



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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NEW YEAR 2021 MESSAGE FROM BELOVED AMMA!!!

"Here we are again at the doorstep of another New Year. Just thinking of New Year awakens vibrations of hope, happiness, and enthusiasm within us. New Year is a reminder about the flow of time. It is love that makes everything new and fresh. We will only be able to experience as much newness and freshness in our life as there is love within us. If the light of love is not present in us, then even in new things we will only be able to experience darkness. It is love and compassion for others that fill our life with freshness. May the flowers of peace and joy blossom in my children's hearts! May those flowers' fragrance spread throughout the world through your good deeds! May my children carry the message of love and peace to the world. May the Paramatma bless my children and fill their lives with peace and contentment. May grace bless my children with the health and mental strength to achieve this."

Amma, Sri Mata Amritanandamayi
Chancellor, Amrita Vishwa Vidyapeetham

NEW YEAR 2021 MESSAGE FROM THE PRINCIPAL



This second issue of Newsletter from Amrita School of Agricultural Sciences happens to be released as the paramount progressive step in 2021. Let's pray for AMMA's Grace for a Pandemic-free, active campus, with blossoms of knowledge and love among our young generation. The academic accomplishments through online mode have remained unhindered despite the turbulent times. Apart from dedicating themselves in online classes, both the first year and second year students are being involved in, a lot of self-disciplined creative activities of crop husbandry, mushroom cultivation, developing locally suitable, innovative technologies, glimpses of which can be seen in this issue of our Newsletter. By practicing such activities, the students are unquestionably molded as true professionals who, I am sure to be entrepreneurs rather than job seekers. I am certain that this issue highlights the achievements of the institute which has undeniably made the best use of these hard times. Let's devote ourselves at the Lotus feet of AMMA to succeed in this "Yantra" of real education by sustaining the momentum throughout.

Dr. P. Sureshkumar, Ph.D.,

Principal,
Amrita School of Agricultural Sciences.

NOTES FROM THE DESK OF HEAD RESEARCH



Chancellor Amma says "Shradha" is the most important quality one should nourish, sharpen and develop throughout their life in the process of learning. When we approach a situation with this awareness, many possibilities will be apparent and a researcher/ learner in you will try to have perfect understanding and will identify many relevant questions that need answers. As our students advance with enhancing awareness in the basics of agricultural sciences, it is time for us to synthesise and develop hypothesis questions that could be researched through pilot studies/research trials with the best use of facilities and expertise around us. I am sure with Amma's blessings, the year 2021 will provide enormous opportunities to participate and provide solutions to such socially and scientifically relevant topics.

Let Chancellor Amma bless us to fulfill all such endeavours.

Dr. Sudheesh Manalil Ph.D., (UWA, Australia)

Head of Research & Professor, Chair Person, Post Graduate Programmes,
Amrita School of Agricultural Sciences

I. STUDENTS' ACTIVITIES

1. FIRST EXPERIENCE IN CROP PRODUCTION

Ms. Nayana Krishnan, joined first year B.Sc. (Hons) Agriculture, in Amrita School of Agricultural Sciences amidst the pandemic situation and the scope of on-campus practical exposure was limited. But the activities with the practical experiments helped her to connect with the subject as well as with Mother Nature. So, she took up the challenge of trying it at her home. Using the available limited area at her home, the soil was tilled well and mixed with organic manure (cow dung) in order to ensure slow supply of nutrients for a considerable period of time. Green gram (*Vigna radiata*) seeds which are easily and readily available were sown by both broadcasting and dibbling method. The seeds were scattered in broadcasting method. For dibbling method, tilled soil was molded with ridges and furrows and the seeds were placed in the ridges one by one into holes made using fingers, at a depth of about 3-4 times the diameter of the seed. The holes were then covered with soil. Proper weeding was done at regular intervals. The seedlings were irrigated once in three days and special care was given during the sensitive period of growth i.e., during the flowering and pod formation stages, since the supply of water and other management practices at later or prior stages without supplying these during the critical period will not compensate the yield loss. All the different stages of the plant growth and development were recorded weekly by taking photographs. This was done as a part of AGR101- Fundamentals of Agronomy (3+1) practical activity under the guidance of the course teacher Dr. R. Sureshkumar, Assistant Professor (Agronomy), ASA.



2. STUDENTS CROP CULTIVATION EXPERIENCE ON VEGETABLES AND SPICES

The students of third semester are currently undergoing a course on 19HOR201- Production Technology for Vegetables and Spices (1+1), being handled by Dr. R. Priya, Assistant Professor (Horticulture), ASA. To fulfill the practical requirements of this course, different crops were sown/ transplanted in raised beds of 1 m width, 15 cm height and 12 m length at the appropriate spacing required for each crop, on 11th December, 2020. The crops included Solanaceous vegetables (viz., tomato and brinjal), Cruciferous vegetables (viz., cabbage and cauliflower), Cucurbitaceous vegetables (viz., pumpkin, ash gourd and watermelon), Root vegetables (viz., radish, beetroot and carrot), Leguminous vegetables (viz., cluster bean and rajma bean), Leafy vegetables (viz., coriander and amaranthus) and okra. Weeding and proper irrigation were provided at regular intervals.



3. MUSING ON THE MEADOWS

Ms. Soundharya Sivakumar, II year student

We, the students of second year (batch 2019) as part of the Livestock and Poultry Management course were split into groups of four to interact with a dairy farmer and understand the management practices followed in the unit, and the financial aspects of rearing.

The project involved a complete survey and analysis of the farming unit, which complemented the course content as there was practical learning about the various breeds of livestock and poultry, their general management, housing, feeding, breeding, diseases, etc.

Through interaction with farmers of different states, colloquial terms used in different languages for the feed or equipment, and some of their indigenous technical knowledge were also learnt. The meeting facilitated in enhancing our confidence as we received beneficial exposure of relating the topics learnt in classes with real life situations. We were also able to identify the problems faced by the farmers, and tried to suggest some useful practices to improve their productivity. The significance of the animal husbandry sector in the livelihood security of the farmers was realized personally by each one of us. The diversity of the dairy farming practices across regions was clearly portrayed when all the groups of students presented their farmer's case in the class. Listening to 30 different success stories of livestock entrepreneurs along with the hurdles they faced, was an enlightening experience.



4. HANDS ON EXPERIENCE TOWARDS SOIL SAMPLE COLLECTION

Successful crop production is reliant on effective nutrient management. And the base for management decisions about the fertilizer / nutrient requirements is soil testing. To derive real benefit from soil testing, it is necessary to take the soil sample by correct and scientific method. After gaining the theoretical knowledge on soil sampling in the course Fundamentals of Soil Science, students of first year B.Sc. (Hons) in Agriculture collected soil samples in their locality by adopting the standard procedure.

Firstly, the field was divided into smaller units based on variations in slope, colour, texture, crop growth and management. Sampling locations were identified by making a zig-zag walk in the field, to collect 10-15 randomly distributed samples. Surface litters were scrapped away without disturbing the surface soil and a "V" shaped cut to the plough depth (15 cm) was made. A slice of 1.5 cm thick from the top to the bottom of the exposed face of the V shaped cut was taken and placed in the bucket. Entire sample was thoroughly mixed and by quartering, the bulk sample was reduced to get a 500g of composite sample. Quartering was done by dividing the thoroughly mixed soil into four equal parts and discarding two opposite quarters. Remaining two quarters were mixed again and divided into four parts and two were rejected again. This was repeated until to reach the desired quantity of sample. The soil was then transferred to a clean polythene bag and

labelled with information like farmer name, location of farm, survey number, previous crop grown, crop to be grown in next season, date of collection, name of the sampler, etc.



5. SOIL TEXTURE DETERMINATION BY FEEL METHOD

The COVID-19 pandemic has triggered new ways of learning. All over the world, educational institutions are using online learning platforms to educate their students. Students of Amrita School of Agriculture have well adapted to online classes in this pandemic situation. After getting theoretical knowledge through online lectures, students are motivated to do the possible practical experiments in their home. As a part of Fundamentals of Soil Science practical, 1st year B.Sc. (Hons) in Agriculture students have practiced soil texture determination by feel method and here are few snapshots.



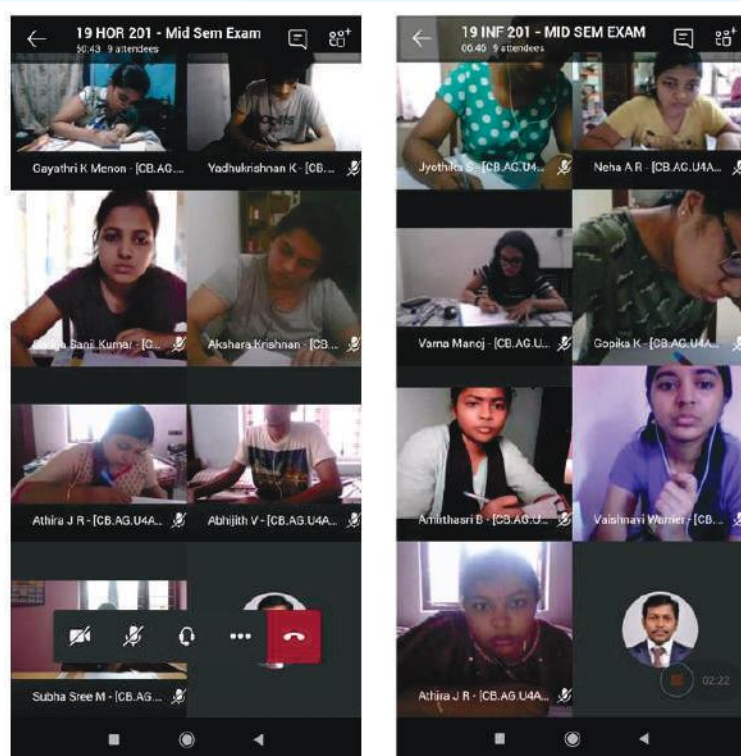
Ms. Anu Sree S, II year student, Amrita School of Agricultural Sciences has actively participated in the National Webinar on Management of Root-rot disease of Horticultural Crops organized by the Department of Plant Pathology, PG College of Agriculture on November 24, 2020.



II. COLLEGE ACTIVITIES

1. CONDUCT OF ONLINE MID- SEMESTER EXAMINATION

The online Mid-Semester Examination for the third semester was conducted from 6th to 18th of November, 2020. The question papers were reviewed by a committee headed by the Principal and assisted by Dr. Priya, R., Assistant Professor (Horticulture) and Dr. Mahanti Naveen Kumar, Assistant Professor (Agricultural Engineering). A pre-prepared random set of seven to eight students were invigilated by a faculty through video mode in Microsoft Teams app. The exam was written on paper and the same was scanned and mailed to the concerned invigilator. The answer sheets were evaluated by the course teachers and was approved by the online class committee meeting held on 1st December, 2020. The marks were circulated to the students for queries and later uploaded in AUMS.



2. WORLD SOIL DAY CELEBRATION 2020: 'KEEP SOIL ALIVE; PROTECT SOIL BIODIVERSITY'

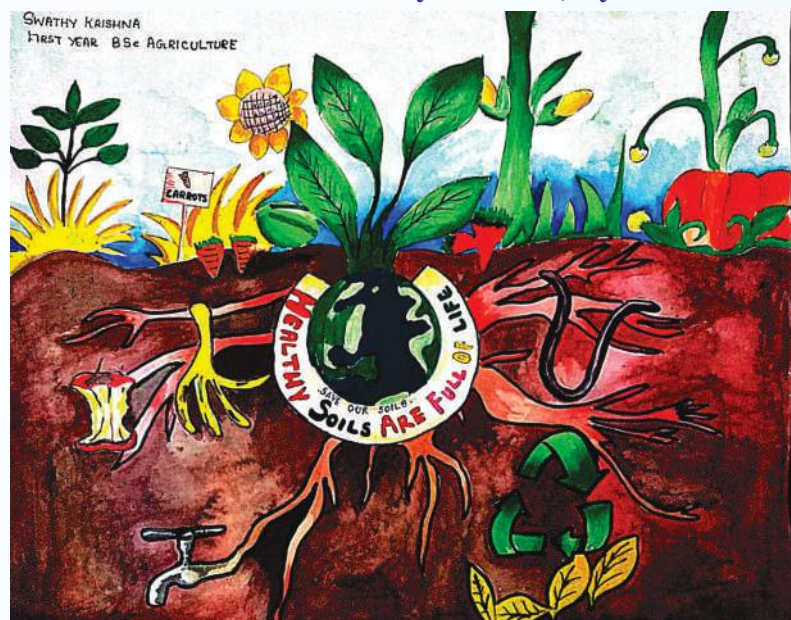
Amrita School of Agricultural Sciences celebrated World Soil Day on 5th Dec 2020 through Teams App. The online event commenced at 10.00 a.m. with all the faculty and students of I and II B.Sc. (Hons) Agriculture. The virtual event was coordinated by Dr. S. Reena, Assistant Professor (Biotechnology) and Dr. D. Dhivyapriya, Assistant Professor (Genetics and Plant Breeding), with the theme "Keep Soil Alive; Protect Soil Biodiversity". Second year B.Sc. (Hons) Agriculture students Ms. Catherine P Shaju and Ms. Pooshna Sri M moderated the event. Ms. A. Manuvanthra delivered the welcome address. The key message was delivered by our College Principal and well-known Soil Scientist Dr. P. Sureshkumar emphasized the significance of mother earth in our journey of life and the importance of preserving soil in every possible way. Mrs. Hemalatha R, Visiting Faculty (Cultural Education) narrated the spiritual and cultural importance of the soil and mother earth. Student activities such as presentations and quiz were conducted as a part of the event. The students' performance was evaluated by Dr. P. Janarthanan, Assistant Professor (Agronomy) and Dr. R. Suresh Kumar, Assistant Professor (Agronomy) along with the coordinators of the event.

The students actively participated in the event by displaying their creative ideas in the form of posters, photos and videos as a means to emphasize the importance of soil biodiversity and the necessity of preserving it. Ms. Soundharya Sivakumar of II B.Sc. (Hons) Agriculture and Ms. Swathi Krishna of I B.Sc. (Hons) Agriculture shared the first prize in the poster competition. Ms. Anjali. M and Ms. Shreya, V. K of I B.Sc. (Hons) Agriculture, won the second prize. Third prize was shared among Ms. Nakshathra. S and Ms. Meera. P of I B.Sc. (Hons) Agriculture and Mr. Mahesh, S. V of II B.Sc. (Hons) Agriculture. For the quiz program students were divided into two groups. Each group consisting of students from I and II year. The students participated enthusiastically in the quiz program, which had questions about soil formation, soil biodiversity etc. It was entertaining as well as informative. Both the teams scored equal marks in the quiz program. Principal appreciated the students' performance. Finally, Mr. Kaviarasu proposed vote of thanks and the program came to an end at 12.40 p.m.

FIRST PRIZE - Ms. Soundharya Sivakumar, II year student



FIRST PRIZE - Ms. Swathy Krishna, I year student



SECOND PRIZE - Ms. Sreya R, I year student

International Soil Day
DECEMBER 5

Protect our soil

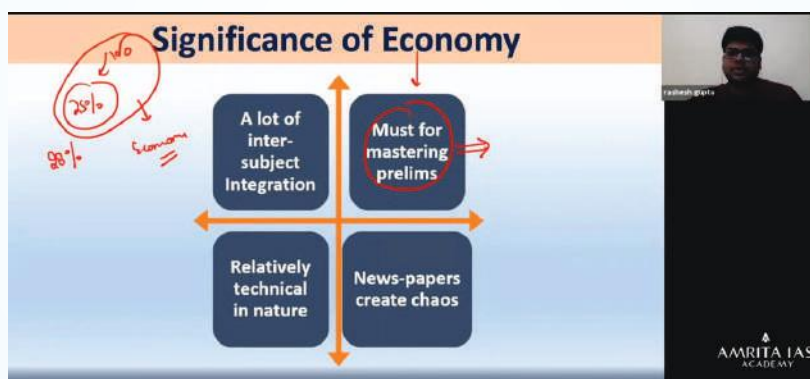


3. ASA CIVIL SERVICE FOUNDATION COURSE - WISDOM WITH A RESOLUTE DETERMINATION

With the Divine guidance of our Amma, Amrita School of Agricultural Sciences continued its journey to show the right path for the Civil Service aspirants with the guidance of Amrita IAS Academy to provide the finest direction for Prelims and Mains through the Civil Service Foundation Course. Civil Service webinar for the benefit of aspirants was scheduled on Sunday, 6th December 2020. The webinar was presented by the faculty of Amrita IAS Academy to familiarize the aspirants with UPSC exam pattern, syllabus and discuss the advantages of early preparation to clear the exam in minimum attempts.



Amidst COVID-19 lockdown, reaching out for Physical Classroom to expedite the preparation for UPSC was the biggest challenge. Being the resource hub for civil service aspirants, Amrita's exclusive digital platform provided the ease of learning from home. With up-to-date and personalized preparation status, online classes, tests and with the student-friendly atmosphere, our ASA students received a good theoretical eloquence about UPSC Civil Service Exams along with regular studies.



4. PLANTED TREES DURING THE BIRTHDAY CELEBRATIONS OF OUR BELOVED AMMA

Planting of trees and their care is a holy act. Trees are seen throughout the ages as powerful symbols of prosperity and birth, often represented in the form of 'trees of life' or 'gifts that keep on giving'. To validate these evidences, trees are planted by beloved Pujya Matrukripamrita Chaitanya, Dr.N.Udhaya Shankar, Campus Director, Amrita School of Agricultural Sciences and Dr.V.S.Ramachandran, Assistant Professor, Centre for Environmental Studies, Amrita Vishwa Vidyapeetham to celebrate the birthday of our Chancellor Mata Amirtanandamayi.



III. RESEARCH AND PUBLICATION

1) **Dr. Sudheesh Manalil**, Head Research, visited Cumbum Agricultural Farm, Amrita Vishwa Vidyapeetham under the Auspices Sampoojya Ramakrishnananda Puri Swamikal



2) **Dr. Sudheesh Manalil**, Head Research published a book chapter entitled “Challenges and Opportunities in Cotton Production”, Cotton Production, 2020 John Wiley & Sons Ltd, ISBN: 9781119385493.

Chapter 18 Challenges and Opportunities in Cotton Production

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IV. ACHIEVEMENTS

AN ENTREPRENEUR HATCHES OUT !

Entrepreneurs need toughness, commitment to thrive in Hatch. To succeed in this Mr.S.Senthil Prabhakaran of second year, thought of doing something innovative with an entrepreneurial angle to it. Utilizing various sources of information and raw materials, he attempted to set up a small-scale manual incubator. He took the help of his able classmate Mr. Kaviarasu S to set the things up. An incubator which would otherwise cost thousands of rupees to buy was set up using minimal resources and expenditure as a result of the collaborative effort. They did a trial run with a minimal number of eggs and were able to successfully hatch a few chicks after the 21 days incubation period. A few tweaks to the system enabled them to increase the number of eggs and the hatchability percentage of the eggs. The duo planned to collect and incubate the fertile eggs produced at their home and neighborhood in the future to see the scope of marketing chicks. The entrepreneurial attitude displayed here by them was worth some appreciation and emulation.



Dr. P. Sureshkumar, Principal, Amrita School of Agricultural Sciences has received “Certificate of Excellence in Reviewing Award” from International Journal of Plant and Soil Science for the outstanding contribution to the quality of the journal.



Dr. S. Parthasarathy, Assistant Professor (Plant Pathology), Amrita School of Agricultural Sciences has received “Certificate of Excellence in Reviewing Award” from International Research Journal of Pure and Applied Chemistry for the outstanding contribution to the quality of the journal.



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