



PROGRAMME

National Symposium on Spices and Aromatic Crops–Strategies for Smart Production, Product Diversification and Utilization (SYMSAC XI) 07-09 January 2025		
ICAR-Indian Institute of Spices Research, Kozhikode		
Day 1: 7th January 2025		
09.00 h to 9.30 h	Registration	
09.30 h to 11.00 h	Inaugural programme	
11.00 h to 11.30 h	Tea	
11.30 h to 13.40 h Technical Session I: Strategies for climate-resilient varieties for sustainable production Chairpersons: Dr. Sudhakar Pandey , Assistant Director General, ICAR, New Delhi Dr. V A Parthasarathy , Former Director, ICAR-IISR, Kozhikode Rapporteurs: Dr. S Mukesh Sankar , ICAR-IISR, Kozhikode & Dr. Deepu Mathew , Kerala Agriculture University, Thrissur		
Lead lectures		
11.30 h to 12.00 h	LL-1	Dr. Vinay Bhardwaj , Director, NRC on Seed Spices, Ajmer Seed Spices in Combating Climate Change in Arid and Semi-Arid Regions
12.00 h to 12.30 h	LL-2	Dr. D. Prasath , Project Co-ordinator, ICAR- AICRP on Spices, Kozhikode Harnessing genetic and genomic approaches for superior spice varieties
Oral Presentations		
12.30 h to 12.40 h	S1 OP1	Leveraging YREM and BLUP for genotype selection in black pepper breeding under temporal environmental variability M S Shivakumar, N C Sunitha, H J Akshitha, K V Saji & B Sasikumar
12.40 h to 12.50 h	S1 OP2	IISR Surya - A unique flavoured turmeric for powdering industries

		S Aarthi, D Prasath, N K Leela, S Mukesh Sankar, T E Sheeja, M Mohanalakshmi, K Giridhar, B Mahender, Parshuram Sial, Arwankie Shadap & Arun Kumar Tiwary
12.50 h to 13.00 h	S1 OP3	Unravelling the breeding potential of multi-parent derived populations in chilli (<i>Capsicum annum</i> L.) C B Siddu, Channabasava, Ganesh Prasad, V Prashantha, A Mohan Rao & S Ramesh
13.00 h to 13.10 h	S1 OP4	Identification of stable sources and genetic determinants controlling resistance to chilli anthracnose through genome wide association mapping in <i>Capsicum</i> spp. Ganesh Prasad, Balaraju Susmitha, Channabasava, C B Siddu, V Prashantha, A Mohan Rao, N Nagaraju & S Ramesh
13.10 h to 13.20 h	S1 OP5	Identification of potential genes that influence quality and nutritional content in the leaves and seeds of coriander (<i>Coriandrum sativum</i> L.) Sharda Choudhary, Mahantesha, B N Naika, Ravindra Singh, Arvind Kumar Verma, Ravi Yadav, N K Meena & R S Meena
13.20 h to 13.30 h	S1 OP6	Identifying superior tamarind clones (<i>Tamarindus indica</i> L.) based morphological and biochemical traits through Multi-trait Genotype-Ideotype Distance Index (MGIDI) M Amaravel, C Bagathsingh, M Akshayasri, D Rajasugunasekar, B Nagarajan, G Radhakrishnan & A Mayavel
13.30 h to 13.40 h	S1 OP7	Red Gold: PKM 2 Red tamarind - A revolutionary high anthocyanin variety for sustainable agriculture and food industry R Chitra, C Rajamanikam, P Jansirani, S Parthiban, A Ramar & J Rajangam
13.40 h to 14.30 h	Lunch	
14.30 h to 16.30 h Special Session Chairpersons: Dr. V S Korikanthimath , Former Director, ICAR–CCARI, Goa Dr. K Kandiannan , Principal Scientist, ICAR-IISR, Kozhikode & President, ISS Rapporteurs: Dr. S Aarthi , ICAR-IISR Kozhikode & Dr Reena Nair , JNKVV Jabalpur		
14.30 h to 15.30 h	Western Ghats Kokum Foundation Endowment Lecture Dr P N Ravindran , Former Project Co-ordinator, ICAR- AICRP on Spices, Kozhikode Beyond Flavour and Taste- Spices in Human Wellness	
15.30 h to 16.00 h	LL-3	Dr. Manoj P. Samuel , Executive Director, CWRDM, Kozhikode Water management strategies for enhancing crop production in the changing climate
16.00 h to 16.30 h	Dr. V. S. Korikanthimath Award for the Best Ph.D. Thesis 2021 Dr. M G Govind , University of Kerala, Thiruvananthapuram, Kerala Thesis Title: Chemotaxonomic studies on the family Myristicaceae from the Western Ghats	

	Dr. V. S. Korikanthimath Award for the Best Ph.D. Thesis 2023 Dr.Raghuveer Silaru, Dr. YSR Horticultural University, Venkataramannagudem West Godavari, Andhra Pradesh Thesis Title: Response of turmeric (<i>Curcuma longa</i> L.) genotypes for growth, yield and phytochemicals under controlled-environment production systems	
16.30 h to 16.45 h	Tea	
16.45 h to 18.30 h	Poster presentations related to Technical Session I and II	
	S1 PP8	Epigenetic perspectives on gene regulation in <i>Piper nigrum</i> (black pepper) during drought stress A Muhammed Fayad, T E Sheeja & K S Krishnamurthy
	S1 PP9	Genomic investigation of the heat shock transcription factor gene family leveraging the secrets of drought resistance in black pepper S Mukesh Sankar, Sona Charles, Hibba, S L Soumya, M S Shivakumar, K V Saji & T E Sheeja
	S1 PP10	Root morpho-anatomical features of black pepper and related species P Jaseera Nasreen, S R Maneesha & Sharon Aravind
	S1 PP11	Unravelling the biochemical and anatomical responses of black pepper (<i>Piper nigrum</i> L.) to biotic and abiotic stresses K V Muhthasim, Sharon Aravind, C N Biju, K S Krishnamurthy, R Sivaranjani, C S Karthika, Dayana Paul, P K Anagha Sathyan & S R Maneesha
	S1 PP12	Evaluation of cardamom genotypes for moisture stress tolerance through multi-location evaluation S J Ankegowda, K S Krishnamurthy, M Alagupalamuthirsolai, R Sivaranjani, N K Leela, H J Akshitha, M S Shivakumar, Mohammed Faisal Peeran, M Balaji Rajkumar, Honnappa Asangi, C K Thankamani & T E Sheeja
	S1 PP13	Genetic diversity analysis of F₁ hybrids through ISSR markers indicates the heterozygous nature of parents in small cardamom [<i>Elettaria cardamomum</i> (L.) Maton T T Preethy, Astile Kuriakose, K K Aswathi, M Murugan & S S Sreekutty
	S1 PP14	Characterization and evaluation of cardamom (<i>Elettaria cardamomum</i> Maton) germplasm accessions for morphological, yield and quality traits Honnappa Asangi, H J Akshitha, M S Shivakumar, S J Ankegowda, M Balaji Rajakumar, Mohammed Faisal Peeran & R Sivaranjani
	S1 PP15	Determination of the optimal condition for ethyl methane sulfonate-mediated mutagenesis in ginger (<i>Zingiber officinale</i> Roscoe) V Vinu, S Aarthi & D Prasath
	S1 PP16	Enhancing ginger (<i>Zingiber officinale</i> Rosc.) crop potential through morphological characterization and DUS descriptor assessment K Venkatesan, B A Vaishnavi, M Mohanalakshmi, N Senthil, V Paranitharan & S P Thamaraiselvi

S1 PP17	Genetic fidelity and <i>in vitro</i> studies using molecular markers in salt stress ginger (<i>Zingiber officinale</i> Rosc.) Sudheeran Pradeep Kumar, Abin Paul Varghese, K Pradip Kumar, D Ajay & A B Rema Shree
S1 PP18	<i>In vitro</i> rooting and hardening in ginger using different rooting and hardening media K Aparna
S1 PP19	Sequence diversity analysis of ring finger family proteins in ginger Muhammed Ameer, Divya P Syamaladevi & T E Sheeja
S1 PP20	Studies on <i>in vitro</i> propagation in turmeric cv. PDKV Waigaon S P Umbarkar, V S Kale, P K Nagre, A M Sonkamble, S B Sakhare & D R Rathod
S1 PP21	Leveraging DNA markers in identification of exotic ABLs as promising fertility restorers and field validation in chilli (<i>Capsicum annum</i> L.) Channabasava, Ganesh Prasad, C B Siddu, V Prashantha, K M Shirisha, A Mohan Rao & S Ramesh
S1 PP22	Unveiling the potential of hybrids derived from exotic advanced breeding lines for fruit yield and its attributing traits in chilli (<i>Capsicum annum</i> L.) V Prashantha, K M Shirisha, Bidwan Rath, Channabasava, C B Siddu, M E Kavya, A Mohan Rao & S Ramesh
S1 PP23	Reciprocal cross differences for breeding potential in chilli (<i>Capsicum annum</i> L.) K M Shirisha, V Prashantha, Channabasava, Bidwan Rath, K Madhusudan, A Mohan Rao & S Ramesh
S1 PP24	Assessing genetic variability in <i>Capsicum annum</i> using half diallel crosses D Divyabharathi, K M Yuvaraj, M Jayaprada, C Venkat Ramana, G Sarada & M Balakrishna
S1 PP25	Variability and character association studies in coriander (<i>Coriandrum sativum</i> L.) R S Meena, N K Meena, S K Bagra & S S Barotia
S1 PP26	Induced mutagenesis and determination of morpho-physiological traits for assessing water deficit tolerance in fennel A K Verma, Sharda Choudhary, R S Meena, Ravindra Singh & C B Harisha
S1 PP27	Germplasm evaluation of fenugreek (<i>Trigonella foenum-graecum</i> L.) in the new alluvial zone of West Bengal Mriganka Basu, Anupam Pariari & Utpal Singha
S1 PP28	Evaluation of mango ginger (<i>Curcuma amada</i> Roxb.) germplasm found in Manipur for yield, quality and medicinal properties P S Mariam Anal & Sagolsem Daina
S2 PP35	Yield, quality and economics of fertigation in black pepper C K Thankamani, K Kandianan, M Alagupalamuthirsolai, V Srinivasan & R Dinesh
S2 PP36	Impact of low cost polytunnel on sprouting and growth of black pepper rooted cuttings in tropical hilly zone

	H J Akshitha, M S Shivakumar, K Kandiannan & S J Ankegowda
S2 PP37	Enhancing black pepper nursery growth with jeevamrutha: A sustainable approach for rooted cuttings M Pavan Gowda
S2 PP38	Precipitation trends and cardamom yield over the montane cloud forest site in Kerala, India 1998-2023 CE Muthusamy Murugan, Sivajothi Ramalingam, Ashokkumar Kaliyaperumal, Raju Ravi, Nafeesa Mohammad & Simi Asharaf
S2 PP39	Integrated management for enhancing productivity in ginger under vertical farming K P Saljuna & C K Thankamani
S2 PP40	Nutrient management regimes and their effects on soil biological processes and culturable microbial diversity in turmeric (<i>Curcuma longa</i> L.) rhizosphere Anitta Abraham, C Sarathambal, V Srinivasan & C K Thankamani
S2 PP41	Impact of nutrient regimes on yield and curcumin content of turmeric varieties-stability analysis C K Thankamani, V Srinivasan, M S Shivakumar, C Sarathambal, R Praveena & R Dinesh
S2 PP42	Enhancing turmeric's climate resilience: A review of breeding approaches for drought and salinity tolerance T Manushri, Madhu Bala & Engu Santosh Kumar
S2 PP43	Analysis of land suitability for turmeric under current and future climate scenarios of India using advanced geospatial techniques U Surendran, K S Krishnamurthy, M Banu, V Srinivasan, K Kandiannan & S J Ankegowda
S2 PP44	Assessment of leafy coriander (<i>Coriandrum sativum</i> L.) genotypes for yield and quality M Mohanalakshmi, M Thanusha & V Rajasree
S2 PP45	Performance of fennel genotypes for growth and seed yield under Hisar condition S K Tehlan, Makhan Lal & T P Malik
S2 PP46	Impact of sowing dates and varieties on growth, leaf yield and quality of Kasuri methi (<i>Trigonella corniculata</i> L.) Monika Koushale, Reena Nair, Shreyansha Dubey, Harshita Thakur, Shubham Ahirwar & Pragya Uikey
S2 PP47	Evaluation of nigella (<i>Nigella sativa</i> L.) genotypes for yield attributes, yield and quality S S Meena, Shyam S Meena, Y K Sharma, M D Meena, N Chaudhary & P K Agarwal
S2 PP48	Effect of integrated nutrient management on yield components and yield of curry leaf in alluvial plains of West Bengal Duppala Gowthami & D K Ghosh
S2 PP49	Unlocking tamarind's potential: NAA and KNO₃-the dynamic duo for enhanced fruit set and quality

		R Chitra, G Nirmala Devi & P Jansirani
	S2 PP50	Evaluation and characterization of lemongrass genotypes Rajesh Kumar Arya, Vipin Kumar, Vinay Kumar, Makhan Lal & Pawan Kumar
	S2 PP51	Evaluating the impact of various seed priming agents on germination behaviour of bael (<i>Aegle marmelos</i> L.) G Chandramohan Reddy, N Vinod Kumar, G Rajeshwari, S Raghuv eer, Siriki Anusha, Banala Gladis, P Chakradhar & Yellapu Rammohan
18.30 h to 19.30 h	Cultural Programme	
19.30 h	Dinner	
Day 2: 8th January 2025		
9.30 h to 11.30 h		
Technical Session II: Advances in production systems of spices and aromatic crops		
Chairpersons: Dr. Manish Das , Director, DMAPR, Anand Dr. Manoj P. Samuel , Executive Director, CWRDM, Kozhikode Dr. Anil Dhake , Sr Vice President (Agri R&D), Jain Irrigation System Ltd, Jalgaon		
Rapporteurs: Dr. Honnappa Asangi , ICAR-IISR, RS Appangala & Dr. R Chitra , Tamil Nadu Agriculture University, Coimbatore		
Lead lectures		
9.30 h to 10.00 h	LL-4	Dr. Manish Das , Director, DMAPR, Anand Prosperity through sustainable cultivation of medicinal and aromatic plants
10.00 h to 10.30 h	LL-5	Dr. Muthu Bagavathiannan , Professor, Weed Ecology & Management, A & M University, Texas, USA Integrated weed management using modern tools
Oral Presentations		
10.30 h to 10.40 h	S2 OP29	Soil available nutrients variability on the slopes of the Indian Cardamom Hills (ICH) Muthusamy Murugan, M Alagupalamuthirsolai, Arun Kumar Raja, Ashokkumar Kaliyaperumal, Raju Ravi & Nimisha Mathews
10.40 h to 10.50 h	S2 OP30	Delineating genotype × environment interaction in turmeric (<i>Curcuma longa</i> L.) genotypes for essential oil across three contrasting production systems using AMMI, GGE biplot models, and metabolomic profiles Raghuv eer Silaru, Aarthi Sounderarajan, Yuvaraj Kotha Madduri, Sivaranjani Rajagopal & Prasath Duraisamy
10.50 h to 11.00 h	S2 OP31	Evaluation of turmeric genotypes for growth, yield and phyto-chemicals Nidhi Kumari & V S Kale
11.00 h to 11.10 h	S2 OP32	Protected cultivation technologies for seed spices under changing climate scenario

		Ravindra Singh, R S Meena, N K Meena, Sharda Choudhary, A K Verma, Y Ravi & Krishna Kant
11.10 h to 11.20 h	S2 OP33	Impact of growing environment on growth and yield parameters of coriander under shade net and open field for year-round production M Mohanalakshmi, T Gowtham & V Rajasree
11.20 h to 11.30 h	S2 OP34	Temperature influence on growth, yield and nutritional parameters of <i>Nigella sativa</i> O P Aishwath, Shiv Lal, Vasundhara Sharma, C K Jangid & V Bhardwaj
11.30 h to 11.45 h	Tea	
11.45 h to 13.45 h		
Technical session III: Integrated soil and plant health management		
Chairpersons: Dr. S Devasahayam, Former Head, Division of Crop Protection, ICAR-IISR, Kozhikode Dr. C K Thankamani, Principal Scientist, ICAR-IISR, Kozhikode		
Rapporteurs: Dr. C Sarathambal, ICAR-IISR, Kozhikode & Dr. M Mohanalakshmi, Tamil Nadu Agriculture University, Coimbatore		
Lead lectures		
11.45 h to 12.15 h	LL-6	Dr. Srinivasan Ramasamy , World Vegetable Center, Taiwan Field-scale evidence for agroecological approaches: Enhancing soil and plant health in Asia and Africa
12.15 h to 12.45 h	LL-7	Dr. V Srinivasan , Head (Crop Production), ICAR-IISR, Kozhikode Green technologies for soil & plant health management in spices
Oral Presentations		
12.45 h to 12.55 h	S3 OP52	A rapid onsite detection of piper yellow mottle virus in black pepper using lateral flow immunoassay M Greeshma, A I Bhat, P Malavika & A Jeevalatha
12.55 h to 13.05 h	S3 OP53	Evaluation of various foliar nutrient application practices on growth, yield and quality attributes in cardamom (<i>Elettaria cardamomum</i> (L.) Maton) Manoj Oommen, John Jo Varghese, Amit Mohan, V Anuja, P Thulasimani, Harish & A B Rema Shree
13.05 h to 13.15 h	S3 OP54	Combined application of cashew nut shell cake with bioconsortia for managing soil borne rot diseases of small cardamom (<i>Elettaria cardamomum</i>) D Ajay, Shony M Francis, K Dhanapal & A B Rema Shree
13.15 h to 13.25 h	S3 OP55	Development and evaluation of isotonic formulation (<i>Chaetomium globosum</i>) for the management of root and stem rot disease in vanilla Mohammed Faisal Peeran, C Sarathambal & M Alagupalamuthirsolai
13.25 h to 13.35 h	S3 OP56	Strategies for management of seed wasp (<i>Systole albipennis</i> Walker) in fennel (<i>Foeniculum vulgare</i> Mill) crop Krishna Kant, Y K Sharma, N K Meena & M K Vishal

13.35 h to 13.45 h	S3 OP57	From genomics to phosphorus clean-up: Metagenomics analysis of phosphorus toxic soils and their bioremediation C P Sreena, R Praveena, T E Sheeja, V Srinivasan & R Dinesh
13.45 h to 14.30 h	Lunch	
14.30 h to 15.00 h	Poster presentations related to Technical Session III	
	S3 PP58	Identification of resistance sources and histopathological insights into black pepper-<i>Phytophthora capsici</i> host-pathogen interaction C S Karthika & C N Biju
	S3 PP59	Assessing the efficacy of abiotic stress tolerant <i>Trichoderma</i> strains in black pepper subjected to moisture stress K V Vijayasanthi, Priya George, K S Krishnamurthy, R Dinesh & R Praveena
	S3 PP60	Studies on evaluation of pesticides against major pathogens of small cardamom (<i>Elettaria cardamomum</i> Maton.) and biocontrol agents under <i>in vitro</i> condition K Dhanapal, Revathisekhar, S Sumathra, Varsha Shaju, K A Saju, D Ajay & A B Rema Shree
	S3 PP61	Evaluation of spinetoram 12% SC on thrips and shoot, panicle and capsule borer in small cardamom P Thiagarajan, A Bharanideepan, M A Ansar Ali, T S Smitha, B Vishnupriya, Arthra Ancy Joseph, K Dhanapal & A B Rema Shree
	S3 PP62	Bio-efficacy evaluation of bio-pesticides, botanicals and newer molecules for the combined management of shoot and capsule borers and thrips in small cardamom M Nafeesa, M Murugan & M Nimisha
	S3 PP63	Evaluating potting mixtures for large cardamom (<i>Amomum subulatum</i> Roxb.) seedlings in the Eastern Himalayan region of India S S Bora, P Limboo, N Lepcha, R L Chaktha, N Lepcha, R Chhetri, J J Varghese & A B Rema Shree
	S3 PP64	Bioassay of <i>Artona chorista</i> and characterization of soil microflora in large cardamom ecosystems of the Sikkim Himalayas T N Deka, Normit Lepcha, Rinzing L Chaktha, Miknon P Lepcha, Birshika Bhutia, Phurba K Lepcha, Pona Limboo, Rayel Chhetri, S S Bora, John Jo Varghese & A B Rema Shree
	S3 PP65	A simple isothermal assay for the rapid and sensitive detection of cardamom bushy dwarf virus causing <i>foorkey</i> disease of large cardamom P Malavika, A I Bhat, M Greeshma & S S Bora
	S3 PP66	Arbuscular mycorrhizal colonization enhances the plant growth and modulates the biochemical, molecular defense responses against <i>Pythium myriotylum</i> and <i>Meloidogyne incognita</i> in ginger (<i>Zingiber officinale</i> Rosc.)

	C Sarathambal, B Manimaran, M Faisal Peeran, V Srinivasan, R Praveena, P Gayathri, Fathima Dilkush & Anitta Abraham
S3 PP67	Performance of different genotypes of ginger (<i>Zingiber officinale</i>) for yield and resistance to rhizome rot and bacterial wilt Shrikant L Sawargaonkar, A K Singh, V Tripathi, D Prasath, M Shankar & A Sharon
S3 PP68	Antagonistic bacterial endophytes from gingers and their metabolite driven interactions for anti-<i>Pythium</i> activity Fathima Dilkush, C Sarathambal, Sona Charles, Blessy Peter, R Praveena & D Prasath
S3 PP69	Improved methods for artificial inoculation of bacterial wilt pathogen, <i>Ralstonia pseudosolanacearum</i> in ginger K S Reshma, Priya George, P Aiswarya, A Sharon & C N Biju
S3 PP70	Development of artificial inoculation techniques for <i>Pythium myriotylum</i> infecting ginger K S Reshma, Priya George, A Sharon, T E Sheeja & R Praveena
S3 PP71	Screening of bacterial isolates for nematicidal activity against the root-knot nematode (<i>Meloidogyne incognita</i>) infesting ginger (<i>Zingiber officinale</i>) R Lekshmi, C Sellaperumal & B Manimaran
S3 PP72	Nano urea for increasing the N use efficiency and productivity of ginger and turmeric V Srinivasan, R Dinesh, M Alagupalamuthirsolai & M Shamsudheen
S3 PP73	Biocontrol potential of <i>Pochonia chlamydosporia</i> against root lesion nematodes in turmeric (<i>Curcuma longa</i>) Aiswarya Babu, Santhosh J Eapen & C Sellaperumal
S3 PP74	Yield, quality and economics of cultivation of turmeric (<i>Curcuma longa</i> L.) in response to chitosan application S N Shibana, Deepa S Nair, G S Sreekala, P Shalini Pillai, Swapna Alex, K N Anith & Ancy Joseph
S3 PP75	GC-MS analysis and anti-fungal activity of cinnamon genotypes P Irene Vethamoni, V P Santhanakrishnan, J E Adeline Vinila, Jeya Jasmine & U Siva kumar
S3 PP76	Enhancing climate resilience in coriander: Screening for <i>Fusarium</i> wilt resistant genotypes for sustainable cultivation M Sowmya, K Giridhar, B Tanuja Priya, T Vijaya Lakshmi & M Kalpana
S3 PP77	Screening of coriander accessions for resistance to stem gall disease caused by <i>Protomyces macrosporus</i> Pradip Kumar
S3 PP78	Insect-pests infesting fenugreek (<i>Trigonella foenum-graecum</i> L.) under semi-arid conditions and their management N K Meena, R Singh, R S Meena, K Kant & R D Meena

	S3 PP79	Wilt and root rot management in cumin N R Patel, P J Patel, D J Santoki & B K Prajapati
	S3 PP80	Studies on the detection and quantification of siderophores by potential biocontrol agents T Shakkeela Farhath, T M Fathimath Zuhra, K A Saju & K Dhanapal
15.00 h to 19.00 h		
Technical Session IV& V: Spices Nutraceuticals, novel products and processes Food Safety, Value chain, and Business Innovation		
Chairpersons: Dr. K Nirmal Babu , Former Director, ICAR-IISR, Kozhikode Dr M Madhava Naidu , Former Chief Scientist & Head, PPSFT Department, CSIR-CFTRI, Mysore Dr. Santhosh J Eapen , Former Head, Division of Crop Protection, ICAR-IISR, Kozhikode		
Rapporteurs: . Dr. R Sivaranjani , ICAR-IISR, Kozhikode & Dr. J J Varghese , ICRI Regional Research Station, Gangtok, Sikkim		
Lead lectures		
15.00 h to 15.30 h	LL-8	Dr. I M Krishnakumar , Chief Research Officer and Head (R&D), Akay Natural Ingredients Pvt Ltd. Spices to Spiceuticals: a science-based approach
15.30 h to 16.00 h	LL-9	Dr. Vandana Tripathy , Network Coordinator, AINP on Pesticide Residues. ICAR-IARI, New Delhi Pesticide Residues in Spices: National and Global Perspective
16.00 h to 16.30 h	LL-10	Dr M Madhava Naidu , Former Chief Scientist & Head, PPSFT Department, CSIR-CFTRI, Mysore Role of spices ahead of food flavoring: Nutraceuticals with multiple health effects
16.30 h to 16.45 h	Tea	
Oral Presentations		
16.45 h to 16.55 h	S4 OP81	Evaluation of AI-driven color sorting and grading for enhanced cardamom quality J J Varghese, B L Parvathi, O Manoj & A B Rema Shree
16.55 h to 17.05 h	S4 OP82	Effect of cold plasma on extraction of bioactive compounds from cardamom husk C Shubham & R Mahendran
17.05 h to 17.15 h	S4 OP83	NMR spectroscopy for quality analysis and profiling of curcuminoids in turmeric P Aishwarya, K S Naresh & C R Sachin
17.15 h to 17.25 h	S4 OP84	Development and evaluation of turmeric oleoresin impregnated biodegradable films P V Alfiya, E Jayashree, K Anees & P Shahala
17.25 h to 17.35 h	S4 OP85	Coriander (<i>Coriandrum sativum</i> L.) response to bio-stimulants: Growth comparisons and GC-MS profiling of essential oil from phytochemical enhanced plants R J Mughunth & S Velmurugan
17.35 h to 17.45 h	S4 OP86	Optimization of process parameter for the development of microencapsulated spray dried sambar oleoresin and evaluation of its quality R Archana, E Jayashree, K Anees & P V Alfiya

17.45 h to 18.00	S5 OP101	Seed storability behavior of coriander varieties under different packaging materials and conditions Sanjay Kumar, Vasundhara Sharma, Mahesh Mahatma, Krishna Kant, Y K Sharma & R D Meena
18.00 h to 19.00 h	Poster presentations related to Technical Session IV& V	
	S4 PP87	Cardamom essential oil as flavouring agent in cashew nut testa phenolics incorporated milk pudding: flavour characterization, evaluation of physicochemical and functional properties P Sruthi & M Madhava Naidu
	S4 PP88	Optimization of process parameters for microencapsulation of cardamom oleoresin and physico-chemical evaluation of the capsules E Jayashree, P V Alfiya, R Archana & K Anees
	S4 PP89	Performance evaluation of microwave vacuum dehydrator and study on quality characteristics of dried cardamom capsules A K Andrya, L Muthumanikandan, N Venkatachalapathy & R Mahendran
	S4 PP90	Unlocking the potential of turmeric: <i>Clpks11</i> gene manipulation for curcumin enhancement T E Arya, T E Sheeja, A Sharon, N Shravan & P T Ayisha Nahala
	S4 PP91	<i>In silico</i> studies to discover the pharmacological properties of Mango ginger (<i>Curcuma amada</i>) V Rajasree, P D Barman, M Mohanalakshmi & N Saranya
	S4 PP92	Process optimization of anthocyanin extraction from <i>Curcuma rubescens</i> and its chemical characterization using LCMS-MS T S Titto Mendez, T P Ahmad Shabeer, N P Krishna Priya, M A Heba & K Anees
	S4 PP93	Convictional sun drying, hot-air and vacuum drying of mace: An evaluation on drying kinetics and quality K Sunisha, E Jayashree & P V Alfiya
	S4 PP94	Volatile profiling of leaf oils from <i>Cinnamomum</i> sp. with distinct aroma reveals a biosimilar substitute for lemon grass oil for commercial exploitation M A Heba, T S Titto Mendez, V A Muhammad Nissar, P B Sruthy, N P Krishna Priya & K Anees
	S4 PP95	A novel LC-MS/MS method for the quantitative analysis of HCA and HCA lactone and its diversity study in <i>Garcinia</i> species N P Krishnapriya, T S Titto Mendez, & K Anees
	S4 PP96	Determination of optimum harvesting stages in fennel (<i>Foeniculum vulgare</i> Mill.) for chewing Shiv Lal, M K Mahatma & C K Jangid
	S4 PP97	Metabolite and biochemical characterization of nigella genotypes Y Ravi, S N Saxena, S S Meena, M K Mahatma, M K Vishal, K Sanjay & B Vinay
	S4 PP98	Physicochemical and antioxidant characterization of blended spice flavoured jaggery cubes during storage

		M Meera, E Jayashree, P V Alfiya, K Anees & C Sarathambal
	S4 PP99	Enriching banana stem juice: A functional beverage boosted with spices and herbs for enhanced health and flavour K N Shiva, G Arunkumar, P Suresh Kumar, K Kamaraju, D Amelia Keran & R Selvarajan
	S4 PP100	Nutraceuticals and spices: A fusion of traditional and modern science R Pujasri Durga Bhavani, Y Deepthi Rachel, Ch Pallavi Sri Padma & D V Vinod
	S5 PP102	Effect of chemical analysis on packaging and storage behaviour of champaca (<i>Michelia champaca</i> L.) S K Sawant, G D Shirke, J H Kadam, & P U Shinde
19.00 h to 20.00 h	General body meeting of Indian Society for Spices	
20.00 h	Dinner	
Day 3: 9th January 2025		
09.00 h to 11.00 h		
Technical session VI: Socio-economics, trade and policy studies		
Chairpersons: Dr. Homey Cheriyan , Director, Directorate of Arecanut and Spices Development, Kozhikode Dr Vikramaditya Pandey , Princiapal Scientist, ICAR, New Delhi		
Rapporteurs: Dr. Muralidhar Meena , ICAR-National Research Centre on Seed Spices, Ajmer & Dr. Simi Ashraf , Kerala Agriculture University, Thrissur		
Lead lectures		
09.00 h to 09.20 h	LL-11	Prof. R Ramakumar , School of Development Studies, Tata Institute of Social Sciences (TISS), Mumbai Spices Production in India: Achievements, Challenges and the Path Ahead
09.20 h to 9.40 h	LL-12	Mr. Ramkumar Menon , Chairman, World Spice Association, Kochi Impact of socio economic and policy factors in spice industry
9.40 h to 10.00 h	LL-13	Dr. Homey Cheriyan , Director, Directorate of Arecanut and Spices Development, Kozhikode Indian Spices- Strategies for Production and Development
Oral Presentaitons		
10.00 h to 10.10 h	S6 OP103	Willingness of primary traders to participate in high value markets of black pepper in Kerala: An empirical analysis Yaman Chader, P K Smija, C D Neetha Rose, A K Arshida & Pratheesh P Gopinath
10.10 h to 10.20 h	S6 OP104	Challenges faced for production of residue free small cardamom (<i>Elettaria cardamomum</i> (L.) Maton.) and the development of road map for sustainable integrated pest management (IPM) strategies M A Ansar Ali, P Thiyagarajan, K Dhanapal & A B Rema Shree

10.20 h to 10.30 h	S6 OP105	Adoption of improved varieties by ginger growers in Karnataka: narrative analysis V K Sajesh & Lijo Thomas
10.30 h to 11.15 h	Poster Presentations related to Technical Session VI	
	S6 PP106	A quantitative assessment on knowledge and adoption level of spice species among the indigenous farming communities in Idukki district, Kerala Simi Asharaf, M Sundaramari & S Ganesh
	S6 PP107	Yield gap and remedial measures in seed spice in India Murlidhar Meena, Shiv Lal, R D Meena, Narendra Choudhary & S S Meena
	S6 PP108	Contributing role of women in spices, medicinal and aromatic plants Santosh Rani, Beena Yadav, Manju Dahiya, Vandana Verma, Ella Rani & Sikha Bhukal
	S6 PP109	Bush pepper and millets popularization activities of KVK at Kozhikode P Ratha Krishnan
	S6 PP110	The quiet cultivators: Exploring the realities of non-commercial ginger cultivation in India G R Ananthkrishnan, C Gayathri, V K Sajesh & Lijo Thomas
	S6 PP111	Turning the tide: Marketing practices and challenges for ginger and turmeric in India's untapped production hubs C Gayathri, G R Ananthkrishnan, V K Sajesh & Lijo Thomas
	S6 PP112	Turmeric industry in India: Status and way forward J H Kadam, K Sammi Reddy & Rinku Dey
	S6 PP113	Land suitability analysis is a prerequisite to achieve optimum utilization of the available land resources for sustainable agricultural production Samarth Dhond
	S6 PP114	Sustainable agriculture practices and new technologies in cumin and fennel Abbas Agalodiya & N R Patel
	S6 PP115	Advantages and challenges of entrepreneur led extension system: An analysis in the context of spices sector V K Sajesh, Lijo Thomas, P Rajeev, S R Maneesha & T E Sheeja
	S6 PP116	Target extension models for promoting technology adoption in spice farming in hill ecosystems P Rajeev & V K Sajesh
S6 PP117	Rediscovering Cochin ginger and Alleppey finger turmeric: Quality spices for export Sunil A Nair, C T Sufaid, Merlin Abraham, N Mini Raj, P Anitha, Jalaja S Menon, H C Vikram, A K Aneesha & Midhun Balachandran	
S6 PP118	Towards greener agriculture: Research on organic cardamom cultivation in Kerala Sunil A Nair, N Mini Raj, P Anitha, M Murugan, Nimisha Mathews & P Manu	
11.15 h to 11.30 h	Tea	

11.30 h to 13.30 h

Farmer-Scientist-Industry interface

Moderator: Dr Lijo Thomas, Senior Scientist, ICAR-IISR, Kozhikode

Pannelists :

Dr. A B Remashree, Director (Research), Spices Board, Cochin

Dr T E Sheeja, Head (Crop Improvement and Biotechnology), ICAR-IISR, Kozhikode

Industry representatives

FPO representatives

Rapporteurs: Dr. V K Sajesh, ICAR-IISR, Kozhikode & **Dr. K Anees**, ICAR-IISR, Kozhikode

13.30 h to 14.00 h

Plenary Session

Chairpersons: Dr. Sudhakar Pandey, Assistant Director General, ICAR, New Delhi

Dr. R Dinesh, Director, ICAR-IISR, Kozhikode

Dr. K Kandiannan, Principal Scientist, ICAR-IISR, Kozhikode & President, ISS

Rapporteurs: Dr. Mohammed Faisal Peeran, ICAR-IISR, Kozhikode & **Dr. M S Shivakumar**, ICAR-IISR Regional Station, Appangala

14.00 h to 14.30 h

Lunch