



AMRITA
VISHWA VIDYAPEETHAM
(Deemed-to-be University)

**School of
Agricultural Sciences**

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

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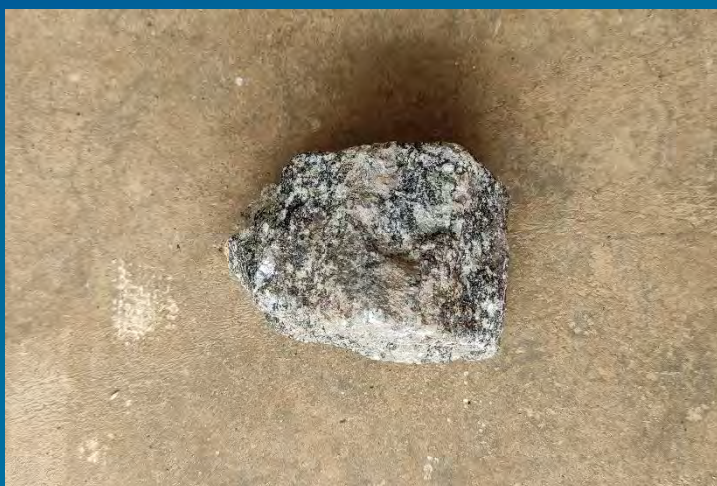
“Nature is an indispensable part of life on earth. Everything relies on nature to live. We are not different from nature; we are an interdependent part of it. Our lives depend on the well-being of the whole. Therefore, it is one of our foremost duties to lovingly care for all the living things.”

Amma, Sri Mata Amritanandamayi
Chancellor, Amrita Vishwa Vidyapeetham

I. STUDENTS ENDEAVORS

1. Collection of rocks and minerals

Petrography deals with the description of rocks, while petrogenesis is the study of the genesis of rocks. Most of the soil parent materials are rocks at some time in their history. The minerals in rocks may contribute to soil fertility and other soil properties long after the original rock is gone. Fundamentals of Soil Science course is offered in the first semester to impart adequate skills in identifying broad categories of rocks. The students of II year B.Sc. (Hons.) in Agriculture are currently undergoing the course "Problematic Soils and their Management (2+0) (19SAC211), handled by Dr. Sivasabari K, Assistant Professor (SAC). To fulfill the practical requirements of the course, the students collected rocks and minerals samples available in their locality by adopting the standard procedures. The rocks and minerals were identified based on color, structure, luster, streaks, hardness and cleavage.



Collected by Ms. Manuvanthra A, II year



Collected by Ms. Catherine P Shaju, II year

2. Emerging Agricultural Journalists of ASA

The Agriculture Journalism would receive opportunity into agriculture radio station, agriculture information and broadcasting. To gain experience in this field, the students of 2019 Batch were acting as radio jockeys and video jockeys as part of the presentation of the course Agricultural Journalism (19AEX211). The session was conducted on online mode and the students effectively participated in all the team activities virtually and broadcasted the videos as part of the course. The audio and video links are given below.

<https://drive.google.com/folderview?id=1W1Cii2DVD8fSGFakhdmzbBnKGFERmsaW>

<https://drive.google.com/file/d/1CBVc1dDMszkrOwCXUcpAwtKEQENirhBB/view?usp=drivesdk>

<https://drive.google.com/drive/u/0/folders/1sLih72WtNYeopmS0tPKncKDZxuz78f9C>



Ms. Soundharya Sivakumar, Ms. Abhirami M J, Ms. Sariga Sanilkumar and Mr. Ashok Balaji E,
II year students presenting TV news programme on “Zero budget natural farming”

3. Seed to Seed Progress

As part of the course “Principles of Seed Technology”, Dr. Dhivyapriya D and Dr. V. Marthandan, Assistant Professors, assigned practical work to the II year students on seed germination tests with the available materials at their home. The germination test was carried out with green gram seeds. The students observed the germinated seeds' various growth phases and categorized them as germinated, ungerminated and abnormal seedlings. Germinated healthy seedlings and other categorized seedlings were taken for computing the germination percentage of the green gram (*Vigna radiata*) seed samples. This practical exercise provided hands-on experience and knowledge to the students for a better understanding of the topic.



Seed germination tests conducted by Ms. Athulya Rajasekar, II year



Seed germination tests conducted by Ms. Manuvanthra A, II year

4. Art cum Science -Terrarium

Terrarium prepared by the students (2019 batch) as a part of the Landscaping Elective Course.



Terrarium prepared by Ms. Paximol Kuriakose, II year



Terrarium prepared by Ms. Aparna S, II year

5. Yoga for mental fitness

The COVID-19 pandemic is an unprecedented time all across the world. Worldwide, extensive social distancing policies are put into place, restricting people's daily activities, including physical activities. Based on our curriculum and syllabus, attempts are made to maintain physical and mental fitness of our ASA students by teaching the physical and yoga education activities through virtual mode by Mr. Karthik Raja V and Ms. D. Mahalakshmi, Physical Educators of ASA. All the students have actively participated in the virtual physical education activities. Here are some snapshots of our students practicing yoga activities.

Vrikasasana



Sarpasana



Bhujngasana

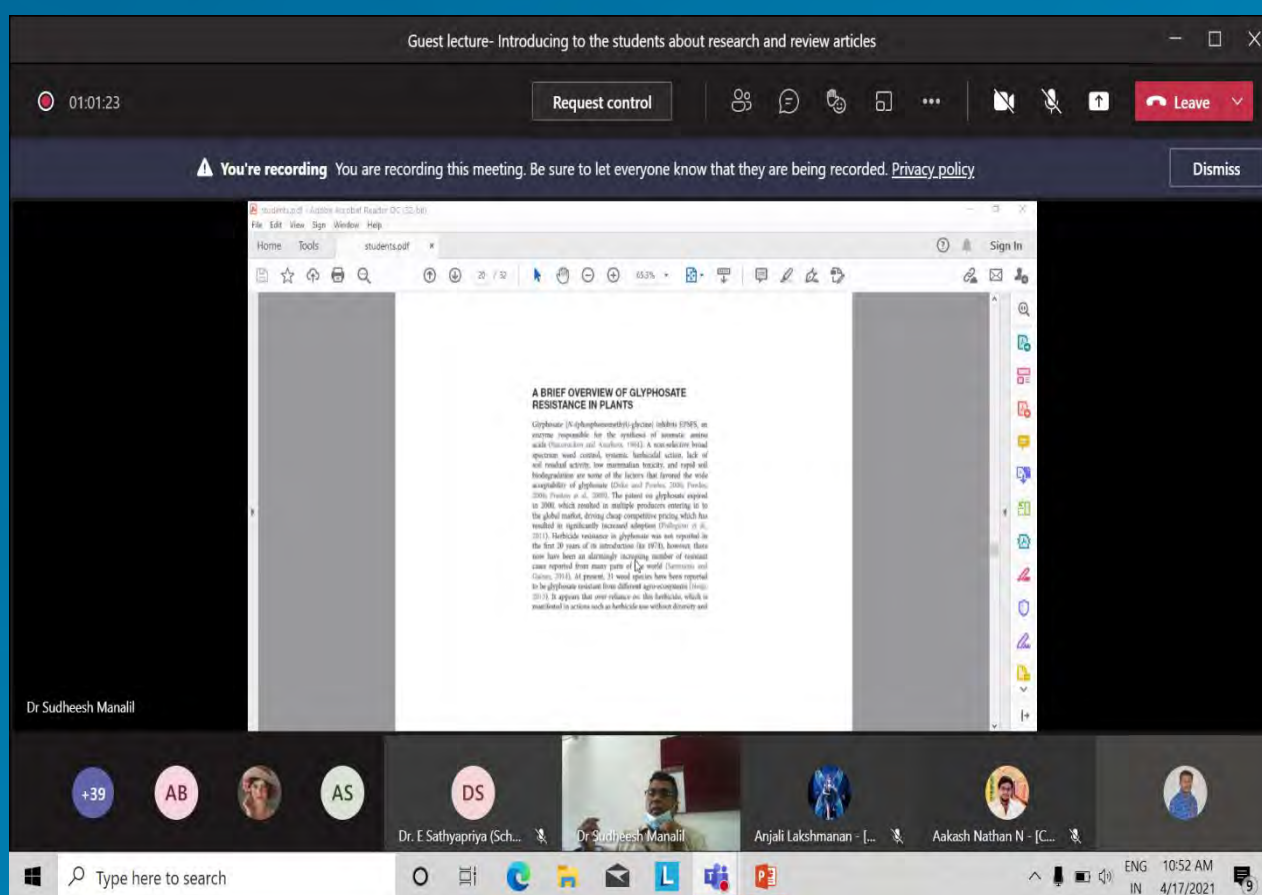


II. COLLEGE ACTIVITIES

1. Enlightening the students on Research and Review Articles

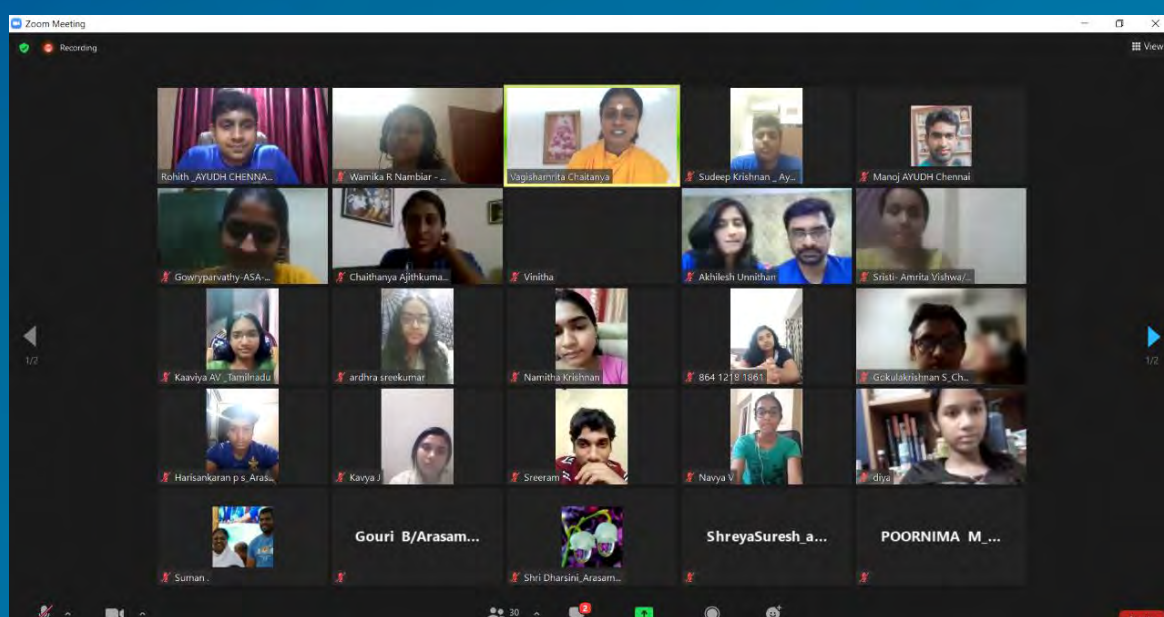
Lecture by Dr. Sudheesh Manalil, Head Research and PGP Chair, ASA

A lecture on “Agricultural Journalism - Introducing to students about Research and Review Articles” was arranged as a part of the 19AEX211 Agricultural Journalism (2+1) course. The programme was organized through a video conference using the Microsoft TEAMS application on 17.04.2021. The welcome address was given by the course teacher Dr. P. Sivaraj, Assistant Professor (Agricultural Extension), ASA. The lecture was given by Dr. Sudheesh Manalil, Head Research and PGP Chair, ASA. He highlighted the importance and current trends in agricultural research, components of a research article and the difference between research article, review article and popular articles with examples. He created awareness among the students about predatory journals and high-impact journals. Also, he interacted with the students and stated the importance of publications in their career advancement. Finally, he motivated the students to write various articles such as popular articles, research articles and review articles.



2. AYUDH- Hanuman Jayanti Celebrations

To commemorate Hanuman Jayanti, an event was held through a zoom meeting in which AYUDHians from different campuses took part. The event started by seeking the blessing of the lord with a prayer song. A small story about Lord Hanuman was narrated to invigorate the attendees and a Power-Point presentation was given on the importance of mantras, their benefits, most commonly chanted mantras and Chancellor Amma's interpretation on chanting mantras. At the end of the presentation, a google forms link was shared for the participants to register for chanting Hanuman Chalisa, and the officials were informed to do the follow-up of this. Then the participants were asked to attend a quiz in Kahoot, which consisted of five questions about Lord Hanuman. Finally, the celebration ended with the prayer Loka Samastha Sukhino Bavanthu.



3. ASA Civil Service Foundation Course

Civil service is a challenging career for determined and talented candidates. Indian Civil services make the way of becoming IAS, IPS or IFS officers. Civil services have a wider domain of authority and supremacy than any other services in India. Amrita School of Agricultural Sciences, in association with Amrita IAS Academy, is engaging our IAS aspirants with fruitful study strategies with complete dedication and focus. Amrita's efforts are unique in satisfying the personal ambition of the aspirants amidst the pandemic. Being India's foremost academic institution offering higher learning and research facilities in multiple disciplines, Amrita has set trail-blazing standards in Civil Service coaching. Amrita's resource persons with ample experience in Civil Service coaching would deal with all the topics listed in the UPSC syllabus in detail. Amrita's successful study strategies provide a wide chance for the candidates to be well aware of different events happening in their respective states, districts or villages to serve their country to the best of their ability and help them to have informed knowledge of the events happening in and around the nation.

KRISHNA DEVA RAYA (1509-1529 AD)

- Most famous king of Vijayanagara
- "most feared and perfect king" - Portuguese traveller – Domingo paes
- Conquered Sivasamudram and Raichur in 1512 AD
- Captured Orissa and West Bengal in 1523 AD
- His empire extended from the river Krishna in the north to River Cauvery in the south; the Arabian Sea in the west to Bay of Bengal in the east

Mountainous soil



- ▶ Chelation =
- ▶ Leaves of coniferous trees covered with chelating agent – hard to degrade
- ▶ Cold climate – slow bacterial process
- ▶ Humus content is high

4. ASA Central Instrumentation lab

Few molecular biology instruments are added to the Central Instrumentation laboratory. A refrigerated centrifuge (Make: Thermo Scientific; Model: ST8R) has been installed on 05.03.2021. This instrument is useful in molecular biology work and specifically it will be used in DNA extraction. This instrument has two interchangeable rotors viz., fixed-angle rotor for 1.5/2ml centrifuge tubes, and a microplate swinging type rotor. In addition, Nanodrop (Make: Thermo Scientific, Model: ND one) has been installed at the lab on 18.03.2021. This instrument is a micro volume spectrophotometer explicitly used to quantify nucleic acids and proteins and identify contaminants in the sample. An ELISA plate reader (Make: Robonik, Model: Read well touch) is installed in the lab on 23.03.2021. This instrument can be used in protein and enzyme assays for measuring absorbance. A fully automatic autoclave (Make: Equitron) is also installed at the lab on 08.04.2021. In addition, few other molecular biology tools such as variable micropipettes (five different volume ranges) and Cryogenic containers (to store liquid nitrogen) are also purchased.

Campus Director Dr. N. Udayasankar, Dr. Sudheesh Manalil, Head research and PGP Chair and Dr. Reena, Assistant Professor, are assessing the progress of the Central Instrumentation Lab.



III. RESEARCH PROGRESS

1. Pot culture experiment exploring the impact of silicon on rice

Silicon is the second most abundant element on the earth's crust and is found in significant quantities in the soil; however, silicon can only be taken up by the plant in the form of mono-silicic acid. Silicon is not included in the formulation of most fertilizers. Although each source of usable silicon may not provide significant levels for a crop, added together, there may be enough silicon to negate the necessity to supplement with a separate silicon fertilizer, especially for non-accumulators. Like other fertilizer elements, silicon needs to be supplied throughout the crop cycle. In this context, we are conducting a pot experiment with different sources.





The seedlings are transplanted in pots after 24 days of the nursery.





2. Phenology of *Parthenium*

A research trial of *Parthenium* is in progress to explore the phenology of this noxious weed with three different locations as treatments by Dr. Jidhu Vaishnavi, S. Assistant Professor (Crop Physiology) along with Dr. Dhivyapriya D. Assistant Professor (Genetics and Plant breeding), ASA.



IV. PUBLICATIONS

1. **Dr. Vinodhini, D**, Assistant Professor (Mathematics), ASA, has published a research article entitled "A NOTE ON AIG- CLOSURE AND AIG- INTERIOR IN IDEAL TOPOLOGICAL SPACES" Turkish Journal of Computer and Mathematics Education Vol.12 No.4 (2021), 1276-1279

Turkish Journal of Computer and Mathematics Education

Vol.12 No.4 (2021), 1276-1279

Research Article

A NOTE ON AIG- CLOSURE AND AIG- INTERIOR IN IDEAL TOPOLOGICAL SPACES

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Article History: Received: 11 January 2021; Accepted: 27 February 2021; Published online: 5 April 2021

Abstract: The concepts of αI_g - closure, αI_g - interior and αI_g - boundary of a subset of an ideal topological space (X, τ, I) are introduced in this article. Some of their basic properties are proven. Furthermore, the relationships between these sets are investigated to get the best of them. Also, it is established that αI_g - closure is a Kuratowski closure operator on (X, τ, I) under certain conditions.

2. **Dr. Manivasagam V S**, Assistant Professor (Agriculture Informatics), ASA, has published a research article entitled "Estimating Processing Tomato Water Consumption, Leaf Area Index, and Height Using Sentinel-2 and VEN μ S Imagery" Remote sensing, 2021. <https://www.mdpi.com/2072-4292/13/6/1046>

Open Access Article

Estimating Processing Tomato Water Consumption, Leaf Area Index, and Height Using Sentinel-2 and VEN μ S Imagery

by  Gregoriy Kaplan ¹ ,  Lior Fine ^{1,2} ,  Victor Lukyanov ¹ ,  V. S. Manivasagam ^{1,3} ,
 Nitzan Malachy ¹ ,  Josef Tanny ^{1,4}  and  Offer Rozenstein ^{1,*} 

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V. FACULTY - STUDENT SPOTLIGHT

1. **Dr. Sudheesh Manalil**, Head Research, and PGP Chair, ASA, has received **CHANCELLOR'S PUBLICATION AWARD** signed by Chancellor Amma, President Pujaniya Swami Amritaswarupananda Puri and Hon'ble Vice-Chancellor Dr. P. Venkat Rangan for publishing a research paper in Nature Scientific Reports - in 2020 titled "Effect of emergence time on growth and fecundity of *Rapistrum rugosum* and *Brassica tournefortii* in the northern region of Australia" at Amrita Innovation Research Award (AIRA), 2021.



2. **Dr. Sudheesh Manalil**, Head Research, and PGP Chair, ASA, has received **PUBLICATION MERIT AWARD** for publishing a research paper in an international journal in 2020 titled "Effect of narrow row-spacing and weed crop competition duration on cotton productivity" at Amrita Innovation Research Award (AIRA), 2021.



3. **Dr. Deepak Chandran**, AP (Animal Husbandry), ASA, has received a recognition certificate as **Winner for the Month of March 2021** for the article “An insight into Bovine Babesiosis” organized by All India Monthly Article Writing Competition (Veterinary and Animal husbandry), E- PASHUPALAN. Article available at <https://epashupalan.com/9501/animal-disease/an-insight-into-bovine-babesiosis/>



4. **Dr. Radhika A M**, Assistant Professor (Agricultural Economics), ASA, has participated in the 15-Days Training Program on “Agriculture for Economic Development: Policy Planning, Policy Analysis and Techniques of Economic Analysis” organized by the National Institute of Agricultural Extension Management (MANAGE), Hyderabad during February 24th to March 10th, 2021.



5. Entrepreneur spotted

Learn to pronounce, our II-year student, rising entrepreneur **Ms. Megha K**, attempted to successfully cultivate chemical-free oyster mushroom in her house using locally available paddy straw and plant residues during lockdown conditions. Innovatively, she experimented the cultivation process with rapidly degrading lignocellulosic wastes for bioconversion and she achieved faster blooms and yield within a short period. As a budding entrepreneur, she took her college and lab experience into the land. She tried mushroom cultivation on her farm. Hay was used as a medium for cultivation. Hay was sterilized by boiling it. The hay and seeds were placed tightly in a polythene cover and made few holes on it. Then, it was kept under dark in a cardboard box for 15 days. After 15 days, it was hanged and watered thrice a day. On the 25th day, the mushroom came out. It was an excellent learning experience.



Oyster mushroom cultivated by Ms. Megha K, II year ASA

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