

E-ISSN: 2582-9467



  
**Vigyan Varta**

# VIGYAN VARTA

An International E-Magazine for Science Enthusiasts

**Volume 5, Issue 10, October 2024**

[www.vigyanvarta.com](http://www.vigyanvarta.com)

|

[www.vigyanvarta.in](http://www.vigyanvarta.in)  
Email: [vigyanvarta@gmail.com](mailto:vigyanvarta@gmail.com)

# Contents

| <i>Volume: 05, Issue: 10</i> |   | <i>October 2024 (E-ISSN: 2582-9467)</i>  |             |
|------------------------------|---|--|-------------|
| <b>Sl. No.</b>               | <b>Title of the Article</b>   | <b>Author's Name</b>   | <b>Page</b> |
| 1                            | Enhancing Profitability in Indian Agriculture: Strategies and Government Initiatives                                | Deepa B. Hiremath*, Shreeshail Rudrapur and Vaishali Surve   | 1-6         |
| 2                            | Innovative Bio-Nanoparticle Approaches for the Sustainable Management of Rhizoctonia solani in Agriculture          | Swarnima Tiwari, Dr. Krishanu, Shachi Tiwari and Neha Chaudhary                                      | 7-12        |
| 3                            | Designer Eggs: Pioneering Innovations and Future Prospects  | Dr. Rushikesh A. Kantale*, Priyanka Meena, Yatin Sharma and Ram Narayan R                            | 13-19       |
| 4                            | Green Technologies: Leading the Way to a Sustainable World  | Dr. Smaranika Mohanta, Nitin Kumar Koumary, P. Kaviya, Prerona Paul and Rajeeb Kumar Behera*         | 20-25       |
| 5                            | Land Reforms in India: Prospects and Challenges   | Sanjana Sinha and Shakti Ranjan Panigrahy*   | 26-31       |
| 6                            | Blooming Future: New Emerging Technologies in Floriculture  | H. H. Chaudhary*, M. P. Ahir, Shailesh Chaudhary, P. M. Mangroliya, Roshni Patel and U. C. Chaudhari | 32-37       |
| 7                            | Atresia Ani - Congenital Malformation in Non-Descript Buffalo Calf  | Dr. Deepak Kumar Chaurasia*  | 38-39       |
| 8                            | From Fields to Future: How Robotics is Redefining Indian Agriculture  | Manohar K N* and Dr. Chaithra N R  | 40-46       |
| 9                            | Use of Microbes in Plant Health Management and Bioremediation   | Bidisha Borgohain*   | 47-50       |
| 10                           | Policy Frameworks and Interventions in Indian Groundwater Management  | Minam Gamoh*, SK Srivastava and Prabhat Kishore  | 51-56       |
| 11                           | Phanerogamic Plant Parasites  | Hasan Mahmudul Hoque and Bidisha Borgohain*  | 57-60       |
| 12                           | Global Seaweed Production: Data and Trends  | Priyatharshni Arivoli*, Cheryl Antony and P. Ruby  | 61-64       |
| 13                           | Using Machine Learning Algorithms to Improve Crop Modeling Predictions for Monitoring and Mitigating Climate Change | Ankita Chauhan* and Narender K. Sankhyan   | 65-69       |
| 14                           | The Future of Indian Agriculture with Aeroponic Farming   | S. Sheelamary*, K. Lakshmi, K. Dhanapal, R. Vivek Kumar, A. Ponselvan and N. Vinith                  | 70-73       |

|    |   |   |         |
|----|---|---|---------|
| 15 | Silicon for Plant Stress Signalling and Defense Responses: Physiological and Molecular Prospective  | Aashin Sharma* and Narender K. Sankhyan   | 74-77   |
| 16 | Mid-Cycle Estrus in Bovines: Major Aberration to Farm and Dairy Industry  | A. Thangamani*, S. Manokaran, A. Reshma, T. Sarath, R. Rajkumar and A. Elango                                 | 78-82   |
| 17 | Market Potential and Promotional Strategies for Inland Farm Fisheries in Kalapatti District of Coimbatore                                 | R. Kameshwar*   | 83-89   |
| 18 | Introduction to Seaweeds  | Priyatharshni Arivoli*, Cheryl Antony and P. Ruby   | 90-94   |
| 19 | Michelia champaca: A Comprehensive Insight into Its Multiutility  | M. Kiruba, G. Anand, M. Ashwin Niranjan and T. Senthilkumar   | 95-98   |
| 20 | Marine Bioprospecting: Novel Use of Ocean Resources   | C. Ganesh, Pullagura Siva Nagendra, Ashish R. Urkude and Mitanshu Yadav*                                      | 99-107  |
| 21 | Quality of Irrigation Water: Need and Criteria  | Dundigalla Sai Teja*, Malothu Chandulal, and Aaviti Abhishek  | 108-111 |
| 22 | Agrotextiles: Revolutionizing Sustainable Agriculture for Climate Resilience  | Neeta* and Nisha Arya   | 112-116 |
| 23 | Silvipastoral Systems in Arid and Semi-arid Regions   | Dr. P. Kumar*, Dr. P. S. Devanand, Dr. M. Kiruba, and Dr. P. Mangammal  | 117-121 |
| 24 | Influence of Age of the Planting Material on the Survivability Percentage of Mulberry Mini Clones Propagated Using Mini Clonal Technology | Kiruthika C, Karthick mani Bharathi B, Susikaran S*, Parthiban KT, Vasanth V, and Navaneethan S               | 122-127 |
| 25 | Influence of Relative Humidity on the Survivability of Mulberry Mini Clones Propagated Using Mini Clonal Technology                       | Kiruthika C, Karthick mani Bharathi B, Susikaran S*, Parthiban KT, Vasanth V, and Navaneethan S               | 128-133 |
| 26 | Agroecology: Integrating Ecology into Farming Practices   | Kavita Solanki, Jyostnarani Pradhan*, Aman Jaiswal and Geeta Kumari   | 134-140 |
| 27 | The Sustainable Symphony of Rice-Duck Farming   | Raktim Bharadwaj*, Royal Islam, Bhaba Krishna Ojah, Arindom Kalita, and Anwasha Barman                        | 141-144 |
| 28 | Broiler Goat Farming: A Profitable Enterprise for Empowering Farm Women   | Biswanath Sahoo*, Arun Kumar Panda, Lipi Das, Tanuja S., Mridula Devi, Gautama Parida and Sanjay Kumar Behera | 145-150 |
| 29 | India's Poultry Production Landscape: Key Trends and Developments   | Kanta Godara*, R. S. Godara, Vinay Singh, Tapendra Saini and Rohit Barwar                                     | 151-155 |
| 30 | Trichoderma: An Effective Bioagent against Plant Pathogens  | Neha Chaudhary*, Dr. Pradeep Kumar Verma, Shachi Tiwari and Swarnima Tiwari                                   | 156-159 |
| 31 | Pesticides Affect Fish: Exploring Physiological, Behavioral and Biochemical Changes   | Shilpee Kumari*, Manibhaskar Kumar, Sarvendra Kumar and Showkat Ahmad Dar                                     | 160-164 |

|    |  |  |         |
|----|--|--|---------|
| 32 | Agronomic Biofortification: An Inventive Tool to Combat Malnutrition   | Porismita Goswami*, Dr. Digambar Sarma, Pratyasha Jonak Baruah and Moumita Routh | 165-169 |
| 33 | Fish Collagen: Alternative Source Mammalian Collagen   | Md. Aman Hassan*, Parmanand Prabhakar and Sarvendra Kumar                        | 170-173 |
| 34 | The Intersection of Philately and Entomology: Insect Stamps as Educational Tools   | Kishore S. M* and S Prasanth   | 174-176 |
| 35 | Heavy Metal Contamination in Urban Soils: Sources, Risks, and Remediation Strategies   | Ramdas Meena*  | 177-179 |
| 36 | Advancing Natural Resource Management through Geospatial Technologies  | Murali K V* and Chetan Bhanu Rathod  | 180-182 |
| 37 | Seaweed as a Biofuel: The Future of Renewable Energy?  | Priyatharshni Arivoli*, Cheryl Antony and Ruby Ponnusamy                         | 183-186 |
| 38 | Sucking Pest of Brinjal and their Management   | Shivangi Shahi*, Eisha Singh, Priyanshu Singh, Diplal Chaudhary and Ankita Rai   | 187-190 |
| 39 | Lepidopterous Egg Parasitoid: Trichogramma Spp.  | Dr. H. V. Patel*, Dr. R. K. Kalaria and Dr. S. K. Chawda                         | 191-193 |
| 40 | Palmyra Palm- A Lesser-Known Fruit for Profitability and Nutritional Security for Marginal and Small Farmers                                 | L.C. De* and Tulipa De   | 194-197 |
| 41 | Utilization of Fermented Unconventional Feed for Animal Feeding- An Approach to Reduce Malnutrition  | Ashvini Bansod, Rajeshwar Khandare* and S. K. Saha                               | 198-202 |
| 42 | A Better Alternative for Disease Management in Agricultural Crops by Using Plant Extract   | Arunima Tiwari, Anshika Sharma, Usharani Sahoo and Prakhar Srivastava*           | 203-206 |
| 43 | The Incredible Health Benefits of Okra: Nature's Nutrient Powerhouse   | Abhishek*  | 207-209 |
| 44 | Silkworm Handling Robots: Transforming the Sericulture Industry  | Sukanya Saikia* and Birina Kaushiki  | 210-212 |
| 45 | Use of Zinc-Solubilizing Bacteria for Biofortification of Paddy in the Katchar Region of Uttar Pradesh (Village: Kariyamai): A Success Story | Viabhav Kumar Upadhayay*   | 213-216 |
| 46 | Dandeli Teak: A Sustainable Legacy   | Chetan Bhanu Rathod*, Praveen Raj, Inamati S S, Jagadish M R and Hanumantha M    | 217-220 |
| 47 | Barley Improvement using Conventional Breeding Approaches  | Madhu Patial* and Santosh Kumar Bishnoi*   | 221-224 |

|    |  |  |         |
|----|--|--|---------|
| 48 | Optimizing Water Use in Agriculture: Strategies for Sustainable Crop Production in a Thirsty World           | Chethan C.*, Manjunath S Melavanki, Chethan Babu, R. T., Shreyas Bagrecha, and Fiskey Vrushabh Vijay | 225-228 |
| 49 | Feeding Livestock for Health: Managing Gut Health for Sustainable Productivity                               | Rajat Buragohain*  | 229-236 |
| 50 | Effect of Climate Change on Livestock Rearing  | Dr. Gagan Chawla*, Dr. Rohit Solanki, Dr. Sachin Chaudhary and Manisha Choudhary                     | 237-241 |
| 51 | Harnessing the Biotechnological Methods in Marine Product Improvement: Its Innovation in Bioactive Compounds | Nandhana Lal R, Sahaya Preethi S, and Vaishali Prakash Arul Prakasam*                                | 242-245 |
| 52 | Nitrogen Fixation in Moong Bean (Vigna radiata)  | Shivani Choudhary*, G. Roopa Lavanya and Sunil Kumar   | 246-250 |
| 53 | Biosensors: A Potential Component in Agriculture and Food Safety   | Palki Priya Khargharia*, Debasmita Nath, Dimpi Dutta, Sudeshna Sarkar, and Arundhati Borgohain       | 251-253 |