



Tamil Nadu Agricultural University



Constituent Units of TNAU

Constituent Colleges

18

28

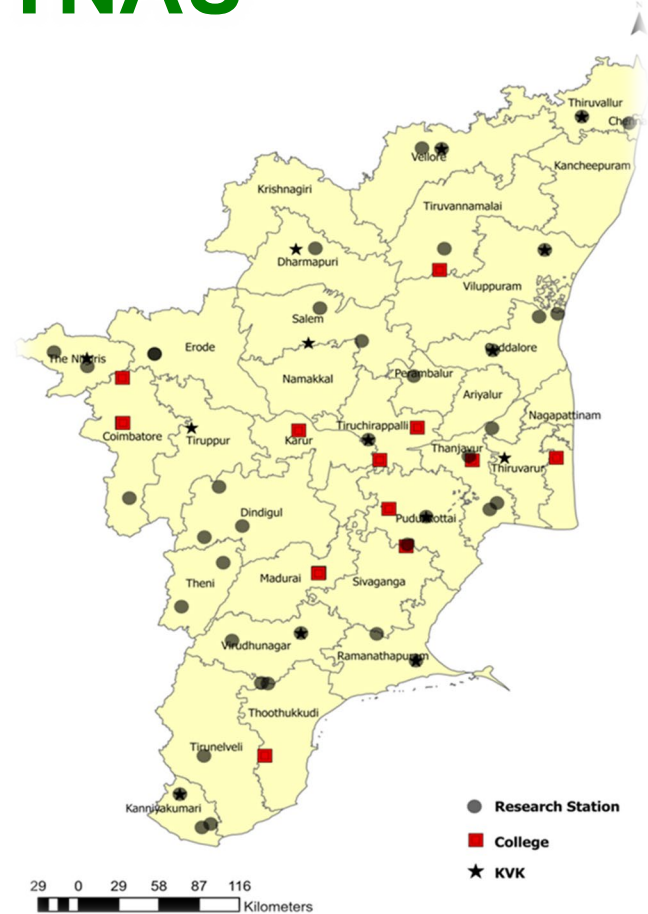
Affiliated Colleges

Krishi Vigyan Kendras

15

40

Research Stations



Mandates of TNAU

Primary Mandate

Secondary Mandate



Under Graduation

1970

to

2023

B.Sc (Hons) in Agriculture
B.Sc (Hons) in Horticulture
B.Sc (Hons) in Forestry

B.Sc (Hons) in Food,
Nutrition and Dietetics
B.Tech (Agrl. Engineering)
B.Sc (Hons) in Sericulture

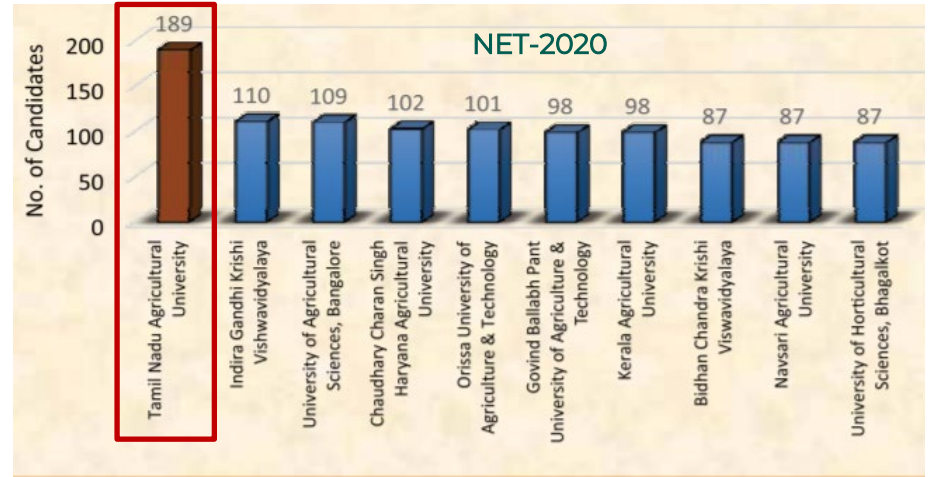
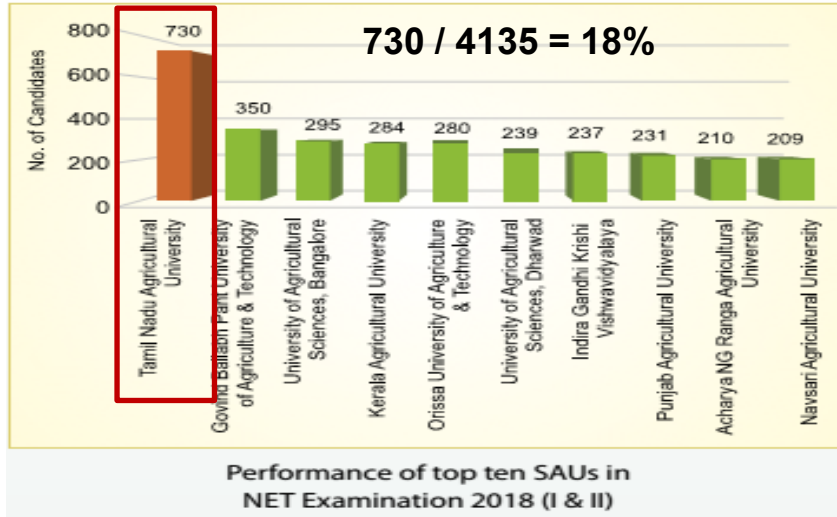
B.Sc (Hons) in ABM
B.Tech (Biotechnology)
B.Tech (Food Technology)
B.Tech (EEE)
B. Sc., (Hons.) Agri. Tamil
B. Sc., (Hons). Horti. Tamil

Post Graduation

	MASTERS	DOCTORAL	Dual Degree Programs
FACULTY	Courses	Courses	
Agriculture	19	18	
Horticulture	4	4	Cornell University, USA
Forestry	3	1	Dalhousie University, Canada
Agricultural Engineering	4	6	
Community Science	1	1	McGill University, Canada
Total	32	30	

TNAU students outnumbered other SAUs in the ICAR sponsored NET Exam

NET-2018 (I & II)



Top Ten SAUs wise details of successful candidates in NET Examination

Nationalization & Internationalization of Education

Other State Students

UG = 10.2 % (742 out of 7286)

PG = 23.6% (287 out of 1216)

Ph.D = 40% (203 out of 506)

Satellite Campuses



**Sugar Research
Institute, Fiji**



**Ebonyi State
University, Nigeria**



**Obafemi
Awolowo
University,
Nigeria**

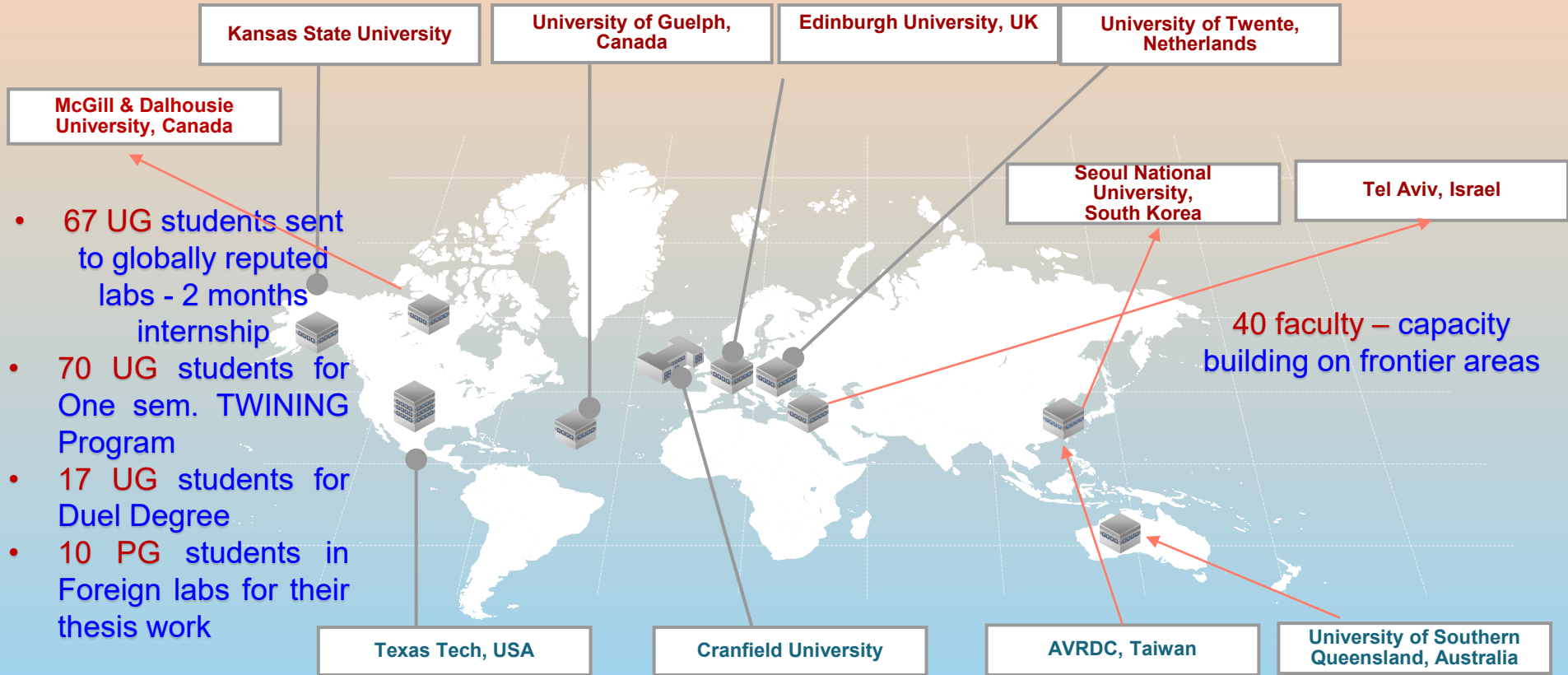
Adjunct faculty, Visiting Professors & Professor of Practice

- Cornell University, Ithaca, USA
- West Virginia State University, USA
- Kansas State University, USA
- Clemson University, USA
- South Dakota State University, USA
- Texas A&M University, USA
- Texas Tech University, USA
- University of Guelph, Canada
- McGill University, Canada
- University of Calgary, Alberta, Canada
- Dalhousie University, Canada
- University of West Indies
- Cranfield University, UK
- University of Twente, ITC, Netherlands
- IPK, Germany
- University of New Castle, Australia
- National University of Singapore
- Seoul National University, South Korea
- IRRI, Philippines
- CIMMYT, Mexico
- WorldVeg Centre, Taiwan

To Attract Foreign Students to TNAU through online courses to the students of developing countries

International Exposure to UG students & Faculty

ICAR-NAHEP-IDP Programs



Centre for Plant Breeding and genetics 01

- Crop improvement – climate resilient cultivars in Rice, Pulses, Millets, Cotton, Oil seeds, Forage Crops, Sugarcane
- Biofortification – Cereals, Pulses
- Germplasm Bank

02 Centre for Plant Molecular Biology and Breeding

- Molecular Breeding / Transgenics
- Gene pyramiding
- Genome editing – yield, quality, disease resistance etc.,



Seed Centre

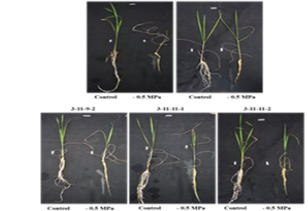
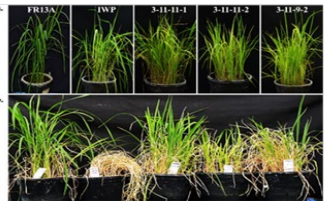
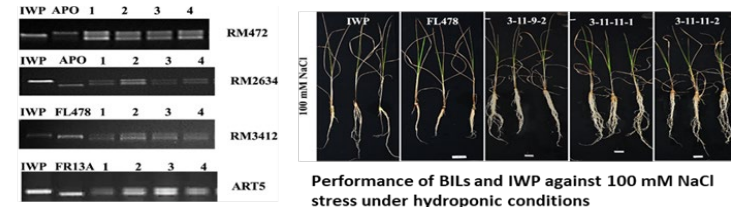
- Ensuring supply of quality seeds
 - Seed quality enhancement
 - Seed Testing and Certification
 - Seed Banks / Seed Stock
- Position of TNAU centres
(<https://seed.tnau.onceptual.in/>)

04

03

Biotechnology to accelerate product delivery

Triple Trouble Tolerant Rice (Drought, Salinity & Submergence)



Performance of BILs and IWP under Submergence

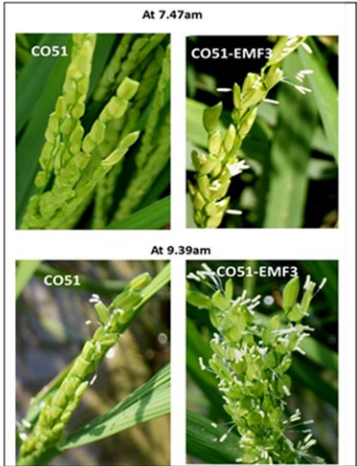
Screening for drought tolerance

Improved Kavuni, CO 57

Traditional Kavuni	Improved Kavuni
Photo-sensitive	Photo-insensitive
Lodging	Non-lodging
Yield: 2 – 3 t /ha	Yield: 4.5t/ha



Heat tolerant rice



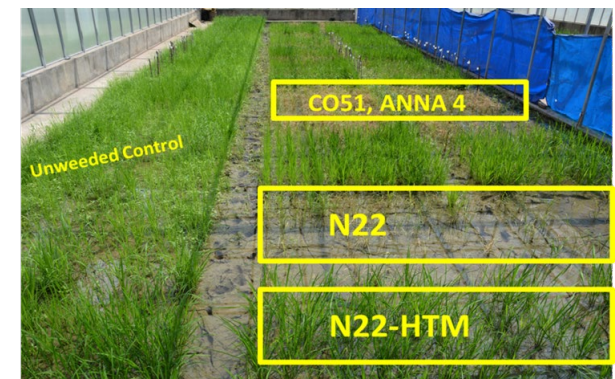
β carotene and QPM pyramided hybrid

Beta carotene content :13.62µg/g

Lysine content :0.33%

Tryptophan content : 0.085%

India's First Herbicide Tolerant Rice



In vitro propagation of coconut

- A reliable '**direct organogenesis**' protocol for 'micro-propagation' through "embryo-splitting" has been developed
- Success rate achieved is 1:3 per **zygotic** embryo

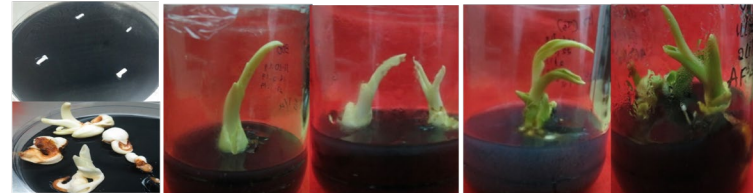


Tissue Culture raised plants available for field planting

Sliced embryo culture



Embryo isolation



Stages of shoot growth



Plantlet development, hardening and field transfer

Directorate of Crop Management

01

- Agronomic management technologies
- Climate Modelling & Weather Prediction
- Crop Boosters
- Organic farming

02

Natural Resource Management

- Soil health
- Next generation Fertilizers (Water Soluble, Nano fertilizers)
- Biofertilizers
- Environmental safety

Centre for Water and Geospatial Studies

- Improving WUE
- Water policy
- RS & GIS (Water / Crop monitoring and Insurance, Disaster assessment)
- Drone applications

04

Flagship Programs

- Village Level Forecasting
- Agro-Advisory Services
- IFS
- Carbon Credit Services
- Drone Services
- Tamil Nadu Doil Doc

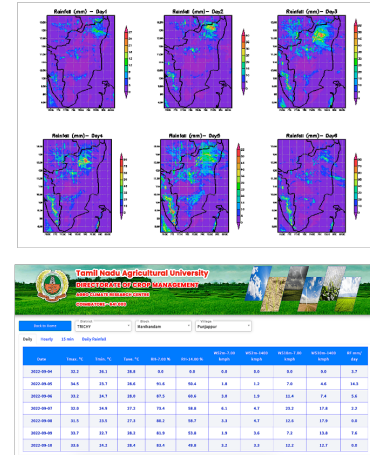
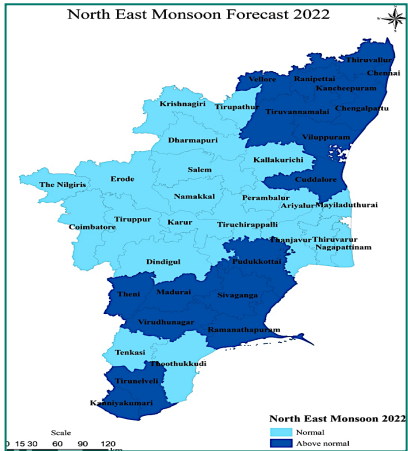
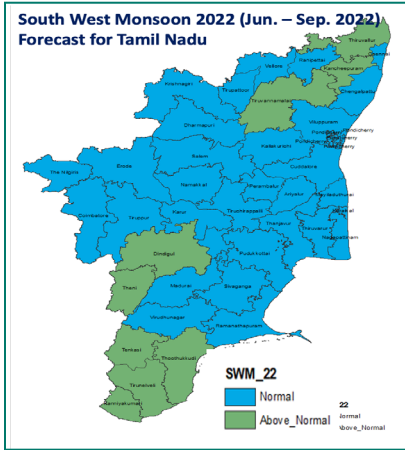
03



Weather Forecast / Early warning of extreme events

TNAU's District Level Seasonal Forecast

TNAU's Village Level Medium Range Forecast



- Since 2014, the only SAU issuing seasonal forecast
- Monsoon Prediction: District wise, twice during last week of May and Sep. for SWM and NEM, respectively
- Accuracy is 60 – 70%

- Since, 2011, the only SAU issuing medium range forecast
- All revenue villages of TN @ 3km resolution for next 6 days
- Updated daily in open domain “<http://tnau.ac.in/vlf>”
- Accuracy is 70 – 80%, list the intensity of rainfall

DRONE APPLICATIONS IN AGRICULTURE

CAPABILITIES OF TNAU

- Crop and Water Monitoring
- Disaster management
- Spraying Agricultural Inputs

Fuel-operated drone



Quad-Copter



Battery-operated drone



Fixed Wing



DEVELOPING SOPs FOR AGRICULTURAL INPUTS

- Pesticides
- Fungicides
- Nutrients and Crop boosters

Crops standardized:

- Rice, Maize
- Cotton
- Groundnut
- Black gram, Green gram

SOP for Rice

Spray Dynamics			
Type of Drone	Battery - operated drone	Fuel operated hybrid drone	
Spray Fluid	10L/ac	30L/ac	
Nozzle	Flat jet nozzle	Atomizer nozzle	
Agro Inputs used	Flat jet nozzle	Fuel operated hybrid drone	
Spray I	Pre emergence Herbicide Pyrazosulfuron ethyl (Saathi) @ 100g /ac-3DAT	10g/L	3.3 g/L
Spray II	Insecticide Fipronil (Regent) @ 60ml/ac - 25 DAT	6ml/L	2 ml/ L
Spray III	Insecticide Chlorantraniliprole (Corogen) @ 60 ml/ac - 60DAT	6ml/L	2 ml/ L
Spray IV	Fungicide Zineb + Hexaconazole (Avatar) @ 250g/ac-90DAT	25g/L	8.3g/L
	Yield	5.16 t/ha	5.65 t/ha

SOP for Maize

Spray Dynamics			
Type of Drone	Battery - operated drone	Fuel operated hybrid drone	
Spray Fluid	10L/ac	30L/ac	
Nozzle	Flat jet nozzle	Atomizer nozzle	
Agro Inputs used	Flat jet nozzle	Fuel operated hybrid drone	
Spray I	Pre emergence Herbicide Atrazine (Atrataf) @ 200g/ac -3 DAS	20 g/L	6.6 g/L
Spray II	Insecticide Emamectin Benzoate (Proclaim) @ 100g/ac -25DAS	10g/L	3.33 g/L
Spray III	Insecticide Chlorantraniliprole (Corogen) @ 60 ml/ac- 40DAS	6 ml/L	2 ml/ L
Spray IV	Crop Booster Maize Maxim @ 1.2 kg/ac - 50 & 65DAS	120 g/L	40 g/L
	Yield	6.95 t/ha	6.43 t/ha

TNAU RPTO

- 21 days training
- Two batch students completed – 65 Nos.

Drone flying Training



Testing the biofertilizers' efficacy in different crops

Validation of Biofertilizers' bio-efficacy - Feedback collection and knowledge transfer –
Popularization, Product improvement, and process optimization

Rice | Maize | Pearl millet | Sorghum | Soybean | Blackgram | Cowpea | Groundnut | Tomato | Cassava |



Pearl millet (Rainfed conditions) Main-plots:

- No fertilizers
- 100% NPK/ha
- 75% NPK/ha
- 50% NPK/ha

Sub-Plots:

- No inoculation
- Azospirillum
- Phosphobacteria
- Azo + Phosphobacteria
- Azo + Phos + PPFM
- Commercial inoculant

Organic practices developed

Agricultural crops

- ❖ Rice
- ❖ Millets
- ❖ Pulses
- ❖ Sunflower
- ❖ Cotton

Plain vegetables

- ❖ Brinjal
- ❖ Chilli
- ❖ Bhendi
- ❖ Tomato
- ❖ Bitter gourd
- ❖ Bottle gourd
- ❖ Pumpkin



Hilly vegetables

- ❖ Cabbage
- ❖ Cauliflower
- ❖ Carrot
- ❖ Radish
- ❖ Beet root
- ❖ Potato
- ❖ Palak
- ❖ Beans



Directorate of Crop Protection 01

- Pest / Disease surveillance/ Forewarning / management
- Invasive / Economically important pests , diseases, nematodes
- Bio-pesticide production and distribution

02 Agriculture and Rural Development studies

- Supply chain management
- Policy Advocacy
- Price Forecasting (DEMIC)
- Technological Impact Assessment

Agricultural Engineering

- Farm machinery and Power
- Renewable energy
- Soil and water conservation
- Food Processing Engineering – Cold Plasma, 3D Printing
- Post Harvest Technology Centre

04

Horticulture and Forestry

- High Density Planting
- Grafting technology for perennializing annual vegetables
- Precision farming
- Multifunctional Forestry

03



New Research Infrastructures at TNAU

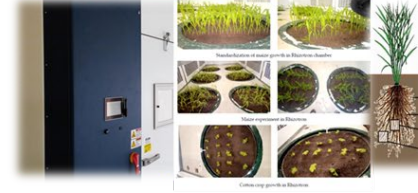
Ramaiah Gene bank :
28500 accessions –
46 crops



Proteomics &
Metabolomic Facility



Water Soluble Fertilizer



Rhizotron facility



COE in Biotechnology



Green House Facilities

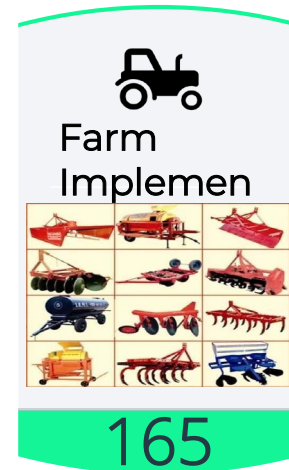
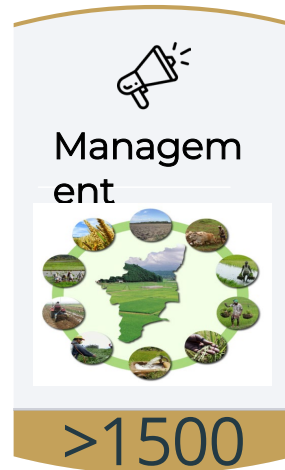


Speed Breeding



Research outcomes

Varieties, Technologies and Implements Developed



Signature Technologies of TNAU



TNAU
Biopesticides
(5)

Trichoderma sps
Pseudomonas sps
Bacillus sps
Metarrhizium sps
Beauveria
sps

TNAU
Biofertilizers
(7)

Azospirillum sps
Azotobacter
Rhizobium sps
Phosphobacteria
Bacillus sps.,
Methylobacterium sps.,

TNAU
Crop boosters
Coconut Tonic



TNAU
Insect Trap

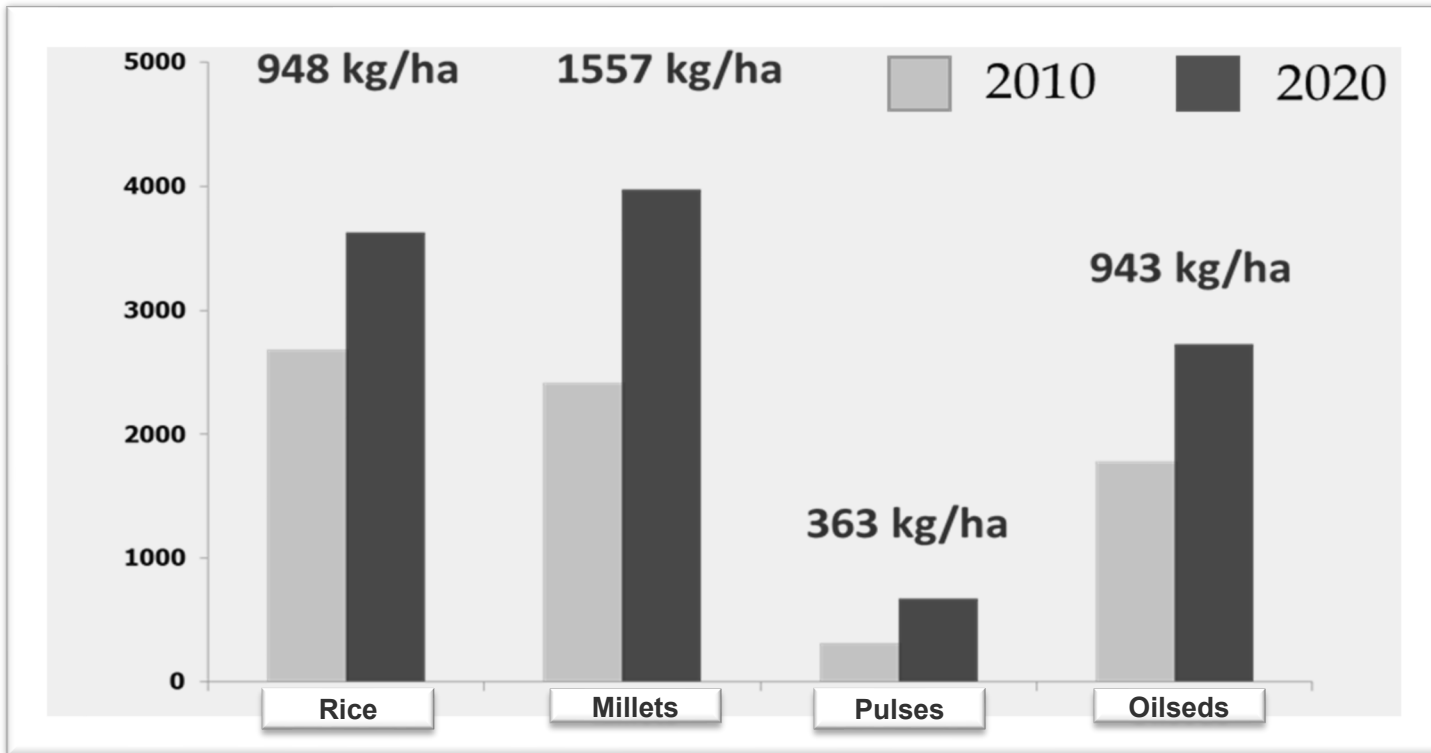


Co 51 Rice
CoHM 6 Maize
PKM 1 Moringa
Co 5 CN Hybrid
TMV 2 Groundnut

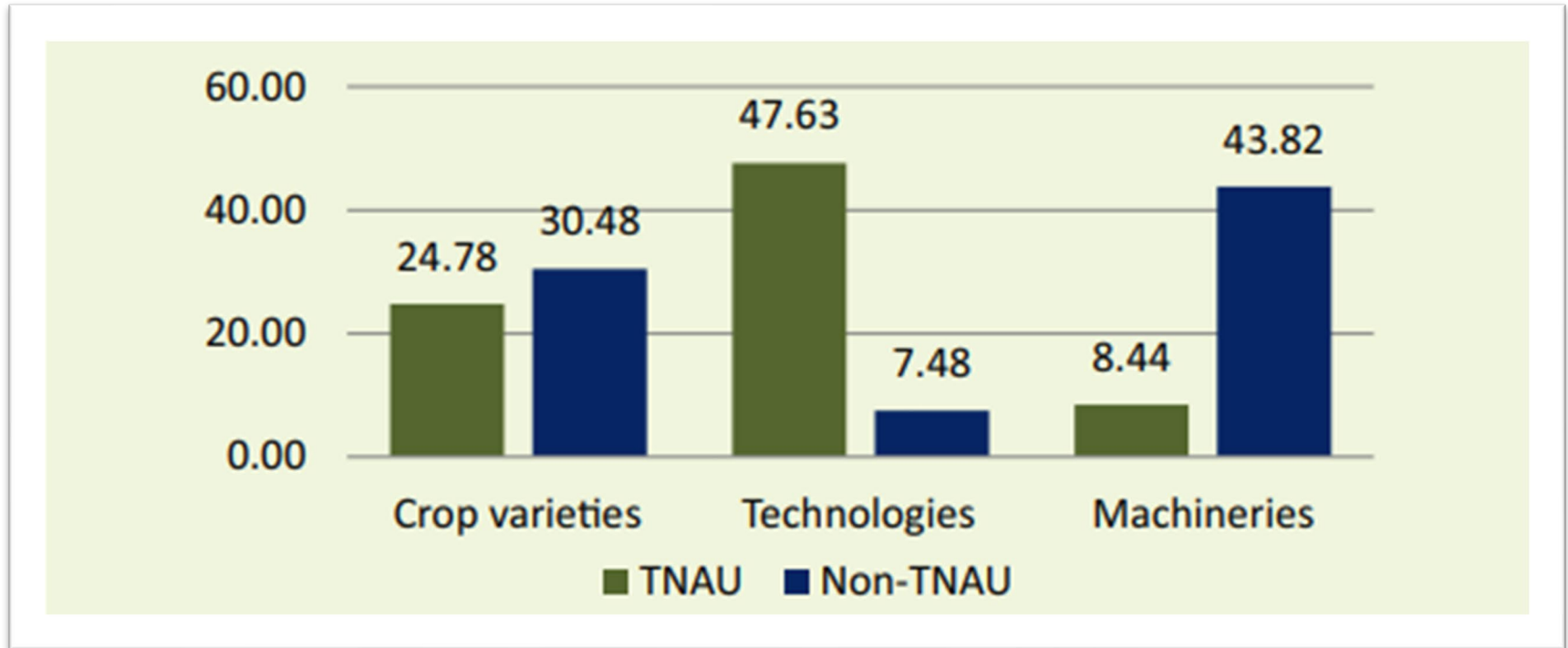




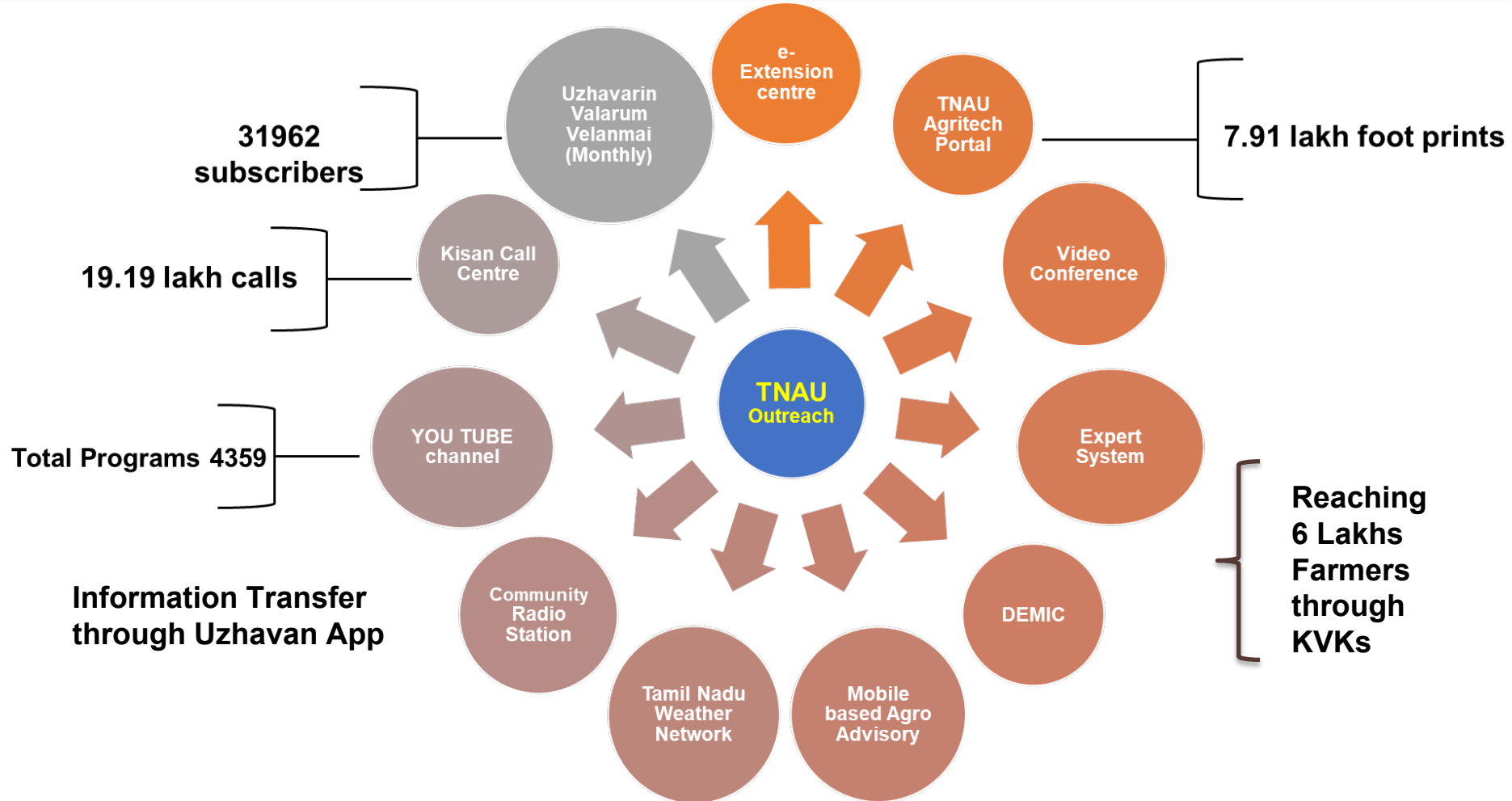
TNAU's Technological Intervention enhanced the productivity of major crops (2010-2020)



Spread of TNAU Varieties, Technologies and Machineries (Lakh Ha)



Outreach Activities





TNAU Online Input Sales Portal

www.tnauagricart.com



TNAU AgriCart

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[Crops](#) ▾

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தமிழ்நாடு வேளாண்மைப் பல்கலைக்கழகம் - அக்ரிகார்ட்
Tamil Nadu Agricultural University - AgriCart

ஆன்-லைன் வேளாண் இடுபொருட்கள் விற்பனை
இணையதளம்

Entrepreneurship Development

Existing Business Incubation Centres

1. Coimbatore
2. Madurai
3. Killikulam
4. Trichy
5. Periyakulam
6. Mettupalayam

Number of Incubatees

1063

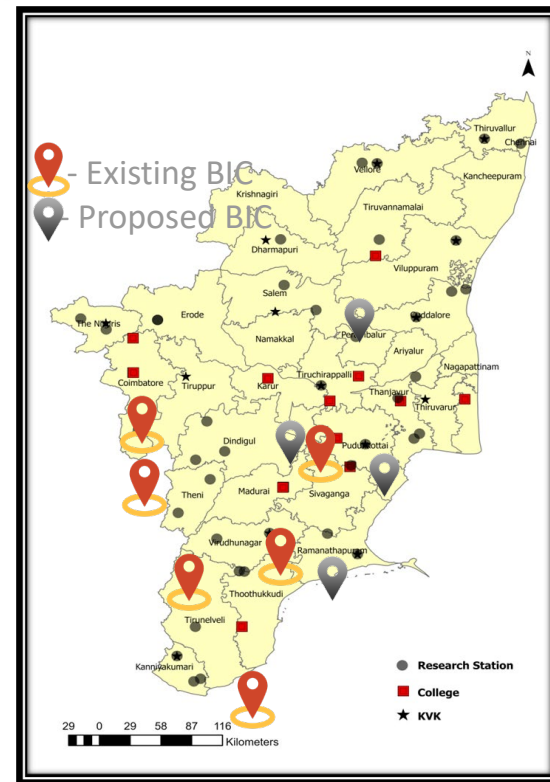
Number of entrepreneurs trained and enrolled

318
Entrepreneurs

Business Incubation Centres in pipeline

1. Trichy (HC&RI W)
2. Eachangkottai
3. Kudumiyanmalai
4. Vazhavachanur

- One among the 29 RKVY-RAFTAAR-R ABI Centres funded by DAC&FW
- 72 entrepreneurs enrolled under RKVY (AOP = 35 (Rs. 1.49 Cr; 24; SAIP = 37 (Rs. 6.61 Cr)
- Others (NIDHI-ERI, SISFS & EDII) = 26 (Rs. 86 Lakhs)



Domestic & Export Market Intelligence Cell (DEMIC)

Developing price forecasts and Disseminating market advisories since 2004

Pre-sowing and pre-harvest market advisories are given for major agricultural/ horticultural crops of Tamil Nadu

Helps the farmers in taking better farm management decisions viz., sowing / selling / stocking

Market advisories are disseminated to farmers through print and electronic media



Cost Of Cultivation Of Principal Crops (CCPC) Scheme

Formulation of Price Policy by the Commission of Agricultural Costs and Prices (CACPC)

Minimum Support Price (MSP)

Implemented since 1971 – Current Budget = 6.30 crores

Major crops: Rice, Maize, Sorghum, Greengram, Blackgram, Bengalgram, Groundnut, Sugarcane, Cotton, Coconut and Onion

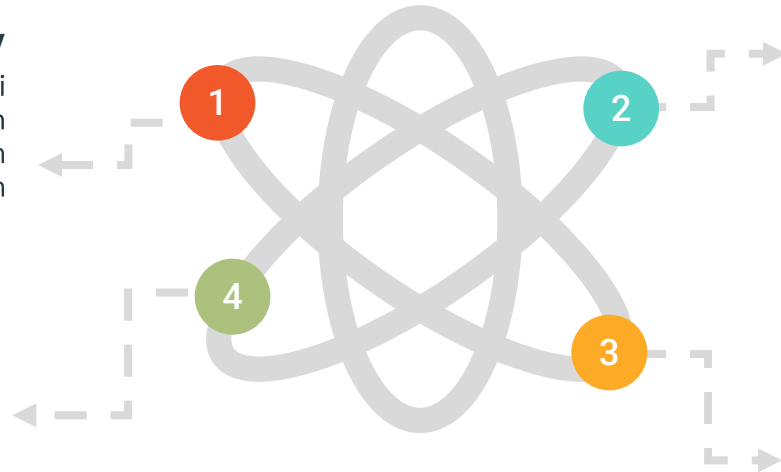
Impact of TNAU Technologies

Food security

TN obtained the prestigious Krishi Karman Award of GOI – 5 times in 8 years for achieving 100 lakh tonnes of food grain production

Nutritional Security

215 varieties are enriched with nutrients and minerals



Climate resilience

- 102 climate resilient varieties in different crops
- Water saved due to wider adoption of micro irrigation is 1269 MCM and additional area could be brought under irrigation would be 1.59 lakh hectares

Environmental security

Due to popularization of IPM, use of agrochemicals reduced by 9 times and the Environment Impact Quotient (EIQ) reduced by 13 times

Awards & Recognition

ICAR

Sardar Patel
Outstanding
ICAR
Institution
Award



THE RANKING

1501+

Rankings > World University Rankings > impact rankings > by subject > reputation rankings > Asia

You are currently viewing a previous year's ranking
View the latest rankings: World University Rankings 2

Show me universities best for **overall** in **India** offering **agric**
Or, find specific universities **tamil nadu**

RANKING	SCORES						
Rank	Name	Country/Region	No. of Full-time Students	No. of Academic Staff	International Students	Researcher per Full-time Student	Knowledge Transfer
1501+	Tamil Nadu Agricultural University	India	6,724	8.7	0%	62 : 38	

FICCI

Best
Institution
Award
2022



QS World
University
Ranking

at Asia level
(First SAU
in India)

QS Asia University Rankings

Tamil Nadu Agricultural University

[View all rankings](#)

S Asia University Rankings

highest Ranking	Lowest Ranking	Average Ranking
301	301	301

Thank You!

