

Dr. Karthika M - Completed Ph. D (Full time)

Experience - 3 years 01 Month

RESEARCH PAPER PUBLISHED IN RECOGNIZED JOURNALS: 18

ABSTRACTS: 11

POPULAR ARTICLES: 08

BOOK CHAPTERS: 06

BOOKS: 02

Sl. No.	Name of the authors	Year of publication	Title of the research paper	Journal name	Volume, issue, Page number	NAAS Rating
1.	Karthika Muthumanickam, Sanjay Kumar Chaudhary, Shiveshwar Pratap Singh, Rajan Kumar & Banavath Mahesh Naik.	2022	Combined application of chemical fertilizers, organics and foliar spray of zinc and iron on yield, quality and water productivity of aerobically grown rice (<i>Oryza sativa</i>) in calcareous soil.	<i>Journal of Plant Nutrition</i>	46 (13): 2990-3001.	8.10
2.	Karthika Muthumanickam, K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A.	2024	Soil enzymatic activity, nutrient dynamics and biplot analysis under varied plant population and nutrient management in machine-planted	<i>Current Science</i>	126 (10): 1273-1279	7.10

			chickpea.			
3.	Karthika Muthumanickam , K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A	2024	Nodulation, yield and economics of machine planted chickpea (<i>Cicer arietinum</i> L.) under varied spacing and nutrient management	<i>Legume Research</i>	47 (10): 1737-1743	6.80
4.	Naik, B. M., Pandey, S. T., Bhatnagar, A., Chandra, S., Kumar, R., Karthika M Reddy, K. S., & Nandipamu, T. M. K	2026	Optimizing nutrient application with vrikshayurveda-based herbal kunapajala concoctions: a sustainable solution for enhancing the productivity of Indian mustard (<i>Brassica juncea</i> L.)	<i>Indian Journal of Traditional Knowledge</i>	25 (1): 63-73	6.80
5.	Karthika Muthumanickam , K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A	2023	The Planter performance under varied seed rate and nutrient management in chickpea	<i>Indian Journal of Agricultural Sciences</i>	93 (12): 1350–1355.	6.40
6.	Banavath Mahesh Naik, Mritunjay Kumar, Karthika M , S K Singh, Navnit Kumar and Nawal Kishor Ray.	2023	Co-implementation of tillage and precision nutrient management practices on crop yield of <i>kharif</i> maize	<i>Indian Journal of Agricultural Sciences</i>	93 (10): 1061–1066.	6.40

			(<i>Zea mays</i>).			
7.	Naik, B. M., Pandey, S. T., Bhatnagar, A., Chandra, S., Kumar, R., Karthika, M., ... & Pramanick, B.	2026	Biostimulant-based nutrient management for energy-efficient and low-carbon mustard cultivation: a life cycle assessment approach for sustainable development.	<i>Scientific reports</i>	doi.org/10.1038/s41598-026-48219-6	9.80
8.	Yazhini, Gunasekaran, Tamilselvan Ilakiya, Sivalingam Shanmugapriya, Dhakshinamoorthy Durgadevi, Ajaykumar Ramasamy, Karthika Muthumanickam, and Jeeva Kasiviswanathan Lekshmi.	2025	Phytogenic Nanoparticles: A Novel Strategy for Sustainable Crop Protection	<i>Plant Stress</i>	18	6.3 (IF)
9.	Karthika Muthumanickam, K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A	2025	Yield, weed dynamics and nutrient balance of machine-planted chickpea under varying seed rate and nutrient management	<i>Journal of food legumes</i>	38(1), 36-42.	5.54
10.	Kumar, M., Naik, B. M., Karthika, M., Kumar, N., & Kumar, A	2019	Effect of Tillage and Nutrient Management Practices on Yield and	<i>International Journal of Current Microbiology and Applied</i>	8(3): 1365-1370	5.38

			Economics of Rice (<i>Oryza sativa</i>)– Maize (<i>Zea mays</i>) Cropping System in North Bihar.	<i>Sciences</i>		
11	Naik, B. M., Kumar, M., Singh, S. K., Karthika, M. , & Roy, N. K.	2022	Combined effect of tillage and nutrient management practices on kharif maize (<i>Zea mays</i> L.) yield and chlorophyll content.	<i>Journal of Crop and Weed</i>	18(2), 01–06.	5.27
12	Adilakshmi, G., Kumar, R., Varalakshmi, P., YN, M. B., & Karthika, M.	2021	Nutrient Content and Uptake by Grain and Straw of different rice Varieties at Different moisture Regimes under direct Seeded Condition.	<i>The Pharma Innovation</i>	10 (5): 561-563	5.23
13	Karthika Muthumanickam , K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A	2022	Impact of Seed Rate and Nutrient Management on Growth Analysis of Chickpea under Semi-Arid Zones	<i>International Journal of Environment and Climate Change</i>	12 (11): 1268-1276	5.16
14.	Karthika Muthumanickam , Sanjay Kumar Chaudhary, Banavath Mahesh Naik & Soundharya N	2025	Improving Nutrient Use Efficiency and Soil Fertility of Aerobic Rice (<i>Oryza sativa</i> L.) under Integrated Nutrient	<i>Journal of Experimental Agriculture International</i>	47 (10): 32-340	5.14

			Management and Micronutrient Foliar Spray in Calcareous Soils			
15.	Naik, B. M., Pandey, S. T., Bhatnagar, A., Chandra, S., Kumar, R., & Karthika M.	2023	Effect of vrikshayurveda based herbal kunapajala and their doses on mustard productivity	<i>Indian Journal of Oilseeds</i>	40 (Special Issue)	5.02
16.	Sekhar, C., Priyadharshini, M., Gayathri C, P., Lakshmi Priya, S & Karthika, M.	2023	An economic appraisal of cultivation of korai grass in Central Tamilnadu	<i>Horticulture International Journal</i>	7 (4): 127-137.	4.74
17.	Karthika Muthumanickam , K Bhanu Rekha, Sudhanshu Kasbe, Madhavi A, Triveni, S and Rajiah, A	2022	Performance of machine planted chickpea (<i>Cicer arietinum</i> L.) as influenced by different seed rates and nutrient management practices in Southern Telangana zone	<i>The Journal of Research, PJTSAU</i>	50 (2): 75-83	4.38
18.	Karthika Muthumanickam , Sanjay Kumar Chaudhary, Banavath Mahesh Naik & Soundharya N	2025	Improving Nutrient Uptake and Protein Yield of Rice through Integrated Nitrogen Management and Foliar Fe and Zn Application in Calcareous Soils	<i>International Journal of Environmental & Agriculture Research</i>	11 (9): 1-7	4.23

i)	Abstracts And Extended Summary Published in Conferences
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1.	Karthika, M. Evaluation of Planter Performance under Varied Seed Rate and Nutrient Management in Chickpea. International Conference on Rainfed Agriculture: Building Pathways for Resilience & Sustainable Livelihoods during 29-31, January 2025 at ICAR-CRIDA, Hyderabad. Pp. 1273-12766.
2.	Karthika M, Chaudhary S.K, Singh S.P, Kumar R. and Mahesh B. Quality and nutrient uptake of aerobic rice as influenced by integrated nutrient management and micronutrient foliar spray on calcareous soils. 5th International Conference in Hybrid Mode on Innovative and Current Advances in Agriculture & Allied Sciences, Himachal Pradesh University, Summer Hill, Shimla (H.P.), 12 th -14 th June 2022. pp. 189-190.
3.	Karthika M, Banavath Mahesh naik and B. Bhavana. Crop Simulation Modeling – A Tool of Risk Assessment and Adaptation Strategies Under Changing Climatic Scenario. National Conference on Food & Nutritional Security and Sustainable Agriculture during 15 and 16 th April, 2022, Hyderabad. Pp. 217-218.
4.	Karthika M, S.K. Chaudhary, S.P. Singh and Banavath Mahesh Naik. “Performance of aerobic rice (<i>Oryza sativa</i> L.) under integrated nutrient management and micronutrients”. Agri-Innovations to Combat Food and Nutrition Challenges, 5th International Agronomy Congress, PJTSAU, Hyderabad, 23-27 November 2021, pp. 1519-1520.
5.	Karthika M and Banavath Mahesh Naik. “Agricultural Mechanization Innovation for Sustainable Agriculture for Farmers’ Prosperity”. Innovation and Agricultural Reforms for Farmers Prosperity, National Youth Convention, PJTSAU, Hyderabad, 20 th – 21 st February 2021, pp. 218.
6.	Banavath Mahesh Naik, Karthika M and K. Preethika Reddy. “Crop modelling for precise input management in agriculture”. National Webinar on “Approaches towards Development of Rural and Agriculture Sector in the present scenario”, JNKVV, College of Agriculture, Tikamgarh (M.P.), 8-9 May 2020, pp. 86.
7.	Banavath Mahesh Naik, Sunita T Pandey, Karthika M and Sreekanth Reddy K. “Liquid fermented organic manures (Herbal Kunapajala) and their doses to improve mustard productivity”. 4th International conference on Global Efforts on Agriculture, Forestry, Environment and Food Security (Climate Change and Its Impact), Tribhuvan University, Pokhara, Nepal, Vol 2, 17 th -19 th September,2022, pp. 278-279.
8.	Banavath Mahesh Naik, M. Karthika, G. Rajitha and K. Sreekanth Reddy. “Resource conservation technology for improving crop productivity”. National Conference for Post Graduate Students on Multidimensional Approaches for Sustaining Food and Nutritional Security, Sri Venkateswara Agricultural College, Tirupati, 4 th - 5 th February 2021, pp. 72.
9.	Banavath Mahesh Naik, Karthika M and K Sreekanth Reddy. “Precision nutrient management in conservation agriculture-based maize improves the crop yields coupled with soil physical and biological properties”. Agri-Innovations to Combat Food and Nutrition Challenges, 5 th International Agronomy Congress, PJTSAU, Hyderabad, 23-27 November 2021, pp. 1392-1393.
10.	Banavath Mahesh Naik, Sunita T Pandey, Amit Bhatnagar, Subash Chandra, Rajeew Kumar, Navneet Pareek And Karthika M. Effect of vrikshayurveda based herbal kunapajala and their doses on mustard productivity. international conference on vegetable oils 2023 (ICVO 2023)-

	research, trade, value chain and policy 17-21 January 2023, Pp. 406-408.
11.	K. Bhavitha , Karthika Muthumanikkam , O. Vamshi and M. Nirmitha. Reframing agricultural sustainability through carbon-smart farming paradigms. National Conference on Agricultural Innovation, Sustainability & Leadership for Future India held on 26-28 February 2026 at Conference Hall, Valmiki Tiger Reserve (VTR), Manguraha, West Champaran, Bihar, India.
ii)	Popular Articles
1.	Karthika M and Banavath Mahesh Naik. 2020. “Application of Crop Models in Agriculture”. Article id: 23840, Agriculture and Food: e-Newsletters 2(5): 683-685. ISSN: 2581 – 8317.
2.	Karthika M and Banavath Mahesh Naik. 2020. “Crop Simulation Modeling - A Tool of Risk Assessment and Adaptation Strategies Under Changing Climatic Scenario”. Article id: 30400, Agriculture and Food: e-Newsletters 2(7): 01-03. ISSN: 2581 – 8317.
3.	Karthika M and Banavath Mahesh Naik. 2020. “Automatic Irrigation System”. Article id: 32161, Agriculture and Food: e-Newsletters 2(10): 471-472. ISSN: 2581 – 8317.
4.	Banavath Mahesh Naik and Karthika M . 2020. “Conservation Tillage for Sustainable Agriculture Production and Eco-Safety”. Article id: 23414, Agriculture and Food: e-Newsletters 2(4): 357-360. ISSN: 2581 – 8317.
5.	Banavath Mahesh Naik and Karthika M . 2020. “Precision Agriculture in Indian Farming: Application of Remote Sensing and GIS”. Article id: 31158, Agriculture and Food: e-Newsletters 2(8): 435-437. ISSN: 2581 – 8317.
6.	R. Karthik, Preethika Reddy, G. Rajitha and M. Karthika .2020. Fertigation – A Modern Agricultural Technique. Rythu Bhandhu 10 (10): 22-23.
7.	Karthika, M. , Naik, B.M., Varsha, N., Joseph, B and Reddy, A.P.K.2026. Biochar: A Zero-Waste and Carbon-Negative Resource with Vast Potential. Agrimagazine 03(04): 203-207: ISSN: 3048-8656.
8.	Varsha, N. Karthika, M. , Dhanshree B.J., Joseph, B and Reddy, A.P.K.2026. Eco-Friendly Weed Control: The Science and Scope of Bioherbicides. Agrimagazine 03(05): 562-566: ISSN: 3048-8656.
iii)	Book Chapter
1.	Karthika M And Banavath Mahesh Naik. 2022. Nanotechnology In Agriculture: Applications, Challenges And Future Perspectives. Weser Books, Germany. Pp. 37-52. ISBN: 978-3-96492-318-9.
2.	Karthika M , Banavath Mahesh Naik, G. Sanketh And Bhavana B. 2022. Crop Modeling - A Tool Of Risk Assessment For Climate Change And Adaptation Strategies. Mahima Research Foundation And Social Welfare, Banaras Hindu University, Varanasi. Pp. 48-53. ISBN: 978-81-953029-3-2.
3.	Banavath Mahesh Naik And Karthika M . 2022. Integrated Farming System For Rural Livelihood Security And Sustainability Under Changing Climatic Scenario. Integrated Publications, New Delhi. Pp. 105-117. ISBN: 978-93-90471-49-2.
4.	Banavath Mahesh Naik, Karthika M , Bhavitha Kokkula and K Srikanth Reddy. 2022. Zero Budget Natural Farming (ZBNF) – Way Forward for Sustainability. Bright Sky

	Publications, New Delhi. pp. 45-57. ISBN: 978-93-92804-09-0.
5.	Bhavitha, M. Sanjana, Karthika M and Banavath Mahesh Naik. 2022. Alternate Crop Residue Management Systems for Doubling Farmers' Income. Integrated Publications, New Delhi. pp. 63-76. ISBN: 978-93-93502-40-7.
6.	K. Srikanth Reddy, G. Sreeja Reddy, C. M. Parihar, Panneerselvam Peramaiyan, K. Sreenivasa Reddy, Kiranmoy Patra, Ayan Sarkar, Alok Sinha, B. Mahesh Naik, And M. Karthika . 2025. Policies And Technological Intervention For Regenerative Agriculture And Carbon Credits To Achieve Carbon-Negative Agriculture. Springer. Pp 59-96.
iv)	Books
1.	Packialakshmi M, Rajput NB, Karthika M , Naik BM, Dinesh GK, Chozhan K (2025) <i>An Introduction to Forestry</i> . Elite Publishing House. ISBN:
2.	Karthika M, Naik B M, Sathya T and Srikanth Reddy, K. 2026. Agrochemicals: Science, Technology and Field Applications. Jaya Publishing House. ISBN: 978-93-48927-68-2.