Scientific publications/Peer-reviewed publications:

1. Vamshi, J., Uma Devi, G., Vishwas Gowda, Ningaraj Belagalla, **Navyashree, R**., Karthika Vishnu Priya, K., Hari Kishan Sudini. (2025). Evaluation of current biological and chemical control methods under climate change to better manage stem rot disease in groundnut. Legume Research. 1-9. (NAAS rating: 6.8, Scopus Indexed-Q2)
2. Vamshi, J., Uma Devi, G., Gireesha, D. **Navyashree, R**. Ningaraj Belagalla, Yamuna Hanamasagar and Hari Kishan Sudini. (2025). Effect of carbon dioxide levels on virulence and physiological parameters in association with stem rot disease of groundnut. Legume Research. 1-8. (NAAS rating: 6.8, Scopus Indexed-Q2)
3. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Evaluating sorghum genotypes for tolerance to osmotic stress during germination and early seedling development. Journal Plant Archives. 24(2):891-898. (NAAS rating: 5.59)
4. Sachin Tawarkhed, Ashvathma, V.H., **Navyashree, R**., Patil, M.D. and Mummigatti, U.V. (2024). Exploring the variation in physiological parameters among different field pea genotypes. Journal Plant Archives. 24(2):2338-2344. (NAAS rating: 5.59)
5. Sachin Tawarkhed, Ashvathma, V.H., **Navyashree, R**., Patil, M.D. and Mummigatti, U.V. (2024). Evaluation of growth parameters and yield variation in field pea genotypes. International Journal of Advanced Biochemistry Research. 8(8): 709-713. (NAAS rating: 5.29)
6. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Effects of water stress on flowering phenology and yield-attributing characteristics of sorghum genotypes. Journal Plant Archives. 24(2):2465-2472. (NAAS rating: 5.59)
7. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Evaluation of Genetic Diversity in Sorghum genotypes via Simple Sequence Repeat (SSR) Markers. Plant Cell Biotechnology and Molecular Biology journal. 25(11):1-9. (NAAS rating: 5.20)
8. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Evaluation of Genetic Diversity in Sorghum Genotypes for Drought Tolerance Using Mahalanobis' D2 Analysis. Journal of Advances in Biology & Biotechnology. 27(9): 90-97. (NAAS rating: 5.30).
9. **Navyashree, R**., Ashvathma, V.H., Patil, M.D. and Mummigatti, U.V. (2024) Evaluation of salinity tolerance in chickpea (Cicer arietinum): Physiological, biochemical, and yield correlations under variable salinity conditions. International Journal of Advanced Biochemistry Research. 8(8):187-191. (NAAS rating: 5.29).
10. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Effect of drought stress on physiological parameters in sorghum: Adaptive changes and correlations with yield under water stress conditions. International Journal of Advanced Biochemistry Research.8(8):125-132. (NAAS rating: 5.29).
11. Sachin Tawarkhed, Ashvathma, V.H., **Navyashree, R**., Patil, M.D. and Mummigatti, U.V. (2024). Genotypic variation in plant height, branching, and yield components of field pea: implications for crop improvement. Journal of Advances in Biology & Biotechnology. 27(9): 715-723. (NAAS rating: 5.30).
12. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Assessment of Drought Tolerance in Rabi Sorghum Genotypes under Polyethylene Glycol-induced Osmotic Stress. Journal of Experimental Agriculture International. 46(8): 577-584. (NAAS rating: 5.14).

13. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Correlation and principal component analysis of morpho-physiological and biochemical traits in sorghum under drought stress. International Journal of Research in Agronomy. 7(8):15-23. (NAAS rating: 5.20).
14. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Effect of drought stress on Morho-phenological and yield parameters in sorghum genotypes. Journal of Geography, Environment and Earth Science International. 28(6):12-22. (NAAS rating: 5.1)
15. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2024). Evaluating the effects of drought stress on biomass and yield traits in sorghum genotypes. International Journal of Environment and Climate Change. 14(5):79-87. (NAAS rating: 5.16)
16. **Navyashree, R**., Ashvathma, V.H., Patil, M.D., Mummigatti, U.V., and Kiran, B.O. (2023). Effect of salinity stress on morpho- physiological traits in chickpea genotypes. International Journal of Research in Agronomy. 7(1): 258-262. (NAAS rating: 5.20)
17. **Navyashree, R**., Mummigatti, U.V., Nethra, P., Basavaraj, B. and Hanamaratti, N.G. (2023). Screening sorghum genotypes for osmotic stress tolerance during seed germination and seedling growth. Pharna innovation journal. 12(7):1010-1015. (NAAS rating: 5.23)
18. **Navyashree, R**., Ashvathma, V.H., Kiran, B.O., Rashmi, K. and Spoorthy, V.C. (2023). Effect of salinity stress on seed germination and seedling vigour index in chickpea genotypes. Pharna innovation journal. 12(2):2219-2223. (NAAS rating: 5.23)
19. **Navyashree, R**. and Ashvathma, V.H. (2023). Correlation studies on effect of salinity stress on phenology, biochemical, and seed yield in chickpea (Cicerarietinum L.) genotypes. International journal on innovative science and technology. 8(1):2156-2165 (Impact factor: 9.88)
20. R.S. Venkatesha, B.O. Kiran, B. R. Brahmesh Reddy, V.H. Ashvathama, C. Vinutha, **R. Navyashree**, V.C. Spoorthy, S.S. Karabanthanal and R.B. Jolli (2023). Thermal Indices and Phenological response of Sorghum (Sorghum bicolor L.) Genotypes for drought tolerance Under Varied Moisture Regimes. International Journal of Tropical Agriculture. 41(1-2):55-61. (NAAS rating: 4.35)
21. **Navyashree, R.** and Ashvathma, V.H. (2022). Biochemical responses on three growth phases of chickpea under graduated salt stress. International journal of environment and climate change. 12(12):1795-1811. (NAAS rating: 5.13)
22. **Navyashree, R**., Ashvathma, V.H., Patil, M.D. (2021). Effect of salinity stress on morphological, phonological and yield parameters in chickpea. Journal of Farm science. 34(2):186-191. (NAAS rating: 4.42)

REVIEW PAPERS

23. Asha Kushwah, Ambika Bhandari, Vikas Chandra, Monika Sindhu, **Navyashree R**, Seema Devi, Periyanna Thangavelu Sharavanan, Ramakrushna Bastia and Vikas Kumar. (2025). Robotic Pollination in greenhouse farming: current innovations, challenges, and future prospects. Oriental Journal Of Chemistry. 41(4):1-10. (NAAS rating: 6.30)
24. Lopamudra Singha1, R.S., Jaikishan Singh, B., Priyadharshini, Kailash Malode, Rishabh Kumar Singh, **Navyashree R**, Devendra Kumar, Parul Narwal. (2025). Heavy metal stress in plants: mechanisms, impacts, and mitigation strategies- a comprehensive review. International Journal of Environmental Sciences. 11(18):2968-2977. (Scopus Indexed-Q3)

25. **Navyashree, R**.(2024). Advancing Drought Stress Mitigation in Agriculture: The Role of Crop-Based Hydrogels in Enhancing Resilience and Productivity. Innovations, Number 79. (Scopus Indexed-Q4)

CONFERENCE PROCEEDINGS

26. T. Illakiya, **R. Navyashree**, A. Aleeswari, G. BhupalRaj, P. Balaji and B. Muni. Deep Learning Models for Predictive Crop Water Stress Management using Real-Time Environmental Data (2025). Third International Conference on Emerging Applications of Material Science and Technology (ICEAMST), Bengaluru, India, 2025, pp. 1647-1654, doi: 10.1109/ICEAMST67459.2025.11335817.

Books and book chapters:

BOOK CHAPTERS:

1. **Water relations in crop plants - balancing transpiration and water uptake** chapter published in the book "Plant physiology – unraveling the science of plant life" **(ISBN : 978- 93-58990-36-2)**
2. **Calcium: A Signalling Molecule for Salt Tolerance in Plants chapter** published in the book " Research and Review in Agriculture Sciences" **(ISBN : 978-93-92804-80-9)**
3. **Water Relations and Uptake in Crops** chapter published in the book "Crop Physiology: A Collaborative Insights Volume 1" **(ISBN No. 978-81-969203-7-1)**
4. **Climate change: Impacts and mitigation strategies chapter** published in the book "Natural Resource Management and Environmental Security, Volume -5" **(ISBN No. 978-93-5834-190-4)**
5. **Antioxidants in Plants** chapter published in the book "Advanced Botany , Volume – 5"

   (ISBN No. 978-81-968391-7-8)
6. **Plant photosynthesis** chapter published in the book "An Introduction to Plant Biology"

   (ISBN No. 978-93-6135-896-8)
7. **Physiological and biochemical effects of drought stress on plant growth and development** chapter published in the book "Agriculture 1.0" **(ISBN No. 978-9393483 478)**
8. **Transcription factors as tools to engineer enhanced drought stress tolerance**

chapter published in the book "Recent advances in Molecular Biology and Plant Physiology" **(ISBN No. 978-93-6135-587-5)**

Books

9. Mahendra pratap, Ram Nath Mourya, **Navyashree R**, Smiriti Hansda and Anil Kumar. (2025). **Agronomy for the Future: Sustainable Techniques and Climate Resilience**. ISBN No. : 978-93-91900-36-6
10. **Navyashree R**, Debarati Das, Manish V Chavhan, Somuthirapandi Subburaj. (2024). **Plant Physiology Exploring Foundations of Plant Life**. ISBN No. 978-93-48909-66-4
11. Shweta, **Navyashree R**, Anuradha Arun Watane, bhumit Lakra and Rohit Gill. (2024). **Comprehensive insights into Environmental science.** ISBN No. 978-81-980103-0-8
12. **Navyashree R**, Snehalata Yadav, Sonu Swami, Geethanjali K, Shweta. (2024). Insights into Crop Physiology: Advances and Applications. ISBN No. 978-81-973762-0-7
13. Andonissamy Daniel G, K.S. Vidhya Bharathi, Dr. Karunya Nallaiyan, **Dr. Navyashree R** and Dr. Akanksha Singh Yadav (2025). Photosynthesis & Beyond: The Science of Plant Life. ISBN No. 978-93-48909-80-0

Awards/Fellowships/Scholarships:

ACADEMIC AWARDS:

1. **Awarded Gold Medal in Ph.D.** Crop Physiology at the 37th Convocation, University of Agricultural Sciences, Dharwad

CONFERENCE AWARDS:

2. **Best poster presentation award** in the National seminar on abiotic stress management for sustainable millet based production systems, 2023
3. **Best research scholar award** in International conference on advances in agriculture technology and allied sciences (ICAATAS 2023)
4. **Best M.Sc Thesis award** in 5th International conference on Global insights on research and development in agriculture, horticulture and allied sciences, 2023
5. **Outstanding/Best Thesis award** 2023 has been awarded for Ph. D research work in

VIII International Conference in Hybrid Mode on Global Research Initiatives for Sustainable Agriculture Allied Sciences (GRISAAS) during 18-20 December, 2023 held at University of Agricultural Sciences, Raichur, Karnataka, India

6. **Young Crop Physiologist Award** for outstanding contribution and recognition in the field of crop physiology on the occasion of Agri Expo & Awards Ceremony organised by RVSKVV Gwalior M.P. & Agri Meet Foundation U.P.
7. **Young Professional Award** in the field of crop physiology was presented during the Agri Expo & Awards Ceremony organised by RVSKVV Gwalior M.P. & Agri Meet Foundation U.P.
8. **Women Excellence Award** for outstanding contribution and recognition in the field of "Crop
   Physiology" on the occasion of National conference on "Nurturing agricultural advancement and sustainability" (NAAAS) at Sampoorna international institute of agri. science & horticultural technology, Maddur, during February - 10-11, 2024
9. **Young Achiever Award** on the occasion of 1st International Conference on "Future Strategies for Sustainable Agriculture and Technology Impact on Human Health and Environment" (FSATIHE) held at Abhilashi University, Mandi, Himachal Pradesh, India from 1 to 3 March, 2024.
10. **Outstanding Achievement Award** for outstanding contribution in the field of Crop Physiology on the occasion of 6th International Conference on "Holistic Innovations and Technological Advances for Sustainable Agriculture" (HITASA), 04-06 March, 2024
11. **Emerging scientist award** at the International conference Current Innovations and Technological Advances in Agriculture and Allied Sciences (CITAAS) on 29-31 August.

Scientific presentations/peer-reviewed presentations:

1. Evaluating salt tolerance in chickpea genotypes under Nacl salinity stress via seed germination and seedling vigour index assessment in National conference on "Nurturing agricultural advancement and sustainability 2024 (NAAAS 2024)
2. Evaluating genetic diversity in rabi sorghum genotypes for drought tolerance through SSR marker analysis in 1st International Conference on "Future Strategies for Sustainable Agriculture and Technology Impact on Human Health and Environment"

(FSATIHE- 2024)

3. Analyzing the Impact of Drought Stress on Biomass and Yield Characteristics in Different Sorghum Varieties in 6th International Conference on "Holistic Innovations and Technological Advances for Sustainable Agriculture" (HITASA-2024), 04-06 March, 2024.
4. Exploring the Physiological basis of Salinity Stress Tolerance in Various Chickpea Varieties in 4th International Conference on "Recent Advances in Agriculture for Aatmanirbhar Bharat (RAAAB)", 19-21 April, 2024
5. Drought tolerance screening of rabi sorghum genotypes using Polyethylene glycol-induced
6. osmotic stress in 6th International Conference in Hybrid Mode on "Innovative and current advances in Agriculture and Allied sciences ICAAAS" 15-20 July, 2024
7. Variation in biochemical parameters of sorghum genotypes under drought stress conditions in " 8th National youth convention on New perspectives for sustainable agriculture and livelihood security", 22-23 August, 2024
8. Nutraceutical and Therapeutic properties of Pointed gourd (Trichosanthes dioica Roxb.): A Healthy Underutilized Vegetable in International Conference on Precision Horticulture (ICPH-2024), August 22-24.
9. Screening drought-tolerant sorghum genotypes using polyethylene glycol under in vitro conditions in International conference on Current innovations and technological advances in agriculture and allied sciences (CITAAS), 29th - 31st August, 2024
10. Drought tolerance studies in rabi sorghum (Sorghum bicolor L. moench) genotypes in 7th International Conference on Advances in Agriculture Technology and Allied Sciences (ICAATAS - 2024), September 15-16.
11. Evaluation of Water Stress Tolerance in Rabi Sorghum (Sorghum bicolor L. Moench) Genotypes Under Rainfed Conditions in 2nd International agricultural conference on Natural Farming Innovations: enhancing soil health and seed quality with AI and drones for a greener agricultural future, November 3-5, 2024
12. Identification of Drought-Resilient Rabi Sorghum Genotypes through Field and Germination Studies in 8th International Conference on "Recent Trends in Advancement of Agriculture, Horticulture, Livestock and Allied Sciences"

(RTAAAS- 2024), 13-14 November.

13. Effect of drought stress on morpho-physiological traits in sorghum genotypes published in Book of Abstracts, "6th International Conference on Advances in Agriculture Technology and Allied Sciences" (ICAATAS 2023), Loyola academy, Telangana.
14. Effect of drought stress on physiological traits in sorghum genotypes published in Book of Abstracts, National seminar on "Abiotic Stress Management for Sustainable Millet based Production Systems" (2023)

Workshop/Invited talks:

1. 30 days international agriculture winter school-cum-training program on "novel approaches in agricultural systems" March 1-30, 2025
2. 21 Days Summer School in Online Mode on Emerging Challenges and Opportunities in Biotic and Abiotic Stress Management, 10-30 August 2024
3. Krishi Manthan: 30 Days Summer School International Training Programme during 15 July to 15th August, 2024.
4. 30 days program on Prime minister & Ministry of Agriculture & Farmers welfare sponsored agriculture scheme & indian agriculture vision-2050 during 1-30 April 2024
5. 21 Days Winter School in Online Mode on Emerging Problems & Recent Advances in Applied Sciences: Traditional & Innovative Approaches, 08-28 February 2024
6. 30 days winter school on Technological advances leading to Smart Farming & Agripreneurship during 1st Jan to 30th Jan, 2024
7. 21 days- Online Refresher Course on Millets (Shree Anna) Model Crops for Sustainable Farming, Value Addition, Entrepreneurship Development and Nutritional Security (RCSA2023), 7th-27th September 2023.

Popular Magazine Articles:

1. **Navyashree R**., Zuby Gohar Ansari, S. Vijaya, Shalini Mishra and Nirjharnee Nandeha. **The Agriculture magazine**, E- ISSN: 2583- 1755, Volume 4, Issue 4, December, 2024

2. **Navyashree R,** Suchismita Dwibedi and Gautam Veer Chauhan. Climate-Smart Agronomy: Adapting Crop Management to a Changing Climate, ISSN: 2582-9882, Agri articles (e-Magazine), Volume: 04, Issue: 06 (Nov-Dec, 2024)
3. **Navyashree R,** Panchal Sangmesh, Ediga Amala, Priyanka Dubey and Saket Dubey. Physiological Responses of Crops to Climate Change, ISSN: 2582-9882, Agri articles (e- Magazine), Volume: 04, Issue: 06 (Nov-Dec, 2024)
4. **Navyashree R,** Vivek Bhanwala, Panchal Sangmesh[2], Priyanka Dubey and Nirjharnee Nandeha. Enhancing Crop Yields through Stress - Resilient Varieties, ISSN: 2582-9882, Agri articles (e-Magazine), Volume: 04, Issue: 06 (Nov-Dec, 2024)
5. **Navyashree R,** S. Vijaya, Zuby Gohari Ansari, Nity Sharma and Saket Dubey. Role of Plant Hormones in Crop Growth and Development, ISSN: 3048- 8656, Agri Magazine (International E-Magazine for Agricultural Articles), Volume: 01, Issue: 05 (Dec, 2024)
6. **Navyashree R**, Panchal Sangmesh, Ediga Amala, Krishnaveni Anbalagan and Ayushi Trivedi. Mechanisms of Drought Tolerance in Crops, ISSN: 3048-8656, Agri Magazine (International E-Magazine), Volume: 01, Issue: 05 (Dec, 2024)
7. **Smriti Hansda,** Navyashree R and Anil Kumar. Agrivoltaics: Integrating Solar Energy with Crop Production, Agriculture and Food: E- Newsletter, Article ID: 60749, E-ISSN: 2581- 8317

Popular articles (Telugu):

Radio talks delivered:

Professional Affiliations

1. Life member of **Indian Society of Agriculture science and Technology Research (ISASTR),** Noida, India (29/08/2024)
2. Life member of **Indian society of Agriculture and Horticulture Research development (ISAHRD)**, Chandigarh, Punjab, India (5/03/2024)
3. Life member of **Agro Environmental Education and Farmers welfare society**, Hoshiarpur Punjab, India (5/10/2023)