

TAMIL NADU AGRICULTURAL UNIVERSITY

PROCEEDINGS

**5th Allied Agricultural Scientists' Meet
(13th June, 2024)**

Lead Centres

**AEC&RI, Coimbatore &
Centre for Students Welfare
TNAU, Coimbatore – 641 003**

**Directorate of Research
Tamil Nadu Agricultural University
Coimbatore - 641 003**

2024

PROCEEDINGS

5th Allied Agricultural Scientists' Meet

The 5th Allied Agricultural Scientists Meet was held at TNAU, Coimbatore on 13.06.2024. All the scientists of allied disciplines *viz.*, Mathematics, Statistics, Computer Science, Tamil, English, Library, Physical Education and Journalism have attended the meeting.

Dr. V. Geethalakshmi, Vice-Chancellor, TNAU chaired the meeting. Madam emphasized that all the faculties of Computer Science, Maths, and Statistics should work in close coordination with all the biological scientists in an interdisciplinary approach. All the scientists should have at least two URPs and should apply for externally funded projects in an interdisciplinary mode.

Dr. M. Raveendran, Director of Research, TNAU in his opening remarks emphasized the role of Allied Sciences in the development of plant Sciences and sensitized all the Allied Agricultural Scientists to get involved in the projects of plant sciences. It was also suggested to have tie up with scientists of other reputed R&D institutes.

The Dean (AEC&RI), Coimbatore and The Dean (CSW), TNAU, Coimbatore presented the action taken report on the recommendations of 4th Allied Agricultural Scientists Meet and also presented the research highlights, progress of the projects handling and action plan 2024-25.

Dr. Balaji Kannan, Professor and Head (PS&IT) proposed vote of thanks.

The Proceedings of the meet is furnished below

I. Mathematics

1. Remarks on the ongoing research projects
2. Action Plan for the year 2024-25

II. Statistics

1. Remarks on the ongoing research projects
2. Action Plan for the year 2024-25

III. Computer Science

1. Remarks on the ongoing research projects
2. Action Plan for the year 2024-25

VI. Tamil

1. Remarks on the ongoing research projects

V. English

1. Remarks on the ongoing research projects

VI. Library

1. Remarks on the ongoing research projects

VII. Physical Education

1. Remarks on the ongoing research projects

VIII. Journalism

1. Remarks on the ongoing research projects
2. Action Plan for the year 2024-25

IX. Remarks

X. List of Participants

I. MATHEMATICS

Remarks on the ongoing projects

S. No.	Number and Title of the Projects	Duration	Project Leader	Remarks
1.	AEC&RI/CBE/PS&IT/ALLIED/2023/001 Estimating Daily Electricity Demand Using Weather-Driven Mathematical Modeling	March 2023 to February 2025	Dr. R. Pangayar Selvi Professor (Maths)	Increase the size of the dataset for better model prediction
2.	AEC&RI/CBE/MAT/ALLIED/2024/056 Development of growth and yield Prediction Model and Experimental Validation in Predicting the Curcumin Content of Turmeric (<i>Curcuma longa</i> L.) in Tamil Nadu	March 2024 to April 2027	Dr. A. Eswari AP(Maths)	New Project
3.	AEC&RI/CBE/MAT/ALLIED/2023/107 "Yield prediction model for Greengram and Blackgram in Tamil Nadu"	Jan 2023 to Dec 2024	Dr. R. Vasanthi, Professor (Maths)	Work with more data sets for better model prediction
4.	ENGG/MDU/ECO/RIC/2022/001 Developing Forewarning Models for Pests and Diseases of Rice based on Weather Parameters in Madurai District.	June 2022 to March 2025	Dr. B. Sivasankari, Professor (Maths)	Prediction and Validation should be carried out for the collected data Publication above NAAS > 6.0 may be evolved from the project
5.	AEC&RI/ECK/MAT/ALLIED/2024/082 Groundwater level Fluctuation and forecasting for Thanjavur District using Artificial Neural Network.	April 2024 to March 2026	Dr. P. Sujatha Assoc. Prof. (Maths)	New Project
6.	AEC&RI/TRY/MAT/ALLIED/2024/081 A Novel Approach for Banana Crop Yield Modelling and Forecasting – Big Data Analytics	Sep 2023 to August 2025	Dr. S. Anandhi, AP (Maths)	The number of parameters can be increased Publication above NAAS > 6.0 may be evolved from the project

Action Plan for the year 2024-25 (Mathematics)

- Application of goal programming on yield optimization of agricultural crops
- Prognostic Analysis in Forecasting the price of agricultural/ Horticultural crops in different regions.
- Forecasting of crop yield for different agro climatic conditions using mathematical models.
- Application of Mathematical models in irrigation and water management.

II. STATISTICS

Remarks on the ongoing projects

S. No.	Number and Title of the Projects	Duration	Project Leader	Remarks
1.	NLC/AECRI/PS&IT/CBE/2024/R001 Advancing Predictive Techniques for Evaluating Afforestation Program Expansion and Biomass Growth in Neyveli Lignite Corporation, Neyveli	March 2024 to Feb 2025	Dr. M. Vijayabhama Professor (Stat)	-
2.	AEC&RI/CBE/STA/ALLIED/2024/010 A Statistical modeling of shifting of Agricultural Land use in Tamil Nadu	Jan 2024 to Dec 2025	Dr. R. Gangai Selvi, Assoc. Professor (Stat)	-
3.	AEC&RI/KDM/STA/ALLIED/2023/151 Prediction of PET Models through Statistical Model for Tamil Nadu	May 2023 to April 2024	Dr. M. Radha, AP (Stat)	Data visualisation and analysis may be attempted and submit the completion report or apply for extension at the earliest

Action Plan for the year 2024-25 (STATISTICS)

1. Time Series Analysis
2. Predicting yield loss due to pest and disease
3. Forest fire prediction modeling

III. COMPUTER SCIENCE

Remarks on the ongoing projects

S. No.	Number and Title of the Projects	Duration	Project Leader	Remarks
1.	AECRI/CBE/COM/2021/001 Deep Learning Based Mobile App for Early Identification of <i>Tuta absoluta</i> in Tomato	March 2021 to August 2023	Dr. S. Sridevy, Professor (CS)	Completion report may be submitted at the earliest
2.	NAHEP/CBE/ABD/2019/E001 Ag-IoT- Virtual Reality and Augmented Reality based class modules - Institutional Development Plan (IDP) entitled "Enhancing the learning outcome, employability and entrepreneurial skills of farm graduates through excellence in education"	01.08.2019 to 31.07.2022 Continued 2022-2024		-
3.	NAHEP/CBE/ABD/2019/E001 IoT Dashboard for Smart Farming - Institutional Development Plan (IDP) entitled "Enhancing the learning outcome, employability and entrepreneurial skills of farm graduates through excellence in education"	01.08.2019 to 31.07.2022 Continued 2022-2024		-
4.	URP - AEC&RI / CBE /COM /ALLTED/ 2023/ 192 A study to analyze the spatial and temporal variability of Aerosol Optical Depth (AOD) and its impact on Normalized Difference Vegetation Index (NDVI), temperature and weather parameters	August 2023 to August 2025	Dr. V. Anandhi, Professor (CS)	<ul style="list-style-type: none"> • Discuss with Dr.Boomiraj for the latest research in this area • Article may be published with NAAS Rating more than six.
5.	ICAR-NASF/AC&RI/CBE/2023/RO01 Development and Demonstration of AI enabled Weather and Market Information Based Decision Support System (FARWM-DS) for sustainable farm productivity & profitability and evolve profitable cropping pattern.	June 2023 to May 2026	Dr. M. Kalpana Professor (CS)	<ul style="list-style-type: none"> • Article may be published with NAAS Rating more than six.

6.	AECRI/CBE/COM/2021/002 Developing Artificial Neural Network model to calculate Potential Evapo Transpiration (PET).	March 2021 to Feb 2023	Mrs. C. Hema Bharathi, AP(CS)	<ul style="list-style-type: none"> • Completion report may be submitted. • Article may be published with NAAS Rating more than six.
7.	AEC&RI/CBE/COM/Allied/2023/149 Performance evaluation of Machine learning model for monitoring and diagnosing the pests and diseases in minor millets	June 2023 to 2025	Th. R. Chellamuthu AP (CS)	Collect more data sets for analysis
8.	AEC&RI/KKM/COM/ALLIED/2024/058 "Web application to access the details of shrubs and trees of medicinal and ornamental value at V.O.C. AC & RI, Killikulam through smart phone by using QR code"	April 2024 to March 2026	Dr. J. Arockia Stephen Raj Professor (CS)	-
9.	SDPC/ACRI/MDU/AEC/2021/R01 Developing IoT Based Smart Water Management to enhance the water and crop productivity	March 2020 to March 2024	Dr. P. Prema, Assoc. Prof (CS)	Completion report may be submitted.
10.	AC&RI/MDU/COM/Allied /2024/007 Design and Development of Barcode for Agricultural Machinery	Jan 2024 to Dec 2025	Dr. P. Prema, Assoc. Prof (CS)	-
11.	AEC&RI/MDU/COM/AILLED/2023/133 Analyzing the Spatial variability and Weather data for yield prediction of mango using Machine Learning Techniques	March 2023 to Feb 2026	P. Jona Innisai Rani, Assoc. Prof. (CS)	<ul style="list-style-type: none"> • Secondary data collection should be done. • Data analysis may be completed within the stipulated time. • Article may be published with NAAS Rating more than six.
12.	AEC&RI/TRY/COM/ALLIED/2023/164 Spectral Analysis of Sodic Soil Characteristics with TRY5 Rice Variety for Prediction of Biomass and Grain Yield Using Multi-Spectral Imagery and Machine Learning Techniques	June 2023 to May 2026	Dr. N. Raja, Assoc. Prof. (CS)	Publication above NAAS >6.0 may be evolved from the project

Action Plan for the year 2024-25 (COMPUTER SCIENCE)

1. Data models with MATLAB tools in agricultural sciences
2. Development of iOS/Android App
3. Application of big data analytics in Agriculture

IV. TAMIL

Remarks on the ongoing projects:

S. No.	Number and Title of the Projects	Duration	Project Leader	Remarks
1.	CSW/MDU/TAM/ALLIED/2023/145 சங்க இலக்கியங்களும் நவீன வேளாண்மைக் கருவிகள் உருவாக்கத்திற்கான நுட்பங்களும்	May 2023 – April 2025	Dr. Vellaichamy. P Professor (Tamil)	May be continued
2.	தமிழகத்தின் பாரம்பரிய நெல் இரகங்களும் பாரம்பரிய நெல் சேமிப்பு முறைகளும் - ஆவணமாக்குதல்	March 2024 -Feb. 2026	Dr. Kumaran, K.C. Professor (Tamil)	New proposal submitted for approval
3.	அகத்தியர் மற்றும் திருமூலர் பாடல்களில் மூலிகைத் தாவரங்களின் பயன்பாடு	June 2024-May 2026	Dr. Rajaganapathy, B. Professor (Tamil)	New proposal submitted for approval

Action Plan for the year 2024-25 (Tamil): Nil

V. ENGLISH

Remarks on the ongoing projects:

S. No.	Number and Title of the Projects	Duration	Project Leader(s)	Remarks
1.	(CSW/TRY/AEC/ALLIED/2023/001) A Study of the Expressive Skills of Students from Tamil Medium Schools, and to facilitate Corrective Exercises in Digital Language Laboratory	Dec. 2023 to March 2024	Dr. Thangaraj. K Professor Co-PI : Dr. Anandhi Santhosh, Asst. Professor (Mathematics)	Completion report may be submitted at the earliest One more URP may be submitted
2.	A Study on the Difference in the Productive Skills in English among the Students of ACRI, Kudumiyamalai	July 2024 to June 2027	Th. P. Sivakumar, Asst. Professor (English)	New proposal
3.	A Comprehensive study of fallacies in classroom interactions among the students of I B.Sc. (Hons) Horticulture, HC & RI, Coimbatore	May 2024 to May 2026	Mrs. Shanmugapriya, S.P. Asst. Prof. (English)	New proposal

Action Plan for the year 2024-25 (English): Nil

VI. LIBRARY

Remarks on the ongoing projects:

S. No.	Number and Title of the Projects	Duration	Project Leader(s)	Remarks
1.	DOR/PKM/LIB/2020/001 A comparative study of library utilization behaviour and student's academic achievements among UG and PG students in HC&RI, Periyakulam	Sep.2020 – Aug.2022	Dr. Thangavelu. K Assistant Librarian	Completion report may be submitted at the earliest

Action Plan for the year 2024-25 (Library): Nil

VII. PHYSICAL EDUCATION

Remarks on the ongoing projects: Nil

Action Plan for the year 2024-25 (Physical Education): Nil

VIII. JOURNALISM

Remarks on the ongoing projects:

S. No.	Number and Title of the Projects	Duration	Project Leader(s)	Remarks
1.	(CARDS / CBE/DEE/ NON/ 2022 /001) Effectiveness of <i>Uzhavarin Valarum Velanmai</i> in dissemination of farm technologies	April 2023 to March 2024	Mrs. Sasikala, R Assistant Professor (Journalism) Dr. R. Premavathi Professor (Agrl. Extension)	Completion report may be submitted at the earliest

Action Plan for the year 2024-25 (Library): Nil

IX. REMARKS

a. General Remarks

- All Allied Agricultural Scientists may be sensitized to propose a minimum of Two URPs each in association with Plant Scientists.

b. Statistics/ Comp. Science and Maths

- Efforts may be taken to conduct capacity-building programs for the Faculties of Statistics/ Comp. Science and Maths to stay updated with the latest advancements in software and its application for effective dissemination of gained knowledge to the students. They should also assist the Biological Scientists in the selection of appropriate statistical designs for conduct of experiments.
- Capacity building on R/SAS package may be strengthened for students.
- Faculties of Agricultural Statistics may be sensitized to visit experimental fields to understand the field level execution of designs.

c. Tamil

- Traditional knowledge may be documented and published in reputed journals like Indian Journal of Traditional Knowledge (IJTK).
- Efforts may be taken to conduct scientific Tamil Seminar/Conference
- The compendium of agricultural technical terms may be published as an e-book.

d. English

- 'Language Editing Cell' may be established to ensure quality of language in manuscripts to be submitted for publication.
- Efforts may be taken to create awareness among students regarding IELTS/ GRE/ TOFEL coaching classes.
- Crash courses may be conducted to improve the communication skills of students.

e. Library

- Steps may be taken to increase the footfall in libraries.
- To enhance the usage of CeRA, efforts may be taken to award extra marks for the students who are spending time in the library for assignment preparation, for which a certificate of attendance and the quantity of articles downloaded from CeRA may be provided by the concerned librarians
- Availability of multiple copies of popular text books for each course may be ensured in all the libraries.

f. Physical Education

- Special focus may be given for para-athletes.

- Students may be encouraged to participate in state and national level competitions.
- Special talents of students may be identified and trained to participate in all levels of tournaments.

g. Journalism

- The quality of *Uzhavarin Valarum Velanmai* may be improved and efforts may be taken to reach more number of beneficiaries.

X. List of Participants

S. No.	Name	Designation and Department
1.	Dr. A. Raviraj	Dean (Agrl. Engg.), AEC&RI, TNAU, Coimbatore
2.	Dr. N. Maragatham	Dean (CSW), TNAU, Coimbatore
3.	Dr. G. Raghavan	Director (Phy. Edn.), FC&RI, Mettupalayam
4.	Dr. C. Parthiban	Director (Phy. Edn.), HC&RI, Periyakulam
5.	Dr. M. Senthilkumar	Deputy Director of Phy. Sci., AC&RI, Madurai
6.	Dr. J.P. Desiga Srinivasan	Deputy Director of Phy. Sci., CSW, Coimbatore
7.	Dr. M.C. Subangi	Deputy Librarian, AEC&RI, Kumulur
8.	Dr. Balaji Kannan	Prof. & Head, PS&IT, AEC&RI, TNAU, Coimbatore
9.	Dr. P. Vellaichamy	Prof. (Tamil), O/o. The Dean, CSC&RI, Madurai
10.	Dr. K. Thangaraj	Professor (English), CSW, TNAU, Coimbatore
11.	Dr. P. Rajaganapathi	Professor, DPM, TNAU, Coimbatore
12.	Dr. K. Kumaran	Professor (Tamil), ADAC&RI, Trichy
13.	Dr. K. Prabakaran	Professor (Statistics), AC&RI, Madurai
14.	Dr. J. Arockia Stephen Raj	Professor (CS), VOC AC&RI, Killikulam
15.	Dr. S. Sridevy	Professor (CS), PS&IT, TNAU, Coimbatore
16.	Dr. R. Pangayarselvi	Professor (Maths), PS&IT, TNAU, Coimbatore
17.	Dr. C.S. Sumathi	Professor (CS), PS&IT, TNAU, Coimbatore
18.	Dr. R. Vasathi	Prof. (Maths), Social Science, HC&RI, Periyakulam
19.	Dr. B. Sivasankari	Professor (Maths), AC&RI, Madurai
20.	Dr. V. Anandhi	Professor (CS), PS&IT, TNAU, Coimbatore
21.	Dr. M. Vijaya Bharma	Professor (Statistics), PS&IT, TNAU, Coimbatore
22.	Dr. M. Kalpana	Professor (CS), O/o. Dean (Agri.), TNAU, Cbe
23.	Dr. C. Babu	Prof. (PBG), Directorate of Research, TNAU, Cbe
24.	Dr. P. Sujatha	Assoc. Prof. (Maths), Dr. MSSAC&RI, Eachangkottai
25.	Dr. R. Gangai Selvi	Assoc. Prof. (Statistics), PS&IT, TNAU, Coimbatore
26.	Dr. P. Prema	Assoc. Professor (CS), AC&RI, Madurai
27.	Dr. N. Raja	Assoc. Professor (CS), DBE&AS, AEC&RI, Kumulur
28.	Dr. P. Jona Innisai Rani	Assoc. Professor (CS), ADAC&RI, Trichy
29.	Dr. Patil Santhosh Ganapati	Asst. Prof. (Statistics), PS&IT, TNAU, Coimbatore
30.	Dr. R. Ravikumar	Asst. Professor (Maths), TNAU, Coimbatore
31.	Dr. R. Chellamuthu	Asst. Professor (CS), PS&IT, TNAU, Coimbatore
32.	Dr. P. Sivakumar	Asst. Professor (English), AEC&RI, Kudumiyamalai
33.	Dr. M. Parthiban	Asst. Professor (CS), PS&IT, TNAU, Coimbatore
34.	Dr. P. Jeyalakshmi	Asst. Professor (English), VOC AC&RI, Killikulam
35.	Dr. M. Nirmala Devi	Asst. Professor (Maths), PS&IT, TNAU, Coimbatore

S. No.	Name	Designation and Department
36.	Dr. G. Vanitha	Asst. Prof. (CS), O/o. Dean (SPGS), TNAU, Cbe
37.	Dr. S. Anandhi	Asst. Professor (Maths), ADAC&RI, Trichy
38.	Dr. M. Radha	Asst. Prof. (Statistics), AC&RI, Kudumiyamalai
39.	Dr. R. Sugunthakunthalambigai	Asst. Prof. (Maths), AC&RI, Karur
40.	Tmt. S.P. Shanmugapriya	Asst. Professor (English), COE, TNAU, Coimbatore
41.	Ms. C. Hemabharathi	Asst. Professor (CS), PS&IT, TNAU, Coimbatore
42.	Ms. R. Sasikala	Asst. Prof. (Journalism), DPM, TNAU, Coimbatore
43.	Dr. C. Karuilancheran	Librarian, AC&RI, Madurai
44.	Dr. M. Sankar	Librarian, AC&RI, Vazhavachanur
45.	Dr. P. Sampath Kumar	Asst. Librarian, FC&RI, Mettupalayam
46.	Dr. K. Thangavel	Asst. Librarian, IOH, Pechiparai
47.	Dr. S. Rani	Librarian In-charge, University Library, CSW, Coimbatore
48.	Dr. N.N. Vimala	Library Assistant, University Library, CSW, Coimbatore
49.	Dr. C. Mahalakshmi	Teaching Assistant (Tamil), DPM, TNAU, Coimbatore
50.	Dr. V. Jamuna Rani	Teaching Assistant (Tamil), DPM, TNAU, Coimbatore
51.	Dr. C. Sethilkumar	Teaching Assistant, AEC&RI, Kumulur
52.	Dr. N. Sathish Babu	Teaching Assistant, VOC AC&RI, Killikulam
53.	Dr. K. Sathishkumar	Teaching Assistant, AC&RI, Vazhavachanur
54.	Dr. K. Bharatha Priya	Teaching Assistant, Phy. Edn., HC&RI, Periyakulam
55.	Dr. S. Karthick	Teaching Assistant, ADAC&RI, Trichy
56.	Dr. G. Karthick	Teaching Assistant, AC&RI, Pudukkottai
57.	Mrs. G. Kalaivani	Teaching Assistant, Phy. Edn., HC&RI (W), Trichy
58.	Ms. S. Sivaranjani	Teaching Assistant, Phy. Edn., TNAU, Coimbatore
59.	Mr. T. Prabu	Teaching Assistant, HC&RI, Periyakulam
