



SPICES NEWS



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TRADITIONAL KNOWLEDGE SHOULD NOT BE RELEGATED TO BACK GROUND - HUKUMDEO NARAYAN YADAV

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Mr. Hukumdeo Narayan Yadav, Minister of State for Agriculture, Govt. of India while visiting the Indian Institute of Spices Research at Chelavoor, Kozhikode called upon researchers to respect the traditional knowledge of Indian farmers. The traditional wisdom of Indian rural folk is a treasure house, scientists have to learn a lot from this rich tradition of our poor villagers and in fact research should be a two way process - lab to land and from farmers to scientists, the minister stressed. The division of people based on the level of knowledge will lead to another sort of slavery. This will be a dangerous situation and should be curbed. Urging for a fair display of checks and balance between traditional knowledge and modern scientific techniques, he exhorted the researchers not to go after 'shortsighted publicity stunt research', but devote to cardinal research that will bring good health and wealth to the people. As most of the spices are medicinal plant as well, this aspect has more relevance, the minister underlined. He praised the *Karingali* water drinking habit of Malayalees (a traditional wisdom) against the mineral water culture.

The minister also planted a sapling of *Garcinia* (Kudampuli) in the main campus.

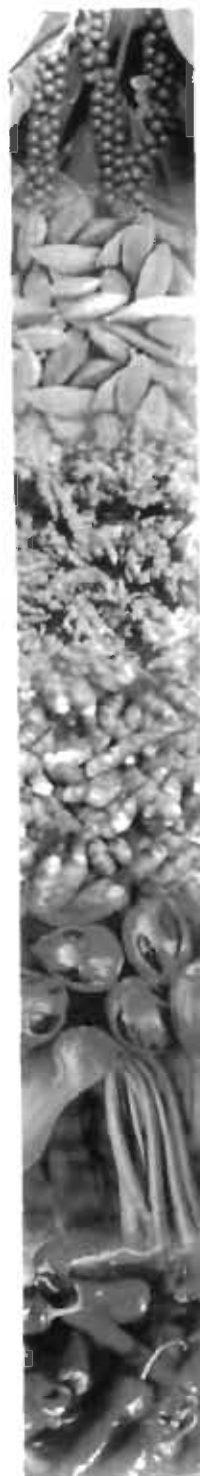
Dr. V.A. Parthasarathy, Director, IISR welcomed the minister and gave a brief introduction of the activities of the Institute.

NEWS FLASH

Dr. V.A. Parthasarathy, Director, Indian Institute of Spices Research, Kozhikode is nominated as Member of the ICAR Society as well as the Governing body of the ICAR Society. The staff of the Institute congratulate Dr. V.A. Parthasarathy.



Hon'ble Minister of State for Agriculture, Govt. of India, addressing the staff members at IISR, Kozhikode



RESEARCH HIGHLIGHTS

Scanning wild *Piper* spp. for quality

Three wild *Piper* spp. viz., *P. argyrophyllum*, *P. galeatum* and *P. attenuatum* were analysed for quality traits.

The quality profile of the species is as below:

Species	oleoresin(%)	e.oil(%)
<i>P. argyrophyllum</i>	11.5	3.40
<i>P. galeatum</i>	31.8	6.24
<i>P. attenuatum</i>	9.7	3.00

Turmeric powder in the red

Presence of *Curcuma zedoaria*, a wild species powder is detected using PCR technique, in 3 major commercial brands of turmeric powder.

Purification and detection of CMV in black pepper

The Cucumber Mosaic Virus (CMV) infecting black pepper was purified and polyclonal antiserum against the virus was produced in New Zealand white rabbit. IgG was purified from the antiserum and coupled with alkaline phosphatase. Double antibody sandwich (DAS) ELISA method was standardized for the detection of CMV in diseased black pepper samples collected from different regions of Karnataka, Kerala and Tamil Nadu.

Black pepper grafts induce optimism

Grafted pepper has been found to thrive upto six years without any decline in onfarm trials.

Radiotracer technique traces root distribution of bush pepper

Radio isotopic studies of root distribution in 4 years old bush pepper using P^{32} isotopes indicated that the active root zone of bush pepper

is limited to within 30 cm radius at a depth of 40 cm.

PGPR vignettes

Field trials on ginger and turmeric with seven efficient isolates of PGPR indicated increased tillering in ginger.

Rhizobacteria with multiple modes of action viz. IISR 658, IISR 663, IISR 853 and IISR 865 which suppress both root knot and burrowing nematodes are also identified. These bacteria also suppress *Phytophthora capsici* infestation besides exhibiting good growth promoting ability in black pepper.

Trichoderma exudates suppress *Ralstonia solanaceum*

Metabolites produced by *Trichoderma viride* are found to inhibit bacterial wilt pathogen *Ralstonia solanaceum* under *in vitro* studies.

Variability for disease reaction in black pepper seedlings

Seedling progenies (open pollinated) of black pepper showed varied response to *Phytophthora capsici* infection.

Morphotypes of *Phytophthora capsici* lack differential pathogenicity

No relationship between the morphology of *P. capsici* isolates and their pathogenicity to black pepper could be observed in laboratory screening.

Interspecific hybridization in vanilla

Eight protocorms are obtained by culturing the seeds from interspecific cross of *V. andamanica* and *V. aphylla*. Basal SH & E₁

medium without growth regulators are found more suitable for culturing vanilla seeds.

Curcumin biosynthesis

Activity of Phenyl alanine ammonia lyase, the major enzyme involved in curcumin biosynthesis was maximum in the microsomal fraction as observed during density gradient centrifugation using sucrose.

Zinc level for ginger

The optimum fertilizer Zn dosage for increasing ginger yield was found to be 6 kg Zn ha⁻¹. The upper limit for soil Zn concentration to get maximum yield in ginger is also found to be 3.4 mg kg⁻¹.

Intercropping Java long pepper with arecanut is profitable

Java long pepper (*Piper chaba*) is one of the best choice crops to be intercropped with arecanut at 1.35 x 1.35 m spaced lines support of *Glyricidia*. Easily 4000 plants can be accommodated in one hectare of arecanut yielding 540 kg dry spikes/ha. At the rate of Rs. 60 kg⁻¹ an income of Rs. 32,400 ha⁻¹ can be obtained.



Piper chaba in arecanut garden

NEW SPICES VARIETIES

The Institute Staff Research Council has approved for release 4 new black pepper clones viz. 'IISR Thevam'; a high yielding foot rot tolerant selection of 'Thevanmundi', 'IISR Girimunda'; a hybrid with high yield, 'IISR Malabar Excel'; a hybrid rich in oleoresin besides P-24 an open pollinated progeny selection of Perambamunda with tolerance to foot rot disease. The former 3 clones are suited to high elevation (3000 ft MSL) areas too.

The Staff Research Council has also approved the release proposal of two new high yielding and high curcumin turmeric varieties viz. 'IISR Kedaram' and 'IISR Alleppey Supreme'.

GERMPLASM COLLECTION

Eight cultivated black pepper accessions collected from Idukki District got established in the ex situ Piper gene bank, IISR, Kozhikode. A black pepper with multibranching spike was also collected from Idukki and added to the gene bank, besides two collections from Koruvarkundu of Malappuram District, Kerala.



A multibranching inflorescence type vanilla

Twentytwo *Vanilla planifolia* accessions collected from farmer's plot located at Idukki, Kerala and Dakshina Kannada district of Karnataka are added to the vanilla genebank. A special collection of vanilla is a multibranched inflorescence type from Sirsi, Karnataka.

GERMPLASM REGISTRATION

Block pepper accession Coll:1041 as a unique accession with foot rot tolerance (Reg. No. INGR 03091) and turmeric accession, Coll: 657 for high yield and high curcumin (Reg. No. INGR.030809) are registered with NBPGR, New Delhi.

PARTICIPATION IN SYMPOSIA/ SEMINARS/ TRAINING/ MEETING

Anandaraj, M

Sixth International PGPR Workshop, 5-10 October, 2003, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Anke Gowda, S. J

Master training programme on 'Vanilla cultivation', 10 February 2003, IISR, CRC, Appangala.

Summer School on 'Application of remote sensing and GIS in agricultural statistics', 6 - 26 August 2003, IASRI, New Delhi.

One day 'Workshop on Horticulture Crops - Floriculture and Plantation Crops', 18 September 2003, NABARD, Madikeri.

National Symposium on 'Improving crop productivity in an ecofriendly environment - Physiological and Molecular approaches', Oct 15-17, 2003, Dept. of Plant Physiology, College of Basic Sciences and Humanities, Govind Ballabh Pant University of Agriculture & Technology, Nainital, Uttaranchal.

33rd Meeting of Scientific Advisory Committee, KVK, Gonikopal, 14 September 2003, Coorg, National Seminar on 'Physiological Interventions for Improved Crop Productivity and Quality - Opportunities and Constraints', 12-14 December 2003, Dept. of Plant Physiology, RARS, Tirupathi, Andhra Pradesh.

Chempakam, B

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Tenth Congress of Federation of Asian and Oceanic Biochemists and Molecular Biologists, 7-11 December 2003, Indian Institute of Science, Bangalore.

Devasahayam, S

Agricultural Research Prioritization Technique, 21-27 August 2003, National Academy of Agricultural Research Management, Hyderabad.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

State level Research Extension Interface, 5-6 November 2003, Directorate of Agriculture, Thiruvananthapuram.

Hamza, S

One day Seminar on 'Total solution for Analytical Laboratory', 29 Sept 2003, Kochi.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Recent Advances in 'Organic farming technologies in plantation crops', 18-27 November 2003, CPCRI, Kasaragod.

Ishwara Bhat, A

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 25-30 October 2003, IISR, Kozhikode.

'Recent techniques in Gene cloning, DNA analysis and functional genomics', 1-10 December 2003, CIMAP, Lucknow.

Johnson K. George

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Training of CEP course on Bioinformatics, 17-22 Nov., IIT, Mumbai

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', ICAR Research Complex, Goa, 27-29 November 2003.

John Zachariah, T

Meeting at District Collector's chamber, Kozhikode to suggest suitable project for Investors, 2 July 2003.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Johnny, A. K

Advance course in Web Design, March 24-29, 2003, NAARM, Hyderabad.

Kandiannan, K

Training on 'Development of spatial and non spatial database for agricultural research system', 9-29 September 2003, Indian Agricultural Statistics Research Institute, New Delhi.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Krishnamoorthy, B

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, IISR, Kozhikode.

32nd Town Official Language Implementation Committee Meeting, 5 November 2003.

Kumar, A

Indo-US Workshop on Genomics, 7-9 September 2003, Bangalore.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, IISR, Kozhikode.

Ginger Platform Meeting, 1-3 December 2003, Gangtok, Sikkim.

Leela, N. K

Short term course on 'Management development programme for women scientists', 27 May to 6 June 2003, NAARM, Hyderabad.

Two day seminar on 'Chemistry in the New Millennium', 24-25 July 2003, NIT, Kozhikode.

Training on 'HPLC analysis of vanillin, capsaicin aflatoxin and Sudan-1 dye'. 13-17 October 2003, Quality Evaluation Laboratory, Spices Board, Kochi.

Workshop on 'Agricultural Bioinformatics', 25-30 October 2003, IISR, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', ICAR Research Complex, Goa, 27-29 November 2003.

Mathew, P. A

Farmers - scientists interaction workshop on development of homestead farming, 28 August 2003, IISR, Kozhikode.

Research Extension Interface, 29 August 2003 and 23 October 2003, IISR, Kozhikode.

Annual Review of KVK, 22 September 2003, IISR, Kozhikode.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

State level Research Extension Interface, 5-6 November 2003, Directorate of Agriculture, Thiruvananthapuram.

Quality control of pepper cuttings, 20 November 2003, Directorate of Agriculture, Thiruvananthapuram.

Parthasarathy, V. A

Seventh Executive development programme in Agriculture Research Management, 17-23 July 2003, NAARM, Hyderabad.

Director's meeting 28-30 July 2003, New Delhi.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, IISR, Kozhikode.

Planters' Meeting, 2 November 2003, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', ICAR Research Complex, Goa, 27-29 November 2003.

Brain storming session on 'Utilization of Genetic Resources', 11 December 2003, New Delhi.

Eighth ICAR Regional Committee Meeting, 29-30 December 2003, Bangalore.

ICAR Governing Body Meeting, 24 December 2003, New Delhi.

Prakash, K. M

Advances in video grouping and photography 26 August to 5 September, 2003, NAARM, Hyderabad.

One day Seminar on 'Medicinal Plant cultivation and marketing', VV Club at Chakkittappara, 14 November 2003, Kozhikode.

Rajeev, P

Monthly interaction workshop of grass root level extension support system of State Dept. of Agriculture and scientists of Agriculture University and ICAR Stations, 21 August 2003, IISR, Kozhikode.

District level Research Extension Interface Meeting, 29 August and 27 October 2003, IISR, Kozhikode.

Annual Zonal Review Meeting of TOT projects of ICAR in Zone VIII. 22-24 September 2003, IISR, Kozhikode.

Sixth International PGPR Workshop 5-10 Oct. 2003, Kozhikode

Winter School on 'Recent Advances on Survey sampling with emphasis on computer intensive data analysis technologies', 5-25 November 2003 IASRI, New Delhi.

Farmers - Scientists interaction workshop on development of homestead farming, 28 August 2003, IISR, Kozhikode.

Ramakrishnan Nair, R

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Ramana, K. V

Seminar on 'Cocoa, black pepper and vanilla', 27-30 September, Eluru, Andhra Pradesh.

Eighth ICAR Regional Committee Meeting, 29-30 December 2003, Bangalore.

Rema, J

Agricultural Research Prioritization Techniques, 21-27 August 2003, National Academy of Agricultural Research Management, Hyderabad.

Sixth International PGPR Workshop, 5-10 October 2003, Kazhikode.

Research Extension workers Interface 2003-2004, 27 October 2003, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, Kozhikode.

Saji, K. V

National Seminar on 'Bioinformatics and biodiversity data management', 15-17 Sept., TBGRI, Palode, Thiruvananthapuram.

'Recent techniques in plant genetic engineering and molecular breeding', 25 September to 15 October 2003, NRC for Plant Biotechnology, New Delhi.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, IISR, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003. ICAR Research Complex, Gaa.

Santhosh J. Eapen

Brain storming session on 'Database for the management of genetic resources of horticulture crops', 19 June 2003, CPCRI, Kasarogod.

Training on the 'Cyberway 'A platform for Information Management and Net working', 11-14 August 2003, MANAGE, Hyderabad.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Pepper Seminar, Spices Board, 31 October 2003, Pulpally, Wynad.

Training on CEP Course on Bioinformatics, 17-22 November 2003, IIT, Mumbai.

Sasikumar, B

One-day seminar on Turmeric, 8 Aug 2003, Hingoli, Maharashtra.

One day workshop on 'Biotechnological interventions in Agriculture', Kerala State Council for Science, Technology and Environment. 17 Aug 2003, RGCB, Thiruvananthapuram.

One-day seminar on 'Biotechnology for Rural Development Growth & Empowerment (BRIDGE)', South Malabar Gramin Bank, 21 August 2003, Olavanna, Kozhikode.

Formers - Scientists interaction workshop on development of homestead farming, 28 August 2003, IISR, Kozhikode.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Preparation of action plan for organic farming, 23 October 2003, Directorate of Agriculture, Thiruvananthapuram.

Research Extension workers interface, 27 October 2003, IISR, Kozhikode.

Workshop on Agricultural Bioinformatics, 29-30 October 2002, IISR, Kozhikode.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Shiva, K. N

Statistical Software for Data Analysis, 18-28 June 2003, NAARM, Hyderabad.

One day Hindi Workshop on Noting and Drafting, 17 September 2003, IISR, Kozhikode.

Workshop on 'Agricultural Bioinformatics', 29-30 October 2003, IISR, Kozhikode.

National Symposium on 'Recent trends in Floriculture', 12-14 November 2003, KAU, Thrissur.

Srinivasan, V

Research-Extension interface, 27 August 2003, IISR, Kozhikode.

Training on 'Introduction to GIS & its applications', 1-26 September 2003, NRSA, Hyderabad.

Meeting on Jaivo Keralam, 23 October 2003, Directorate of Agriculture, Thiruvananthapuram.

Preparation of action plan for organic farming, 23 October 2003, Directorate of Agriculture, Thiruvananthapuram.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

Susheela Bhai, R

Training on 'Management Development Programme for women scientists', 27 May to 6 June 2003, NAARM, Hyderabad.

Workshop on 'Grass root level support system for Agriculture Development at Panchayath level', 21 August 2003, IISR, Kozhikode.

One day seminar - 'Hopes on vanilla cultivation', Vikas Sena Front, 1 September 2003, Kozhikode and 13 September 2003, Kannur.

Sixth International PGPR Workshop, 5-10 October, Kozhikode.

Training course on Techniques in Biochemistry and Molecular Biology, 1 - 21 November 2003, Centre for Advanced Studies in Biochemistry, Divn. of Biochemistry, IARI, New Delhi.

Thankamani, C. K

Farmers - Scientists interaction workshop on development of homestead farming, 28 August 2003, IISR, Kozhikode.

Sixth International PGPR Workshop, 5-10 October 2003, Kozhikode.

Research Extension Interface on Organic Farming, 22 October 2003, Dept. of Agriculture, Govt. of Kerala, Kannur.

13th Swadeshi Science Congress, 6-8 November 2003, CABIC, MSSRF, Kalpetto, Wynad.

National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants', 27-29 November 2003, ICAR Research Complex, Goa.

GUEST LECTURES DELIVERED/PAPERS PRESENTED

Anke Gowda, S. J

Propagation and cultivation of black pepper. Master training programme on black pepper cultivation, 19 February 2003, IISR, CRC, Appangala.

Cardamom cultivation. Bhagamandale Vyavasaya Seva Sahakarana Bank and Bank-farmers association programme, 8, March 2003, Bhagamandale, Karnataka.

Spices cultivation. Coffee berry borer control programme, Coffee Board, Bhagamandale, 26 March 2003, Karnataka.

Cardamom cultivation. Coffee berry borer control programme, Coffee Board, 28 March 2003, Yuvakopad, Kakkabe, Karnataka

Cardamom, black pepper & vanilla cultivation. 21 November 2003, Syndicate Bank, Customer's Meet (farmers), Coorg.

Hamza, S

Spices cultivation in coconut and arecanut garden with special emphasis on black pepper and vanilla. State Farmer's Day, 17 August 2003, GUP School, Chammandkadavu, Krishi Bhavan, Kodur, Malappuram.

Soil chemistry, plant and nutrition. 10 October 2003, Chemistry Association, PSMO College, Tirurangadi, Malappuram.

Ishwara Bhat, A

Microarray technology and its application. 21 November 2003, Winter School, Dept. of Plant Pathology, TNAU, Coimbatore.

John Zachariah, T

Value added products from spices. 26 June 2003, Farmer's Meet, RARS, Ambalavayal, Wynad.

Processing and value addition of spices. 9 July 2003, Farmer's Meet, Vadakara, Kozhikode.

Processing and value addition of spices. 22 August 2003. Agricultural Officers Training, Farmers Training Centre, Feroke, Kozhikode.

Processing and value addition of spices. Research-Extension Interface, 29 August 2003, IISR, Kozhikode.

Kandiannan, K

Organic way of spices production-an overview. Recent Advances in Organic Farming Technologies in Plantation Crops, 24 November 2003, CPCRI, Kasargod.

Organics for quality planting material production. Recent Advances in Organic Farming Technologies in Plantation Crops, 24 November 2003, CPCRI, Kasargod.

Kumar, A

Micrabial and molecular genetics. 18 August 2003, Providence Women's College, Kozhikode.

Biotechnology Vs Plant pathogens—the ongoing fight. 7- 9 September 2003, Indo – US Workshop on Genomics, Bangalore.

Mathew, P. A

Recent development in agriculture. 16 May 2003, Farmer's Club, Chakkithipara, Kazhikade.

Organic farming. 11 July 2003, Farmers' Club, Chakkithipara, Kozhikode.

Vanilla cultivation. Seminar on cocoa, black pepper and vanilla, 28 September 2003, Eluru, Andhra Pradesh.

Organic farming. 6 October 2003, Kondotty Black Panchayat, Malappuram.

Vanilla cultivation. 21 November 2003, Agriculture Officers Training, Thamorassery, Kazhikode.

Rajeev, P

Production management in black pepper. 23 August 2003. Farmer's Training Centre, Ferake, Kazhikode.

Rema, J

Varieties and production management in tree spices. Inservice training programme for technical staff of IISR, 6-7 August 2003, IISR, Kozhikode.

Santhosh J. Eapen

Introduction to bioinformatics. Bioinformatics training, 18 August 2003, CPCRI, Kasargod.

Santhosh J. Eapen & Parthasarathy, V. A

Future strategy for genetic resources management and role of bioinformatics. Broinsforming session on dotobase for the management of genetic resources of horticulture crops, 19 June 2003, CPCRI, Kasargod.

Shiva, K. N

MSTAT-C practical class. Basic Statistics and Computer Application in Agricultural Research for AICRP (S) scientists, 24 & 25 September 2003, IISR, Kozhikode.

Sasikumar, B

Restriction enzymes. Bioinformatics Diploma students, 23 October 2003, DOEACC (formerly CEDIT), Kozhikode.

Introduction, general consideration in experimental planning and consideration of spices field triols. Basic Statistics and Computer Application in Agricultural Research for AICRP (S) scientists, 18 September 2003, IISR, Kozhikode.

Introduction, Balance Incompatible Block Designs and Augmented Design. Basic Statistics and Computer Application in Agricultural Research for AICRP (S) scientists, 19 September 2003, IISR, Kozhikode.

Varieties of pepper, ginger and turmeric. Inservice training of technical staff of IISR, 6-7, August 2003, IISR, Kozhikode.

Turmeric production. Farmer's Seminar, 8 August 2003, KVK, Hingali, Maharashtra.

Biotechnology for rural industrial development growth and improvement. 21 August 2003.

South Malabar Gromin Bank, Olavonna, Kozhikode.

Srinivasan, V

Organic farming of Spices. District level Research – Extension Interface Meet. 29 August 2003, IISR, Kozhikode.

Thankamani, C. K

Selection and production of quality planting material for spices. 23 October 2003, FTC, Feroke, Kozhikode.

PUBLICATIONS

Research articles

Anandaraj, M. and Sarma, Y. R. 2003. The potential of PGPR in disease management of spice crops at Indian Institute of Spices Research, Kozhikode, Kerala, India. In: Reddy, M. S., Anandaraj, M., Eopen, S. J., Sarma, Y. R. and Kloepper, J. W. (eds.), Proc: Sixth International PGPR workshop, Indian Institute of Spices Research, Kozhikode, India, 5-10 October 2003, pp: 27-39.

Anandaraj, M., Diby Paul, Jisha, P. J., Kumar, A., Saju, K. A., Thankamani, C. K. and Sarma, Y. R. 2003. Potential of a consortium of Plant Growth Promoting Rhizobacterio and *Trichoderma* for effective nursery management in black pepper (*Piper nigrum* L.). In: Reddy, M. S. Anandaraj, M., Eopen, S. J., Sarma, Y. R. and Kloepper, J. W. (eds.), Proc: Sixth International PGPR Workshop, Indian Institute of Spices Research, Kozhikode, India, 5-10 October 2003, pp: 8-11.

Anke Gowda, S. J. 2003. Optimum leaf stage for transplanting small cardamom (*Elettaria cardamomum* Maton.) seedlings from primary nursery to poly bag (secondary nursery). In: Proc. National Seminar on Physiological Interventions for Improved Crop Productivity and Quality: Opportunities and Constraints. RARS, Tirupathi, Andhra Pradesh, 12-14 December 2003 (Abstract).

Anke Gowda, S. J and Krishnamuthy, K. S. 2003. Screening of small cardamom (*Elettaria cardamomum* Maton.) cultivars for drought tolerance. In: Proc. National symposium on Improving Crop Productivity in an Ecofriendly Environment: Physiological and Molecular Approaches, Department of Plant Physiology, College of Basic Sciences and Humanities, G. B. Pant University of Agriculture and Technology, Nainital, Uttaranchal, 15-17 October 2003 (Abstract).

Anuradha Upadhyay, Jayadev, K, Manimekalai, R and Parthasarathy, V.A. 2003. Genetic relationship and diversity in Indian coconut accessions based on RAPD markers. *Scient. Hort.* 99: 353-362.

Beena, B., Santhosh J. Eopen and Ramana, K. V. 2003. Native rhizobacteria for the biological suppression of *Radapholus similis* infesting black pepper (*Piper nigrum* L.). In: Reddy, M. S., Anandaraj, M., Eopen, S. J., Sarma, Y. R. and Kloepper, J. W. (eds.), Proc: Sixth International PGPR workshop, Indian Institute of Spices Research, Kozhikode, India, 5-10 October 2003, p.12.

Bhat, A. I. 2003. Coat protein sequence identities - a criteria for the classification of plant virus species and their strains. Workshop on Agricultural Bioinformatics. 29-30 October 2003, IISR, Kozhikode.

Bhat, A. I., Devasahayam, S., Sarma, Y. R. and Pant, R.P. 2003. Association of a badna virus in black pepper (*Piper nigrum* L.) transmitted by mealy bug (*Ferrisia virgata*) in India. *Curr. Sci.*, 84: 1547-1550.

Chandra Naik, R., Devendra and Ankegowda, S. J. 2003. Influence of glyphosate with or without surfactant on growth and control of *Cyperus rotundus*. In: Proc. National symposium on 'Improving Crop Productivity in an Ecofriendly Environment: Physiological and Molecular Approaches. Department of Plant

Physiology, College of Basic Sciences and Humanities, G. B. Pant University of Agriculture and Technology, Nainital, 15-17 October 2003 (Abstract).

Chempakam, B., Jnana Rani, L.J., Devasahayam, S., Krishnamurthy, K.S and Anandaraj, M. 2003. Biochemical profile of leaves of black pepper lines tolerant to 'pollu beetle' (*Longitarsus nigripennis*). National Seminar on New Perspectives in Spices, Medicinal and Aromatic Plants, ICAR Research Complex, Goa, 27-29 November 2003, p. 185 (Abstract).

Dhamayanthi, K. P. M., Sosikumar, B. and Remasree, A. B. 2003. Reproductive biology and in compatibility studies in ginger (*Z. officinale*). *Phytomorphology*, 53 : 123-131.

Diby Paul, Srinivasan, V., Anandaraj, M. and Sarma, Y. R. 2003. *Pseudomonas fluorescens* mediated nutrient flux in the black pepper rhizosphere microcosm and enhanced plant growth. In: Reddy, M. S. Anandaraj, M., Eapen, S. J., Sarma, Y. R. and Kloepper, J. W. (eds.) In: Proc. Sixth International PGPR workshop, Indian Institute of Spices Research, Kozhikode, India, 5-10 October 2003, pp: 18-24.

Hamza, S. and Sadanandan, A, K. 2003. Effect of organic amendments on yield and quality of black pepper. In: Proc. National Seminar on Strategies for Increasing Production and Export of Spices. Korikanthimath V. S. et al. (Eds.) IISR, Kozhikode, 24-26 October 2002, pp. 81-84.

Hamza, S., Sadanandan, A, K. and Srinivasan, V. 2003. Effect of amendments and molybdenum on the yield and quality of black pepper. National Seminar on New Perspectives in Spices, Medicinal and Aromatic Plants, ICAR Research Complex, Goa, 27-29 November 2003, (Abstract).

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National Seminar

The Indian Society of Spices organized a National Seminar on 'New Perspectives in Spices, Medicinal and Aromatic Plants' during 27-29 November 2003 at Goa in collaboration with ICAR Research Complex, Goa and Indian Council of Agricultural Research, New Delhi

AWARDS/HONOURS

Dr. S. Hamza, Technical Officer (T-6) Indian Institute of Spices Research, Kozhikode bagged the **S.N. Ranade Memorial Award** for Excellence in Micronutrient Research for the year 2003.

Mrs. C. K. Sushama Devi, Sr. Library Assistant has been awarded **Ph.D degree in Library and Information Science** for her thesis entitled "**A quantitative analysis of Indian research output on spices since 1970**" by **Annamalai University, Annamalainagar, Tamil Nadu.**

Institute Awards of Excellence – 2003

Utilizing the interest of the best ICAR Institute Award fund, **Awards of Excellence** are constituted for administrative, technical and supporting staff of the institute below the pay scale of Rs. 5500-9000 for the first time. The award carries a cash prize of Rs. 1000/-, certificate and a plaque. The awards for the year 2003 go to the following staff members.

Supporting staff (two awards)

1. Mr. B.M. Sheshappa, IISR, CRC, Appangala, Coorg
2. Mr. Balakrishnan Nair, IISR, Kozhikode

Technical staff (one award)

Mr. V.P. Sankaran, IISR Experimental Farm, Peruvannamiuzhi, Kozhikode

Administrative staff (one award)

Mr. C. Ramesh Babu, IISR, Kazhikode

TRANSFER OF TECHNOLOGY

Workshop on Homestead Farming

A one day workshop on Homestead Farming sponsored by NATP through CPCRI, Kasaragod was held at IISR, Kozhikode on 28-08-2003

IAEA sponsored training

Ms. D. B. R. Swornathilaka from Sri Lanka underwent a three months training on black pepper breeding and biotechnology at the Crop Improvement Division of IISR, Kozhikode from 1st June to 31st August 2003.

Consultancy service

Dr. B. Sasikumar, Sr. Scientist (Plant breeding), Dr. R. Susheelo Bhai, Sr. Scientist (Plant Pathology) and Dr. C.K. Thankamani, Scientist, Sr. Scale (Agronomy) visited Ambanad Estate of the Trovancore Rubber and Teo Ca. Ltd on 11-12-2003 to suggest ways and means for improving black pepper production in the estate.

Dr. K. V. Ramana, Project Coordinator (Spices), Dr. M.N. Venugopal, Principal Scientist (Plant Pathology), and Dr. S. Devasahayom, Principal Scientist (Entomology) visited Sikkim on invitation from Dept. of Horticulture, Govt. of Sikkim to study the decline in the productivity of large cardamom, during 15-22 October 2003.

Training programmes conducted

A training programme on 'Spices Production Technology' for Agricultural officers of State Department of Agriculture, Malappuram district was conducted during 12-13 June 2003.

An orientation programme on 'Spices Research and Development' for PG students of Plantation Management, Calicut University was conducted on 17th July 2003.

In service training programme on Spices Production Technology for technical staff of IISR, Kozhikode was arranged during 6 – 7 August 2003.

Training Programme for scientists of AICRP(S) on Basic Statistics and Computer Application in Agricultural Research was conducted during 16-26 September 2003, IISR, Kozhikode.

Agricultural Technology Information Centre News

A total of 472 farmers and 339 students visited the centre for availing various services of the single window delivery system.

KVK ROUNDUP

A total of 54 training programmes were conducted during the period for practicing farmers/farm women, rural youth and extension functionaries and 990 trainees participated in the programme that includes 340 male and 650 female participants.

Revolving Fund

Under revolving fund an amount of Rs. 1,36,294 was generated through production and sale of planting materials of spices, plantation crops, fresh crops, plants etc, mushroom spawns, sale of *Trichoderma* consultation and registration fees of animal clinic, Kisan Mela.

Study tour

The KVK arranged a study tour to Wynad as a part of training on Vanilla cultivation to the members of VW Club of Chakkittappara on 29 October and 18 November 2003.

KVK Annual Review Meeting

The Annual Review Meeting of KVK's of zone VIII was organized at IISR, Kozhikode, 22-24 September 2003.

VIGILANCE DAY

Vigilance Day was observed at the Indian Institute of Spices Research, Kozhikode on 3rd Nov. 03. The function started with the administering of the vigilance day pledge stressing transparency in public institutions to the staff members by the Director of the institute. Followed by the pledge taking, a quiz program was also organized. Mr. P. Balachandran, Passport Officer, Kozhikode, the chief guest of the function stressed the need for better transparency in day-to-day activities in public offices. He identified greed of the government servants as the main culprit for corruption in the offices. He also distributed prizes to the quiz competition winners. The Asst. Finance and Accounts Officer of the institute proposed vote of thanks.

HUMAN RESOURCE DEVELOPMENT ACTIVITIES AT IISR, KOZHICODE

Name	Training Course	Place and duration
Sri. A. P. Sankoron Asst. Administrative Officer	Improving Administrative Efficiency and Financial Management	NAARM, Hyderabad June 17-24, 2003
	44 th Workshop on Administration of Establishment and Personal rules	Goa, November 24-28, 2003
Mrs. P. V. Sali Stenographer Mr. C. Ramesh Babu Stenographer	Computer Applications for Administrative and Financial Management	NAARM, Hyderabad September 16-23, 2003

BIOINFORMATICS NEWS

Bioinformatics Training

A 21-days intensive training 'Biotechnology and Bioinformatics – Tools and Applications' was organized by the Bioinformatics Centre of the Institute from 2-23 December 2003. Six scientists and four university teachers participated in this programme. The DBT sponsored training was recognized by ICAR for career advancement.

Bioinformatics Course

The Centre is assisting DOEAC Centre, Kozhikode to run 'O' level and 'A' level courses in Bioinformatics.

Workshop on Agricultural Bioinformatics

Two day workshop on Agricultural Bioinformatics was organized during 29-30 October 2003 by the Bioinformatics Centre, Indian Institute of Spices Research, Kozhikode. Dr. M. V. Joseph, Professor & Head, Department of Biotechnology, Calicut University inaugurated the workshop and delivered the keynote address. There were three technical sessions – Bioinformatics & Biodiversity; Bioinformatics & Biotechnology and Bioinformatics, Biocomputing



A view of the inaugural function of the Bioinformatics Workshop

& Knowledge Management. Altogether 17 papers were presented in these sessions. The plenary session was chaired by Dr. K. V. Ramona, Project Coordinator, AICRP on Spices. Dr. G. M. Ajit, Director, DOEAC Centre, Kozhikode delivered the plenary lecture.

VISIT ABROAD

Dr. V. A. Porthasarathy, Director, IISR, Kozhikode visited Vietnam during 3-8 November 2003 under the Indo-Vietnam work plan for Horticulture.

RECREATION CLUB

The Institute Recreation Club conducted many programmes during the period including ICAR Foundation Day, Vigilance Awareness Week, Republic Day, Onam Festival and also honoured the Institute Staff who won awards.



Musical chair competition in connection with Republic Day Celebrations

HINDI WEEK

Hindi week was celebrated from 14th to 20th September 2003 at the Institute. Director, Dr. V.A. Porthasarathy administered an oath for use of Hindi in official dealings to all staff members. Hindi Officer, Mr. B. Krishnamoorthy read an appeal received from the Director General, ICAR, New Delhi for using Hindi in day to day activities. Various Hindi competitions like essay

writing, elocution, music, noting, extempore speech, paragraph reading etc were conducted during the Hindi week. A Hindi workshop was also organized for the staff members. Smt. B. Bindu, Hindi Pradhyapak, Hindi Teaching scheme took a class on noting and drafting. On the valedictory function of Hindi week celebrations, participation certificates were issued to all participants of Hindi Workshop and prizes and certificates were given to the winners of various competitions by the Director. Prizes and certificates were also distributed to Asst. Administrative Officer and Asst. Finance & Accounts Officer of the IISR for doing maximum file work in Hindi during the year.

NEW PROJECTS SANCTIONED

1. Molecular characterization of viruses causing stunted disease and development of PCR based methodology for their detection (DBT)
2. Identification and development of diagnostic for the viruses causing stunted disease in black pepper (ICAR)
3. Entophytic bacteria for the biological system management of *Rodopholus similis*, the key nematode pest of black pepper *Piper nigrum* L (DBT).

PERSONNEL

Appointments

Name	Designation	Place of posting	Date of Joining
Mr. Shiju, A.A	Training Associate (Fisheries)	KVK, P. Muzhi	11-06-2003
Ms. Lixy John	Training Associate (Home Sci.)	KVK, P. Muzhi	16-06-2003
Ms. Saira Banu, V.K	Training Associate (Plant prot.)	KVK, P. Muzhi	18-06-2003
Ms. Anila George	Laboratory Assistant	IISR, Kozhikode	26-06-2003
Mr. Aravind, R	Junior Research Fellow	IISR, Kozhikode	11-08-2003
Ms. Madhubala, R	Junior Research Fellow	IISR, Kozhikode	13-08-2003
Ms. Sindhu, V.K	Junior Research Fellow	IISR, Kozhikode	16-08-2003
Mr. Karthik Prabhu	Junior Research Fellow	IISR, Kozhikode	19-08-2003
Mr. Hareesh, P.S	Junior Research Fellow	IISR, Kozhikode	21-08-2003
Mr. Sreekanth Sreedhar	Junior Research Fellow	IISR, Kozhikode	25-08-2003
Ms. Preethi, N	Senior Research Fellow	IISR, Kozhikode	29-09-2003
Mr. Ratheesh, S.T	Senior Research Fellow	IISR, Kozhikode	06-10-2003
Mr. V. Bhadra Murthy	Senior Research Fellow	IISR, Kozhikode	10-10-2003
Ms. Dinu Antony	Junior Research Fellow	IISR, Kozhikode	05-11-2003
Ms. Tresa Thomas	Senior Research Fellow	IISR, Kozhikode	01-12-2003
Mr. Manoj, K.A	Senior Research Fellow (PME)	IISR, Kozhikode	31-12-2003

Resignation

Name	Designation	w.e.f
Mr. Sreekant Sreedhar	Junior Research Fellow	30-11-2003
Ms. Neena, K	Technical Assistant	13-10-2003

Promotion

Name	Promoted to	w.e.f
Smt. N. Prasannakumari,	Hindi Translator T4, IISR, Kozhikode	29-6-2001

OBITUARY

Sri. C. Kelappan, Supporting staff Gr.II, IISR Experimental Farm, P.muzhi, expired on the afternoon of 15th July 2003.



Sri. K. Keeran, Supporting staff Gr.IV (Rtd.), IISR, Kozhikode, expired on 20th December 2003.

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