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SPICES NEWS

Indian Institute of Spices Research
Marikunnu (P.O.), Calicut, Kerala, India

In Focus

INSIDE



Dr H. P. Singh, a renowned horticulturist of international stature has taken charge as Deputy Director General (Horticulture) at ICAR, New Delhi in February 2007. A fellow of NAAS, HSI AIPUB and AGAI, he is the man behind the stupendous success of programs under the *Mission Mode* approach. In addition to his pivotal role in laying a strong foundation for the development of horticulture in the country, his contribution to agricultural education is immense. Dr Singh was also instrumental in establishing Institute of Agri-Business Management, College of Biotechnology, Nalanda College of Horticulture, Bihar. Before taking charge as DDG, Dr

Singh has occupied several coveted posts including Vice-Chancellor, RAU, Pusa; Dean (Agriculture), GBPUA&T, Pantnagar; Horticulture Commissioner, Government of India; Director, NRC for Banana, Trichy; Project Coordinator (Fruits), Bangalore etc.

He is also credited to have developed and released three cultivars, one each of litchi, passion fruit and acid lime. He is credited to have developed 11 cultivars of fruits (passionfruit, litchi, banana, papaya and sapota). Notable among them are multiple disease resistant cultivar of passionfruit-KAVERI, cracking resistant cultivar of litchi-SWARNRUPA, five selections in banana, two in acid lime and one selection each in papaya and sapota. The production technology developed by him is widely adopted which includes high density planting, nutritional management, flower regulation etc. He is instrumental in promotion of efficient water management using micro-irrigation. Dr. Singh is credited to have authored more than 250 research papers and book chapters. He has edited 17 bulletins and 17 books. He has distinctly proved his leadership in Horticulture and is associated with many academic and professional societies which have the mandate of catalysing the growth of Horticulture. He is Chairman of Several International Committees and large number of National Committee. He is Chairperson of Review Committees of an International Organisation, APCC.

Dr H. P. Singh has received several awards for his contribution to Horticultural Research and Development, which includes International Awards viz., Kalpvriksha Award-2001 of Asia Pacific Coconut Community (APCC), Jakarta, Indonesia and International Raja 1996 (INIBAP), and many Awards, such

Dr. G. Kalloo, former DDG (Horticulture), ICAR and presently Chairman, QRT of IISR has taken over as Vice Chancellor, JNKVV, Jabalpur.

Award Pisang
A S P N E T
Philippines
National
as All India

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Kitchen Garden Medal 2002; Dr. M.H. Marigowda National Award-2001; Ranade Memorial Senior Scientist Award-1998; G.L. Chadha Memorial Gold Medal – 1996; Kadali Puraskar 1996; Sheveroy Foundation Awards 1995 etc. The National Academy of Agricultural Sciences (NAAS) has also recognized the services of Dr. Singh to Horticultural Research and Development by conferring him as a “Fellow” of NAAS.

A man of vision, commitment and exemplary leadership qualities, Dr H. P. Singh’s zeal for excellence and overall development of agriculture and horticulture in the country is unsurpassable.

IISR wishes him great success in all his future endeavors.

Research update

Explorations were conducted in Attappadi (Palaghat), Wagamon, Peerumedu (Idukki), Mundakkayam (Kottayam), Dapoli (Maharashtra) Ponda, Concona (Goa). 77 *Piper* accessions, 8 black pepper cultivars, 20 *Garcinia*, 7 *Kokum*, 6 *Cinnamon* and one *Myristica* accessions were collected.

- ▶ Germplasm collection
- ▶ Anatomical comparison of vanilla
- ▶ SCAR marker to detect adulteration
- ▶ Tissue cultured plantlets-field evaluation
- ▶ Molecular characterization of ginger
- ▶ Nutrient management in black pepper
- ▶ Nutrient mobilizing bacteria for cardamom
- ▶ Multiplex RT-PCR for virus detection
- ▶ Shoot borer in turmeric
- ▶ Biocontrol technology
- ▶ Endophytic bacteria for nematode control
- ▶ *C. verum* chemotypes

Anatomical comparison of transverse sections of the internodes of *V. planifolia* and *Vanilla* sp. from A & N islands indicated that the most contrasting difference between the two is the presence of schlerenchymatous layer separating cortex from the ground tissue in *V. planifolia* and its absence in *Vanilla* sp. from A&N islands. This indicates the closeness of latter to the leafless species of *Vanilla*.

Sequence characterized amplified region (SCAR) marker was developed to identify Papaya seed

Among tree spices, IISR presently has in its collection 484 *Myristica*, 408 *Cinnamomum*, 233 *Syzygium*, 86 *Garcinia* and 2 *Pimenta* accessions.

adulteration in powdered market samples of black pepper. The papaya seed specific band produced by RAPD primer OPJ-09 with a molecular size of approximately 450 bp was cloned, sequenced and designed primers for developing SCAR marker. Four genuine varieties/cultivar of black pepper, market samples of black pepper powder, powdered papaya seed and simulated

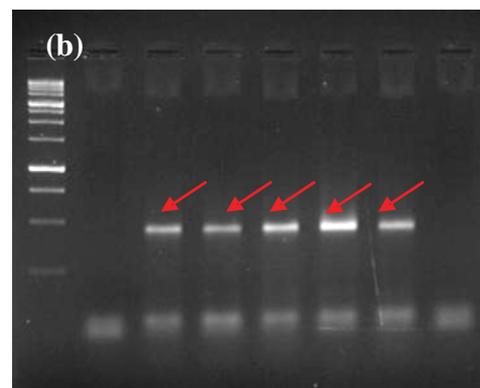
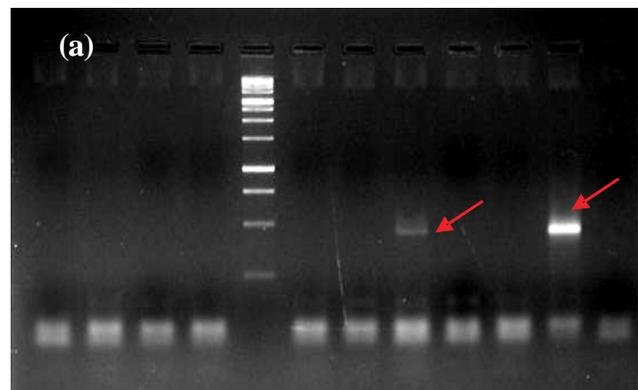


Fig.1. (a) - Detection of papaya adulteration in market samples of black pepper using the SCAR marker developed. Lane 1-Panniyur, Lane 2-Karimunda, Lane 3-Wayanad, Lane 4-Malabar pepper, lane 5-9 different market samples of black pepper powder, Lane 10-papaya seed, Lane 11-negative control and M-1 KB ladder. (b) - Amplification papaya specific SCAR marker in simulated pepper powder with different conc. of ground papaya seed. M-1 KB ladder, Lane 1-black pepper. Lane 2-5 - simulated black pepper powder with ground papaya seed in different concentration, Lane 6- papaya seed and lane 7- negative control.

black pepper powder with different concentration of ground papaya seeds (2-20%) were screened with the OPJ 09₍₄₄₉₎ (20 mer) primer pair derived from the cloned RAPD band (Fig.1). A single amplification product of 449 base pairs is obtained in one of the market samples, genuine papaya seed and all black pepper samples simulated with ground papaya seed.

Field evaluation of tissue cultured plantlets of black pepper in 100 trials covering the states of Kerala and Karnataka indicated that the TC plants showed good establishment and 20% of them showed early flowering.

Based on the volatile oil composition of leaves of germplasm accessions two chemotypes of *C. verum* were identified – accessions rich in eugenol and those predominated by benzyl benzoate.

Comparative molecular characterization (RAPD and ISSR) of primitive ginger cultivars viz., Kakkakalan, Ellakkallan, Kozhikkalan, Pink ginger and Sabarimala and an exotic introduction (Kintoki) along with Varada, an improved variety revealed some interesting pattern with the four primitive types (Ellakalan, Kozhikkalan, Kakkakalan and Sabarimala) forming a single cluster in the dendrogram. Pink ginger was the most distant. Kintoki and Varada too formed separate nodes in the dendrogram

Application of Azospirillum along with nitrogen (70g), phosphorus (55g), potash (270g) and magnesium sulphate (200g) per vine increased yield of black pepper vines to the tune of 21% compared to control and application of NPK (140:55:270 g vine⁻¹) alone.

Presently IISR holds 2337 accessions of black pepper, 436 accessions of cardamom, 684 accessions of ginger and 1040 accessions of turmeric

Application of Azospirillum (Caz3) and phosphobacteria (Cpb2) registered maximum number of leaves, dry weight, total NPK uptake, root colonization and lower disease incidence. The N fixing capacity of the isolate Caz3 was 7.39 mg g⁻¹ malate and Cpb2 recorded greater P solubilization efficiency of up to 220 mg L⁻¹.

A single tube multiplex RT coupled PCR assay

(mRT-PCR) was developed for the simultaneous detection of both *Cucumber mosaic virus* (CMV) and *Piper yellow mottle virus* (PYMoV) infecting black pepper using primer pairs specific for each of the viruses and isolated total nucleic acid as template. Quantity of the template used in PCR was found to be crucial for successful amplification. The method was found successful for the detection of viruses in nursery and field samples.

Studies on crop loss caused by shoot borer (*Conogethes punctiferalis*) on turmeric in the field indicated that the yield obtained was only 262 g per clump when 75–100% of shoots were damaged when compared to 378 g per clump when 0-25% of shoots in a clump were damaged by the pest.

Endophytic bacteria found effective against *Phytophthora capsici* in black pepper were identified as *Pseudomonas aeruginosa* (BP-35) and *P. putida* (BP-25) by analyzing the nucleotide sequence of 16 s rDNA. *P. aeruginosa* was found to induce density dependent systemic resistance in excised single nodal shoots.

Two promising bacteria (*Curtobacterium luteum* -TC 10 and *Bacillus megaterium* -BP 17) that suppress burrowing nematode (*Radopholus similis*) were identified from about 173 isolates of endophytic bacteria collected from black pepper. These bacteria significantly improved growth of nematode inoculated black pepper plants and suppressed nematode multiplication in extensive greenhouse and nursery trials.

Bacteria	Pattern	Position	Primer	Length
Erwinia paradisiaca	GGGGACAGGCTTAATAACGTCTGTTCATT	426-453	GGGGACAGGCTTAATAAGST	19

The bioinformatics centre of IISR has developed *Sign-O-Bacteria*, a tool for identifying the species specific signatures in plant associated bacteria. The centre has also collaborated with NIT, Calicut in offering a Bioinformatics course for M.Tech. (Computer Science) students.

Personalia

Awards/ Honours/ Recognitions

Anandaraj M

Award from Consortium for educational communication for the best video on Rhizobacteria promoting plant growth, New Delhi 25 February 2007.

Saji KV

Awarded Ph.D. degree in Botany on 26 December 2006 by University of Calicut for the study on Taxonomic and Genetic Characterization of Black Pepper and Related Species.

Sasikumar B

Served as Judge, young scientist award contest in biotechnology, Kerala Science Congress, Kannur, 29 - 31 January 2007.

Invited DBT Expert for the interactive workshop on management of ginger diseases and pests in North East and Himalayan Region, Sikkim, 5-6 January 2007

Ms Nagamma HB

Gold medal in carrom singles in ICAR South Zone Inter Institutional Sports Meet 2006, NAARM, Hyderabad, 02-06 March 2007.

Participation in Symposia/ Seminars/ Conferences/ Meetings

All scientists

Group meeting of cardamom research workers, IISR, Calicut, 08 February 2007.

Anandaraj M

Joint Executive Committee Meeting of ISPC, CPCRI, Kasaragod, 03 January 2007.

Award function of UGC-CEC, 25 February 2007.

Second meeting of Institute Management Committee, CPCRI, Kasaragod

Seventh meeting of Spices and Condiments Sectional Committee FAD 9 (BIS), Spices Board, Cochin, 13 April 2007.

Anandaraj M

Rajeev P

Srinivasan V

Horticulture Summit 2007– Stake holder's Meet for accelerated development of horticulture

organized jointly by ICAR and Confederation of Indian Horticulture, Lucknow, 16-19 June 2007

Anke Gowda S J

Meeting of the committee for certification of cashew grafts for Karnataka State Horticulture Mission Program, 24 to 27 May 2007.

Bhat AI

DBT Task Force meeting on Plant Biotechnology, DBT, New Delhi, 02-03 April 2007.

Bhat AI

Devasahayam S

Sasikumar B

Suseela Bhai R

National workshop on black pepper, Pepper Research Station, Panniyur, 26 February 2007.

Jacob TK

Prakash KM

District level seminar on sericulture, 05 February 2007.

John Zachariah T

Group meeting of AICRP on vegetable Crops, CCSHAU, Hisar, 04-06 May 2007.

John Zachariah T

Kandiannan K

Krishnamoorthy B

National seminar on organic spices and aromatic crops, DASD, Calicut, 01-02 February 2007.

Kandiannan K

Review Meeting of mega seed project on seed production in agricultural crops and fisheries, NASC Complex, New Delhi, 01-02 March 2007.

Kandiannan K

Srinivasan V

Thankamani CK

Brain storming session on organic farming in plantation crops – issues and strategies, CPCRI, Kasaragod, Kerala, 22 January 2007.

Krishnamoorthy B

Prasannakumari N

39th meeting of Town Official Language Implementation Committee, Calicut, 31 May 2007.

Parthasarathy V A

Interactive workshop on management of ginger diseases and pests, Gangtok, Sikkim, 05-06 January 2007.

National seminar on organic spices and aromatic crops, DASD, Calicut, 01-02 February 2007.

Library networking, CPCRI regional station, Kayankulam, 12 February 2007.

DPC meeting, CTCRI, Trivandrum, 13 February 2007.

Inauguration of golden jubilee celebration of Pepper Research Station, 26 February 2007.

National seed project meeting, ICAR, New Delhi, 01-02 March 2007.

2nd Indian Horticulture Congress, Barapani, 17-20 April 2007.

I QRT of IISR, DDGs chamber, ICAR, New Delhi, 25 April 2007.

Directors meeting (Horticulture Division), ICAR, New Delhi, 15 May 2007.

1st QRT meeting of NRC Banana, Trichy, 15 May 2007.

1st meeting of expert committee on preparation of guidelines of research results, NBA, Chennai, 13 June 2007.

60th meeting of Spices Board, Kochi, 20 June 2007.

Expert consultation meeting on science and shaping the future of plantation crops, MSSRF, Chennai, 30 June 2007.

Prakash KM

One day workshop on documentation of KVK achievements during X plan, TNAU, Coimbatore, 31 May 2007.

Prakash KM Shanmughavel S

Action plan meeting of KVKs, KAU, Trichur, 12-13 April 2007.

Rema J Shiva KN Srinivasan V Suseela Bhair R

National seminar on organic spices and aromatic crops, DASD, Calicut, 01-02 February 2007.

Santhosh J Eapen

Meeting of the DBT task force committee on biopesticides, New Delhi, 23-24 January 2007.

Annual Meeting of BTIS coordinators, Gangtok, Sikkim, 03-04 February 2007.

National horticultural research conference, New Delhi, 27-28 April 2007.

Sasikumar B

Interactive workshop on management of ginger diseases and pests in North East and Himalayan Region, Sikkim, 05-06 January 2007.

National seminar on production, development, quality and export of seed spices, NRC (Seed Spices), Ajmer, Rajasthan, 02-03 February 2007.

Farmer's Seminar, KVK, Peruvannamuzhi, 16 March 2007.

One day workshop on *share your experience*, SBI, Coimbatore, 28 April 2007.

Shanmughavel S

Orientation training program on OFT and FLD, KVK, Trichur, 12-13 March 2007.

Inaugural function, New Administrative Building, Zonal Coordinating Unit, Bangalore, 07 June 2007.

Sheriff P A

Library resource sharing meeting, CPCRI Regional Station, Kayangulam, 12 February 2007.

Sushama Devi CK

International conference on semantic web and digital libraries, Indian Statistical Institute, Bangalore, 21-23 February 2007.

Membership in committees/ professional societies

Parthasarathy VA

Member, Advisory Committee, UGC assisted Advanced PG Diploma in Food Microbial Technology, Bundhelkand University, Jhansi

Santhosh J Eapen

Member, Board of Studies (Bioinformatics), Calicut University

Lectures delivered

■ *Diseases of black pepper*, delivered in scheme on public participation in agricultural production

program, organized by the Department of Agriculture, Calicut, 04 January 2007 (*Suseela Bhai R*).

■ *DNA structure*, delivered to M. Tech students of Computer Engineering at NIT, Calicut, 10 January 2007 (*Shamina Azeez*).

■ *Integrated pest and disease management in chillies*, delivered to Agricultural Officers (UP), IISR, Calicut, 12 January 2007 (*Prasath D*).

■ *Amino acids and proteins*, delivered to MTech students of Computer Engineering at NIT, Calicut, 12 January 2007 (*Shamina Azeez*).

■ *Production technology for organic tree spices*, delivered in the national seminar on organic spices and aromatic crops, Hotel Malabar Palace, Calicut, 01-02 February 2007 (*Krishnamoorthy B, Rema J*).

■ *Production of organic pepper / ginger*, delivered in the national seminar on organic spices and aromatic Crops, Hotel Malabar Palace, Calicut, 01-02 February 2007 (*Parthasarathy VA, Kandianan K, Srinivasan V*).

■ *Biotechnological approaches in seed spices improvement*, delivered in national seminar on production, development, quality and export of seed spices, NRC Seed Spices, Ajmer, 02 February 2007. (*Sasikumar B*)

■ *Spices – Chemistry and functional properties*, delivered in the UGC sponsored national Seminar on Spices in Indian life, Sree Sankara College, Kalady, 09 February 2007 (*Leela NK*)

■ *Integrated management of diseases of spices*, delivered in the farmers' awareness campaign-2007, organized by the Indian Society of Agribusiness Professionals, Chalakkudi, 17 February 2007 (*Suseela Bhai R*).

■ *Post harvest processing and value addition in pepper*, Pulpally and Sulthan Bathery and Wayanad, 20 and 27 February, 2007 (*John Zachariah T*).

■ *Integrated management of insect pests of spice crops*, delivered in the National Workshop on Black Pepper, Panniyur, 26 February 2007 (*Devasahayam S*).

■ *Crop improvement of black pepper*, delivered in the National Workshop on Black Pepper, Panniyur, 26 February 2007 (*Sasikumar B*).

■ *Value added products and quality aspects in black pepper*, delivered during Golden Jubilee of PRS Panniyur at the National workshop on Black pepper, Pepper Research Station, Panniyur, 26 February 2007. (*John Zachariah T*).

■ *Problems and prospects of black pepper cultivation in Karnataka*, delivered in farmers meeting, Bettagiri,

State Horticulture Department, Madikeri, 26 February (*Prasath D*).

■ *Epidemiology and disease forecasting in black pepper*, delivered in the national workshop on black pepper, Pepper Research Station, Panniyur, 26 February 2007 (*Suseela Bhai R*).

■ *IPR issues in agriculture*, delivered in farmer's seminar, KVK, Peruvannamuzhi, 16 March 2006 (*Sasikumar B*).

■ *Cytological techniques and photomicrography*, delivered in the summer training course on Bio-chemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 07 May-06 June 2007 (*Ramakrishnan Nair R*).

■ *Bioinformatics – an overview*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 08 May 2007 (*Santhosh J Eapen*).

■ *Internet basics, search engines and search strategies*, delivered in the summer training course on Biochemistry, Biotechnology and Bio-informatics for M.Sc. students, IISR, Calicut, 09 May 2007 (*Santhosh J Eapen*).

■ *Internet resources in bioinformatics*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 09 May 2007 (*Santhosh J Eapen*).

■ *Biotechnology-application for the future*, delivered in National Technology Day, CWRDM, Calicut, 11 May 2007 (*Sasikumar B*).

■ *Spices as nutraceuticals and functional foods*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 11 May 2007 (*Shamina Azeez*).

■ *GIS-A tool for biodiversity study*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 11 May 2007 (*Utpala Parthasarathy*).

■ *Search methodologies & biological databases*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 15 May 2007 (*Santhosh J Eapen*).

■ *Isolation of plant DNA and RAPD*, delivered in the summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 19 May 2007 (*Sasikumar B*).

■ *Microarray technology*, delivered in the summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 22 May 2007 (*Bhat AI*).

■ *Molecular phylogeny*, delivered in the summer training course on Biotechnology, Biochemistry and

Bioinformatics, IISR, Calicut, 23 May 2007 (*Santhosh J Eapen*).

■ *Applications of bioinformatics in diagnostics*, delivered in summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 25 May 2007 (*Santhosh J Eapen*).

■ *Molecular methods for detection of plant viruses*, delivered in summer training course on Bio-technology, Biochemistry and Bioinformatics, IISR, Calicut, 26 May 2007 (*Bhat A*).

■ *Protein folding*, delivered in the summer training course on Biochemistry, Biotechnology and Bioinformatics for M.Sc. students, IISR, Calicut, 01 June 2007 (*Shamina Azeez*).

■ *RNA interference*, delivered in the summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 01 June 2007 (*Bhat A*).

■ *Agrobacterium based transformation of plants*, delivered in the summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 01 June 2007 (*Sasikumar B*).

■ *IPR and patenting*, delivered in the summer training course on Biotechnology, Biochemistry and Bioinformatics, IISR, Calicut, 04 June 2007 (*Sasikumar B*).

■ *Plant molecular farming*, delivered in the summer training course on Biotechnology, Bio-chemistry and

Bioinformatics, IISR, Calicut, 04 June 2007 (*Bhat A*).

■ *Production of tree spices, ginger and turmeric for effective land use planning*, delivered in the Horticultural Summit 2007 – Stakeholder's Meet for Accelerated Development of Horticulture, Lucknow, 16-18 June 2007 (*Anandaraj M*).

■ *Planting material production of black pepper*, delivered in Karshaka Seminar, NAFED, Kottiyur, 23 June 2007 (*Thankamani CK*).

Participation in trainings

Prasath D

Testing of plant varieties for DUS-Principles and procedures, IARI, New Delhi, 05-09 March 2007.

Graduate course on Intellectual Property Management, STEM, Goa, 19-22 May 2007.

Utpala Parthasarathy

Training on GIS based decision support systems for sustainable agriculture, NAARM, Hyderabad, 01-21 March 2007.

Distinguished Visitors

Shri Jairam Ramesh, Minister of State for Commerce, 23 March 2007

Dr HP Singh, Deputy Director General (Horticulture), ICAR, 14 April 2007

Appointment

Name	Post	Date
Biju CN	Scientist (PI. Pathology)	18/05/2007

Transfer

Name	Post	Details
Kandiannan K	Sr Scientist	From IISR, Calicut to IISR Exptl. Farm, Peruvannamuzhi, 31/05/07
Prasath D	Scientist (Sr Scale.)	From CRC Appangala to IISR, Calicut, 01/05/07
Prasanna Kumar KB	T-2	From CRC Appangala to IISR, Calicut, 02/04/07
Rema J	Sr. Scientist	From IISR, Calicut to IISR Exptl. Farm, Peruvannamuzhi, 31/05/07
Remesh Babu C	Steno. Gr III	To CPCRI Regional Station, Kayankulam,
Suseela Bhai	Sr. Scientist	From IISR, Calicut to IISR Exptl. Farm, Peruvannamuzhi, 31/05/07

Superannuation

Name	Post	Date
Chettiar SM	PS to Director	30/06/07
Raghavan K	SS Gr. II	31/05/07

News and Events

Shri Jairam Ramesh, Minister of State for Commerce visits IISR



The Union Minister of State for Commerce, Shri Jairam Ramesh visited the Indian Institute of Spices Research, Calicut on 23 March 2007. During the visit the Minister visited the Agricultural Technology Information Centre of IISR and also had a close interaction with the scientists of the Institute. The Minister lauded the achievements of IISR and emphasized the need to take up research on nutraceutical and non culinary uses of spices in the present patent regime.

Annual Institute Research Committee meeting

The Annual IRC meeting was held from 26-28 March 2007. About 59 projects including external funded ones were critically reviewed and suggestions, recommendations and decisions on each project have been recorded for implementation.

Research Advisory Committee meeting



The third meeting of the Research Advisory Committee (RAC) was held under the Chairmanship of Prof. S. Kannaiyan during 03-04 April 2007. The research achievements of 12 mega projects, Action Taken Report on the recommendations and program envisaged for the next year were presented.

Dr HP Singh DDG (Horticulture) at IISR



Dr H. P. Singh, Deputy Director General (Horticulture), ICAR was at the institute from 14-15 April 2007. He visited the germplasm repositories, seed propagation units and the KVK at Peruvannamuzhi. He also laid the foundation stones of seed storage unit and farm office at Peruvannamuzhi farm. At the institute Head Quarters, he visited the laboratories and had a close interaction with the scientists and staff of the institute. He also laid the foundation stone of biocontrol laboratory.

Institute Joint Staff Council meeting

The Institute Joint Council was held on 23 April 2007. The meeting was presided over by the Director.

Quinquennial Review

The Quinquennial Review Team visited the institute from 07-09 May 2007. The team consisted of Dr I. Irullappan, Former Dean (Hort.), TNAU, Coimbatore; Dr K.C. Bansal, Professor, NRC Plant Biotechnology, IARI, New Delhi; Dr R. Samiyappan, Director, CPPS, TNAU, Coimbatore and Dr B. N. Choudhary, Retd. ADG (Extn), ICAR, New Delhi.



National Science Day

The National Science Day was celebrated in the institute on 28 February 2007. Dr Saji Gopinath, IIM, Kozhikode gave a lecture on *Value chain management in agriculture*.

International Women's Day



The International Women's Day was celebrated on 09 March 2007. Dr Irene Hunt, Ex-Principal, Malabar Christian College, Calicut was the chief guest.

SARANI – IISR Recreation Club



The Staff Recreation Club celebrated its Annual Day on 19 May 2006. Sports, fun games and other events were conducted for the staff members and prizes were distributed. A drama was organized by the staff of the institute. Dr. V. A. Parthasarathy, Director, presided over the function and Mr R. Kanakambaran, AIR was the Chief Guest. SARANI merit awards were also distributed during the occasion.

हिन्दी अनुभाग

जनवरी से जून, २००७ तक की अवधि में राजभाषा कार्यान्वयन समिति की तिमाही बैठकें दो बार आयोजित हुईं। संस्थान में ५ नाम पट्ट द्विभाषी रूप में बनवा दिया। हिन्दी के प्रति सभी स्टाफों को अवगत कराने के लिए इस अवसर पर दो हिन्दी कार्यशालाएं आयोजित कीं। श्री ई राधाकृष्णन, हिन्दी प्राध्यापक, हिन्दी शिक्षण योजना और श्रीमती बी बिन्दु, हिन्दी प्राध्यापक, हिन्दी शिक्षण योजना ने हिन्दी टिप्पण एवं आलेखन के बारे में कक्षा चला दी। प्रस्तुत अवधि में आठ अधिकारियों एवं एक कर्मचारी ने हिन्दी प्राज्ञा परीक्षा लिख दीं। नगर राजभाषा कार्यान्वयन समिति द्वारा दिनांक.३०.५.२००७ को आयोजित बैठकें में डॉ वी ए पार्थसारथी, निदेशक ने भाग ली। दिनांक ३१.५.२००७ को नगर राजभाषा कार्यान्वयन समिति की बैठकें में श्री बी कृष्णमूर्ति, हिन्दी अधिकारी

और श्रीमती एन प्रसन्नकुमारी, हिन्दी अनुवादक ने भाग ली। जुलाई- दिसंबर २००७ को जारी किये स्पाइसस न्यूज का अनुवाद करके हिन्दी में प्रकाशित करने को दिया। प्रस्तुत अवधि में राजभाषा कार्यान्वयन संबन्धी दो तिमाही रिपोर्ट एवं एक वार्षिक रिपोर्ट तैयार करके परिषद को भेज दिया। जैव नियन्त्रण प्रयोगशाला के उद्घाटन करने तथा कृषि कार्यालय, पेरुवन्नामुषि के शिलान्यास के लिए फलक द्विभाषी रूप में तैयार किया। प्रस्तुत अवधि में १३ हिन्दी पुस्तकें खरीद लीं। फाइल कवरों में हिन्दी एवं अंग्रेजी टिप्पणियों को मुद्रित कर दिया। परियोजना समन्वयक की रिपोर्ट हिन्दी में अनुवाद करके वार्षिक रिपोर्ट में समाहित करने के लिए दिया। एक रबड की मोहर द्विभाषी रूप में तैयार किया। संस्थान के वेब साइट के दो पृष्ठ द्विभाषी करने के लिए तैयार करके संबन्धित अनुभाग को दिया। पांच सूचना बोर्ड द्विभाषी रूप में बनाने के लिए तैयार करके दिया। श्री आर. एन. सुब्रमण्यन, सहायक एवं श्री के आनंदा, तकनीकी सहायक, (इलायची अनुसंधान केन्द्र, अप्पंगला) को बैंगलोर में आयोजित हिन्दी कंप्यूटर प्रशिक्षण के लिए नामित किया।

Bioinformatics news

The Centre has developed a new database 'PhyDisH' (*Phytophthora* Diseases of Horticultural crops). This database is available online (<http://www.spices.res.in/phydish/>) and includes information on all the *Phytophthora* cultures conserved in the National Repository of *Phytophthora* at the institute.

News from NICS

During the period 27 reference books, 431 bound volumes, one thesis, 6 technical reports, 11 project reports and 5 CDs were added to the Library collection. Online access to journals published by M/s Elsevier Scientific Publishing Co, Annual Reviews and databases like SCOPUS and Science Direct was facilitated on a trial basis under the National Agricultural Innovation Project, ICAR, New Delhi. There were 1193 internal and 645 external users during the reporting period. Access to SpicE-Lib, the library portal was extended to ICRI, Myladumpara.

Transfer of technology

Trainings

**Nirmal Babu K
Krishnamurthy KS
Santhosh J Eapen**

◆ One month summer training course on *Biochemistry, Biotechnology and Bioinformatics* for M.Sc. students, 07 May- 06th June 2007.



Inauguration of Workshop on Production Management and Post harvest technology in ginger at Sikkim

Under the Central Sector Scheme on Technology Mission for Integrated Development of Horticulture in NE states two workshops and two demonstrations on *Production Management and Post harvest technology in ginger* at Jorethang and Gangtok in Sikkim were organized during 12-16 March 2007 in collaboration with Department of Horticulture, Govt. of Sikkim. The participants included 126 farmers. *Dr.P.Rajeev, Dr.V.Srinivasan, Dr.T.John Zachariah and Dr.A. Kumar* were the resource persons

Agricultural Technology Information Centre

The ATIC organized the following training programs

- ◆ Production management in ginger, turmeric and chillies under the National Horticulture Mission for UP state Department of Horticulture, January 2007.
- ◆ Spices research and development – Induction training program for field officers of Spices Board, January 2007.

The Rashtriya sam Vikas Yojana/VSAT Teleconferencing program (sponsored by the Kerala State Planning Board) with four Village Resource Centres in Wayanad has been put into operation and the first telecast was on 1 June 2007.

About 478 farmers availed the benefit of advisory services and 713 students from institutions across the country visited the institute.

Krishi Vigyan Kendra

Close to 1500 farmers visited KVK during the period for consultation, purchase of planting materials and other inputs.

The Kendra conducted 35 training programs on

various subjects during the period. Around 995 persons participated.

A block level seminar was organized by the Kendra in collaboration with State Animal Husbandry Department on 27 February 2007, and an FET seminar was conducted on 07 April 2007. The Kendra organized FLDs on

- ✦ Introduction of high yielding ginger varieties of IISR
- ✦ Introduction of a high yielding variety of amorphophallus viz., Sree Padma
- ✦ Demonstration on milk production performance in dairy cattle by feeding with silage under scarcity conditions
- ✦ Introduction of Chinchilla rabbits in cage rearing for meat purpose with balanced ration



Apiculture- a risk free enterprise promoted by our KVK

OFTs conducted by the Kendra include

- ✦ Testing the efficiency of organic composting of coir pith by TNAU method
- ✦ Performance of *P. fluorescens* and vermicompost for foot rot management
- ✦ Broiler goat production
- ✦ The effect of treatment with GnRH analogue on conception rate in repeat breeder cows

Farmers study tours to Government Goat Farm, Kommeri, Kannur (17 February 07), Kerala Livestock Development Board, Dhoni Farm, Palakkad (20 February 07) and to Assam, Meghalaya, Tripura and Nagaland (03-18 June 2007) were organized.

The Kendra also participated in the Calicut Flower Show from 08-14 February 2007 and coconut festival organized by the Coconut Development Board, from 03-06 May 2007.

Publications

Research papers

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Success story

Prathibha-our turmeric variety

'Prathibha will be the ruling turmeric variety of Andhra Pradesh within the next 4-5 years'

The above words are the prediction of Mr. P. Chandra Sekhar Azad, a progressive turmeric farmer from Kunchanappalli, Tedepalli Mandal, Guntur, Andhra Pradesh, who had been to the institute to acknowledge his success with Prathibha turmeric variety. Andhra Pradesh being the leading turmeric producing state in the country with about 65000 ha under the crop, his prophetic words are poignant.

In their urge to improve the profit margin from turmeric, farmers root for high yielding varieties of turmeric. That is how Mr. P. Chandra Sekhar Azad, a 67 year old farmer having a freedom fighter's pedigree, came to know about Prathibha variety of turmeric, evolved at IISR, Calicut in 1996.

Traditionally turmeric varieties such as 'Kadappa', 'Duggirala' etc. are grown in Guntur. Having heard about Prathibha in the year 2004, Mr. Azad procured 50 kg seed rhizomes and since then he has been steadily expanding the area under Prathibha in and around Guntur. High yield of 40t ha⁻¹ (instead of 30 t ha⁻¹ of the local varieties), early maturity of 195 days (instead of 210-215 days of the local varieties) and better price (25% more than the local types) coupled with 24% dry recovery are the important attributes that endears Prathibha to Mr. Azad and others.

The success story of Mr. Azad was featured by 'India Today' (Telugu) February 2007 issue besides NDTV and ETV (Telugu). Motivated by the success of Mr. Azad, farmers in the nearby villages have switched over to Prathibha cultivation. Andhra Pradesh Department of Agriculture (Nizamabad) has already sourced 4t of rhizomes from Mr. Azad and they are planning to procure an additional 8-10 t from him during this season. Mr. Azad is planning to plant Prathibha in 5 acres of his land, this month. Mr. Azad not only distributes the seed rhizome to the nearby farmers but also shares his experience with them

Radio talk/Video Conference

Date	Topic	Speaker
29.5.07	Land preparation and planting in cardamom	Anke Gowda SJ
01.6.07	Participated in the video conference at the Space Technology Enabled Village Resource Centre, IISR, Calicut on <i>Black pepper varieties and cultivation</i>	Sasikumar B
25.6.07	Preparatory agricultural practices at onset of monsoon	Prakash KM

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