



**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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"We should serve others without any expectations whatsoever. When others throw thorns at us, we should be able to throw flowers back at them".

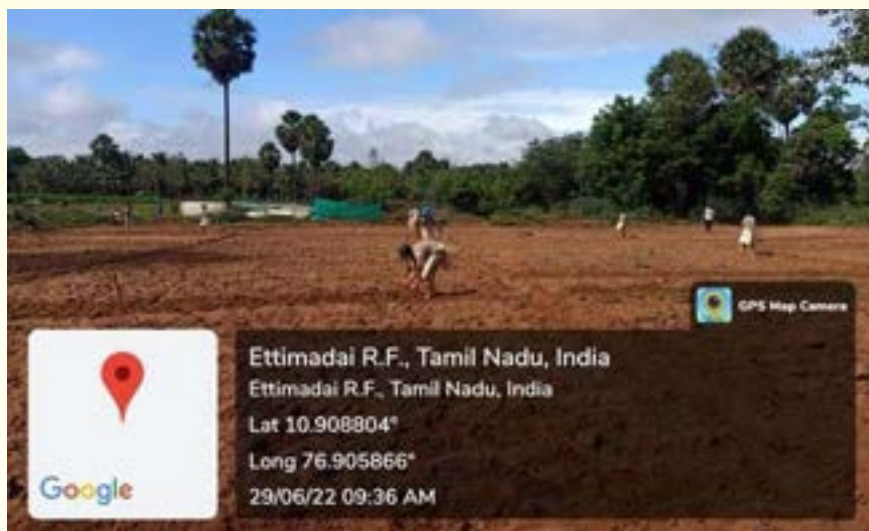
**Amma, Sri Mata Amritanandamayi Devi**  
Chancellor, Amrita Vishwa Vidyapeetham



# I. STUDENTS' ACTIVITIES

## 1. Crop Production by the Students of ASA

Third-year (2019 batch) students were engaged in cultural operations (land preparation) for the course 19AGR316- Practical crop production – II (rabi crops), under the guidance of Dr. Janarthanan P, Assistant Professor (Agronomy). Each student was allotted 2 cents of land for doing crop production activities.



**Land preparation for crop cultivation (2019 batch)**

## 2. Simulation Games for the Students

One of the best ways to use the natural humtendency to assume roles in education is through simulation games, which combine drama in a potent way. As part of the 19AEX113- Communication Skills and Personality Development course, first-year (2021 batch) students participated in various simulation games conducted by the course teacher Dr. Sivaraj P, Assistant Professor (Agricultural Extension).



**Ms. Anjali M R first year (2021 batch) participating in Simulation Games**

### 3. Field visit to Centre of Excellence for Vegetables

As part of the 19HOR202 - Production Technology for Vegetables and Spices course, handled by Dr. Priya, R, Assistant Professor (Horticulture), the second year (2020 batch) students visited the Centre of Excellence for Vegetables (Indo Israel Project), Dindigul, on 18 May 2022 and gained practical knowledge of protected cultivation, hi-tech open field cultivation, and nursery maintenance for vegetables along with automated fertigation and vermicomposting.



**Students familiarising hi-tech open field vegetable cultivation**

### 4. Blowing of Larva – Hands-on practice

The popular method of preserving soft-bodied larva is “blowing”. This method consists of removing the internal contents of the larva and then inflating it like a balloon to its natural size and drying it in this position in a blowing apparatus. As part of the course 19AEN111- Fundamentals of Entomology, students have done the blowing of larva very enthusiastically under the guidance of Dr. K. Murugasridevi, Assistant Professor (Agricultural Entomology).



**Blowing of larva experimented by the first-year students (2021 batch)**



## 5. Exposure Visit to Krishi Vigyan Kendra

As part of the 19AEX112 - Fundamentals of Agricultural Extension Education course, the course teacher Dr. E. Sathyapriya, Assistant Professor (Agricultural Extension), organized the exposure visit to Avinashilingam Krishi Vigyan Kendra, Karamadai, Coimbatore on 21 June 2022 for the first-year students (2021 batch) to learn more about the activities and mandate of KVK and its role on Agricultural development. During the visit, Dr. P. Kumaravadivelu, Senior Scientist and Head, explained the KVK activities and its importance, followed by the subject matter specialists explained their role in rural welfare.



Also the students participated in a national farm meet on “efficient and balanced use of fertilizers including nano fertilizers,” and they were exposed to various training units like Azolla cultivation, vermicompost, nursery, dairy unit, sericulture, and mushroom cultivation. This visit enlightened the students to understand various agricultural training and their importance to agriculture and youth development.



## 6. Hive Inspection by the Students

As part of the 19AEN312- Management of Beneficial Insects course, third-year students (2019 batch) gained experience in bee hives handling and adjacent comb cleaning in Indian bee hive colony. Additionally, they were involved in

doing super chamber, comb foundation sheet, and extraction of honey from the colonies. They cleaned the super chamber with water spray and cleaned the waste using a decapping knife under the systematic guidance of the course teacher Dr. Aravind J, Assistant Professor (Agricultural Entomology).



## 7. Crop Diagnostic- Direct Field Experience

Outcome-based education provokes students learning goals and cognitive processes in a sustainable manner. Optimally from field level identification and differentiation of pests, diseases, deficiency, and disorders in cultivated crops and experimentation for addressing real-world problems. It will help the students to tailor their crop diagnostic skills and recommend Integrated Pest and Disease Management (IPDM) practices to diverse and dynamic ecological conditions. Third-year students (2019 batch) actively explored these activities as part of the courses 19PAT313 - Diseases of Field and Horticultural Crops and Their Management II, handled by Dr. Parthasarathy S, Assistant Professor (Plant Pathology).

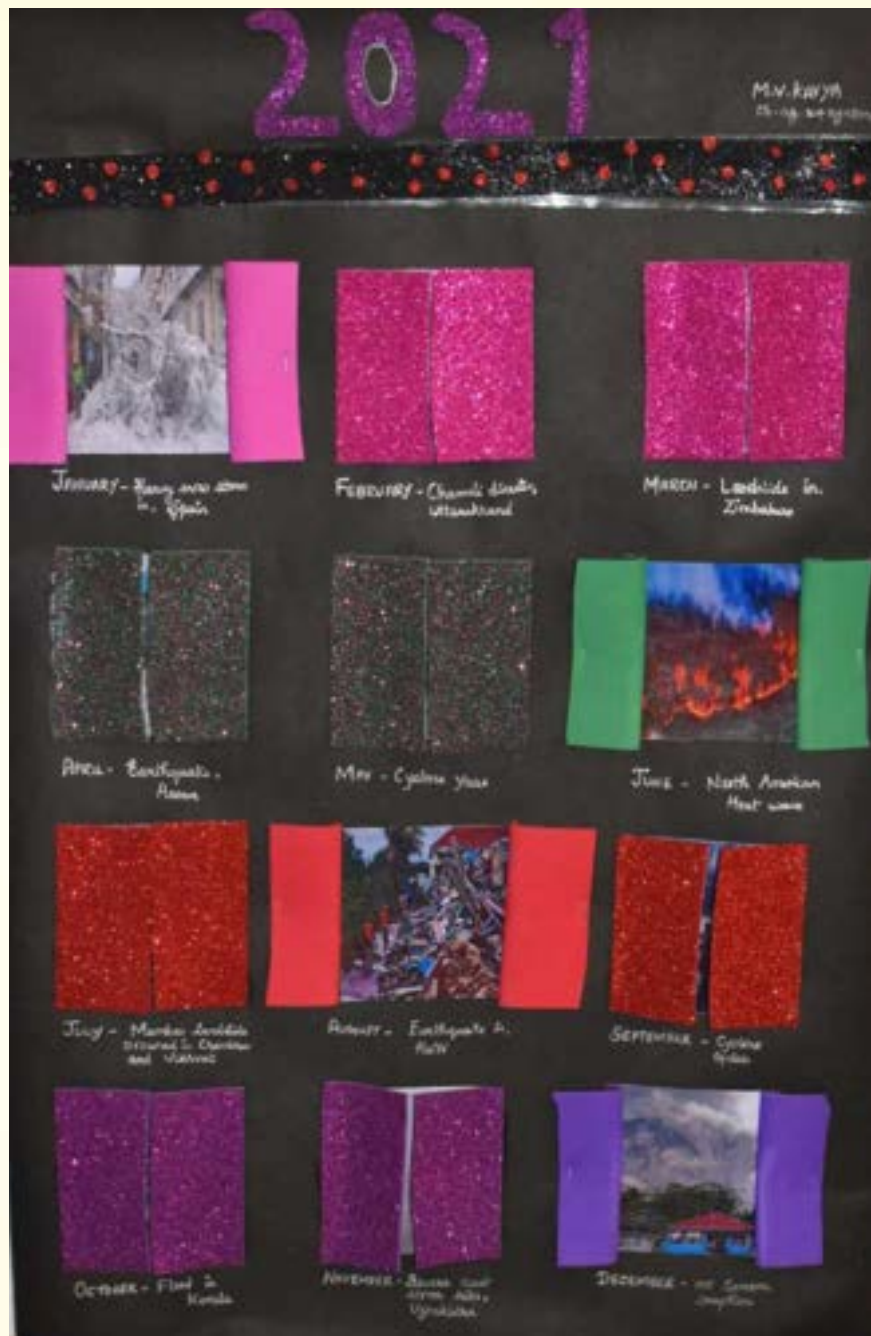


## 8. Disaster Calendar Preparation

As part of the 19CRP111- Environmental Studies and Disaster Management course, second-year students (2020 batch) prepared a calendar based on the disasters that happened during that particular month in the year 2021. The disaster calendar for the year 2021, which was designed by the students, was the collection of disasters that happened at



the state, national, and international levels under the guidance of the course teacher Dr. S. Jidhu Vaishnavi, Assistant Professor (Crop Physiology). The calendar shows the types of disasters, their locations, and pictures.



**Disaster calendar Prepared by Ms. Kaavya A.V, second-year (2020 batch) student**

## 9. Visit to Orathupalayam Dam

To learn about the polluted sites and to study the effects of water pollution and pollutants, the second-year students (2020 batch) visited Orathupalayam Dam in Tiruppur on 6 May 2022, as part of the course 19ENV201- Environmental Studies and Disaster Management, which was organised by the course teacher Dr.Sivasabari K, Assistant Professor (SS&AC). Students collected polluted samples to analyze and characterize the physical, chemical, and

biological properties of wastewater. The visit was a success in terms of providing knowledge and valuable information about industrial wastewater disposal and its effects on the Noyyal river which is a major water source of Tiruppur district.





## II. COLLEGE EVENTS

### 1. World Environment Day Celebration

Amrita School of Agricultural Sciences, Amrita Vishwa Vidyapeetham celebrated World Environment Day on 5 June 2022 at Ettimadai main campus. The function began with a prayer and the lightening of the lamp by Swami Ajamritananda Puri and distinguished Chief Guest Shri. T.K Ashok Kumar IFS delivered on the importance of trees in mitigating climate change and protecting the environment. Mr. Hari Parthasarathy explained about the “Amritavanam” project, followed by the initiation of the “Amritavanam” project by the Chief Guest Shri T.K Ashok Kumar IFS, District Forest Officer, Dr. Sudheesh Manalil, Principal, and Dr. N. Udaya Sankar, Campus Director have participated in the deliberations from ASA.

All the dignitaries planted saplings, and student volunteers of ASA participated enthusiastically and planted nearly 1000 saplings of more than 76 species, including medicinal, flowering, fruit-bearing, and timber purpose tree specieses.



**Students familiarising hi-tech open field vegetable cultivation**

As part of the function, the competition was conducted for the students to keep the day memorable; competitions like poster making and slogan writing were conducted, and prizes were distributed to the winners.





## 2. Career Development Activity- Resource Collection

The Career Development Committee of ASA has been making a special effort to ensure student's competence in career-related examinations. The committee organized a "Technical Review for Exam-Oriented Resource Collection for Students" on every Tuesday and Thursday. Third-year students (2019 batch) presented their resource collections to committee members and students. Dr. Parthasarathy S and Dr. Aravind J, Coordinators, Career Development Committee, facilitated the event.



## 3. International Yoga Day Celebration

*“Yoga is not just physical movement,  
like going to the gym and exercising”*

– Chancellor, Amma.

Amrita School of Agricultural Sciences commemorated International Yoga Day on June 21, 2022, with the theme "Yoga for Humanity" at the ASA Auditorium. Mr. Karthick Raja V and Ms. D. Mahalakshmi, Physical Educators, ASA organized the programme. Students, faculty, and staff of ASA participated in the event.



### III. RESEARCH AND DEVELOPMENT

#### 1. New Equipment's Initialization at ASA, CIL

The NIKON Ci-L microscope, DS-Fi-3 Camera, and fluorescence model B-LED1 were installed at the Central Instrumentation Laboratory, ASA, to benefit students and promote the research in an advanced way. This microscope is a 40x fluorescence objective lens, and the light source used in the microscope is LED. It is a licensed software (NIS-Elements D) for measuring different parts of cells. Different fluorescent filters such as blue, green, and yellow are attached to observe different fluorescent intensities. It is used to measure the fluorescence of stained cells and to view their internal structures.



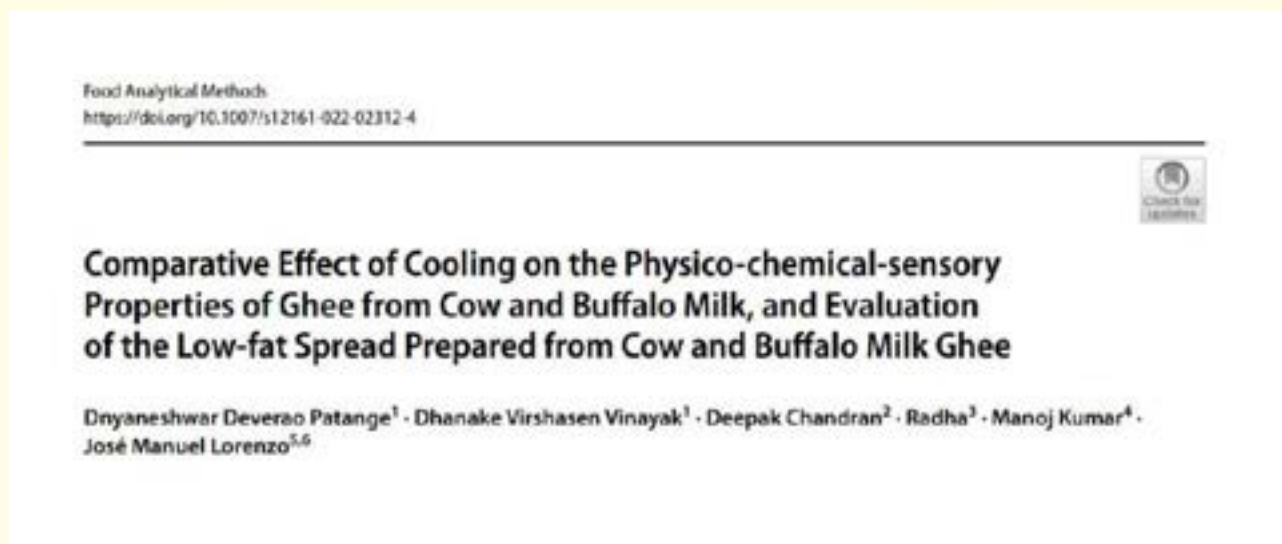
An Ultra-low deep freezer (-86oC) (Brand - Blue star; Model - BW-HL398S) is purchased and it is kept functional at the Central Instrumentation laboratory. This Deep freezer is set at -80°C, and it will be used for storing samples for molecular work and for storing important samples or materials for the long term.





## IV. PUBLICATIONS

1. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Comparative effect of cooling on the physico-chemical-sensory properties of ghee from cow and buffalo milk, and evaluation of the low-fat spread prepared from cow and buffalo milk ghee.” *Springer – Food Analytical Methods*. <https://doi.org/10.1007/s12161-022-02312-4>



2. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), has published a research article entitled “Isolation and purification of phycocyanin pigments from *Spirulina* sp. biomass and evaluation of its anticancer and antioxidant potential.” *Biomass Conversion and Biorefinery*, pp.1-11. <https://doi.org/10.1007/s13399-022-02765-x>



3. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled "Optimization of the use of cellulolytic enzyme preparation for the extraction of health-promoting anthocyanins from black carrot using response surface methodology." *Elsevier - Lebensmittel Wissenschaft und Technologie (LWT) - Food Science and Technology*. 163(4): 113528p. <https://doi.org/10.1016/j.lwt.2022.113528>

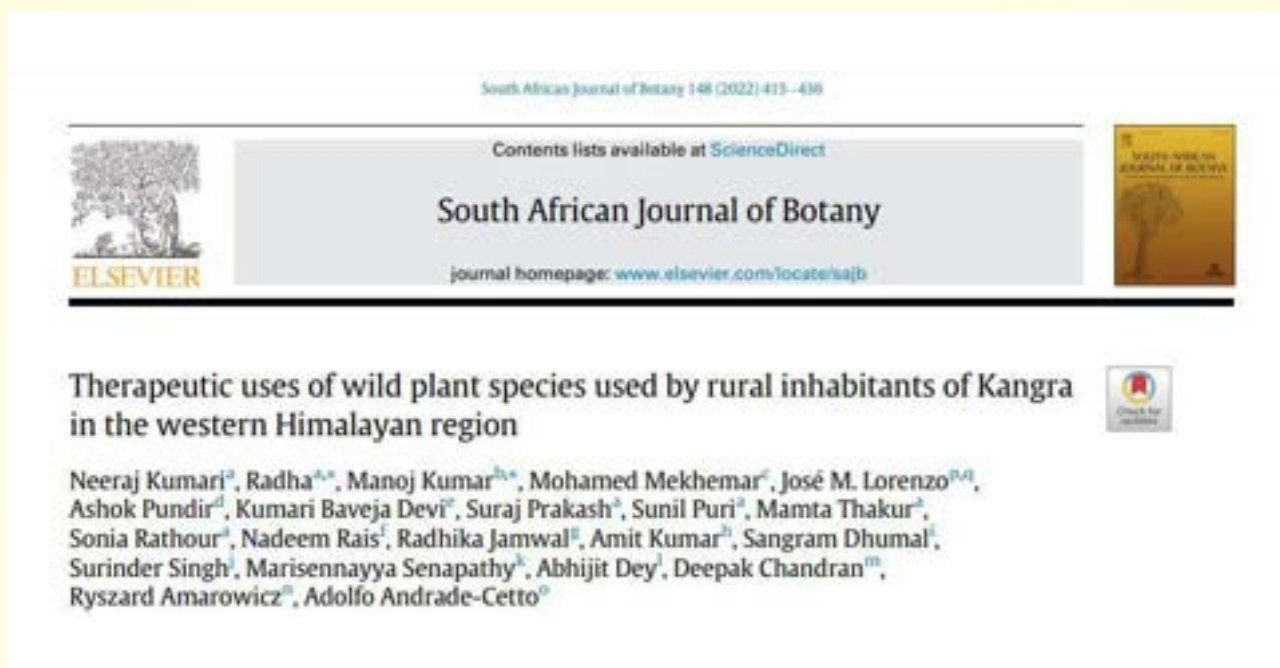


4. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), has published a research article entitled "Production, characterization, and feed supplement applications of phytase enzyme from *Aspergillus tubingensis* isolated from Western Ghats soil". *Biomass Conversion and Biorefinery*, 1-11. <https://doi.org/10.1007/s13399-022-02894-3>





5. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Therapeutic uses of wild plant species used by rural inhabitants of Kangra in the western *Himalayan region*.” *Elsevier – South African Journal of Botany*. 148: 415-436. <https://doi.org/10.1016/j.sajb.2022.05.004>



6. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Prevalence and risk factors of Staphylococcal subclinical mastitis in dairy animals of Chitwan, Nepal.” *Journal of Pure and Applied Microbiology*. 16 (2): 1392-1403. <https://doi.org/10.22207/JPAM.16.2.67>



7. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Mapping global trends in canine platelet-rich plasma research: A bibliometric analysis using scopus database.” *The Indian Veterinary Journal*. 99(5): 27-35.



8. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Unexpected sudden rise of human monkeypox cases in multiple non-endemic countries amid COVID-19 pandemic and salient counteracting strategies: Another potential global threat?”. *Elsevier – International Journal of Surgery*. 103(2022): 106705p. <https://doi.org/10.1016/j.ijso.2022.106705>



9. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a research article entitled “Chemical characterization of apricot kernel: Nutraceutical composition, amino acid, and fatty acid profile.” *Springer – Food Analytical Methods*. <https://doi.org/10.1007/s12161-022-02317-z>





10. **Dr. Deepak Chandran**, Assistant Professor (AH &VS), **Ms. Catherine P Shaju**, a third-year student and **Dr. Sureshkumar R**, Assistant Professor (Agronomy), have published a review article entitled "Potential health benefits of dietary *Curcuma longa* (Turmeric) supplementation on health and production of poultry: A mini-review." *The Indian Veterinary Journal*. 99(2): 7-13.

Indian Vet. J., February 2022, 99 (02) : 07 - 13

### **Potential Health Benefits of Dietary *Curcuma longa* (Turmeric) Supplementation on Health and Production of Poultry : A Mini-review**

**Deepak Chandran<sup>1</sup>, Catherine P Shaju<sup>1</sup>, Khan Sharun<sup>2</sup>, Sureshkumar R<sup>1</sup>, Talha Bin Emran<sup>3,4</sup>, Saikat Mitra<sup>5</sup>, Luiz Everson da Silva<sup>6</sup>, Hardeep Singh Tuli<sup>7</sup>, and Kuldeep Dhama<sup>8</sup>**

<sup>1</sup>Amrita School of Agricultural Sciences, Amrita Vishwa Vidyapeetham University, Coimbatore, Tamil Nadu, India – 642109;

<sup>2</sup>Division of Surgery, ICAR-Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India – 243122;

<sup>3</sup>Department of Pharmacy, BGC Trust University Bangladesh, Chittagong 4381, Bangladesh;

<sup>4</sup>Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, Dhaka 1207, Bangladesh.

<sup>5</sup>Department of Pharmacy, Faculty of Pharmacy, University of Dhaka, Dhaka 1000, Bangladesh;

<sup>6</sup>Post-graduate Program in Sustainable Territorial Development, Universidade Federal do Paraná, Marinhos, Brazil – 832600-00;

<sup>7</sup>Department of Biotechnology, Maharishi Markandeshwar (Deemed to be University), Mullana, Ambala 133207, Haryana, India;

<sup>8</sup>Division of Pathology, ICAR-Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India – 243122;

11. **Dr. Deepak Chandran**, Assistant Professor (AH & VS), has published a review article entitled "Beneficial effects of dietary *Allium sativum* (garlic) supplementation on health and production of poultry: A mini-review." *The Indian Veterinary Journal*. 99(5): 19-26.

Indian Vet. J., May 2022, 99 (05) : 19 - 26

### **Beneficial Effects of Dietary *Allium sativum* (Garlic) Supplementation on Health and Production of Poultry: A Mini-Review**

**Deepak Chandran<sup>1</sup>, Talha Bin Emran<sup>2</sup>, Firzan Nainu<sup>3</sup>, Khan Sharun<sup>4</sup>, Manoj Kumar<sup>5</sup>, Saikat Mitra<sup>6</sup>, Sandip Chakraborty<sup>7</sup>, Ranjan K. Mohapatra<sup>8</sup>, Hardeep Singh Tuli<sup>9</sup>, and Kuldeep Dhama<sup>10</sup>**

<sup>1</sup>Department of Veterinary Sciences and Animal Husbandry, Amrita School of Agricultural Sciences, Amrita Vishwa Vidyapeetham University, Coimbatore, Tamil Nadu, India – 642109;

<sup>2</sup>Department of Pharmacy, BGC Trust University Bangladesh, Chittagong, Bangladesh.

<sup>3</sup>Faculty of Pharmacy, Universitas Hasanuddin, Makassar 90245, Indonesia.

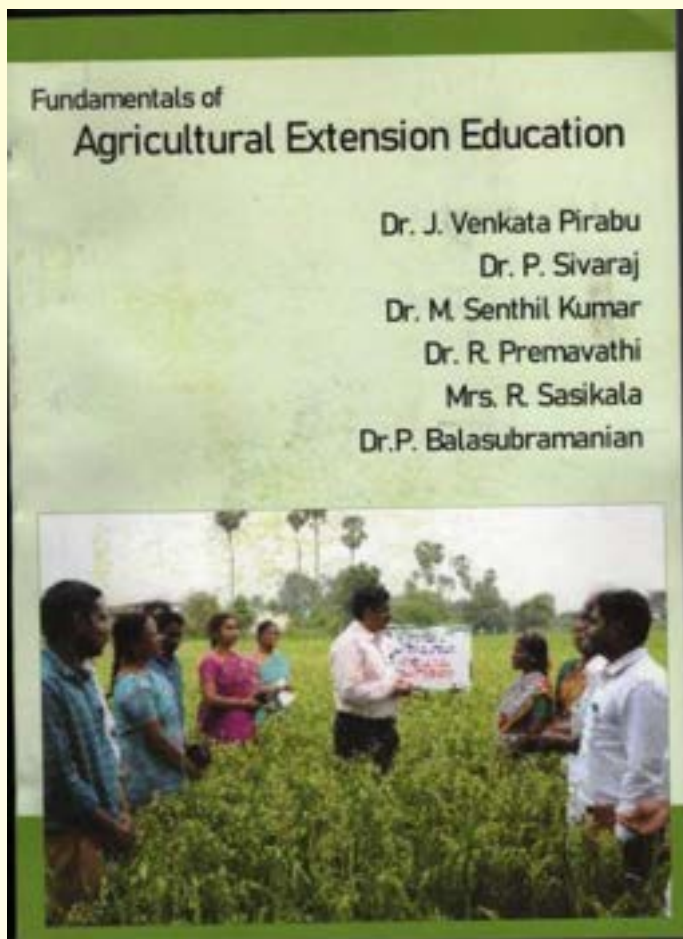
<sup>4</sup>Division of Surgery, ICAR-Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India – 243122.

12. Dr. Deepak Chandran, Dr. Sureshkumar R, Dr. Marthandan V, Assistant Professors have published a review article entitled “*Carica papaya* L. leaves: Deciphering its antioxidant bioactives, biological activities, innovative products, and safety aspects.” *Hindawi – Oxidative Medicine and Cellular Longevity*. Vol. 2022, Article ID 2451733, 20 pages. <https://doi.org/10.1155/2022/2451733>



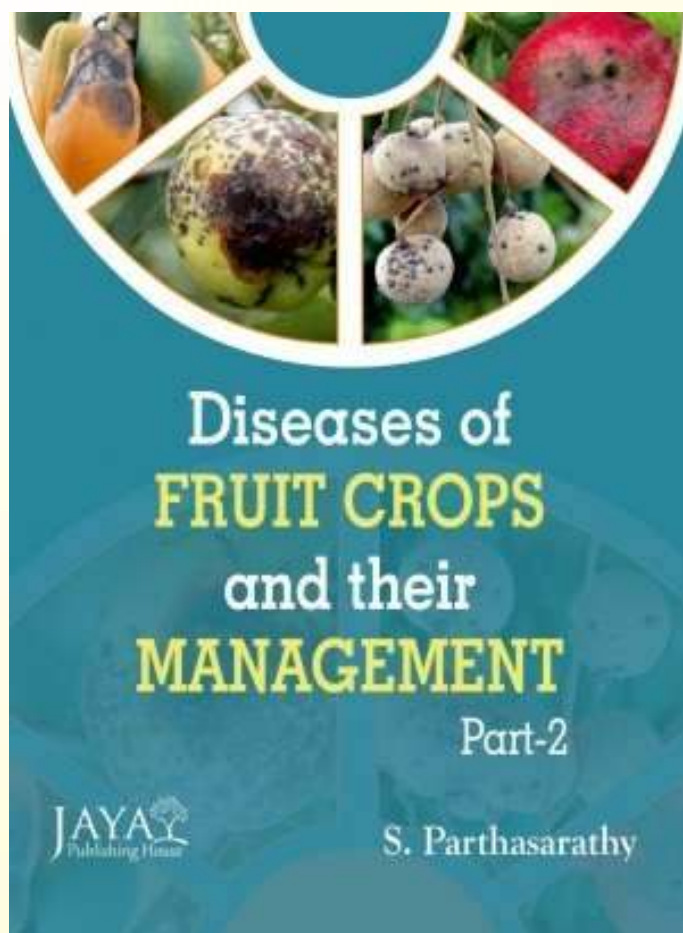
13. Dr. Deepak Chandran, Assistant Professor (AH & VS), has published a review article entitled “An updated review on the properties of *Melissa officinalis* L.: Not exclusively anti-anxiety.” *Frontiers in Bioscience – Scholar*. 14(2): 16p. <https://doi.org/10.31083/j.fbs1402016>



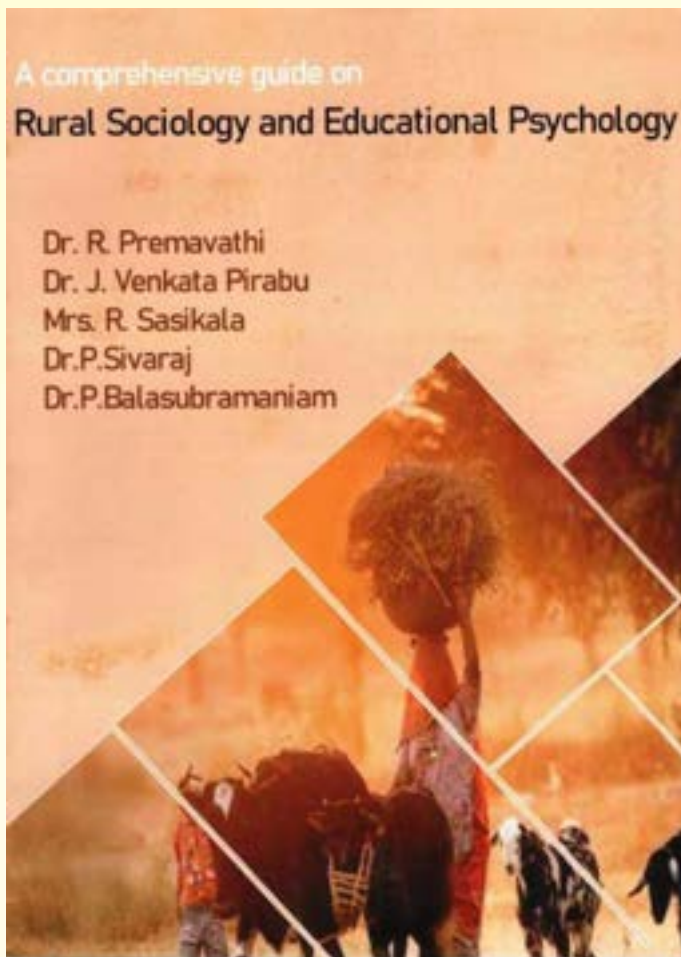


14. **Dr. Sivaraj P**, Assistant Professor (Agricultural Extension), has published a textbook entitled "Fundamentals of Agricultural Extension Education." JPS Scientific Publisher, Tamil Nadu. ISBN: 978-93-91342-89-0.

15. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), has published a textbook entitled "Diseases of Fruit Crops and their Management (2 Parts/ Volumes)", Jaya Publishing house. ISBN: 9789391063597.







16. **Dr. Sivaraj P**, Assistant Professor (Agricultural Extension), has published a textbook entitled "A Comprehensive Guide on Rural Sociology and Educational Psychology." JPS Scientific Publisher, Tamil Nadu. ISBN: 978-93-91342-40-1.

17. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), has published a chapter entitled "Diseases, pests and disorders in Plum- Diagnosis and Management." In: Gull, A., Nayik, G.A., Wani, S.M., & Nanda, V. (Eds.). (2022). Handbook of Plum Fruit: Production, Postharvest Science, and Processing Technology (1st ed.). CRC Press. <https://doi.org/10.1201/9781003205449>



Chapter

## Diseases, Pests, and Disorders in Plum

Diagnosis and Management

By Parthasarathy Seethapathy, Rajadurai Gothandaraman,  
Thiribhuvanamala Gurudevan, Imtiyaz Ahmad Malik

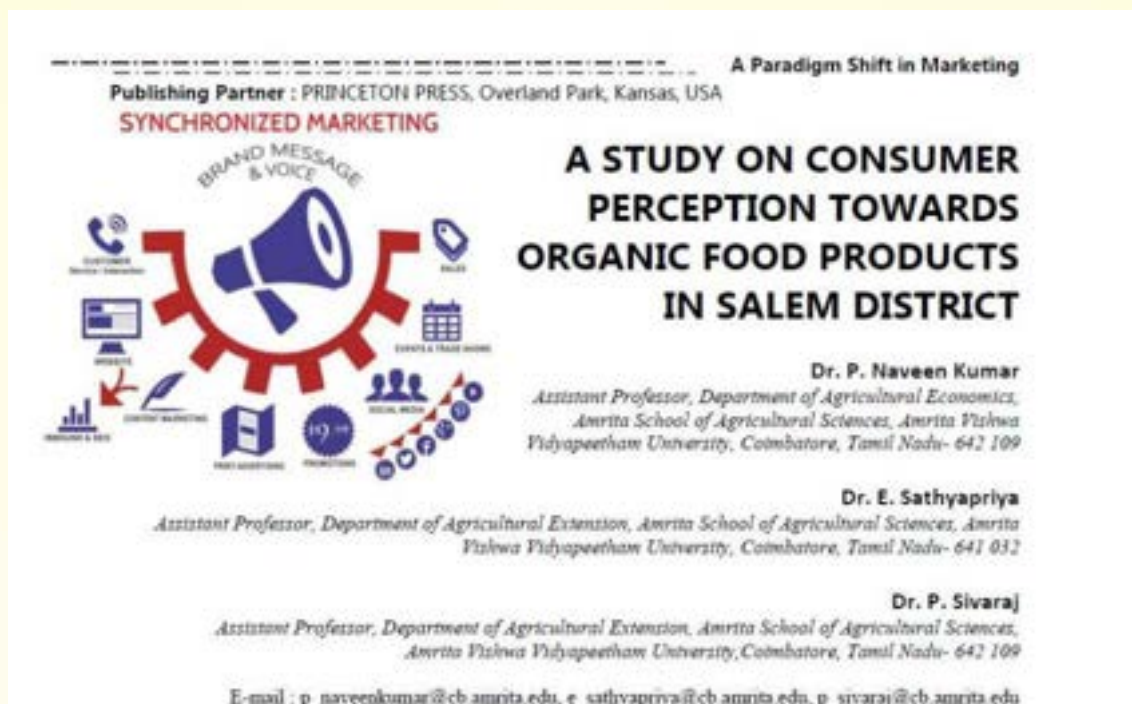
Book [Handbook of Plum Fruit](#)

Edition 1st Edition

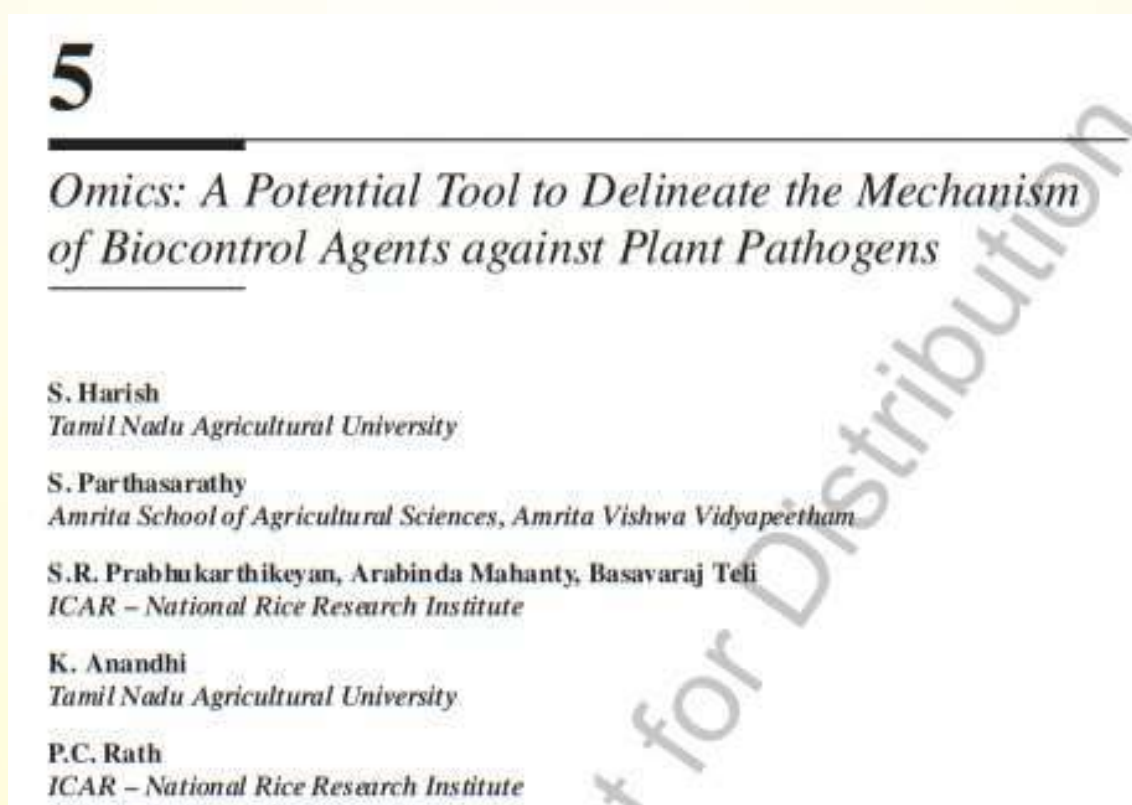
First Published 2022

Imprint CRC Press

18. **Dr. Naveen Kumar P, Dr. E. Sathyapriya, and Dr. Sivaraj P**, Assistant Professors, have published a book chapter entitled "A Study on Consumer Perception towards Organic Food Products in Salem District." In: A Paradigm Shift in Marketing: Creating Value for A More Sustainable Future. Princeton press, Overland park, Kansas, USA. 2022, pp 215-223. ISBN: 978-920-5-20216-7.



19. **Dr. Parthasarathy S**, Assistant Professor (Plant Pathology), has published a chapter entitled "Omics: A Potential Tool to Delineate the Mechanism of Biocontrol Agents against Plant Pathogens." In: Plant-Microbe Interactions: Harnessing Next-Generation Molecular Technologies for Sustainable Agriculture (2022): 79.



20. **Dr. Naveen Kumar P**, Assistant Professor (Agricultural Economics), has published a book chapter entitled “A study on consumer behavior related mobile phone usage in Coimbatore city.” In: A Paradigm Shift in Marketing: Creating Value for A More Sustainable Future. Princeton press, Overland park, Kansas, USA. 2022, pp 115-125. ISBN: 978-920-5-20216-7.





## IV. AWARDS AND ACHIEVEMENTS

1. **Dr. K. Sivasabari**, Assistant Professor (Soil Science), has attended a 21-day international training cum workshop programme on “Agriculture 3.0: A futuristic approach towards smart agriculture and sustainable urban farming” organized by Agro-Environmental Education & Farmers Welfare Society (AEEFWS), Punjab.



2. **Dr. V.S.Manivasagam**, Assistant Professor (Agriculture Informatics), has attended the remote pilot training program to operate small and medium category UAVs (up to 150 Kg) at the Centre for Aerospace Research-Remote Pilot Training Organization (CASR-RPTO), MIT Campus, Chennai.



# **ASA e Newsletter Committee**

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