produce publishable photographs.

Students are trained on methods to write a quality research article.

GPB 691 Master's seminar

Students make comprehensive presentations on seminar topics about recent advances in Plant Breeding and Genetics.

GPB 699 Master's thesis research

Students are assigned with research problems based on the mandate of the colle.

The students formulate the research program, design field experiments, layout the same, record biometrical and physiological observations, analyse the same and draw conclusions in consultation with their advisory committee.

The results are submitted as thesis dissertation.

They are also trained to publish their results in peer reviewed scientific journals.

Apart from the core courses, students also undergo allied courses in Statistics, Bio – chemistry and Physiology.

PLP 601 Principles of Plant Physiology

Hands on training is given on assessment of plant water status by different methods like leaf water potential and relative water content.

The students are trained on measurement of leaf area, estimation of different gas exchange parameters, estimation of photosynthetic pigments, soluble protein content and diagnosis of nutritional disorders.

Hands on training is provided for assessment of drought tolerant capacity by studying nitrate reductase activity, chlorophyll stability index, proline content, catalase activity, total phenolics.

BIC 601Plant Biochemistry

The students are trained to estimate Proline, starch, total free aminoacids, protein , total phenols and tannins.

Hands on training is provided to extract alkaloids and estimation of lycopene and carotenoids.

STA 602 Designs of Experiments

The students are trained to formulate experimental designs based on different research scenarios, so as to enable them to understand the concepts involved in the basic principles of experimental designs, collection of data, analysis and interpretation.

STA 603 Data Analysis techniques for Agricultural Sciences

Students are trained to perform CRD, RBD, LSD, ABD, correlation, regression analyses using data analysis softwares *viz.,* MS Excel, SYSTAT and IRRI STAT.

PGS 601 Library and Information Services

The students are trained on searching for literatures from different search engines like pubmed, cera, TNAU main library Koha search.

PGS 605 Agricultural Research, Research Ethics and Rural Development Programs

The students are trained to practice and promote ethics in research and developmental endeavors.

PGS 603 Intellectual Property and its Management in Agriculture

The students are equipped with knowledge of intellectual property rights (IPR) related protection systems, their significance and use of IPR as a tool for wealth and value creation in a knowledge-based economy.

Apart from institutional educational activities, students are also taken on exposure visit to renowned institutes, industries, progressive farms to facilitate better understanding of the subject. The following exposure trips were undertaken by the students

Table 4. Exposure visits by PG students of Department of Plant Breeding and Genetics

Place of visit	Knowledge gained
2014-15 Batch	
Exposure visit to National Bureau of Plant Genetic Resources, Regional Station, Thrissur.	Functioning of NBPGR
	Different germplasm conservation methods *viz., Insitu* and *Exsitu* conservation
Germplasm exploration trip to Pachamalai Hills, Trichy	Organizing germplasm exploration
	Crop wild relatives in Pachamalai hills
Ramiah Gene Bank, Department of PGR, TNAU, Coimbatore	Functioning of germplasm bank
	Functioning of cold storage module
2015-16 Batch	
Exposure visit to Regional Plant Quarantine Station at Chennai.	Functioning of Quarantine department
	Procedure to quarantine plant materials
	Issue of phyto-sanitary certificate
Germplasm exploration trip to Grizzled Squirrel Wildlife Sanctuary, Srivilliputtur	Organizing germplasm exploration
	Crop wild relatives in Grizzled Squirrel Wildlife Sanctuary
Ramiah Gene Bank, Department of PGR, TNAU, Coimbatore	Functioning of germplasm bank
	Functioning of cold storage module
2016-17 Batch	

Exposure visit to Plant Quarantine Station, International Airport, Trichy	Functioning of Quarantine department Procedure to quarantine plant materials Issue of phyto-sanitary certificate
Germplasm exploration trip to Sirumalai Hill station, Dindigul District	Organizing germplasm exploration Crop wild relatives in Sirumalai hills
Ramiah Gene Bank, Department of PGR, TNAU, Coimbatore	Functioning of germplasm bank Functioning of cold storage module

6.4.6. Supervision of students in PG / PhD Programs

PG research

The department is offering PG Program in Genetics and Plant Breeding since the academic year 2014-15.

Five students are admitted for PG Program every year.

The students undergo 13 core courses and six allied courses over a period of three trimesters.

For fulfillment of research credits, the students are assigned with research problems taking in to consideration the mandate of the institute and the progress of the work is monitored by the supervisors and evaluated by the advisory committee.

The thesis works are supervised by four well qualified faculties of the Department.

Table 5a. Theses submitted by PG students of Department of Plant Breeding and Genetics

Name of the student & ID no.	Title of the thesis
2014 – 15 Batch	
S. Priyanka (2014670801)	Assessment of nicking ability and heterosis for yield, its components and sodicity tolerance in Rice (*Oryza sativa* L.)
P. Renu prasath, (2014670802)	Genetic analysis of sodicity tolerance in Rice (*Oryza sativa* L.)
N. Saravana krishnan, (201467080)	Genetic variability and diversity studies in green gram (*Vigna radiata* (L.) *Wilczek*) under sodicity.

Name of the student & ID no.	Title of the thesis
2015-16 Batch	
Ms. Amrutha Unni, M. (2015670801)	Genetic analysis in green gram [*Vigna radiata* (L.) Wilzcek]
Devi Chandra Vadhana, E. (2015670802)	Study of genetic variability of physiological and biometrical traits related to sodicity tolerance in rice (*Oryza sativa* L.).
R. Gayathri, (2015670803)	Genetic diversity studies in Foxtail Millet (*Setaria italica* (L.) Beauv.)

Imran Khan, S. (2015670804)	Genetic analysis of sodicity tolerance in Rice (*Oryza sativa* L.)
Patcha Rajasekhar, (2015670805)	Genetic studies on yield and plant architecture associated traits in rice (*Oryza sativa* L.)

Table 5b. PG thesis supervision

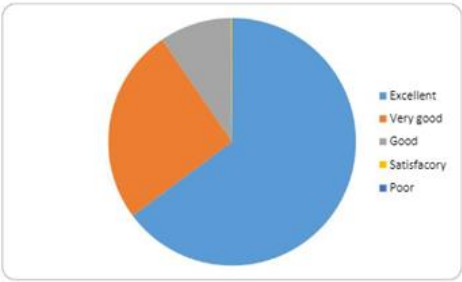
No of students intake per year	5
No of supervisors	4
No of student fellowships for research	NIL
University grants/ ICAR/ DST/ other funding	

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

Feed back of students are being received at the end of every trimester. Feed back from the parents is also received periodically. The same is consolidated and presented hereunder.

Table 6. Feed back of stake holders of Department of Plant Breeding and Genetics

Stakeholders	Feedback
Students	√
Parents	√
Employers, those who come for campus placements banks, companies,	x
Farmers	x
Industries	x
Entrepreneurs	x
Agricultural officials / allied	x
NGOs	x



2016-17 Batch M.Sc.(Ag.) Genetics and Plant Breeding students' feed back

2017-18 Batch M.Sc.(Ag.) Genetics and Plant Breeding students' feed back

Feed back of parents

The parents have expressed their satisfaction in teaching methodology, research facilities, infrastructure facilities, laboratory facilities, hostel facilities and library in the institute. They have expressed their satisfaction over the guidance offered to the students by the supervisors and the relationship of the faculty with the students.

6.4.8. Student intake and attrition in the Program for last five years

Post graduate Program in Plant Breeding and Genetics was started in the Department Plant Breeding and Genetics in the year 2014-15. On an average, five students are allotted each year to pursue PG program. During 2017-18, the number of PG seats were increased to six. So far, a total of eight PG students have passed out from this Department (2015-16 and 2016-17 passed out). Among the eight, two are pursuing Ph.D. Program, two are pursuing research in Rice crop as Senior Research Fellows, one is serving as Technical Officer in IIHR, Bangalore and one is employed as Agricultural Officer, Department of Agriculture, Government of Kerala.

Table 7. Details of students intake and attrition rate in PG program of Department of Plant Breeding and Genetics

Name of the Degree Program	Actual student admitted in last five years						Attrition (%)					
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
M.Sc. (Ag.)-- GPB /M.Sc. (Ag.) in GPB	--	--	5	5	5	6*	--	--	40+	0	20++	--

* M.Sc. (Ag.) (Genetics and Plant Breeding) seats were increased to six during 2017-18.

+ One student left the course to join in Anna University, Chennai to pursue M.Sc. (Biotechnology) Program and another student left the course to join in UAS, Dharwad, to pursue M.Sc. (PB&G), on ICAR placement

++ One student got employed in Bayer Crop Science as Field Officer and working at Hosur.

6.4.9. ICT Application in Curricula Delivery

The Department is equipped with one desktop and one laptop computers exclusively for PG teaching purpose and also for analysis of data recorded in students research Program. All labs, students waiting rooms, faculty cabins are wifi enabled facilitating updation of scientific know how by the faculty and students. The wifi facility and LCD Projector installed in the lecture hall and laboratory, facilitate screening of online videos about process like cell division and also emasculation and crossing techniques, mutation, polyploidization of crops and demonstration of data analysis using statistical softwares. Sharing of lecture notes and study materials with students is facilitated by the wifi network. Online data analysis tools like OPSTAT of HAU, Hisar, SPAR 3 of IASRI, New Delhi, TNAU STAT of TNAU were demonstrated to the students. ICT tools like Drop box, Google apps, You tube, Remind etc are also used in teaching.

Table 8. Details of ICT tools used

S.No.	Technique	ICT Tools
1.	Data analysis of experiments	OPSTAT of HAU, Hisar, SPAR 3 of IASRI, New Delhi, TNAU STAT of TNAU
2.	Floral biology and emasculation and crossing techniques, DNA replication, PCR, cell cycle	Youtube, Slideshare, Author stream, Linkedin, Researchgate, Academia, Powerslide
3.	Sharing of course content and literature	Youtube, Slideshare, Author stream, Linkedin, Researchgate, Academia, Powerslide

Table 9. Details of ICT based infrastructure in Department of Plant Breeding and Genetics

No of computers	Desktop – 1, Laptop – 1 exclusively for PG teaching
Networking facilities	Wi-fi enabled networking for lecture hall, laboratory, library, students' study hall
Wi-fi enabled classrooms and Halls	Wi-fi enabled Lecture hall and laboratory
Projectors, ipads, interactive boards,	LCD Projector with motorized screen – 1 No.

With the above faculty strength and infrastructure facilities Post Graduate Program M.Sc. (Ag.) Genetics & Plant Breeding / M.Sc. (Ag.) in Genetics and Plant Breeding is being offered to students.

6.4. Self study report for Masters Programme in Agronomy

6.4.1. Brief History of the Degree Programme

The Department of Agronomy was established in 2011 as a constituent of the Anbil Dharmalingam Agricultural College and Research Institute, Trichy. Until 2011, the Department was a unit under Department of Crop Management and focused on UG programme. Postgraduate programme was started during 2015 -16.

Name of the Programme	M.Sc. (Ag.) Agronomy
Year of Start	2015

The department comprises, faculties of Agronomy, Crop Physiology, Agricultural Engineering, Food Science and Nutrition and Animal Husbandry. The Department has a coordinated programme of teaching, research and extension covering a variety of fields, including crop production, water management, weeds management, integrated farming system etc. The department also maintains a farm of 34 acres focusing on research. This department involved in offering PG courses in other deparments like soil science and Agrl. Chemistry and Agricultural Entomology.NCC and NSS programme are also organised by the department.

Mission:

To create, integrate, and share knowledge among students and other stakeholders to enhance agricultural productivity and to sustain the health of land, air and water in salt affected soils.

Vision

To be a pioneering department for Under Graduate and Post Graduate education in Agronomy including Crop physiology and Agricultural Engineering.

To develop agronomical strategies for enhancing crop and water productivity in salt affected environment.

Overall Goal

To educate	To advance technology	To serve
Offering courses for undergraduate and Post graduate programmes	For improving crop and water productivity and enhancing profitability in salt affected soils	The farmers and stakeholders with technical inputs

Objectives

To impart knowledge on crop management practices to undergraduate students and to specialize PG students in the field of Agronomy.

To provide cropping system based agronomic research for sustainable crop production in sodic soil.

To develop water management technologies for more crop per drop of water in problem soil

To prioritize demand driven and resource based research programmes with focus on emerging market opportunities.

To develop contingent crop plan / alternate cropping pattern / diversified farm activities and to undertake problem solving agronomic research.

To develop cost effective agro-techniques for higher benefits.

To support the farm agro advisory services for efficient transfer of technology.

Accomplishments

Post graduate programme in Agronomy was started in 2015-16, with the focus on doing agronomical research and developing technologies in salt affected soils. A vibrant intellectual environment, encompassing both teachers and students, was painstakingly cultivated by the founding generation of the faculty. This is manifested in several ways that make the department unique.

The department has a coordinated programme of teaching, research and extension. This centre has Nine core faculty trained in different areas of crop production, water management, weed management, integrated farming system etc. The department is establishing contacts with various national and international institutes for advancing in teaching and research.

The main research focus is on developing agro technologies for profitable crop production in sodic environment. The main research accomplishment includes;

In rice, application of green manure 8.3 t ha^{-1} + vermicompost 2.1 t ha^{-1} + biofertlizers recorded yield on par with recommended dose of inorganic fertilizers under sodic soil conditions.

In rice, SRI planting + rotary weeding + 187.5: 50: 50 kg/ha NPK + FYM (12.5 t/ha) + Azophosmet (Seed treatment 200 g/ha and Soil application 2 kg/ha) + PPFM (Foliar spray @ 1 ppm at PI and Heading) may be recommended for higher yield and returns under sodic soil conditions

Seed treatment with cowpea sprout extract (2%) + foliar spray of Panchagavya (1%) was more effective in increasing seedling establishment and seed yield under sodic soil in blackgram and greengram

Pre-sowing application of glyphosate @0.75 kg ai / ha at 15 days before crop establishment along with post emergence application of bensulfuron – methyl + pretilachlor @0.06 + 0.06 kg a.i /ha at 8-15 DAT recorded significantly higher grain yield.

Raingun method of irrigation can be economically used for cluster beans with alkali water. Water use efficiency was higher with bhendi with raingun irrigation followed by bhendi with surface irrigation.

The research programmesare designed to address the farmers' problems in salt affected soils of Tamil Nadu. These programs focus on crop management in sodic soils using agronomical, biological and engineering tools, micro-irrigation system including sub-surface drip irrigation, land configuration, alternate irrigation methods, integrated weed management, latest herbicides, integrated farming systems, mechanization in cotton and green gram, improving rice productivity in sodic soils etc . The studies conducted during 2015-16 and 2016-17 are

2015-16

Evaluation of weed management practices in transplanted rice under sodic soil

Rice yield enhancement in sodic soil through combined application of gypsum and organic amendments

Effect of fish amino acid and egg amino acid as foliar nutrient on productivity of rice

Evaluation of weed management practices in direct wet seeded rice under sodic soil

2016-17

Enhancement of assimilate partitioning efficiency in irrigated cotton through nutrient management.

Response of finger millet(*Eluesinecorocana*) varieties to different level of NPK under sodic soil condition.

Effect of land configuration and nitrogen management on ragi growth and yield in sodic soil.

Effect of varieties and deficit irrigation on greengram productivity in sodic soil

Effect of High density planting and compact cultivars on yield and mechanical harvesting in cotton under sodic soil.

Inter-institutional collaboration

The scientists from this department have research collaboration with scientists from international institutes and domestic institutions.

International collaboration

Climarice

This project was on operation at Department of Agronomy as sub centre. It was collaborated with Norwegian Institute for Agricultural and Environmental Research (Bioforsk, Norway), Tamil Nadu Agricultural University (TNAU, India), International Water Management Institute (IWMI, India) and International Pacific Research Center (IPRC, United States); to assess the impact of climate variability on water availability and rice production in the Cauvery river basin of Tamil Nadu, India. In this project, trainings were conducted on Azolla production technology to farmers

RIICE Project

ADAC&RI, Trichy is one of the sub centres of RIICE project which is a collaborative project between TNAU and IRRI, Philippines. Collection of ground truth data in rice fields is major activity of this centre

National collaboration

AICRP – Agronomy

Development of agro technologies for improving the productivity of field crops under salt affected soil and use of poor quality water. Conjunctive use of different water resources for field crops

NADP Project

NADP sponsored scheme on Remote sensing based information for crop coverage, yield estimation and drought monitoring is in operation at ADAC&RI, Trichy as a sub centre. In this scheme, collection of ground truth data on rice and non rice points in 360 places and collecting crop cutting experiment data in 180 places in Ariyalur, Trichy and Perambalur districts. Training to farmers and department officials are also being done.

Netafim Irrigation sponsored project

Netafim Irrigation India Pvt Ltd, India sponsored project on "Exploring the feasibility of drip irrigation for kuruvai paddy and summer vegetable cultivation under sodic soil with saline water" was operated at Department of Agronomy during 2016-17 to screen rice varieties suitable for drip irrigation system under sodic soil with saline water during Kuruvai season, standardize the lateral spacing and optimize the nitrogen dosage for drip irrigated paddy under sodic soil and to screen suitable vegetable crops for sodic soil under drip irrigation during summer season

Details of patents and income generated

Revenue of Rs 10.41 Lakh was generated through sale of farm produce during 2015-16

Revenue of 2.21 Lakh was generated through sale of FYM/Composts through venture capital assistant schemes during 2015-17

6.4.2. Faculty Strength (Agronomy)

Sufficient staff members are available for running the programme in a smooth manner. Lab helpers are helpful in executing the practical classes and Office staff like AAO and superintendent is helpful in purchase of required items for the class and research purposes and disbursing the fellowships to the students etc.

Table 1 Faculty strength of the Department of Agronomy

Faculty	Numbers
Professor	1+1**
Associate Professor	0+1*
Assistant Professor	5

**Associate professor (FSN) is posted in the department;*

*** Professor (Processing) is posted in the Department*

Faculty from other departments offering courses for postgraduate programme

Department of Soil Science and Agricultural Chemistry (Microbiology – 1; Disaster management-1; Plant biochemistry-1)

Department of Social sciences (Statistics – 3; Language- 1; IPR -1;Research Ethics 1)

Library (1)

Trained and experienced faculty members are available in Agronomy. Many of the faculty members have completed their doctoral programme in reputed institutes. Sufficient staff strength is available to offer the courses. Every year maximum 6 students are admitted for M. Sc. (Ag.) Agronomy.

6.4.3. Technical and Supporting staff

The technical staff and supporting staff are attached with office of the Dean for administrative convenience and they are allotted to the other Departments whenever need arises. Farm labourers are attached with the Department of Agronomy and utilized for conduct of field experiments.

Table 2. Technical and Supporting Staff of the Department of Agronomy

Supporting Technical Staff	Numbers
Agricultural Assistant / Supervisor	1
Field Assistants / PUSM	14
Attendant/Messenger	3

6.4.4. Classrooms and Laboratories:

Class room	A classroom (20' x 18' ft) is available for M.Sc. (Ag) – Agronomy; AV aids and Wi-Fi facilities available
Functional laboratories	1 (well furnished)
Instruments available	The instruments include Electronic balance, Centrifuge, Flame photometer, Refrigerator, Hot air oven, UV-VIS spectrophotometer, Weighing balance, Water bath, Leaf area meter, Conductivity meter, pH meter, Automatic N estimation system and Single distillation unit, irrigation measuring devices are available in agronomy lab.
Farm facilities	Sufficient farm area of 34 acres is available for research with sodic soil condition. According to the students need and research the area is allotted. The farm is well maintained with green houses and machineries.

Vermi compost Production Unit

The aim of this unit is production of vermicompost and recycling of farm waste through vermicomposting. Training solid waste management was also done. During 2015 to 2017, 28940 kg's of vermicompost and 20.9 kg's earthworms was sold. The total revenue generated was Rs.2,21,615/-

Irrigation Cafeteria

The Department readied a model farm on an area of 1.25 acres, featuring pressurized irrigation technologies to demonstrate water saving and enhanced crop yield. The cafeteria features advanced head control unit, sprinkler irrigation, drip irrigation and fertigation units. This cafeteria also involved in training farmers, students and extension personnel on various aspects of micro irrigation.

6.4.5. Conduct of Practical and Hands-on-Training

No of students per batch	Maximum 6 students per batch
Hands on training during classes	The students perform all the lab / Field experiments on their own supervised by the course teacher. The course teacher will ensure that every one students will take part in the experiments. Individual students have to show the results.
Hands on training in crop production technologies (AGR 601, AGR 606, AGR 607, AGR 608)	During practical classes hands on training are provided in seed hardening, seed treatments, foliar application of nutrients, vermi-composting, preparing stock solutions for fertigation etc.,
Hands on training in soil fertility management (AGR 602)	Students are trained in soil sampling, soil analysis and soil fertility mapping using GPS and advanced tools.
Hands on training in weed management (AGR 603)	Students are given hands on training in preparing herbicidal solutions, application of herbicides, mechanical weeding, residual studies etc,
Hands on training in Water management (AGR 604)	PG students perform themselves experiments in soil moisture measurements, water quantifications, ET estimations, irrigation scheduling, operation and get hands on training in maintenance of drip and sprinkler irrigation systems etc.
Hands on training in Agro-meteorology (AGR 605)	In practical classes students are trained in meteorological data handling and analysis, preparation of crop weather calendars and agro-advisory bulletins etc.,
Hands on training in farming system, dry farming and water shed management (AGR 609 and AGR 610)	PG students receive hands on training in farming system components – dairy, goat and poultry - fish farming, integrated dry farming techniques and watershed designing and technologies.

Hands on training in sustainable and organic farming (AGR 611)	Students are trained in organic carbon estimation, composting, especially vermin-composting, and other organic farming techniques
Field visits/ visit to renowned institutes, industries, progressive farms	The students were taken to field visits, govt. agency demonstrations, water-sheds and agro-industries like irrigation companies and herbicide companies. The students were also motivated to attend national or international workshops / conference during their course of study.

List of participatory learning activities of the department

The teaching-learning process is made student-centric (learner centric) in this Department by assigning:

Student selects seminar topics. They prepare the presentations and discuss with faculties for clarifications wherever the need arises.

The students are given the task of identifying relevant articles related to course and different topics from refereed national and international journals for term paper presentations in each course

This department has very healthy student-teacher ratio, and students are encouraged to interact with faculty in the teaching-learning process. The Institute provides laboratory and field facilities for all students, and thus students can learn and gain expertise in their area of interest.

Guest Lectures /Visits

Guest Lectures, lectures by Directors and award lectures held very regularly and students and faculty attend seminars, workshops and conferences very regularly

The students were taken to farmers' field in Tiruchirappalli, Dindigul and Coimbatore districts. They were exposed to different agro- industries like Jain irrigation, Netafim irrigation Pvt ltd etc. The students were taken to water shed areas of Pullambadi block of Trichy district and cotton fields of Perambalur district.

Highlight the participation of students and faculty in extension activities

Faculty and PG students participate in extension activities like on farm demonstration/ trials are being conducted in villages of sodic soils and Radio talks participating farmers melas and exhibition and also have interaction with various stake holders meeting like zonal meeting farmers meeting etc., at district level.

Seminar/ Symposium attended by PG students

PG Agronomy students have attended symposium on "perspectives of agricultural engineering on nation building, 22nd December 2017, AEC&RI Kumulur, Tiruchirappalli,India" and presented two papers.

Rasakumar, R., S.Somasundaram and G. Srinivasan. 2017. Enhancing water productivity in salt affected soil. In: Proceedings of the national symposium on. pp130-131. (ISBN No. 978-93-5001-563-6).

Sasikumar,R., S.Somasundaram. and G. Srinivasan. 2017. Review on Drones in Precision agriculture. Proceedings of the national symposium on perspectives of agricultural engineering on nation building, 22nd December 2017, AEC&RI Kumulur, Trichy ,India. pp 22. (ISBN No. 978-93-5001-563-6).

Details of "beyond syllabus scholarly activities" of the department

Study tours, visit to various institutes and laboratories for exposure, sports are held at institute, region, all India and Universities level. Participation in performance art, students have students union which have cultural and sports activities

6.4.6. Supervision of students in PG programmes

During their research, each postgraduate student shall have an advisory committee which is formed before the end of the first trimester to facilitate the student in carrying out the assigned thesis program. There are five approved postgraduate guides in the Department. For masters programme, the advisory committee shall comprise of a chairman and two members, of which one member shall be from the major discipline and another from any other discipline in the related field of thesis research. Expert members are also included as additional members. The Co-Chairman may be considered from experts of collaborative industry, or collaborative institute of National/ International and Adjunct faculty. A Supervisor can guide not more than four students at a time. The chairman of the advisory committee will guide throughout the program of the student and selecting appropriate major and minor courses, guiding in the selection of topic for thesis research and seminar, continuous monitoring of thesis research, seminar and maintaining research monitoring register for each student for research.

Weekly once the students progress are reviewed by the chairman. The Professor and Head of the respective Departments / Directors are taking up the monthly review to assess the progress of research done by PG students. At the end of the each trimester the evaluation of research is done by the advisory committee members by presenting their progress of research at the Department level where all the faculties and students

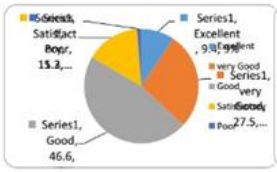
attend and offer their remarks/ suggestions for improvement of their research. Half yearly / annual reviews are conducted by Dean, ADAC&RI, Tiruchirappalli.

The students are monitored regularly during their research programme. The students have to discuss with the chairman twice in a week about their progress in research. The advisory committee will evaluate the progress made in ending of the each trimester. Students are encouraged to go to reputed institutes at national/ international level to learn advanced techniques and implement for their research programme.

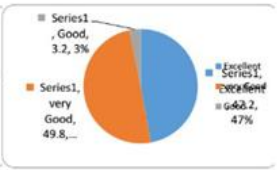
At department level professor monitor academic activities and Dean monitor at the Institute level to ensure that programme objectives are constantly met and learning outcomes are monitored

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

All the course leaders have to obtain feedback from the students in a prescribed format approved by the Academic Council. The feedback form is given to the student in the last class of each course. The feedback form is available as Course Evaluation Proforma, Each student need to fill and submit the feedback form to the Professor of the respective discipline.



2016-18 Batch overall M. Sc. students' feedback



2017-19 Batch overall M. Sc. students' feedback

Feedback from faculty and students is taken for designing and revising courses as well as for improving teaching-learning evaluation. Students' feedback is taken into consideration for further improvement in faculty in their teaching methodology. The suggestions of alumni are always well taken

6.4.8. Student intake and attrition in the programme for last five years

Name of the degree programme	No of actual students admitted			Attrition %		
	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
M.Sc. (Ag.) Agronomy	4	5	6	0	0	16.6

All the admitted students finish the programme after thesis submission. Course discontinuation, if any, is due to permanent job placement. Some of the other state students leave immediately after joining the course because of attaining seat in their native state.

6.4.9. ICT Application in Curricula Delivery

No of computers	Centre has very good laboratories with eight computers with net connectivity and statistical software like Crop stat Agris stat. Besides, two computers with net connectivity have been provided exclusively for the PG/Ph.D. students to access e resources
Networking facilities	Available
Wi-fi enabled classrooms and Halls	The class rooms and laboratories are enabled with net connectivity In this campus has 24 X 7 Wi-Fi connectivity. This facility is available for the students all the time for accessing e-learning resources, journals, books, etc. The students are provided with modern multimedia teaching aids like power point slides and videos
Projectors, ipads, interactive boards	Projectors available
Mobile Apps	Weather based Apps and websites for meteorological information and data collection
Web Portals and Tamil Nadu Agricultural Weather Network (TAWN),	TNAU and IMD weather portals for real time information

Annexure 6.4.1

Short Term and Long Term Goal of the Department of Agronomy

S. No	Goals	Objectives	Implementation	Performance metrics / Time line
1	Upgradation of students education	To educate students on basic concepts and advanced technologies of agronomy	By upgradation of course content and making it up to date	Continuous process
2	Improving the lab facilities	To improve the lab facilities in the lab to generate more data on reachable issues	By purchasing more instruments needed for the study	Two years
3	Promote innovation in research by empowering the students	To empower the students technically so that they can choose advanced agronomical technologies	By making the students to visit important national and inter-national institutes By providing skill based training to students	Continuous process
4	Enhancing the domain knowledge and of both faculty and students	Training faculty and post graduate students on basic and advanced developments in the field of Agronomy and agronomic transformation for suiting changing farming situation	Arranging national and inter-national training for both faculty and students By allotting appropriate research issues so as to make the students confident in handling future research needs.	Continuous process
5	To evolve agronomic technologies for enhancing crop and water productivity	Developing biological, engineering and chemical tools for improving the crop and water productivity in salt affected soils	Tailoring crops and varieties for salt affected environment Evaluation of Integrated farming sysetms in salt affected soils Improving water productivity	Continuous process

			through advanced irrigation methods	
			Evaluation of biological tools like green manures, bio-fertilizers etc.,	
6	Publishing in high impact journals	To encourage faculty and students for quality publication	Sensitising on the importance of publishing	Continuous process
			Training both faculty and students for recent software tools and quality publication including plagiarism	
7	To develop patent and products	Toget patent for the developed products and technologies	Training faculty for patent application and assisting in the process	Continuous process

Annexure 6.4.2

Credentials of the Teaching Staff

Name	Designation	No. of Years of Experience		No. of Publications in Referred/ indexed journals		No. of Publications in Conferences		No. of book chapters published	No. of journals serving as editor/ reviewer	No. of Masters/ Ph.D. Student guided	H-Index	I-10 Index
		Teaching	Research	National	International	National	International					
Dr S. Avudaithai	Professor and Head (Agronomy)	15	17	8	10	6	1	9	-	-	3	2
Dr.R.Visvanathan	Professor (Agricultural Engineering)											
Dr. M. Marimuthu	Associate Professor (Food Science)	12	7	2	-	3	-	5	-	-	-	-
Dr. S. Somasundarm	Assistant Professor (Agronomy)	12	12	4	4	27	5	7	-	PG-3	2	-
Dr. T. Ramesh	Assistant Professor (Agronomy)	4	8	35	9	18	10	7	-	PG-2	8	7

Dr. S. Rathika	Assistant Professor (Agronomy)	7	8	15	17	19	4	10	-	PG-2	4	-
Dr.S.Anandha Krishnaveni	Assistant Professor (Agronomy)	3.50	3.50	2	-	2	-	2	-	-	-	-
Dr. S. Nithila	Assistant Professor (Crop physiology)	8	8	7	3	8	-	10	-	Member PG-8 Ph.D-2	2	-

6.4. Self Study Report for the Programme

6.4.1. Brief History of the Degree Programme

Name of the programme	M.Sc. (Ag.) Soil Science and Agricultural Chemistry / M.Sc. (Ag.) in Soil Science
Year of start	2013-14
Objective	Developing skilled human resource in Soil Science through quality post graduate degree program

The Department of Soil Science and Agricultural Chemistry is one of main department in Anbil Dharmalingam Agricultural College and Research Institute, Trichy which was established as fourth constituent college of Tamil Nadu Agricultural University. Previously, it was established with ICAR funding as Kumaraperumal Farm Science Centre. During 1980, it was upgraded as "Soil Salinity Research Centre" by National Agricultural Research Project funding to conduct research on salt affected soils which is a unique problem in this area. During 2011, at ADAC&RI, the separate Department of Soil Science and Agricultural Chemistry was established and the Masters Degree Program in Soil Science was started during 2013. The PG students of this department carried out research on key problem identified at various scientific forums based on the prioritization and thrust areas.

Formerly this college was started as Soil Salinity Research centre since 5000 hectares of manikanadam block around the college were affected by sodicity and salinity. Hence, it is highly competent to have PG programme in Soil Science at this College. In addition, Centre of Excellence in Sustaining Soil Health is started in this college during 2015-16 with the funding of NADP in which the highly sophisticated instruments were purchased to carry out advanced research. This definitely helps the PG scholars to carry out unique research in the field of sodic soil management and soil health.

The students are admitted to the M.Sc. in Soil Science program through TNAU common entrance test conducted by TNAU since 2013. The campus has well trained core faculty members in different areas of Soil Science. The masters' thesis research is designed to address the farmers' problems with due focus on soil and crop management. Major objectives are screening different crops and varieties for salt tolerance, sewage irrigation effect on heavy metal accumulation in soil, leafy vegetable and flower crop, site specific nutrient management for rice in alkali soils, utilization of industrial wastes and effluents on the reclamation of sodic soils etc. The students get hands-on-training in these fields during thesis work. They are well trained to carryout research independently. The students are motivated to publish their thesis work in peer-reviewed

high impact factor journals, which resulted in wider opportunities for students to continue their research in advance institutes.

Accomplishments

Academic Achievements

The Masters Degree Program in the Department of Soil Science and Agricultural Chemistry initiated during 2013. Since its inception, the department has been making significant contributions to strategic and applied research in Soil Science.

The ADAC&RI, Trichy is the 4th campus offering Masters Degree programme to the students under TNAU and students admitted are selected based on the score obtained in the common entrance test conducted by TNAU.

The PG students of SS&AC department carry out their research based on key research problem identified at various scientific forums based on the prioritization and thrust areas.

In addition, the students from other campuses of University based on merit are also deputed to avail the fellowship existing in the externally funded schemes as student SRF/JRF to carry out the research.

Research Achievements

Enriched / Fortified zinc with organics for maize in sodic soil was developed and evaluated

Distillery yeast sludge (DYS) as a source of nitrogen for maize under sodic soil was studied

Impact of sewage irrigation on heavy metal accumulation in soil, vegetables and flower crops were evaluated

Specific nutrient management for rice in alkali soils of Manikandam block Trichy was developed

Effect of gypsum incubated organic manures, fly ash and paper mill sludge as an amendments in alkali soil was evaluated

Micronutrient dynamics and yield of rice under sodic environment was studied

Unique Research Facilities

Special Instruments like Microbial Community analyzer (MALDI-TOF), LC-MS/MS FT-IR, Open Top Chamber (4 units), Gas Chromatograph coupled with mass spectrophotometer (GC-MS), Pressure Plate apparatus etc are available in the COE in SHS for advanced research

Unique experimental platform on salinity and sodicity soils as well as alkali water helps to carryout research activities on problem soil and water management

Funding and Collaboration for respective degree programme

ICAR recognized this centre as core centre of Tamil Nadu in executing the trials pertaining to management of salt affected soils and use of poor quality water in Agriculture. In addition to this, survey and characterization of ground water quality of coastal districts of Tamil Nadu is also executed through All India Coordinated Research Projects.

The Department has collaborative research and teaching programs with leading Agricultural Industries like EID Parry Ltd., Kothari Sugars, Chemplast etc in the form of fellowships, industrial exposure etc.

Currently Department is having two externally funded research projects from private industry which gives fellowship to PG students for pursuing research work.

The alumni of this campus are working in nationalized banks, Agricultural colleges of Various SAU's as SRF/RA and Scientists.

6.4.2. Faculty Strength

Trained and experienced faculty members are available in the Dept. of Soil Science & Agricultural Chemistry. All faculty members have completed their doctoral programme in reputed institutes. Sufficient staff strength is available to offer the courses. Every year 4-8 students are admitted for M. Sc. (Ag.) in Soil Science through TNAU-PG entrance examination/ICAR rank holders. Guest lectures by subject experts are arranged regularly for the benefit of the students and the students are encouraged to attend expert lectures

Table 1. Faculty position in the Department

Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
Professor*	3+2	--	1
Associate Professor*	1+1	--	1
Assistant Professor*	2	--	2+1

** As students have been allotted to AECB.RI, Kumulur, ACB.RI, Echangottai, SWMRI, Tanjore, the faculty members have been included.*

Faculty recognized for guiding M. Sc. (Ag.) Soil Science: 6 Nos.

Teachers from other field of specialization belong to this department and College is also offering the courses for M. Sc. (Ag.) Degree programme as given below:

Biochemistry (1)

Environmental Sciences (2)

Agricultural Microbiology (2)

Agricultural Statistics (1)

Languages (1)

Faculties comprise of three Professor, one Associate Professor and two Assistant Professors exclusively for teaching both UG and PG programme. Faculties are specialized in various fields with diverse expertise in advanced research exposure. The course curriculum comprises of one year course work and one year research work under an allotted supervisor. Twelve major courses of Soil Science is included in the first year of course work spreading in first three trimesters followed by second year with additional three trimester for research work.

Table 2. Specialization and responsibilities of the faculties

Name	Designation	Specialization	Responsibilities
Dr. P. Balasubramaniam	Prof & Head (SS&AC)	Soil fertility; Problem soils management	UG and PG Teaching; PG and Ph.D. students guidance; Professor & Head, Project Director (COE in SSH); Ward counsellor; PI and Co-PI of the research projects
Dr. P. Santhy	Professor (SS&AC)	Soil fertility and biology	PG Teaching and PG and Ph.D. students guidance; PI of research project
Dr. T. Thilagavathi	Prof (SS&AC)	Soil fertility	UG and PG Teaching and PG and Ph.D. students guidance, Ward counsellor
Dr. M. Maheswari	Professor (Environ-mental Science)	Waste Water treatment and recycling of solid wastes	UG and PG Teaching and PG and Ph.D. students guidance, UG Coordinator, Project Director (FWKC)
Dr. Sundar	Prof (Agrl. Micro.)	Bio fertilizer Production technology and	UG and PG Teaching and PG students' guidance, Research Coordinator of the College.

		fermentation technology	
Dr. P. Janaki	Associate Prof. (SS&AC)	Herbicide behavior in environment; Plant chemistry and nutrition	UG and PG Teaching and PG students' guidance and research project works, Coordinator for II year UG Agriculture, Ward counsellor, Dept. research coordinator
Dr. G. Gomadhi	Assistant Professor (SSAC)	Land Evaluation for soil fertility	UG and PG Teaching and PG students guidance and research project work, Associate Coordinator for II UG Agriculture; UG & PG coordinator, ward counsellor, UG lab incharge.
Dr.T. Sherene Jenita Rajammal	Asst. Prof. (SS&AC)	Heavy metals behavior; soil fertility; Problem soils management	UG and PG Teaching and PG students' guidance and research project works; ward counsellor, PG lab incharge.
Dr. J. Ejilane	Asst.prof. (Agrl.Micro.)	Bio process & biocatalysis	UG and PG Teaching and PG students guidance
S. Pandarinathan	Asst. Prof (Biochem)	Plant Biochemistry	UG and PG Teaching and PG students guidance; UG microbiology lab incharge, ward counsellor
Dr.M.Selvamurugan	Asst. Prof (Environmental science)	Anaerobic digestion and recycling of wastes	UG and PG Teaching and PG students guidance; UG ENS lab incharge, ward counsellor

6.4.3. Technical and Supporting staff

Sufficient supporting staff members are available for running the programme in a smooth manner. Lab Technician / Lab helper will be helpful in executing the practical classes and College office staff like AO/AAO and superintendent will be helpful in purchase of required items for the class and research purposes and disbursing the fellowships to the students etc.

Table 3. Supporting / Technical staff and their responsibilities

Supporting / Technical staff	No	Responsibilities
AAO*	-	-
Lab technicians	1	Assisting in lab, purchase etc
Lab Assistants	3	Assisting in lab activities, practical classes, preparation of reagents etc

** The existing AAO in the College or farm office are helping in laying out the trials, conducting field experiments, input purchase and distribution etc.*

6.4.4. Classrooms and Laboratories

An ICT enabled classroom is available for teaching. A separate PG laboratory (65 x 40 ft) is available. The PG Class rooms are ICT enabled and equipped with AV aids and Wi-Fi. The students are provided access to e-Resources through intranet and also for Off-Campus Users, such as CeRA- Science Direct, Springer e-Books and journals etc. Necessary farm trial area is provided by the respective farms in ADAC&RI, Trichy for paddy, millets, pulses, cotton etc

Table 4. Classrooms facilities

Hall type	Size
Modern Lecture cum Seminar hall with LCD facility	30 ft x 21 ft
Lecture hall (For board teaching)	20 ft x 10 ft

Table 5. Functional laboratories

Hall type	Size
PG Laboratory	65 ft x 20 ft (1300 sq.ft)
AAS lab	152 sq.ft
Instrumental Lab	440 sq.ft

Instruments available

The PG lab is equipped well with the necessary equipments and is listed below

Instruments Name

Electronic Top pan balance (0.001 g / 1 mg capacity), Electronic balance (Avery) 0-30 kg, Hot air oven, pH Meter, EC Meter, Flame Photometer, UV-Visible , spectrophotometer (Double beam), Atomic Absorption spectrophotometer, Water analysis kit, Digestion block, Nitrogen Analyser (Kjelplus), Chlorophyll meter, Hot Plate, Distilled water unit,

Automatic Double glass distillation unit, Water Bath, Mechanical Shaker, Centrifuge, Refrigerator, Digital Water purifier (RO unit), Machanical stirrer, Sand bath, Vacuum pump.

In addition to the instruments in PG lab, the instruments available in the Centre of Excellence in Sustaining Soil Health are used by the students for PG research work and are listed below.

Instruments / Equipments

Photometer, Water Purifier system (Milli pore), Wet sieve and dry sieve for soil aggregate system, Soil Core Sampling unit, Pressure Plate Apparatus, LC-MS/MS, FT-IR, Open Top Chamber (4 units), CLPP-Microbial Community Analyzer (MALDI-TOF), Gas Chromatograph coupled with mass spectrophotometer (GC-MS-MS), Deep Freezer, UV-Visible double beam spectrophotometer, Refrigerated Centrifuge, Atomic Absorption spectrophotometer

Farm facilities

The sufficient cultivable lands is available in the college campus for conducting field experiments for PG research apart from the required pots for conducting pot culture experiments.

Cultivable area – 2.0 acres

Cement pots – 100 Nos.

Name of Demo Units: Soil Health Management (PME) Demo unit, Gypsum bed Technology Demo unit, Soil Profile Examination Unit

A modern lecture hall equipped with LCD Projector and computer and a practical laboratory is available for Post Graduate teaching. Well equipped post graduate laboratory having dimensions of 65 ft x 20 ft with 1300 sq.ft size is available for carrying out analytical and research work. Around 8 work tables of 1.9 m x 0.8 m size placed in the lab could be sufficient to occupy 16 students at a time to carry out analytical work in accurate manner. This lab has sufficient space to keep all the laboratory glassware's, chemicals (AR grade) along with voluminous equipments like Plant sample grinder, mechanical shaker, RO unit, distillation unit, refrigerator, plant and soil sample storage cabinets, distillation units of around six numbers and all the required apparatus like core sampler, soil sampling tools, burette stands, pipette stands, suction pump, mechanical stirrer and filter stands. As a part of post graduate laboratory, we have sophisticated Atomic Absorption Spectrophotometer room 152 sq.ft size which is used for analyzing micronutrients and heavy metals in soil, plant and water samples.

In addition to the PG lab, a separate air conditioned instrument room having around 440 sq.ft to accommodate all the instruments like electronic balance pH meter, EC meter, centrifuge, flame photometer, Kjel plus digestion unit, Kjel plus N distillation unit, UV Spectrophotometer along with computer facilities for documenting the results. We have the facilities of doing analysis for pH, EC, major nutrients, secondary nutrients and micro nutrients as well as heavy metals in soil, plant, manures, fertilizers and water samples. We have also facilities to carry out analysis for problem soil diagnosis.

In addition, the instruments available in the NADP Scheme COE in sustaining soil health are also utilized by our PG students teaching and research.

6.4.5. Conduct of Practical and Hands-on-Training

No of students per batch : Maximum 8 students / batch

Hands on training during classes

During practical classes, the students are individually given with experiment or analysis work which enables them to conduct experiment or analysis independently and develops confident to them for carrying out any work independently. The practical trainings given to them in the field of soil science and allied fields are given below.

Training on Soil Science & Agricultural Chemistry

Establishment of Soil, Plant and Water Testing lab

Soil sampling, soil profile digging and description of soil profile

Soil and Crop specific Fertilizer recommendations using NUTMON and DSSIFER

Nutrients Deficiency identification in crops and Foliar correction measures using VDK

Soil texture determination by feel method

Particle size analysis and texture determination by International pipette method

Soil aggregate analysis

Hydraulic Conductivity

Insitu Infiltration Rate measurement in soil

Soil colour determination using Munsell colour chart

Determination of soil pH and EC using saturation paste extract

Determination of redox potential in submerged soils

Estimation of Phosphorus and Potassium fixation in soil

Determination of Cation Exchange Capacity of soils

Determination of Micro nutrients in soil using Atomic Absorption spectrophotometer

Estimation of Nitrate N & Ammonical N in Fertilizers

Estimation of P_2O_5 in Single Super Phosphate and Rock phosphate fertilizers

Estimation of K_2O in potash fertilizers

Compost making from crop residues

Delineation and classification of soil and land use in satellite imageries by using GIS

Interpretation of satellite imageries, aerial photographs, toposheet, Cadastral maps

Diagnosis and reclamation of sodic soil

Reclamation of Sodic Soil using Gypsum Bed technology

Determination of Organic Carbon in Soil

Determination of N,P,K, Ca, Mg and S in Plant and Soil (Available & Total)

Rocks and Minerals identification

Starch and Crude Protein estimation in Plants

Saponification and acid value in oils

Reducing and Non reducing sugars in sugarcane juice and jiggery

Training to use Software's and Computer skill development

Scientific Writing skills

Equation (Math Type) Editor Software

Thesis Aiding Software- Mendeley, END Note, LateX, Plagiarism checker

Mapping Software- Arc GIS, Toposheets and Cadastral Maps

Statistical Tools- Agris, SPSS, SAS, e-stat

Table 9. Field visits/ visit to renowned institutes, industries, progressive farms

Name of the place	Purpose
Viralimalai	To expose the students to the influence of soil farming factors on the development of different soil types by studying soil profiles in red soil areas
TNPL Unit II, Mondipatti, Trichy	To expose the students to soil profile excavation and examination facilitated by the Expert Dr. P. Raja, Senior Scientist (Soil Science), IISWC, Ooty
Dept. of Remote sensing and GIS, TNAU, Coimbatore	To expose the students to the functions and mandate of remote sensing and GIS department. Digitization and soil mapping using ARC-GIS software and digital land use classification
Soil Physics unit, Dept. of SS&AC, TNAU, Coimbatore	To know the mandate and functions of soil physics unit To have practical knowledge on operation of pressure plate apparatus, aggregate size analyzer etc.

Soil Survey and Land use planning Wing, Dept. of Agriculture, JDA office, Lawley Road, Coimbatore	To give exposure to the students on the mandate, activity and functions of soil survey unit under the state Department of Agriculture
Soil Testing Lab (STL), Trichy	To expose the students on the layout, Mandate and functions of soil testing lab under the state Department of Agriculture
Fertilizer Testing Lab (FTL), Trichy	To give exposure to the students on the mandate and functions of Fertilizer testing lab under the state Department of Agriculture
Pesticide Testing Lab (PTL), Trichy	To expose the students on the layout, Mandate and functions of soil testing lab under the state Department of Agriculture
Ganga Kaveri fertilizer Corporation, Konalai, Trichy	To have practical exposure on the preparation of complex and mixed fertilizers in the fertilizer production / mixing unit
Vermicomposting unit at Farmers Holding (Mr. Gopalakrishnan) at Valayappatti, kulithalai tk, Karur dt	To study the different species of earthworms, types of farm wastes used for vermicomposting and way of marketing.

PG students are provided with hands on training for delineation and classification of soil and land use pattern based on satellite imageries by using GIS. Also the post graduate students are regularly undertaken exploration trips to study the soil profile at different places around TNPL and red soil areas in and around Viralimalai.

6.4.6. Supervision of students in PG/PhD programmes

Under graduate students regularly carrying out research as project work during IV year (APW 401 (0+1)) under the following theme areas.

Developing nomogram for diagnosing sodicity soils based on pH and ESP relationship

Study on nutrient availability in rhizosphere soil under different crop situation

Impact of sodic soil reclamation by gypsum on forage grass

Sustainable low cost eco-friendly vermifiltration technology for removing organic pollutants from domestic wastewater

Removal of Pollutants from Domestic Wastewater by using Natural Coagulants

Evaluation of the impact of elevated carbon dioxide and temperature on crops

During their research, each Post Graduate student shall have an advisory committee which is formed before the end of 2nd trimester to facilitate the student in carrying out the assigned thesis program. For Masters Programme, the advisory committee shall comprise of a chairman and two members, of which one member shall be from

the major Discipline and another from any other Discipline in the related field of thesis research. Expert members are also included as additional members. The Co-Chairman may be considered from experts of collaborative industry, or collaborative institute of National/ International and Adjunct faculty. A Supervisor can guide not more than four students at a time. The chairman of the advisory committee will guide throughout the program and selecting appropriate major and minor courses, guiding in the selection of topic for thesis research and seminar, continuous monitoring of thesis research, seminar and maintaining research monitoring register for each student.

Weekly once the students progress are reviewed by the chairman. The Professor and Head of the respective Departments / Dean are taking up the monthly review to assess the progress of research done by PG students. At the end of the each trimester, the evaluation of research is done by the advisory committee members by presenting their progress of research at the Department level where all the faculties and students attend and offer their remarks/ suggestions for improvement of their research. Half yearly / annual reviews are conducted by Dean, Post Graduate Studies.

Table 10. Students intake, no of supervisors and fellowships provided to students

No of students intake	2013-14	2014-15	2015-16	2016-17	2017-18
	5	6	4	8	6
No of supervisors	Seven (7 nos)				
No of student fellowships for research	2013-14	2014-15	2015-16	2016-17	2017-18
	-	1	3	4	3
University grants/ ICAR/ DST/ other funding	-	EID parry	EID parry	Clima Adapt, EID parry, TNPL, GOI-UGC	TNPL scheme

The students are monitored regularly during their research programme. The students have to discuss with the chairman twice in a week about their progress in research. The advisory committee will evaluate the progress made in ending of the each trimester. Students are encouraged to go to reputed institutes at national/ international level to learn advanced techniques and implement for their research programme

Table 11. List of thesis completed for PG programme

Title of Thesis	Students Name	Chairperson	Year
Eco-friendly utilization of treated distillery effluent for seed cane (*Saccharum officinarum L.)*	J.Revathi	Dr.M.Baskar	2013
Eco-Friendly utilization of distillery wastes application for sustaining soil health and crop production	K . Sivasabari	Dr. L.Chitra	2013
Influence of TNAU micronutrient mixture with amendments on soil micronutrient dynamics and yield of rice under sodic environment	B.R.Iniyalakshimi	Dr.M.Baskar	2015
Direct and residual effect of fly ash on soil physico-chemical and biological properties under rice ecosystem	P.Muthusamy	Dr.P.Balasubramaniam	2015
Effect of paper mill sludge as an amendment in alkali soil and its influence on the growth and yield of greengram {VBN (Gg)2}	G.Anitha	Dr.D.Jayakumar	2015
Impact of sewage irrigation on heavy metal accumulation in soil and leafy vegetables	S.Suganya	Dr. L.Chitra	2015
Characterization and site specific nutrient management for rice in alkali soils of Manikandam block, Trichy	M.Sathiya	Dr.S.Avudainayagam	2015
Dynamics of zinc in sodic soils with zinc enriched organics and its effect on yield of maize	R.Illavarasi	Dr.M.Baskar	2016
Evaluation of the efficacy of gypsum incubated organic manures for green gram (Vamban 2) in sodic soils	T.Sundhari	Dr.T.Thilagavathi	2016
Utilization of distillery yeast sludge (DYS) as a source of nitrogen for maize under sodic soil	P.Jusvin Sinthiya	Dr.L.Chithra	2016
Utilization of calcium containing tannery sludge for amelioration of alkali soils and chromium reduction	S.Saravanakumar	Dr. P. Thangavel	2016
Effect of various amendments on properties of sodic soil and performance of green gram	J.Anandhan	Dr. G. Gomadhi	2017
Delineation and mapping of soil productivity constraints for crop suitability in ponnaniyar reservoir basin	V.Sabareeswari	Dr.M.Baskar	2017

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

Students Feed back

Feedback from the Students were obtained and analyzed. At the end of trimesters students evaluate teachers and share the experience gained in each course. At the end of the programme also feedback is obtained from the students.

Parent's feedback

After completion of course work, the feedback from parents of the respective scholar was obtained through their chairman. It was observed that the parents were generally satisfied with the student's academic performance and behavior. Further the moral support both technically and personally provided by the college for carrying out the research programme in time was worth mentioning in the feedback. The mentors in the department are continuously motivating as well as monitoring the scholars in such a way that their curriculum not be affected by any means especially during lab activities and field visits if any. It was also interested to note from their feedback that many of our scholars are motivated to write competitive exams and other higher studies to get a good job in their carrier.

Farmer's feedback

Feedback was obtained from the farmers of Manikandam block at Trichy district ear-marked for sodic soil and alkali water. They were satisfied with the gypsum application and gypsum bed reclamation technology for sodic soil and alkali water management demonstrated by the PG scholars and staffs of this department. Also, the farmers were happy with the campaign conducted on the importance of soil health and its maintenance by PG students on the eve of soil health day.

Industries Feedback

Feedback was obtained from the collaborating industries viz., EID parry, Kothari Sugars Ltd., Chemplast Ltd and TNPL regarding research outcome from the respective projects. They were impressed by the research trial execution, accuracy in results, proper methodology adoption, and following latest technologies in laboratory analysis and conducting the experiments. They also mentioned the word of appreciation about the research monitoring activities of the college/University in relying the findings obtained through these projects.

Employer's feedback

The employers feedback showed that the students graduated from this college specialized in Soil Science and Agricultural Chemistry was outstanding and unique in work execution. They are prompt and character is found to good.

6.4.8. Student intake and attrition in the programme for last five years

All the admitted students finish the programme after thesis submission. Course discontinuation, if any, is due to permanent job placement. Some of the other state students leave immediately after joining the course because of attaining seat in their native state.

Table 12. Student's intake and attrition (%)

Name of the Degree Programme	Actual student admitted in last five years						Attrition (%)					
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
M.Sc. (Ag.) Soil Science and Agricultural Chemistry / M.Sc. (Ag.) (Soil Science)	-	5	6	5	8	6	-	NIL	33	40	-	-

6.4.9. ICT Application in Curricula Delivery

ICT Tools :

The Department is equipped with one laptop and 10 desktops for PG teaching purpose and also for analysis of data recorded in students research Program. All labs, students waiting rooms, faculty cabins are wifi enabled facilitating updation of scientific know how by the faculty and students.

Following online, paid and free ICT tools are used to deliver curricula to the students

Table 13. Details on ICT tools used for curricula delivery

Name of Tool	Purpose
Decision Support System for Integrated Fertilizer Recommendation (*DSSIFER*)	To generate crop and location specific balanced fertilizer prescriptions for crops.

Visual Diagnostic Kit (VDK)	For identifying nutrient deficiencies in crops and management. Also an interactive tool for the specific queries by the farmer or the client.
NUTMON	A methodology for monitoring nutrient flows and economic performance in tropical farming systems
Nutrient Expert® of IPNS	It is an easy-to-use, interactive, and computer-based decision support tool that can rapidly provide nutrient recommendations for an individual farmer field in the presence or absence of soil testing data.
ARCGIS –vector based software	Digitization and generation of base map and soil map
ILVIS raster based GIS software	Geo referencing and digitization of the cadastral map
Satellite imageries	Classification of soil and preparation maps
GPS	To identify the soil and water sampling points
SMART! (Fertilizer management software)	Fertilizer Management is a decision support platform for optimizing fertilizer use for agriculture, enabling growers to maximize crop yields, save costs and increase their profits.

The students are taught using audio visual aids. Board teaching also performed to explain the concepts / principles. Videos are also run to explain the various processes, so that the students can easily understand the principle / mechanism very easily.

Table 14. Details of ICT based infrastructure in the Department

No of computers :	Desktop – 10 (including the computers available with chairman's)
Networking facilities	Network connectivity for lecture hall, laboratory, library, students' study hall
Wi-fi enabled classrooms and Halls	Class rooms and laboratories are enabled with net connectivity
Projectors, iPods, interactive boards	LCD Projector – 1 No.

Online resources and study materials like aerials photographs, topo sheets, cadastral maps, ground truth date were obtained online available with NBSS&LUP, Nagpur, CSSRI, Karnal, ISSS, Bhopal etc. The carbon sequestration data and resources were obtained online and calculations methods are delivered using the web CRIDA-NICRA library. Similarly for the assessment of soil quality, the soil quality index calculations, rating and scoring information's and study materials available in the NRCS-USDA web is used. The web resources related to soil health and quality assessment parameters like Soil Management Assessment Framework (SMART), Soil Pollution Index through BURFER etc are regularly being obtained online.

Sharing of lecture notes and study materials with students is facilitated by the wifi network. Online data analysis tools like TNAU STAT of TNAU were demonstrated to the students. ICT tools like Drop box, Google apps, You tube, Remind etc are also used in teaching.

Annexure 6.4.1

Mission

To educate and develop skilled human resource personnel in basic and applied aspects of Soil Science and Agricultural Chemistry for soil health sustenance.

Vision

To be a pioneering department for Under Graduate and Post Graduate education in Soil Science and Agricultural Chemistry, Agricultural Microbiology, Environmental Science and Plant Biochemistry

To develop management strategies for improving the crop productivity in salt affected soils

Short term and long term goal

Goals	Objectives	Implementation	Performance metrics / Time line
Educate UG students	To educate UG students on basic concepts of Soil and Environmental Health	By up-gradation of course content and making it up to date	Continuous process
To empower the students technically	To empower the students technically so that they can choose soil testing, and plant analysis, vermicomposting and microbial innoculants enterprise	By up-gradation of course content and making it up to date By providing skill based training to students	Continuous process
To train PG students	To train post graduate students on basic and advanced developments in Soil Science & Agrl. Chemistry	By updating of course content By concentrating more on curriculum having more thrust on practical classes so that the students gains expertise in the science By allotting appropriate research issues so as to make the students confident in handling	Continuous process

		future research needs.	
To evolve technologies for the management of salt affected soils for enhancing the productivity of the field and horticultural crops and agro forestry system.	Develop management strategies for improving the crop productivity in salt affected soils	Screening crops and varieties for graded levels of sodicity Evaluation of INM for different crops in salt affected soils Management of salt affected soils using different water management techniques for enhancing crop productivity	Continuous process
To produce quality biofertilizers and vermicompost	Production and supply of quality biofertilizers and vermicompost	Maintenance of virulent salt tolerant microbial innoculants Production of biofertilizers and vermicompost and supply to indentors	Continuous process
Soil health improvement for sustainable crop productivity	To create awareness to farmers on soil health Empowerment of farmers on techniques to produce quality vermicompost	Organizing training programmes on Soil health, quality production of vermicompost	Continuous process

Annexure. 6.4.2

Individual faculty profile from start of service

Name	Designation	No. of Years of experience in		No. of publications in referred /SCI indexed Journal		No. of publications in conferences		No. of book chapter published	No of journals servicing as Editor / Reviewer	No. of Masters / Ph.D. students guided	H-Index	i10 index
		Teaching	Research	National	Inter-national	National	Inter-national					
Dr. P. Balasubramaniam	Prof (SS&AC)	16	26	25	8	3	4	3	2	M.Sc : 5 Ph.D : 1	4	4
Dr. P. Santhy	Professor (SS&AC)	32	31	18	20	5	2	5	2	M.Sc :8 Ph.D : 2	4	8
Dr.M.Maheswari	Professor (Env. Sciences)	28	28	32	5	48	12	5	-	M.Sc : 15 Ph.D : 2	7	3
Dr. T. Thilagavathi	Prof (SS&AC)	23	23	16	13	3	1	2	-	M.Sc :3 Ph.D : 1	6	5
Dr. M. Sundar	Professor (Agrl. Micro)	23	23	11	8	2	1	2	1	M.Sc :4	1	1
Dr. P. Janaki	Associate Prof (SS&AC)	10	17	21	26	5	4	4	Editor-1 Reviewer-5	M.Sc :3	7	4

Dr. G.Gomadhi	Assistant Professor (SSAC)	3	8	4	2	2	1	1	-	M.Sc :1	1	-
Dr.T.Sherene Jenita Rajammal,	Asst. Prof (SS&AC)	8	8	10	9	-	5	-	Editor -1	Masters -1	3	2
Dr. J.Ejilane	Asst. Professor (Agrl. Microbiology)	10	10	1	2		3	1	Reviewer-1	-	2	2
S. Pandarinathan	Asst. Prof (Biochem)	5 ½	12	-	5	2	4	-	-	-	-	-
Dr.M.Selvamurugan	Asst. Prof (Environmental science)	3.5	10	7	13	5	8	1	Reviewer-2	-	6	2

6.4. Self Study Report of Masters Programme in Agricultural Entomology

6.4.1. Brief History of the Degree Programme

Farmers can reap richer harvests only if pests and diseases are effectively checked. There is a greater opportunity for adopting Integrated Pest Management technologies to mitigate dependence on pesticides. The institute is located in the central part of Tamil Nadu, where food crops, vegetables and fruit crops are grown in larger area, the department research programme is focussed on non-chemical pest management stratergies. Further there is an increasing awareness among farmers on the use honeybees as an input for enhancing the yield in cross pollinated crops. The institute also focuses on a special research to study the pests and diseases affecting rice grown in saline soils.

With the objectives of human resource development in the field of Agricultural Entomology through Post-graduate teaching, to conduct research in basic and applied aspects of pest management , to cater to the needs of the farmers like pest diagnosis, surveillance, forecasting and pest management, to expose the students for further research and pursuing higher studies in the relevant the M.Sc. (Ag.) programme with specialization in Agricultural Entomology was started during the academic year 2014 - 15. The students are allotted with research topics oriented to understand the basic and applied aspect of entomology so that the plant protection need of the farmers in this region can be addressed.

The department has well trained core faculty members in different areas of Entomology. The masters' thesis research is designed to address the farmers' problem. The research programme focus on IPM for sustainable crop protection technology, to develop cost effective, ecologically sustainable pest and disease management measures for agricultural and horticultural crops. The students are also get hands-on-training in these fields during thesis work. They are well trained to carryout research independently. IPDM module developed for Chilli and Onion and Instant Residue Indicator Drop method developed for detecting pesticide residues at farm level (patency pending) are some of the outcomes emanated from PG student's research work. The students were also motivated to publish their thesis work in peer-reviewed high impact factor journals, which wider opportunities for the students to continue their research at Ph.D. level.

6.4.2 Faculty Strength

Excellent laboratory facilities like Residue laboratories, exclusive laboratories for conducting research, glass house, shade nets house, apiary and sericulture to conduct research at post graduate level with highly qualified and experienced faculty to handle PG programme. The students are exposed to hand on training and demonstrable competencies in various technologies training programmes, surveillance programmes and diagnostics, applicable laboratory tools and analysis.

The institute has developed Integrated Pests and Disease Module for pest like onion and chillies have been developed and demonstrated to the farmers of this region. The outcome of students' research finding has resulted in the development of a 'Residue Indictor Device' a diagnostic indicator tool of residues of pesticides on crop samples which would help the farmers to analyse the pesticide residue at their farm gate. This kit has been placed for patency.

The faculty comprises of two Professors, one Assistant Professor and four visiting faculty to handle the PG courses. Faculties are specialized in various disciplines of Entomology and they undergo frequent training on research, teaching, technical writing and question paper authorization and evaluation procedures. The faculty members of other department of ADAC & RI also handle the minor, non credit compulsory common courses. The course curriculum comprises of one year course work and one year research work under Approved Advisory Committee in a trimester system.

Table1. Faculty Strength

Sanctioned Faculty	Faculty in Place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
Professor	2	-	-
Associate Professor	-	-	-
Assistant Professor	1	-	-
*Faculty from other Department of ADAC&RI, Trichy	12	-	-
**Faculty from other Department of HC&RI (W), Trichy	4	-	-

Besides regular faculties, experts from other departments are also offering the courses for M.Sc. (Ag.) Agricultural Entomology programme.

*Faculty from other Department of ADAC&RI, Trichy

Department	No. of faculty
Department of Crop Physiology	1
Department of Plant Breeding and Genetics	1
Department of Physical Sciences and Information Technology	3
Department of Environmental Sciences	1
Department of Trade and Intellectual Property Rights	1
Department of Agricultural Extension	1
Department of Soil Science	1
Statistics	1
Languages	1
Library	1

Technical expertise and outsourcing guest speakers:

The PG students are taken on industrial visits to biotechnology industries to learn the functioning of Industrial biotechnology. Guest lectures by national or international subject experts are arranged regularly for the benefit of the students and they are encouraged to attend expert lectures arranged by other departments also.

6.4.3 Technical and Supporting staff

Sufficient supporting staff members are available for the conduct of PG programme in an efficient manner.

Table2. Technical and supporting staff

Supporting Technical staff	No. and their responsibilities
Check who are technical and supporting staff	1 (Field Assistant)

Supporting staff under consolidated pay from general pool of the college are utilised for arranging specimen, demonstration and conducting the practical classes. They are also helpful in conducting field assessment and purchase of items for the class and research purposes.

6.4.4 Class rooms and Laboratories

Table 3. List of Classroom and laboratory facilities

Particulars	Dimension
Toxicology Laboratory	40" x 33"
Glass House	52" x 22"
Shade net facility	25"x25"
Apiary unit	80"x60"
Sericulture	104"x31"
PG Laboratory	53"x32"
PG Lecture Hall	53"x23"

Table 4. List of Instrument/Equipments in Toxicology Laboratory

Name of the Instrument / Equipment	No.
GC system	1
HPLC	1
Hot air oven	2
Refrigerated centrifuge	1
Deep Freezer	2
Muffle Furnace	1
Turbovap	1
Gel Documentation System	1
Autoclave	1
Photo spectrophotometer	1
Double distillation Unit	1
Laminar Air flow Chamber	1
Degassing Facility	1
Vacuum flash evaporator	1
Refrigerator	2
Sonicator	1
Microscope	1
Electronic balance	1

A Toxicology laboratory with precision instruments is available exclusively for conducting bioassays and residue analysis

Table 5. List of Instrument/equipments in PG Laboratory

Name of the Instrument / Equipment	No.
Hot air oven	2
B.O.D. Incubator	2
Eppendorf centrifuge	1
Centrifuge (50 ml)	1
PCR Machine	2
Image Analyser	1
Photo Spectrophotometer	1
Nanodrop Spectrophotometer	1
Flame photometer	1
Phosphine gas generator	1
Plant growth chamber	1
Insect cages	4
Desiccators	1
UV trans illuminator	1
pH Meter	1
Refrigerator	1
Refrigerated centrifuge	1

List of Instruments/Equipments in Centralized laboratory: Ice Making Machine, tomic Absorption Spectrophotometer, Gas Generator, UV-Vis-Spectrophotometer, Refrigerator, Gel Electrophoresis unit

A modern lecture hall exclusively for PG teaching equipped with LCD Projector and a desktop with Online UPS to facilitate effective teaching and learning. A laboratory with HPLC, GC, PCR, Image Analyser, Photo spectrophotometer, Nanodrop Spectrophotometer, Gel Documentation System, Atomic Absorption unit, UV-Vis-Spectrophotometer, Gas Generator is available for the PG student's Shade net and glass house facilities are available for conduct of PG research programme. An apiary unit with Indian, Italian and stingless bee hives has been established for beekeeping research and related activities. Field trials are conducted in the farm campus.

6.4.5. Conduct of Practical and Hands-on-Training

No of students per batch	Six Students (Commenced from academic year 2014-15)
Hands on training during classes	To facilitate effective operation of the equipments and instruments like HPLC, GC, PCR, AAS, etc. by the students for their research, Demonstrations and handson training in operational procedures are given to the students under the course on basic concepts of laboratory techniques in their curriculum. Handson experience is given to the students on production of various biocontrol agents like *Trichogramma*, *Bracon brevicornis*, *Chrysoperla*, *Acerophagus papaya* and *Cryptolemus montrouzeri*. The apiary at the campus provides opportunity to the students to have handson training on establishment and maintenance of apiary. Courses on pest management include diagnosis of pests by the students. The students also rear the pests of crops to know the biology and damage symptoms. Apart from the regular curriculum, students are also exposed to training on pest diagnosis.
Field visits/visit to renowned institutes, industries, progressive farm,	**batch:** Exposure visit to IICPT, Indian Institute of Crop Processing and Technology, Thanjavur. Bio-Control Laboratories at TNAU, Coimbatore. Exposure visit to Plant Quarantine Station, International Airport, Trichy Exposure Visit to Department of Nanotechnology, TNAU, Coimbatore. Visit to NPRC, Vamban to study Pest of Pulses and Sugarcane Research Station, Sirugamani. Exposure Visit to NRCB, National Research Centre for Banana, Trichy. Exposure visit to Periyakulam, Thadiyankudisai and Kodaikanal for diagnosis of pest of Horticultural crops.

The Post Graduate students visited State and National level organizations involved in Plant Quarantine, bio-control production, crop processing and nanotechnology to have exposure on various techniques involved in pest diagnosis, mass production of biocontrol agents, formulation of nano pesticide molecules, methods of extraction and quantification of pesticide residues through high end instruments, prevention of storage losses, export of Pest free plant materials with regard to quarantine.

6.4.6. Supervision of students in PG/PhD programmes

Name of the Programme M.Sc. (Ag.) in Agricultural Entomology

During their research, each Post Graduate student shall have an advisory committee which is formed before the end of the first trimester to facilitate the student in carrying out the assigned thesis programme. For Masters Programme, the advisory committee shall comprise of a chairman and two members, of which one member shall be from the major Discipline and another from any other Discipline in the related field of thesis research. Expert members are also included as additional members. The Co-Chairman may be considered from experts of collaborative industry, or collaborative institute of National/ International and Adjunct faculty. A Supervisor can guide not more than four students at a time. The chairman of the advisory committee will guide throughout the programme of the student and in selection of appropriate major and minor courses, guiding in the selection of topic for thesis research and seminar, continuous monitoring of thesis research, seminar and maintaining research, monitoring register for each student for research.

The student's progresses are reviewed by the chairman on weekly basis. The Professor and Head of the Department / Dean are taking up the monthly review to assess the progress of research done by PG students. At the end of each trimester, the evaluation of research is done by the advisory committee members by presenting their progress of research at the Department level where all the faculties and students attend and offer their remarks/ suggestions for improvement of their research.

No of students intake	Six per academic year
No of supervisors	Six
No of student fellowships for research	NIL
University grants/ ICAR/DST/other funding	NIL

Table7. List of Thesis submitted:

2016-17 Batch Thesis Title

S. No.	Name of the student	I.D No.	Thesis Title
1.	V. Karthik	2016670501	Interaction among the vector *Varroa jacobsoni*, probiotic lactic acid bacteria (LAB) and symbiotic acetic acid bacteria (AAB) in honeybees
2.	S. Lekha Priyanka	2016670503	Evaluation of pheromone traps and lures for management of pod borer, *Helicoverpa armigera* (Hubner) in red gram
3.	K. Naveena	2016670504	Bio-ecology and management of cigarette beetle, *Lasioderma serricorne* (Fab.) Infesting cured turmeric rhizomes, *Curcuma longa* L.
4.	S. Selva Rani	2016670505	Management of Rice Weevil, *Sitophilus oryzae* (L.) in Stored Sorghum Seeds.
5.	S. Vignesh	2016670506	Studies on Fruit fly Trapping Systems in Guava and Mango orchards

2015-16 Batch Thesis Title

S. No.	Name of the Student	I.D No.	Thesis Title
1.	N. Anandhabhairavi	2015670501	Studies on impact of bee pollination in cucumber (*Cucumis sativus* L.) production system
2.	K. Balaji	2015670502	Bioecology and management of key pests in green gram (*Vigna radiata*)
3.	M. Kalai Nila	2015670503	Eco- safe approaches for the management of amaranthus defoliator *Spoladea recurvalis*
4.	Selvaraj Susmitha	2015670504	Validating the insecticide-Residue Indicator Drop (i-RID) method in comparison with Analytical Procedures
5.	P. Jayapal	2015670505	Studies on the bioecology, seasonal incidence and the management of Greater Wax Moth *Galleria mellonella* L.(Lepidoptera: Pyralidae) In Indian Bees *Apis cerana indica* F.

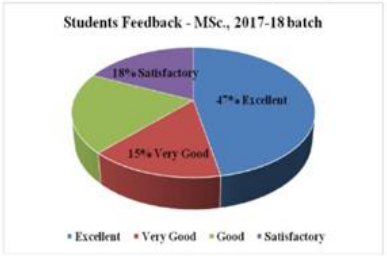
2014-15 Batch Thesis Title

S. No	Name of the Student	I.D. No.	Thesis Title
1.	V. Jayanthi	2014670501	Exploiting lactic acid bacteria (LAB) in rice pest management
2.	Rachapudi Harshini Priya	2014670504	Exploring the diversity of Epiphytic Lactic Acid Bacteria (LAB) on oviposition sites for pest management
3.	A. Subash Chandra Bose	2014670505	Detecting Pesticide Residues On-farm and Managing them with Lactic Acid Bacteria (LAB)
4.	A.Annamalai	2014670506	Holistic approaches for pest management in high density planting system of Guava (*Psidium guajava* L.)
5.	V. Priyadharsini	2014670507	Studies on strategic approaches for pest management in jasmine ecosystem
6.	Sandeep Kumar Jalapathi	2014670508	Some studies on blue banded bees

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

6.4.7.1. Student's Feedback

Feedback from the Students are obtained and analyzed. In addition at the end of each trimester, students evaluate teachers and share their experience gained in each course.



Stakeholders	Feedback
Students	√
Parents	√

6.4.7.2. Parent's Feedback

Parents are satisfied with the academic performance of their wards in the PG course work and their exposure to the recent development in the field of Entomology with updated information and practical exposure. The facilities available at the department are well exposed with proper orientation to latest instruments and equipments to accomplish their research. Field oriented problems are identified and research topics allotted in relevance to the current needs in solving problems to the farming community.

A hands-on training is given to the students on the demonstrations in the proven technologies diagnostic tools, techniques and pest surveillance to improve their technical skill in handling their research. Students are well exposed on the further research opportunities and higher studies like ICAR, CSIR JRF and Ph.D. Programmes to deliver their capabilities with result oriented self-confidence employment

6.4.7.3. Farmer's Feedback

Farmers of this region are well advised on the outbreak and incidence of pests and diseases. The crop damage with symptoms brought to the department is diagnosed and suitable remedial measures are recommended. Outbreak of pests during the onset of monsoon is visited by the faculty members along with the students to provide an over view of the cause and suitable remedial measures. The farmers of this region are well addressed by conducting periodical on and off campus training. Field trials on students research work are also taken up in farmer's field where farmers get opportunity to have knowledge on ecology, pest assessment and management. Farmers are also interested and ready to offer their support in conducting research trials in their farm. Farmers are given training on beekeeping and supplied with quality beehives and colonies of Indian bees and recommendation measures are suggested to the farmers on beekeeping.

6.4.8. Students intake and attrition in the programme for last five years

Name of the Degree Programme	Actual students admitted in last five years						Attrition (%)					
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
M.Sc. (Ag.) (Agrl. Entomology)	--	--	6	4	5	6*	--	--	0	0	20	14

* M.Sc. (Ag.) (Agricultural Entomology) seats were increased to six during 2017-18.

6.4.9. ICT Application in Curricula Delivery

The students are taught using audio visual aids. Black boards are also utilised to explain concepts with diagrams / principles. For better understanding videos are also run to explain the principles and applied aspects of plant protection.

ICT	Pest surveillance and Modelling , Pest diagnosis
No of computers	Desktop – 1, Laptop - 1
Networking facilities	Wi-fi enabled networking for lecture hall, laboratory, library, students' study hall
Wi-fi enabled classrooms and halls	Wi-fi enabled Lecture hall and laboratories
Projectors, i pads, interactive boards,	LCD Projector – 1 No.
Exam pads – check with COE	--
AV labs, videoconferencing	--
Expert system App for farmers	--

The Department has two PG laboratories enabled with internet and bioinformatics software. Besides, computers with net connectivity have been provided exclusively for the students for analysis and documenting their research.

The students are imbibed with the latest development to meet the future challenges in the field of Entomology by delivering ways and means to combat the problem related to pest management. The research and practical exposure gained during their post graduate programme gives impetus to provide consultancy services and pest advisory services. The academics provide scope for further academic excellence in research and education

Annexure 6.4.2

Name and Designation	No. of years of Experience in		No. of Publications in Referred/Sci indexed Journals		No. of publications in Conferences		No. of book chapters published	No. of Journals-serving as editor/ reviewer	No. of Masters /Ph.D. Students guided	H-index*	i-10 index*
	Teaching	Research	National	International	National	International					
Dr. C. Gailce Leo Justin Professor & Head	25	29	5	2	-	-	6	-	Ph.D. :1 M.Sc.(Ag). : 1	6	5
Dr. P. Pandiyarajan, Prof.(Microbiology)	34	36	-	-	-	-	-	-	Ph.D. :2 M.Sc.(Ag.) : 2	3	2
Dr.G.Ravi Professor (Ento.)	23	23	8	3	6	3	-	3	Ph.D.: 2 M.Sc.(Ag): 6	6	3
Dr. P. Yasodha Asst. Prof. (Ento.)	6	8	-	1	2	2	2	-	M.Sc.(Ag) :2	-	-
Dr. K. Chitra Asst. Prof. (Pl. Patho.)	3	8	-	-	-	-		-	-	-	-
Dr. L. Karthiba,	4	4	2	2	2	-	4	-	-	3	2

Asst. Prof. (Pl. Patho.)											
Dr. G. Jothi, Asst. Professor (Nematology)	13	5	2	-	-	-	2	-		4	2
Dr. T. Senthilkumar Asst. Prof. (Nematology)	8	5	2	-	2	-	3	2	-	3	2

Annexure 6.4.2

Name and Designation	No. of years of Experience in		No. of Publications in Referred/Sci indexed Journals		No. of publications in Conferences		No. of book chapters published	No. of Journals-serving as editor/ reviewer	No. of Masters /Ph.D. Students guided	H-index*	i-10 index*
	Teaching	Research	National	International	National	International					
Dr. C. Gailce Leo Justin Professor & Head	25	29	5	2	-	-	6	-	Ph.D. :1 M.Sc.(Ag). : 1	6	5
Dr. P. Pandiyarajan, Prof.(Microbiology)	34	36	-	-	-	-	-	-	Ph.D. :2 M.Sc.(Ag.) : 2	3	2
Dr.G.Ravi Professor (Ento.)	23	23	8	3	6	3	-	3	Ph.D.: 2 M.Sc.(Ag): 6	6	3
Dr. P. Yasodha Asst. Prof. (Ento.)	6	8	-	1	2	2	2	-	M.Sc.(Ag) :2	-	-
Dr. K. Chitra Asst. Prof. (Pl. Patho.)	3	8	-	-	-	-		-	-	-	-
Dr. L. Karthiba,	4	4	2	2	2	-	4	-	-	3	2

Asst. Prof. (Pl. Patho.)											
Dr. G. Jothi, Asst. Professor (Nematology)	13	5	2	-	-	-	2	-		4	2
Dr. T. Senthilkumar Asst. Prof. (Nematology)	8	5	2	-	2	-	3	2	-	3	2

ADAC & RI, TIRUCHIRAPALLI