

Research Papers

Ajay, B.C., R. Abdul Fiyaz, S.K. Bera, Narendra Kumar, K. Gangadhara, Praveen Kona, Kirti Rani and T. Radhakrishnan. 2022. Higher Order AMMI (HO-AMMI) analysis: A novel stability model to study genotype-location interactions. **Indian J. Genet. Plant Breed.** 82(1): 25-30.

Aman Verma, M.K. Mahatma, L.K. Thawaita, Sushmita Singh, K. Gangadhara, Kona Praveen and A.L. Singh. 2022. Processing techniques alter resistant starch content, sugar profile and relative bio-availability of iron in groundnut (*Arachis hypogaea* L.) kernels. **J. Food Compost. Anal.** 112:104653 <https://doi.org/10.1016/j.jfca.2022.104653>

Anindita Paul, Sujan Majumder and Satyapriya Singh. 2022. Bio pesticide: A paradigm shift of pesticide development in India. **FSR** 3(6): 22-25.

Anindita Paul, Sujan Majumder, Satyapriya Singh and Pratap A Divekar. 2022. Recent trends in botanical pesticides. **Indian Farming** 72(3): 22-24.

Ankur, B., Y.V. Singh, R. Singh, P. Jaiswal, N.D. Saha, V.K. Sharma and Abhishek. 2022. Effect of nutrient and weed management on crop productivity and soil microbial properties in aerobic rice (*Oryza sativa*). **Indian J. Agri. Sci.** 92(11): 1375–1380.

Antony Prajwala, K., B.V.K. Bhagavan, K. Ravindra Kumar, P. Subbaramamma, K. Prabhakara Rao and T. Gouri Sankar. 2022. Establishment of axenic cultures in Pomegranate cultivars Bhagwa and Super Bhagwa. **Pharma Innov. J.** 11(4): 35-40.

Antony Prajwala, K., B.V.K. Bhagavan, K. Ravindra Kumar, P. Subbaramamma, K. Prabhakara Rao and T. Gouri Sankar. 2022. Optimizing *in vitro* axenic culture establishment in pomegranate cultivars Bhagwa and Super Bhagwa. **Pharma Innov. J.** 11(4): 2120-2125.

Bhanushree, N., B.S. Tomar, J. Akhtar and P. Saha. 2022. Identification of new resistant varieties to Phomopsis fruit rot of egg plant (*Solanum melongena*). **Indian J. Agri. Sci.** 92(9): 1143–1147.

Bhanushree, N., P. Saha, B.S. Tomar and A.D. Munshi. 2022. Phomopsis blight in egg plant and strategies to manage through resistance breeding. **J. Hort. Sci. Biotechnol.** 97:1, 34-45. DOI: 10.1080/14620316.2021.1966321.

Bhattachryya, R., A. Bhatia, B. Chakrabarti, N.D. Saha, P. Pramanik, A. Ghosh, S. Das, G. Singh and S.D. Singh. 2022. Elevated CO₂ alters aggregate-carbon and microbial community but does not affect total soil organic C in the tropics. **SSRN-id4121028**.

Bhendarkar, M.P., B.B. Gaikwad, A.K. Bhalerao, A.L. Kamble, K. Viswanatha Reddy, R. Sendhil, G.B. Srikanth, P. Ramasundaram and S.R. Kalbande. 2022. Impacts of Covid-19 induced Lockdown and Key Reforms in the Indian Fisheries Sector-A Stakeholders' Perspective. **Aqua. Int.** (Accepted)

Das, S., R. Bhattachryya, N.D. Saha, A. Ghosh, S.A. Khan, N. Ahmed, A. Dey, A. Bhatia, P. Pramanik, S.N. Kumar, B.K. Agarwal and D.K. Shahi. 2022. Soil aggregate associated carbon and organic carbon pools as affected by conversion of forest lands to agriculture in an acid soil of India. **Soil Tillage Res.** 223: 105443.

Gangadhara, K. and H.K. Gor. 2022. Phenotypic diversity among the Virginia breeding lines of groundnut. **Ekin J. Crop Breed. Genetic.** 8(2):108-117.

Gangadhara, K., Kirti Rani, B.C. Ajay, Sushmita Singh, Praveen Kona, Kiran K. Mori, Narendra Kumar, S.K. Bera and C.S. Praharaj. 2022. Multi-seasons evaluation of Spanish bunch advanced breeding lines for fresh seed dormancy in groundnut (*Arachis hypogaea* L.). **Ann. Agric. Res. New Series** 43(4): 450-456.

Gangadhara, K., M. Anuradha, L.K. Prasad, C. Nanda, K. Sarala and D. Damodar Reddy. 2021. Genetic variability and multivariate analysis for leaf yield and quality traits in tobacco (*Nicotiana tabacum* L.). **Tob. Res.** 47(2): 72-78.

Harisha, S.M., P. Saha, Y.A. Lyngdoh, B.S. Tomar and A. Kundu. 2022. Screening of egg plant genotypes with respect to Anthocyanin content (in Press).

Hema, B., D. Damodar Reddy, A. Srinivas, Y. Subbaiah and S. Kasturi Krishna. 2022. Constraints for Crop Diversification in FCV tobacco growing regions of Andhra Pradesh and Karnataka. **J. Community Mobilization Sustain. Dev.** 17(2): 413-419.

Hema, B., D. Damodar Reddy, K. Viswanatha Reddy, A. Srinivas and S. Kasturi Krishna. 2021. Impact Assessment of Flue-Cured Virginia Tobacco in Mysore and Hassan Districts of Karnataka. **Indian J. Ext. Educ.** 57(2): 76-81.

Kiran Kumar, T., D. Damodar Reddy, C. Chandrasekhara Rao, S. Kasturi Krishna and Y. Subbaiah. 2021. Diversified Integrated farming system for enhancing system productivity and profitability in tobacco growing Vertisols of Andhra Pradesh. **Tob. Res.** 47(2): 94-96.

Krishna Reddy, S.V., C.C.S. Rao and S. Kasturi Krishna. 2022. Enhancement of productivity, water and nutrient use efficiency and economics through drip fertigation and tray seedlings in FCV tobacco (*Nicotiana tabacum*) under irrigated Alfisols of Andhra Pradesh. **Indian J. Agron.** 67(3): 294-303.

Mandi, S., S.Y. Singh, P. Radha, D. Kumar, T.J. Purakayastha, V. Pooniya, S. Nayak, O. Raihan, K. Baral, and M. Pal. 2022. Improving micro-nutrient density in basmati rice and durum wheat through summer green manuring and elemental sulfur fertilisation. **Crop Pasture Sci.** 73: 804-816.

Matiwade, P.S., B. Arunkumar, Geeta Dandin, C.C.S. Rao and D. Damodar Reddy. 2021. Effect of different mulches on leaf yield and quality of *bidi* tobacco. **Tob. Res.** 47(2): 67-71.

Nanda, C., P. Nagesh and S. Ramakrishnan. 2021. Performance of CMS based FCV tobacco hybrids under agro-climatic conditions of Karnataka Light Soils. **Tob. Res.** 47(2): 55-58.

Nanda, C., P. Nagesh, S. Ramakrishnan, K. Gangadhara and K. Sarala. 2022. Heterosis and character association studies in CMS Hybrids of FCV tobacco (*Nicotiana tabaccum* L.). **Emer. Life Sci. Res.** 8(2): 104-112.

Palsaniya, D.R., Sunil Kumar, A.K. Misra, P.K. Ghosh, M. Louhaichi, A. Sarker, S. Ahmad and T. Kiran Kumar. 2022. Spineless fodder cactus under different land use and production systems in rainfed semi-arid tropics of India. **Acta Hortic.** 1343. ISHS 2022. DOI 10.17660/ActaHortic.2022.1343.30

Palsaniya, D.R., T. Kiran Kumar, Manoj Chaudhary and Mukesh Chodhary. 2022. Effect of reduced tillage and mulching on soil health in *sesbania* alley cropping based rainfed food-fodder systems. **Arch. Agron. Soil Sci.** <https://doi.org/10.1080/03650340.2022.2111025>.

Paramesh, V., P. Kumar, M. Shamim, N. Ravisankar, V. Arunachalam, A.J. Nath, T. Mayekar, R. Singh, A.K. Prusty, R.S. Rajkumar, A.S. Panwar, K. Viswanatha Reddy, Malay Pramanik, Anup Das, Kallakeri Kannappa Manohara, Subhash Babu and Poonam Kashyap. 2022. Integrated Farming Systems as an Adaptation Strategy to Climate Change: Case Studies from Diverse Agro-Climatic Zones of India. **Sustainability** 14: 11629. <https://doi.org/10.3390/su141811629>.

Paramesh, V., N. Ravisankar, U.K. Behera, V. Arunachalam, P. Kumar, R.S. Rajkumar, S. Misra, M. Kumar, A.K. Prusty, D. Jacob, A.S. Panwar, T. Mayekar, K. Viswanatha Reddy, Rajkumar and Susitha. 2021. Integrated farming system for achieving food and nutritional security, enhancing profitability, employment opportunity, and climate resilience in India. **Food Energy Secur.** 00, e321. <https://doi.org/10.1002/fes.3.321>.

Paramesha, V., K.K. Parveen Kumar, K. Manohara, K. Viswanatha Reddy, Dinesh Jinger and Bappa Das. 2022. Energy budgeting, sensitivity analysis and green house gas emission from rice production system: a case study from the coastal eco-system of Goa, India. **Indian J. Agron.** 67(4): 348-353.

Paul, A., A. Dutta, A. Kundu, S.B. Singh, K. Banerjee and S. Saha. 2022. Response surface methodology driven ultrasonic assisted extraction of ellagitannins from pomegranate rind: optimization of parameters and *in silico* molecular interaction with catalase. **Biomass Conver. Biorefn.** doi.: <https://doi.org/10.1007/s13399-022-03396-y>.

Pooja, P., T.J. Purakayastha, B. Sarkar, A. Bhowmik, S. Biswas, S. Kumar, L. Shukla, D.R. Biswas, K.K. Bandyopadhyay, B.K. Agarwal and N.D. Saha. 2022. Nitrogen-enriched biochar co-compost for the amelioration of degraded tropical soil. **Environ. Tech.** DOI: 10.1080/09593330.2022.2103742.

Prakash, P., K. Pramod Kumar, K. Viswanatha Reddy, N. Ravi Kumar, K. Srinivasa and V. Paramesh. 2022. Protected Cultivation of Horticultural Crops as a Livelihood Opportunity in Western India: An Economic Assessment. **Sustainability** 14: 7430. <https://doi.org/10.3390/su14127430>.

Prasad, L.K., C. Chandrasekhara Rao, D. Damodar Reddy, K. Padmaja and N. Johnson. 2022. A New Extractant for Concurrent Estimation of Nicotine, Reducing Sugars and Chlorides in Tobacco Cured Leaf. **Commun. Soil Sci. Plant Anal.** 53(13): 1685-91.

Rajappa, J.J., Puran Chandra and K.P. Mohapatra. 2022. Tree bean- A Multipurpose tree legume of North-eastern Hill Region. **Indian J. Hill Farming** (Under Review).

Rajappa, J.J., Puran Chandra, T. Ramesh, G. Kadirvel and A. Sen. 2022. Self-sustainable integrated farming system through crop, livestock and forestry interventions under rainfed conditions for productivity enhancement in Mid-hill conditions of Meghalaya. **Indian J. Hill Farming** 35: 91-96.

Rojasara, Y.M., N.A. Bhatt and J.N. Patel. 2021. Efficacy of different oils for the management of damping-off caused by *pythium aphanidermatum* and rove beetle (*Bledius latiusculus* KR) in *bidi* tobacco nursery. **Tob. Res.** 47(2): 59-61.

Sailaja Jayasekharan, B., U. Sreedhar and V. Venkateswarlu. 2021. Spatial distribution pattern of tobacco aphids in FCV tobacco. **Tob. Res.** 47(2): 79-84.

Sarala, K., P. Venkateswarlu, T.G.K. Murthy, K. Prabhakara Rao, A.V.S.R. Swamy, Y. Subbaiah and D. Damodar Reddy. 2021. FCJ-11: An FCV somaclone suitable for cultivation under NLS of Andhra Pradesh. **Tob. Res.** 47(2): 85-93.

Singh, S.Y., P. Radha, S. Mandi, A. Kanchan, S. Kaur, S. Nayak, B. Kirttiranjan, M. Pal, Sirohi and N. Lata. 2022. Cyanobacterial Inoculation Enhances Nutrient Use Efficiency and Grain Quality of Basmati Rice in the System of Rice Intensification. **ACS Agrl. Sci. Tech.** 2(4): 742-753.

Sridhar, J., V. Venkateswarlu, M.A. Shah, K. Neelam, R. Baswaraj, A. Bhatnagar, J.S. Choudhary, S. Sharma, M. Nagesh and S.K. Chakrabarti. 2022. Species Composition and Distribution of the Vector Aphids of PVY and PLRV in India. **Potato Res.** <https://doi.org/10.1007/s11540-022-09540-5>.

Sridhar, J., V. Venkateswarlu, M.A. Shah, K. Neelam, A. Bhatnagar, R. Baswaraj, S.K. Chakrabarti. 2022. Incidence of the cabbage aphid, *Brevicoryne brassicae* L. in potato crops in India and its efficiency for transmission of potato virus Yo. **Int. J. Trop. Insect Sci.** 42: 285-291. <https://doi.org/10.1007/s42690-021-00544>.

Srinivas, A., D. Damodar Reddy, K. Vishwanath Reddy, Hema Baliwada and S. Kasturi Krishna. 2022. Impact Assessment of Bidi Tobacco in Gujarat. **Indian J. Ext. Educ.** 58(2): 144-148.

Srinivasa Rao, N., B. Padmaja, S.K. Soam and H.R. Sankar. 2022. Impact of Internet of Things in Agriculture: A Systematic Review. **Gradiva Rev. J.** 8(5):191-208.

Srushti, S.C., Shivaleela Biradar, J.J. Rajappa and R.L. Babu. 2022. *Withania somnifera*: The wonder plant with Withanolide E and J inhibit inflammatory mediator AP-1 factor. **Curr. Bioact. Compd.** 18(2): 1-16.

Sujan Majumder, Anindita Paul and Satyapriya Singh. 2022. New Sulfone, Benzophenone and Organophosphate Derivatives Fungicide Chemistries for Diseases Management. **FSR** 3(4): 10-14.

Sunil Kumar, D.R. Palsaniya, T. Kiran Kumar, A.K. Misra, Shahid Ahmad, A.K. Rai, Ashutosh Sarker, Mounir Louhaichi, Sawsan Hassan, Giorgia Liguori, P.K. Ghosh, G. Prabhu, S.K. Mahawer and H.K. Bhargavi. 2022. Survival, morphological variability, and performance of *Opuntia ficus-indica* in a semi-arid region of India. **Arch. Agron. Soil Sci.** DOI: 10.1080/03650340.2022.2031998.

Sunil Kumar, T. Kiran Kumar, Mahendra Prasad, J.B. Singh, Mukesh Choudhary and A.K. Dixit. 2022. Alley Cropping System in Degraded Land of Central India: Evaluation of Crop Performance, Economic Benefit and Soil Nutrients Availability. **Int. J. Plant Prod.** <https://doi.org/10.1007/s42106-022-00228-x>.

Sushmita Singh, Amrit Lal Singh, K. Gangadhara, Vidya Chaudhari, C.B. Patel, Mahesh Mahatma, Aman Verma and Lokesh Kumar. 2022. High Zn bioavailability in peanut (*Arachis hypogaea* L.) cultivars: an implication of phytic acid and mineral interactions in seeds. **J. Plant Nutr.** DOI: 10.1080/01904167.2022.2035750

Swarnalatha, G., K. Sarala, K. Prabhakara Rao and K.R.S. Sambasivarao. 2021. ITS – Sequence characterization of orobanche infecting tobacco crop in Andhra Pradesh. **Tob. Res.** 47(2): 62-66.

Venkateswarlu, P., U. Sreedhar, M.V. Jayakrishna and A. Suresh Babu. 2021. Integrated management of tobacco leaf curl virus disease transmitted by whitefly, *Bemisia tabaci* in FCV tobacco. **Tob. Res.** 47(1): 13-17.

Viswanatha Reddy, K. and D. Damodar Reddy. 2022. Crop Size Fixation Shields Price Volatility Syndrome: Analysis of Some Commercial Crops in India. **Indian J. Econ. Dev.** 18(1): 148-155. <https://doi.org/10.35716/IJED/21213>

Viswanatha Reddy, K., D. Damodar Reddy and R. Sendhil. 2022. An Assessment of Agricultural Export Competitiveness of Commercial Crops: Pathways to Augment Indian Agricultural Exports. **Indian J. Econ. Dev.** 18(2): 436-444. <https://doi.org/10.35716/IJED/21276>

Viswanatha Reddy, K., V. Paramesh, V. Arunachalam, B. Das, P. Ramasundaram, M. Pramanik, S. Sridhara and D. Damodar Reddy. 2022. Farmers' Perception and Efficacy of Adaptation Decisions to Climate Change. **Agronomy** 12: 1023. <https://doi.org/10.3390/agronomy12051023>.

Yashbir Singh Shivay, Radha Prasanna, Sunil Mandi, Amrita Kanchan, Kaur Simranjit, Somanath Nayak, Kirttiranjan Baral, Madan Pal Sirohi and Lata Nain. 2022. Cyanobacterial Inoculation Enhances Nutrient Use Efficiency and Grain Quality of Basmati Rice in the System of Rice Intensification. **ACS Agrl. Sci. Tech.** 2(4): 742-753.

Book chapters

Kiran Kumar, T., D. Damodar Reddy and C. Chandrasekhara Rao. 2022. Integrated farming system for enhancing system productivity and profitability in tobacco growing vertisols of Andhra Pradesh. In: D.R. Palsaniya, Maneet Rana, Amit Kumar Singh, Mukesh Choudhary, Omkar M Limbalkar, AvijitGhosh, Maharishi Tomar, Tejveer Singh, R Srinivasan, BB Choudhary, JB Singh and SK Mahanta (Eds). Innovations in Forage and Livestock Sector for Enhancing Entrepreneurship and Farm Productivity: Souvenir cum Abstracts of National Symposium, November 1-3, 2022, Jhansi, India, Range Management Society of India, Jhansi, UP, India. pp 270.

Kiran Kumar, T., D. Damodar Reddy, C. Chandrasekhara Rao and S. Kasturi Krishna 2022. Integrated farming system for enhancing system productivity and profitability in tobacco growing vertisols of Andhra Pradesh. In: P. Arivazhagi, P. Savitha, T. Sivakumar, T. Prabha, P. Sivakumar, V. Karunakaran, P. Silambarasan, K. Sivagamy, M. Selvamurugan, R. Meenatchi, M. Radha. (Eds). Emerging Trends and New Vistas in Applied Sciences: Souvenir cum abstracts of first national conference, 31st December, 2022, Erode, Tamilnadu, India, Society for nature and applied sciences, Tiruchirapalli, Tamilnadu, India. pp 270.

Namita Das Saha, B. Chakraborti, A. Bhatia, N. Jain, Archana Sharma and D.S. Gurjar. 2022. Innovative approaches for sustainable development: Theories and Practices (Chapter 3). Springer. Pp 43-64.

Partha Saha, Saurabh Singh, Aditika, Reeta Bhatia, S.S. Dey, N.D. Saha and Pritam Kalia. 2022. Genomic Designing for Abiotic Stress Resistant Vegetable Crops. 978-3-031-03963-8, 499324_1_En, (Chapter 5). ChittaranjanKoley (Eds.), Springer Nature. Pp 153-185.

Rajappa, J.J., D.M.Firake, R. Krishnappa, G. Kadirvel and Khaidem Kennedy Singh. Medicinal and Aromatic Plants in Northeast India: Diversity, Conservation and Opportunities for entrepreneurship". In Kadirvel Govidasamy, Roy Subhra Saikat, Ghatak Sandeep and Mishra Vinay Kumar (Eds.). 2022. Agri-Business Opportunities in North East India, Published by Today and Tomorrow's Printers and Publishers, New Delhi, India.

Rajendra Prasad, Yashbir Singh Shivay, Sunil Mandi. 2022. Phytosiderophores and absorption of iron and other cations by plants. In: Upadhyay, S. (Eds.), Cation transporters in plants, Academic Press.

Sarala K, C. Nanda, K. Baghylakshmi, Reza Darvishzadeh, K. Prabhakara Rao, U. Sreedhar and K. Gangadhara. 2022. Designing Tobacco Genomes for Resistance to Biotic Stresses In: Kole, C. (Eds) Genomic Designing for Biotic Stress Resistant Technical Crops. Springer International Publishing, Cham. Pp 441-581.

Sarala, K., K. Prabhakara Rao, C. Nanda, K. Baghylakshmi, Reza Darvishzadeh, K. Gangadhara and J.J. Rajappa. 2022. Abiotic Stress Resistance in Tobacco: Advances and StrategiesIn: Kole, C. (Eds) Genomic Designing for Abiotic Stress Resistant Technical Crops. Springer International Publishing, Cham. Pp 329-427.

Somanath Nayak, Sunil Mandi, Kirttiranjan Baral, Radha Prasanna and Yashbir Singh Shivay. 2022. Agronomic approaches for biofortification of staple food crops. In: Kumar, S., DIKSHIT, H.K., Mishra, G.P., Singh, A. (Eds.), Biofortification of Staple Crops, Springer Singapore.

Sunil Kumar, T. Kiran Kumar and J.B. Singh. 2022. Innovative climate resilient approaches for achieving fodder security in semi-arid regions. In: D.R. Palsaniya, Maneet Rana, Amit Kumar Singh, Mukesh Choudhary, Omkar M Limbalkar, AvijitGhosh, Maharishi Tomar, Tejveer Singh, R Srinivasan, BB Choudhary, JB Singh and SK Mahanta (Eds). Innovations in Forage and Livestock Sector for Enhancing Entrepreneurship and Farm Productivity: Souvenir cum Abstracts of National Symposium, November 1-3, 2022, Jhansi, India, Range Management Society of India, Jhansi, UP, India. pp 270.