

**NRCS**

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# Newsletter

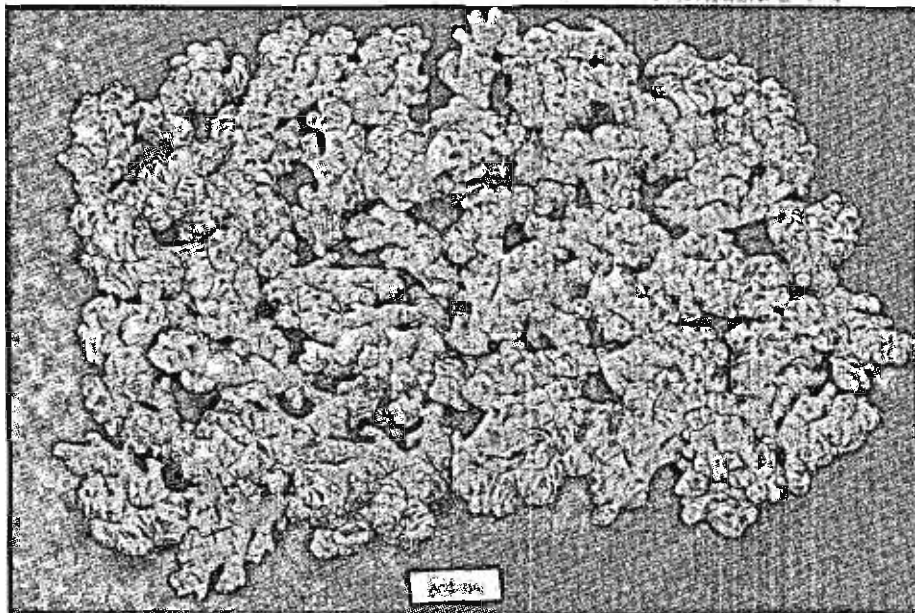


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## GINGER RESEARCH AT NRCS CLINCHES

**G**inger (*Zingiber officinale*) is one of the oldest spices of mankind. Even though ginger of traditional commerce is the dried underground rhizome of the plant, ginger is traded in all about 13 different forms around the world. India has the world monopoly in production and export of ginger. India produces about 1,48,520 tonnes of ginger annually from an estimated area of 53,300 ha. Kerala is the leading state in area and production (area 25%, production 31%) followed by Orissa (area 16%, production 9%).



New, yet to be named and released ginger variety from NRCS, Kozhikode

Lack of adequate number of high yielding and disease resistant varieties is one of the major constraints in increasing ginger production in the country. So far, there are only 3 high yielding ginger varieties viz. Suprabha, Suruchi and Suravi, all from the High Altitude Research Station, OUAT, Pottangi, Orissa, released for general cultivation. The rest of ginger cultivars in the country are traditional land races, widely varying in yield and quality with a few exception of exotic introductions. With the setting up of the National Research Centre for Spices at Kozhikode in 1986, ginger research in the country got a new fillip. Systematic and concerted research efforts during the last seven years have now started yielding dividends. Enriching ginger germplasm is one of the mandates of NRCS, Kozhikode. And today, NRCS Kozhikode has one of the world's largest collection of ginger germplasm numbering above 370 accessions. The collection include cultivated types, wild relatives and a few exotic collections. A ginger with unusually small rhizome and dwarf plant type collected from Sabarimala Hills is one among the important accessions. This may be the first such collection of ginger from wild habit.

A new ginger variety, the first ever ginger variety to be developed in Kerala, is in the pre-release stage at NRCS. Two tetraploid lines ( $2n=44$ ) and another somaclone of ginger are at advanced stages of evaluation. NRCS, Kozhikode has evolved effective management measures against ginger shoot borer and other insect pests. Biological control research on rhizome rot of ginger using *Trichoderma* spp. and *Gliricium virens* as well as disease management aspects through soil solarization are at the final stages. Quality assessment of ginger germplasm to locate varieties suitable for different end uses is also progressing.

### SPICES VARIETIES IN THE PRE-RELEASE STAGE AT NRCS, KOZHIKODE

A new ginger variety, the first ever ginger variety developed in Kerala is in the pre-release stage at NRCS, Kozhikode. This variety developed through germplasm selection is high yielding and of good quality.

A first ever turmeric variety developed through open pollinated progeny selection is also in the pre-release stage. A high quality and high yielding type, it gives about 600 kg of curcumin/ha.

A black pepper cultivar with tolerance to *Phytophthora* foot rot is undergoing yield evaluation as a prelude to release for general cultivation.

Another two promising black pepper lines suitable for high altitude area (above 3000 ft MSL) are also being identified.

## RESEARCH HIGHLIGHTS

### Biocontrol Research :

Seven VAM strains which promote growth of black pepper and suppression of *Phytophthora capsici* are identified.

A *Trichoderma* spp. which significantly reduced the root knot nematode population in cardamom was also isolated.

### Sex ratio in nutmeg :

A sex ratio of 40:45:5 male : female : bisexual was observed in a progeny population of nutmeg.

### Polyembryony in nutmeg :

Polyembryony in nutmeg is only about 0.2%.

### Chemical control of mussel scale of black pepper :

The mussel scale, *Lepidosaphes piperis* is a serious pest of black pepper at high altitudes. Recent studies revealed that malathion, dimethoate and monocrotophos (0.1% each) are effective against this pest, if sprayed twice at 30 days interval after harvest of the crop.

### Indexing *Phytophthora* severity in black pepper :

Statistical analysis showed significant positive correlation between foot rot index and foliar yellowing of black pepper vines infected by *Phytophthora capsici*. An index for the disease was developed by scoring foliar yellowing and defoliation of vines.

### Cytogenetics of black pepper :

The chromosome number of *Piper magnificum*, a wild species of pepper, was confirmed as  $2n=26$ . Karyotype analysis of pepper cultivar "Kurialmundi" revealed that chromosome length ranges from 0.66 to 1.33 and most of the chromosomes have median and submedian centromeres.

### White pepper recovery among black pepper cultivars :

Black pepper cultivars differed significantly for recovery as well as size of white pepper. White pepper recovery varied from 15.6 to 25.1% among 21 cultivars studied. 'Panniyur-1' had the white pepper corns of more than 4.75 mm size. Based on yield of white pepper, size of corn and other features 'Panniyur-1', 'Jeerakamundi', 'Karimunda (1081)' and 'Doddigae' are rated as better types.

## GERMPLASM COLLECTION AND CONSERVATION

Sixteen wild *Piper* species collections including *P. suganthei*, *P. nigrum* and *P. brachystachyon* were made from forest areas of Wynad and Guddalur by Sri. Johnson George K, Scientist, NRCS, Kozhikode.

In a joint collection programme in collaboration with NBPGR Regional Station, Hyderabad, Sri. Johnson George K, collected 30 cultivated ginger and 43 cultivated turmeric from the Arakkuvally, Paderu and Chintapalli mandals (tribal tracts) in the Visakhapatnam district of Andhra Pradesh. The ginger land races collected from these area had distinct colour and aroma. Twentytwo collections of cultivated *Piper longum* were also assembled from this area.

A tree spices germplasm collection survey was made in Kottayam and Ernakulam districts of Kerala by Mr. B. Krishnamoorthy, Scientist Sr. Scale, NRCS, Kozhikode. During the survey three 150 year old nutmeg trees from Palai region (Kottayam) were located (courtesy Dr. B Sasikumar) and scions collected. A few elite nutmeg types, four double nut nutmegs, a few clove types and a few wild nutmeg and five cinnamon types were also collected.

In another collection survey made in Pechiparai, Kulashekaram and

surrounding areas of Kanyakumari district of Tamil Nadu, Mr. B Krishnamoorthy collected seven nutmeg types, two clove types, one cinnamon type, and two allspice lines. The collections included distinctly variant forms of nutmeg (flower variant) and clove (small leaf type).

### SURVEY AND COLLECTION OF VARIABILITY IN ALLEPPEY TURMERIC :

Turmeric grown in Perumbavoor, Kalady, Muvattupuzha, Thodupuzha and adjoining areas of central Kerala is known as 'Alleppey Turmeric'. Since very olden days 'Alleppey Turmeric' has a special place in the international trade due to its superior quality and flavour. However, 'Alleppey turmeric' being a generic name need not be a genetically distinct variety. In fact, there is variation for yield and other traits in turmeric grown in the above location. Hence a survey for collection of variability of Alleppey turmeric from the above localities of Ernakulam and Kottayam district was undertaken by Dr. B Sasikumar, Scientist Sr. Scale (Plant breeding) and Sri Johnson George K, Scientist (Genetics). A total of 60 accessions were collected besides seven ginger and two *Kaempferia galanga* accessions. The collected accessions are being multiplied.

### SCALING SCALE INSECT INFESTATION ON BLACK PEPPER

Sri. S. Devasahayam, Scientist (SG), Entomology, NRCS, Kozhikode conducted surveys in 21 locations in Kottayam and Ernakulam districts (Kerala) and Nilgiris district (Tamil Nadu) to record the incidence of scale insects on black pepper. The incidence of scale insects was negligible in the two districts of Kerala. In Nilgiris district, the percentage of vines infested by *Lepidosaphes piperis* and *Aspidiotous destructor* ranged from 6.7-80.0 and 0.0 to 73.3% respectively.

### SURVEY ON BIOCONTROL AGENTS OF TURMERIC RHIZOME ROT

A survey was conducted in five districts of Kerala viz., Kozhikode, Emakulam, Idukki, Cannanore and Palghat for incidence of rhizome rot of turmeric by Dr. T G Nageshwara Rao, Scientist Sr. Scale (Plant Pathology), NRCS, Kozhikode. The casual organism of turmeric rhizome rot was identified as *Pythium aphanidermatum*. The casual organism of turmeric rhizome rot was pathogenic to ginger, whereas pathogen isolated from ginger was non-pathogenic to turmeric.

### SEVENTH ANNUAL RESEARCH COUNCIL MEETING

The Seventh Annual Research Council Meeting of NRCS, Kozhikode was held during 18-20 May, 1994. The meeting was inaugurated by Dr. P. Rethinam, Assistant Director General (Plantation Crops), ICAR, New Delhi. Dr. P. Rethinam chaired the technical sessions held during 18 and 19 May 1994 along with Dr. M C Nair (KAU, Vellayani), Dr. C Sreedharan (KAU, Vellayani) and Dr. R. D. Iyer (CPCRI, Kasaragod) as co-chairmen of various sessions.

The work done in 31 research projects and three supportive research projects were presented and discussed. The progress of work in three adhoc research schemes funded by ICAR and three projects funded by Department of Biotechnology, New Delhi were also presented. The technical programmes for the current year was finalised and three new research projects were approved.

The plenary session held on 20 June, 1994 under the chairmanship of Dr. P Rethinam, ADG (PC) was attended by scientists of NRCS and officials from related research organisation and developmental agencies besides Dr. M K Nair, Director, CPCRI, Kasaragod, Dr. M Aravindakshan, Director of Research, KAU, Trissur, Mr. E Velappan, Director, DCASD, Kozhikode and Mr. Pankajakshan, Dy. Director, Spices, Dept. of Agriculture, Govt. of Kerala.

### PARTICIPATION IN SYMPOSIA, SEMINARS AND TRAINING

- Prof. K. V. Peter, Director
- National Group Meeting of Scientists working under AICRP on Medicinal and Aromatic Plants held at Kerala Agricultural University, Trissur, Jan 17-18, 1994.
  - Seminar on management of stunted diseases of black pepper, Kalpetta, Kerala, Feb. 20, 1994.
  - National Seminar on Vegetables, Raipur, Madhya Pradesh, Mar. 15-16, 1994.
  - Seminar on Biofertilizers and Bioagents organised by Spices Board, Cochin, April 22, 1994.

- Sri. K. Kandiannan, Scientist (Agronomy)
- National Symposium on Integrated Input Management for Efficient Crop Production, TNAU, Coimbatore, Feb. 22-25, 1994.

All Scientist/Research Scholars/Research Associates/Research Fellows, NRCS, Kozhikode.

- National Seminar on Diseases of Spices Kozhikode, April 7-8, 1994.

- Sri. Jose Abraham, Scientist (SG) Statistics
- Workshop on Bioinformatics and CDROM information retrieval TNAU, Coimbatore, March 16-18, 1994.
  - Discussion cum Training on Krishi Vigyan Kendra at KVK Kattupakkam, Madras, Feb. 1-10, 1994.

- Zonal Workshop of KVKS & TTCs of Zone VIII at Pondicherry, May 27-29, 1994.

Dr. Y. R. Sama, Dr. P. N. Ravindran, Mr. Anandaraj and Mr. K. Nirmal Babu.

- Second Asia Pacific Conference on Agricultural Biotechnology, Madras, March 6-10, 1994.

M/s. M. Anandaraj, Santhosh J. Eapen, K. Kandiannan, Scientists, NRCS, Kozhikode.

- Short term course on Desk Top Publishing and Computer Aided presentation methods at Centre for Electronics Design & Technology, Kozhikode May 9-13, 1994.

Dr. T. John Zacharia, Scientist Sr. Scale (Biochemistry)

- Technology clinic on value added spices organised by STED, Dept. of Science and Technology, Govt. of Kerala, Kozhikode, June 6, 1994 at Kozhikode and June 10 at Kottayam.

Sri. Johnson George K, Scientist (Genet.)

- Summer Institute on Cell Technology and Genetic Engineering at TNAU, Coimbatore June 15 to July 5, 1994.

### MEETINGS

Regional Committee Meeting (VIII) of ICAR, Bangalore, 20-21 Jan, 1994.

- Prof. K. V. Peter & Dr. A. K. Sadanandan.

Research and Development Committee Meeting of Spices Board, Cochin 4 Mar. 1994.

- Prof. K. V. Peter.

Spices Board Meeting, Cochin, 5 Mar. 1994 - Prof. K. V. Peter.

Meeting on review and preview of Farm and Home Programme, AIR Kozhikode, 25. Mar., 1994.

- Dr. B. Sasikumar

General Council Meeting of Kerala Agricultural University, Thiruvananthapuram, 28-29 Mar. 1994.

- Prof. K. V. Peter

Research Council Meeting of Indian Cardamom Research Institute (Spices Board), Myladumpara, Idukki 19-21 April 1994.

- Prof. K. V. Peter and Dr. Y. R. Sama.

Seminar on New Input in Crop Production, 22 Apr. 1994.

- Dr. Y. R. Sama.

STED Meeting, Kozhikode, 26 Apr. 1994 - Prof. K. V. Peter.

Advisory Committee Meeting of SFCI, Aralam at Thiruvananthapuram, 28 Apr. 1994 - Prof. K. V. Peter.

Annual Meeting of ISPC at CPCRI, Kasaragod, 6 May 1994.

- Prof. K. V. Peter.

Seminar on foot rot disease management in black pepper, Chickamagalore and Mercara, 11 May 1994.

- Dr. Y. R. Sarma.

Standing and Working Committee Meeting of PLACROSYM XI at Coffee Board, Bangalore, 25 May 1994.

- Prof. K. V. Peter & Dr. Y. R. Sarma.

Zonal meeting of KVK at RARS Pattambi, Kerala, 27 May 1994.

- Prof. K. V. Peter.

Review meeting at Dept. of Biotechnology, New Delhi 4 & 5 July 1994.

- Prof. K. V. Peter, Dr. Y. R. Sarma, Mr. Nirmal Babu, Mr. M. Anandaraj.

ICAR Cess Fund Project-Horticulturist Panel Meeting, New Delhi, 7 July 1994 - Prof. K. V. Peter, Dr. Y. R. Sarma, Dr. G. N. Dake, Mr. M. Anandaraj.

#### PUBLISHED ARTICLES

Anandaraj M., Sarma, Y. R. and Ramachandran R., 1994. *Phytophthora* foot rot of black pepper in relation to age of host and its culmination in foot rot. *Indian Phytopathology*, 47 : 212-216.

Devasahayam, S and Abdulla Koya, K. M. 1993. Seasonal incidence of hymenopterous parasites of top shoot borer (*Cydia hemidoxa*) infesting black pepper (*Piper nigrum*). *J. Ent. Res.*, 7 : 205-208.

Devasahayam, S. and Abdulla Koya, K. M. 1994. Seasonal incidence of *Hexameris* spp. (Dor. Mermithidae) parasitizing larvae of top shoot borer *Cydia hemidoxa* Meyr (Lep.) (Tortricidae) on black pepper. *J. App. Ent.* 117 : 31-34.

Nair, R. R. and Ravindran, P. N. 1994. Somatic association of chromosomes and other mitotic abnormalities in *Vanilla planifolia* (Andrews). *Caryologia*, 47 : 65-73.

Peter, K. V. 1994. Spices Mixed Performance. *The Hindu Survey of Indian Agriculture*, 1994 : 91-96.

Peter, K. V. 1994. Spices Scenario-Pepper the bigger foreign exchange earner. *Agri. Research Year Book* 124-129.

Ravindran, P. N. and Sasikumar, B. 1993. Variability in open pollinated progenies of black pepper. *J. Spices and Aromatic Crops*, 2 : 60-65.

Rema, J. and Krishnamoorthy, B. 1993. Rooting response of elite cinnamon (*Cinnamomum verum*) (Bercht. & Perl.) lines. *J. Spices and Aromatic Crops*, 2 : 21-25.

Rethinam, P. and Sadanandan, A. K. 1994. Nutrition Management of Seed Spices. In: *Advances in Horticulture* (ed.) Chadha, K. L., Malhotra Publishing House, New Delhi (In press).

Sadanandan, A. K. 1994. Black pepper nutrition. In: *Advances in Horticulture* (ed.) Chadha, K. L., Malhotra Publishing House, New Delhi (In press).

Sadanandan, A. K. and Hamza, S. 1993. Comparative efficiency of slow release nitrogen fertilizers on transformation of nitrogen and yield response of black pepper (*Piper nigrum* L.) in an oxisol. *J. Plant. Crops*, 21 (Suppl.) : 58-66.

Santhosh J. Eapen, 1993. Seasonal variation of root knot nematode population in a cardamom plantation. *Indian J. Nematol.* 23 : 63-68.

#### POPULAR ARTICLES

Kandiannan, K., Sivaraman, K. and C. K. Thankamani 1994. Production of quality black pepper planting material. *Valarum Velanmai* (Tamil), 20 : 26-28.

Krishnamoorthy, B. 1991. Cinnamon as intercrop in coconut and coffee gardens. *Valarhozil* (Tamil), Feb. 15 : 8-9.

Krishnamoorthy, B. 1993. High yielding clove trees. *Spice India* (Tamil), 7 : 6-11.

Leela N. K. 1994. Chemical constituents of spices. *Spice India* (Mal.), 7 : 12-15.

Peter, K. V. and Nair, R. R. 1994. *Biotechnology in spices* (Mal.), "Mathrubhumi" Agric. Spl. issue.

Peter, K. V. 1994. Production technology and package of practices in chilli. *Spice India*, 12 : 14-21.

Rao, T. G. N., Reddy, B. N. and Sasikumar, B. 1993. Production constraints of turmeric in Andhra Pradesh. *Spice India*, 6 : 8-13.

Rema, J. and Krishnamoorthy, B. 1992. Economic use of tree spices. *Indian Spices*, 24 : 2-4.

Sasikumar, B. and Krishnamoorthy, B. 1994. Sarvasugandhi. *Spice India* (Mal.), 7 : 7-11.

Sasikumar, B. 1994. Regionalism in black pepper cultivars. *Spice India* (Mal.), 6 : 13.

Sasikumar, B. 1994. New varieties of spices and their path of origin. *Spice India* (Mal.), 6 : 5-7.

Sivaraman, K., Kandiannan, K. and Thankamani, C. K. 1994. Bush pepper (Tamil). *Spice India*, 7 : 12-13.

#### STUDY CIRCLE

The NRCS study circle met 13 times during the period from Jan.-June 1994 and seven research papers were approved for publication. Seven guest lectures were also delivered by eminent scientists in the Study Circle.

#### TECHNICAL PUBLICATIONS/REPORTS

Introduction to National Research Centre for Spices, NRCS, Kozhikode-1994.

- Anandaraj, M., Devasahayam, S. and Nirmal Babu, K.

Research Highlights 1994. NRCS, Kozhikode.

- Sivaraman K., Thankamani C. and Kandiannan K.

Status Report-AICRP on Spices 1994 - NRCS, Kozhikode,

- Sadanandan, A. K. and Johny A. Kallupurackal.

Technology Developed by AICRPS for adoption by Development Agencies 1994 - NRCS, Kozhikode.

- Sadanandan, A. K. and Johny A. Kallapurckal.

Stunted (little leaf) and phyllody diseases of black pepper 1994.

- Sarma, Y. R., Anandaraj, M. and Devasahayam, S., NRCS, Kozhikode.

### TRANSFER OF TECHNOLOGY

#### Training programmes conducted:

Course : Nursery Management in Spices

Date : 14. & 15 February 1994

No. of participants : 11

Nature of positions : Officers from different states and central Agricultural/Horticultural Departments.

#### Foreign Nationals Trained:

Mr. Okwudiri Onwu Biko from the National Root Crop Research Institute, Nigeria underwent advanced training on 'Ginger seed micropropagation and seed rhizome storage' for a period of 4 months from March to June 1994 as an FAO nominee.

#### Production and supply of quality spices planting materials:

Period : Jan.-June 1994.

Black pepper : 60,000 rooted cuttings

Turmeric : 20 tonnes (seed rhizomes)

Clove : 300 seedlings

Nutmeg : 8000 seedlings

: 500 grafts

Cinnamon : 5000 seedlings.

#### COLLABORATIVE RESEARCH PROJECT

Calicut University launched an ambitious project on 28-6-'94 for research and study of spices with the co-operation of NRCS, Kozhikode. As a first step, Prof. K. V. Peter, Director,

NRCS, Mr. B. Krishnamoorthy, Scientist, Sr. Scale (Pl. Breeding), NRCS; Dr. A. N. P. Ummerkuttu, Vice Chancellor, Prof. V. J. Papoo, Pro-Vice Chancellor, Mr. T. K. Ummer, Registrar and Dr. K. Unnikrishnan, Head, Botany Department, Calicut University planted saplings of tree spices such as cinnamon, nutmeg, clove and allspice at the botanical garden of the university. Nearly three acres of land have been set aside for the scheme.

#### DEPUTATION ABROAD

Dr. B. Sasikumar, Scientist, Sr. Scale (Plant Breeding) was selected for three months overseas training by the Department of Biotechnology (DBT), New Delhi as part of DBT National Associateship 1991-92 to undergo advanced training in Plant molecular biology at the Plant Biotechnology Institute, NRC, Canada. Dr. Sasikumar was relieved on 25 April 1994 to take up the programme at Canada.

#### HONOURS/AWARDS

Dr. B. Sasikumar, Scientist, Sr. Scale (Plant Breeding) is recognised as research guide in Botany (Genetics/Plant Breeding/Cytology/Biotechnology) under the Faculty of Science of Calicut University.

#### RADIO TALKS

Dr. B. Sasikumar : National Seminar on Diseases of Spices - A Radio Report (Malayalam), April 11, 1994, AIR, Kozhikode.

Prof. K. V. Peter : Spices Development programme (Malayalam), May 12, 1994, AIR, Kozhikode.

Mrs. Mini P. Mathai : Biotechnology in Agriculture (Malayalam) May 17, 1994, AIR, Kozhikode.

Mr. Santhosh J. Eapen : How to control quick wilt of black pepper (Malayalam), May 29, 1994, AIR, Kozhikode.

Mrs. C. K. Thankamani : Manuring of tree spices (Malayalam) June 6, 1994, AIR, Kozhikode.

Mrs. N. K. Leela : Chemical constituents of spices (Malayalam), June 15, 1994, AIR, Kozhikode.

#### DISTINGUISHED VISITORS

Prof. T. N. Anandakrishnan, Director, Entomology Research Institute, Loyola College, Madras - 20 February, 1994.

Dr. P. K. Ramachandran, Director (Retd.) and Emeritus Scientist, DARE, Gwalior - 28 February, 1994.

Dr. Hamdy M. Eisa and Mr. T.C. Jain, World Bank, New Delhi - 29 April, 1994.

Dr. P. K. Jyengar, Chairman, STEC, Tiruvananthapuram - 4 May, 1994.

Sri. W. Pongte, Minister of Agriculture, Govt. of Arunachal Pradesh - 9 May, 1994.

Dr. Maxwell Noronah, Bishop of Kozhikode - 17 June, 1994.

Dr. V. Krishnabrahmam, Director, Centre for Electric Development and Technology, Kozhikode, 22 June, 1994.

#### NEW SCHEMES SANCTIONED

The Department of Biotechnology, New Delhi sanctioned a project on "Control of Diseases of Spices Crops through Biological Control Agents".

Another adhoc research scheme entitled "Biological control of scale insects of black pepper" was also sanctioned by ICAR, New Delhi.

#### FARM ADVISORY COMMITTEE

The Farm Advisory Committee of NRCS, Kozhikode met at the NRCS, Kozhikode on 12-2-'94 under the chairmanship of Director, NRCS, Kozhikode. Farm Superintendent, NRCS Farm at Peruvannamuzhi, Asst. Accounts Officer and Asst. Administrative Officer have attended the meeting besides the scientists.

#### INSTITUTE JOINT COUNCIL

The third meeting of IJC was held on 4-1-'94 under the chairmanship of Director, NRCS, Kozhikode.

#### CELEBRATIONS

Republic Day was celebrated on 26th Jan. 1994. Prof. K. V. Peter, Director, hoisted the National Flag at the main campus. Science Day was celebrated on 28th February, 1994.

## NATIONAL SEMINAR ON DISEASES OF SPICES

The national seminar on 'Diseases of Spices', the third seminar in the series being conducted by the Indian Society of Spices was held at Kozhikode during 7-8 April 1994. Sri. M S Joseph, Agril. Production Commissioner (Govt. of Kerala) inaugurated the Seminar which was presided over by Prof. K S Manilal, Sr. Professor of Botany, Calicut University, Calicut. About 150 delegates from various parts of the country participated in the two day seminar.

## NEW OFFICE BEARERS FOR INDIAN SOCIETY FOR SPICES

A new Executive Committee for the Indian Society for Spices was constituted with Prof. K V Peter as President, Dr. C K George as Vice President, Dr. K V Ramana as Secretary, Dr. B Sasikumar as Joint Secretary and Sri. Ramakrishnan Nair as Treasurer. The new executive committee members were also elected/nominated.

Dr. P N Ravindran, Principal Scientist (Genetics), NRCS, Kozhikode is nominated as the new Chief Editor of the Journal of Spices and Aromatic Crops.

## JOURNALISTS VISIT NRCS, KOZHIKODE

A team of journalists from PTI, PTI (Bhasha), UNI, Times of India and The Hindu, led by Dr. S. K. Sharma, Chief PRO, ICAR, New Delhi visited, NRCS, Kozhikode, during 23-24 March, 1994. Major National dailies covered the research activities of NRCS, Kozhikode from 4th April to 11th April, 1994.

# Spices production up after a decade of stagnation

UNI

CALICUT, April 3

Concerted efforts by scientists at the National Research Centre for Spices (NRCS) have finally broken down the stagnation in the production and export of major Indian spices.

Dr. K V Peter, Director of NRCS, an Institute of the Indian Council for Agricultural Research, pointed out that the spices production in the country was static at around 1.8 million tonnes from an area of about two million hectares for over a decade. While there is no appreciable increase in the spices area, its output has increased to two million tonnes in 1992-93 and has gone up even further in 1993-94.

India exported about 125,000 tonnes of spices in raw and value added forms in 1992-93, earning foreign exchange worth Rs 387 crore. But during 1993-94, India's foreign exchange earnings from spices have exceeded Rs 500 crore despite low unit prices prevailing in the international markets, confirming higher domestic production and export availability.

Dr. Peter said that despite the population growth and resultant higher domestic demand for spices, the export earnings from these crops would rise in the coming years because of the research attention being paid to raise the production from the additional spices area.

The major spice varieties dealt

with at the NRCS are pepper, cardamom, turmeric, ginger, cloves, cinnamon and nutmeg. Dr. Peter pointed out that there was scope for expansion of area under pepper, the number one foreign exchange earner. Pepper cuttings being grown at the 14.3 hectare research farm of NRCS at Peruvannamuzhi, near Calicut, would be airlifted to Assam and Arunachal Pradesh for planting with the onset of the monsoon.

NRCS also houses the headquarters of the all India coordinated research project on spices headed by Dr. A. K. Sadanandan and A. Krishna Vignyan Kendra taking the research results to the cultivators.

It was pointed out that the location of NRCS at Calicut was apt because all the major spices are grown in and around the area in Kerala. Calicut, incidentally, was the Port where the Portuguese navigator Vasco da Gama who came in search of Indian spices, first landed in 1498.

At NRCS, 37 research projects on spices crop improvement, management and crop protection are in progress. It is also the National repository of spice germplasm to be used in varietal improvement. NRCS scientists conduct extensive surveys in different parts of the country for collection of cultivated plant types and their wild relatives.

The spices germplasm collection at NRCS is the largest in the world and every year it is further enriched by collections from

## Upswing in production, export of spices

KOZHIKODE, April 3.

Scientists at the National Research Centre for Spices (NRCS) here say their efforts have helped in ending the stagnation in the production and export of major Indian spices.

Dr. K. V. Peter, director of NRCS, an Institute of the Indian Council for Agricultural Research, said here that the spices production in the country was static at around 1.8 million tonnes from an area of about two million hectares for over a decade. While there is no appreciable increase in the spices crop area, its output has increased to two million tonnes in 1992-93 and has gone up even further in 1993-94.

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Dr. Peter said that despite the population growth and resultant higher domestic demand for spices, the export earnings from these crops would rise in the coming years because of the research attention being paid to raise the production from the traditional spices area.

The major spice varieties dealt with at the NRCS are pepper, cardamom, turmeric, ginger, cloves, cinnamon and nutmeg.

Dr. Peter said there was scope for expansion of the area under pepper, the top foreign exchange earner. Pepper cuttings being grown at the 14.3 hectare research farm of the NRCS at Peruvannamuzhi, near here, would be

The NRCS, set up in 1986 by upgrading the Calicut station of the Central Plantation Crops Research Institute, has already released four varieties of high yielding and disease resistant black pepper vines. Two high yielding hybrids of pepper suited for cultivation in high elevation areas are undergoing intensive field testing.

The first ginger variety being released by NRCS is a superior selection, having an average yield of 32 tonnes of rhizomes and a 20 per cent higher dry-ginger yield. Recombination breeding technique would enable the centre to release a superior turmeric variety having higher curcumin content.

The centre employs tissue culture techniques for micropropagation of various spice varieties. Tissue cultured pepper, cardamom, ginger and turmeric are already under field evaluation. Callus regeneration of plantlets of ginger, turmeric and cardamom has successfully been exploited by NRCS scientists.

In tree spices like clove, cinnamon, nutmeg, the centre is maintaining a progeny orchard for making available superior planting materials through new grafting techniques. The beginning of monsoon will also mark farmers' arrival at the centre's nurseries for buying the planting materials produced under expert supervision.

Dr. A. K. Sadanandan, principal scientist and project coordinator for spices, pointed out that the bush pepper technique would enable raising of the black pepper as a potted ornamental crop in houses and would yield the prized spice round the year.

He said India would continue to have the

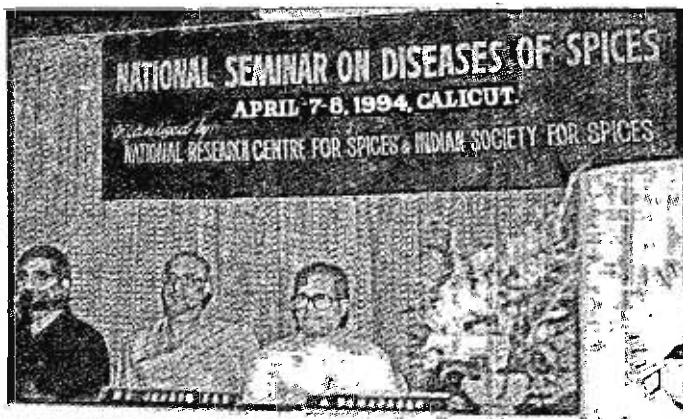


## NEWS IN PICTURES



Dr. K. L. Chadha, DDG (Hort.), ICAR, New Delhi inaugurated the irrigation system at NRCS Farm, Peruvannamuzhi. Mr. K. Thankappan, Executive Engineer, CPWD, Prof. K.V. Peter, Director, NRCS, Kozhikode, Sri. V. K.A. Koya, Farm Superintendent and Dr. T. G. N. Rao, Scientist-in-charge, NRCS Farm, Peruvannamuzhi are also seen.

Dr. K. L. Chadha, DDG (Hort.), ICAR, New Delhi inaugurated the Plant Tissue Culture Facility at NRCS, Kozhikode.



A view of the inaugural function of the National Seminar on "Diseases of Spices" held at Kozhikode. (sitting R-L) Sri. M. S. Joseph, Agricultural Production Commissioner, Prof. K. S. Manilal, Calicut University and Dr. I. Irulappan, Professor, Horticulture, TNAU, Coimbatore.

A view of the collaborative research plot on spices at Calicut University campus.



### COMING EVENTS

#### **Phytophthora Meeting :**

A national group meeting on *Phytophthora* diseases of Horticultural crops will be held from 21-23 September, 1994 at NRCS, Kozhikode.

#### **Training Programmes :**

Course	Total Seats	Date	Venue	Contact
Nursery Management in Cardamom	20	3-4 Oct. '94	Appangala Karnataka	Scientist-in Charge, NRCS CRS P.O. Hervalnad Madikeri Karnataka - 571 201
Spices Production Technology	20	21-26 Nov. 94	Kozhikode Appangala	Director NRCS, Kozhikode Marikunnu P.O. Kozhikode - 673 012 Kerala
On Farm Processing of Spices	20	8-9 Feb. '95	Kozhikode & Peruvannamuzhi	"
Nursery Management of Spices	20	14-15 Feb. '95	"	"

### PERSONNEL

#### APPOINTMENTS

Name	Designation	Posted at	Date of joining
Sri. P. S. Manoj	Tech. Officer (T6) Horticulture	KVK, Peruvannamuzhi	30-05-1994
Sri. K. D. Prathapan	Tech. Officer (T6) (Pl. Protection)	KVK, Peruvannamuzhi	17-06-1994
Sri. Shaji Philip	Res. Associate	DBT Scheme NRCS, Kozhikode	23-02-1994
Dr. P. S. Sudararaju	Res. Associate	ICAR Scheme NRCS, Kozhikode	21-03-1994
Ms. M. R. Bindu	Res. Assistant	DBT Scheme NRCS, Kozhikode	21-02-1994
Sri. M. S. Muhammed Mustaffa	Sr. Res. Fellow	ICAR Scheme NRCS, Kozhikode	07-03-1994

#### PROMOTION

Name & Designation	Promoted as	With effect from	Posted at
Sri. D. K. Eshwara SS Gr. I (Lab Attender)	JTA (T1)	20-01-1994	NRCS, Peruvannamuzhi

#### TRANSFER

Name & Designation	From	To
Sri. C. Venugopalan, Jr. Clerk	CPCRI, Kasaragod	NRCS, Kozhikode

#### RETIREMENTS

**Dr. A. Ramadasan**, Principal Scientist (Plant Physiology), NRCS, Kozhikode retired from ICAR service on 30-4-1994.

**Sri. K. M. Thimmiah**, SS Gr. III Watchman, NRCS Appangala retired from ICAR service on 31-03-1994.

All NRCS staff wish a very happy retired life to both of them.

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