



NRCS

Newsletter

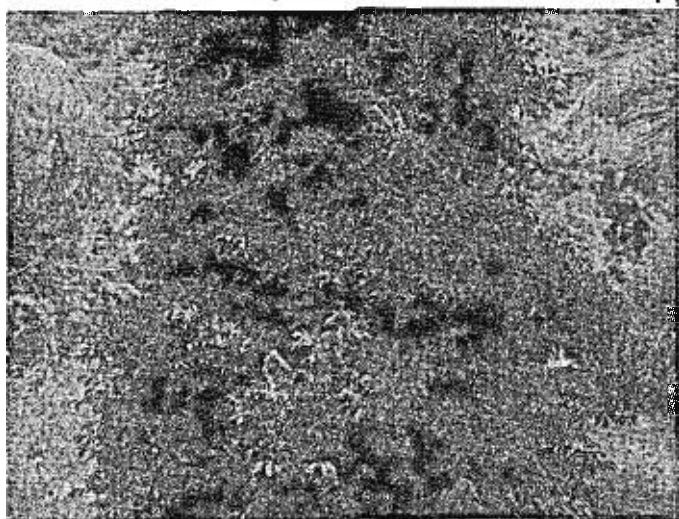
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COLONIAL HERITAGE HAUNTS NUTMEG

A perusal through the annals of history reveals an indelible relationship between a few of the trade crops and colonialism. It was a fact that colonial rulers patronised a few of the commercial crops in their colonies. Thus, crops like rubber, clove, nutmeg etc. were introduced to India during 18th century by Britishers. In majority of cases, the original introductions constituted only a few seedlings. And the present day populations in many of these crops are derived from this narrow gene pool.



Nutmeg - unaware of the impending vulnerability

Broad genetic base is the basis of any successful crop improvement programme. Crop improvement programme in many tree crops is now in full swing. And the weak genetic architecture of many of the introduced tree crops has been realised either by classical genetic variability analysis or otherwise. Recent studies done at NRCS, Kozhikode brought to light this alarming situation of genetic vulnerability in nutmeg. It is observed that vegetative propagation of a few elite mother trees originating from a narrow genetic base will usher in genetic vulnerability and the corresponding casualties in nutmeg in the long run.

It may be mentioned here that in rubber, a massive introduction of exotic germplasm was undertaken during the eighties to counter this inherent problem. A similar germplasm introduction is the need of the day in nutmeg.

STOP PRESS

The National Research Centre for Spices (NRCS) Kozhikode, has been upgraded to a full fledged Institute, **Indian Institute of spices Research (IISR), Kozhikode.**

RESEARCH HIGHLIGHTS

Biocontrol studies make further headway

Fluorescent Pseudomonads isolated from rhizophora and rhizoplane of black pepper from Eastern Ghats & Andhra Pradesh showed *in vitro* and *in vivo* inhibitory effects on *Phytophthora capsici* and root knot infection.

Trichodermas were also effective against nematodes infesting black pepper. However, among the various isolates and species of *Trichoderma*, *T. harzianum* and *T. viridae* as well as *Gliocladium virens* were found to be more promising.

Trichoderma hamatum and *Gliocladium virens* were found to grow and sporulate on coconut liquid endosperm from mature coconut which is otherwise an agricultural waste. This could be effectively utilised to mass culture these organism.

Biological control of insect pests of spices using various natural products also has shown promise. Laboratory bioassays indicated that in addition to neem products, custard apple seed extracts possessed significant antifeedant activity against 'pollu' beetle of black pepper.

Dipel, a commercial formulation of *Bacillus thuringiensis* (Bt) was also effective in causing significant mortality of shoot borer larvae of black pepper in laboratory bioassays and in preliminary field trails.

An integrated pest management package incorporating all these biocontrol components is in the anvil.

Biotechnology

A protocol is standardised to regenerate whole plants of black pepper from callus phase in 100 days.

Plant regeneration protocol is standardised from callus of cinnamon (*Cinnamomum verum*).

Induction of callus and regeneration of plantlets from four herbal spices viz. coriander, savory, anise and lavender are achieved.

Micropropagation protocol for pepper mint (*Mentha piperita*) from shoot tip cultures is also developed in addition to successful field establishment of tissue cultured cinnamon and camphor seedlings.

Organic farming

Studies on the residual effect of organic manures to ginger and turmeric crops showed that application of oil cakes improved the physical properties of the soil. Reduced bulk density, increased water holding capacity and consequent increase in root growth were evident.

Vermicompost boosts clove seedling vigour

Soil and vermicompost mixed in 1:1 proportion enhanced vigour of clove seedlings under nursery condition.

Bacterial wilt of *Kaempferia* and clove

Occurrence of bacterial wilt on *Kaempferia galanga* and on clove (*Syzygium aromaticum* L. Merr. & Perry) are reported for the first time in India from Kerala state. The causative organism of *Kaempferia* wilt is *Pseudomonas solanacearum* where as the casual organism for clove wilt is another *Pseudomonas* sp.

Bionomics of black pepper nematode

Black pepper nematode *Trophotylenchulus piperis* enters the roots of black pepper within 3 days after inoculation and completes life cycle within 55 days at room temperature (24-30°C.)

Location effect on curcumin content

Significant effect of location on curcumin content of turmeric varieties was observed when curcumin content of different tur-

meric varieties grown at 3 locations viz. Muvattupuzha, Peruvannamuzhi and Coimbatore was compared. Coimbatore samples registered the lowest curcumin content as compared to the other two locations.

Rooting in Allspice

Rooting was achieved in air layered allspice treated with hormones.

PROTOCOL FOR PROTOPLAST ISOLATION FROM BLACK PEPPER

Protocol has been developed for the first time to isolate viable protoplast from black pepper. Development of microcalli from the isolated protoplast was also achieved.

FRUITFUL FRUITING IN ALLSPICE

Allspice (*Pimenta dioica* L.) generally does not set seed under all agroclimatic conditions. Fruits being the commercial product in this crop this has been a major handicap in allspice production in the country.

Studies carried out at the National Research Centre for Spices Kozhikode, now offer a remedy to this problem. Combined application of Indole Acetic Acid (IAA) and Benzyl Adenine (BAP) (50:5) to allspice trees resulted not only in fruit setting but also in producing big sized fruits. Two birds with one shot! True to its size, the fruits contained as many as 16 seeds against 1-2 seeds in normal cases!

PUTATIVE WILD TYPE GINGER FROM WESTERN GHATS?

An accession of ginger collected from Ponnambalamedu peak of Sabarimala Hills (Western Ghats) during a collection survey in 1990 possesses many primitive features such as low yield, dwarf plant type, tendency to grow perennially, small leaves, thin, small rhizomes etc.

Occurrence of ginger from wild habitat is, however, yet to be established beyond doubt. The possibility of ginger escaping from cultivation and running wild in Western Ghat forests is also a fact.

NATURAL ENEMIES OF SCALE INSECTS OF BLACK PEPPER

A survey to record the natural enemies of scale insects of black pepper was undertaken in Coorg district of Karnataka and Lower Pulney of Tamil Nadu during March and May 1995, respectively, by Sri. S. Selvakumaran, Research Associate, NRCS, Kozhikode.

GERMPLASM COLLECTION AND CONSERVATION

In a germplasm collection survey carried out at different estates of Wyanad district of Kerala by Mr. B. Krishnamoorthy, Scientist SG (Plant Breeding) and Mr. Johnson K. George, Scientist SS (Genet. & Cytogenet.), NRC (Spices) Kozhikode, twelve accessions of *Cinnamomum malabattrum*, Three *Cinnamomum verum*, one *Myristica beddomeii* were collected in addition to seeds and laterals of *Piper sugandhi*.

In another collection survey carried out in South Kanara and Kodagu districts of Karnataka by Dr. P. N. Ravindran, Principal Scientist (Genetics) and Mr. B. Krishnamoorthy, Scientist SG (Plant Breeding), nine nutmeg accessions, one *Myristica beddomeii* and one *Cinnamomum verum* were collected besides two vanilla accessions.

A dwarf clove seedling (2 yr. old) and 6 king clove plants were also located in a private estate in South Kanara.

Two accessions of turmeric from Western U. P were added to the turmeric gene bank. (Courtesy: VPKAS Almora).

SPARING SPICES GERMPLASM

The germplasm repository of NRC (Spices) conserves the germplasm of various spices, in certain cases the largest in the world.

Germplasm materials of some of the spices were supplied to different research establishments free of cost. Twenty two accessions of ginger and one accession of turmeric were supplied to VPKAS, Almora whereas HRS, Peechipara (TNAU) received twenty

ginger accessions. Dept. of Plantation Crops & Spices (KAU, Trissur) was given 5 turmeric and 1 ginger accessions. Eleven accessions of turmeric were allotted to Himachal Pradesh Agricultural University, Palampur. Six ginger accessions were also sent to Queensland in exchange.

PARTICIPATION IN SYMPOSIA, SEMINARS AND TRAINING

Dr. K. V. Peter.

- 3rd National Meeting of Plant Genetic Resources Coordinators at BARC, Dhaka, 10-12 January, 1995.
- Hort-National 1995 organised by Kerala Horticultural Project (KHDP) and chaired sessions on "Seed production" and "Processing technology", 25 January, 1995, Thiruvananthapuram.
- Workshop of All India Coordinated Vegetable Improvement Project at IGUAT, Raipur and National seminar on 'Recent trends in vegetable production', 2-5 Feb. 1995 Raipur, M. P.

Mr. B. Krishnamoorthy

- Exchange and Quarantine of Plant Genetic Resources, 10-24 January, 1995, NBPGR, New Delhi.

Dr. K. Sivaraman

- National symposium on 'Agriculture in relation to environment', 16-18, January, 1995, IARI, New Delhi.

Ms. Geetha S. Pillai, Sajina A, John C. Zachariah, Mini P. Mathai, Minoo Divakaran

- 7th Kerala Science Congress, 27-29 January 1995, Palakkad.

Dr. Y. R. Sarma

- Global conference on "Recent advances in plant disease and their management", 12-17 February, 1995, Udaipur.

Mr. M. Anandaraj

- Global conference on 'Recent advances in plant disease and their management', 12-17 Feb., 1995, Udaipur.
- Third National conference on Mycorrhiza, 13-15, 1995, Tata Energy, Research Institute, New Delhi.

Dr. T. John Zachariah

- Workshop on 'Quality upgradation of spices - role of irradiation', 20-21 February, 1995, Spices Board, Cochin.

Mr. S. Hamza

- Short term training course on 'Analytical techniques and instrumentation on water quality management', 6-10 March, 1995 CWRDM, Kozhikode.

Dr. K. V. Ramana / Mr. Santhosh J. Eapen / Dr. P. Sundararaj

- Ninth biennial group meeting of All India Co-ordinated Research Project on 'Plant parasitic nematodes with integrated approaches for their control', 22-23 March 1995, IARI, New Delhi.
- National symposium on 'Nematode problems of India - An appraisal of nematode management with ecofriendly approaches and biocomponents', 24-26 March 1995, IARI, New Delhi.

Mr. S. Anke Gowda

- Workshop on 'Theory and methodology for physiological and molecular basis of stress resistance in crop plants' 3-24 April, '95 Water Technology Centre, IARI New Delhi.

Dr. A. K. Sadanandan

- National symposium on the use of rock phosphate for sustainable agriculture, 24 - 25 April, 1995, University of Agricultural Science, Bangalore.

Mr. K. S. Krishnamoorthy

- Extraction and quantification of plant hormones, 15-26 May, 1995 IIHR, Bangalore

Ms. Mini Kallil

- Training on various aspects of rearing scale insects of black pepper and their natural enemies, 14-15 June, 1995, Directorate of Biological Control, Bangalore

Mr. K. Nirmal Babu, Anandaraj, M. Minoo Divakaran, Mini P. Mathai, Shaji Philip, Bindu, M. R., Sajina A., Geetha S. Pillai.

- All India symposium on 'Recent advances in biotechnological application of plant tissue and cell culture', 22-24 June, 1995, CFTRI, Mysore.

Guest Lectures delivered / Invited papers presented

Anandaraj, M., Sarma, Y. R. and Ramachandran, N. (1995) *Phytophthora* infection in black pepper in relation to crop phenology. Presented at the global conference on 'Recent advances in plant diseases and their management', 12-17 February, 1995, Udaipur.

Devasahayam, S. (1995) Insect pest management in spices. Refresher training course in plantation crops. 11th January, 1995 CPCRI, Kasaragod.

Devasahayam, S. (1995). Insect pest outbreaks - causes, forecasting and surveillance. PG students of Govt. Arts College, Madapally, 20th February 1995 at NRCS, Kozhikode.

Hegde Rajendra and Korikanthimath V. S. (1995). Cardamom - a ecofriendly plantation crop. Presented at the one day seminar on 'Economic development of Kodagu district' 10th February 1995 at FMC Sr. College, Madikeri.

Korikanthimath, V. S. and Hegde Rajendra (1995). Efficient farming systems of Kodagu district. Paper presented in the one day seminar on 'Economic development of Kodagu district', 10th February 1995, at FMC Sr. College, Madikeri.

Nirmal Babu, K., Samsudeen, K. and Ravindran, P. N. (1995). Biotechnological approaches for crop improvement in ginger (*Zingiber officinale* Rosc). Presented in the All India symposium on 'Recent advances in biotechnological application of plant tissue and cell culture', 22-24, June 1995, CFTRI, Mysore.

Peter, K. V. (1995). Recent trends in vegetable spices production. Presented in the National symposium on vegetable improvement, 2-5 February, 1995, IGUAT, Raipur, M.P.

Peter, K. V. (1995). Agriculture development-Export crops. In: 'Develop Malabar' Seminar organised by Malabar Chamber of Commerce, 8th March 1995, Kozhikode.

Rema, J. (1995). Production technology of tree spices and propagation technique in spices, 11 January, '95, CPCRI, Kasaragod.

Rema, J. (1995). Introduction to Biotechnology - M.Sc. Zoology students of Govt. College, Madapally on 20th February, 1995 at NRCS, Kozhikode.

Sadanandan, A. K. (1995). "Water management for black pepper production" 24th February, 95, CWRDM, Kozhikode.

Sadanandan, A. K. and Hamza, S. (1995). Use of rock phosphate for sustainable pepper production. National symposium on the use of rock phosphate for sustainable agriculture, 24-25th April, 1995, University of Agricultural Science, Bangalore.

Santhosh J. Eapen and Venugopal, M. N. (1995). Field evaluation of *Paecilomyces lilacinus* and *Trichoderma sp.* in cardamom nurseries for the control of root knot nematode and rhizome rot disease. National symposium on nematode problems of India, 24-25 March, 1995, IARI, New Delhi.

Shaji Philip, Bindu, M. R., Anandaraj M., and Sarma, Y. R. (1995). Callus induction and regeneration in different cultivars of *Piper nigrum*. All India symposium on 'Recent advances in biotechnological application of plant tissue and cell culture', 22-24 June '95, CFTRI, Mysore.

Sarma, Y. R. (1995). Back ground paper on IPM strategies in black pepper - present status and future strategies, 20th April, 1995, Spices Board, Cochin.

Sarma, Y. R. (1995). 'Disease management in spice crops'. 11th January, 1995 CPCRI, Kasaragod.

Sundararaj, P., Ramana K. V. and Santhosh J. Eapen (1995). Observations on the life cycle of *Trophotylenchulus piperis* Mohandas, Ramana and Raski in root knot of black pepper (*Piper nigrum* L.). National symposium on Nematode problems of India', 24-26th March, 1995, IARI, New Delhi.

MEETINGS

Dr. K.V.Peter

Award ceremony of Calicut Flower Show, Kozhikode, 29th January, 1995.

AGMARK Exhibition Felicitation Meet, Kozhikode, 30th January, 1995.

World Spices Congress, Spices Board, Cochin, 15-17 February 1995.

Inauguration of "Onfarm water management" CWRDM, Kozhikode, 20th February, 1995.

Technology Clinic on Floriculture organised by STEC, Kozhikode, 13th March, 1995.

Calicut district Agricultural Seminar Quilandy, 18th March, 1995.

Institute Management Committee, NRCS, Kozhikode, 16th March, 1995.

General Council Meeting, Kerala Agricultural University, Trissur, 24 March, 1995.

R&D Committee of Spices Board and meeting of Spices Board, Cochin, 25th March, 1995 and 2-3 June, 1995.

Plenary Session of Annual Staff Research Council meeting of CPCRI, Kasaragod, 3rd April 1995.

Scientific Panel Meeting (Horticulture), ICAR, New Delhi, 26-28 April, 1995.

Sub-Committee of Central Variety Release Committee, (Horticultural Crops) to finalise/update standards and norms for notification, ICAR, New Delhi, 15th May, 1995.

Meeting organised by Spices Board, Cochin for discussion with Member, (Agriculture) Planning Commission, Government of India, Cochin, 30th May 1995.

Dr. Y.R.Sarma

Meeting on "Problems of Export in Spices" convened by Horticultural Commissioner, Govt. of India, Spices Board, Cochin, 3rd February 1995.

DBT pannel meeting and presentation of report on Ad-hoc Scheme on Biotechnological approaches on development of *Phytophthora* resistance in black pepper, at the Dept. of Biotechnology, New Delhi, 1-2 March, 1995.

Group meeting on Biocontrol and botanical pest control methods, SPIC foundation, Madras, 6th March, 1995.

Annual Research Council meeting in ICRI, Myladumpara, 29-30 March, 1995.

Pepper Technology Meeting convened by Secretary, Agriculture, Govt. of Kerala, 6th June, 1995.

Dr. K. Sivaraman

Meeting on "Problems of export in spices" convened by Horticultural Commissioner, Govt. of India, Spices Board, Cochin, 3rd February 1995.

Mr. M. V. Prasad

Group meeting organised by Directorate of Cocoa, Arecanut and Spices Development' on 18th April '95 at NRCS, Kozhikode.

Phytophthora foot rot management training organised at KDC Bank Ltd. Kozhikode by DCASD on 27th April 1995 and at Thodupuzha on 28th April 1995.

PUBLISHED ARTICLES

Devasahayam, S and Abdulla Koya, K. M. 1994. Natural enemies of major insect pests of black pepper. *Journal of Spices and Aromatic Crops*, 3: 50-55.

Devasahayam, S and Abdulla Koya, K. M. 1994. Field evaluation of insecticides for the control of mussel scale (*Lepidosaphes piperis* Gr.) on black pepper (*Piper nigrum* L.). *Journal of Entomological Research*, 18: 213-215.

Geetha, S.P., Manjula C., and Sajina, A. 1995. *In vitro* conservation of genetic resources of spices. *Proc. 7th Kerala Science Congress (Abstr.)* PP.330-335.

Korikanthimath, V.S., Hegde Rajendra and Sivaraman, K. 1995. Integrated input management in coffee based spices multistoreyed cropping system. *Indian Coffee*, 59: 3-6.

Korikanthimath, V.S., Hegde Rajendra, Venugopal, M. N., Sivaraman, K. and Krishnamoorthy, B. 1994. Multistoreyed cropping system with coffee, clove and pepper. *Indian Coffee*, 58: 3-6.

Krishnamoorthy, B and Rema, J. 1994. Three promising morphological variants in clove (*Syzygium aromaticum* L. Merr. & Perry) from Tamil Nadu, India. *Journal of Spices and Aromatic Crops*, 3: 168-69.

Krishnamoorthy, B., and Rema, J. 1994. Air layering in cassia (*Cinnamomum aromaticum* Nees). *Journal of Spices and Aromatic Crops*, 3: 48-49.

Premkumar, T., Devasahayam, S and Abdulla Koya, K. M. 1994. Pests of spice crops. In : Chadha, K. L. and Rethinam P. (Eds.) Advances in Horticulture (Vol.10) Plantation and Spice Crops. Part 2. Malhotra Publishing Houses, New Delhi, pp.787-823.

Rema, J., John C. Zachariah and Mini P. Mathai. 1995. *In vitro* plant regeneration of economically important *Piper* species (*P. nigrum* L.; *P. betle* L.; *P. longum* L.; *P. chaba* Hunt). Proceedings of 7th Kerala Science Congress (Abstr.). pp. 321-324.

Ramana, K. V. and Santhosh J. Eapen. 1995. Nematode problems of spices and condiments. In: Nematode pest management - An appraisal of ecofriendly approaches (Eds.) G. Swarup, D. R. Dasgupta and J. S. Gill, NSI, New Delhi. pp. 263-270.

Sasikumar, B and Veluthambi, K. 1994. Kanamycin sensitivity of cultured tissue of *Piper nigrum* L. Journal of Spices and Aromatic Crops, 3: 158-160.

Shaukathali, T. K. and Ramadasan, A. 1995. Optimum conditions for *in vitro* assay of nitrate reductase in leaves of black pepper (*Piper nigrum* L.) Ann. Plant Physiol., 9: 64-66.

Thankamani, C. K., Sivaraman, K., Kandianan, K. and Peter, K. V. 1994. Agronomy of tree spices (clove, nutmeg, cinnamon and allspice) - A review. J. Spices and Aromatic Crops, 3: 105-123.

POPULAR ARTICLES

Hegde Rajendra. 1995. Fuel efficient fuel wood ovens from Astra. Shakti (Kannada daily), Madikeri. 19.2.1995

Hegde Rajendra and Korikanthimath V. S. 1995. Important cultural operations in cardamom. Spice India (Kannada), 8 (5) : 18-19.

Korikanthimath, V. S. and Hegde Rajendra. 1995. Methodology of selection of elite lines and rapid clonal multiplication of cardamom. Adike Patrike (Kannada), Dec. 1994, 9-11.

Krishnamoorthy, B. 1995. Prospects for tree spices cultivation in Shevaroy and Kolli hills of Tamil Nadu. Spice India (Tamil), 8(3) : 31-33.

Krishnamoorthy, B. 1995. Dwarf clove. Spice India (Tamil), 8 (3) : 9.

Krishnamoorthy, B. and Rema, J. 1995. Nutmeg and Cinnamon. Souvenir of Calicut Flower Show. pp.9-14.

Sasikumar, B. 1995. Sex segregation in nutmeg. Spice India (Mal.), 8 (3) :3.

Sasikumar, B. 1995. Thou shalt not touch the sacred grove! Spice India (Mal.), 8(6) : 14-15.

Sasikumar, B. 1995. Biodiversity and Biotechnology. Yojana (Mal.), 23(9):5-6 & 29.

Sadanandan, A.K. and Johny, A.K. 1995. Note on the new varieties in spices. 'The Hindu', 7th June 1995.

Thankamani C.K, Sivaraman, K. and Kandianan, K. 1995. Vesicular Arbuscular Mycorrhizae -Environment friendly fungi for improving soil fertility. Spice India (English), 8(1):25.

TECHNICAL PUBLICATIONS/REPORT

NRCS Annual Report - 1993-94

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

NRCS Research Highlights - 1994-95

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

Post Harvest Technology of Spices

(Proceedings of the National Seminar)

-Spices Board, Cochin and Indian Society of Spices, Kozhikode. (Eds.) C.S. Narayanan *et al.* 1993

NRCS CURRENT NEWS

A new monthly inhouse publication on current inside news and events in NRCS has been started from May 1995 onwards from NRCS, Kozhikode.

HONOURS / AWARDS

Dr. K.V.Peter, Director, NRCS, Kozhikode bagged the **HARBHAJAN SINGH AWARD** instituted by the Indian Society of Vegetable Sciences for the best paper published in the Journal of Vegetable Sciences during 1993.

Ms. Geetha S. Pillai, Research Assistant, DBT Scheme at NRCS, Kozhikode received the **YOUNG SCIENTIST AWARD** for the year 1995 of the State Committee on Science, Technology and Environment (STEC), Govt.



Geetha S. Pillai

of Kerala for the paper entitled "*In vitro* conservation of genetic resources of spices" jointly authored with C. Manjula and A. Sajina and presented in the 7th Kerala Science Congress held at Palakkad 27-29, January 1995.

JAWAHARLAL NEHRU AWARD for the best Ph. D. thesis for the year 1992 instituted by ICAR, New Delhi has gone to **Dr. P. Sundararaj**, Reserch Associate in ICAR Scheme at NRCS, Kozhikode.



P. Sundararaj

Dr. Sundararaj worked on the 'Bioecology and management of lesion nematode *Pratylenchus filipjev* 1936 in sugarcane.

Sri. K. S. Sreekumaran, -Sr. Clerk, NRCS, Kozhikode passed the **Audit & Accounts Examination** of Indian Council of Agricultural Research for inservice candidates conducted in April 1995.

STUDY CIRCLE

The NRCS Study Circle met eight times during Jan-June 1995 and approved 5 research papers and 1 review article for publication. The study circle of the Cardamom Research Station, Appangala had also met once.

PH.D. STUDIES

Sri. R. Ramakrishnan Nair, Scientist (Genetics & Cytogenetics) and **Smt. N. K. Leela**, Scientist, Sr. Scale (Org. Chem.) have joined for Ph.D. programme at IIT, Kharagpur and RRL, Thiruvananthapuram, respectively.

DISTINGUISHED VISITORS

Mr. Harshavardhan Patil, State Minister for Agriculture, Water & Soil Conservation, Govt. of Maharashtra visited NRCS, Kozhikode from 11-12 May 1995. The other important visitors during the period were Sri. B.S.V. Murthy, Deputy Collector, Customs & Central Excise, Dr. A. Rajan, Dean, College of Veterinary and Animal Sciences, KAU, Trissur and Sri. S. S Rana, Director (P), (ICAR), New Delhi;

Dr. S. Rangarajan, Director (Rtd.) Meteorological Institute, Pune. Mr. Justice Jusha Nañavāty, Chief Justice, Karnataka High Court, Bangalore and Dr. S. Krishnamoorthy IG of Police (Training), Bangalore visited the Cardamom Research Station, Appangala.

RESEARCH COUNCIL MEETING

The Eighth Annual Research Council Meeting of NRCS, Kozhikode was held

during 21-23 April, 1995. The progress of work in thirty three research projects and three supportive research programmes were presented and discussed and the technical programmes for the current year were finalised. Seven research projects funded by ICAR and DBT separately were also reviewed. Five new projects were approved. In addition to the scientists of the institute, expert scientists in respective fields and officials from development organizations also attended the meeting. Dr. P. Rethinam, ADG (PC) was the general chairman of SRC. The following important recommendations were approved in the SRC to be passed on to the extension agencies.

1. Production of disease free planting materials in black pepper: The nursery mixture is to be sterilized with soil solarisation and fortified with VAM and mixture of *Trichoderma* sp. and *Gliocladium virens*.
2. Release of one ginger variety (Acc. No.64) and two value added turmeric varieties (Acc No.360 and Acc.No. 361).
3. Homestead cultivation of cardamom in Coorg district

GROUP MEETING ON VIRUS DISEASES OF PEPPER AND CARDAMOM

A group meeting on the virus diseases of black pepper and cardamom was held at the National Research Centre for Spices, Kozhikode from 13-14 June 1995. The meeting convened by Dr. S. Edison, Project Coordinator (Spices) was attended by virologists and molecular biologists from S.V. University, Tirupati; MKU Madurai; UAS Bangalore; CPCRI RS Kayangulam and ICRI Myladumpara besides the plant protection group from NRCS, Kozhikode. Status papers on viral diseases of both the crops were presented in the meeting and discussed. The meeting decided to propose an ad-hoc research scheme on stunted disease of black pepper.

NEW PROJECT SANCTIONED

ICAR Ad-hoc Scheme on 'Biochemical characterisation of ginger and turmeric

TRANSFER OF TECHNOLOGY

Demonstration of biocontrol programme

Large scale demonstration trials on biocontrol to check root rot disease of pepper, cardamom and ginger have been taken up in various farmers field by NRCS, Kozhikode.

Field and nursery visit

Dr. Y. R. Sama, Principal Scientist (Plant Pathology) NRCS, Kozhikode visited pepper nurseries (alongwith Mr. E. Velappan, Director, DCASD, Kozhikode) at District Agricultural Farm, Taliparamba, and Central State Farm, Aralam.

Instant training on spices.

A group of Ph.D students from the Dept. of Plantation Crops & Spices, KAU, Trissur were briefed on breeding and in vitro propagation techniques of black pepper & tree spices.

Eight progressive farmers from Goa who visited the Cardamom Research Centre at Appangala were given a one day training on scientific cultivation of cardamom.

Inhouse training

Mr. K. M. Prakash, Training Asst., KVK, Peruvannamuzhi was trained on 'Vermitechnology' on 30th March 1995 at NRCS Cardamom Research Station, Appangala.

Training on onfarm processing of spices.

A two day training on onfarm processing of spices was organised during 8-9 February 1995 at NRCS, Kozhikode. Three state govt. officers participated in the programme.

Nursery Management of Spices.

Another two day training programme on Nursery Management of Spices was organised at NRCS, Kozhikode/Appangala from 14-15 February 1995. A total of nine agricultural/horticultural officers from different states participated in the training.

Production and supply of quality planting material

(period: January - June 1995)

item	Kozhikode	Appangala
Black pepper (rooted cuttings)	15000	3192
Clove	800	-
Nutmeg	1000 seedlings	-
	600 grafts	-
Cinnamon	200	-
Cardamom	-	26000

Radio talks

Dr. Rajendra Hegde: Pest management in cardamom 18th April, AIR, Madikeri
 Dr. Rajendra Hegde: Tissue culture in Cardamom - Merits and demerits, 20th March 1995, AIR, Madikeri

Dr. K.V.Peter : Planning a spices garden in our home, 25th March 1995 - AIR, Kozhikode.

Dr. A.K.Johny : Manuring of tree spices, 7th June 1995, AIR, Kozhikode

Ms. Mini P. Mathai : Advanced propagation method in black pepper, 21 June 1995, AIR, Kozhikode.

Dr. M. ARAVINDAN TAKES OVER AS KVK CHIEF

Dr. M. Aravindan, an eminent agricultural educationist and a veterinary scientist took over the leadership of KVK Peruvannamuzhi. Dr. M. Aravindan joined as CTO KVK, in March 1995.

FARM ADVISORY COMMITTEE

The Farm Advisory Committee met twice (Peruvannamuzhi and Kozhikode) during the period under the chairmanship of Dr. K.V.Peter, Director, NRCS, Kozhikode. Scientists, Asst. Administrative Officer and Asst. Accounts Officer participated in the meeting. Various issues relating to farm functioning were discussed and actions formulated.

CELEBRATIONS

Foundation day celebration

The ninth foundation day of NRCS, Kozhikode was celebrated on first April 1995. Dr. K. V. Peter, Director, NRCS, presided over the function. Sri. U.K.S Chauhan, District Collector, Kozhikode was the chief guest. Rt. Rev. Mar Ephraem, Arch Bishop, Thiruvananthapuram, Dr. E. J. James, Director, CWRDM, Kozhikode, Mr. E. Velappan, Director, DCASD, Kozhikode, Dr. Prabhakaran Nair, Mr. Thankappan, etc. offered felicitations.

Republic Day

Republic day was celebrated on 26th January 1995.

JOURNAL OF SPICES & AROMATIC CROPS

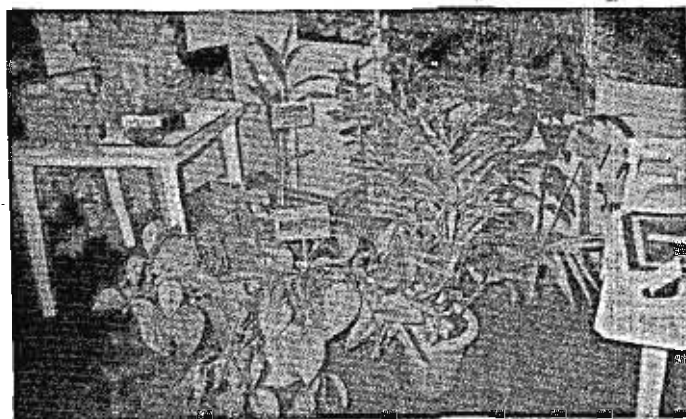
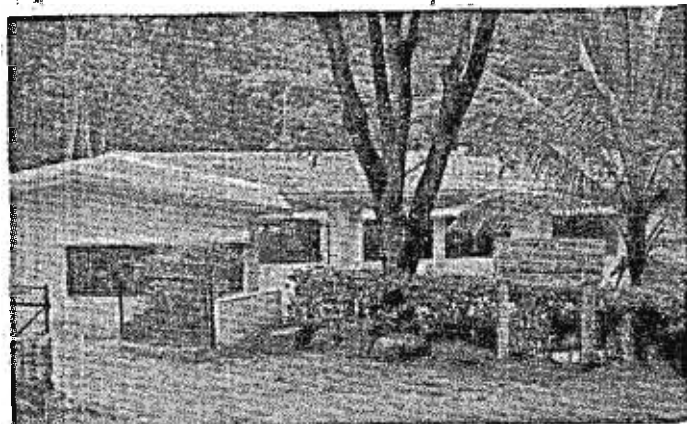
Journal of Spices and Aromatic Crops is the official publication of the Indian Society for Spices. The editors of the journal welcome review articles, original research papers, short communications and book reviews for publication on any of spices, aromatic, medicinal and related plants. For format and other details, refer to a recent issue of the journal or write to the Editor, Journal of Spices and Aromatic Crops, C/o IISR, Kozhikode-12, Kerala.

NEWS IN PICTURES



A view of the foundation day celebration of NRCS, Kozhikode. Sri. U.K.S. Chauhan, District Collector, Kozhikode, Sri. E. Velappan, Director, DCASD, Kozhikode, Rev. Mar. Ephream, Archbishop, Thiruvananthapuram and Dr. K. V. Peter, Director, NRCS, Kozhikode are seen.

A view of the new building of NRCS Cardamom Research Centre, Appangala



A scene of the NRCS stall from the international ARG-EXPO '95 held at Pragati Maidan, New Delhi.

COMING EVENTS

Popular Lecture series in Biotechnology

A series of 3 popular lectures in frontier areas of biotechnology for school and college students will be organised during September 1995 at Kozhikode.

National Seminar on Spices Biotechnology

The Indian Society for Spices, Kozhikode will be organising a National Seminar on 'Biotechnology of Spices and Aromatic Plants' (BIOSAAP) during April '96 at Kozhikode. This will be the 4th National Seminar the society will be conducting.

Forthcoming Training Programmes

Sl. no.	title	seats	period	venue	contact
1.	Spices Production Technology	20	20-25 Nov. 1995	Kozhikode & Appangala	Director, IISR P.B.No.1701, Marikunnu P.O Kozhikode-673 012 Kerala.
2.	Onfarm Processing of Spices	20	7-8 Feb. 1996	Kozhikode & Peruvannamuzhi	-do-
3.	Nursery Management of Spices	20	14-15 Feb. 1996.	-do-	-do-

PERSONNEL

APPOINTMENTS

Name	Designation	posted at	date of joining
Sri.P.Rajan	Field Asst.(IPDS)	NRCS, Peruvannamuzhi	11.1.1995
Sri.P.Prakash	Driver(DBT)	NRCS, Kozhikode	15.2.1995
Sri P.D.Jose	SSGr.I (Animal Attendant)	KVK, Peruvannamuzhi	15.2.1995
Sri. B.Satheesan	SSGr.I (Hort.Attendant)	KVK, Peruvannamuzhi	1.2.1995
Sri. Ramanna Gowda	Driver (KVK)	"	13.2.1995
Ms.T.P.Sreeja	Sr.Res. Fellow	AP Cess Fund Scheme NRCS, Kozhikode	16.3.1995
Mr. M.S.Sivadasan	SSGr.I(Village Work Attendant)	KVK, Peruvannamuzhi	4.4.1995
Ms. S.M.Lakshmi	Sr. Res. Fellow (DBT)	NRCS, Kozhikode	27.4.1995
Mr. P.Sundaran	Jr. Clerk(KVK)	"	19.5.1995
Mr. T.R.Sadasivan	Pump Operator (A)	NRCS, Peruvannamuzhi	22.5.1995
Mr. N.Sreejith	Tech. Asst.(T-II-3) Computer- Programmer Cum-Operator	NRCS, Kozhikode	1.6.1995

PROMOTIONS

Name & Designation	Promoted as	With effect from
Mr.Johnson K. George, Scientist (Genetics & Cytogenetics)	Scientist Sr, Scale	28.2.1993
Mr. Santhosh J. Eapen, Scientist (Nematology)	Scientist Sr. Scale	7.3.1994
Ms..N.K.Leela, Scientist (Org.Chem.)	Scientist Sr. Scale	2.6.1994
Dr. A.K.Johny, Tech. Officer	Sr. Tech.Officer	1.7.1994
Sri. K..S. Sreekumaran, Jr. Steno	Sr. Clerk	20.1.1995
Sri. K.P. Premachandaran, SSGr.I	JTA (T1)	25.4.1995

RESIGNATION

Sri. Regy Luckose, Scientist (Genetics & Cytogenetics) NRCS CRS Appangala resigned from Council's service.

WEDDINGS

Kum. K. Padminikutty,	Jr. Clerk, NRCS, Kozhikode	with	Mr. K. Honnappa	on 9.2.1995
Kum. Chandravally	JTA (T1), NRCS, Kozhikode	with	Mr. Mr. Viswanathan	on 7.4.1995
Mr. K. S. Sreekumaran	Sr. Clerk, NRCS, Kozhikode	with	Ms. T.R.Ragini	on 12.5.1995
Mr.P.P.Rajan	Research Fellow, NRCS, Kozhikode	with	Ms. P.V. Reena	on 11.6.1995

Congratulations and Best Wishes to the Married Couples!

Published by Dr. K.V. Peter, Director, NRCS, Kozhikode

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