



SPICES NEWS



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July - December

IISR CELEBRATES SILVER JUBILEE

IISR
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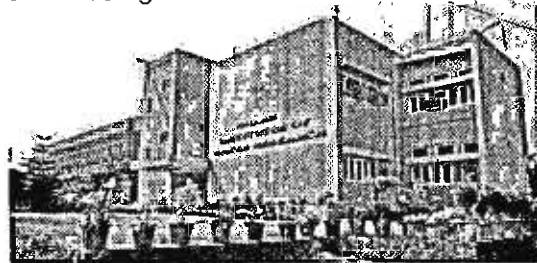
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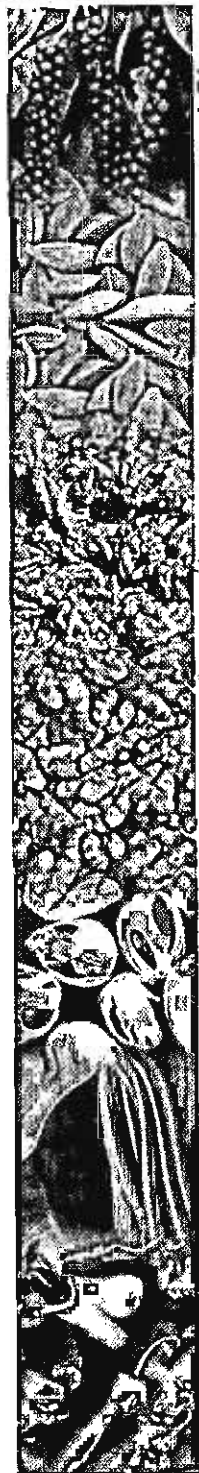
The year 2001 is the Silver Jubilee year of the Indian Institute of Spices Research (IISR) located in the historic city of Calicut (now Kozhikode), where Vasco-de-Gama landed in search of 'black gold' or black pepper on 20th May 1498, in the foot hills of Western Ghats. Incidentally, Western Ghats is also the centre of origin of black pepper and cardamom. The Indian Institute of Spices Research is the apex body for research on major spices like black pepper, cardamom, ginger, turmeric and tree spices. The headquarters of the All India Coordinated Research Project on Spices, AICRP (Spices), with twenty centres spread out across the length and breadth of the country is also located at Calicut. A KVK is also there at Peruvannamuzhi attached with the Institute.

Started as a Regional Station of the Central Plantation Crops Research Institute, Kasarogod in 1975, it was elevated to National Research Centre for Spices (NRC Spices) in 1986 itself realising the relevance of spices in the National Exchequer. The National Research Centre for Spices was further elevated to the full fledged 'Indian Institute of Spices Research' (IISR) in

1995, soluting the contributions of the research centre in the field of spices research. The story of transformation of the erstwhile Regional Station of the CPCRI to a full fledged institute for spices research through NRC (Spices) is one of dedications of scientists and staff members alike fused with the vision of the pioneers and leaders of this Research Institute. In testimony thereof lies a handful of awards including the Best Institute Award of ICAR for the year 1999.



Indian Institute of Spices Research, Calicut



Today, the Indian Institute of Spices Research possesses the world's largest germplasm collection of black pepper besides one of the best world collections of ginger, turmeric, and cardamom gene pool. The tree spices (nutmeg, clove, cassia, cinnamon, *Garcinia* and allspice) collections are also impressive. Vanilla and paprika germplasm are also collected and conserved at this institute. The institute has, so far, released five black pepper varieties viz. Sreekara, Subhakara, Panchami, Pournami and Palode-2; two cardamom varieties viz. CCS-1 and RR-1; five turmeric varieties namely, Suvarna, Suguna and Sudarsana, Prabha and Prothibha; ginger variety viz. Varada besides two varieties of cinnamon viz. Nithyasree and Navashree. Cardamom variety RR-1 is resistant to rhizome rot disease. Prabha and Prathibha are first ever turmeric varieties released through open pollinated progeny selection. Varada ginger is a hit throughout the country. Two more bold rhizome selections of ginger; one virus resistant cardamom and a high yielding nutmeg variety are recently recommended for release.

The other new varieties in pipeline include '*Phytophthora*' foot rot tolerant black pepper lines such as Coll.1041 (a clone of 'Thevonmundi'), P-24 (an open pollinated progeny selection of 'Perambamudi'), HP 780 and HP-1411 hybrid pepper lines, an open pollinated progeny selection of 'Karimunda' (OPKm), two Alleppey finger turmeric selections (Acc.584 and Acc.585), in addition to a cassia line.

Micropropagation techniques for about 40 spices are standardised. Molecular characterisation of spices germplasm is also progressing fast in the institute.

Biological control strategy of major diseases, insect pests and nematodes of black pepper has been perfected at IISR, Calicut. Biological control of *Phytophthora* foot rot and slow decline disease using antagonistic *Trichoderma* Spp., fluorescent pseudomonads, plant growth promoting rhizobacteria (PGPR) and insect pest control employing neem based pesticides are other major contributions of the Institute in the area of spices

disease and pest management. The biological control technology to combat *Phytophthora capsici* has been transferred to 10 entrepreneurs for large scale production and distribution of the inoculum among farming community. An integrated technique involving the use of insecticide and manual removal of infested shoots is recently recommended for shoot borer control in ginger.

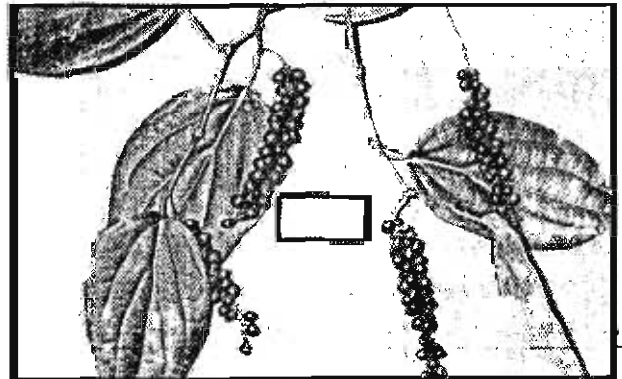
High Production Technology (HPT) has been perfected in pepper and cardamom. The HPT in pepper promises an yield increase of 146-303 per cent. Rapid multiplication of pepper and cardamom cuttings / suckers is another contribution of the institute in planting material generation.

An year long programme from November 10, 2000 to November 9, 2001 involving launching of agroclinics, release of publications, interface with exporters-scientists- decision makers, kisan mela etc. are planned to commemorate the Silver Jubilee celebration. Padmavibhushan Prof. M.S. Swaminathan, will be inaugurating the function on 8th October 2001.

RESEARCH LATEST

Spices germplasm collection from Silent Valley National Park

Silent Valley National Park consists of 8,952 ha. situated at the South Western corner of Nilgiris in the Palghat district of Kerala at 11° 05' N latitude and 75° 27' E longitude. Silent Valley National Park is one of the evergreen forest ecosystems harbouring a rich diversity of flora and



Piper Sp. from Silent Valley

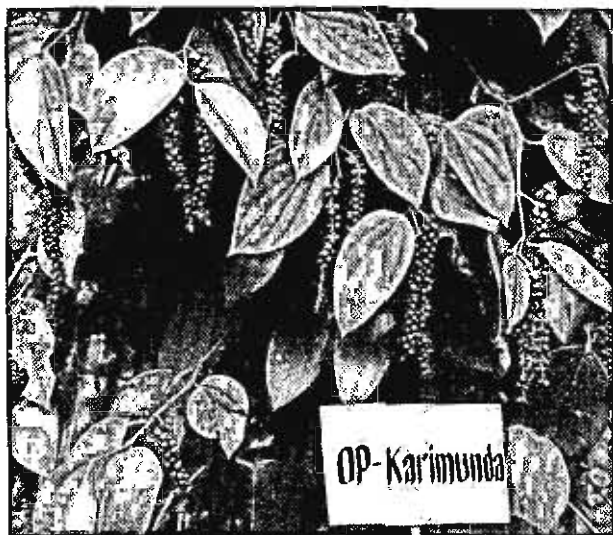
found. The park harbours a good diversity of *Piper*, *Curcuma*, *Zingiber*, *Cardamomum* and *Garcinia* geneum pool.

IISR Scientists, Dr. B.Sasikumar, Dr. Johnson K. George, Dr. S. J. Anke Gowda along with Mr. S. Biju and Mr. Diby Paul (Research Fellows) explored the park. A total of 55 accessions of spices were collected from Silent Valley forests including *Garcinia morella*, and a putative wild type *Zingiber officinale* characterized by small, round rhizomes, persistent fleshy roots and high pungency.

The other collections include *E.cardamomum* ('Malabar' and 'Vāzhukka' types), *Piper sugandhi* (male and female), *P. attenuatum*, *P. mullesua* (male and female), *P.hymenophyllum*, *P. nigrum* (male and female), *P. trichostachyon*, *Cinnamomum* Spp., *Curcuma* Spp. etc.

Black Pepper - New High Yielding Lines

HP-1411, a hybrid line and OPK_m, an open pollinated progeny of the cultivar 'Karimunda', are new black pepper lines for tomorrow. HP 1411, is characterized by large cordate leaves, bold berries, long compact spikes (16.5 cm) with a mean yield of 3.65 kg fresh berries / vine during the 3rd year of planting. OPK_m, is distinct from the mother vine 'Karimunda' with vigorous growth, large ovate



OPK_m



HP 1411

leaves, long spikes (12 cm) and bold berries. Its average yield is 3.4 kg fresh berries / vine during the 3rd year of planting. Initial behavior indicates that OPK_m is also tolerant to drought.

Elite Garcinia

A very high yielding *Garcinia* accession, (2500 fruits/ year/ tree) yielding throughout the year is located in a farmers' garden at Arikkulam (Quilandy Taluk), Calicut, Kerala. Clones of this tree are produced. Clonal multiplication of this line is in progress.

Black turmeric and Kasturi turmeric

Black turmeric (*C.caesia*) and kasturi turmeric (*C.aromatica*) are two important *Curcuma* Spp. conserved in the turmeric genebank of IISR, Calicut. Black turmeric has bluish black rhizomes whereas the rhizomes of kasturi turmeric are cream coloured and have good aroma (All turmeric are not yellow!)

C. zedoaria ('Monjakuva') is the most common *Curcuma* Sp. traded as kasturi turmeric.

Phytophthora foot rot relents

Coll. 1041, a clone of 'Thevanmudi', continue to show tolerance to *Phytophthora* foot rot at Valparai (Tata Tea Ltd.). Its mean yield / vine during the sixth yielding year at Valparai is 8.45 kg (fresh).

Phyllody disease of black pepper in the news

Phyllody disease of black pepper has attracted media attention, of late, as the disease has assumed an epidemic form in the foothills of Calicut - Wynad districts of Kerala. The phyllody affected vines are characterized by small, intense yellow leaves and stunted branches. Abnormal reduction of internodes, malformed spikes (spikes produce leaf like appendages) and short branches are the other typical symptom of phyllody disease. The fruit shape becomes long. Affected vine assumes a 'witches broom' appearance and gradually declines and dies.



Phyllody

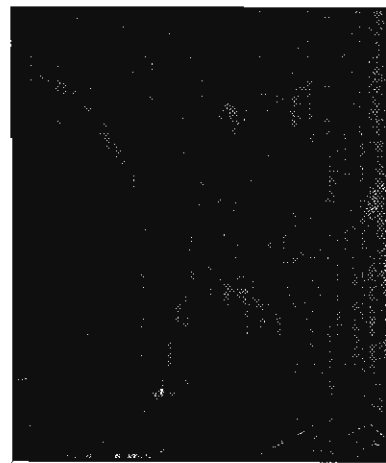
This disease is caused by phytoplasma. Phyllody was first reported from Puthady area of Wynad in Kerala during 1986. Due to strict eradication of the affected vines the disease did not spread then. However, the disease erupted further during 1999 at Kodancherry in Calicut district. At present the disease has assumed an epidemic form in the Kodancherry taluk of Calicut, in the foot hills of Western Ghat.

IISR scientists, Dr. M. Anondaraj and Mr. S. Devasahayam along with Technical Assistant Mr. K.K. Sasidharan visited the affected areas and observed that the disease is more in pepper plantations contiguous to forest areas. The team could collect a putative vector spreading the disease. Further observations are on. The

disease is locally known as 'Ayiram kanni' = thousand laterals, indicating the malformation of spikes to fruiting laterals leading to profuse promiscuous laterals production.

In fact the symptoms of another disease of pepper known as 'little leaf disease' suspected to be caused by viruses get confounded with phyllody. Farmers term both as 'Ayiram kanni' disease.

As the disease is caused by phytoplasma, control measures centre around the use of planting materials from unaffected vines and



'witches broom'

eradication of the affected vines to prevent further spread, for the time being.

Integrated management of shoot borer of ginger

An integrated management strategy for the control of shoot borer (*Conogethes punctiferalis*) of ginger is perfected. The package involves pruning of infested shoots during July - August (at fortnightly intervals) and spraying of insecticide such as malathion (0.1%) during September - October (at monthly intervals). By adopting this integrated method, two insecticide sprays can be avoided, thus conserving natural enemies and reducing the harm to the ecosystem.

Black Pepper for drought prone areas

In drought prone areas panniyur-5 may be preferred over Panniyur -1, both as bush as well as

vine pepper.

Irrigation once in 3 days with 3.5 l of water is recommended for bush pepper grown in pots of 60 x 40 cm size filled with sieved potting mixture containing soil, FYM and sand in 1:1:1 proportion.

Rhizome solarization – A simple and practical method for disinfecting ginger rhizome

A simple and innovative technique to disinfect seed rhizomes of ginger is developed by Dr. A. Kumor, Scientist (Plant Pathology) at Indian Institute of Spices Research, Calicut. Bacterial wilt of ginger caused by *Ralstonia solanacearum* is one of the major production constraints in ginger and the pathogen is seed borne. Healthy seed rhizome is an important prerequisite for raising disease free ginger crop. Seed treatment with chemicals, though effective, will be costly besides being non-ecofriendly. The new method involves solarisation of ginger seed rhizomes packed in transparent polyethylene bags for 2-4 hrs. during 9 am to 1.0 pm in the month of May, before planting. The heat generated inside the polythene



Solarisation of ginger rhizome in polyethylene bag

bag during solarisation destroys the rhizome borne bacterial pathogen. Further studies on field performance and yield are in progress at various locations.

DNA isolation protocol from soil.

Protocol for isolation of bacterial DNA from soil is standardized.

Biochemical mechanism of *Phytophthora* tolerance in black pepper

The basic biochemical mechanism of *Phytophthora*

tolerance in black pepper, using P-24, a *Phytophthora* tolerant line, was elucidated. During the first few hours after infection the defence enzymes such as Phenyl Ammonia Lyase (PAL) gets activated and expressed in higher quantities. This is followed by accumulation of autofluorescing cell wall components. In the third stage of defense, after 8 hrs of infection, pathogenesis related proteins such as β 1-3, glucanase and chitinases are produced. The induction of PR proteins has been confirmed by Western blot using specific antibodies. The induced proteins were electroeluted and tested for its sensitivity to *P. capsici*. This showed growth inhibition and hyphal lysis of *P. capsici*.

Coir compost potting mixture

Decomposed coir compost can substitute soil or sand in conventional potting mixture. By enriching the coir compost with DAP (0.2 kg/m³) even FYM component of the potting mixture can also be replaced.

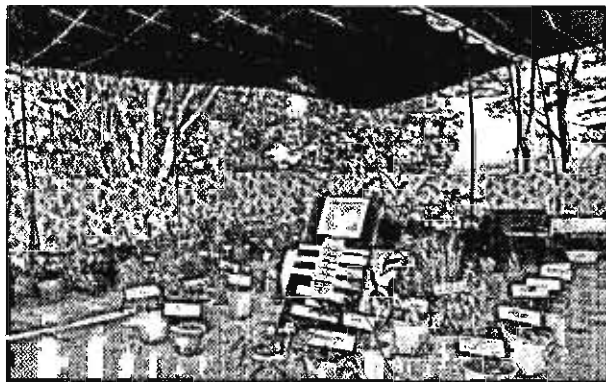
NEW PROJECTS SANCTIONED

1. Organization of ginger and turmeric germplasm based on molecular characterization - ICAR Adhoc Scheme.
2. Immunoserological approaches to pathogen, defense proteins and disease management in ginger and cardamom - DBT Scheme.
3. Man made *in situ* conservation of spices - Western Ghat Development Programme. Dept. of Planning and Economic Affairs - Govt. of Kerala.
4. Integrated technologies for value addition and post harvest management in palms, spices and tropical tuber crops- NATP Project with CTCRI Trivandrum lead centre.
5. Plant Biodiversity. NATP Project with NBPGR, New Delhi - Lead centre
6. Multi-institutional project 'Improvement of selected spices through biotechnology current tools - black pepper, cardamom, ginger and vanilla- DBT Network Project.

TRANSFER OF TECHNOLOGY

Biodiversity Awareness & Pepper Seminar

A one day biodiversity awareness programme



Biodiversity awareness posters and live exhibits



Smt. Nalini, M.K., District Panchayath President, Calicut, inaugurating the pepper seminar.

and a pepper seminar was organized at IISR Farm Peruvannamuzhi. About 150 farmers participated in the programme.

Consultancy services provided

Name of the consultant	Consulting party	Area on which consultancy provided
Dr. Y.R. Sarma Dr. M.Anandaraj Dr. V.Srinivasan	Indo Swiss project, Sikkim. Udevar Estate company, Arehalli , Karnataka.	Ginger, disease control Black pepper nutrition and disease control.
Dr. Y.R.Sarma Dr. V.Srinivasan	Tata Coffee Ltd. Pollubetta, Karnataka.	Black pepper nutrition and disease control.
Dr. K.S.Krishnamaarty Dr. V.Srinivasan	Mahamaya consultants, New Delhi.	Contract Research Project on Evaluation of ATONIC for black pepper growth, yield and quality characteristics.
Dr. M.Anandaraj Dr. B.Sasikumar Dr. B.Sasikumar	Devon Plantation & Industries Ltd. Koppa, Chickamagalur, Karnataka. Hailey Buria Tea Estate Ltd,	Rejuvenating pepper gardens / pepper nursery Rejuvenating pepper plantation organic pepper production, pepper nursery
Dr. M.Anandaraj Dr. K.S.Krishnamoorthy	Elappara, Idukki, Keralo.	

This year, the institute has sold biocontrol technology to 7 different entrepreneurs

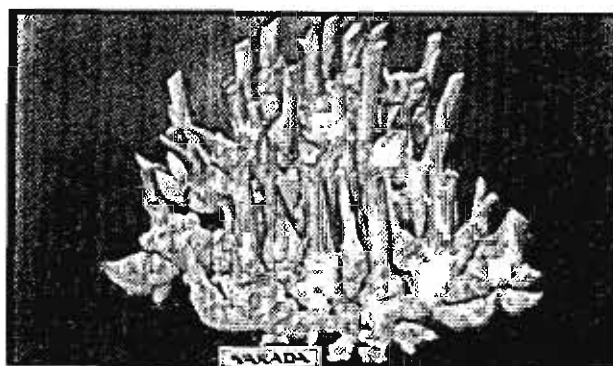
IISR- collabarates with Dabur Research Foundation

The pharmaceutical research giant Dabur Research Foundation has tied up with IISR, Calicut for the supply of rooted cuttings of *Piper chaba*, ('Banglathippali' or 'Gajathippali'), a long pepper species. Dabur Research Foundation has booked 1,00,000 *P. chaba* cuttings from IISR for their contract farming venture in Andhra Pradesh and Karnataka.

Another pharmaceutical company, Zandu Foundation, has also expressed interst in IISR ginger variety, Varada and turmic variety Prabha for trial in Gujarat. Pilot scale trials with these varieties are now in progress in Gujarat.

Varada brings laurels

'IISR Varada' variety of ginger released by the Indian Institute of Spices Research, Calicut in



Varada

Varada is a low fibre, medium bold variety having an average yield of 22t/ha (fresh) with a dry recovery of 20 percent. It has done exceedingly well throughout Kerala. Traversing the borders of the state, Varada is now becoming a favourite variety of ginger throughout the country. Feedback information from farmers of western Maharashtra and Karnataka testifies the superiority of 'Varada' over local varieties. NGOs like Seva Mandir of Udaipur (Rajasthan), CARD Amaravati also have only admiration for Varada. Reports from the Department of Horticulture, Meghalaya also confirm the high yield and disease resistance nature of Varada. Under the farming situation in Meghalaya, Varada yields about 25t/ha (fresh). Research station data from Chintappally (Andhra Pradesh), Raigarh (Chhattisgarh) and Andaman & Nicobar Islands also vouch for the superiority of Varada over other varieties. Many farmers acclaim the variety resistant to disease also. IISR has now scaled up the multiplication of this variety to meet the increasing demand of the growers.

Radio Talks

B. Sasikumar

Propagation of spices-Interview- AIR, Kozhikode 1st October 2000.

Y.R. Sarma

Biological control in foot rot management in black pepper, 28th December 2000 AIR, Kozhikode.

PARTICIPATION IN SYMPOSIA/ SEMINARS / TRAINING/MEETING

Sarma, Y.R., Sadanandan, A.K., Devasahayam, S. and Thankamani, C.K

International Symposium on Plantation Crops (PLACROSYM XIV), Hyderabad, 12-15, February 2000.

International Conference on Managing Natural Resources for Sustainable Agricultural Production in the 21st Century. New Delhi, February 14-18, 2000.

Sarma ,Y.R

Potential for spices cultivation in Andhra Pradesh, Madanapalli Farmer Association, Madanapalli, Andhra Pradesh, 4th June 2000.

Sarma, Y.R, Ravindran, P.N, Korikantimath, V.S, Anke Gowda, S.J. and Jhonson K. George

National Symposium on Hi tech Horticulture, Bangalore, 26-27 June 2000.

Sarma, Y.R., Anadaraj, M., Veena, S.S., Saju, K.A., Stephen JebaKumar., Anuradha,Y., Vijaya, P and Diby paul

Phytonet Review Meeting, IHR, Bangalore, 24-25 August, 2000.

Krishnamoorthy, B and Korikantimath, V.S

National Seminar on the Frontiers of Research and Development in Medicinal Plants. Central Institute of Medicinal and Aromatic Plants, Lucknow, 16-18th September, 2000.

Sasikumar, B and Saji, K.V

National Biodiversity Strategy and Action Plan. KFRI, Trissur, 4th November, 2000.

Devasahayam, S

Entomocongress 2000, Thiruvananthapuram, 5-8 November 2000.

Thankamani ,C.K

Diagnosis and correction of nutritional and

physiological disorders in crops. TNAU, Coimbatore. 12-21st June, 2000.

National Symposium on Agronomy 'Challenges and strategies for new millennium'. Gujarat Agricultural University, Junagadh, Gujarat, 15-18 November, 2000.

Swadeshi Science Congress, Cochin, 7-9 November, 2000.

Sasikumar, B

Fifth meeting of Biodiversity Committee. Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, 1st December, 2000.

Anandaraj, M

Indian Phytopathological Society (S. Zone) Meeting. IIHR, Bangalore, 7-8 December, 2000.

Devasahayam, S

V National Conference of Applied Zoology Research Association, Chennai, 27-29 December, 2000.

GUEST LECTURES DELIVERED / PAPERS PRESENTED

Sarma, Y.R

'*Phytophthora*' present status and future research. Division of Plant Pathology, IARI, New Delhi.

Over all scenarios of biocontrol programme in disease management of spices crops. Centennial Conference on Spices and Aromatic Plants, Calicut, 20-21 August, 2000.

Disease problem of spices and their management South Zone Meeting of Indian Phytopathological Society, UAS, Bangalore 7th December 2000.

Status of disease management of *Phytophthora* in plantation crops International Symposium on

Plantation Crops (PLACROSYM XIV), 12-15 December 2000, Hyderabad.

Sasikumar, B

Seed preservation and propagation of ginger and turmeric. 'Nursery Management in Spices' training. IISR, Kozhikode, 18th September, 2000.

Varieties and varietal improvement in black pepper. 'Spices production technology' training. IISR, Kozhikode, 22nd November, 2000.

Varieties and varietal improvement in ginger, turmeric and vanilla. 'Spices production technology' training. IISR, Kozhikode, 23rd November, 2000.

John T. Zacharia

Post harvest processing of spices. 'Spices production technology' training. IISR, Kozhikode, 24th November 2000.

Post harvest processing of spices. Summer institute for Plantation Crops, CPCRI, Kasargode, 2nd November, 16th November, 2nd December 2000.

PUBLICATIONS

Books

1. Ravindran, P.N. (Ed.) (2000). Black pepper (*Piper nigrum* L) Horwood Academic Publishers, Amsterdam., p.553.

2. Chadha, K.L., Ravindran, P.N., Leela Sahjiram (Eds.) (2000) Biotechnology in Horticulture and Plantation Crops. Malhotra Publishers, New Delhi.

Chapters in Monographs/Books

Anandaraj, M. 2000. Diseases of black pepper. In: Black pepper (*Piper nigrum* L) P.N. Ravindran (Ed.), Harwood Academic Publishers, Amsterdam. pp. 239-267.

- Nirmal Babu, K., Peter, K.V and Ravindran, P.N. (2000). Biotechnology of Spices. In: *Biotechnology in Horticulture and Plantation Crops*. Chadha, K.L., Ravindran, P.N. and Leela Sahjiram (Eds.) Malhotra Publishers. New Delhi pp. 487-527.
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- Ravindran, P.N., Balachandran, I., and Chempakam, B.(2000) End uses of black pepper (*Piper nigrum L.*) In: *Black pepper (Piper nigrum L.)*. P.N. Ravindran, (Ed.) Harwood Academic Publishers, Amsterdam. pp. 467-479.
- Ravindran, P.N. (2000). Constraints and yield gaps in black pepper. In: *Black pepper (Piper nigrum L.)*. P.N. Ravindran, (Ed.) Harwood Academic Publishers, Amsterdam. PP.489-496.
- Ravindran, P.N. (2000). Other economically important species of *Piper*. In: *Black pepper (Piper nigrum L.)*, P.N. Ravindran, (Ed) Harwood Academic Publishers Amsterdam. pp.497-50.
- Chadha, K.L., Ravindran, P.N. and Leela Sahjiram (2000). Biotechnology in Horticulture. In: *Biotechnology in Horticulture and Plantation Crops*, Chadha, K.L., Ravindran, P.N.and Leela Sahjiram (Eds.) Malhotra Publishers. New Delhi, pp.1-25.
- Nirmal Babu, K., Ravindran, P.N. and Peter, K.V.(2000). Biotechnology of Spices. In: *Biotechnology in Horticulture and Plantation Crops* Chadha, K.L., Ravindran, P.N. and Leela Sahjiram (Eds.) , Malhotra Publishers New Delhi. pp. 487-527.
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Review articles

- Ravindran, P.N. (2000). Genetic resources of spices in Kerala. In: *Biodiversity and Ecology - Concepts and Fact* Sivadasan, M and Mohanan, K.V.(Eds.) Prof. K.Unnikrishnan Comemorative Volume. Dep.Botany, Univ. Calicut, Kerala. pp.50-76.
- Sosikumar, B., Krishnamoorthy, B., Saji, K.V., Johnson K.George and Peter, K.V.2000. Biodiversity of black pepper and cardamom. In: *Biodiversity and Ecology-Concepts and Facts*. In : Sivadasan, M and Mohanan, K.V, (Eds.) Prof. K. Unnikrishnan Comemorative Volume, Dep. Botany, Univ. Calicut, Kerala. pp.77-90.
- Peter, K.V., Srinivasan, V and Hamza, S.2000. Nutrient management in spices. *Fertilizer News*, 45(7): 13-18,21-25 and 27-28.
- Krishnamoorthy, B., Sasikumar, B., Saji, K. V., Johnson K. George, Rema, J., Ravindran, P.N. and Peter, K.V. 2000. Biodiversity of spices in Western Ghats of India. Paper presented in the International Conference on Managing Natural Resources for Sustainable Agricultural Production in the 21st century - Abstract of extended summary, Vol.2. pp. 809-810.

Research Articles

- Chempakam, B., Saji, K.V., Shajiprabha, S. P., Sasikumar, B. and Johnson K. George. 2000. Seed proteins- A contributing factor for high agronomic value of black pepper (*P. nigrum* L.) Proc. Nat. Sem. Recent Adv. Plant Biolo., (Abstract), 3-5 February 2000. CPCRI, Kasaragod.
- John Zachariah, T., Shajiprabha, S. P. and Krishnamoorthy, B. 2000. Chemical quality profile in selected nutmeg accessions. In: Proc. Nat. Sem. Recent Adv. Plant Biolo. 3-5 February 2000, CPCRI, Kasaragod.
- Srinivasan, V, Sadanandan, A.K. and Hamza, S. 2000. An IPNM approach in spices with a special emphasis on coir compost International Conference on Managing Natural Resources for Sustainable Agricultural Production in the 21st Century. 14-18 Feb 2000, IARI, New Delhi (Abstr.) p-1363.
- Sarma, Y.R. and Anandaraj, M. 2000. Nature of resistance to diseases in spice crops of the humid tropics. In: Annual meeting of Indian Phytopathological Society and National Symposium on 'Role of Resistance in Intensive Agriculture', 15 -17 Feb 2000 Directorate of Wheat Research, Karnal. (Abstr.) pp.5-6.
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FORTHCOMING EVENTS

XVI Workshop of All India Coordinated Research Project on Spices

November, 1-3, 2001

Kerala Agricultural University Campus, Vellanikkara, Trichur.

The ICAR in collaboration with Kerala Agricultural University and IISR will be conducting the XVI National Group Meeting of Research Workers of the All India Coordinated Research Project on Spices during 1st-3 November 2001 at Kerala Agricultural University, Vellanikkara, Trichur.

Contact: Dr.P.N. Ravindran, Project Coordinator (Spices), Indian Institute of Spices Research, P.B.No.1701, Marikunnu P.O., Calicut-673 012, Kerala, India.

E Mail: iisrclt@md3.vsnl.net.in, pcspices@yahoo.com, pnravi@md4.vsnl.net.in.

Phytopathological Society South Zone Meeting

The Indian Phytopathological Society South Zone meeting will be held at the Indian Institute of Spices Research, Calicut during 10th -12 December, 2000.

**Contact : Dr. Y.R.Sarma, Director, IISR
Calicut – 673012. Ph.0495-730294**

Fax: 0091-495-730294,

E Mail: iisrclt@md3.vsnl.net.in

AWARDS/HONOURS

Dr. C.S. Venkataram Memorial Award

Dr. Y.R. Sarma, Director, IISR, Calicut has bagged the Dr. C.S. Venkataram Memorial Award for the distinguished scientist award-2000 in plantation crops.

Dr. J.S. Pruthy Award 1999

Dr. M. N. Venugopal, Principal Scientist (Plant Pathology), IISR, CRC, Appangala has bagged the Dr. J.S. Pruthy Award '99 for the best research paper entitled '*Natural disease escapes as a source of resistance against cardamom mosaic virus causing 'katte' disease of cardamom (E. cardamomum Maton) published in J.Spices & Aromatic Crops, Vol.8 :1999.*

Best Poster Awards

Dr. Johnson George K, Scientist (SS), (Genetics & Cytogenetics) bagged the best poster paper award for the poster entitled '*DNA finger printing of triploid cultivars of banana-RAPD and SCAR development*' in the "National Seminar on Hi-tech Horticulture" held in Bangalore 26-28 June, 2000.

Mr. Santhosh J. Eapen, B. Beena and Dr. K.V. Ramana jointly received the best poster presentation award for their paper entitled '*Evaluation of organic substrates for the mass multiplication of Paceilomyces lilacinus*' during the National Nematology Symposium on Integrated Nematode Management held at OUAT, Bhubaneswar, Orissa during November 23-24, 2000.

The first Alappati Prasad Rao Award (poster paper award) is bagged jointly by Dr. (Ms.) B. Chempakam, Ms. N.K. Leela and Mr. Sinu P. John for the poster presentation entitled '*Distribution of curcuminoids during rhizome development in turmeric C.longa*'.

L' displayed in the 'Centennial Conferences on Spices and Aromatic Plants' 20-23, September, Calicut.

Ph.D

Ms. C.K. Thankamani, Scientist (Agronomy) IISR, Calicut is awarded Ph.D in Agronomy by Kerala Agricultural University, Trissur and Mr. Johnson .K. George Scientist Sr. Scale (Genetics & Cytogenetics) is awarded Ph.D in Biotechnology by TNAU Coimbatore.

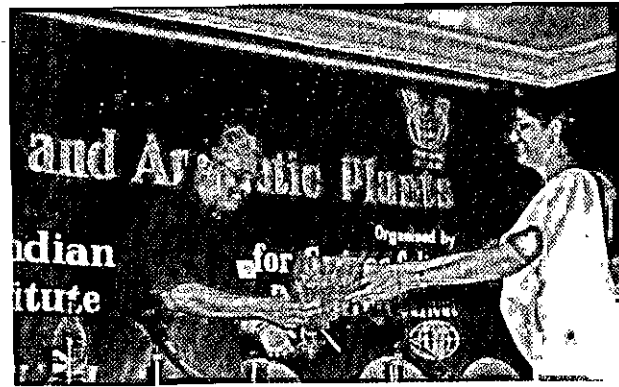
PERSONNEL

Visit Abroad

Dr. Y.R. Sarma, Director attended the 5th International Workshop on Plant Growth Promoting Rhizobacteria (PGPR) at Corodoba, Argentina during October 30 to November 3, 2000.

CENTENNIAL CONFERENCE ON SPICES AND AROMATIC PLANTS

A 4 day Centennial Conference on Spices and Aromatic Plants was held during September 20-23, 2000 at Calicut. The conference was inaugurated by Professor S. Kannaiyan, Vice



Appointments

Name	Designation	Posted at	Date of joining
Ms. Neema Antony	SRF	IISR, Kozhikode	24.11.2000
Dr. Anu Augustine	SRF	IISR, Kozhikode	26.8.2000
Mr. P.Manoj Das	SRF	IISR, Kozhikode	30.8.2000
Mr. R.Elango Madhavan	SRF	IISR, Kozhikode	14.9.2000
Mr. S.Biju	SRF	IISR, Peruvannamuzhi	4.8.2000
Anitha K	Technical Assistant(TMBP)	Calicut	22.03.2000
Prasanthan P V	-do-	Cannanore	23.03.2000
Satheesh	-do-	Wynad	27.03.2000
Sreekumar P R	-do-	Kasaragod	24.04.2000
Sojish T K	-do-	Wynad	26.04.2000
Neena K	-do-	Calicut	01.05.2000
Santhosh Kumar	-do-	Kasaragod	25.09.2000
Vinod B K	-do-	Calicut	26.09.2000
Sreena V	Secretarial Assistant	Calicut	27.11.2000
Sijish S	Technical Assistant	IISR, Peruvannamuzhi	01.12.2000

chancellor, Tamil Nadu Agricultural University, Coimbatore in a function presided over by Prof. K.K.N. Kurup, Vice Chancellor, Calicut University. About 200 delegates attended the meeting, seventyfive contributory papers were discussed during the conference. Awards for best oral and poster presentations were also given.

**IInd Review of
NATIONAL NETWORK OF PHYTOPHTHORA DISEASE
OF HORTICULTURAL CROPS (PHYTONET)**

The second PHYTONET Review meeting was held at UAS Campus, Bangalore. Dr. S.P.Ghosh the then DDG (Hort.) ICAR, New Delhi inaugurated the Review meeting on 24th. August 2000, In his inaugural address he explained the need for the field implimentation of technologies emanated so far, *distribution survey of Phytophthora in the country and their molecular characterization*. Dr. R.N.Pal, DDG (Hort.) and Dr.Y.R.Sarma, Network coordinator presided over/ reviewed the program. This was followed by presentation of wark by all the 9 centres.

MONOGRAPH ON BLACK PEPPER

'Black pepper' monograph is the first monograph published on this important and most widely used spice by mankind. This monograph

includes chapters on all aspects of crop botany and improvement, agronomy, chemistry, post harvest technology, processing, disease and insect pests, marketing, economics and uses. This publication will be useful to students, teachers and research workers involved in spices research.

Black pepper (*Piper nigrum*L.)

Edited by P.N. Ravindran, IISR, Kerala.

Medicinal and Aromatic Plants, Industrial Profiles, Volume 13. Hardwood Academic Publishers, Amsterdam 2000, p.553.

Price US \$ 120

Indian Society for Spices – New Executive Council

The new office bearers of the Indian Society for Spices for 2000-2002 were elected / nominated.

Dr. Y. R. Sarma	President
Dr. V. S. Korikanthimath	Vice President
Mr. Koshy John	Vice President
Dr. M. Anandraj	Secretary
Dr. K.S. Krishnamoorthy	Joint Secretary
Dr. V. Sreenivasan	Treasurer

Editor: Dr. B. Sasikumar, Members: Dr. Johnny Kallapurackal & P.A. Sheriff, IISR, Kozhikode.

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