

E-ISSN: 2582-9467



# VIGYAN VARTA

An International E-Magazine for Science Enthusiasts

Volume 6, Issue 05, May 2025

# Contents

<b>Volume: 06, Issue: 05</b>		<b>May 2025 (E-ISSN: 2582-9467)</b>	
<b>Sl. No.</b>	<b>Title of the Article</b>	<b>Author's Name</b>	<b>Page</b>
1.	Weed Management Strategies in Organic Agriculture and Natural Farming	Shiwani Kumari*, G D Sharma, Sandeep Manuja, Janardan Singh and Shashi Badesra	1-5
2.	Liquid Gold: The Vital Role of Colostrum in Livestock Health	Amit Kumar* and Shraddha Dwivedi	6-11
3.	Leadership and Responsibility: Life Lessons from Mufasa in the Disney Movie - The Lion King	Chandrasekhar Bhoi*	12-21
4.	Heat Tolerant Crops: Measure to Combat Climate Change in Agriculture	Gourav Kumar Sarangi* and Simran Rout	22-25
5.	Fundamental Mechanisms and Emerging Strategies in Phytoremediation of Environmental Pollutants	Prabhutva Chaturvedi*, Kusumlata Goswami, Binal Rajeshbhai Khalasi, Vishal Soni, Shrishti Sharma and Shubham Kanaujiya	26-33
6.	Efficient Water Management Practices for Direct Seeded Rice (DSR) Cultivation System	Dharani Dhar Pradhan*, Suchismita Tripathy and Rabiratna Dash	34-37
7.	Clinical Echocardiography in Canines: Techniques, Applications and Diagnosis	Shree Ram Karir*, Alka Bharia, Sachin Chaudhary and Lokesh Kumar	38-41
8.	Shree Anna for a Hotter Planet: Millets as Climate-Resilient Superfoods	S Harshitha Nayak*, Adrita Dam, Sunil Naik and Rakesh N	42-45
9.	Hepatitis A and Shellfish: Understanding Zoonotic Risks	Santhiya. V*, Porselvan. S, Saravanan. S and Kaviarasu. D	46-49
10.	The Emergence of RNA Interference Technology: An Experimental & Innovative Approach for Crop Improvement	Aman Mishra* and Dr. Uttam Chandel	50-55
11.	Antixenosis Resistance in Crop Plants Against their Major Insect Pest	Shashikumar E Shivannanavara*, Pradeep K. Chandra and Adarsh Kumar	56-60
12.	Social Media: Empowering Farmers to Take Judicious Actions Related to Agriculture	Diksha Patel*, Pragya Ojha and Vister Joshi	61-65
13.	Reviving Tradition: Liquid Organic Manures for Eco-Friendly Disease Management in ZBNF	Souvik Bhattacharjee*, Pankaj Kumar Mishra and Ahana Sarkar	66-72
14.	Carbon in the Clouds: Bhojpatra Forest as High- Altitude Climate Heroes	Lakshay Mokta* and Muskan Sharma	73-76
15.	Geospatial Intelligence for Natural Resources: The Power of Google Earth Engine	Komal Rokade*, Ravindra Bansod, Sachin Nandgude and Mahanand Mane	77-80

16.	Proteomics for Insect- Pest Management in Cotton	Srilekha Koduri* and A. G. Sreenivas	81-83
17.	Recent Trends in Fracture Management in Canines: A Brief Study	Shree Ram Karir*, Anita, Alka Bharia and Nupur Pandey	84-87
18.	Millets: The Smart Grain for a Sustainable Future	Sonali Naik*, Sushmita Toppo and Jeebanjyoti Behera	88-91
19.	Integrated Parasite Management (IPM): A Sustainable Approach	Kavita Kumari*, Alka Bharia, Deepika and Priyanka Saini	92-94
20.	Prospects and Constraints of Nano Fertilizer Technology in Agriculture	Divya Rana*, Pritika, Dr. Narender K. Sankhyan, Dr. Kanika Baghal, Anamika Karmani and Akanksha	95-100
21.	Harnessing Soil Microbiome for Enhancing Soil Health, Crop Productivity and Environmental Sustainability	Anamika Karmani*, Dr. N K Sankhyan, Dr. Sanjay Sharma, Yashasvi Sood and Divya Rana	101-105
22.	Toda Embroidery: A Timeless Tribal Craft	Minakshi Sharma*, Saroj Yadav, Neelam M. Rose and Shalini Rukhaya	106-109
23.	Advanced Techniques for Characterizing Soil Hydrological and Transmission Properties	Yashasvi Sood*, Dr. Narender K. Sankhyan, Dr. Lav Bhushan, Anamika Karmani, Pritika Nalwa and Ayushi	110-114
24.	Sensor-Based Fertigation for Real-Time Nutrient Delivery and Crop Optimization	Pritika*, Dr. Narender K Sankhyan, Dr. Kanika Baghla, Divya Rana, Akanksha, and Yashaswi Sood	115-119
25.	Hydroponics: A Smart Farming Revolution for Young Farmers	Sadhana Kongala*	120-123
26.	Aeroponics: Smart Farming in the Air for Young Farmers	Sadhana Kongala*	124-126
27.	Stay-Green Trait: A Prospective Approach in Crop Improvement	Isha Goswami*, Vijay Rana, Prikshit and Ankita Kapoor	127-129
28.	Quinoa Farming in a Changing Climate: Sustainability, Challenges, and the Way Forward	Harshabardhan, Lalit Kumar Sanodiya*, Abhijeet Kumar and Pratik Sanodiya	130-135
29.	Chemical Weed Management in Direct Seeded Rice (DSR)	Dharani Dhar Pradhan*, Suchismita Tripathy, Rabiratna Dash and Prekshya Das	136-139
30.	Handicrafts in Shaping the Livelihood of Rural Communities in West Bengal	Indrajit Mandal and Dr Bineeta Satpathy*	140-143
31.	Shree Anna Abhiyan – Odisha Millet Mission: Reviving Nutritional Traditions	Subhashree Dash*, Sayeena Biswal and Jeebanjyoti Behera	144-146



32.	Bridging Income Gaps: Empowering Marginal Farmers	Sayeena Biswal*, Subhashree Dash and Jeebanjyoti Behera	147-153
33.	Digital Extension: The Growing Role of Mobile Phones in Rural Education	Asutosh Mishra*, Shubhasmita Nayak and Jeebanjyoti Behera	154-157
34.	Crisis Management in Extension Organizations: Real-World Lessons from Disasters and the Pandemic	Shubhasmita Nayak*, Asutosh Mishra and Jeebanjyoti Behera	158-161
35.	Advancing Women's Participation & Gender Equity in Agriculture	Sreeparna Rath* and Jeebanjyoti Behera	162-164
36.	From Field Visits to Digital Platforms: The Evolution of Agricultural Extension Services in the Digital Era	Shibani Purohit* and Jeebanjyoti Behera	165-169
37.	Capacity Building and Skill Development: Key Pillars of Extension Education	Sumitra Soren* and Jeebanjyoti Behera	170-173
38.	Youth Engagement in Agriculture: Innovative Extension Approaches	Snehashree Dalei* and Jeebanjyoti Behera	174-178
39.	From Policy to Productivity: The Role of PPPs in Transforming Extension Services	Swagatika Ratha* and Jeebanjyoti Behera	179-182
40.	The Basis of Statistical Quality Control	Suraj Mallick* and Akhilesh Kumar Gupta	183-186
41.	Bridging Gaps through Agripreneurship: Opportunities for Women and Rural Youth	Aparna C.V.*, Pedapati Anand Tej and Jeebanjyoti Behera	187-191
42.	Traditional Ways of Recycling Textile Materials: A Review	Pratibha*, Saroj Yadav, Neelam M. Rose and Shalini Rukhaya	192-194
43.	VISTAAR: A New Era of Agricultural Extension in India	Gokani Geetha*, Pavan Kalyan Sandipam and Jeebanjyoti Behera	195-199
44.	The Impact of Climate Change on Smallholder Farmers' Livelihoods: A Study of Adaptation Strategies and Policy Interventions	Ameesha Rani Das *, Akhilesh Kumar Gupta and Jeebanjyoti Behera	200-202
45.	The Role of Extension Education in Biofortification of Crops	Keshab Chandra Gouda* and Jeebanjyoti Behera	203-205
46.	Role of Extension Education in Rural Development for Managing Migration	Soumya Suvam Das*, Keshab Chandra Gouda and Jeebanjyoti Behera	206-209
47.	Soil-Root Interactions: Rhizosphere Processes and Nutrient Acquisition	Nivedita Bagga*and Sanjay Sharma	210-214

48.	Soil Erosion in Hilly Landscapes: Drivers and Mitigation Strategies	Aayushi Chaudhary*, NK Sankhyan, Lav Bhushan, Aarushi Chaudhary and Yashasvi Sood	215-219
49.	Weed Management in Wet Direct-Seeded Rice	Sakshi Nimbal*, Sandeep Manuja, G D Sharma and Anil Kumar	220-125
50.	Beyond the Needle: The Symbolism and Significance of Kashida Embroidery in Kashmiri Culture	Divya*, Saroj Yadav, Neelam M. Rose and Shalini Rukhaya	226-229
51.	Soil Health Degradation in Monoculture: Challenges and Remediation Strategies	Kavita*, Dr. Narender K. Sankhyan, Dr. Dhanbir Singh, Dr. Amita, Dr. Ravindra Pal Mandar, and Tanvi Mehta	230-232
52.	Precision Nutrient Management: Innovative Technological Approaches	Tanvi Mehta*, Dr. Dhanbir Singh, Kavita and Mannat Rana	233-237
53.	The Rise of Precision Agriculture: Transforming Farming with Technology	Pedapati Anand Tej*, Aparna C.V and Jeebanjyoti Behera	238-240

**[www.vigyanvarta.in](http://www.vigyanvarta.in)**

© Vigyan Varta-2025