



# NRCS

# Newsletter

Volume : 4 (1)

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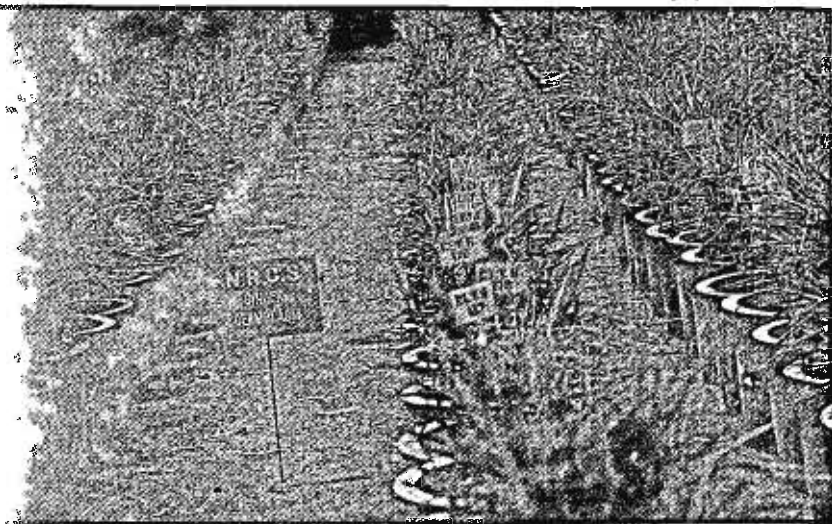
January - June 1993

## WEALTH OF SPICES

### - NRCS FARM AT PERUVANNAMUZHI

The National Research Centre for Spices (NRCS) farm at Peruvannamuzhi, 54 km away from Calicut on the Calicut-Kuttiady route (via Perambra, is one of the world's largest repository of germplasm of major spices especially black pepper. Substantial holdings of turmeric, ginger and tree spices (clove, nutmeg, cinnamon etc.) germplasm are also maintained here. Systematic research on crop improvement, production and protection aspects in black pepper, ginger, turmeric and tree spices are carried out at this research farm. Large scale multiplication and distribution of elite planting materials of new varieties, under Integrated Programme for Development of Spices (IPDS) with special central assistance, is another important project of the farm.

A conservatory of medicinal and aromatic plants like *Vetiveria zizanioides* (Vetiver), *Hemidesmus indicus* ('Naruneendi'), *Solenostemon rotundifolius*, *S. aromaticus* (Coleus), *Kaempferia galanga* ('Kacholam'), *K. rotunda* ('Chengazhanneer'), *Mentha piperita* (Mentha), *Ficus glomerata* ('Atthi'), *Eupatorium triplinerve* ('Sivamooli'), *Baliospermum* ('Nagadendi'), *Pogostemon cablin* ('Pachouli'), *Abelmoschus moschatus*, *Homolomena aromatica*, *Andrographis paniculata*, *Citronella* spp. Thyme, *Cardiospermum halicacabum*, *Eryngium foetidum* (Burmese coriander), *Crelogyne ovalis* ('Adapathiyar'), *Coscinium fenestratum* ('Maramanjil'), *Tylophora indica* ('Vallippala'), *Tinospora cordifolia* ('Chittamruthu'), *Vanilla*, *Ocimum* spp. etc. is also maintained here.



National gene bank of Ginger at NRCS farm, Peruvannamuzhi.

This sprightly garden of spices spread over 94 hectares, located close to the scenic site of the Kuttiady irrigation dam, is a very valuable wealth to farmers, scientists, extension workers and students.

## RESEARCH HIGHLIGHTS

### Fruit Set in Allspice

Allspice (*Pimenta dioica*) has been very shy to set seed at Peruvannamuzhi (NRCS Farm). Drenching the tree basin with Cultar (Paclobutrazol) at low concentration has shown positive response to flowering and fruit setting in allspice.

### Quality Study in Allspice

Leaf oil content in the leaves of allspice varies from 1.8 to 3.8% (v/w). Major constituents of the oil are eugenol (58-62%), myrcene (14.17%) and 1, 8-cineole (6.6 - 8.4%).

### Organic Farming of Bush Pepper

Application of groundnut cake @ 14g/10kg pot bimonthly increased the fresh berry yield by 184% over control.

### More on Biocontrol Research

Antagonistic *Pseudomonads* identified: Fluorescent *Pseudomonads* isolated from ginger rhizosphere showed high antagonistic activity against ginger soft rot pathogen *Pythium aphanidermatum* in *in vitro* studies.

Competitive saprophytic ability of pathogen, *Phytophthora capsici*:

Competitive saprophytic ability (CSA) of foot rot pathogen *Phytophthora capsici* is observed very low in soil amended with organic amendments.

New Biotypes of *Pseudomonas solanacearum* :

Twenty five isolates of *Pseudomonas solanacearum* isolated from wilted plants of *Zingiber officinale*, *Curcuma longa*, *Lycopersicon*

*esculentum*, *Capsicum annum*, *Capsicum frutescens*, *Tagetes erecta*, *Ageratum conyzoides* and *Chromolaena odorata* are identified as biotypes III & IV.

### Chemical Control of Pests of Pepper and Cardamom

Studies carried out at NRCS Cardamom Research Station, Appangala revealed that application of phorate (@ 5g and 2.5g a.i./plant twice a year) reduced the damage by thrips and also controlled the population of nematodes and root grubs in cardamom plantations resulting in an increase in cardamom production by 57.1 and 36.5%, respectively.

A field trial conducted at Wynad district, Kerala against control of *Lepidosaphes piperis* in black pepper showed that application of monocrotophos, dimethoate, methyl parathion and malathion (0.1%) are promising.

### In vitro Propagation of Spices

Micropropagation protocols are standardised for vanilla (*Vanilla planifolia*, *V. aphilla*), Mango ginger (*Curcuma amada*) and Kasturi turmeric (*Curcuma aromatica*) and celery (*Apium graveolens*).

In the *in vitro* conservation repository at NRCS, over 100 accessions of spices are maintained.

### Other News From In vitro Front

- \* Multiple shoots are induced in clove, cinnamon and camphor shoot cultures.
- \* A promising ginger somaclone 'OCP-1222' is identified.
- \* For medium term conversation of cardamom germplasm, a medium that promotes slow growth is identified.

### SURVEYS ON INSECT PESTS OF BLACK PEPPER KINDLE HOPE

Sri. S. Devasahayam and Sri. K.M. Abdulla Koya, Scientists (Entomology), NRCS, Kozhikode conducted surveys in farmer's gardens at N. Kanara and Shimoga districts of Karnataka to record

incidence of scale insects on black pepper during 21-23 Jan. 1993. However, infestations by *Lepidosaphes piperis* and *Aspidiotus destructor* are negligible. Pepper crops in Malappuram and Palakkad districts of Kerala are also free from scale insect infestation. This is revealed in another survey conducted by Sri. K.M. Abdullakoya, Scientist, NRCS during 14-15 Jan. '93.

### GERMPLASM COLLECTION AND CONSERVATION

Intensive collection programme of black pepper germplasm made in Malappuram district (Kerala) resulted in assemblage of 37 cultivated types and 6 accessions of *Piper betle* by Dr. P.N. Ravindran and Mr. Johnson K George, Principal Scientist and Scientist (Genetics) respectively, NRCS Kozhikode. Twelve and 3 accessions each of cultivated black pepper were also collected from D. Kannada (Karnataka) and Quilon Districts (Kerala), respectively. Collections made from Sirsi include 3 cultivated *Piper betle* and other 6 wild *Piper* accessions. From a collection expedition carried out in the forests of Quilon (Kerala) Mr. Johnson K George, Scientist (Genetics), NRCS, collected 91 accessions of wild pepper.

Other major additions to black pepper germplasm conservatory are 3 accessions of *Piper longum*, one from Arunachal Pradesh, two from the Department of Plantation Crops and Spices, KAU, Thrissur (Mulayam & Panniyur) as well as *Piper bababudani* and *P. sungandhi* syn *P. pseudonigrum* from NBPGR centre, Thrissur. All the species got established at the black pepper germplasm repository at Peruvannamuzhi farm.

Two accessions of *Kaempferia galanga* were also obtained in an exchange of germplasm of *Kaempferia* between NRCS, Kozhikode and Dept. of Plantation Crops & Spices, KAU, Thrissur.

### IN PIPELINE

Two high yielding clones of black pepper suitable for high altitude areas are under confirmatory trials at NRCS, Kozhikode.

### PARTICIPATION IN SYMPOSIA, SEMINARS AND TRAINING

Dr. Y.R. Sarma, Principal Scientist (Plant Pathology) attended the meeting of the panel on 'Biological pest control agents and biopests' and presented a paper on 'Scope of biocontrol in management of diseases and pests of spices', Dept. of Biotechnology, New Delhi 16 Feb. 1993.

Mr. M. Anandaraj, Scientist (SG), (Pl. Pathology) attended 'Continuing Medical Education Programme - Recent Advances in Laboratory Techniques in Medicine', Medical College, Thrissur, 19-21st February, 1993.

Mr. Johnson K George, Scientist (Genetics) attended short term training course on 'Application of Laboratory Techniques in Biotechnology', Dept. of Biotechnology, Madurai Kamraj University, Madurai, 8-26th March, 1993.

Mrs. N.K. Leela, Scientist (Organic chemistry) attended the 'National Workshop on Radio Chemistry and Applications of Radioisotopes' conducted at CWRDM, Kozhikode, 9-19th March 1993.

Dr. A.K. Sadanandan, Principal Scientist (Soil Science), attended National Seminar on 'Soil Resources vis-a-vis Sustainable Land Use', Calcutta, March 12-14, 1993.

Dr. K.V. Peter, Director, NRCS, Dr. A.K. Sadanandan, Principal Scientist (Soil Science) and Dr. B. Sasikumar, Scientist, Sr. Scale (Plant Breeding) attended the SRC meeting, ICRI (Spices Board), Myladumpara, 19-21 April, 1993.

Dr. Y.R. Sarma, Principal Scientist (Plant Pathology) attended the International Workshop on 'Sustainable Farming and the Environmental Need', and presented a paper on 'Biocontrol in pest and disease management of spice crops', 28-29th April, 1993.

Dr. K.V Peter, Dr. A. Ramadasan, Dr. P.N. Ravindran, Dr. K.V Ramana, Dr. Jose Abraham, Mr. S. Devasahayam, Dr. K. Sivaraman, Dr. G.N Dake, Mr. M. Anandaraj, Dr. T. John Zacharia,

Dr. B. Sasikumar, Mr. K. Nirmal Babu, Dr. (Mrs.) J. Rema and Mr. R. Ramakrishnan Nair attended the National Seminar on 'Post Harvest Technology of Spices' at Regional Research Laboratory, Thiruvananthapuram, 13-14th May, 1993.

Dr. K.V. Peter, Director, NRCS and Dr. (Mrs.) J. Rema, Scientist, Sr. Scale (Hort.) attended the Golden Jubilee Symposium of Horticultural Society of India, Bangalore, 24-28 May 1993.

Dr. K.V. Ramana, Sr. Scientist (Nematology), attended the course on 'Computer Application in Agricultural Research Management', NAARM, Hyderabad, 15-25 June 1993.

#### MEETINGS

1. Board meetings Spices Board, Cochin. 5th Feb. and 18th June 1993 - Prof. (Dr.) K.V. Peter.
2. R and D Committee of Spices Board, Cochin 4th Feb. 1993 - Prof. (Dr.) K.V. Peter.
3. Review Meeting, Dept. of Biotechnology, New Delhi 4-5 Feb 1993 - Mr. K. Nirmal Babu and Dr. (Mrs.) J. Rema.
4. Meeting convened by Hon'ble Minister of Agriculture, Govt. of Kerala, on declaration of Idukki and Wynad districts of Kerala as spices districts. Painav, Idukki, 6th Feb 1993 - Dr. Y.R. Sarma.
5. Group meeting on establishment of Biopesticide Pilot plants, Dept. of Biotechnology, New Delhi, 16th Feb 1993 - Mr. S. Devasahayam.
6. Meetings convened by DDG (Hort.) to formulate Mid Term Plan in Horticulture, ICAR, 21-24 Feb. 1993, New Delhi and 27-28 April 1993, CTCRI, Thiruvananthapuram - Prof. (Dr.) K.V. Peter.
7. Standing Committee meeting of PLACROSYM XI, NRCS, Kozhikode 16th March 1993 - Prof. (Dr.) K.V. Peter.
8. General Council meeting of KAU, Thiruvananthapuram, 26-27 March 1993 - Prof. (Dr.) K.V. Peter.

9. Group meeting on 'Virus disease of Cardamom' with special emphasis on 'Kokke kandu', a new viral disease. S.V. University, Tirupathi, 13th April 1993 - Dr. Y.R. Sarma.

10. Group meeting on virus diseases of cardamom. CRS, Appangala, 13th April 1993 - Dr. K.V. Ramana, Dr. M.N. Venugopal, Mr. Santhosh J. Eapen, Dr. Y.R. Sarma, Dr. K.V. Peter.

11. Bureau of Indian Standards FAD-9, RRL, Thiruvananthapuram, 12th May 1993 - Prof. (Dr.) K.V. Peter.

12. Board of studies, Life Science Dept., University of Calicut, 15th May 1993 - Dr. Y.R. Sarma.

13. Second Standing Committee meeting of International Symposium on Plantation Crops (PLACROSYM XI), SBI, Coimbatore, 1st June 1993 - Prof. (Dr.) K.V. Peter, Dr. Y.R. Sarma, Dr. K.V. Ramana and Mr. M. Anandaraj.

14. Meeting convened by Govt. of Kerala to select Krishi Vigyan Award Winner at Thiruvananthapuram, 11th June 1993 - Prof. (Dr.) K.V. Peter.

#### SIXTH ANNUAL RESEARCH COUNCIL MEETING

The Sixth Annual Research Council Meeting of NRCS was held during 3-5 June, 1993 at Calicut. The meeting was inaugurated by Dr. P.C. Sivaraman Nair, Retired Director of Research, KAU, Thrissur and Chairman, Quinquennial Review Team. The technical sessions were held during 3rd and 4th June 1993 under the chairmanship of Dr. P. Rethinam, Asst. Director General (Plantation Crops), ICAR, New Delhi. The respective sessions were co-chaired by Dr. K.K.N. Nambiar (CPCRI, Kasaragod), Dr. C. C. Abraham (KAU, Vellanikkara), Dr. K.P. Prabhakaran Nair (National Institute of Agriculture and Rural Education, Republic of Cameroon) and Dr. S. Natesh (DBT, New Delhi). The work done in 32 projects (including 3 projects funded by other agencies) were discussed and the technical programme

for the current year finalised. The plenary session was held on 5th June 1993 under the chairmanship of Dr. P. Rethinam, ADG (PC). Dr. A.N.P. Ummer Kutty, Vice Chancellor, University of Calicut, released the publication 'NRCS Research Highlights 1992-93'.

Recommendations for extension agencies were also approved during the session. The plenary session was attended by scientists and officials from related research organisations and developmental agencies.

#### PUBLISHED ARTICLES

1. Anandaraj M. and Sarma Y.R. 1992. A new leaf rot in *Pimenta dioica*. Indian Phytopath. 45(2): 276-277.
2. Ali, S.S and Venugopal, M.N. 1992. Interaction between *Meloidogyne incognita* and *Rhizoctonia solani* in damping off or rhizome rot disease of cardamom seedlings. Nematol. medit. 20:65-66.
3. John Zacharia, T. and Nirmal Babu K. 1993. Evaluation of chemical quality in black pepper and turmeric - A review. Presented at 'National Seminar on Post Harvest Technology of spices' held at RRL, Thiruvananthapuram, 13-14th May 1993.
4. Krishnamoorthy B. 1993. Approach grafting in clove. Spice India (Tamil), 6(4) : 13-15.
5. Krishnamoorthy B. 1993. Pepper new varieties. Spice India (Tamil), 6(5) : 11-12.
6. Nirmal Babu K, Rema J, Ravindran P.N and Peter K.V. 1993. Micropropagation of black pepper and related species - its potential in crop improvement. Paper presented in the Golden Jubilee Symposium 'Horticultural Research-Changing Scenario' held at Bangalore, May 24-28, 1993.
7. Nirmal Babu K, Regy Lukose, Ravindran P.N 1993. Tissue culture of Tropical Spices. In: Genetic Engineering, Molecular

- Biology and Tissue Culture for crop pest and disease management. (Ed.) P. Vidyasekharan, Daya Publishing House, New Delhi. pp.257-267.8.
8. Nirmal Babu K, Samsudeen K and Ratnambal M.J 1992. *In vitro* plant regeneration from leaf derived callus in ginger (*Zingiber officinale* Rosc.) Plant Cell Tissue and Organ Culture, 29(2) :71-74.
  9. Nirmal Babu K and Ravindran P.N 1992. Improved varieties of black pepper. In : Black pepper and Cardamom-Problems and Prospects. (Eds.) Sarma, Y.R, Devasahayam S and Anandaraj M. Indian Society of Spices, NRCS, Kozhikode. pp.61-64.
  10. Ramakrishnan Nair R, Sasikumar B and Ravindran P.N. 1993 Polyploidy in a cultivar of black pepper (*Piper nigrum* L.) and its open pollinated progenies Cytologia, 53:27-31.
  11. Ravindran P.N, Balakrishnan R and Nirmal Babu K. 1992. Numerical taxonomy of South Indian *Piper* L. (Piperaceae) I. Cluster analysis. Rheedeia, 2(1) : 55-61.
  12. Ravindran P.N, Nair M.K and Nirmal Babu K 1992. Panchami - A high yielding selection of black pepper. Spice India, 5(6):11-13
  13. Ratnambal M.J, Nirmal Babu K, Nair M.K and Edison S. 1992. PCT-13 and PCT-14 - Two high yielding varieties of turmeric. J. Plant. Crops. 20(2) : 79-84.
  14. Rema J and Krishnamurthy B. 1993. Economic use of Tree Spices. Indian Spices, 29(4) : 2-4.
  15. Sadanandan A.K and Hamza S. 1993. Soil constraints and measures for sustained production of spices. National Seminar on Soil Resources vis-a-vis Sustainable Land Use, Calcutta, March 12-14, 1993 (Abstract).
  15. Sarma, Y.R, Anandaraj M and Ramana K.V. 1992. Present status of black pepper diseases in India and their management. In: Proc. International Workshop on Black Pepper Diseases, Boger, Lampung, Indonesia 3-5 Dec. 1991. (Eds.) Pasril Wahid, D. Sitepu, S.A Deciyant and Ujang Suparman, Agency of Agricultural Research and Development, Research Institute for Spices and Medicinal crops, Boger, Indonesia. pp.67-68.
  16. Sarma Y.R, Anandaraj M and Ramachandran N 1992. Recent advances in *Phytophthora* foot rot research in India and the need for a holistic approach. In : Proc. International Workshop on Black Pepper Diseases. Boger, Lampung, Indonesia, 3-5 Dec. 1991, pp.133-143.
  17. Sarma Y.R, Ramana K.V. and Anandaraj M. 1992. Status of slow decline disease of black pepper and approaches of disease management. In : Proc. International Workshop on Black Pepper Diseases. Boger, Lampung, Indonesia, 3-5 Dec. 1991, pp.167-174.
  18. Sarma Y.R and Anandaraj M. 1992 Anthracnose and phylloidy diseases of black pepper in India. In : Proc. International Workshop on Black Pepper Diseases. Boger, Lampung, Indonesia, 3-5 Dec. 1991. pp.211-214.
  19. Sarma Y.R, Anandaraj M and Devasahayam S. 1992. Diseases of unknown etiology in black pepper. In : Proc. International Workshop on Black Pepper Diseases. Boger, Lampung, Indonesia, 3-5 Dec. 1991. pp.215-219.
  20. Sasikumar B and Johnson K. George. 1992. Direct single noded propagation of black pepper. J. Plant. Crops. 20(2) :165-167.
  21. Sasikumar B. 1993. Height is desirable for ginger. ('Inchikku uyaram lithamam'), Spice India (Mal.), 6(4):21.
  22. Sasikumar B. 1993. The story of pollination in black pepper ('Akathu thiri theruthu purathu muttayittu'), Spice India (Mal.), 6(5) :2-3.
  23. Sasikumar B. 1993. Tissue culture cardamom - A note of descent. ('Tissue culture Elathinu oru patabhedam') Spice India (Mal.), 6(6) : 7.
  24. Santosh J. Eapen, 1992. Influence of plant age on root knot nematode development in cardamom. Nematol medit. 20: 193-195.
  25. Santhosh J. Eapen, 1992. A methodology for evaluation of resistance in cardamom to root knot nematodes. Indian J. Nematol. 20: 197-202.

#### STUDY CIRCLE

The NRCS study circle met 10 times during January - July 1993 under the chairmanship of the Director, NRCS and approved 12 research papers for publication.

Dr. Hari Eswaran (Soil taxonomist, USA), Dr. D.M Vasudevan (Medical College, Thrissur), Dr. N.M Nayar (CTCRI, Thiruvananthapuram), Dr. K.R Rao (S.V. University, Tirupati), Dr. R. Balakrishnan (DOR, Hyderabad) and Mr. M.K. Muliya (CPCRI, Kasargod) delivered guest lectures in the study circle.

#### TECHNICAL PUBLICATIONS/ REPORTS

1. SPICES BIOTECHNOLOGY AT NRCS - Nirmal Babu K, Rema J, Regy Lukose, Ravindran P.N, Johnson K. George, Sasikumar B and Peter K.V. NRCS, Kozhikode, 1993.
2. BLACK PEPPER AND CARDAMOM - PROBLEMS AND PROSPECTS. Proceedings of the National Seminar on Black Pepper and Cardamom, May 17-18, 1992, NRCS, Kozhikode, Kerala. (Eds.) Sarma Y.R, Devasahayam S and Anandaraj M.
3. RESEARCH HIGHLIGHTS, 1992-93. NRCS, Kozhikode. K. Sivaraman & C. K. Thankamani.
4. ANNUAL REPORT 1991-92. NRCS, Kozhikode. Jose Abraham & K. Nirmal Babu.

### **NRCS LIBRARY KOZHIKODE - A TREASURE TROVE FOR THE SCHOLARS**

NRCS library at Kozhikode was established during the year 1976 when this centre was functioning as a Regional Station of CPCRI, Kasaragod. Along with the elevation of the erstwhile CPCRI Regional Station to NRC (Spices) in the year 1986, the library also got expanded in terms of number of books and journals and other facilities. During this short period of 17 years, the library acquired 3000 scientific books, 1900 reprints, 55 theses, 2000 bound volumes and other scientific and technical publications of various institutes and Agricultural Universities throughout the world. Library is subscribing to 56 foreign journals and 88 Indian journals. Theses on spices accepted in Indian universities and institutes are being collected to have an exhaustive literature on spices.

Library is also regularly publishing 'Bibliography on Spices' in the 'Journal of Spices and Aromatic crops' published by Indian Society for spices, Kozhikode. Another publication is 'Agri. Sci. Tit. bits' brought out quarterly by the library by organising clippings from different newspapers, popular journals, news relating to advancement of science in Agriculture, technologies developed, development programmes in Agriculture etc. mainly on spices crops. This information services is being sent to the institutes and the centres of the All India Coordinated Research Project on Spices. The library has a well equipped reprographic facility also.

The library and its services are open to scientists and research scholars from other institutes and universities as well. A number of students and research workers from nearby universities, colleges and research stations visit library regularly for scanning the rare journals subscribed by the library.

In addition to the above, the library distributes all institute publications, extension pamphlets etc. to farmers and to different organisations. The sale of institute publications is also carried out through the library.

Another small library is also established in the institute's research farm at Peruvannamuzhi. About 200 books on the basic subjects are available there. NRCS Cardamom Research Centre at Appangala, Kodagu Dist. Karnataka has also a mini library for the scientists working there. This library also possesses books, journals and a number of other publications for immediate reference.

### **TRANSFER OF TECHNOLOGY**

#### **Training programmes conducted**

Dates : 17th & 18th February 1993.

Course : Nursery management of spices

Nature of positions : Extension officials of various State Departments of Agriculture & Horticulture

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

Planting materials of high yielding black pepper varieties amounting to 40,000 rooted cuttings, seed rhizomes of new turmeric varieties (24 tonnes), seedlings of clove (500 Nos) cinnamon (2000 Nos) and nutmeg grafts (200 Nos) and nutmeg seedlings (50 Nos) were distributed to various developmental agencies, state departments, farmers and research institutes during Jan - June 1993.

#### **Radio Talks**

Prof (Dr) K.V. Peter: Marketing of pepper - various aspects (Malayalam), February 2nd, 1993, AIR, Kozhikode.

Dr. B. Sasikumar : Selection and planting of pepper vines and rooted pepper cuttings (Malayalam), June 7th 1993, AIR, Kozhikode.

Mrs. Mini P. Mathai : Application of Biotechnology in Spices development (Malayalam), June 26th 1993, AIR, Kozhikode.

### **DEPUTATION ABROAD**

Dr S. Edison, Project Coordinator (Spices) was selected as Spices-Expert by FAO, Rome. He was relieved on 12.1.93(AN) to take up the assignment at Dhaka, Bangladesh for a pe-

riod of 18 months from 13th Feb.1993.

Dr. A. K. Sadanandan, Principal Scientist (Soil Science) took over as Project Coordinator-in-charge.

### **DISTINGUISHED VISITORS**

Prof. (Dr) Suchorska & Dr. Bakowski, Agri. Research Institute, Poland, 25 Jan. 1993.

Air Marshal S Kulkarni, National Defence College, New Delhi - 4th Feb. 1993

Dr. Hari Eswaran, National leader, World Soil Resources, USDA - Soil Conservation Service, USA - 3rd March 1993.

Mr K. Viswanathan, Deputy General Manager, SBI, Cochin - 10th March, 1993.

### **NEW SCHEME SANCTIONED**

The Department of Biotechnology sanctioned a project on 'Development of *Phytophthora* resistance in black pepper (*Piper nigrum*) through biotechnological approaches.

### **EVENTS HELD**

#### **Curcumin analysis in turmeric**

A group meeting was conducted at NRCS on 22nd February for evolving a uniform methodology of curcumin analysis and sampling in turmeric. The meeting was attended by scientists from RRL, Thiruvanthapuram, Spices Board, Cochin and Y.S. Parmar Univ. of Horticulture & Forestry, Solan, Himachal Pradesh besides NRCS, scientists. The meeting decided to follow ASTA methods for estimation of curcumin for bulbs and fingers, separately.

#### **National Seminar on Post Harvest Technology of Spices**

A national seminar on post harvest technology of spices was organised by the Indian Society of Spices at RRL, Thiruvanthapuram during May 13-14, 1993 in collaboration with the Regional Research Laboratory (RRL), Thiruvanthapuram and NRC (Spices), Kozhikode. About 150 participants from all over the country attended the seminar.

### COMING EVENTS

#### PLACROSYSM XI

The First International Symposium on Plantation Crops (Placrosym XI) will be held at NRCS, Kozhikode, Kerala from 30 Nov. - 3 Dec. 1994. The theme of the symposium is 'PlantTech - Plantation Technology for productivity and quality'. The crops covered are Rubber, Tea, Coffee, Arecanut, Oil Palm, Cocoa, Cashew, Black pepper, Cardamom, Clove, Nutmeg, Cinnamon, Allspice, Ginger & Turmeric. For more details please contact :

Dr. Y.R. Sarma, (Principal Scientist)  
General Convenor,  
International Symposium on Plantation Crops  
National Research Centre for Spices  
P.O. Marikunnu, Kozhikode - 12  
India

#### NRCS Training Programmes

- Nursery Management in Cardamom.** Date : 7-8 Sept. '93  
Venue : NRCS, Cardamom Research Centre, Appangala.
- Spices Production Technology**  
Date : 22-27 Nov. '93  
Venue : NRCS, Kozhikode & Appangala
- Nursery Management in Spices.** Date: 14-15 February '94  
Venue: NRCS, Kozhikode & NRCS Farm, Peruvannamuzhi

#### Contact :

Mr. Johnson George K.  
Co-ordinator, (Training)  
National Research Centre for Spices  
P.O. Marikunnu, Kozhikode - 12

### XVI IUBMB CONGRESS 19 - 22 SEPTEMBER 1994, NEW DELHI

#### ACTIVITIES

Plenary Lectures - 6 Poster session - 4/day  
60 young scientists invited for special program.

#### SYMPOSIA

Molecular Biology including plant molecular biology

Protein structure, function and regulation

Endocrinology & Reproduction

Neurochemistry

Developmental biology

Nutrition & clinical Biochemistry

Molecular basis of Disease processes

Membrane biology, Immunochemistry & Immunogenetics

Biomolecular Structure

Biotechnology Applications

Biochemical education

SATELLITE SYMPOSIA : India/FAOB Region

REGISTRATION FEE (Payable in US Dollars)

	Before Aug 31 '93	Before Apr 15 '94	Before Apr 16 '94
Participants	375	400	450
Young Participants (Below 30 years)	120	175	225
Accompanying Persons	125	125	125

Contact Address : Prof. N. Appaji Rao  
Secretary General  
Department of Biochemistry, Indian Institute of Science  
Bangalore - 560 012, India  
Telephone No. : 91-812-344411 Ext. 2310  
Fax No. : 91-812-341683/91-812-369561

### INSTITUTE MANAGEMENT COMMITTEE

The third Institute Management committee met at NRCS, Kozhikode on 16th February 1993.

### FARM ADVISORY COMMITTEE

The FAC met at NRCS Farm Peruvannamuzhi on 27th January 1993 with Prof. (Dr.) K.V. Peter on the chair.

### CELEBRATIONS

Republic Day was celebrated on 26 January at NRCS. The National Flag was hoisted by Director, NRCS Kozhikode at Chelavoor Campus.

### SEVENTH ANNUAL DAY OF NRCS

The National Research Centre for Spices (NRCS) celebrated the 7th Annual Day on 1st April 1993. To commemorate the event, a function was organised at the Chelavoor campus which was attended by scientists and staff members with their families besides many distinguished persons.

### BIRD FAUNA AT NRCS, PERUVANNAMUZHI

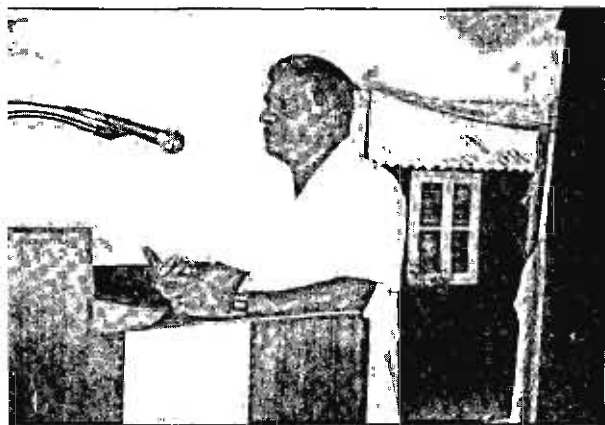
Research Farm of NRCS at Peruvannamuzhi situated at the foot hills of the Wynad range of Western Ghats are very close to Kuttiady dam is known to be a treasure trove for naturalists with its wide variety of flora and fauna and attempts are being made to document them. Mr. S. Devasahayam, Dr. (Mr. J. Rema and Mr. M. Anandaraj, Scientists of NRCS, Kozhikode have recorded 92 species of birds belonging to 35 families from the farm, including some which have not been recorded earlier from this part of Kerala. The bird life at the farm is diverse because of the wide variety of habitats available in this niche such as open patches of grass land, shrubby bushes, forests, plantations of black pepper, rubber and tree spice arecanut and coconut gardens etc. Newsletter for Birdwatchers 32(11-12) : 3-6 (1992) give more details of the study.

**"All great discoveries are made by men whose feelings run ahead of their thinking"**

(Editor)

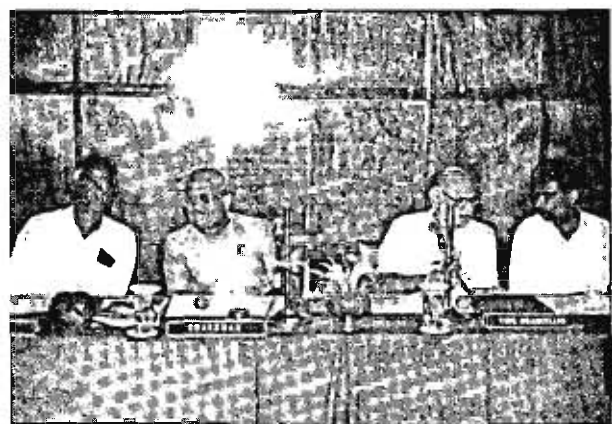


## NEWS IN PICTURES



← Dr. A. M. Michael, Vice Chancellor, KAU, Thirissur delivering the presidential address at the Seventh Annual Day celebrations of NRCS, Kozhikode, at Chelavoor campus of NRCS.

A scene from the one act play enacted during the Seventh Annual Day function.



← Sixth Annual Research Council meeting of NRCS in progress. (Left to Right) Dr. K. V. Peter, Director, NRCS, Dr. P. Rethinam, ADG(PC), ICAR, Dr. A. N. P. Ummerkutty, Vice-Chancellor, University of Calicut and Sri. S. Devasahayam, Secretary, SRC, NRCS are on the dais.

A scene from the National Seminar on Post Harvest Technology of Spices held at RRL, Thiruvananthapuram. (Left to Right: Sitting) Dr. A. Ramadasan, President, Indian Society for Spices, Sri. P. P. George, Hon'ble Minister for Agriculture & Animal Husbandary (Govt. of Kerala), Sri. B. Rachaiah, His Excellency the Governor of Kerala, Dr. K. V. Peter, Director, NRCS, and Dr. C. S. Narayanan, Head, Food Chemistry, RRL, Thiruvananthapuram.



**PERSONNEL**

**APPOINTMENTS**

Name	Designation	Posted at	Date of joining
Sri. K. Kandiannan,	Scientist (Agron.)	NRCS Kozhikode	28-5-1993
Kum. K. Padminikutty,	Jr. Clerk	"	30-3-1993
Kum. C. Manjula,	SRF under DBT Scheme	"	1-4-1993
Kum. C.K. Beena,	Jr. Steno.	KVK, Peruvannamuzhi/Kozhikode	13-3-1993
Sri. K.S. Subramanian,	Jr. Clerk	"	23-3-1993
Sri. T.C. Prasad,	Driver (Auxiliary)	"	17-5-1993
Sri. K.P. Gangadharan,	SS Gr. I (Watchman)	"	29-6-1993

**PROMOTIONS**

Name	Present position	Promoted as	With effect from	Posted at (station)
Dr. S Edison	Project Co-ordinator (Spices)	Principal Scientist	1.1.1986	NRCS Kozhikode
Dr. Y R Sarma	Sr. Scientist (Pl. Path.)	Principal Scientist	1.1.1986	NRCS Kozhikode
Dr. A K Sadanandan	Sr. Scientist (Soil Science)	Principal Scientist	1.1.1986	NRCS Kozhikode
Dr. P N Ravindran	Sr. Scientist (Genetics)	Principal Scientist	1.1.1986	NRCS Kozhikode
Mr. B Krishnamoorthy	Scientist (Pl. Breeding)	Scientist Sr. Scale	1.1.1986	NRCS Kozhikode
Mr K M Abdullakoya	Scientist (Ento)	Scientist Sr. Scale	1.7.1988	NRCS Kozhikode
Dr. T John Zacharia	Scientist (Biochem.)	Scientist Sr. Scale	14.1.1990	NRCS Kozhikode
Dr. B Sasikumar	Scientist (Pl. Breed.)	Scientist Sr. Scale	29.4.1990	NRCS Kozhikode
Mr. K Nirmal Babu	Scientist (Pl. Breed.)	Scientist Sr. Scale	31.12.1991	NRCS Kozhikode
Dr. (Mrs) J Rema	Scientist (Hort.)	Scientist Sr. Scale	14.8.1992	NRCS Kozhikode
Sri. V L Jacob	Assistant	Supdt. (KVK)	20.1.1993	NRCS Kozhikode
Sri. V Vijayan	Sr. Clerk	Assistant	20.1.1993	NRCS Kozhikode

**TRANSFERS**

Name & Designation	From	To
Sri. M. Gopalakrishnan Nair, Scientist SG(Agron.)	CPCRI RS, Kayangulam	NRCS, Peruvannamuzhi
Sri. S. Gnanakkan, JTA (T2)	NRCS, Peruvannamuzhi	SBI, Coimbatore

**RESIGNATION**

Smt. Sreeranjini Devi Pillai. C, resigned from the post of Sr. Research Fellow under DBT Scheme.

**WEDDING**

Sri. M.K. Purushu, Wash Boy, NRCS, Kozhikode with Ms. O. Sunila (23.5.1993). Congratulations and Best Wishes to the married couple!

Published by Prof. (Dr.) K.V. PETER, Director, NRCS, Kozhikode

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