



NRCSS

Newsletter

Volume : 5 (2)

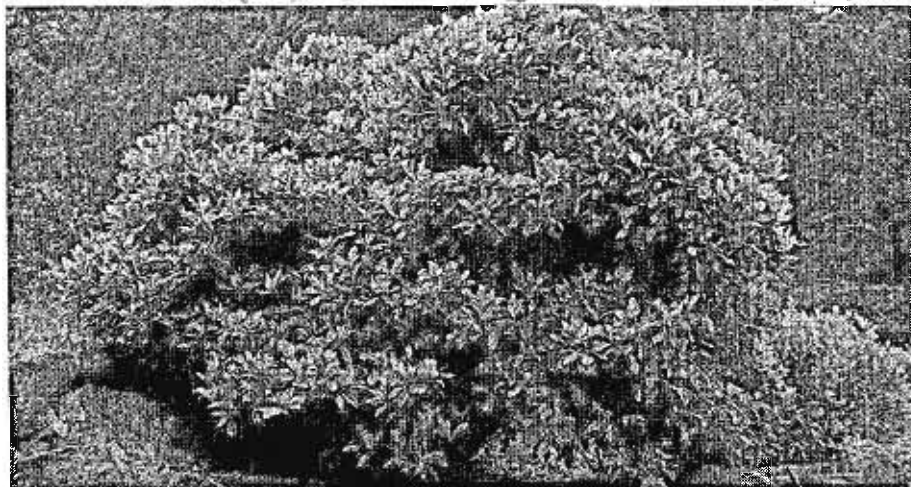
July - December 1994

DWARF CLOVE IN THE OFFING

Green revolution has been the direct aftermath of the dwarfing genes discovered in wheat and rice during the sixties.

Dwarfism has its advantage in perennial species too. Besides facilitating easy and less expensive harvesting, dwarf tree genotypes enable to increase the plant population per hectare and to develop novel intercropping patterns.

Clove (*Syzygium aromaticum* M. & P.) is an evergreen multibranched tree, reaching a height of 15-20 metres; planted at a spacing of 7 x 7m. Clove buds are harvested by hand picking the flower buds. Harvesting of clove is a relatively labour intensive process and scaffolding is a must for harvesting the buds from the extreme tip of the branches.



The dwarf clove variant located at Kanyakumari district, Tamil Nadu

India produces only about 1500 MT of clove from an estimated area of 1855 ha whereas the domestic consumption of clove in our country is 4000 MT per annum. This difference in production and consumption is met through import of clove from other producing countries.

Crop improvement in clove would go a long way in increasing clove production in India. Better crop ideotypes in clove having compact canopy size, which facilitate easy harvesting is one aspect that demands scientific attention. The dwarf clove genotype located by the scientist of NRCSS, Kozhikode attains special significance in this context. This natural variant (2 Nos.) was spotted in a large private clove garden of Kanyakumari district, Tamil Nadu.

This dwarf gene source may usher in a new dawn in clove production in the country as the dwarfing genes 'Dee-Gee-Woo-Gen' and 'Norin 10' have revolutionized rice and wheat production, respectively over the world.

RESEARCH HIGHLIGHTS

Genetic vulnerability in nutmeg:

In a progeny population of 16 elite mother trees of nutmeg, significant genetic variation for yield and other attributes was found lacking. The cause of this poor genetic variability in the nutmeg population was attributed to the narrow gene pool of the original mother trees from which the present day nutmeg population had evolved.

Biocontrol studies:

Observation on the combined effect of Vesicular Arbuscular Mycorrhizae (VAM) along with *Trichoderma hamatum* and *Gliocladium virens* on suppressing root rot of black pepper kindles hope.

Biotechnology:

Micropropagation and/or callus regeneration protocols for various spices and aromatic crops such as vanilla, large cardamom, turmeric, asparagus, basil, sage, celery, mint, savory, oregano etc. were standardised besides encapsulation technique of somatic embryos of ginger.

DRIS in black pepper:

A novel nutritional diagnosis technique viz. Diagnosis Recommendation Integrated System (DRIS) is developed in black pepper from tissue analysis.

ELISA Test confirms the role of CMV in mosaic disease of long pepper:

ELISA studies carried out in collaboration with S. V. University, Tirupati confirmed the role of CMV (Cucumber Mosaic Virus) in mosaic symptoms of *Piper longum*.

GERMPLASM COLLECTION AND CONSERVATION

In a tree spices germplasm collection survey carried out by Mr. B. Krishnamoorthy, Scientist Selection Grade (Plant Breeding) at Ashambo hills of Kanyakumari district (Tamil Nadu), two rare, dwarf, bushy clove trees (16 years old) and one king clove (bold clove) (about 25 years old) were located and the accessions collected.

RHIZOME ROT OF TURMERIC RAISES NO PROBLEM

A survey was conducted in Thiruvananthapuram, Kollam and Alapuzha districts of Kerala on the incidence of rhizome rot of turmeric by Dr. T. G. Nageshwara Rao, Scientist, Sr. Scale (Plant Pathology), NRCS, Kozhikode. The survey revealed a meagre one to five per cent incidence of rhizome rot of turmeric in these areas. Earlier surveys on other districts of Kerala also indicated a very low incidence of the disease.

Rhizome rot disease is a major production constraint of turmeric in Andhra Pradesh and Tamil Nadu.

SURVEY ON BIOCONTROL AGENTS OF SCALE INSECTS

A survey conducted by Sri. S. Selvakumaran, Research Associate, (ICAR Scheme) NRCS, Kozhikode, during December 1994 in Wynad and Idukki districts of Kerala to record incidence of natural enemies

of scale insects of black pepper has identified *Pseudoscymnus* sp. (Coleoptera), *Cybocephalus* sp. (Coleoptera), *Encarsia lounsburyi* (Hymenoptera) and an unidentified chrysoiid (Neuroptera), on *Aspidiotus destructor* in Wynad district and *Chilocorus circumdatus* (Coleoptera) on *Lepidosaphes piperis* in Idukki district as the natural enemies of scale insects. These predators/parasites appear to offer great potential in the control of scale insects of black pepper.

PARTICIPATION IN SYMPOSIA, SEMINARS AND TRAINING

Dr. P. N. Ravindran

- International Symposium on Kerala Studies. AKG Centre for Research & Studies, Thiruvananthapuram, 26-30th August, 1994.

Mr. S. Devasahayam

- Refresher course in Applied Entomology, University of Calicut, 5-6 October, 1994.

Dr. Y. R. Sarma

- Seminar at Coffeeland, Sakleshpur, Karnataka, October 30, 1994.

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

- International Symposium on Plantation Crops (PLACROSYM-IX), November 30-December 3, 1994.

Guest lectures delivered/Invited papers presented

Devasahayam, S. (1994). Insect pests of spices and their management. Talk delivered for refresher course in Applied Entomology organised by University of Calicut, 5-6 October, 1994.

Peter, K. V. (1994). Research and Development of Spices-Paper presented at the symposium organized by ISAS, New Delhi at KAU, Trissur, December 15, 1994.

Peter, K. V. (1994). Emerging Trends in Spices Research - Key

note address-First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, 30th Nov. - 3rd Dec. 1994.

Peter, K. V. (1994). Genetic Resources of Spices. Talk delivered at NBPGR Regional Station, Trissur, 23rd September, 1994.

Peter, K.V. (1994). Spices Research - An Overview. Talk delivered at SPIC Science Foundation, Madras, 27 October, 1994.

Peter, K. V. (1994). Organic Spices - Talk delivered to farmers at Koduvally, Kozhikode, 9 September, 1994.

Sarma, Y.R. (1994). Disease management of black pepper. Talk delivered at Coffeeland, Sakleshpur, 3rd October, 1994.

MEETINGS

General Council Meeting of KAU, Trissur, 14 June, 22 July, 19 November, 1994.

- Prof. K. V. Peter

Task Force Meeting of DBT, New Delhi, 4-5 July, 1994.

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

Scientific Panel Meeting of Horticulture, New Delhi, 5-8 July, 1994.

- Prof. K. V. Peter, Dr. Y.R. Sarma, Dr. G. N. Dake, Dr. M. N. Venugopal, Mr. V. S. Korikantimath

Spices Board Meeting, Kochi, 30 July, 20 December, 1994.

- Prof. K. V. Peter

Brain Storming session at University of Calicut organised by DST, New Delhi, 6 September, 1994.

- Prof. K. V. Peter

Research Advisory Committee Meeting of National Horticultural Research and Development Foundation, New Delhi, 28 September 1994.

- Prof. K. V. Peter

National Seminar on Garlic and Onion, New Delhi, 28-29 September 1994.

- Prof. K. V. Peter

Seed Committee Meeting of Central Sub-Committee on Seed Certification, *Krishi Bhavan, New Delhi*, 30 September, 1994.

- Prof. K. V. Peter

Review and Preview Meeting of Farm & Home, AIR, Kozhikode, 28th October, 1994.

- Sri. Santhosh J. Eapen

Director's Conference convened by D. G., ICAR, New Delhi, 7-8 November, 1994.

- Prof. K. V. Peter

Conference of Directors of Horticultural Division, convened by DDG (Hort.), ICAR, New Delhi, 9 November, 1994.

- Prof. K. V. Peter

Meeting convened by Minister of Agriculture, Govt. of Kerala, at Emakulam to chalk out organisation of Agriculture Fair at Tiruvananthapuram, 18 November, 1994.

- Prof. K. V. Peter

Executive Committee Meeting of Indian Society of Agricultural Statistics, 15 December, 1994.

- Prof. K. V. Peter

PUBLISHED ARTICLES

Anandaraj, M., Sarma, Y.R. and Ramachandran, N. 1994. *Phytophthora* foot rot of black pepper in relation to age of the host and its culmination in foot rot. *Indian Phytopath.*, 47 : 203-206.

Anandaraj, M., Ramana, K.V. and Sarma, Y. R. 1994. Role of *Phytophthora capsici* in the etiology of slow decline disease of black pepper. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, November 30-Dec. 3, 1994 (Abstract).

Anandaraj, M. and Sarma, Y. R. 1994. Ecological and epidemiological studies in *Phytophthora* incited diseases. National Group

Meeting on *Phytophthora* diseases of Horticultural Crops, NRCS, Kozhikode, 21-23 September, 1994.

Balakrishnan, P., Usman, N. M. and Sarma, Y.R. 1994. Management of disease of ginger by soil solarisation. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, Nov. 30-Dec. 3, 1994 (Abstract).

Dake, G.N., Anandaraj, M., Raju, C. A. and Rohini Iyer, 1994. Effect of seed treatment and lining material on rhizome rot of ginger in storage. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode Nov. 30 -Dec. 3, 1994 (Abstract).

Krishnamoorthy, B. and Rema, J. 1994. Genetic resources of tree spices. In : *Advances in Horticulture (Vol. 9). Plantation Crops and Spices-Part I.* (Eds.) Chadha, K. L. and Rethinam, P., Malhotra Publishing House, New Delhi, pp. 169-192.

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

Krishnamoorthy, B., Sasikumar, B. and Rema, J. 1994. Genetic variability and segregation of sex in nutmeg. First International Symposium on Plantation Crops (PLACROSYM-XI) Kozhikode, Nov. 30-Dec. 3, 1994 (Abstract).

Nirmal Babu, K., Rema, J. and Ravindran, P. N. 1994. Biotechnology Research in Tropical Spices. In: *Advances in Horticulture (Vol. 9). Plantation Crops and Spices, Part I.* (Eds.) Chadha K.L. and Rethinam, P., Malhotra Publishing House, New Delhi pp: 633-653.

Nirmal Babu, K., Geetha, S. P., Manjula, C., Ravindran, P. N. and Peter, K. V. 1994. Medium term conservation of cardamom germplasm - an *in vitro* approach. Second Asia Pacific Conference on Agricultural Biotechnology, Madras (Abstract).

Nirmal Babu, K., John Zachariah, Samsudeen, K. and Ravindran, P. N.

1994. Plant regeneration from tissue culture of *Piper colubrinum* - a species resistant to *Phytophthora capsici*. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, Nov. 30-Dec. 3, 1994, (Abstract).

Ravindran, P. N., Sasikumar, B., Johnson K. George, Ratnambal, M.J., Nirmal Babu, K., Zachariah, T. J. and Nair, R. R. 1994. Genetic resources of ginger (*Zingiber officinale* Rosc.) and its conservation in India. *Plant Genetic Resources News Letter*, 98 : 1-4.

Ravindran, P. N. and Nirmal Babu, K. 1994. Genetic resources of black pepper. In: *Advances in Horticulture (Vol. 9). Plantation Crops and Spices, Part I.* (Eds.) Chadha, K. L. and Rethinam P., Malhotra Publishing House, New Delhi, pp. 99-120.

Ravindran, P. N., Nirmal Babu, K., Rema, J., Samsudeen, K., Minoo, D., Geetha, S. P., Sajina, A., Zachariah, J. C., Mini, P. M., Manjula, C. and Peter, K. V. 1994. Micropropagation of some very important spices and medicinal plants : Proc. Exposition and workshop on microporpagated commercial plants, West Bengal Academy of Sciences, Calcutta (in press).

Ravindran, P.N. and Peter K. V. 1994. Genetic resources of spices in Kerala and their conservation. International Congress on Kerala studies, AKG Centre for Research Studies, Thiruvananthapuram (Abstract) 4 : 12-13.

Rajamannar, M., Prasadji, J. K. and Sarma, Y.R. 1994. Etiology and control of nut rot of coconut. First International Symposium on Plantation Crops (PLACROSYM-XI), Nov. 30-3rd December, 1994 (Abstract).

Rema, J. and Krishnamoorthy, B., 1994. Vegetative propagation of clove. (*Eugenia caryophyllus* Sprengel, (B. & H.) *Tropical Agriculture (Trinidad)*, 71 : 144-146.

Rema, J. and Krishnamoorthy, B. 1994. Approach grafting of clove. *Indian Hort.*, 39 : 53-54.

- Rema, J. and Krishnamoorthy, B. 1993. Rooting response of elite cinnamon (*Cinnamomum verum*) (Bercht. & Presl.) Line. J. Spices and Aromatic Crops, 2 : 21-25.
- Sadanandan, A. K. 1994. Black pepper nutrition. In: Advances in Horticulture (Vol. 9). Plantation Crops and Spices, Part I. (Eds.) Chadha K. L. and Rethinam P., Malhotra Publishing House, New Delhi, pp. 423-456.
- Sadanandan, A. K., Bhargava, B. S. and Hamza, S. 1994. Leaf nutrient norm for black pepper using DRIS. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, Nov. 30-Dec. 3, 1994 (Abstract).
- Sadanandan, A. K. and Hamza, S. 1994. Response of four turmeric varieties to nutrients in an oxisol on yield and curcumin content. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, 30 Nov.-3rd Dec. 1994.
- Santhosh, J. Eapen. 1994. Pathogenicity of *Meloidogyne incognita* on small cardamom (*E. cardamom* Maton). Ind. J. Nemat., 24 : 31-37.
- Santhosh, J. Eapen. 1994. Effect of three granular pesticides on damage by thrips (*Sciothrips cardamomi* R.) in small cardamom (*E. cardamom* Maton). J. Ent. Res., 18 : 181-183.
- Sarma, Y. R. and Anandaraj, M. 1994. Present status of *Phytophthora* foot rot of black pepper in India. National Group Meeting on *Phytophthora* diseases of Horticultural Crops, NRCS, Kozhikode, 21-23 September, 1994.
- Sarma, Y. R., Anandaraj, M. and Ramachandran, N. 1994. Strategies of disease management in *Phytophthora* caused plants diseases. National Group Meeting on *Phytophthora* diseases of Horticultural Crops, NRCS, Kozhikode, 21-23 September, 1994.
- Sarma, Y. R., Anandaraj, M. and Venugopal, M. N. 1994. Diseases of spice crops. In: Advance in Horticulture (Vol. 9). Plantation Crops and Spices, Part I. (Eds.) Chadha, K. L. and Rethinam, P., Malhotra Publishing House, New Delhi, pp. 1015-1050.
- Sarma, Y. R. 1994. Diseases of seed spices. In: Advances in Horticulture, (Vol.9). Plantation Crops and Spices. Part I (Eds.) Chadha, K. L. and Rethinam P., Malhotra Publishing House, New Delhi, pp. 1059-1084.
- Sarma, Y. R. 1994. Rhizome rot disease of ginger and turmeric In: Advances in Horticulture, (Vol. 9). Plantation Crops and Spices. Part-I (Eds.) Chadha, K. L. and Rethinam, P., Malhotra Publishing House, New Delhi, pp. 113-1138.
- Sasikumar, B. and Veluthambi, K. 1994. Strain and vector specificity in *Agrobacterium* - black pepper interaction. First International symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, Nov. 30-Dec. 3, 1994 (Abstract).
- Sasikumar, B., Nirmal Babu, K., Jose Abraham and Ravindran, P. N. 1992. Variability, correlation and path analysis in ginger germplasm. Indian J. Genet., 52 : 428-431.
- Usman, N. M., Balakrishnan, P. and Sarma, Y. R. 1994. Biocontrol of rhizome rot of ginger. First International Symposium on Plantation Crops (PLACROSYM-XI), Kozhikode, Nov. 30-Dec. 3, 1994 (Abstract).
- POPULAR ARTICLES**
- Anandaraj, M. and Sarma, Y. R. 1994. Biological control of black pepper diseases. Indian Cocoa, Arecanut & Spices J., 18(1) (Special issue) : 22-23.
- Dake, G. N. 1994. Integrated management of bacterial wilt of ginger. Spice India, 7(11) : 14-16.
- Devasahayam, S. 1994. Management of insect pests of black pepper. Spice India, 7(9) : 27-29.
- Krishnamoorthy, B. 1994. Drying black pepper on polyethene materials. Spice India, 7(7) : 21-22.
- Krishnamoorthy, B. and Rema J. 1994. Tree spices crop improvement. Spice India, 7(11) : 24-30.
- Leela, N. K. 1994. Spices as pesticides? Kerala Karshakan (Mal.), 40(4) : 5-6.
- Peter, K. V. 1994. Gearing up spices research to meet the emerging challenges. Indian Hort., 39(3) : 7-10.
- Peter, K. V. 1994. Trends in production, cultivation, processing and storage of chillies. Indian Cocoa, Arecanut & Spices J., 18(1) (Special issue) : 5-10.
- Peter, K. V. 1994. A curtain raiser to PLACROSYM-XI. Indian Coconut J., (Special issue) 18(4) : 4-7.
- Rao, T. G. N. 1994. Turmeric rhizome rot and its management. Spice India, 7(11) : 17-19.
- Rethinam, P., Edison, S., Sadanandan, A. K. and Johnny, A. K. 1994. Major achievements of AICRP on Spices. Indian Cocoa, Arecanut & Spices J., (Special issue) 18(1) (Special issue) : 16-21.
- Sadanandan, A. K. and Hamza, S. 1994. Importance of organic manure in spices cultivation. Kerala Karshakan (Mal.) 40(1) : 3-4 and 29.
- Sadanandan, A. K. 1994. Doubling our production of spices - Aiming through infrastructure spread and research : AICRP on Spices. Indian Hort. 39(3) : 10-16.
- Santhosh J. Eapen. 1994. Diseases of black pepper. Spice India (Mal.) 7(11) : 6-7 and 12-13.
- Sarma, Y. R., Anandaraj, M. and Rajan, P. P. 1994. *Phytophthora* - a threat to black pepper - present status and future strategies of disease management. Spice India, 7(11) : 10-13.
- Sasikumar, B., Ravindran, P. N. and Johnson K. George. 1994. Breeding ginger and turmeric. Indian Cocoa, Arecanut & Spices J., 18(1) (Special issue) : 10-12.
- Sasikumar, B. 1994. Genetic vulnerability in nutmeg. Spice India (Mal.), 7(12) : 11.
- Sivaraman, K. Thankamani, C. K. and Kandianan, K. 1994. Recent advances in the cultivation of pepper. Spice India, 7(9) : 7-11.
- Thankamani, C. K. 1994. Rapid multiplication of black pepper. Spice India (Mal.), 7(3) : 11-13.
- Zachariah, T. J. 1994. The chemistry behind the flavour and fragrance of spices. Spice India (Mal.), 7(10) : 2-4.

Zachariah, T. J. 1994. Spices quality research at NRCS, Kozhikode. Spice India (Mal.), 7(11) : 3-5.

TECHNICAL PUBLICATIONS/REPORTS

Annual Report 1993-94, AICRP on Spices.

- Sadanandan, A. K. & Johny A. Kallupurackal, NRCS, Kozhikode.

Directory of *Phytophthora* workers in India.

- Sarma, Y.R. and Anandaraj, M. 1994, NRCS, Kozhikode.

Research Highlights - 1993-94, AICRP on Spices.

- Sadanandan, A. K. & Johny A. Kallupurackal, NRCS, Kozhikode

Plant parasitic nematodes and slow decline disease of black pepper.

- Ramana, K.V., Mohandas, C. and Santhosh J. Eapen, 1994, NRCS, Kozhikode.

Short protocols for micropropagation of spices and aromatic crops. Vol. 1

- Nirmal Babu, K., Minoo, D., Sajina, A., Geetha, S. P., Samsudeen, K., Rema, J., Ravindran, P. N. and Peter, K. V., 1994, NRCS, Kozhikode.

HONOURS/AWARDS

Dr. A. K. Sadanandan, Principal Scientist (Soil Science) and Sri. S. Hamza, Technical Officer, NRCS, Kozhikode bagged **Dr. R. L. Varasimha Swamy memorial award** for the second best original research paper entitled "Leaf nutrient norms for black pepper using DRIS" presented in the First International Symposium of Plantation Crops (PLACROSYM - XI), Kozhikode, 30 Nov.-3rd December 1994.



Dr. A.K. Sadanandan



Sri. S. Hamza

STUDY CIRCLE

The NRCS study circle met seven times during July-December 1994 and approved 12 research papers for publication.

A guest lecture was delivered by Dr. Alok Adholeya, Microbiologist, TERI, New Delhi.

NEW PROJECTS SANCTIONED

1. ICAR Ad-hoc Scheme on "Developmental morphology of ginger and turmeric rhizomes"
2. ICAR ad-hoc Scheme on "Biochemical characterization of ginger and turmeric"

DISTINGUISHED VISITORS

Sri. Amitabh Kant I.A.S., District Collector, Kozhikode - 13 July, 1994

Dr. B. S. Basnet, Director of Agriculture, Gangtok, Sikkim - 26 August, 1994.

Sri. T. T. Dorji, Secretary (Agriculture), Govt. of Sikkim, Gangtok - 26 August, 1994.

Dr. R. S. Paroda, Director General, ICAR, New Delhi - 19 November, 1994.

Dr. Hem Sleepy, Dr. Wiesława Karagun, Poland University of Agriculture, and Dr. Krystyna Elvener from Poland Research Institute of Vegetable crops - 23 November 1994.

Dr. K. L. Chadha, DDG (Hort.), ICAR, New Delhi, 21 September, 29 November, 1994.

Dr. P. Rethinam, ADG (PC), ICAR, New Delhi, 21 September, 29 November, 1994.

Smt. Neela Gangadharan, Secretary (Agriculture), Govt. of Kerala, Thiruvananthapuram - 19 December, 1994.

Dr. D. P. Singh, ADG (Crop Science), ICAR, New Delhi - 30 December 1994.

FARM ADVISORY COMMITTEE

The Farm Advisory Committee of NRCS, Kozhikode was held at NRCS farm Peruvannamuzhy on 13th Dec., 1994 under the chairmanship of Director, NRCS, Kozhikode. The meeting was attended by Scientists, Asst. Administrative Officer, Asst. Accounts Officer and the Farm Superintendent, NRCS Farm, Peruvannamuzhi. A master plan for the overall development for farm is being prepared. It was also decided to keep aside an undisturbed piece of farm land as a permanent forest ecosystem.

PROJECT COORDINATOR (SPICES) REJOINS

Dr. S. Edison, has resumed duties as Project Coordinator (Spices), at NRCS, Kozhikode, after completion of the FAO assignment as Spices Expert at Bangladesh.

TRANSFER OF TECHNOLOGY

Management of Rhizome rot of ginger

Mr. Uchung Bhutia, Sr. Project Officer, and Mr. D. L. Chetri, Horticultural Officer, Dept. of Agriculture, Govt. of Sikkim, Tadong were imparted training on management of rhizome rot of ginger, at NRCS, Kozhikode, during October 1994.

Production and supply of quality planting materials.

(Period July-December 1994)

Black Pepper	65,000 rooted cuttings
Clove	8,000 seedlings
Nutmeg	2,000 seedlings
	&
	300 grafts
Cinnamon	2,000 seedlings

Spices Point

A spices point in the heart of the city at Manamchira Square was laid out by NRCS, Kozhikode in collaboration with corporation of Kozhikode. Seedlings of cinnamon, clove, nutmeg, allspice and bush pepper were planted. Dr. K. L. Chadha, DDG (Hort.) inaugurated the spices point by planting an allspice seedling in the Square. The collector of Kozhikode was present on the occasion.

Radio talks

1. Dr. J. Rema: Cultivation of tree spices (Malayalam), 13 July 1994, AIR, Kozhikode.
2. Dr. K. V. Peter: Quality maintenance in spices (Malayalam), 5 August, 1994, AIR, Kozhikode.
3. Dr. B. Sasikumar: Genetic finger printing of crop plants (Malayalam), 11 Oct. 1994, AIR, Kozhikode.
4. Mrs. N. K. Leela: Value added spices (Malayalam) 20, Oct. 1994, AIR, Kozhikode.
5. Dr. P. N. Ravindran: Grow anthurium for profit and pleasure (Malayalam), 16, Sept., AIR, Kozhikode.
6. Mr. Santhosh J. Eapen: Soil and micro-organisms (Malayalam), 26, Oct. 1994, AIR, Kozhikode.
7. Mrs. C. K. Thankamani: Harvesting and processing of ginger and turmeric (Malayalam) 26, Nov. 1994, AIR, Kozhikode.
8. Dr. J. T. Zachariah: Processing of pepper - The scientific way (Malayalam) 3rd December 1994, AIR, Kozhikode.
9. Mr. K. M. Prakash: First International Symposium on Plantation Crops - A Radio Report, 7 December 1994, AIR, Kozhikode.

Krishi vigyan Kendra, Peruvannamuzhi

Five on campus, one day training and six off campus trainings were organised by the KVK, Peruvannamuzhi, on management of *Phytophthora* foot rot of black pepper, pests and

diseases of spices, cultivation of black pepper and banana as well as on other aspects of spices. A total of 299 personnels were trained in these programmes. KVK Peruvannamuzhi also participated in two agricultural exhibitions; one at Perambra, Kozhikode and another one at Kanakakunnu Palace ground, Thiruvananthapuram. Frontline demonstration on green gram cultivation in a rice-rice fallow rotation at Karayad, Arikkulam, Kozhikode, farm visits (12 farms), radio talks (5 talks in Malayalam) etc. were the other important extension activities of the KVK. About 266 visiting farmers were also imparted training on various practical aspects of cultivation of spices.

Village adoption

KVK, Peruvannamuzhi has adopted Pannikkottur SC Colony of Chakkittapara Panchayat for overall agricultural development.

EVENTS HELD

National Group Meeting on *Phytophthora* diseases of Horticultural Crops

ICAR, New Delhi organised the National Group Meeting on *Phytophthora* diseases of Horticultural Crops at NRCS Kozhikode from September 21-23, 1994. It was attended by plant pathologists specialised in *Phytophthora* diseases. The meet was inaugurated by Dr. K. L. Chadha, DDG (Hort.). Dr. P. Rethinam, ADG (PC) also attended.

PLACROSYM-XI

The first International Symposium on Plantation Crops (PLACROSYM-XI) was held at Kozhikode during 30 November 3rd December 1994. Dr. R. S. Paroda, Director General, ICAR, New Delhi and Secretary, DARE, GOI, inaugurated the symposium. Dr. K. L. Chadha, released the special publications of PLACROSYM - XI. Dr. M. K. Nair, Director, CPCRI, Kasargode welcomed the delegates. Prof. K. V. Peter, Director, NRCS, Kozhikode

delivered the key note address. Felicitations were offered by G. L. Kaul, Horticultural Commissioner, Govt. of India, Amitab Kant, I.A.S. District collector, Kozhikode and Dr. Aravindakshan, Chairman, Coconut Board, Cochin. Dr. Y. Sarma, General Convener, PLACROSYM - XI proposed vote thanks.

About 300 delegates from countries participated in the day symposium and 140 research papers on crop management, improvement, biotechnology, physiology, pests and diseases, harvest technology, market economics and development aspects of allspice, arecanut, black pepper, betelvine, cardamom, cocoa, coffee, cashew, cinnamon, ginger, nutmeg, rubber, turmeric tea etc. were presented and discussed.

CELEBRATIONS

Sadbhavana day

NRCS, Kozhikode observed **Sadbhavana Day** on 20 August 1994. All the staff members observed the Sadbhavana pledge administered by Prof. K. V. Peter, Director, NRCS Kozhikode.

Communal Harmony night

Communal harmony fort was observed from 20 August to 23 September 1994 to promote national integration and harmony towards everyone, to preserve the heritage of tolerance, harmony and unity in diversity.

Hindi week celebration

As part of the annual programme for the implementation of the language policy, **Hindi week** was celebrated from 14-20 September, 1994.

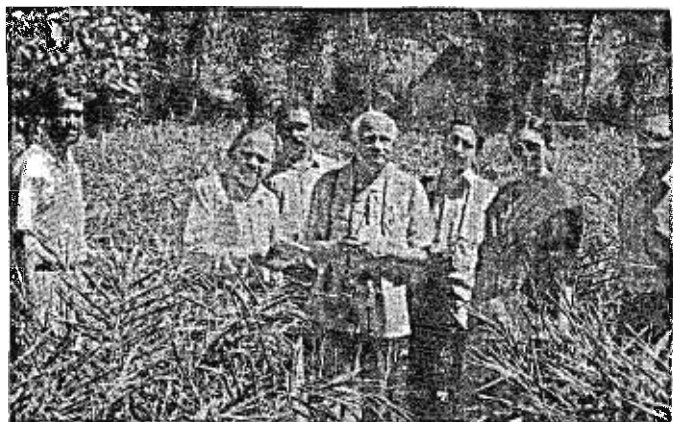
Sri. B. Krishnamoorthy, Scientist, SG, (Plant Breeding) presented **Praveen (Hindi) examination** (May 1994), conducted under the Hindi Training Scheme, Ministry of Official Languages, MOH, Delhi.

NEWS IN PICTURES



A view of the inaugural function of PLACROSYM-XI. Sitting (L-R) Prof. K. V. Peter, Dr. M. Aravindakshan, Sri. Amithabh Kant, IAS, Dr. R. S. Paroda, Dr. K. L. Chadha, Dr. G. L. Kaul, and Sri. C. K. Karunakaran. Dr. M. K. Najir is also seen.

Dr. R. S. Paroda, addressing the scientists at NRCS, Kozhikode. Dr. K. V. Peter and Dr. K. L. Chadha are also on the dais. →



Experts from DBT, New Delhi at NRCS Farm, Peruvannamuzhi. Dr. P. S. Rao, Dr. H. Y. Mohan Ram, Dr. Natesh and Dr. (Mrs.) Renu Swaroop, from DBT, New Delhi are seen. Dr. P. N. Ravindran, Sr. Johnson K. George and Dr. B. Sasikumar of NRCS, Kozhikode are also seen. ←

People making a beeline at the NRCS/KVK stall arranged at Kanakakunnu Palace, Thiruvananthapuram in connection with the State Agri. Trade, Dec. 14-18, 1994. →



NEW ICAR CHIEF

Dr. R. S. Paroda, internationally renowned and highly decorated agricultural scientist was appointed as Director General, Indian Council of Agricultural Research and Secretary, Department of Agricultural Research and Education (DARE) Govt. of India. Director, scientists and staff members of NRCS, Kozhikode extend warm greetings and best wishes to Dr. R. S. Paroda!

Dr. R. S. Paroda at NRCS, Kozhikode

Dr. R. S. Paroda, the new Director General of ICAR, known as a man of action, was given an affectionate reception at the National Research Centre for spices, Kozhikode on 29-11-1994.



Dr. R. S. Paroda, Director General, ICAR is being garlanded by Dr. K. L. Chadha, DDG (Hort), ICAR at NRCS, Kozhikode.

PERSONNEL

APPOINTMENTS

Name	Designation	Posted at	Date of joining
Sri. P. Rajeev	Scientist (Agri. Extn)	NRCS, CRS, Appangala	2-8-1994
Dr. Raveendra Mulge	Scientist (Hort.)	-do-	17-8-1994
Sri. S. J. Anke Gowda	Scientist (Pl. Phy)	NRCS, Kozhikode	17-8-1994
Sri. K. S. Krishnamoorthy	-do-	-do-	12-9-1994
Sri. M. V. Prasad	Scientist (Agri. Extn)	-do-	31-10-1994
Sri. N. Cholurappa	SS Gr I (Lab. Attender)	NRCS, CRS, Appangala	8-8-1994
Sri. K. K. Thimmaiah	SS Gr. I (Watchman)	-do-	10-8-1994
Sri. Ravindran	SS Gr. I (Farm Attendant)	NRCS, Kozhikode	15-12-1994
Ms. Reeny Mary Zachariah	Technical Asst. (DBT Scheme)	NRCS, Kozhikode	15-12-1994

PROMOTIONS

Name & Designation	Promoted as	With effect from
Sri. B. Krishnamoorthy, Scientist	SS (Plant breeding)	Scientist SG
Ms. V. Radha, Sr. Clerk	Assistant	1.7.1986
Ms. Alice Thomas, Jr. Stenographer	Stenographer	22.11.1994
Sri. Venugopal, Jr. Clerk	Sr. Clerk	23.11.1994
Sri. S. M. Chettiar, Stenographer	Sr. Stenographer	23.11.1994

RETIREMENT

Sri. K. K. Velayudhan, Jr. Tech. Asst. (T-3) retired from ICAR service on 1.9.1994. All NRCS staff wish a very happy retired life to him.

Kum. Manjula C., Sr. Research Fellow, NRCS, Kozhikode with **Mr. Sudhakaran K.** (11.09.1994). Congratulations and best wishes to the married couple!

Published by Prof. K.V. PETER, Director, NRCS, Kozhikode

Printed at CARMEL PRINTS, Cochin 31