

Publication Details

Name : Dr. Sadras Bhavana

Department: Crop Physiology

I. Research Articles:

- 1 Sadras Bhavana, M. Vijay Kumar, G. S. Madhu Bindu, D. V.V Reddy. (2017). Study on Morpho-Physiological characters in different clones of sugarcane (*Saccharum officinarum* L.). IJCMAS, Vol-6 (11).
- 2 Sadras Bhavana, M. Vijay Kumar, G. S. Madhu Bindu, D. V.V Reddy. (2017). Screening for root and yield characteristics under rainfed conditions in sugarcane clones (*Saccharum officinarum* L.). Bulletin of Environment Phamacology and life sciences. Vol 6, pgs: 466-474.
- 3 Sadras Bhavana, M. Vijay Kumar, G. S. Madhu Bindu, D. V.V Reddy. (2017). Correlation analysis for root, growth, yield and quality parameters of twelve sugarcane clones. Agriculture Update. Vol 1, pgs 2107-2111.
- 4 Sadras Bhavana, T Ramesh, P. Raghuveer Rao, CH. Damodar Raju and B. Balaji Naik. (2021). Correlation Studies between yield and yield attributes of elite rice genotypes transplanted under different growing environments. Journal of PJTSAU. Vol 49(1&2).
- 5 Sadras Bhavana, T Ramesh, P. Raghuveer Rao, CH. Damodar Raju and B. Balaji Naik. (2021). Performance of Rice cultivars for yield and yield attributes at twelve different dates of sowing. Journal of Pharmacology and Phytochemistry. Vol 10 (1), pg 2123-2130
- 6 D. Parvathi, Sadras Bhavana, B. Prashanthi. (2021). Assessment of biochemical parameters in Chilli under storage conditions. Journal of Pharma inovations. Vol 10(12), pg 1122-1126.
- 7 Sadras Bhavana, M. Vijay Kumar, G. S. Madhu Bindu, D. V.V Reddy and K. Chiranjeev. (2022). Assessment of quality parameters in different clones of sugarcane (*Saccharum officinarum* L.). International Journal of Environment and climate change. Vol 12(11), pg :3524-3530.
- 8 Pinninty Sandhya Reddy, Sadras Bhavana and Pradeep K. Shukla. (2022). Biochemical Characteristics of Graphene and Titanium dioxide Nanoparticles in Okra (*Abelmoschus esculentus* L.). International Journal of Environment and climate change. Vol 12(11), pg: 3240-3248.
- 9 G. S. Madhu Bindu, M. Vijay Kumar, P. Raghurami Reddy and S. Bhavana. (2022). Productivity of Sugarcane based sequential intercropping system suitable for Central Telangana Zone. International Journal of Bioresource and Stress Management. Vol 13(1), pg: 1201-1208.
- 10 G. S. Madhu Bindu, M. Vijay Kumar and S. Bhavana. (2022). Two row planting-A high density planting method in sugarcane under wide row mechanised drip irrigation system. Biological forum- An International Journal.

II. Review Articles:

- 1 G. S. Madhu Bindu , S. Bhavana , C. Subha Lakshmi , G. Vinay , N. Vikram , B. Madhukar , G. Vijaya Lakshmi , S. Sushma , A. Chandrababu Naidu , M. Sanjana , S. Vijay Kumar , V. Amulya , M. Sreeja and P. Revathi. (2025). Regenerative Agriculture: A Sustainable Solution to Combat Climate Change and Restore Ecosystems. *Agriculture Association of Textile Chemical and Critical Reviews Journal*. Vol 13 (3), 32-37.
- 2 Dr. Mashetty Rakesh Kumar, Dr. Shivaraj Kumar Verma , Dr Vikas Chandra, Dr Shreya, Dr. Amit Kumar Pandey, Dr Sadras Bhavana, Dr. Sheshanka Dugyala, Dr. Dipsika Paramjita, Vikas Kumar. 2025. Integration Of Precision Agriculture And Horticulture For Improved Crop Yields. *Oriental Journal of Chemistry*. 41 (1).
- 3 Deori, Mamoni & Bhavana, Sadras & Dugyala, Sheshanka & Annapurna, Meka & Sahoo, Anup & Teja, Rachamalla & Ranasingh, Nishigandha & Kumar, Vikash. (2025). Organic Liquid Formulations In Horticultural Crops: A Comprehensive Review On Growth, Quality, And Soil Health. *Plant Archives*. 25. 972-5210. 10.51470/PLANTARCHIVES.2025.v25.supplement-2.004.
- 4 Das S, Chakravarty S, Bhowmik S, Jeet I, Bhandari A, Pandey A. K, Bhavana S, Sutar V. 2026. Determination of Pesticide Residues In Agricultural Produce Using Advanced Analytical Techniques. *Orient J Chem*. 42(3).
- 5 Bhavana, S., P. R. Rao, P. Latha, G. S. M. Bindu, M. V. Kumar, and C. S. Lakshmi. 2026. “ The Role of Mathematical Modeling in Plant Abiotic Stress Biology: Current Trends and Future Prospects.” *Physiologia Plantarum* 178, no. 3: e70909. <https://doi.org/10.1111/ppl.70909>.

III. Books

- 1 **Dr. Sadras Bhavana. 2022.** Molecular Aspects of crop plants to biotic and abiotic stresses (Vol-1). SR Publications – 978-93-92941-12-2.
- 2 Dr. Praveen Kumar, Dr. Pratibha Bisen & **Dr. Sadras Bhavana. 2023.** Genes to Traits: Molecular Plant Breeding (Vol-1). SR Publications- **978-93-92941-33-7**
- 3 **Dr. Sadras Bhavana & Dr. Pratibha Bisen. 2024.** Molecular Aspects of crop plants to biotic and abiotic stresses (Vol-2). SR Edu Publications.- 2023 978-93-92941-39-9.

IV. Book Chapters

- 1 Sadras Bhavana, Sheshanka Dugyala, Rachana Bagudam, C. Subha Lakshmi & K. Krishna Mohan Marker-Assisted Breeding for Rice Improvement Climate-Smart Rice Breeding, Springer-2024.
- 2 Sadras Bhavana, G. S Madhu Bindu, C. Subha Lakshmi, Ch. Chandra Sekhar and Sheshanka Dugyala. Nanotechnology -Its Application In Plant Growth, Development and Protection. *Nanotechnology Approaches in Soil Science*, Springer-2026.
- 3 G. S. Madhu Bindu, K. Bhavitha, C. Subha Lakshmi, Ch. Chandra Sekhar, S. Bhavana and K. Suresh. *Green Nanotechnology: Synthesis and Application of Eco-friendly*

- Nanomaterials for Sustainable Environment and Agricultural Advancements. Nanotechnology Approaches in Soil Science, Springer-2026.
- 4 Dr. D. Parvathi, Dr. Sadras Bhavana and Dr. B. Prashanthi. Comprehensive Knowledge on Chilli Mycotoxins" in the book entitled "Current Research in Horticulture (Vol - 1), Weser Books publications, 2022, ISBN: 978-3-96492-294-6
 - 5 Dr. Sadras Bhavana and P. Sandhya Reddy. Transformation of crop plants- A Review, in the book entitled "Advances in Agricultural and Life sciences" (Vol-10), Weser Books publications, 2022, ISBN: 978-3-96492-383-7.
 - 6 Thamminana Jyotsna and Y. Durga Venkat Hemu and Sadras Bhavana. Engineering Abiotic Stress Tolerance in Crop Plants in the book entitled "Molecular Aspects Of Crop Plants To Biotic And Abiotic Stresses (Volume1), SR Edu Publications, 2023, ISBN: 978-93-92941-12-2.
 - 7 Jessie Huldah. Y, Maruthi Gayathri, M. Kirthy Teja, Goriparthi Meghana, Velamala Gowthami, Sadras. Bhavana, Donakonda Divyasree. Genetic Engineering Advances to Impart Abiotic Stress Tolerance in the book entitled "Molecular Aspects Of Crop Plants To Biotic And Abiotic Stresses (Volume1), SR Edu Publications, 2023, ISBN: 978-93-92941-12-2.
 - 8 V. Asha Latha and Sadras. Bhavana. Physical Barriers of Plant to Biotic Interference in the book entitled "Molecular Aspects Of Crop Plants To Biotic And Abiotic Stresses (Volume1), SR Edu Publications, 2023, ISBN: 978-93-92941-12-2.
 - 9 Mahendra, Kadiri & Sheshanka, Dugyala & Shivani, Darmagaru & Bhavana, Sadras. (2025). Biotechnology In Arid Crop Improvement: An Approach To Drought Resistance. 10.58532/nbennurACEPSW10.
 - 10 Sadras Bhavana. 2025. Systems Physiology and Modeling Approaches for Predicting Climate-Resilient Crop Performance. SR edu publications. ISBN: 978-81-997333-4-3.
 - 11 Sadras Bhavana. 2025. Modelling Yield Stability and Variability under Climate Stress. SR edu publications. ISBN: 978-81-997333-4-3.

V. Popular Articles:

1. Sadras Bhavana, P. Sandhya Reddy, D. Manideepthi, A. Maneesha and N. Divya. Agriculture trends in recent times. Just Agriculture
2. N. Divya, Dr. Sadras Bhavana, P. Sandhya Reddy, D. Manideepthi. Acacia-its potential uses. Times of Agriculture
3. B. Santosh & S. Bhavana. Vermicompost preparation. Vyavasayam, PJTSAU.
4. Sadras Bhavana, P. Sandhya Reddy, D. Manideepthi. Prophylactic measures to be taken in summer maize. Agriculture and Food Magazine- E Newsletter.
5. S. Bhavana, D. Manideepthi, A. Maneesha, N. Divya, P. Sandhya Reddy Date palm cultivation practices and health benefits. Sabujeema- An International Multidisciplinary E- Magazine
6. Rasheeba Iqbal, Sadras Bhavana. Stevia-It's Sugary Uses. Agriculture & Food E- Newsletter
7. S. Bhavana & Ashoka C. Noni Importance and Seed sowing. Vyavasaya Padipantalu
8. S. Bhavana & T. Laxman. Mangosteen cultivation. Vyavasaya Padipantalu

9. S. Bhavana. Management practices in Spiny guord cultivation. Vyavasaya Padipantalu.
10. C. Subha Lakshmi, G.S. Madhu Bindu, H. Arunakumari, Sadras Bhavana. 2025. Polyhalite – A Multinutrient and Ecofriendly Fertilizer Agriculture and Food Magazine- E Newsletter.
11. Dr. Anil Kumar, Dr. D. Sheshanka, Dr. Dhanshree Bharat Jadhav, Dr. Sadras Bhavana. Innovations in Crop Production and Protection. 2025. COOP/2023/KOTA/201080/25/21. Leaf let.
12. Sadras Bhavana, D. Sheshanka, M.P. Bharath. Role of Drones in Precision Crop Monitoring and Smart Pesticide Spraying. ISSN (E): 2583 – 1933. Curr. Agri.Tren.:e-Newsletter, (2025) 4(12), 48-52.
13. N. D. Baria, Sadras Bhavana, Dhanshree Bharat Jadhav, Anil Kumar. Utilization of Hydrogel and Moisture Conservation Techniques to Improve Water Use Efficiency. ISSN (E): 2583 – 0821.Sun. Agri.:e- Newsletter, (2025) 5(10), 29-31.
14. Sadras Bhavana. Hydroponics and Aquaponics: Eco-Friendly Approaches for Modern Agriculture. ISSN (E): 2583 – 0821. Sun. Agri.:e- Newsletter, (2025) 5(12), 52-57.
15. Sadras Bhavana, D. Sheshanka, M.P. Bharath Role of Drones in Precision Crop Monitoring and Smart Pesticide Spraying. ISSN (E): 2583 – 1933. Curr. Agri.Tren.:e-Newsletter, (2025) 4(12), 48-52.

I. Practical manuals :

- 1 Dr. Sadras Bhavana & Dr. Joseph – Environmental Studies and disaster Management (Course AGRO 103, VIth Deans Syllabus)
- 2 Dr. Sadras Bhavana & faculty – Soil, Water and plant Analysis.
- 3 Dr. Sadras Bhavana & Dr. Navyashree R. – Fundamentals of Crop Physiology. (Course CPHY 361, VI th Deans Syllabus)

II. Presentations in International & National Conferences/Seminars/Workshops

1. G.S Madhu Bindu, M. Vijay Kumar, Raghurami Reddy and S. Bhavana. 5th International Agronomy Congress, 2021. Sustainable intercropping system for sugarcane under wide row drip irrigated system of central Telangana Agro climatic zones.
2. Bhavana et al., TECHSER-2017. Correlation Analysis for Root growth yield and quality parameters of twelve sugarcane clones.
3. Bhavana et al., International conference and Expo on Agriculture and Veterinary Sciences. 2019. Study on the root mining characters in relation to growth and yield in different clones of sugarcane.
4. Bhavana et al., 2022. International Conference in system of Crop intensification for climate smart livelihood and nutritional security-(ICSCI). Performance of Rice cultivars for yield and yield attributes at twelve different dates of sowing.
5. Bhavana et al., 2023. International Conference on Innovations to Transform Agriculture, Horticulture and Allied sectors - ITAHAS-. Studies on Correlation Co-efficients of yield and yield attributing characters of six rice genotypes across twelve dates of sowing.

6. Participated in National Conference of Plant Physiology, December 09-11, 2021, Frontiers of Plant Physiology for Climate Smart Agriculture.
7. Attended the National Conference of Science Communicators and Science Teachers (29- 30 Nov. 2021) organized by CSIR-National Institute of Science Communication & Policy Research (CSIR-NIScPR), Vigyan Prasar, DST (Govt. of India) and Vijnana Bharati (VIBHA). The theme of the conference was “Indian Independence Movement & the Role of Science”.
8. Attended the 5th International Conference “Advances in Agriculture Technology and allied Sciences (ICAATAS-2022) conducted at MS Swaminathan School of Agriculture, Centurion University of Technology and Management, on June4-5th 2022.

III. Workshops attended

- 1 Attended a webinar with title “Development of climate change resilient rice varieties through molecular breeding” on 6th July’2020, organized by Bioingene.
- 2 Attended National level safety and self-defense workshop for women and girls organized by NCC unit and women’s development cell jointly with the IQAC.
- 3 Attended a webinar with the title “Development of climate change resilient rice varieties through molecular breeding” on 8th July’2020 organized by Bioingene.
- 4 Attended a webinar with the title “Sustainable Agricultural Practices” on 4th July’2020 organized by Dr. Chaitra Bharath.
- 5 Participated in National Level Online Quiz on World Environment Day, 5th June’20202, organized by the Department of Botany and NSS & Green Globe Nature Club on 6th May’2020 and secured 90%.
- 6 Attended webinar on “SCRIBERE SCIENTIA: An insight into scientific writing” organized by M.Sc. students of plant biology and biotechnology University of Hyderabad (UoH) on 10th June’2020.
- 7 Attended Webinar on “CRISPR-Cas Precision Genome Engineering” organized by Bioingene on 24th July’2020.
- 8 Attended webinar on “National Seed System and Policy Perspectives” organized by NAHEP (ICAR)-CAAST, IARI on 23rd May’2020.
- 9 Participated in a Global Webinar on “Impact of Covid - 19 : Future Endeavors for Sustainable Agriculture” organized by Department of Agricultural Science and Rural Development , Loyola Academy, Secunderabad in collaboration with Sowbhagya Biotech Pvt. Ltd. on 23rd May, 2020.
- 10 Attended webinar on “Development of genetic and genomic resources in foxtail millet: Progress and prospects” conducted by Bioingene on 8th July’2020.
- 11 Participated in an international webinar on ‘Eco-conscious Agriculture’ conducted by Maris Stella College, Vijayawada on 4th June’2020.
- 12 Attended a webinar on 22nd May’2021 on “Awareness program on civil services” conducted by Malla Reddy university.
- 13 Attended webinar on 5th Sep, 2021 on the topic “Ethics in research and publications” delivered by Prof. S. C. Lakhotia, conducted by Bioingene.

- 14 Attended Seminar on 7th Sep'2021 on "Rice area mapping and yield estimation assimilating remote sensing products with crop growth models" conducted by ICAR- INDIAN INSTITUTE OF RICE RESEARCH.
- 15 Attended a webinar on 14th Oct'2021 on "to sensitize researchers about the program and writing science in a popular format" conducted by Augmenting writing skills for articulating research (AWSAR), DST.
- 16 Attended a webinar on 10th Nov'2021 on "How to create login system using Python conformation" conducted by Edureka webinars.
- 17 Attended a presentation on Hydroponics by Dr. Madhuri after receiving training at IARI.
- 18 Attended Awsar Webinar on "Understanding of Science Communication" conducted on 10th June, 2022 by DST, Govt. of India.
- 19 Attended a one day online Workshop on "Fuzzy Machine/Deep Learning for Remote Sensing Data Processing." organized by IIRS-ISRO, Dehradun.
- 20 Attended a webinar on 11th Nov'2021 on "Selenium in 60 minutes" conducted by Edureka webinars.
- 21 Attended One Week Online Certificate Course on Molecular Biology Techniques by CATR - March 20th to 27th, 2025.
- 22 Attended Online Hands-on Training on "Molecular Docking" organized by Centre for Advanced Training and Research, Lucknow, U.P. (India) from 03-04 March 2025.
- 23 Attended one day webinar on "The Plant Cell Webinar Focus on Photosynthesis" on October 17, 2024.
- 24 Attended one day webinar on "The Plant Cell Focus Issue on Proteolysis" on September 24, 2024.
- 25 Attended one day workshop on "TAFE-Tractor Machinery" at Department of Agri Engineering, Kaveri University ;2026
- 26 Attended one day workshop on "Molecular Series-I; Extraction of DNA from Plant samples" at Genetics and Plant Breeding Department, Kaveri University; 2026.
- 27 Attended one day Workshop on "Molecular Series I; Hands On Working of PCR" at Genetics and Plant Breeding Department, Kaveri University; 2026.
- 28 Attended two days Hands on Training at ICRISAT on Biologicals on June 9th and 10th 2026.
- 29 Attended one day training at Thermo Fishers on "Hands on -working of RT-PCR", on 28th August 2026.