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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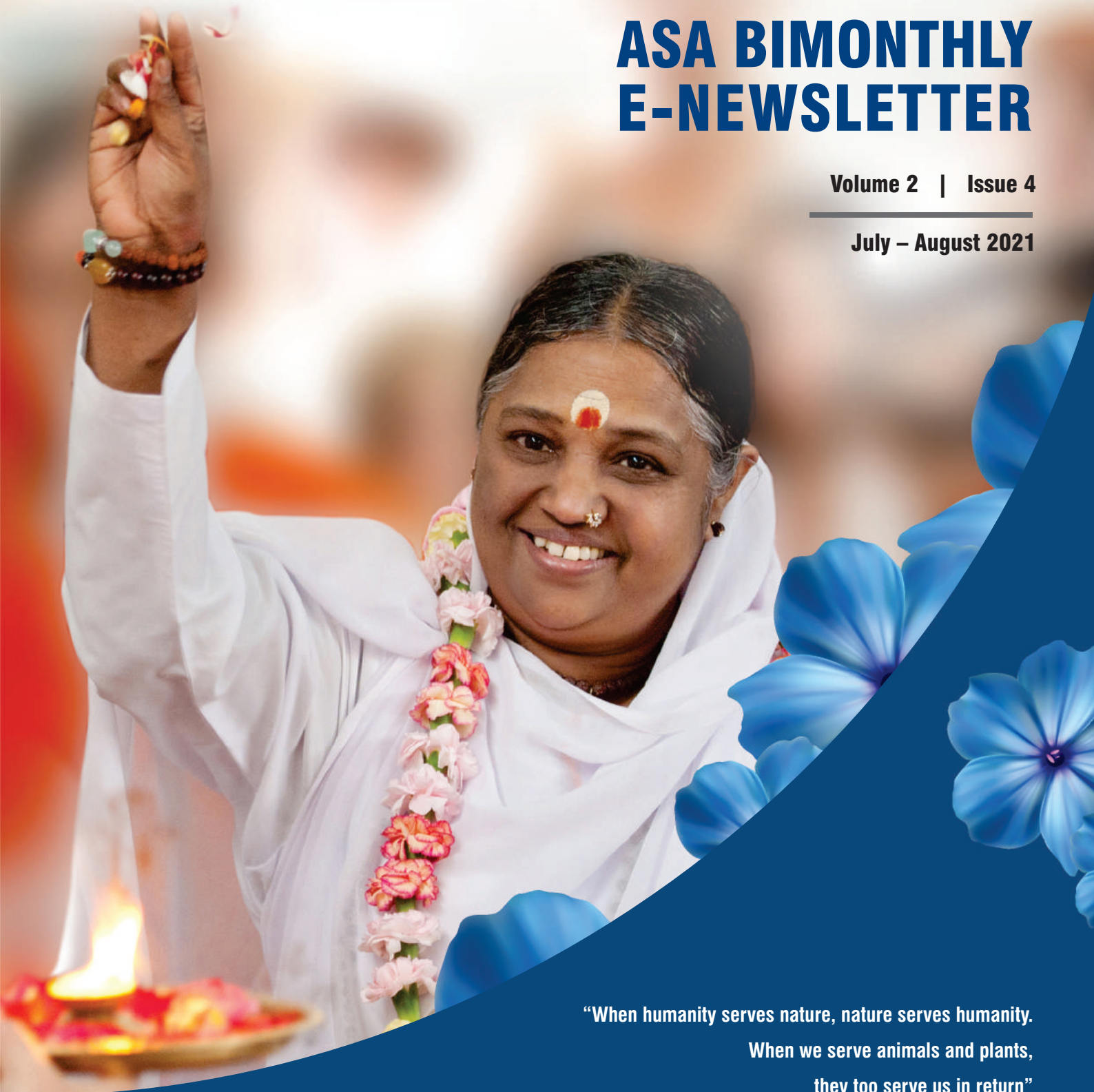
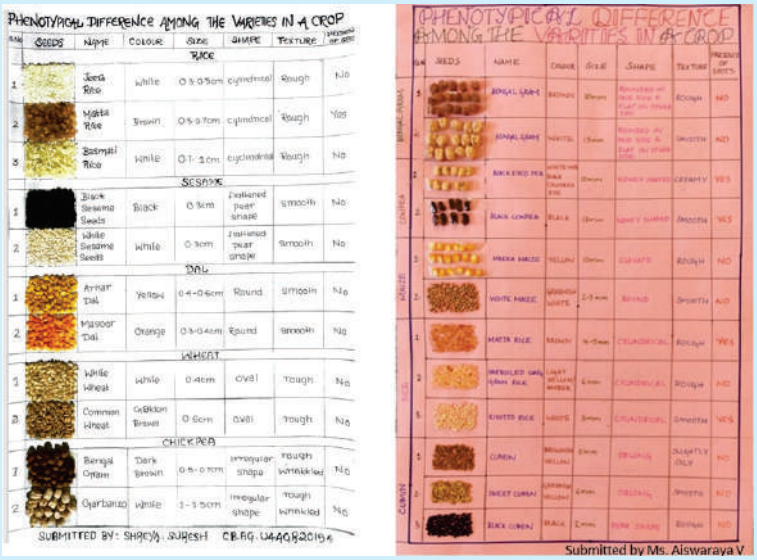


"When humanity serves nature, nature serves humanity.
When we serve animals and plants,
they too serve us in return"

Amma, Sri Mata Amritanandamayi Devi
Chancellor, Amrita Vishwa Vidyapeetham

I - STUDENTS ENDEAVORS

1. VARIETAL SEEDS COLLECTION



As part of the course 19GPB111- Fundamentals of Genetics, the students of the 2020 batch were assigned with the practical work to collect varietal seeds in crops viz., rice, wheat and legume species and to observe the phenotypical differences among the varieties in each crop, as guided by the course teacher Dr. Dhivyapriya D, Assistant Professor (GPB). The various morphological features of seeds viz., the colour of the seed, shape, size, length, breadth, aroma, texture and distinct spot on the seeds were observed by the students. This practical exercise provided a better understanding of the phenotypical differences among the varieties and enhanced the knowledge level of students on this topic.

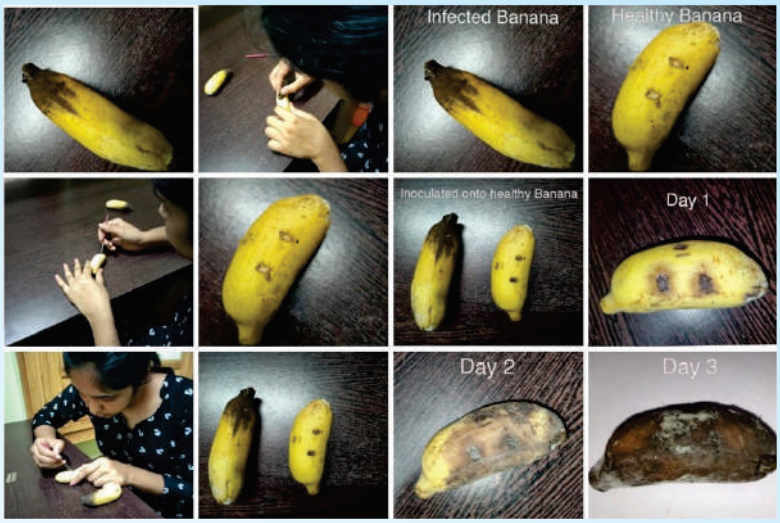
2. CROP DISEASE COLLECTION AND CONSERVATION

As part of the 19PAT111- Fundamentals of Plant Pathology, the course teacher Dr. Parthasarathy S, Assistant Professor (Plant Pathology) has assigned practical tasks to the students on “collection and conservation” of crop disease symptoms.

a) Ms. Meera P & Ms. Aswathi PR, 2020 batch students have prepared experimental videos for Koch Postulates and Wet Preservation methodologies in an excellent manner.

b) First-year students (2020 batch) Ms.Aarcha S.A & Ms. Devika V. M have demonstrated Wet Preservation of mango fruit rot disease specimens using Sodium chloride in their houses.

c) First-year student (2020 batch) Ms. Devika V M, has experimentally proven the Koch Postulates with a periodical observation of the establishment of the inoculated fungal pathogen to cause Banana Fungal Tip Rot.



d) First-year students (2020 batch) Ms. Hridya P, Ms. Diya Prasanth, Ms. Nayana Krishnan, and Ms. Aishwarya Prasanth, have experimented the confirmation of Koch Postulates for fungal pathogen establishment and development towards Apple Bitter Rot disease.

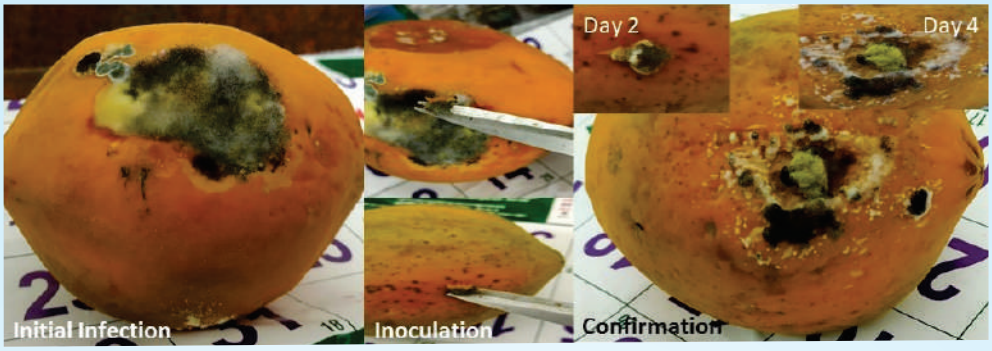
e) Mr. Anuranj P.R, Ms. Abirami Prakash, and Ms. Aswathi PR, 2020 batch students have collected and documented numerous Wild, Edible and Medicinal Mushrooms in their location and have conserved them for phenotypic documentation.

f) Our students are passionate towards the subjects and their learning objectives. Ms. Kaaviya A.V, 2020 batch student has taken an adoring effort and has explored several endangered beautiful macrofungi bio-diversity in Kottagam Village, Kanyakumari District of Tamil Nadu.

g) Ms. Priyanka Gupta, 2020 batch student (from Nepal) has demonstrated Dry preservation and documentation of disease specimens.

h) Learn from the land is more important in agriculture education. Our students are always keen in updating themselves from their native agriculture livelihood during this pandemic situation. Ms. Hridya P, Ms. Nakshatra S, Ms. Nayana Krishnan, Mr. Nithin S Rajan, Ms. Aishwarya Prasanth & Mr. Harisankar J, 2020 batch students have conducted Crop Disease Scoring, Scouting and Collection Experiments. These field visits (following Covid-19 Protocol) have provided them with more lively experiences and knowledge for a better understanding of the crops and crop diseases.

i) Mr. Vishwesh Raja K, 2020 batch has experimented the time-lapse of the establishment of a fungal pathogen on the inoculated ripen papaya fruits. This experiment has given a better visual knowledge about pathogen infection and disease cycle in host plants.



3. VEGETATIVE PROPAGATION OF FRUIT CROPS

As part of the practical assignment for the course 19HOR213- Production Technology for Fruit and Plantation Crops 2 (1+1) handled by Dr. Priya R, Assistant Professor (Horticulture), the students have done vegetative propagation of fruit crops in their farm field and home garden.

Ms. Megha K of III year trying banana propagation through suckers

Ms. Athulya Rajasekharan of III year trying banana propagation through suckers

Ms. Aparna S of III year experimenting
air layering in guava

Ms. Vaishnavi Warrier of III year experimenting
air layering in guava

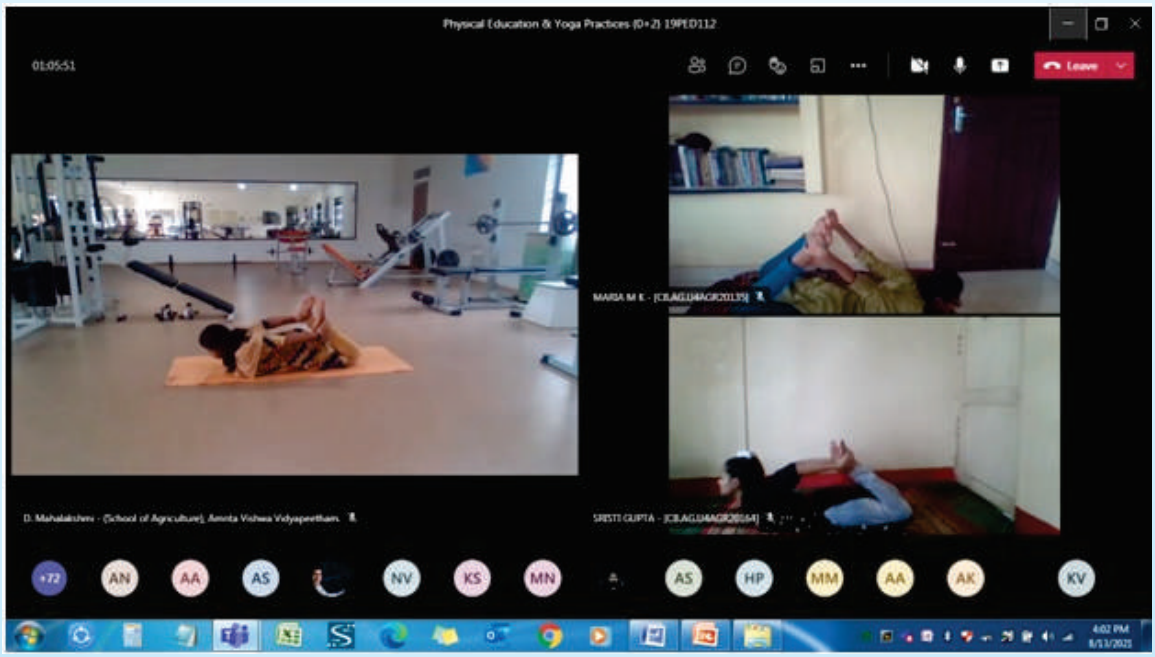
Ms. Sahara Panta of III year trying strawberry
propagation through runners

Mr. Mahesh SV of III year doing crown propagation
in pineapple

Ms. Nanda Vinod of III year trying banana propagation through suckers

4. YOGA: IMMUNITY ASANAS AND BREATHING EXERCISES IN DEMAND DURING THE PANDEMIC

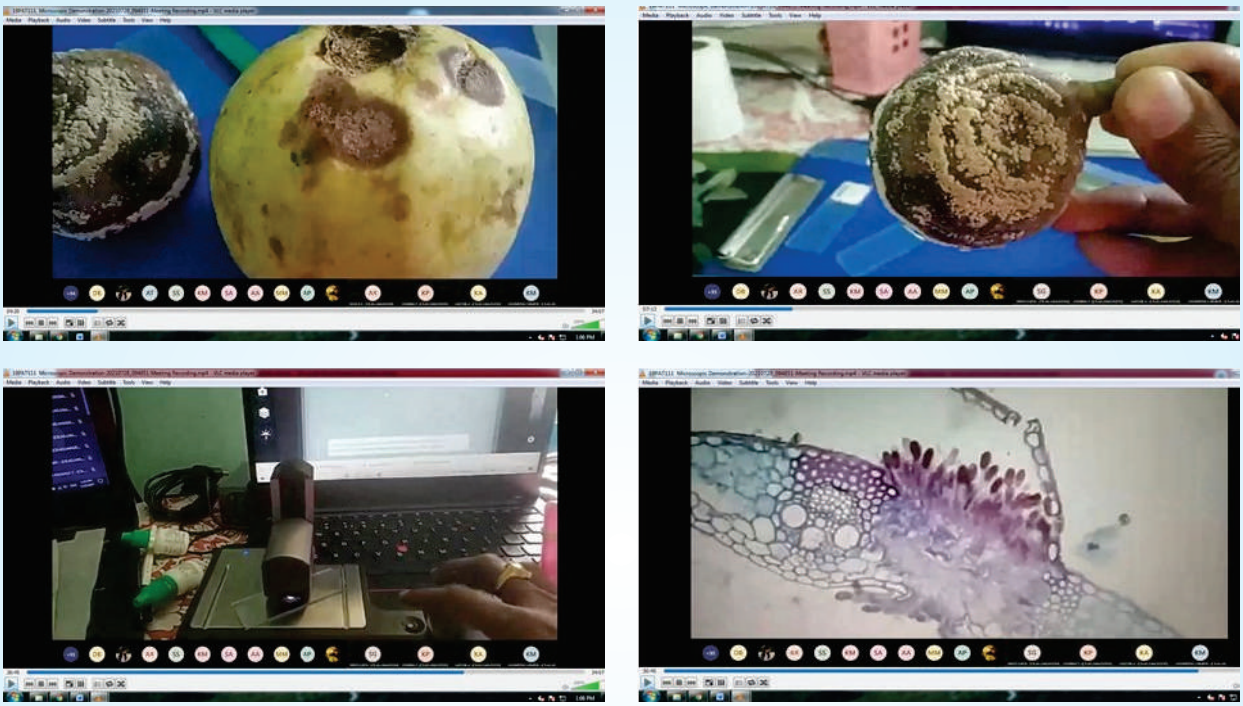
Demand for yoga lessons is at all-time high during the second wave of the pandemic. We need yoga more than ever now, because the entire focus today is on physical and mental wellbeing. As part of the 19PED112 -Physical Education & Yoga Practices (0+2) course handled by Mr. Karthik Raja V and Ms. D. Mahalakshmi, Physical Educators of ASA, students are taking up yoga lessons online for better immunity and mental health with dedicated asanas.



II - COURSE ACTIONS

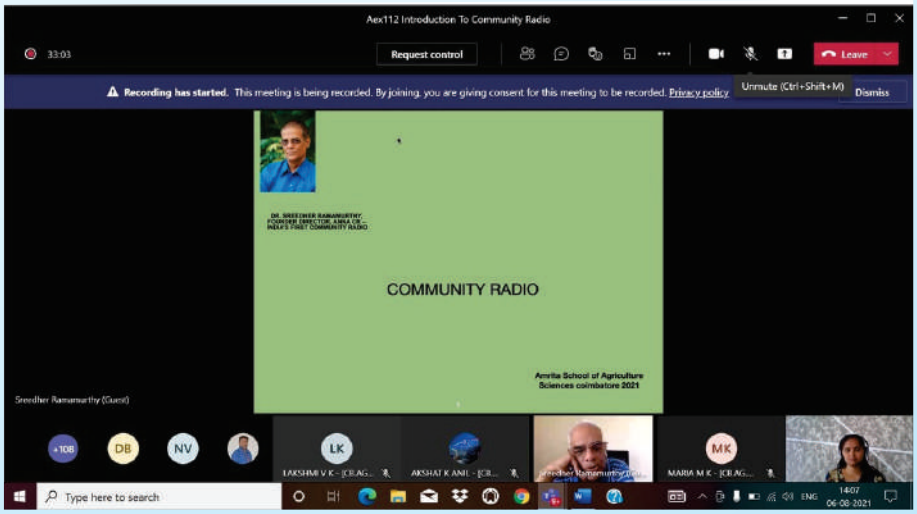
1. VIRTUAL PRACTICAL DEMONSTRATION

ASA aims to timely deliver possible lab-based practical experiments to its students through virtual mode. A virtual demonstration has been delivered to first-year students by Dr. Parthasarathy S on 28.07.2021, as part of practical class of 19PAT111- Fundamentals of Plant Pathology. It includes exposure of lab equipment, dissection techniques and detection of fungal pathogens in various diseased fruits by microscopic sectioning by using ioLight portable microscope and its cloud-enabled software.



2. GUEST LECTURE ON COMMUNITY RADIO – ROLE AND ACTIVITIES

A lecture on "Community Radio – Role and Activities" was arranged as part of the course 19AEX112- Fundamentals of Agricultural Extension Education. The programme was organized through a video conference using the Microsoft Teams App on 06.08.2021. The welcome address was given by the course teacher Dr. E. Sathyapriya, Assistant Professor (Agricultural Extension), ASA. Dr. R. Sreedher, Founder of Community Radio, delivered the guest lecture. He explained the role of community radio on the diffusion and adoption of agricultural technology and success stories elaborately. Also, he interacted with students and shared his experiences on career development. Finally, the session was concluded with a vote of thanks by the course teacher Dr. E. Sathyapriya.



3. CONDUCT OF ONLINE END SEMESTER THEORY EXAMINATION

The online end semester theory examination for the fourth semester (2019 batch) was conducted from 15th to 28th of July, 2021.

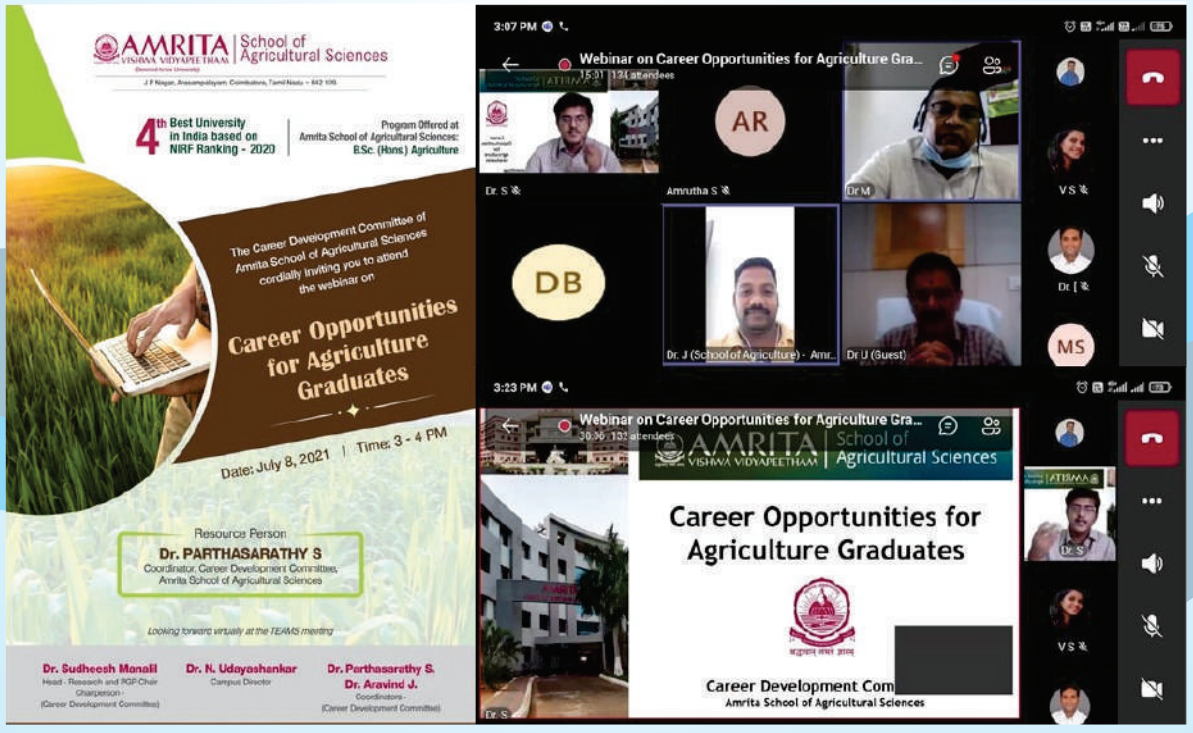
4. ONLINE REGISTRATION OF V SEMESTER

The online registration of the V semester by the students of the 2019 batch was conducted on 9th August 2021 through AUMS. The commencement of online classes was from 10th of August, 2021.

III - COLLGE EVENTS

1. CAREER AND PROFESSIONAL DEVELOPMENT: PLAN TO ACTION

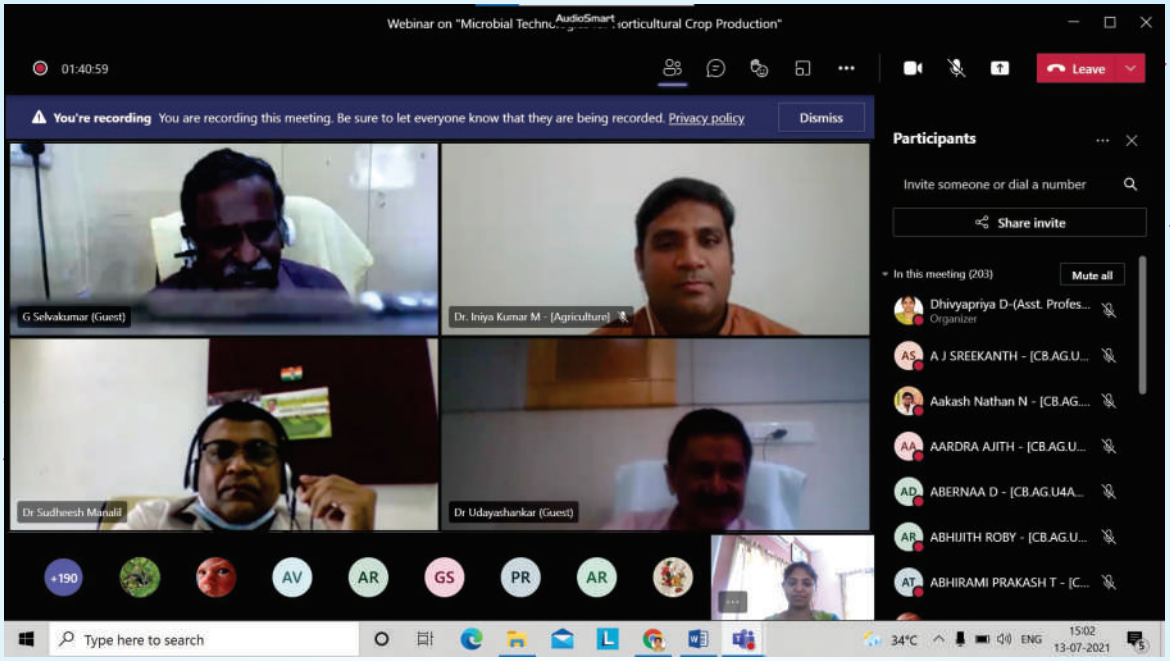
The Career Development Committee of ASA is making a special effort to ensure students on target with educational and career goals and helps them to identify the perfect career path. The committee organized a webinar on "Career Opportunities for Agriculture Graduates" on 08.07.2021 through online mode in Microsoft Teams App. The webinar began with a prayer song by Ms. Amrutha Ramesh, a second-year student. Dr. Aravind J, Coordinator, Career Development Committee welcomed the gathering.



Dr. N. Udaya Shankar, Campus Director, inaugurated the webinar with the presidential address and the keynote address was delivered by Dr. Sudheesh Manalil, Principal, Head Research and PGP Chair, Career Development Committee Chairperson, ASA. The resource person Dr. Parthasarathy S, Assistant Professor, Career Development Coordinator, ASA, delivered the webinar. He gave an admirable overview of career opportunities for agriculture graduates and the plan of action to achieve career goals. The presentation was followed by an interactive opening and students actively upraised their queries, which the speaker addressed. Lastly, Dr. Aravind J, Assistant Professor (Agricultural Entomology) extended his vote of thanks to the chairperson, resource person and all the participants for the successful conduct of the session.

2. WEBINAR ON 'MICROBIAL TECHNOLOGIES FOR HORTICULTURAL CROP PRODUCTION

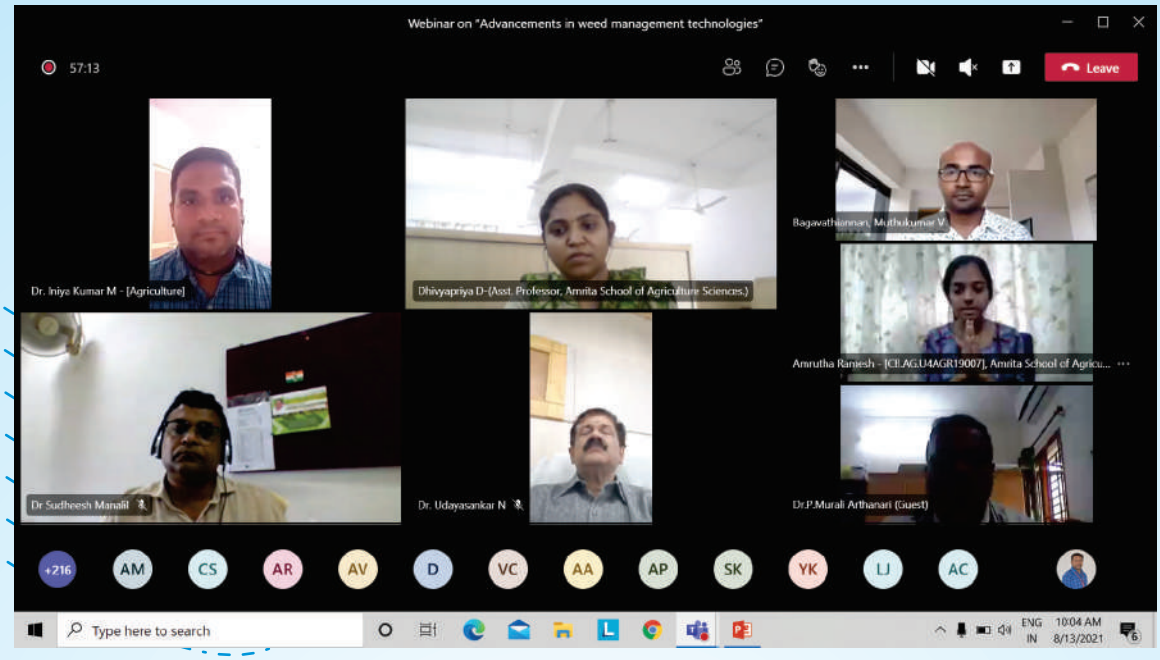
As part of the Webinar Series, the "Microbial technologies for horticultural crop production" webinar was organized by the Webinar Committee of ASA on 13th July 2021. The speaker of the webinar was Dr. G. Selvakumar, Principal Scientist (Agricultural Microbiology), who belongs to the division of Natural Resources of ICAR- Indian Institute of Horticultural Research (IIHR), Bengaluru. The webinar began with a prayer song by Ms. Nandana Mohan, of third year. The welcome speech was addressed by Dr. Dhivyapriya D, Assistant Professor, (Webinar Committee Co-ordinator). Dr. N. Udaya Shankar, Campus Director, ASA officially inaugurated the webinar session and the keynote address was given by Dr. Sudheesh Manalil, Principal, Head Research and PGP Chair, Webinar Committee Chairperson, ASA.



The talk covered the development and application of bio-fertilizer consortiums such as Arka Microbial Consortium, Arka actino- plus, Arka fermented cocopeat and mass production of AM Fungal inoculum on Arka Fermented Cocopeat for horticultural crop production. The webinar discussed on the products development from IIHR, their application and how these products became a great success. The resource person mainly emphasized the merits of the microbial consortium over the conventional bio-fertilizers. The webinar was a great opportunity for faculty and students to gain more knowledge on this topic. The webinar was concluded with a vote of thanks by Dr. Iniyakumar M (Assistant Professor and Webinar Committee Coordinator).

3. WEBINAR ON ADVANCEMENTS IN WEED MANAGEMENT TECHNOLOGIES

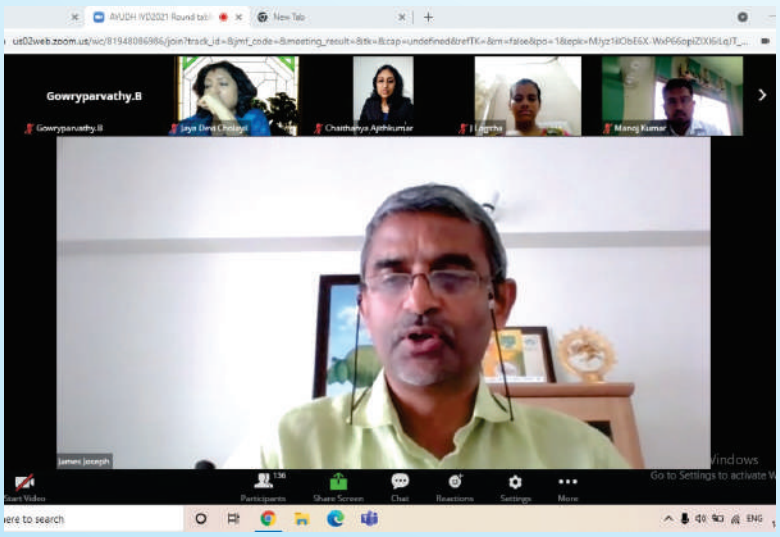
The Webinar Committee of ASA organized a webinar on the "Advancements in weed management technologies" by Dr. Muthukumar Bagavathiannan, Associate Professor, Department of Crop and Soil Sciences, Texas A&M University, USA on 13th August 2021. The webinar began with a prayer song by Ms. Amrutha Ramesh, of third year. The welcome speech was addressed by Dr. Iniyakumar M, Assistant Professor, Webinar Committee Co-ordinator. Dr. N. Udaya Shankar, Campus Director, ASA officially inaugurated the Webinar Session and the keynote address was given by Dr. Sudheesh Manalil, Principal, Head Research and PGP Chair, Webinar Committee Chairperson, ASA.



It was an enlightening session filled with a wealth of information. This was the first webinar of the Webinar Series of ASA in collaboration with Tamil Nadu Agricultural University. The webinar had the foresight of the issue of weeds in our country and the evolution of various technologies and management techniques that could be possibly used to help us to avert the worsening of the current situation of weeds. It was highly informative and an introduction to a whole new world of different possibilities in weed management for the students other than conventional methods. The webinar was concluded with a vote of thanks by Dr. Dhivyapriya D, Assistant Professor.

4. AYUDH - INTERNATIONAL YOUTH DAY 2021

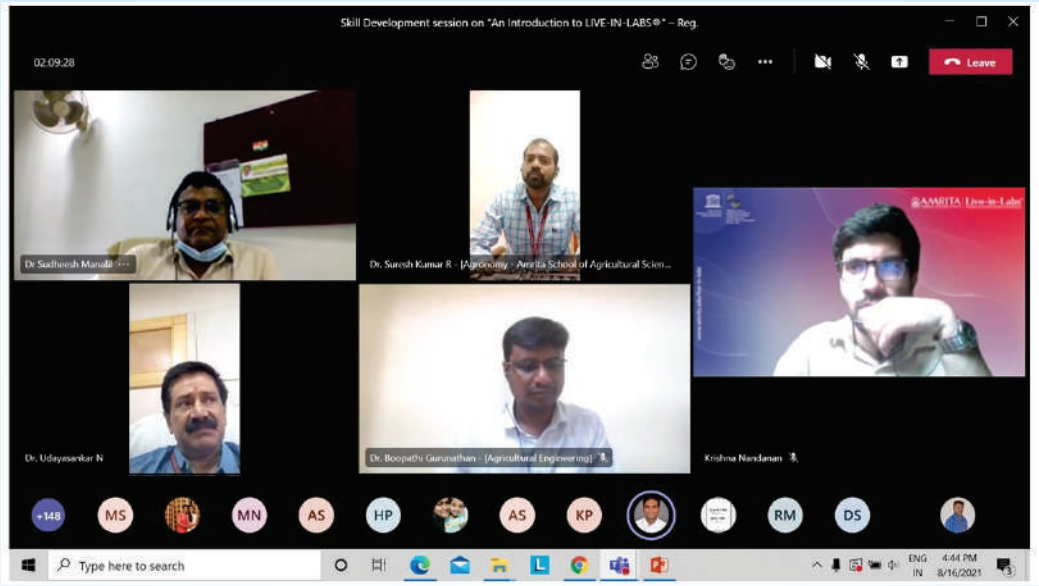
As part of observing International Youth Day 2021, a virtual roundtable of innovators in food systems was organized by AYUDH on 14th August 2021. The theme for International Youth Day 2021 was 'Transforming food systems: Youth Innovation for Human and Planetary Health'. Around 200 AYUDHians actively took part in the roundtable to find solutions to challenges in our current food systems. The innovators who joined the roundtable to share their knowledge on the same were Mr. Deepak Parihar, Mr. James Joseph, Ms. Jaya Debi Cholayil, Mr. Vikas Temani, Ms. Srishti Jain and Dr. Yelloji-Rao Mirajkar. The innovators and experts were impressed with the initiatives of AYUDH for educating the youth.



The speakers also shared their experiences and viewpoints to the participants with the help of PowerPoint. Believe in yourself, apply your minds, was the take-home message for the youth before bidding bye. There will be challenges, but don't stop, work hard; patience is the key when you are innovating, was one such message passed by Mr. Deepak Parihar. This was a roundtable arranged with a thought, by coming together we can build a world in which no one is hungry, no one is poor and no one is left behind to realize Amma's dream.

5. REVEALING THE IMPORTANCE OF MULTIDISCIPLINARY RESEARCH

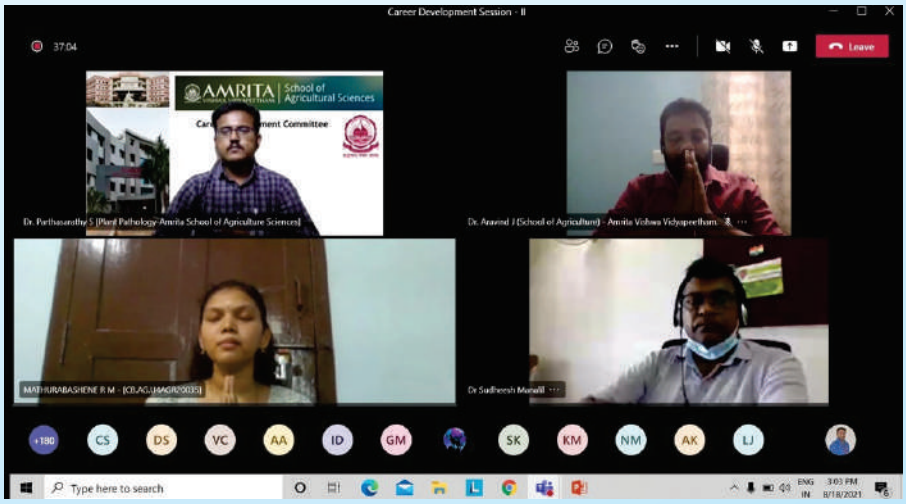
The second webinar on skill development series was organized by the Skill Development Committee on 16.08.2021 through online mode via MS Teams application. The welcome note was delivered by Dr. G. Boopathi, Assistant Professor (Agrl. Engg.), ASA and the introductory address was given by Dr. Sudheesh Manalil, Principal, Head Research and PGP Chair, ASA, and Dr. N. Udaya Shankar, Campus Director delivered the presidential address and expressed his wish to have more collaborative research work between the School of Agricultural Sciences and other Schools of Amrita Institutions.



Mr. Krishna Nandanan, Programme Co-ordinator and Mr. Renjith Mohan, Academic Co-ordinator, Live-in-Labs®, Amrita Vishwa Vidyapeetham, Amritapuri, Kollam have delivered a lecture on "An Introduction to LIVE-IN-LABS® - Opportunities in multidisciplinary collaboration in the field of research, academic and outreach programs under the auspices of LIVE-IN-LABS®". Mr. Krishna Nandanan, elucidated the importance of multidisciplinary collaborative research which has changed many lives in the rural community. He explained the various activities of Live-in-Labs at many villages throughout the country and involving students from Amrita Institutions and foreign universities. At the end of the session, the students interacted with Mr. Krishna Nandanan and Mr. Renjith Mohan and clarified their queries. Finally, Dr. R. Sureshkumar, Assistant Professor (Agronomy), ASA thanked all the participants for their support and contribution towards the successful conduct of the skill development programme.

6. USING BEST PRACTICES TO IMPROVE COMPETITIVE EXAM PREPARATION

We, under the auspices of the Career Development Committee are highly dedicated to competitive test preparation to serve the nation, employability skill development to lead the nation, and life skill development in order to create future leaders for the country.



The Career Development Committee of our School organized a session on “Resource Collection and Preparation for Agriculture Competitive Exams” on 18.08.2021 through virtual mode in MS Teams. The webinar began with a prayer by Ms. Mathurabashene RM, of the 2020 batch. The welcome note was delivered by Dr. Parthasarathy S, Coordinator, Career Development Committee, ASA. The keynote address and career guidance were delivered by Dr. Sudheesh Manalil, Principal, Head Research, and PGP Chair, Career Development Committee Chairperson, ASA. Dr. J. Aravind, and Dr. Parthasarathy S, Coordinators, Career Development Committee, ASA, jointly delivered a lecture with more emphasis on the exam preparation strategies, the significance of previous question banks (UPSC, SSC, IBPS, ICAR-ARS/SRF/JRF, State PSC, etc.) on significant crops, the bottom-down approach of preparation, plan-prepare-practice modules and shared their experiences in cracking agriculture-oriented competitive exams. Finally, Dr. Aravind thanked all the participants and faculty for their contribution towards the successful conduct of the session.

7. CIVIL SERVICE FOUNDATION COURSE

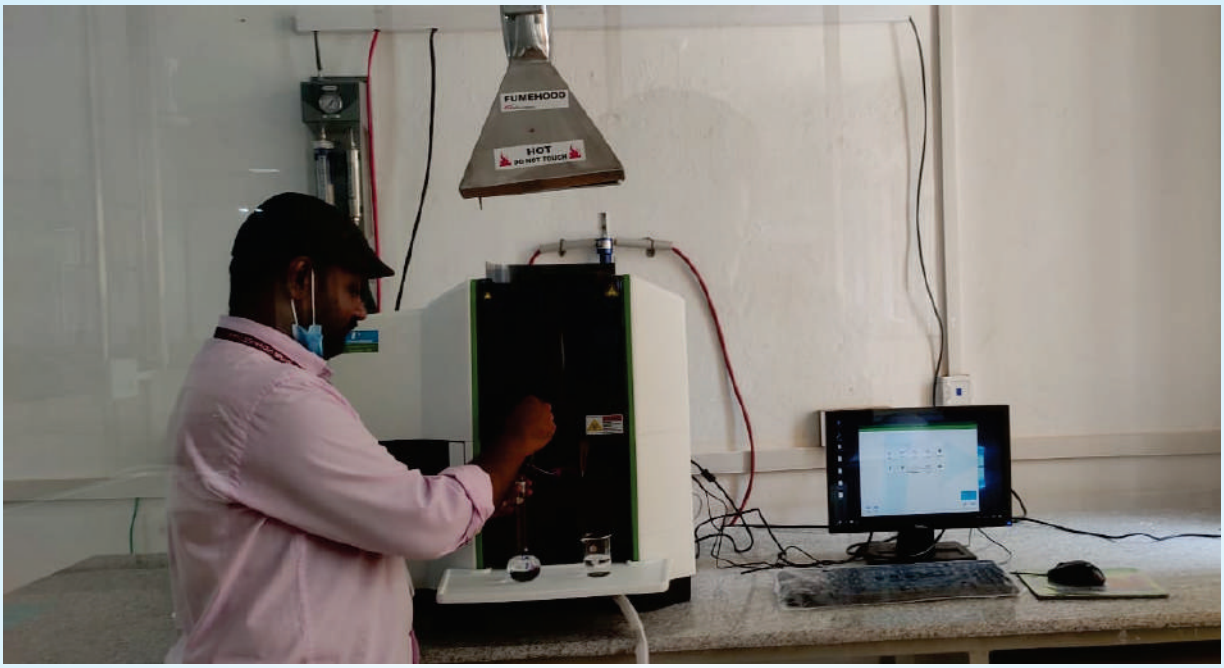
ASA Civil Service aspirants received glimpses of World History events from the 18th century such as the Industrial revolution, Colonization, Decolonization, World wars, Redraw of national boundaries, Political philosophies such as capitalism, socialism, communism, etc., to develop an analytical approach to tackle World History and to analyze the causes and results of every event.

8. AUTOMATIC WEATHER STATION (AWS)

To improve our weather monitoring, an automatic weather station (Model: WatchDog 2700) was installed in our ASA campus. Weather Station was placed inside the Meteorological observatory. AWS was operational from 12th August 2021 which recorded major weather variables namely, rainfall, temperature, relative humidity, wind speed, wind direction, solar radiation and photosynthetically active radiation in every 15 minutes.

9. INSTALLATION OF ATOMIC ABSORPTION SPECTROPHOTOMETER (AAS)

Atomic Absorption Spectrophotometer (AAS) is one of the analytical instruments available in the Central Instrument Laboratory, Amrita School of Agricultural Sciences, Coimbatore. Atomic absorption spectrophotometry is an analytical technique used for the measurement of elemental concentrations in liquid samples. Also, the known mass of solid samples can be dissolved in a specific solvent and the dissolved material can be analyzed for its composition. Atomic absorption is a sensitive technique and can measure the concentration of an element up to parts per million or parts per billion of a gram in a sample. In this technique, we utilize the wavelength of light emitted by a lamp and its absorption by an element present in the sample, which corresponds to the energies required to support electrons from lower energy state to higher energy state. It includes a flame burner to atomize the sample, a monochromator, and a photon detector.

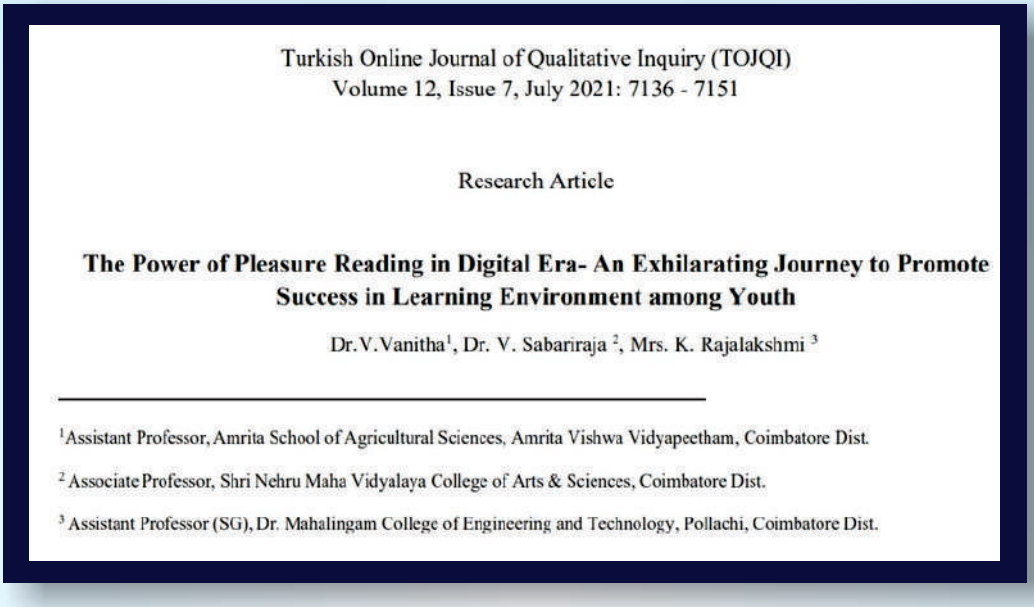


Instrument Specification- Model: AAS Pinnacle 500, Make: Perkin Elmer, USA, Available lamps: 13 (Ca, Mg, Fe, Hg, Pb, As, Mn, Cu, Cd, Cr, Fe, Ni, and Zn) and Techniques: Flame and Mercury Hydride system (MHS).

AAS instrument will be utilized for carrying out analysis in soil, plant, fertilizer, manure, blood, milk, cement, water, urine, petrol, food, and pesticide samples. Also, this instrument can be used to know the absorption spectra of trace elements.

IV - PUBLICATIONS

1. **Dr. V. Vanitha**, Assistant Professor (English), ASA, has published a research article entitled “The Power of Pleasure Reading in Digital Era- An Exhilarating Journey to Promote Success in Learning Environment among Youth”. Turkish Online Journal of Qualitative Inquiry (TOJQI), Vol 12 (7), July 2021.



Turkish Online Journal of Qualitative Inquiry (TOJQI)
Volume 12, Issue 7, July 2021: 7136 - 7151

Research Article

The Power of Pleasure Reading in Digital Era- An Exhilarating Journey to Promote Success in Learning Environment among Youth

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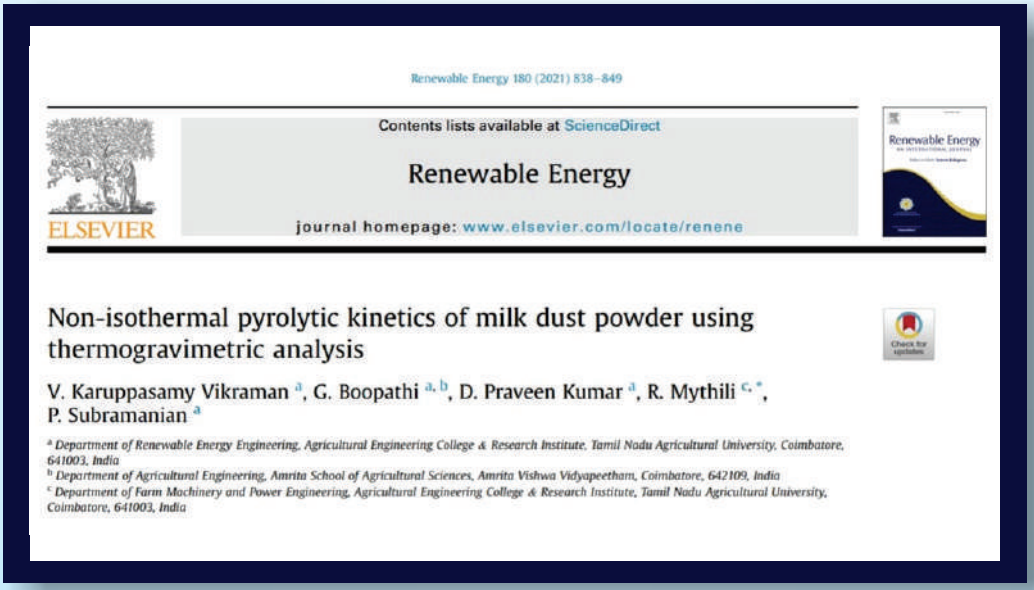
[2] Associate Professor, Shri Nehru Maha Vidyalaya College of Arts & Sciences, Coimbatore Dist.

[3] Assistant Professor (SG), Dr. Mahalingam College of Engineering and Technology, Pollachi, Coimbatore Dist.

2. **Dr. G. Boopathi**, Assistant Professor (Agriculture Engineering), ASA, has published a research article entitled “Non-isothermal pyrolytic kinetics of milk dust powder using thermogravimetric analysis”. Renewable Energy. 2021. https://doi.org/10.1016/j.renene.2021.08.099



Renewable Energy 180 (2021) 838–849

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Non-isothermal pyrolytic kinetics of milk dust powder using thermogravimetric analysis

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V - RESEARCH CORNER

Mr. ESTONE JIJI HABANYATI, a Zambian, is enrolled in the Amrita E4LIFE International Ph.D. Program in Sustainable Development at Amrita Vishwa Vidyapeetham's Amrita School of Sustainable Development in Amritapuri, Kollam. He is currently working on his research entitled "Challenges and Constraints in the Adoption of Organic Farming in India". His doctoral committee includes **Dr. Sivaraj P**, Assistant Professor (Agricultural Extension) as well as **Dr. Sudheesh Manalil**, Principal, Head Research, and PGP Chair, **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), **Dr. Aravind J**, Assistant Professor (Agricultural Entomology), ASA, and **Dr. P. K. Viswanathan**, Professor (Economics and Sustainability), Amritapuri campus.

Mr. MASOUD BARATI KAKOLAKI, from Iran, is enrolled in the Amrita E4LIFE International Ph.D. Program in Sustainable Development on our ASA campus. **Dr. V.S. Manivasagam**, Assistant Professor (Agricultural Informatics) and **Dr. Sudheesh Manalil**, Principal, Head Research, and PGP Chair, ASA, are his collaborators. His research focuses on applying an integrated modelling and field testing strategy to optimize the period of planting in rice crops.

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