



**AMRITA**  
VISHWA VIDYAPEETHAM  
(Deemed-to-be University)

School of  
Agricultural Sciences

J P Nagar, Arasampalayam, Coimbatore, Tamil Nadu – 642 109.

# ASA BIMONTHLY E-NEWSLETTER

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January - February 2022

“Shivaratri is a celebration of sacrifice, dispassion, and renunciation. Shivaratri teaches us to abandon all other thoughts in contemplation of God and to realize the ultimate purpose of human life”.

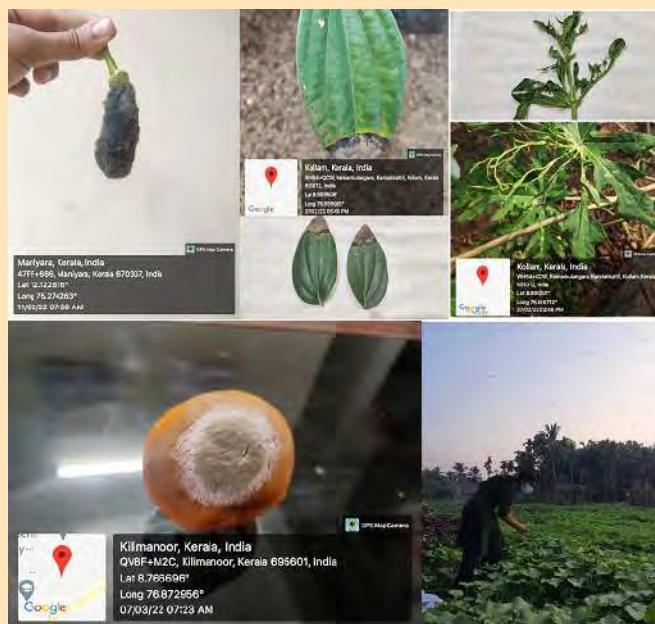
**Amma, Sri Mata Amritanandamayi Devi**  
Chancellor, Amrita Vishwa Vidyapeetham



# I. STUDENTS' ACTIVITIES

## 1. SURVEY AND COLLECTION OF CROP DISEASES

Nature-based education is always engaging and provokes students' learning objectives and cognitive processes in a sustainable manner. Ms. Athulya Rajasekharan, Ms. Keerthana Vijayan, and Ms. Aparna S, students of the third year (2019 batch), had actively experienced these concepts as part of the courses 19PAT301 - Diseases of Field and Horticultural Crops and Their Management, and 19PAT302 - Principles of Integrated Pest and Disease Management, taught by Dr. Parthasarathy S, Assistant Professor (Plant Pathology). This field experience helped them to get a complete picture of the crops and the environment they live in.



## 2. A SUCCESSFUL EXPERIMENT IN CROP CULTIVATION

Ms. Deepika Krishnan, the first-year student (2021 batch), Amrita School of Agricultural Sciences had her first experience in crop cultivation as part of the practical experiment of the course 19AGR101- Fundamentals of Agronomy (3+1) course. She utilized 1.5 cents from her land for the experiment and understood the challenges faced by the farmers, such as pest and disease infestation, micronutrient deficiency, etc., as well as the organic methods to overcome it. The selected land (1.5 cents) was divided into 3 plots and the soil was tilled well and mixed with well rotten cow dung. 150g of cowpea seeds (*Vigna unguiculata*) were treated with *Trichoderma viride* and sown by E dibbling method. Holes with a depth of approximately 3-4 times the diameter of the seeds, were poked in the soil using the index finger, at a spacing of 30cm x 15 cm. The crops were irrigated once in two days. Weeding and manuring were done at regular intervals. Organic pesticides were applied to control mealybugs and aphids. Additional care was given to the plants during the stage of flowering and pod formation. Photographs were taken

weekly to record all the stages of growth and development. The whole activity was completed under the guidance of the course teacher Dr. R. Sureshkumar, Assistant Professor (Agronomy), ASA.



**Ms. Deepika Krishnan,  
from the first year (2021 batch)**



Mr.Raghul Vadhugunath, the first-year student (2021 batch), had cultivated Pearl millet. He ploughed his land with a tractor-drawn cultivator. Sowing was done by the broadcasting method. The 3<sup>rd</sup> leaf stage appeared on the 6<sup>th</sup> day after sowing, the 5<sup>th</sup> leaf stage appeared 14 – 15 days after sowing, and the panicle initiation started between 22 to 28 days after sowing. He followed the check basin method for irrigating the crop. In addition to the

regular weeding, Partheniums and Cinderella weeds were also removed. Irrigation was done twice a week. He observed changes like elongation of leaves, the emergence of all tillers, floral initiation in tillers, and stem elongation. The elongation of the panicle, formation of floral parts, and emergence of stigmas on the panicle were observed later. He did not find any pests and diseases in the crops. Photographs were taken periodically to view the changes.



**Mr.Raghul Vadhugunath, from the first year (2021 batch)**

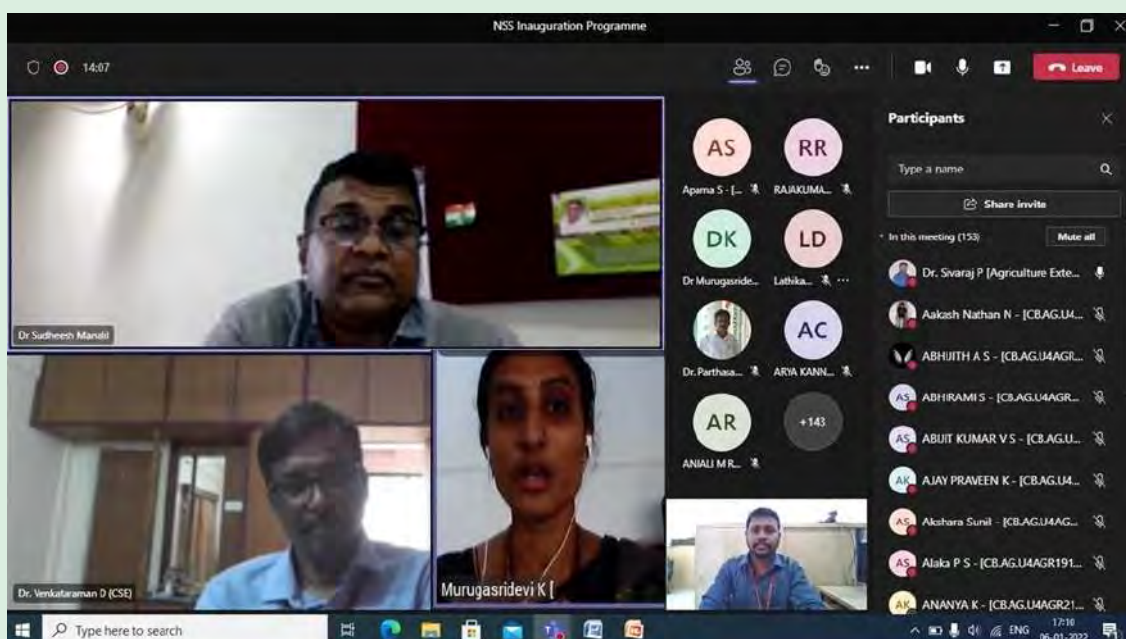
## II. COLLEGE EVENTS



### 1. INAUGURATION OF NATIONAL SERVICE SCHEME (NSS) UNIT IN ASA

Amrita School of Agricultural Sciences proudly launched its NSS unit on 6 January 2022. The inauguration programme began with a prayer song by Ms. Aparna.S. of the third year. Dr. Sivaraj P, Assistant Professor (Agricultural Extension) welcomed the gathering. The presidential address was delivered by Dr. Sudheesh Manalil, Principal and Head Research, ASA. During his address, he shared his personal experience in social activities and motivated the students. Chief Guest, Dr. Venkatraman D, NSS Programme Coordinator, Associate Professor, Department of Computer Science

and Engineering, Amrita School of Engineering delivered the keynote address. His talk covered the history of NSS, regular and camp activities conducted in NSS, the significance of NSS for the student community, and the advantages of involvement of Agriculture students in the NSS Programme. He described many possible plans to be inculcated in our unit viz., promotion and awareness of organic farming, tree plantation, planting palm trees, training on value-added products from palm trees to the villagers, and parthenium eradication programme. His motivating speech was a great inspiration and guidance for the students. Following this, three student coordinators from Amrita School of Engineering, Ms. Lekha, Ms. V.S. Sasmitha, and Mr. Manoj Kumar shared their practical experiences in the NSS programme. Finally, the inauguration programme was concluded with a vote of thanks by Dr. K. Murugasridevi, NSS Programme Officer, Assistant Professor (Agricultural Entomology). As part of this programme, 140 student volunteers joined the NSS Unit of Amrita School of Agricultural Sciences.



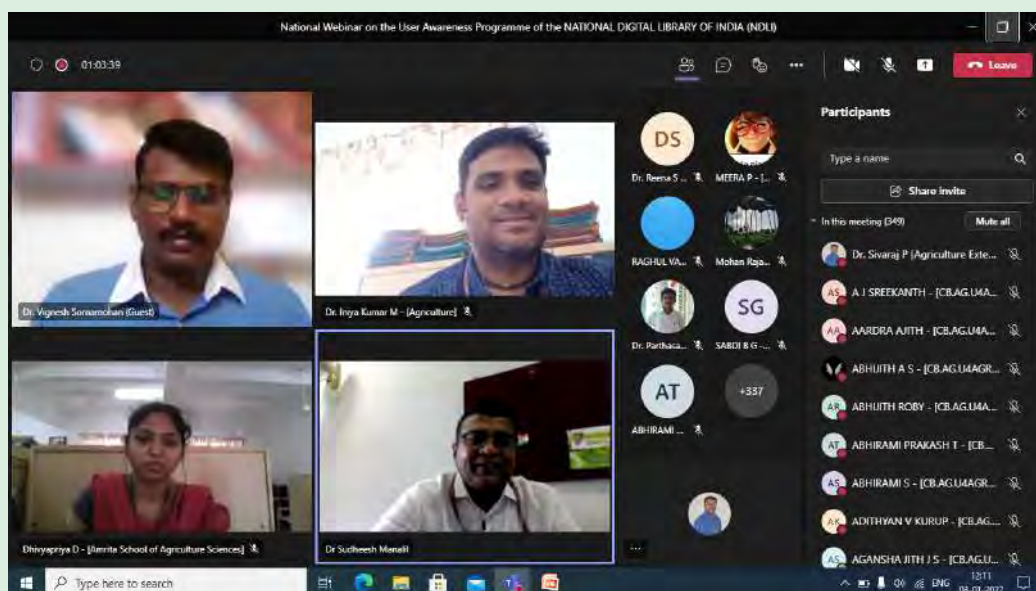


## 2. AMRITA SCHOOL OF AGRICULTURAL SCIENCES HELPS STUDENTS TO SUCCEED IN SCHOOL

Computers in education have proved to boost students' performance by assisting them in becoming more engaged with their schoolwork. Computers have significantly improved the mathematical ability, critical thinking, and improved test results of the students, in addition to support them with problem-solving skills. Amrita School of Agricultural Sciences provided personal computers to the Government High School in Arasampalayam Village, Kinathukadavu. As part of this event Dr. N. Udayashankar, Campus Director and Dr. Sudheesh Manalil, Principal and Head Research, ASA, presented computers to Mrs. Revathy and Mrs. Karuna, School Head Masters, for the benefit of advanced learning among the student community.



## 3. WEBINAR ON NDLI USER AWARENESS PROGRAMME



Amrita School of Agricultural Sciences Coimbatore, NDLI Club ASA, and the Webinar Committee organized a Webinar on the “NDLI User Resource Awareness Programme” on 3 January 2022 through MS Teams platform. Dr. Sudheesh Manalil, Principal and Head Research of Amrita School of Agricultural Sciences, welcomed the Chief Guest and in his introductory address, emphasized the use of digital resources in teaching, learning, and research activities of the institution. The Chief Guest Dr. Vignesh Sornamohan, Chief Strategic and Outreach Officer NDLI from IIT Kharagpur, in his speech, explained the seven wings of NDLI and elaborated on the specialty of NDLI, which is more specific to learners of

different age groups. In addition, the Chief Strategic and Outreach Officer highlighted that Amrita School of Agricultural Sciences was the first agricultural institution to join the NDLI club. Further, he invited Amrita School of Agricultural Sciences to be a potential content contributor to the NDLI club. He also elaborated on how to access the Digital Resources and explained the search options like Author, Title, Language, and Publisher. The event was coordinated and assisted by Mr. Saravanan R, Librarian of ASA. Dr. Dhivyapriya D and Dr. Iniyakumar M, Assistant Professors of ASA. 360 NDLI club members were attended and benefitted from the awareness programme.

#### 4. NATIONAL YOUTH DAY CELEBRATION

AYUDH Tamil Nadu observed National Youth Day - Swami Vivekananda Jayanthi 2022 in a very meaningful way. AYUDHians from the Agriculture campus participated part in this event on 9 January 2022. Learnings from Amma's book - 'Practice Spiritual Values and Save The World'- were addressed. The book contained Amma's inaugural address during the 150<sup>th</sup> birth anniversary celebrations of Swami Vivekananda, held in New Delhi. In the speech, Amma explained how youth can make Swami Vivekananda's dream of Love, Fearlessness & Unity become a reality. The participants enthusiastically took part in the quiz that followed. AYUDHians also learned Amma's MAOM meditation guided by Bri Vagishamrita Chaitanya, learning to tap into themselves and gain the mental strength to face the challenges of life. They also experienced how it brought down their stress instantaneously. Over 50 AYUDHians across Tamil Nadu participated with great fervor in the online celebrations. There was a short quiz conducted by AYUDH Tamil Nadu and Mr. Abhijith A S, Ms. Shobika, Ms. Parthikaa, Ms. Navya of the 2021 batch were the winners of the show. The event ended with prayer for the peace and well-being of all beings in creation.



#### 5. ASA CIVIL SERVICE FOUNDATION COURSE

Biodiversity is the key indicator of the health of an ecosystem. ASA Civil Service aspirants have learned the importance of conserving biodiversity, protecting genetic resources and species as well as promoting sustainable development in communities of the surrounding region.



**Biodiversity - Live and Let live**

## 6. NATIONAL GIRL CHILD DAY: ROLE OF YOUTH IN PROTECTING THE RIGHTS OF GIRL CHILD

On the significance of National Girl Child Day (24.01.2022), the AYUDH team organized a webinar on the topic “Role of youth in protecting the rights of girl child”. Mr. Valavan, explained the importance of this day to spread the message among the public to flag the inequalities faced by the girl child in India. In his speech, he extended the issues encountered by girl children, the rights of girl children, and the importance of increasing awareness in protecting girl children. Further, he underlined the necessity of female education in reducing the probability of these problems. Dr. Sethuraman Rao, Assistant Professor at Amrita Vishwa Vidyapeetham shared his insights on this topic.

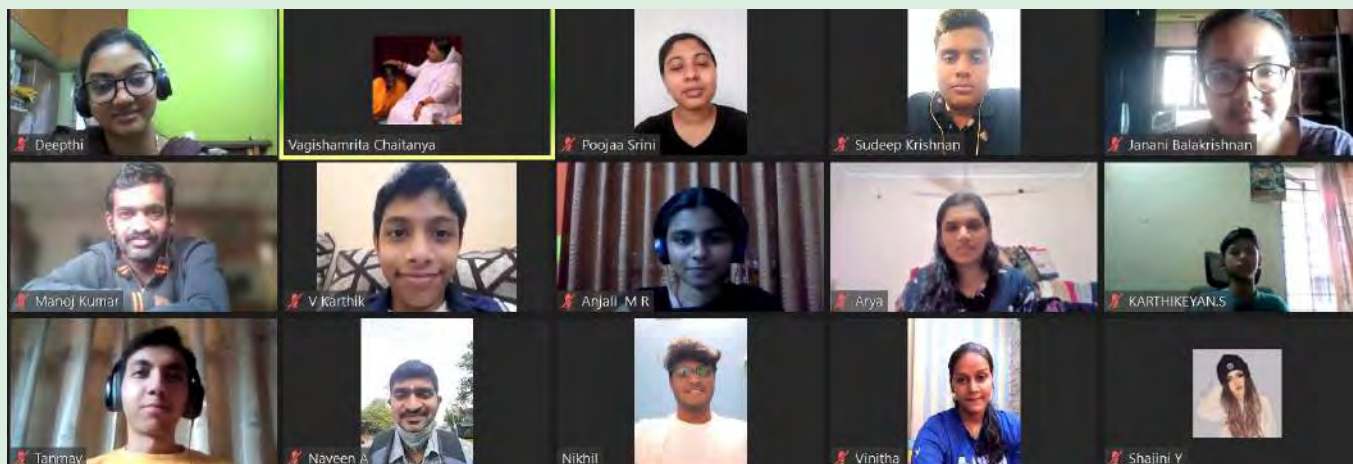


## 7. UN INTERNATIONAL DAY OF HUMAN FRATERNITY

In connection with the United Nations International Day of Human Fraternity (4 February 2022), AYUDH Tamil Nadu organized a virtual event that was attended by volunteers across the state. Ms. Deepthi, Associate Consultant, Tata Consultancy Services, and treasurer, AYUDH Chennai, took the participants through an interesting and interactive presentation titled 'Special features of Hinduism'. The presentation was based on the book 'The Eternal Truth' which contains a collection of Amma's answers to questions on the principles of Sanatana Dharma. In the book, Amma says, “In Hinduism everything is God. There is nothing that is not God. According to Sanatana Dharma, all religions are different



pathways to the same goal. Sanatana Dharma is the comprehensive science of life management". The session was really good, widely praised.



## 8. COMBATING DRUG ABUSE AMONG YOUNGSTERS: AN AWARENESS OUTREACH BY NSS UNIT

As part of the NSS Unit of Amrita School of Agricultural Sciences, a programme entitled, "Combating Drug Abuse among Youngsters: An Awareness Outreach" was conducted on 7 February 2022. The programme was compered by Ms. Keerthana Vijayan of the third year. The event commenced with a prayer song by Ms. Mathurabhashene R M of the second year. Ms. Meera P of the second year addressed the gathering. Dr. Sudheesh Manalil, Principal, Head Research and PGP chair, ASA shared his valuable words on the negative consequences of drug abuse. Following his speech, Dr. D. Venkataraman, NSS Programme Coordinator, educated the gathering by emphasizing points that would prevent the younger generation from drug addiction.



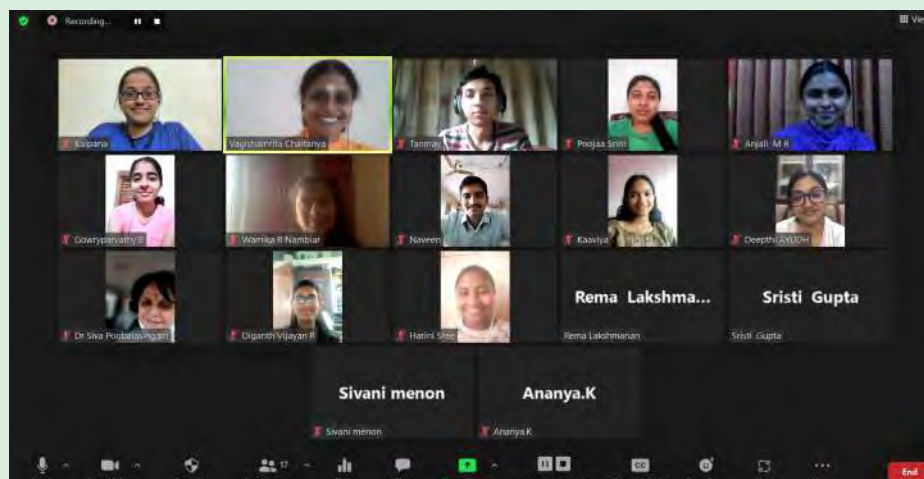


The Chief Guest, Mr. Venugopal G Kurup, Assistant Director, Narcotics Control Bureau, Chennai Zone shared his immense knowledge on various drugs, consequences of their consumption, symptoms of drug addiction, and awareness of certain laws and punishments to contain drug abuse. It was an eye-opening session, where a whole new perspective of the Narcotics world was understood by the participants. Dr. N. Udayashankar, Campus Director, ASA shared his experience of losing his good friend who was a drug addict. He emphasized the importance of family, religious values and importance of karma, self-care, and hard work. Finally, Dr. K. Murugasridevi, NSS Programme Officer, Assistant Professor (Agricultural Entomology) extended her gratitude to everyone. As part of this programme, 460 participants from Amrita Vishwa Vidyapeetham had taken the pledge and received a certificate quoting "Say Yes to Life, No to Drugs" from the Ministry of Home Affairs.



## 9. PRELUDE TO MAHASHIVARATRI

Mahashivaratri is a celebration of sacrifice, dispassion, and renunciation. Shivaratri teaches us to abandon all other thoughts in contemplation of God and to realize the ultimate purpose of human life. AYUDH Tamil Nadu started preparing for 'Shivaratri2022' well in advance. In an online event organized on 13 February 2022, AYUDHians learned Amma's wisdom about the magic of mantras and how mantra chanting could benefit their material and spiritual life. Ms. Kalpana, Team lead AYUDH TN made an interesting presentation about the benefits of Sri Rudram chanting. Dr. Sethuraman Rao, Assistant Professor at Amrita Vishwa Vidyapeetham shared his insights on Sri Rudram. AYUDHians were motivated to learn Sri Rudram.



## 10. NATIONAL SCIENCE DAY



National Science Day is observed on the 28<sup>th</sup> of February every year in memory of Nobel laureate Sir. C. V. Raman. On this day, institutes organize webinars, conferences, and workshops to create scientific temper among students and faculty. In this connection, Amrita School of Agricultural Sciences organized a webinar on “Showcasing Key Research Findings”. Two speakers of the event were Mr. Krishna Nandan, Live-in-Lab's coordinator, and Mr. Estone Jiji Habanyati, Ph.D. Student, E4 life programme, Amrita School for Sustainable Development, Amritapuri. The speakers shared their

experiences from their published papers. While addressing the audience, Mr. Krishna Nandan, explained the execution of the Participatory Rural Appraisal (PRA) technique in the Karkatta village of Jharkhand, India. Using this PRA, researchers involved the local people to analyze the water crisis problem of the village. A new co-design was developed by the researchers and village community and brought socially relevant solutions and developed a prototype to address the water crisis challenges faced by the farmers.



The second speaker Mr. Estone Jiji Habanyati described the impact of COVID-19 on the agriculture sector survey analysis of farmer responses from Kerala and Tamil Nadu states in India. The survey utilized three phases and phase-wise analysis was carried out for a comprehensive understanding of the situation and its impact. During the

pandemic, inputs that were supplied through shops faced a shortage especially at the beginning of COVID-19, compared to locally available organic materials, indicating the need to ensure adequate storage of inputs at the time of pandemic. Perishable crops viz., rice, bananas, vegetables, coconuts, and flowers suffered maximum crop

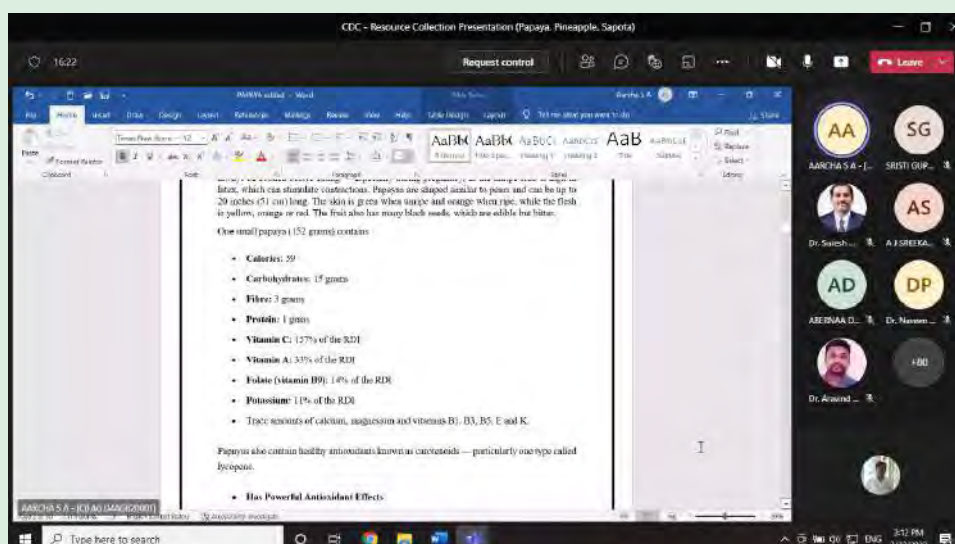
loss compared to pulses, groundnuts, cotton, and rubber, which could all be stored after harvest. Among fertilizers, the maximum shortage was observed for chemical fertilizers (46%) and bio-fertilizers (30%) compared to cow dung (18%) and poultry manure (6%) indicating that farmers tended to use more local materials that could be easily procured and accessed compared to shop-based inputs. The study showcased several graphical, analytical, and statistical representations for better comprehension of the spectators. The speaker suggested that the government needs to strengthen certain areas of agriculture like marketing, warehousing, and post-harvest infrastructure.



Dr. Sudheesh Manalil, Principal and Head Research, ASA while introducing the speakers, emphasized the importance of sharing the research knowledge. The event was coordinated by Dr. Iniyakumar M and Dr. Dhivyapriya D, Assistant Professors, ASA. Totally, 298 NDLI club members were attended and benefitted from the webinar.

## 11. CAREER DEVELOPMENT ACTIVITY - RESOURCE COLLECTION

The Career Development Committee of ASA is making a special effort to ensure students' competence in career-related exams. The committee organized a session on "Technical Review for Exam-Oriented Resource Collection for Students" on 22 February 2022. Secondyear students (2020 batch) were presented their valuable resources in front of committee members and students. Dr. Sudheesh Manalil, Principal and Chairperson (Career Development Committee) guided and reviewed critically all the students' presentations and extended his suggestions for future improvement. Dr. Parthasarathy S and Dr. Aravind J, Coordinators, Career Development Committee, facilitated the event successfully.

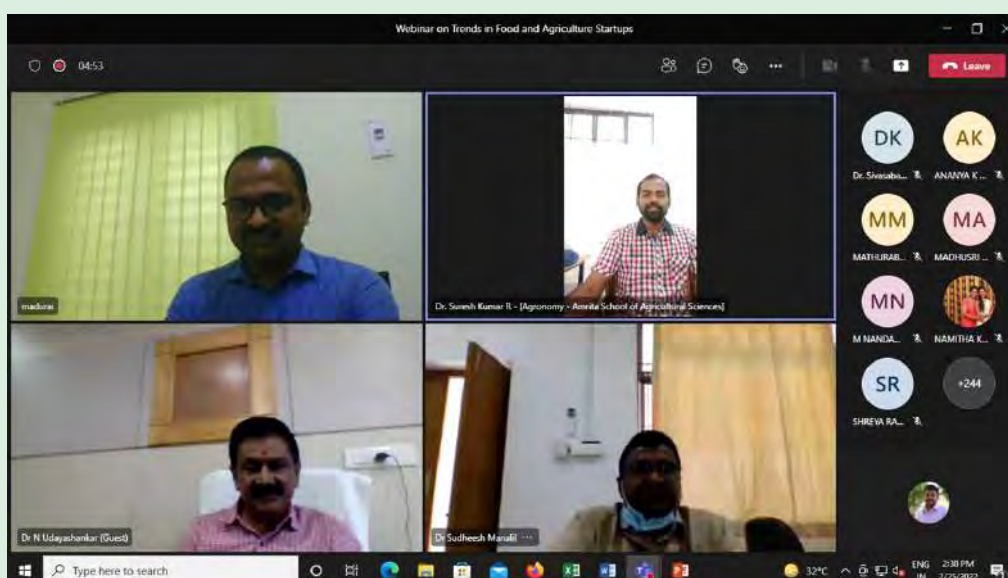




## 12. SKILL DEVELOPMENT SESSION ON TRENDS IN FOOD AND AGRICULTURE STARTUPS

Entrepreneurship education has emerged as a demanding subject to be mastered by young students. With each passing day, as the jobs are getting limited owing to numerous reasons such as technological advancements and population growth, the entrepreneurship option can be seen as a significant career option among the youngsters. With this note, the Skill Development Committee of Amrita School of Agricultural Sciences, Coimbatore, organized a webinar on “Trends in Food and Agriculture Start-ups” on 25 February 2022. Dr. R. Sureshkumar, Assistant Professor (Agronomy) welcomed the gathering and briefed the importance of Entrepreneurship. The presidential address was delivered by Dr. Sudheesh Manalil, Principal, ASA, and in his address, he emphasized the importance of agriculture economization along with the webinar's role in supporting the cause. Dr. N. Udayashankar, Campus Director, Amrita School of Agricultural Sciences, shared his views on the perspective of agricultural start-ups as a special note. The session was delivered by Mr. Sivakumar P, CEO, Madurai

Agri-Business Incubation Forum (NABARD-MABIF), and Mr. Guru Shankar, Senior Manager, NABARD-MABIF. During the session, speakers explained the aspects of the market cycle, the steps involved in business, and the importance of incubation services as a start-up. They elaborated various steps and pre-requisites to approach an incubation center, as well as how to get the maximum benefit out of the services. Further, they quoted the creative and innovative approach through many agro and food-related start-ups, as well as mentioned the fact that high-demanding ideas have a greater success rate. Speakers concluded with a note, that they always encourage new ideas and product development from students and help them to transform into budding entrepreneurs and addressed the queries from the students and faculty. Finally, Dr. Boopathi G, Asst. Professor (Agrl. Engg.) extended his gratitude to the speakers and thanked all the participants for their support and contribution towards the successful conduct of the programme.



## 13. AZADI KA AMRIT MAHOTSAV - SURYA NAMASKAR

India is celebrating 75 years of Independence, this year in the form of a national festival called Azadi Ka Amrit Mahotsav. Surya Namaskara: yajna was conducted as a tribute to the 75<sup>th</sup> Independence Anniversary of Bharatam. The Ministry of AYUSH created an initiative at the beginning of this year to bring everyone together for 75 crores (or 750 million) Surya Namaskaras, in order to promote a healthy lifestyle for everyone around the world. Amma has emphasized the

importance of the daily practice of Surya Namaskara for decades. With Amma's blessings, Amrita Yoga (Mata Amritanandamayi Math) coorganized the 75 Crore Surya Namaskar Yajna to contribute towards this great cause. On January 31, 2022, Swamiji Amritaswarupananda Puri, Vice – Chairman, Mata Amritanandamayi Math inaugurated the auspicious event and 21 Day Surya Namaskar Daily Guided Practice Session was organized from Amrita Yoga.



The faculty and students of ASA participated with great enthusiasm. At ASA, three sessions were organized and Dr. Dhivyapriya D, Mr. Karthik Raja V, and Ms. Mahalakshmi instructed the faculty dutifully. A 21-day challenge of Surya Namaskar was accepted and it was successfully completed by Dr. Dhivyapriya D, Mr. V, Karthick Raja, Ms. Mahalakshmi, Dr. Reena S, faculties of ASA and Ms. Namitha Krishnan, of the second year (2020 batch). To mark the formal closure of the 21-day Surya Namaskara Yajna, Sankalpa Purti Divas was celebrated on 20 February 2022 which was organized from the Amritapuri campus.



#### 14. BMG LABTECH MICROPLATE READER SPECTROstar NANO INSTALLED IN CIL LAB

SPECTROstar Nano is a microplate reader manufactured by German-based firm BMG lab tech. This instrument measures absorbance in the range of 200 -1000 nm in 96 well plates, cuvettes, micro cuvettes, and tray cells. The machine can perform absorbance kinetics under shaking conditions with a reading speed of less than 1 sec/well. The instrument has mass analysis software for simultaneous measurement and analysis of the data. The Amrita School of Agricultural Sciences has purchased this instrument and installed it in Central Instrumentation Laboratory. This instrument has been purchased for measuring enzyme kinetics, quantification of DNA and RNA, etc





### III. RESEARCH AND DEVELOPMENT

#### 1. TURMERIC CROP PERFORMANCE ASSESSING IN INTERCROPPING SYSTEM

The research team at Amrita School of Agricultural Sciences started "Assessing the performance of graded turmeric seed rhizomes on biometric and qualitative features, intercropping in coconut plantation" by involving students who were directed by Dr. Sudheesh Manalil, Principal & Head Research and Dr. S. Kumaresan, Assistant Professor (Horticulture).



#### 2. GREEN SHADE NET HOUSE ESTABLISHMENT

Ornamental Nursery was established with different ornamental plants including indoor plants, ground covers, hanging baskets, and annual flower crops.



## IV. PUBLICATIONS


1. **Dr. P. Naveen Kumar**, Assistant Professor (Agriculture Economics), has published a research article entitled "Industrial IoT and AI implementation in vehicular logistics and supply chain management for vehicle mediated transportation systems ". *International Journal of System Assurance Engineering and Management*. 2022. <https://doi.org/10.1007/s13198-021-01581-2>

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<https://doi.org/10.1007/s13198-021-01581-2>

ORIGINAL ARTICLE



### Industrial IoT and AI implementation in vehicular logistics and supply chain management for vehicle mediated transportation systems

Amitabh Bhargava<sup>1</sup> · Deepshikha Bhargava<sup>2</sup> · P. Naveen Kumar<sup>3</sup> · Guna Sekhar Sajja<sup>4</sup>  · Samrat Ray<sup>5</sup>

2. **Dr. Deepak Chandran**, Assistant Professor (Veterinary Sciences and Animal Husbandry), **Dr. Sureshkumar R**, Assistant Professor (Agronomy), **Dr. Marthandan V**, Assistant Professor (Seed Science) have published a research article entitled "Optimization and identification of lactic acid bacteria with higher mannitol production potential". *Indian Journal of Animal Research*, 2022, 56(1): 1-8. <https://doi.org/10.18805/IJAR.B-4759>

B-4759  
[1-8]

RESEARCH ARTICLE

Indian Journal of Animal Research



### Optimization and Identification of Lactic Acid Bacteria with Higher Mannitol Production Potential

Lejaniya Abdul Kalam Saleena<sup>1</sup>, Deepak Chandran<sup>2</sup>, R. Geetha<sup>3</sup>, R. Radha<sup>3</sup>, C.T. Sathian<sup>3</sup>, Manoj Kumar<sup>4</sup>, R. Sureshkumar<sup>5</sup>, V. Marthandan<sup>5</sup>, Radha<sup>6</sup>

10.18805/IJAR.B-4759



3. **Dr. Deepak Chandran**, Assistant Professor (Veterinary Sciences and Animal Husbandry), **Dr. Sureshkumar R**, Assistant Professor (Agronomy), **Dr. Marthandan V**, Assistant Professor (Seed Science) have published a research article entitled "Development of low-calorie functional yoghurt by incorporating mannitol producing lactic acid bacteria (*Leuconostoc pseudomesenteroides*) in the standard yoghurt culture. *Journal of Pure and Applied Microbiology*. 2022, 16(1): 729-736. <https://doi.org/10.22207/JPAM.16.1.78>

Saleena et al. | J Pure Appl Microbiol | 16(1):729-736 | March 2022  
Article 7614 | <https://doi.org/10.22207/JPAM.16.1.78>  
Published Online March 1, 2022  
Print ISSN: 0973-7510; E-ISSN: 2581-690X



RESEARCH ARTICLE

OPEN ACCESS

## Development of Low-calorie Functional Yoghurt by Incorporating Mannitol Producing Lactic Acid Bacteria (*Leuconostoc pseudomesenteroides*) in the Standard Yoghurt Culture

Lejaniya Abdul Kalam Saleena<sup>1</sup>, Deepak Chandran<sup>2\*</sup> , Geetha Rayirath<sup>3</sup>,  
Arjun Shanavas<sup>4</sup>, Sureshkumar Rajalingam<sup>5</sup> , Marthandan Vishvanathan<sup>6</sup>,  
Khan Sharun<sup>7\*</sup> and Kuldeep Dhama<sup>8</sup>

4. **Dr. Sathyapriya E**, Assistant Professor (Agricultural Extension), has published a research article entitled "What are the consequences of livelihood diversification, and what solutions are suggested? findings from Tamil Nadu, India". *Asian Journal of Agriculture and Rural Development*, 2022, 12 (1), 20-29.



### WHAT ARE THE CONSEQUENCES OF LIVELIHOOD DIVERSIFICATION, AND WHAT SOLUTIONS ARE SUGGESTED? FINDINGS FROM TAMIL NADU, INDIA

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 **M.Vengateswari**<sup>b</sup>  
 **R.Raja Priya**<sup>c</sup>  
 **Reeba Jacob**<sup>d</sup>  
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<sup>d</sup>Department of Social Sciences, S Thangapazham Agricultural College, Tamil Nadu Agricultural University, Tenkasi, Tamil Nadu, India.  
<sup>e</sup>Department of Agricultural Extension, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.

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5. **Mr. Habanyati Estone Jiji**, Research Scholar, **Dr. Sivaraj P**, Assistant Professor (Agricultural Extension), **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), **Dr. Aravind J**, Assistant Professor (Agricultural Entomology), Mr. Rahul K, Farm Assistant, and Dr. Sudheesh Manalil, Principal and Head Research have published a research article entitled "Impact of COVID-19 on the Agriculture Sector: Survey Analysis of Farmer Responses from Kerala and Tamil Nadu States in India". MDPI- *Agronomy*, 2022, 12 (2): 503. <https://doi.org/10.3390/agronomy12020503>



agronomy



Article

## Impact of COVID-19 on the Agriculture Sector: Survey Analysis of Farmer Responses from Kerala and Tamil Nadu States in India

Estone Jiji Habanyati <sup>1</sup>, Sivaraj Paramasivam <sup>2</sup>, Parthasarathy Seethapathy <sup>2</sup>, Aravind Jayaraman <sup>2</sup>, Rahul Kedanhoth <sup>2</sup>, Pozhamkandath Karthiayani Viswanathan <sup>3</sup> and Sudheesh Manalil <sup>2,4,\*</sup>

6. **Dr. Manivasagam V S**, Assistant Professor (Agriculture Informatics), ASA, has published a research article entitled "Climate Risks, Farmers Perception and Adaptation Strategies to Climate Variability in Afghanistan" *Emirates Journal of Food and Agriculture*. 2021; <https://ejfa.me/index.php/journal/article/view/2797>

Emirates Journal of Food and Agriculture. 2021. 33(12): 1038-1046  
doi: xxxxx  
<http://www.ejfa.me/>

### RESEARCH ARTICLE

## Climate Risks, Farmers Perception and Adaptation Strategies to Climate Variability in Afghanistan

Meraj Sarwary<sup>a,b</sup>, Senthilnathan Samiappan <sup>a,\*</sup>, Venkatachalam Saravanakumar<sup>a</sup>, Tamilarasu Arivelarasan<sup>c</sup>, V.S. Manivasagam<sup>d</sup>

<sup>a</sup>Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore - 641003, Tamil Nadu, India, <sup>b</sup>Department of Agricultural Economics & Extension, Nangarhar University, Nangarhar, Afghanistan, <sup>c</sup>Department of Social Sciences, Kumaraguru Institute of Agriculture, Erode-638315, Tamil Nadu, India, <sup>d</sup>Amrita School of Agricultural Sciences, Amrita Vishwa Vidyapeetham, Coimbatore 642 109, Tamil Nadu, India

7. **Dr. Deepak Chandran**, Assistant Professor (Veterinary Sciences and Animal Husbandry), **Dr. Sureshkumar R**, Assistant Professor (Agronomy) have published a review article entitled “Recent Advances in Novel Packaging Technologies for Shelf-Life Extension of Guava Fruits for Retaining Health Benefits for Longer Duration. MDPI – *Plants*, 2022, 11: 547. <https://doi.org/10.3390/plants11040547>

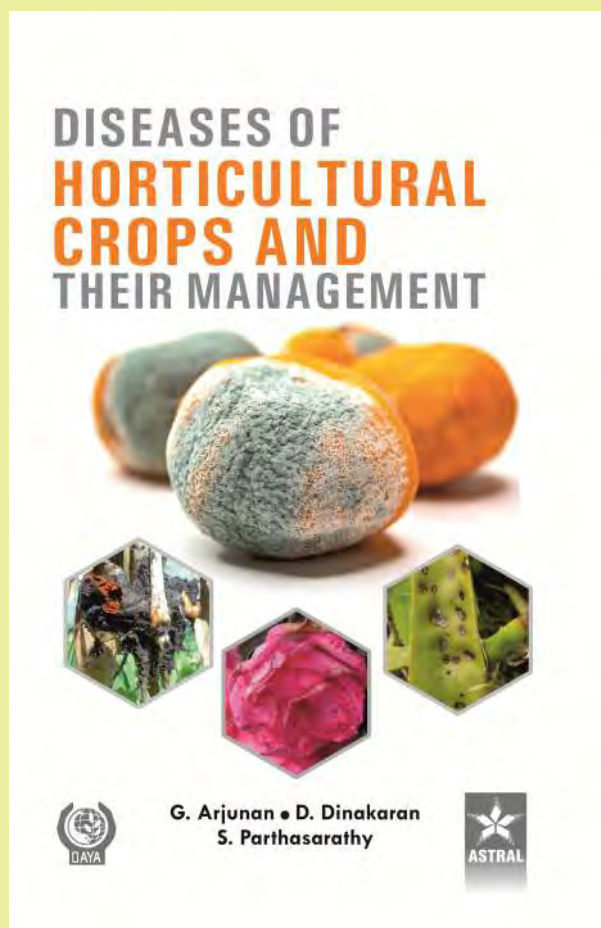


Review

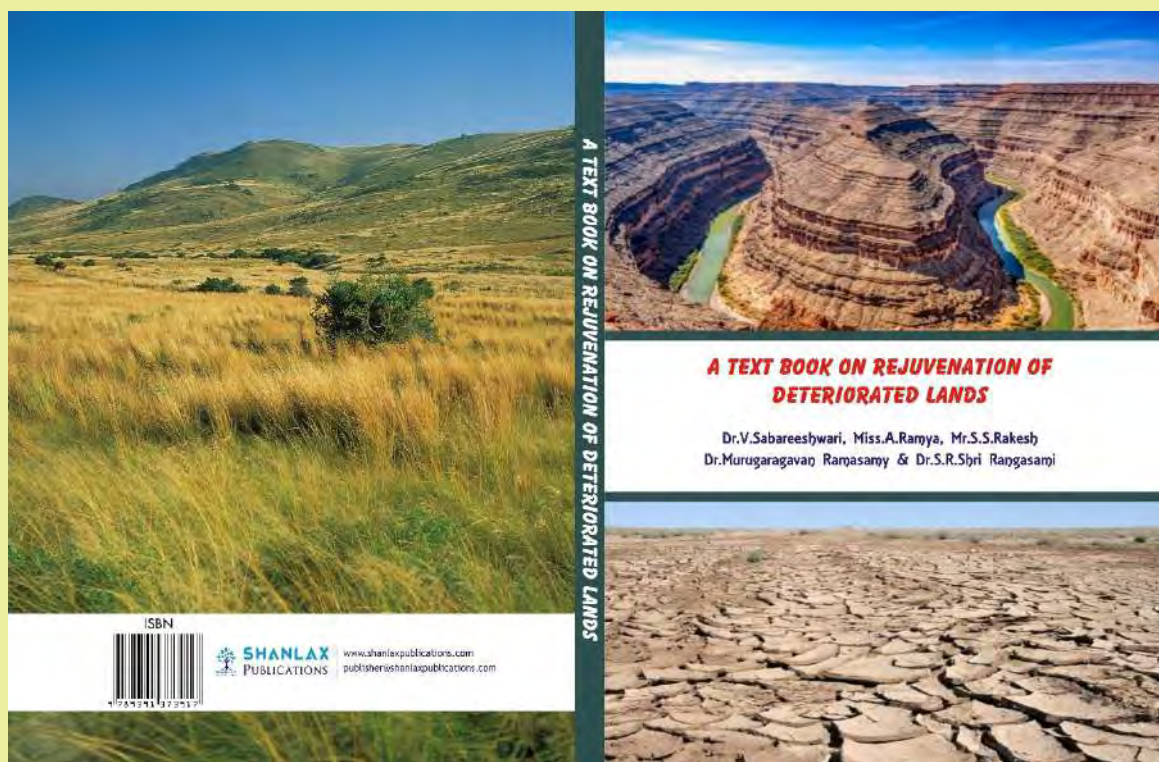
## Recent Advances in Novel Packaging Technologies for Shelf-Life Extension of Guava Fruits for Retaining Health Benefits for Longer Duration

Ajay Yadav <sup>1,2</sup>, Nishant Kumar <sup>2</sup>, Ashutosh Upadhyay <sup>2,\*</sup>, Olaniyi Amos Fawole <sup>3</sup>, Manoj Kumar Mahawar <sup>4</sup>, Kirti Jalgaonkar <sup>5</sup>, Deepak Chandran <sup>6</sup>, Sureshkumar Rajalingam <sup>7</sup>, Gokhan Zengin <sup>8</sup>, Manoj Kumar <sup>9,\*</sup> and Mohamed Mekhemar <sup>10,\*</sup>

8. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology) has published a book entitled “Diseases of Horticultural Crops and Their Management”, ISBN: 9789354613418, Daya Publishing House, India, 524 pages. Available at <https://www.astralint.com/book/9789354613418/diseases-of-horticultural-crops-and-their-management>



9. Dr. **Sabareeshwari V**, Assistant Professor (Soil Science and Agricultural Chemistry), has published a book entitled “A Text Book on Rejuvenation of Deteriorated Lands” with ISBN No: 9789391373917, Shanlax publication.





## V. AWARDS AND ACHIEVEMENTS

1. **Dr. Dhivyapriya D**, Assistant Professor (Genetics and Plant Breeding), won the “Second Prize for Poster Presentation” in the International Conference on “Future Challenges and Prospects in Plant Breeding” held at CPBG, Tamil Nadu Agricultural University, Coimbatore.



2. **Mr. Mahesh S V**, a third-year student (2019 batch), participated and completed the online course offered by the National Institute of Electronics and Information Technology (NIELIT), Calicut.



3. **Dr. Deepak Chandran**, Assistant Professor (Veterinary Sciences and Animal Husbandry) completed the online diploma course on "Post Graduate Diploma in Agricultural Extension Management (PGDAEM)", from the National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India.



4. **Ms. Keerthana Krishna Kumar**, Senior Research Fellow (Soil Science) participated in the online course on "Geo-informatics for Biodiversity Conservation Planning". This online course was conducted from 06-12-2021 to 17-12-2021 by IIRS, ISRO.



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