

TABLE OF CONTENTS

i	Editorial and Table of Contents	i-v
1	Smart Greenhouses: Creating Optimal Growing Environments for Crops Vineichuno Kuotsu and Aseem Tara	1
2	SPLAT: A New Pheromone Technology for The Management of Pink Bollworm in Cotton Madhu T. N and V. Chinnababu Naik	3
3	Importance of Health for Middle Age Transgender Individuals Vijetha B. V. and Usha Ravindra	5
4	Bio-Intensive Management Strategies for Cotton Pests Madhu T. N. and V. Chinnababu Naik	7
5	Revolutionizing Agriculture: The Role of AI in Modern Farming Muneshwar Prasad Mandal	9
6	A Guide to Transgender on Non-Communicable Diseases Vijetha B. V. and Usha Ravindra	13
7	Waste Utilization in Flower Crops Sudati Akshitha	15
8	Impact of Transgenic Cotton on Pink Bollworm in India Madhu T. N. and V. Chinnababu Naik	18
9	Insights on Transgenders Living in Bangalore City Vijetha B. V. and Usha Ravindra	20
10	Impact of Egg Parasitoid, <i>Trichogramma bactrae</i> for the Management of Pink Bollworm in Cotton Madhu, T. N. and V. Chinnababu Naik	22
11	Leveraging Social Media Tools and Its Application for Sustainable Agriculture Amitha C. D.	24
12	Millets – A Solution in Combating Risk in Dryland Agriculture: A Review B. Sirisha, T. Lakshmi and K. Raghavendra Chowdary	27
13	Vermicompost – The Organic Gold for Agriculture Satpal, Kanika Pareek, Neelam and Pratibha Bharti	30
14	Base Editing: The Next Frontier in Genome Editing Somsole Bharath, Supriya Raj D. S. and Shridhar Ragi	35
15	Ripening And Its Control Using Active Packaging and Monitoring Using Intelligent Packaging Nitika Bishwas, Ayush Gupta, Tangringchi S. Momin, Chilse C. Marak, T. Spongglemla, Sasikumar R. and I. B. Mangang	38
16	Mastering the Tender Coconut Trade: A Saga of Resilience and Expansion G. Malathi, N. Sriram, G. Anand and R. Jegathambal	41

17	CRISPR: A Breakthrough in Crop Improvement Shivangi Bishnoi and Jayanti Tokas	43
18	Critical Analysis of Polyphenol Oxidase: A Major Contributing Factor in Enzymatic Browning Reaction Anyasha Das, Birti Katharpi, Sentile Thono, Dipkar Darjee, Banrilaakor Dkhar, Sasikumar R. and I. B. Mangang	47
19	Dioscorea Species: An Important Under-Exploited Medicinal Plant and A Potential Root Crop for Agroforestry Girish Shahapurmath and Akshay F. Madiwalal	50
20	Sulphur as a Dynamic Minerals in Indian Soils Kasinam Doruk	55
21	From the Americas to Asia: The Global Spread of Fall Armyworm and its Impact on Agriculture Rupali J.S., Vidya Madhuri E., Sagar D. and Akhileswar Viswakarma	57
22	Finger Millets: The Miracle Millet Aastha Vithalkar, Keshav Kaiwartya and Yashwant Kumar Patel	61
23	Resistant Starch: A Comprehensive Overview of Modification Methods, Health Benefits and Food Applications Nongmaithem Seema Chanu, Sajesh Chettri, Hijam Merina Devi, Rakesh Kumar Raigar and Said Prashant Pandharinath	65
24	Root and Tuber Crops for Livelihood and Nutritional Security of Farmers Nidhi Kumari, Avinash Pandey, Kishor U. Tribhuvan, Shambhu Krishan Lal and Sudhir Kumar	69
25	Significance and Methods of Pollen Storage A. Thanga Hemavathy and V. Dhanushkodi	73
26	Speed Breeding: An Accelerating tool for Crop Improvement Choudhari A. K., Kalpande H. V. and More A. W.	76
27	The Crucial Role of Plant Genetic Resources in Cultivating New Varieties and Hybrids R. Praveen and Premkumar Adhimoalam	78
28	Advanced Production Techniques of Senna Vasanthkumar S. S., Pooja U. K., Gowshika R. and Rubika R.	80
29	Causes of Soil Compaction and Hardpan Formation and Its Optimal Solution – Subsoiling Priyanka Rajkumar Khole	84
30	Techniques for Packaging in Horticulture Vasanthkumar S. S., S. Vallalkannan, Pooja U. K. and Gowshika R.	86
31	Invitro Techniques in Major Vegetable Crops Rashmi H, Gandikota Brahmani and Yoshita Sri Krishna Shastri	88
32	Tissue Culture Technology: Its Utilization in Crop Improvement D.B. Prajapati	93
33	Nanocellulose: Transforming Agricultural Waste into High-Value Biomaterials Chidamparam Poornachandhra, Rajamani M. Jayabalakrishnan, Joseph Ezra John and Boopathi Gopalakrishnan	96
34	Intelligent pH Sensing Films in Food Packaging Priya V. N. and Usha Ravindra	100

35	Indian Wild Boar: An Unwelcome Visitor to Groundnut Fields Harish G., Nataraja Maheshala and Sakthivel P.	104
36	Guardians of the Roots: Soil-Insect Interactions in Plant Protection Guruprasad H.	107
37	Eco-Friendly Flower Preservation: Sustainable Methods and Practices E. Shirin Hima Bindu and R. Neela Rani	111
38	Acclimation: An Effective Tool for Enhancing Low-Temperature Stress in Bitter Melon Veena Devi, Ritesh, Parminder Kumar and Jomika Devi	114
39	Soil Health Management: Restoring Ecosystem Functionality N. Sandhya Rani, V. Usha Rani and A. Lalitha	117
40	Smart Agriculture: Robotics is the Future for Modular Farming Meena A., Ramya Krishna K. and Safna M.	120
41	A Decade Decoded: Spies and Hackers in the History of TAL Effectors Research MD Thabrez and Vineeth M	123
42	Pruning and Training Under Protected Structures Keerthana Sethunath	126
43	Bee Hotel – Increasing the Pollination Efficiency G. Gunasekar	130
44	Nano-fertilizers: A Smart Delivery System Towards Increased Crop Production Sagardeep Sinha and Anindita Jana	133
45	Harmonizing Farming and Natural Resource Preservation: The Profitable Approach of Regenerative Agriculture R. Bhargavi, K. Raghavendra Chowdary, T. Lakshmi, G. L. Siva Jyothi and M. D. Mubeena	137
46	Soybean: A Golden Crop for Farmers and Markets Shilpa A. Habib, Ramu M. S., Sadhana H. S., and Pavithra K. N.	141
47	Prime Editing Reshapes Plant Genetics with Precision Genome Modification Somsole Bharath and Shridhar Ragi	145
48	Tulsi: The Sacred Herb of India - A Comprehensive Exploration Keshav Kaiwartya, Aastha Vithalkar and Yashwant Kumar Patel	148
49	Curative and Protective Effect of Coconut (<i>Cocos Nucifera. L</i>) Inflorescence Sap (Neera) Roopa B. Patil and Bhavana A.	152
50	Male Sterility and Hybrid Development in Sorghum Karthik R. and Gaganashree K. P.	157
51	Sodium Alginate Based Slow-Release Fertilizers Keerthana G.	160
52	Community Led Extension System for Promotion of Improved Farm Livelihoods for Self Help Groups Raman Wadhwa and Jayaram Killi	162

53	Ratoon Management Through IISR RMD Device Sreedevi M. S.	165
54	Low-Cost Rain Hose Irrigation for Increasing the Water Productivity of Short Duration Crops M. Saravanan	167
55	Crop Modelling – A Futurist Tool for Agricultural Research K. Srikanth Reddy, G Sreeja Reddy, Kadapa Sreenivasareddy, G Alekhya and Banavath Mahesh Naik	171
56	Stimulating Approaches for Optimising Development Dr. (Mrs.) Pritishri Parhi and Ms. Suchismita Patra	175