

**SCHOOL OF
AGRICULTURAL SCIENCES**
Arasampalayam, Coimbatore Campus

ASA BIMONTHLY E-NEWSLETTER

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“Happiness depends on how you accept, understand and surrender to situations”.

Amma, Sri Mata Amritanandamayi Devi

Chancellor, Amrita Vishwa Vidyapeetham



I - COURSE ACTIVITIES

1. Experiential Learning - Mushroom Production Technology

Mushroom Production Technology Experiential Learning Programmes (ELP) is a commercial business module cum hands-on-training program. The ELPs are an important part of entrepreneurship opportunities in mushroom cultivation. The programs are designed to help students acquire skills and expertise by doing things and learning from their experiences towards oyster mushroom cultivation and allied activities.

As part of this ELP, a total of 19 students enrolled in the programme engaged in various activities related to oyster mushroom cultivation and associated tasks. The programme was conducted under the expert guidance of Dr. Parthasarathy S, Assistant Professor in Plant Pathology, who supervised and mentored the students throughout the training sessions.

Cultivation and production of oyster mushrooms

Students of the 2021 batch are involved in the production of oyster mushrooms as a part of the ELP course.



Mushroom Bio-waste to Biochar

Spent mushroom substrate (SMS), a nutrient-dense byproduct of mushroom cultivation, was explored as a promising feedstock for biochar production, aiming to offer a sustainable solution to modern agricultural and environmental challenges. The unique physicochemical properties of SMS, including its lignocellulosic composition, high nutritional profile, and organic matter richness, make it a perfect substrate for biochar production. SMS-derived biochar offered a sustainable solution to numerous challenges in modern agricultural systems.



Mushroom Waste to Farm Manure

Spent mushroom substrate (SMS) was effectively reused as a farm manure or soil amendment through composting or vermicomposting to improve soil quality, enhance crop yield, and recycle nutrients. This process broke down the substrate, reduced fungal spores, and mitigated potential contaminants, transforming a waste product into a valuable biofertilizer and soil conditioner rich in organic matter and essential nutrients. The SMS materials were applied as manure to the banana crop on our campus in order to enhance soil nutrients, structure, aeration, and water holding capacity.



Visit to Button Mushroom Production Unit, Coonoor, the Nilgiris

Engaging 2023 batch students in Hands-on-Training



2. Students' Participation at AGRI INTEX 2025

Second-year students (2024 batch) visited over 500 exhibitors, 1000 booths, and 500 product categories in the 23rd edition of India's Prime Agricultural Trade Fair, AGRI INTEX 2025, at the CODISSIA Trade Fair Complex in Coimbatore on 14 July 2025. This visit inspired the students to understand the developments and pursue their career opportunities in the high-tech industrial sectors. This exposure visit was arranged by the course teacher, Dr. Sathyapriya E, and accompanied by Dr. Sivaraj P and Dr. Karuppasamy Vickraman.



3. Exposure visit to ICAR- National Research Centre for Banana (NRCB), Trichy

An exposure visit was organized for the 2023 batch of students on 18 July 2025 to ICAR-National Research Centre for Banana in Trichy, Tamil Nadu, by Dr. Reena S, Assistant Professor, Plant Biotechnology, as a part of the course 19GPB214 Micropropagation Technologies. The visit aimed to bridge theoretical knowledge with practical exposure in the field of banana cultivation and micropropagation techniques employed in banana.

Dr. M Saraswathi, Principal Scientist, specializing in tissue culture and molecular biology, briefed the students about the banana varieties developed and released from NRCB, including 'Kaveri-kalki', 'Saba', 'Udhayam', and 'Grande Naine'. She highlighted their unique characteristics and fusarium wilt resistance through mutation breeding. She also explained the different stages of tissue culture from initiation to hardening, and introduced various innovative technologies employed in plant tissue culture.

The students were taken to the laboratory and observed various stages of micropropagation, including multiplication, root proliferation, etc., in the culture bottles. Then, they were introduced to both primary and secondary hardening facilities.

Subsequently, the students visited the NRCB processing unit, where they were introduced to various equipment such as fibre extraction machines, banana ripening chambers, fermentors, pasteurizers, and more. Around 45 value-added products were showcased, providing students with the opportunity to observe them. These products included textiles, fiber-based handicrafts, and processed food products.

Dr. C Karpagam, Principal Scientist in Agricultural Extension, interacted with the students during the visit. The entire visit was efficiently coordinated by Dr. P Ravichamy, enabling students to thoroughly explore the key areas of NRCB.



II. COLLEGE EVENTS

NATIONAL SERVICE SCHEME UNIT - 6

DAY 1

Date: 15.07.2025 (Tuesday)

Venue: Myleripalayam Village, Coimbatore

The NSS special camp of NSS Unit 6 of Amrita School of Agricultural Sciences was inaugurated on 15.07.2025 at Government High School, Myleripalayam. Totally, 55 students from the 2023 batch attended the NSS special camp. The inaugural programme began with a prayer song by Ms. Megha Manikandan of the 2023 batch, and the programme was convened by Ms. Anusri, Ms. Diya T, and Ms. Megha Manikandan of the 2023 batch. Dr. K. Murugasridevi, NSS Programme Officer, NSS Unit 6, welcomed the gathering and delivered the plan of work at the NSS special camp. After this, the Headmaster of Government High School, Myleripalayam, Mr. A. Robert, delivered the inaugural address and inaugurated the NSS special camp. He insisted the NSS students to actively participate in the NSS camp. Following this, the vote of thanks was given by Ms. Lakshitha of the 2023 batch. The inauguration programme ended with the national anthem. After the inaugural programme, NSS student volunteers were involved in the collection of plastic garbage within the school premises. Another group of NSS student volunteers were actively engaged in cleaning the weeds in the school premises. This event was facilitated by Dr. K. Murugasridevi, Dr. P. Naveen Kumar, and Dr.V. Karthik Raja. After this, the ill effects of plastics and the need for their eradication in the environment was taught by NSS programme coordinator, Dr. D. Venkataraman, under the theme, “Amalabharatham”. On the first day of the camp, events for school students, such as lemon in the spoon, music chair, and running race, were organized by NSS student volunteers.



Weed removal in the school premises



Weed removal using a brush cutter



Pledge taken to refuse single-use plastics.



Plastic waste removal within school premises

NATIONAL SERVICE SCHEME UNIT - 6

DAY 2

Date: 16.07.2025 (Wednesday)

Venue: Myleripalayam Village, Coimbatore

As a part of the NSS special camp, a yoga session was conducted for school students by NSS student volunteers. Asanas such as Taadasana, Vrikshasanam, Thrikonasana, Bhadrasana, Dandasana, Vajrasana, and Surya namaskaram were taught by NSS students. Following this, in order to create an awareness of road safety rules, NSS student volunteers of Amrita School of Agricultural Sciences and students of Govt. High School, Myleripalayam collaboratively conducted a “Rally on road safety awareness”. Another rally on the theme, “Amalabharatham” representing the ill effects of plastic usage and the need for environmental conservation, followed this rally. Before starting the rally, students took a pledge on road safety rules and an oath against plastic usage in both Tamil and English. The rally started from Govt. High School, Myleripalayam, and passed through the streets of the village, crossed the main areas of the village, and culminated at GHS, Myleripalayam. During the rally, slogans on road safety rules and the ill effects of plastic usage were raised, and placards cautioning the younger generation on the theme were displayed. This event was facilitated by Dr. K. Murugasridevi, Dr. V. Vanitha, Dr. K. Sivasabari, and Dr.V. Karthik Raja. This event was followed by an awareness session on “Role of meditation and planning to achieve academic goals”. In the view of improving concentration for doing an activity without a distraction and to achieve greater success in exams, NSS student volunteers acted out a skit and depicted the significance of meditation. This session became significant due to the guided meditation session facilitated by Mr. Parthiban, teacher of GHS. NSS volunteers also taught school students how to plan a day before and how to journal the daily activities in a diary. After this, school students performed a drama on the theme, “Awareness of drug abuse”. Simultaneously, events such as Tamil speech, quiz competition, and drawing competition were conducted for the school students.



Yoga session for school students



Guided meditation session for the school students



Raising Awareness on Plastic Pollution and Road Safety under the Theme “Amalabharatham”

NATIONAL SERVICE SCHEME UNIT - 6

DAY 3

Date: 17.07.2025 (Thursday)

Venue: Myleripalayam Village, Coimbatore

The day began with a yoga session for school students by NSS student volunteers. The asanas done on the previous day were again repeated by the NSS student volunteers. After this, NSS volunteers conducted a skit to spread awareness on nutrition and healthy food habits. They have also conducted brainstorming sessions among school students on good, healthy foods and unhealthy foods. Many school students came forward and participated with great interest. At the end of the session, school students were much more motivated to opt for healthy, nutritious eating habits rather than unhealthy junk foods. Our NSS student volunteers also organized a session about personal hygiene among school students. This event was facilitated by Dr. K. Murugasridevi, Dr. S. Thirukkumar, and Dr.V. Karthik Raja.

Valedictory function of NSS special camp was conducted on 17.07.2025 at Government High School, Myleripalayam. The valedictory programme commenced with a prayer song by Ms. Janaki Binu of the 2023 batch. The programme was compered by Ms. Sairithanya and Ms. Fiza Firos V of the 2023 batch. Ms. Dhanushrii Sivasamy of the 2023 batch welcomed the gathering. After this, the Valedictory address was delivered by Mr. A. Robert, Headmaster of Government High School, Myleripalayam. Following this, a special address was delivered by Mr. Parthiban, teacher of GHS, Myleripalayam. He insisted students stay active in social service and thanked them for their great work done in the camp. Followed by this, Mr. Senthilnathan, teacher of GHS, Myleripalayam, delivered the special address and encouraged the school and college students with motivating quotes. After this, prize distribution was done by the dignitaries for the winners of various events. Dr. K. Murugasridevi, NSS Programme Officer, delivered a vote of thanks. The programme ended with a National Anthem.



Awareness session on nutrition and healthy food habits

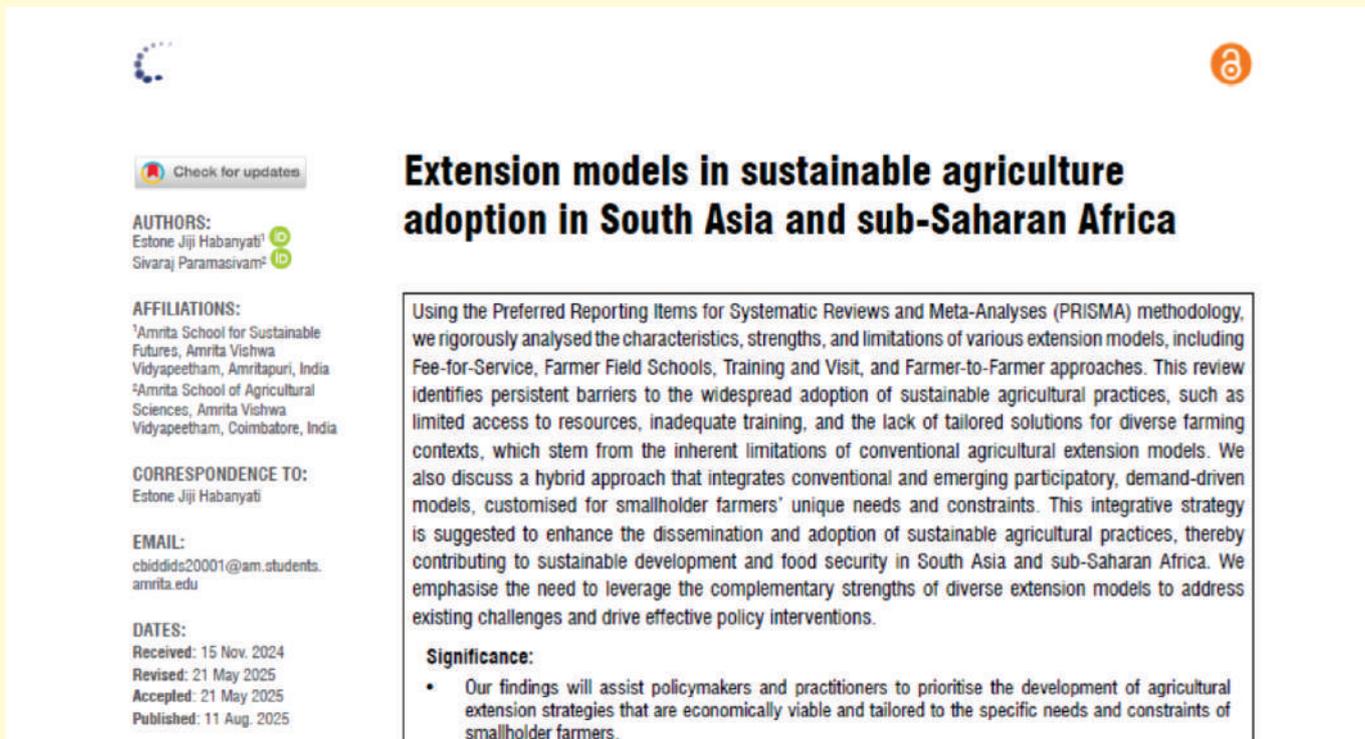


Prize distribution for the winners



III. PUBLICATIONS AND PARTICIPATION

1. **Mr. Habanyati Estone Jiji**, Phd Scholar, and **Dr. Sivaraj P**, Assistant Professor (Agricultural Extension), have published a review article entitled “Extension models in sustainable agriculture adoption in South Asia and sub-Saharan Africa”, South African Journal of Science, 121(7/8), Art. #20578, 2025. <https://doi.org/10.17159/sajs.2025/20578>



The screenshot shows the title page of a review article. At the top left is the Amrita logo, and at the top right is the Open Access logo. Below the logo is a 'Check for updates' button. The title is 'Extension models in sustainable agriculture adoption in South Asia and sub-Saharan Africa'. The authors are listed as Estone Jiji Habanyati and Sivaraj Paramasivam, with ORCID icons. Affiliations are provided for both authors. Correspondence and email information are listed for Estone Jiji Habanyati. Dates of receipt, revision, acceptance, and publication are provided. The abstract text is enclosed in a box, and a 'Significance' section follows with a bullet point.

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Extension models in sustainable agriculture adoption in South Asia and sub-Saharan Africa

Using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology, we rigorously analysed the characteristics, strengths, and limitations of various extension models, including Fee-for-Service, Farmer Field Schools, Training and Visit, and Farmer-to-Farmer approaches. This review identifies persistent barriers to the widespread adoption of sustainable agricultural practices, such as limited access to resources, inadequate training, and the lack of tailored solutions for diverse farming contexts, which stem from the inherent limitations of conventional agricultural extension models. We also discuss a hybrid approach that integrates conventional and emerging participatory, demand-driven models, customised for smallholder farmers' unique needs and constraints. This integrative strategy is suggested to enhance the dissemination and adoption of sustainable agricultural practices, thereby contributing to sustainable development and food security in South Asia and sub-Saharan Africa. We emphasise the need to leverage the complementary strengths of diverse extension models to address existing challenges and drive effective policy interventions.

Significance:

- Our findings will assist policymakers and practitioners to prioritise the development of agricultural extension strategies that are economically viable and tailored to the specific needs and constraints of smallholder farmers.

2. **Dr. Naveen Kumar R**, Assistant Professor (Plant Pathology) has published a review article entitled “Tobacco streak virus—an emerging disease in cotton: A review of genetics and control strategies”, Tropical Plant Pathology, 50, 66 (2025). <https://doi.org/10.1007/s40858-025-00748-7>



The screenshot shows the title page of a review article. At the top left, the journal name 'Tropical Plant Pathology' and issue information '(2025) 50:66' are displayed, along with the DOI link. A 'REVIEW' label is in a grey box. At the top right is the 'Check for updates' button. The title is 'Tobacco streak virus—an emerging disease in cotton: A review of genetics and control strategies'. The authors are listed as Sampathkumar Arunachalam, Baghyalakshmi Kari, Valarmathi Pandian, Ramchander Selvaraj, Prakash Arkalgud Hiriyannaiah, Naveenkumar Ramasamy, and Prasad Yenumula Gerard. Dates of receipt and acceptance are provided. The copyright notice is at the bottom.

Tropical Plant Pathology (2025) 50:66
<https://doi.org/10.1007/s40858-025-00748-7>

REVIEW

Tobacco streak virus—an emerging disease in cotton: A review of genetics and control strategies

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3. **Dr. Parthasarathy S, Mr. M. Kannan, Dr. G. Gopakumar, Dr. V.S. Manivasagam, and Dr. Sudheesh Manalil** have published an IEEE conference paper entitled “A Mobile Application for the Early Detection of Dolichos Yellow Mosaic Virus in Lablab-Bean Using Pre-Trained CNN Models and Deep Learning”. as a part of the ANRF-SURE Project (SUR/2022/004268). <https://ieeexplore.ieee.org/document/11118776>

A Mobile Application for the Early Detection of Dolichos Yellow Mosaic Virus in Lablab-Bean Using Pre-Trained CNN Models and Deep Learning

Publisher: IEEE Cite This PDF

Parthasarathy Seethapathy ; M. Kannan ; G. Gopakumar ; V.S. Manivasagam ; Sudheesh Manalil All Authors

15 Full Text Views

Abstract

Abstract: Lablab-bean is a versatile legume crop that is widely cultivated across India. Lablab-bean is subject to various plant diseases on a global scale. Dolichos yellow mosaic virus (DoYMV) disease stands out as a significant limitation in Lablab-bean production across India. A rapid early detection system is essential for the timely management of this disease. This research examines the application of deep learning methodologies, especially utilizing pre-trained Convolutional Neural Networks (CNNs) for precise detection of virus symptoms on bean plants during the early stages of the disease. This study employed

Document Sections

- I. Introduction
- II. Literature Review

4. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology) and **Mr. Kannan M** Project Fellow-ANRF-SURE, presented a conference paper titled “Paper ID-8658: Early and Stage-Specific Detection of Grape Powdery Mildew Disease Using YOLOv8 Deep Learning Model” as a part of ANRF-SURE Project (SUR/2022/004268) at the IEEE-AICTE sponsored 16th International Conference on Computing, Communication, and Networking Technologies (ICCCNT-<https://16icccnt.com/>), a premier conference organized from July 6-11, 2025 at Indian Institute of Technology Indore (IIT Indore), Madhya Pradesh, India.



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