



C. T. R. I. NEWS LETTER

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MAJOR EVENTS

The V National Symposium on tobacco organised by the Indian Society of Tobacco Science, Rajahmundry was celebrated from 15th to 18th February, 1984 at CTRI New Building Complex. The Symposium was inaugurated by Dr. M. V. Rao, Dy. Director General (CS) ICAR while Sri M. C. Mahapatra, I. A. S., Chairman, Tobacco Board, presided over the function. Eminent scientists of the past

and present who did commendable work and devoted their services for the research and development of tobacco were honoured by the Society during the symposium. The scientists honoured on this jubliant occasion are : Dr. D. M. Gopinath (Posthumous), Sri A. S. Sastry (Posthumous), Sri S. Viswanadham (Posthumous), Prof. H. M. Shah (Posthumous), Dr. N. R. Bhat, Dr. G. S. Murthy, Dr. N. L. Pal, Dr. N. S. Reddy, Dr. K. V. Krishna Murthy, Sri I. V. G. Krishna Murthy, Sri N. A. Elias, Dr G. J. Patel and Dr. N. C. Gopalachari.



Dr. N. C. Gopalachari, Director receiving honour of distinction from Dr. M. V. Rao, DDG (CS) ICAR.

Sri Mahapatra in his opening remarks greatly appreciated the Research work carried out by the Scientists of Central Tobacco Research Institute under the leadership of Dr. N. C. Gopalachari. He appealed to see that the

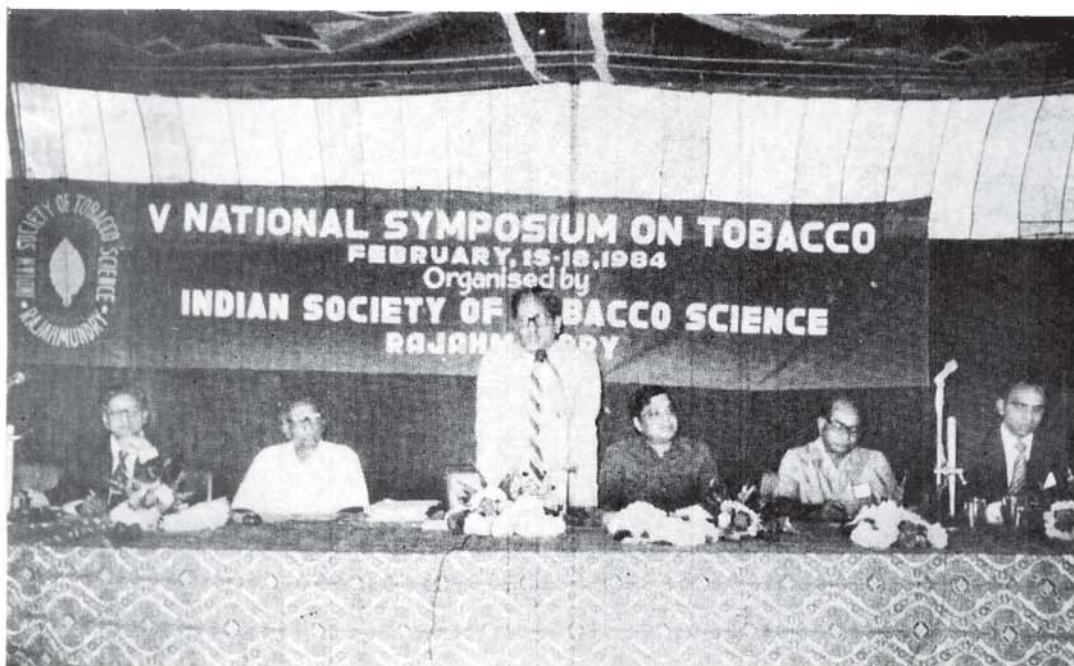
fruits of research should reach the farmers in the field and further he called upon the scientists to evolve varieties that improve quality of tobacco grown in black soils, for export.



Sri M. C. Mahapatra, I. A. S., Chairman, Tobacco Board, releasing the Souvenir brought out by I. S. T. S.

Inaugurating the Seminar, Dr. M.V. Rao emphasised the need to introduce new techniques to reduce the cost of tobacco cultivation so that India could compete effectively in the world market. He also suggested that an

alternative fuel should be used for flue curing, as coal was becoming scarce and he praised the CTRI for its work in this aspect.



Inaugural speech by Dr. M.V. Rao, DDG (C.S.) ICAR
in connection with V National Symposium on Tobacco

Shri. T.D. Prasada Rao, President of the Indian Society of Tobacco Science, said there was need for an international symposium on tobacco so that foreign scientists and customer representatives could give their Indian

counterparts an idea about the research being done in their countries and India's image in their markets.

Dr. M.S. Chari proposed a vote of thanks.



Field visit by Dr. M.V. Rao along with the scientists of CTRI to Black Soil Farm, Katheru



Field visit of Dr. M. V. Rao along with the scientists of CTRI to the Light soil Farm of CTRI Research Station, Kalavacherla

The working group on tobacco constituted by the Commerce Ministry, Government of India for formulating comprehensive tobacco policy consisting of the following members visited this Institute on 11th January, 1984.

Sri S. B. Shukla, IAS, Jt. Secretary, Ministry of Commerce, Sri B. Sahay, Jt. Secretary, Dept. of Industrial

Development, Ministry of Industry, Sri R. K. Chandra Dy. Secretary, Dept. of Revenue, Dr. N. C. Gopalachari, Director, Central Tobacco Research Institute, Sri M. C. Mahapatra, IAS, Chairman, Tobacco Board, Sri S. Mahadeva Iyer, Officer on Special duty (Tobacco), Ministry of Commerce, Govt. of India, and Sri B. V. Sivaiah, Vice-Chairman, Tobacco Board.



Members of working group along with the Director and scientists of CTRI visited the Black soil farm, Katheru

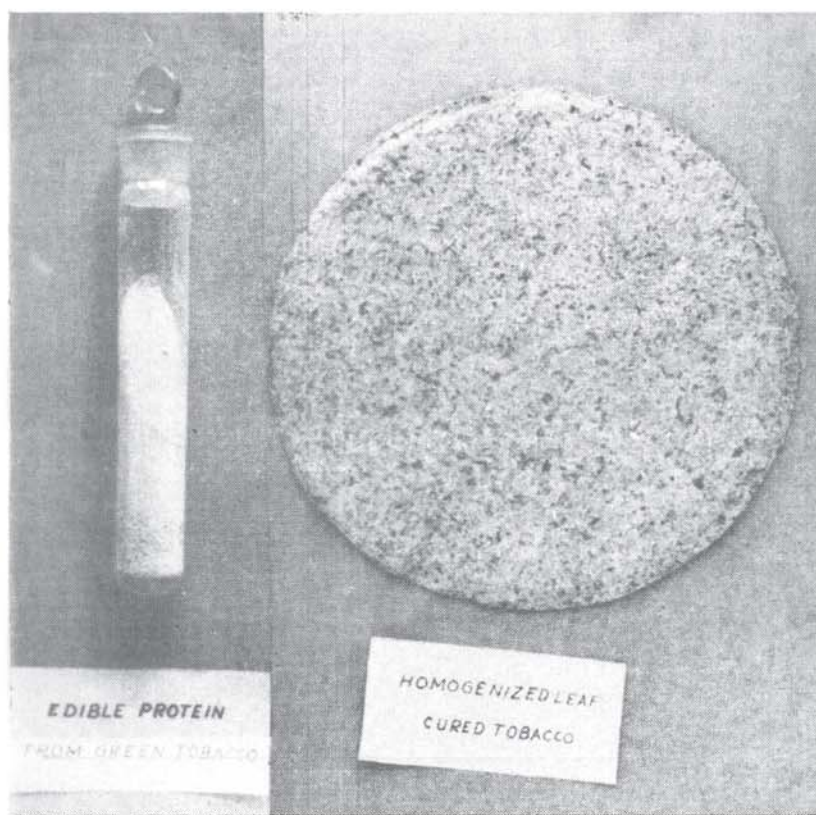
RESEARCH HIGHLIGHTS

CTRI Rajahmundry :

Studies conducted at the Central Tobacco Research Institute, Rajahmundry during 1983-84 season have shown that the tobacco seedlings (Varieties Kanakaprabha and HDBRG) grown at a population density of 2.5 lakh seedlings/ha of nursery, stalk-cut after 6 weeks of growth in the nursery and again the ratoon crop stalk-cut twice at intervals of 45 days in the same nursery, have yielded a total of about 200 kg. of proteins per hectare. The

proteins, precipitated from the slurry by the heat denaturation technique, showed about 85% purity.

After the precipitation of the protein the solution was added back to the residual tobacco and the slurry was incubated at 40°C for 48 hours after adding Ethrel (250 mg/kg). The slurry was then made into homogenised leaf sheets of 0.5mm thickness, to be shredded and blended with the usual leaf tobacco for cigarette manufacture. The homogenised leaf sheets are relatively less carcinogenic than the tobacco leaf used in cigarettes.



Edible Proteins from tobacco leaf

From the tobacco germplasm being maintained at the Institute, 9 varieties were found resistant to damping off and 7 varieties were resistant to TMV. This formed an important source for developing resistant varieties to these two diseases.

The granular (5 G) and liquid formation (400 E. C.) of Phenamiphos (Nemacur) were found equally effective for root-knot nematode control under nursery conditions

at 10 kg and 10 lts/ha dosages respectively.

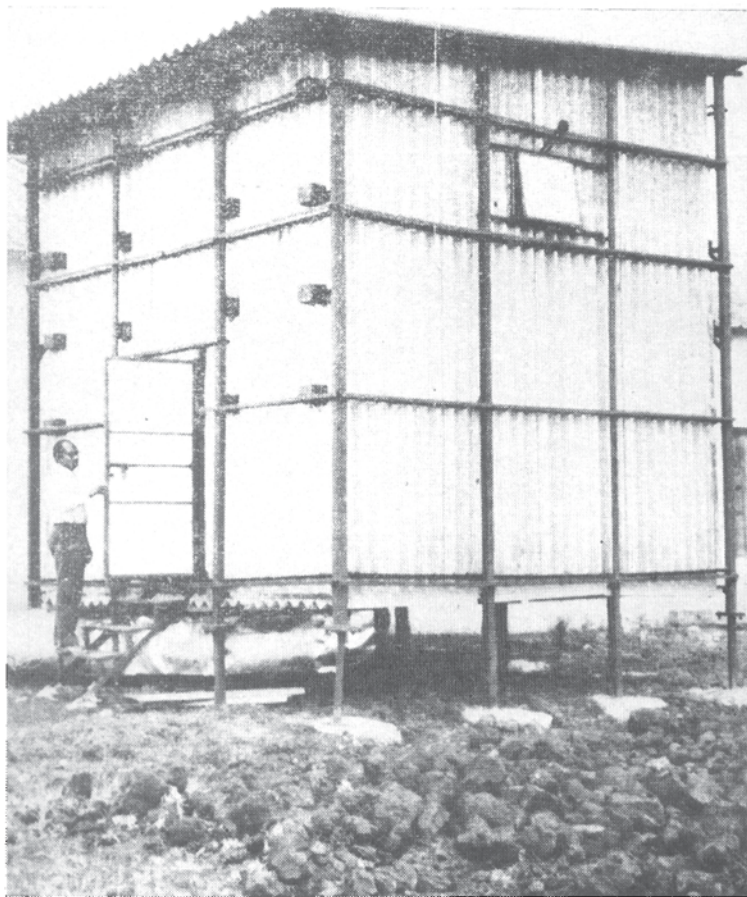
The keeping quality of virus inhibitors of plant origin viz., *Boerhaavia diffusa*, *Bougainvillea spectabilis*, *Clerodendron inerme* and *Peltophorum ferruganium*, were studied with the addition of preservatives like sodium benzoate and potassium metabisulphite. These two preservatives improved the keeping quality of the virus inhibitors considerably.

CTRI Research Station, Guntur :

Considerable resistance to caterpillar was observed in some of the selections of the crosses DG-3 X DWFC and line 435 X DWFC under natural and artificially infested

conditions at Guntur.

The darkcast FCV line 754-2-1 was observed as one of the best in giving the highest cured and bright grade leaf among the other lines tested under different agronomical practices.



Solar air-drying system with a newly constructed asbestos sheet barn at CTRI Research Station, Guntur.

CTRI Research Station, Vendasandur :

An early maturing chewing tobacco variety 'Mara-gadham' planted in rows of 90 cms apart with a distance of 60 cms plant to plant, was given only spot application of organic manure at 0.27 kg/plant with NPK on the 40th day has a very good growth. This is due to the beneficial effect of giving limited quantity of water (i.e.) daily 3 to 4 mm in December and increasing to 6 mm after the 60th day as against 20-30 mm given in the irrigation trials.

CTRI Research Station, Hunsur :

The superior powdery mildew resistant FCV tobacco line 1494, was released with the name 'SWARNA' for cultivation in Karnataka, at the 9th AICRP Tobacco Workshop held at Dharwad Campus of University of Agricultural Sciences, Bangalore.

CTRI Research Station, Pusa :

Fertilizer schedule for the targetted yield under tobacco-maize crop has been developed for the sandy loam

calcareous soil belt of North Bihar. This will greatly help in planning the yield, crop insurance, balanced and efficient use of fertilizer under difficult situations like drought, late planting for the region.

CTRI Research Station, Dinahata :

Line HDM-1 derived from a cross between T-238 X Labu performed very well in different locations and was adjudged to be far superior to DD-437 and Hemti varieties of Motihari tobacco (*N. rustica L.*).

Lab to Land Programme :

CTRI Rajahmundry :

Twenty demonstrations of one acre each were conducted in the farmers fields with Neem oil Emulsion as suckercide in the villages of Achayyapalem, Challavari-gudem and Annadevarapeta of West Godavari district, Kateru and Katavaram of East Godavari district. Curing the flue cured Virginia tobacco in the improved solar barn and field crop of Northern light soils were filmed by Doordarshan Kendra of Hyderabad on 18th March, 1984.

CTRI Research Station, Pusa :

Under Lab to Land Programme, a Tobacco Extension Fortnight was organised from 22nd January to 3rd February, 1984 in the nearby villages of Pusa. The function was inaugurated by Sri J. N. Tripathi, IAS, District Magistrate, Samastipur. The concluding session at Pusa was inaugurated by the Hon'ble Member of Legislative Assembly, Bihar, Mrs. Ram Sukumari Devi in which Sri A. N. Singh, Director, Tobacco Development, Madras was also present. The farmers gosthi was presided at Saidpur by Dr. K. N. Chandrasekhar, Director, College of Home Science, RAU (Bihar), at Goroul by Sri Ram Prasad Singh, District Agril. Officer, Vaisali, at Kasor by Sri Kamaldeo Narain Singh, Progressive farmer, at Narauli by Dr. Ram Narain Prasad joint Director of Agriculture (Govt. of Bihar), Muzaffarpur and at Pusa Dr. N. N. Sharma, Director of Sugarcane Research Institute, Pusa. The fortnight was organised in the joint collaboration of Rajendra Agricultural University (Dept of Home Science) Pusa and Department of Agriculture (Tobacco Development), Muzaffarpur. During the fortnight, special programme on improved techniques of tobacco cultivation was broadcasted daily for half an hour for the benefit of farmers on All India Radio Darbhanga.



Dr. P. P. Jha, Director Research, Dr. G. Trivedi, Director Extension, Dr. J. C. Bakshi, Vice-Chancellor Rajendra Agricultural University Pusa, Bihar, visited the CTRI Research Station accompanied by the Officer-in-charge and staff of the Research Station (From L. to R.)

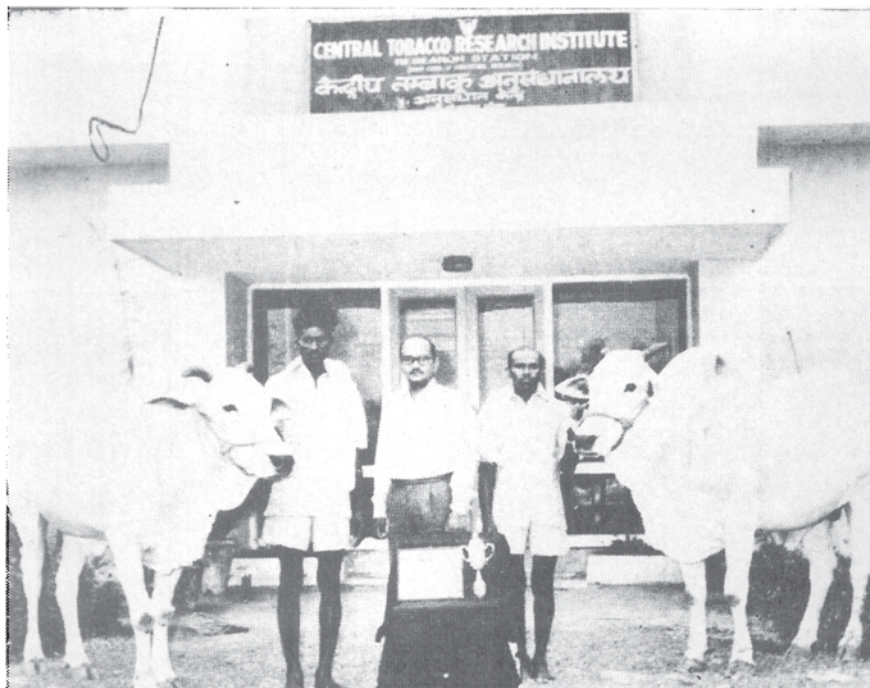
CONFERENCE & SYMPOSIA

The following scientists from the Institute and Research Stations have participated in the IX All India Tobacco Workers Workshop held at Dharwad (Karnataka) from 2nd to 5th January, 1984. Dr. K. Nagarajan, Head of the Division, Plant Pathology, Sri K. Apparao, Head of the Division, Genetics and Plant Breeding, Sri M. Bangarayya, Scientist S-2, Plant Physiology, Sri K. S. N. Murthy, Head of the Division, Ag. Chemistry and Soil Science, Sri N. S. Murty, Scientist S-1 (Statistics) and Dr. N. Krishnananda, Scientist S-1 (Entomology) from CTRI, Rajahmundry, Sri V. V. Ramana Rao, Officer-in-Charge and Sri M. Umamaheswara Rao, Scientist S-1 from CTRI Research Station, Guntur, Dr. B. V. Ramakrishnayya, Officer-in-Charge and S/Shri K. Devappa and J.S.L. Moses, Scientists from CTRI Research Station, Hunsur, Dr. R. Sinha, Officer-in-Charge, CTRI Research Station, Pusa and Dr. S. N. Tripathi, Officer-in-Charge and Sri V. M. Chavan Scientist S-1 from CTRI Research Station, Dinahata.

HONOURS & AWARDS

Sri S. V. V. Satyanarayana, Technician T-4 (Entomology Division), CTRI Rajahmundry was awarded M. Sc. (Ag.) degree by Viswa Unnyayan Samsad (World University of Informal Higher Education, West Bengal) during 1983 for his thesis entitled 'Studies on natural enemies of tobacco caterpillar, *Spodoptera litura* F'.

Sri Y. Ch. Narasimhamurty, Technician T-4 (Biochemistry and Plant Physiology), CTRI, Rajahmundry was awarded M. Sc., (Ag.) degree by Viswa Unnyayan Samsad during 1983 for his thesis entitled 'Potassium and forms of Nitrogen on the uptake of chlorides and their influence on quality and leaf burn of flue cured Virginia tobacco'. Sri Narasimhamurty was also elected as Associate of Institution of Chemists (India).



Young bullock pair of the CTRI Research Station, Guntur was awarded a cup & Certificate in the 'Third cattle show of Ongole breed' held at Guntur during March, 1984.

The stall installed by the CTRI Research Station, Dinahata at the Exhibition Pavillion in the North Bengal Krishi Mela was awarded a 'Trophy' as 2nd prize.

Indian Society of Tobacco Science :

There was a straight contest for the Indian Society of Tobacco Science president's election between Dr. N.C. Gopalachari and Dr. M.K. Chakraborty. Dr. Gopalachari has won the election with thumping majority.



President of the ISTS Dr. N.C. Gopalachari.

The other Executive Committee members were elected unanimously. The following are the Executive Committee members for the period of 1984-86.

- President : Dr. N. C. Gopalachari, Director
- Vice-President : Sri K. Appa Rao, Head of the Division Genetics & Plant Breeding, CTRI, Rajahmundry.
- Secretary : Sri K. S. N. Murthy, Head of the Division, Ag. Chemistry & Soil Science, C. T. R. I Rajahmundry.
- Treasurer : Sri A. Hanumantha Rao, Technician T-5, Biochemistry & Plant Physiology, CTRI, Rajahmundry.
- Editor : Sri B.V. Kameswara Rao, Head of the Division, Biochemistry & Plant Physiology, CTRI, Rajahmundry.

- Members :
- : Dr. K. Nagarajan, Head of the Division, Plant Pathology, CTRI Rajahmundry.
 - : Dr. R. Sinha, Officer-in-Charge CTRI Research Station, Pusa
 - : Sri S. Krishnamurthy, Officer-in-Charge, CTRI Research Station, Vendasandur.
 - : Sri Ch. Krishnamurthy, Managing Partner, M/S Chegu Krishnamurthy & Company, Guntur.
 - : Sri K. Srinivasa Rao, Managing Director, Agrimmcor Pvt. Ltd., Guntur.
 - : Sri K. Balagopal, Consultant, M/s. Golden Tobacco Company Ltd., Guntur.

TRAINEES & VISITORS

Foreign assignment :

CTRI, Rajahmundry :

Dr. P.S.N. Murthy, Scientist S-2 (Organic Chemistry), CTRI, Rajahmundry, was deputed to U. K. for a period of six months from 4th January, 1984 for training on 'Structural elucidation of natural insecticides' at Southampton University, London under Colombo Plan by British Council. During his stay in U. K. he will be visiting various industrial establishments and laboratories to acquaint himself with the problems relating to the chemical aspects of tobacco.

Trainees :

Training was given at the Institute to the farmers deputed by the State Agricultural Department, Tobacco Board and farmers from U. P. in flue cured Virginia tobacco cultivation, curing, grading and improved methods of technology.

- 21-1-1984 Sri L. Namasivaiah, Secretary, Tobacco Board, Guntur and Sri Chopra, Expert, Commerce Ministry, Govt. of India, New Delhi.
- 27-1-1984 Dr. G. Kemmler, International Potash Institute stationed at Honnover, Representative of Germany and Dr. G. S. Sekhon; Director Potash Research Institute of India, Gurgaon.
- 8-3-1984 Dr. (Mrs.) S. V. Bhide, Head, Cancer Research Unit, Bombay.
- 27-3-1984 Sri M. S. Sheshagiri Rao; Sr. Assistant Manager; Central Ware Housing Corporation, Hyderabad.

CTRI Research Station, Guntur :

Four farmers sponsored by the Tobacco Board, Guntur, were imparted training in the process of flue-curing handling and grading of tobacco, during the period from 6th to 20th February 1984.

- 4-1-1984 Sri R.C. Singhal, Assistant Marketing Officer, Directorate of Marketing & Inspection, Nagpur.
- 2-2-1984 Sri Gaurav Aggarwal, Ballarpur Industries Ltd., Exports Division, New Delhi.
- 20-2-1984 Shri Ganesh P. Rauniyar and Sri R.C. Sahu, Tobacco Development Co. Ltd, Janakpurdham, Nepal.
- 23-2-1984 Mr. George Kabubi, Marketing & Co-operation from Zambia.

CTRI Research Station, Vendasandur,

- 24-1-1984 Dr. D. Kandasamy, Associate Professor of Microbiology, Tamil Nadu Agricultural University, Coimbatore.
- 24-3-1984 Dr. V. Narasimhan, Associate Professor of Plant Pathology and Dr. G. Arjunan, Assistant Professor along with a batch of post graduate students.

CTRI Research Station, Hunsur :

- 22-1-1984 The Working Group on Tobacco, Ministry of Commerce, Government of India.

CTRI Research Station, Pusa :

- 3-2-1984 Sri A.N. Singh, Director, Tobacco Development, Madras.
- Mrs. Ram Sukumari Devi, M.L.A. (Bihar) Patna.
- 12-3-1984 Dr. S. Ramanujam, Head, Division of Genetics, IARI, New Delhi.
- 14-3-1984 Dr. J. C. Bakhshi, Vice-Chancellor, Rajendra Agril. University (Bihar), Pusa.

CTRI Research Station, Dinhata :

- 1-1-1984 Shri Kamal Kanti Guha, Hon'ble Minister for Agriculture, Govt. of West Bengal, Shri Binay Krishna Chowdhury, Hon'ble Minister for Land Reforms, Govt. of West Bengal.
- Shri S. Chowdhury, Hon'ble Minister for Transport, Govt. of West Bengal.
- Shri B. Mandal, Director of Agriculture, Govt. of West Bengal.
- Dr. P. V. Shenoi, Secretary, Agriculture Deptt. Govt. of West Bengal.
- 24-1-1984 Shri A. N. Singh, Director, Tobacco Development, Madras.
- 20-2-1984 Shri N. K. Kacker, I. A. S., Divisional Commissioner, Jalpaiguri.
- Shri S. Sanjeeva, I. A. S., Deputy Commissioner, Cooch Behar.
- Shri S. C. Bhadra, W.B.C.S., Sub-Divisional Officer, Dinhata.
- 14-3-1984 Shri P. Roy Chowdhury, Chairman, West Bengal Agro - Industries Corporation Calcutta.

APPOINTMENTS AND PROMOTIONS

Sri S. Jitendranath, appointed to the post of Technician T-4 at KVK of CTRI, Rajahmundry w. e. f. 5-1-1984.

Smt. V. Venkatalakshmi Kumari, appointed to the post of Technician T-4 at KVK of CTRI, Rajahmundry w. e. f. 9-1-1984.

Sri E. Vijaya Prasad, appointed to the post of Technician T-4 at KVK of CTRI, Rajahmundry w. e. f. 18-1-1984

Sri P. Sampatkumar, appointed to the post of Technician T-6 (Horticulture) at K. V. K. of CTRI, Rajahmundry w. e. f. 13-2-1984.

Sri B. Guruswamy, appointed to the post of S. S. Gr. at CTRI Research Station, Kandukur w. e. f. 6-1-1984.

Sri U. Satyanarayana, appointed to the post of S. S. Gr. I (Cook) at KVK of CTRI, Rajahmundry w.e.f, 20-1-1984.

TRANSFERS

Sri Y. Hayagrivudu, Asst. Adm. Officer, transferred to CTRI, Rajahmundry from CTRI Research Station, Kandukur w. e. f. 3-2-1984,

Sri M. James Wilson, Scientist Gr. 'S-1' (Ag. Extension), CTRI, Rajahmundry relieved on the Afternoon of 28th February, 1984 consequent on his promotion to the post of Scientist Gr. S-2 (Ag. Extension) at IARI Regional Station, Hyderabad.

Sri S. L. Vara Prasad, Junior Clerk, CTRI, Rajahmundry relieved on the afternoon of 29-3-1984 consequent on his promotion to the post of Assistant at Central Institute of Cotton Research, Nagpur.

RETIREMENT

Sri G. S. Prasad Singh, Assistant, CTRI Research Station, Pusa retired w. e. f. 31-1-1984 from the Council's service,

PAPERS PUBLISHED

1. An evaluation of intermating in an early generation of an intervarietal cross of flue-cured tobacco,

Rao, C. V., Apparao, K., and Suryanarayana, N. Sabrao, J. 15 (1) : 39-44, 1983.

2. Competition among flue cured tobacco (*Nicotiana tabacum* L) genotypes.

Rao, C. V., Murthy, N. S., Apparao, K and Subrahmanyam, G.S.V.

Crop Improve. 9 (1) : 83-6, 1982.

3. Distribution of dry matter in different genotypes of flue-cured tobacco (*Nicotiana tabacum* L.)

Sastri, A. B., Rao, R. V. S., Subrahmanyam, M and Prasad Rao, P.V.

Tob. Res. 9. (2) : 71-82, D.C., 1983.

4. Investigation on some aroma-bearing constituents in flue-cured tobaccos of different aroma attainments. Prabhu, S.R. and Chakraborty, M.K. Tob. Res. 9 (2) : 56-60, Dec., 1983.

5. Leaf curl disease on tobacco.

Reddy, T.S.N. and Nagarajan, K.

Tob. News 5 (9) : 5-6, 1982.

6. Note on more additions to the natural enemy complex of *Spodoptera litura* F. and *Myzus persicae* Sulz on tobacco in Andhra Pradesh.

Rao, R.S.N. and Satyanarayana, S.V.V.

Curr. Sci. 53 (4) : 201-2, Feb. 20, 1984.

7. Performance of promising cigar filler tobacco (*Nicotiana tabacum* L.) lines for Tamilnadu.

Ilyas Ahmed, M., Prasannasimharao, G.S.B., Moses, J.S.L. and Subbaiah, N.

Tob. Res. 9 (2) : 65-71, 1983;

8. 'Bhavani Special' an improved variety of country cheroot tobacco (*Nicotiana tabacum* L.) for Bhavani tract of Tamilnadu.

Moses, J.S.L., Ilyas Ahmed, M., Prasannasimharao, G.S.B. Krishnamurthy, S and Balagopal, K.

Tob. Res. 9 (2) : 101-3, 1983,

9. Studies on the effect of different levels of liming and F.Y.M. on yield and quality of cigar - filler tobacco (*Nicotiana tabacum* L.)

Singh, B.L. Singh, K.D. and Tripathi, S.N.

Tob. Res. 9 (2) : 83-7, Dec. 1983.

10. Influence of sources and methods of phosphorus application on yield and quality of cigar wrapper tobacco (*Nicotiana tabacum* L.).

Singh, B. L., Singh, K. D. and Tripathi, S. N.

Tob. Res. 9 (2) : 88-93, 1983.

11. Influence of topping on yield, quality and economics of cigar filler tobacco (*N. tabacum* L.)

Singh, B. L. and Pandey, R. G.

Tob. Res. 9 (2) : 104-6, 1983

12. Quantification of root-knot nematode (*Meloidogyne* Spp) damage on f. c. v. tobacco

Hussaini, S. S.

Tob. Res. 9 (2) : 61-65, 1983.

13. A short note on susceptibility of cowpea CV 152 to two species of root-knot nematode.
Hussaini. S. S.
Tob. Res. 9 (2) : 94-5, 1983.
5th National Symposium on Tobacco, Rajahmundry, Feb. 15-18, 1984 Souvenir p, 29-33.
14. Impact of Research on the economics of Tobacco Production in India.
Gopalachari. N. C.
5th National Symposium on Tobacco, Rajahmundry, Feb. 15-18, 1984 Souvenir p. 1-7.
15. Problems and progress of Research in Cigar Tobacco.
Krishnamurthy, S.
5th National Symposium on Tobacco, Rajahmundry, Feb 15-18, 1984 Souvenir p. 23-28.
16. Development of Chewing, Hookah and Wrapper Tobaccos in India.
Sinha. R.
17. Improved Tobacco Varieties.
Apparao, K.
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- Bulletins :**
1. CTRI Library, RaJahmundry.
D. Ch. Raja Rao &
Y. V. Suryanarayana,
CTRI, Rajahmundry 1984, 14p.
 2. Indian Tobacco in Maps
D. Ch Raja Rao, C.T R.I, Rajahmundry, 1984, 28p.

Edited and Compiled by A. HARANATH