

## SPONSORS



**Indian Council of Agricultural Research,  
New Delhi**



**ICAR - Indian Institute of Spices Research,  
Kozhikode, Kerala**



**Directorate of Arecanut and Spices Development,  
Kozhikode, Kerala**



**National Horticulture Board, Gurgaon,  
Maryana**



**Spices Board, Kochi, Kerala**



**National Bank for Agriculture and Rural  
Development, Mumbai**



**TAMIL NADU AGRICULTURAL UNIVERSITY  
COIMBATORE**

**&  
INDIAN SOCIETY FOR SPICES  
KOZHICODE**

**NATIONAL  
SYMPOSIUM ON SPICES AND AROMATIC CROPS  
(SYMSAC-VIII) 2015**

## INAUGURAL FUNCTION INVITATION



**Date : 16.12.2015  
Time : 2.30 pm**

**Venue : Anna Auditorium  
Tamil Nadu Agricultural University  
Coimbatore**

**TAMIL NADU AGRICULTURAL UNIVERSITY  
COIMBATORE**

**&  
INDIAN SOCIETY FOR SPICES  
KOZHICODE**

**Cordially invites you to the  
National  
Symposium on Spices and Aromatic Crops  
(SYMSAC-VIII)**

*Towards 2050 - Strategies for Sustainable Spices Production*

### Inaugural Function

**Dr. N.K. Krishna Kumar**  
Deputy Director General (Hort. Science),  
ICAR, New Delhi

will be the guest of honour

**Dr. K. Ramasamy**

Vice-Chancellor,  
TNAU, Coimbatore

will preside over the function

**Dr. K. Nirmal Babu**

President, ISS, Kozhikode  
will welcome the gathering

**Dr. J. Suresh**

Professor and Head & Organizing Secretary  
will propose vote of thanks

**Dr. J. Suresh**

Professor and Head (DSPPG) & Organizing Secretary,  
HC&RI, Coimbatore

**Dr. D. Prasath**

Co-Organizing Secretary, ISS,  
Kozhikode

## PROGRAMME

Date : 16.12.2015

Time : 2.30 pm

Lighting of Kuthu Vilakku

Invocation

: **Prayer**

Welcome Address

: **Dr. K. Nirmal Babu**  
President, ISS, Kozhikode

Presidential Address

: **Dr. K. Ramasamy**  
Vice-Chancellor, TNAU, Coimbatore

Inaugural Address

: **Dr. N.K. Krishna Kumar**  
Deputy Director General (Hort. Science),  
ICAR, New Delhi

Key Note Address

: **Prof. R.R. Hanchinal**  
Chairperson, PPV & FRA, New Delhi

Felicitation

: **Sri. L. Sithirasanen, IAS**  
Director (Horticulture and Plantation Crops), Chennai

**Dr. V.A. Parthasarathy**  
Former Director, ICAR-IISR, Kozhikode

**Dr. M. Anandraj**  
Director, ICAR-IISR, Kozhikode

**Dr. S. Mariappan**  
Dean (Hort.) I/c, HC & RI, TNAU, Coimbatore

**Dr. Balraj Singh**  
Director, ICAR-NRCS, Ajmer, Rajasthan

**Dr. Jitendra Kumar**  
Director, ICAR-DMAPR, Anand, Gujarat

**Dr. Homey Cheriyan**  
Director, DASD, Kozhikode

Distribution of Fellowships/  
Awards

- 1) Sugandha Bharathi Award
- 2) ISS Fellowships
- 3) Sugandhasree Innovative Farmer Award
- 4) Dr. V.S. Korikanthimath Award for the best Ph.D. thesis
- 5) Smt. Vijaya V. Korikanthimath Award for the best M.Sc. thesis
- 6) Dr. J.S. Pruthi Award of Honour

Vote of Thanks

: **Dr. J. Suresh**  
Professor and Head,  
Dept. of Spices and Plantation Crops,  
HC&RI, Coimbatore

Inauguration of Exhibition

: **Dr. N.K. Krishna Kumar**  
DDG (Hort. Science), ICAR, New Delhi

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INDIAN SOCIETY FOR SPICES  
KOZHIKODE**

**NATIONAL  
SYMPOSIUM ON SPICES AND AROMATIC CROPS  
(SYMSAC-VIII) 2015**

**16 - 18 December 2015**

**PROGRAMME**



**Venue : Anna Auditorium**

**Tamil Nadu Agricultural University  
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Vote of Thanks : **Dr. J. Suresh**  
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Inauguration of Exhibition : **Dr.N.K. Krishna Kumar**  
DDG (Hort. Science), ICAR, New Delhi.

# PROGRAMME

Venue: Anna Auditorium, TNAU, Coimbatore

WEDNESDAY, 16 December 2015	
<b>5.00 pm – 7.00 pm: Special Session</b>	
<b>Chairpersons</b> Prof. K.V. Peter, Director, World Noni Research Foundation, Chennai Dr. M. Anandaraj, Director, ICAR-Indian Institute of Spices Research, Kozhikode	
<b>Rapporteurs</b> Dr. Sharon Aravind, Scientist (Hort.), ICAR-IISR Regional Station, Appangala Dr. B. Senthamizh Selvi, Asst. Professor (Hort.) , TNAU, Coimbatore	
<b>5.00 pm – 5.40 pm</b>	<b>Western Ghats Kokum Foundation Endowment Lecture</b> Dr. Ajit Shirodkar, WGKF, Goa & Dr. P.J. Kshirsagar, Dr. BSKKV, Dapoli
<b>5.40 pm – 6.10 pm</b>	<b>Special Lecture I</b> The challenges and options to sustainable crop production in spices Dr. M. Anandaraj, Director, ICAR-Indian Institute of Spices Research, Kozhikode
<b>6.10 pm – 6.30 pm</b>	<b>Special Lecture II</b> Potentials and policy options for horticultural development in North East Dr. V.A. Parthasarathy, Former Director, ICAR-Indian Institute of Spices Research, Kozhikode
<b>6.30 pm – 6.50 pm</b>	<b>Special Lecture III</b> Protected cultivation technologies for seed spice crops Dr. Balraj Singh, Director, ICAR-NRC on Seed Spices, Ajmer
<b>7.00 pm – 8.00 pm</b>	<b>ISS General Body Meeting</b>
<b>8.00 pm – 9.00 pm</b>	<b>Dinner</b>

**THURSDAY, 17 December 2015**

**9. 30 am – 12.00: Session I (Genetic resources, crop improvement & biotechnology)**

**Chairpersons**

Dr. VA Parthasarathy, Former Director, ICAR-Indian Institute of Spices Research, Kozhikode

Dr. M. Maheswaran, Director of Research, TNAU, Coimbatore

Dr. D. Veeraragavathatham, Former Dean (Hort.), HC & RI, TNAU, Coimbatore

**Rapporteurs**

Dr. V. Jegadeeswari, Asst. Professor (Hort.), TNAU, Coimbatore

Ms. S. Aarthi, Scientist (Hort.), ICAR-IISR, Kozhikode

<b>Lead lectures</b>	<p><b>L-1.</b> 9.30 am – 10.00 am Crop improvement in spice crops -A way forward Dr. B. Sasikumar, Head (Crop Improvement &amp; Biotechnology), ICAR-Indian Institute of Spices Research, Kozhikode</p> <p><b>L-2.</b> 10.00 am – 10.30 am Designing a plant for seed spices Dr. E.V. Divakara Sastry, Professor (Plant Breeding), Rajasthan Agricultural Research Institute, Jaipur</p> <p><b>L-3.</b> 10.30 am – 11.00 am NGS approaches for non-model crops Dr. Raja Mugasimangalam, Founder &amp; CEO, Genotypic Technology (P) Ltd., Bengaluru</p>
<b>11.00 am–11.15 am</b>	<b>Tea</b>
<b>Oral presentations</b>	<p><b>O-1.</b> 11.15 am – 11.30 am Varietal diversity in nutmeg  Dr. N. Mini Raj, Professor, College of Horticulture, KAU, Thrissur</p>
<b>Oral presentations</b>	<p><b>AP-1.</b> 11.30 am – 11.45 am <i>Myristica fragrans</i> Developing minimal descriptor for nutmeg (Houtt.) and characterization of germplasm Mr. H C Vikram, Ph.D. Scholar, College of Horticulture, KAU, Thrissur</p> <p><b>AP-2.</b> 11.45 am – 12.00 <i>Nigella sativa</i> Characterization and evaluation of L. genotypes for growth, yield and quality  Mr. Y. Diwakar, Scientist, ICAR-NRC on Seed Spices, Ajmer</p>

<b>12. 00 – 5.00 pm: Session II (Soil &amp; Plant Health Management)</b> <b>Chairpersons</b> Dr. V.S. Korikanthimath, Former Director, ICAR RC Goa Dr. K. Ramaraju, Director, Centre for Plant Protection Studies, TNAU, Coimbatore Dr. J. Thomas, Former Director (Research), ICRI, Myladumpara <b>Rapporteurs</b> Dr. M. Suganthi, Asst. Professor (Agrl. Entomology), TNAU, Coimbatore Dr. R. Praveena, Scientist (Plant Pathology), ICAR-IISR, Kozhikode	
<b>Lead lectures</b>	<b>L-1.</b> 12.00 – 12.30 pm Good agricultural practices in medicinal plants Dr. Jitendra Kumar, Director, ICAR-Directorate of Medicinal & Aromatic Plants Research, Boriavi, Gujarat  <b>L-2.</b> 12.30 – 1.00 pm Sustainable plant protection technologies in spice crops Dr. S. Devasahayam, Head (Crop Protection), ICAR-Indian Institute of Spices Research, Kozhikode
<b>1.00 pm – 2.00 pm</b>	<b>Lunch</b>
<b>Lead lectures</b>	<b>L-3.</b> 2.00 pm – 2.30 pm Carbon sequestration in spices cropping systems- future strategies for climate change Dr. E.V.S. Prakasa Rao, Former Chief Scientist, CSIR-Central Institute of Medicinal & Aromatic Plants, Bangalore Centre
<b>Oral presentations</b>	<b>O-1.</b> 2.30 pm – 2.45 pm Importance of micronutrients and designer formulations for spices Dr. V. Srinivasan, Principal Scientist, ICAR-Indian Institute of Spices Research, Kozhikode  <b>O-2.</b> 2.45 pm – 3.00 pm Climate change in the cloud forest cardamom hot spots in relation to cardamom productivity in Guatemala and India Dr. Muthusamy Murugan, Professor & Head, Cardamom Research Station, KAU, Pampadumpara, Kerala  <b>O-3.</b> 3.00 pm – 3.15 pm Status of pesticide residues in major spice commodities  Dr. K. Bhuvaneshwari, Professor, TNAU, Coimbatore <b>O-4.</b> <i>Colletotrichum</i> The black pepper- host-pathosystem: Biology, epidemiology and management Dr. C.N. Biju, Scientist, ICAR-Indian Institute of Spices Research, Kozhikode

<b>Oral presentations (HS Mehta Award)</b>	<p><b>AP-1.</b> <i>Leaf curl virus</i>  <small>Identification of 3.30 pm – 3.45 pm</small>  through whitefly transmission and PCR  Mr. M. Manikandan, Ph.D Scholar, Horticultural College &amp; Research Institute, TNAU, Coimbatore</p> <p><b>AP-2.</b> 3.45 pm – 4.00 pm  Residues and dissipation of chlorfenapyr in chilli under field condition  Dr. P. Karthik, Research Associate, TNAU, Coimbatore</p> <p><b>AP-3.</b> <i>occidentalis Curcuma longa</i>  <small>Cassia 4.00 pm – 4.15 pm</small> and extract mediated synthesis of silver nanoparticles and their nematicidal activity against the root knot nematode  Ms. Kalaiselvi, Ph.D. Scholar, Department of Zoology, Bharathiar University, Coimbatore</p> <p><b>AP-4.</b> 4.15 pm – 4.30 pm <i>Nigella</i>  L.: Role of sowing window, nitrogen and phosphorus  Dr. Giridhar Kalidasu, Scientist, AICRPS, Horticultural Research Station, Dr. YSRHU, Lam, Andhra Pradesh</p> <p><b>AP-5.</b> 4.30 pm – 4.45 pm  Special method of cultivation for root medicinal and aromatic crops  Dr. L. Nalina, Assistant Professor, Horticultural College &amp; Research Institute, TNAU, Coimbatore</p>
<b>4.45 pm–5.00 pm</b>	<b>Tea</b>
<p><b>5.00 pm – 7.30 pm: Session III (Mechanization, Post Harvest Management &amp; Quality Standards)</b></p> <p><b>Chairpersons</b>  Dr. M.R. Sudharshan, Former Director (Research), Spices Board, Kochi  Dr. C. Divaker Durairaj, Dean (Agrl. Engg.), Agricultural Engineering College &amp; Research Institute, TNAU, Coimbatore  Dr. T. John Zachariah, Head (Crop Production &amp; PHT), ICAR-Indian Institute of Spices Research, Kozhikode</p> <p><b>Rapporteurs</b>  Dr. B. Senthamizh Selvi, Asst. Professor (Hort.) TNAU, Coimbatore  Ms. H.J. Akshitha, Scientist (Hort.), ICAR-IISR, Kozhikode</p>	



<b>Best Ph.D. thesis Spices, Medicinal Aromatic Crops</b>	<b>on &amp;</b> 5.00 pm – 5.20 pm Therapeutic propensity of selected spice actives against  Dr. N. Sathya Prasad, University of Mysore, Mysore
<b>Lead lectures</b>	<p><b>L-1.</b> 5.20 pm – 5.50 pm Harmonization of quality standards in spices Dr. M.R. Sudharshan, Former Director (Research), Spices Board, Kochi</p> <p><b>L-2.</b> 5.50 pm – 6.20 pm Innovations on spice processing - An overview Dr. M. Madhava Naidu, Head (Spice &amp; Flavour Science), CSIR- Central Food Technological Research Institute, Mysore</p> <p><b>L-3.</b> 6.20 pm – 6.50 pm Mechanization in spice crops Dr. B. Sridhar, Professor &amp; Head, Agricultural Machinery  Research Centre, AEC &amp; RI, TNAU, Coimbatore</p>
<b>Oral presentations</b>	<p><b>AP-1.</b> 6.50 pm – 7.05 pm Microwave assisted extraction of 6-Gingerols from fresh ginger Ms. M. Vedashree, Junior Research Fellow, CSIR-Central Food Technological Research Institute, Mysore</p> <p><b>AP-2.</b> 7.05 pm – 7.20 pm Cinnamon and turmeric dominate in antioxidant potential among four major spices-study using sequential extracts Ms. Saranya Balu, Senior Research Fellow, ICAR-Indian Institute  of Spices Research, Kozhikode</p>
<b>7.30 pm – 9.00 pm</b>	<b>Cultural Programme</b>
<b>9.00 pm – 10.00 pm</b>	<b>Dinner</b>

**FRIDAY, 18 December 2015**

**9. 30 am – 11.15 am: Session IV (Quality Planting Material production)**

**Chairpersons**

Dr. N. Kumar, Former Dean (Horticulture), TNAU, Coimbatore

Dr. Homey Cherian, Director, Directorate of Arecanut & Spices Development, Kozhikode

Dr. M. Jawaharlal, Dean, HC & RI for Women, Trichy

**Rapporteurs**

Dr. R. Chitra, Asst. Professor (Hort.), TNAU, Coimbatore

Dr. P. Alagupalamuthirsolai, Scientist, ICAR-IISR, Regional Station, Appangala

**Lead lectures**

**L-1.** 9.30 am – 10.00 am

Nursery standards and accreditation in spices

Dr. Homey Cherian, Director, Directorate of Arecanut & Spices Development, Kozhikode

10.00 am – 10.30 am

Quality seed production in seed spices - Issues and strategies

**Oral presentations**

**O-1.** 10.30 am – 10.45 am

Perspectives on quality planting material production (QPMP) in black pepper

Dr. K. Kandiannan, Principal Scientist, ICAR-Indian Institute of Spices Research, Kozhikode

**O-2.** 10.45 am – 11.00 am

Plug production of turmeric transplants

Dr. R. Chitra, Asst. Professor, HC & RI, TNAU, Coimbatore

**11.00 am– 11.20 am**

**Tea**

**11.15 – 2.30 pm: Session V (Scientist-Farmer-Industry Interface)**

**Chairpersons**

Dr. S.K. Malhotra, Horticulture Commissioner, GOI, Ministry of Agriculture, New Delhi

Dr. A.K. Singh, Managing Director, National Horticulture Board, Gurgaon

Dr. P. Rethinam, Former ADG, ICAR, New Delhi

Dr. T.N. Balamohan, Dean, HC & RI, Periyakulam

**Rapporteurs**

Dr. L. Nalina, Asst. Professor (Hort.), TNAU, Coimbatore

Dr. M. Mohanalakshmi, Asst. Professor (Hort.), TNAU, Coimbatore

**Lead lectures**

**L-1.** 11.20 pm – 11.40 pm

High production technology in black pepper – Farmers perspective

Dr. S.J. Ankegowda, Head, ICAR-IISR, Regional Station, Appangala,

Karnataka

	<p><b>L-2. 11.40 pm – 12.00</b> Organic Production Technology in Seed Spices Dr. Gopal Lal, Principal Scientist, ICAR-NRC on Seed Spices, Ajmer</p> <p><b>L-3. 12.00 pm – 12.20 pm</b> Nutmeg and coconut based cropping system Mr. O.V.R. Somasundaram, Planter, Pollachi</p> <p><b>L-4. 12.20 pm – 12.40 pm</b> Vanilla from Indian – An opportunity revisited Dr. R. Mahendran, Expovan &amp; Indian Vanilla Initiative Pvt. Ltd. Pollachi</p> <p><b>L-5. 12.40 pm – 1.00 pm</b> Farmer producer company in turmeric – Success story Mr. Nallaswami, Chairman, Ulavan Farmer Producer Company, Erode</p>
<b>1.15 pm – 2.00 pm</b>	<b>Lunch</b>
<b>Lead lectures</b>	<p><b>L-6. 2.00 pm – 2.20 pm</b> Industry: Status and opportunities Mr. Philip Kuruvilla, Chairman, World Spice Organization, Kochi</p> <p><b>L-6. 2.20 pm – 2.40 pm</b> State Horticulture Mission, Tamil Nadu</p> <p><b>L-7. 2.40pm – 3.00 pm</b> Strategies for sustainable spices production – Role of Spices Board Mr. P.C. Gopalakrishnan, Deputy Director, Spices Board, Kochi</p>
<b>3.00 pm – 3.30 pm</b>	<b>Discussion</b>
<b>3.30 pm – 4.30 pm</b>	<p><b>Plenary Session</b></p> <p><b>Chairpersons</b> Dr. S.K. Malhotra, Horticulture Commissioner, GOI, Ministry of Agriculture, New Delhi Dr. A.K. Singh, Managing Director, National Horticulture Board, Gurgaon</p> <p>Dr. S. Edison, Former Project Coordinator, AICRPS &amp; FAO Expert</p> <p><b>Best oral and poster presentation awards</b></p> <p><b>Presentation of reports by session chairpersons</b></p> <p><b>National Anthem</b></p>

## **Poster presentation**

**THURSDAY, 17 December 2015**

**Poster viewing: 9.30 am – 4.00 pm**

**All the presenters are requested to display  
their Posters in the allotted space before  
9.30 am on 17 December 2015**

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