



C. T. R. I. NEWS LETTER

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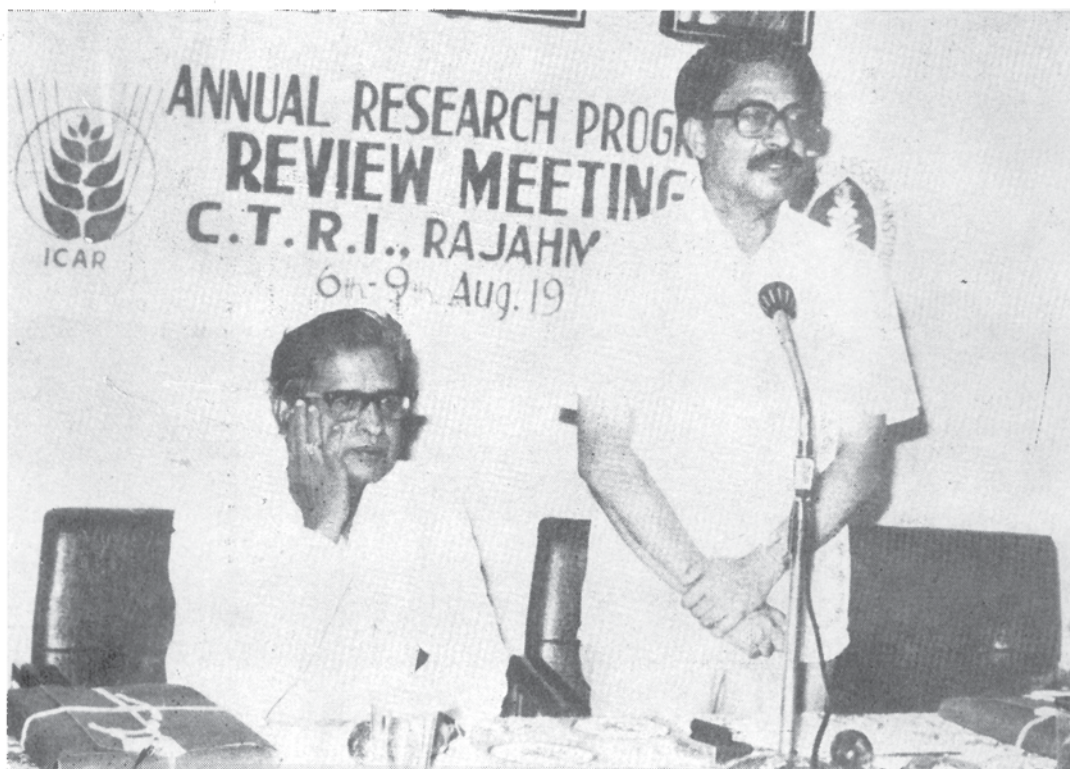
MAJOR EVENTS

The Annual Research Programme Review meetings were held during 6-9th August, 1984 at CTRI, Rajahmundry to discuss and finalise the research programmes to be implemented during 1984-85 season at CTRI and its Research Stations and Research Centre. Scientists, Traders, Officers of Tobacco Board, Directorate of Tobacco Development etc. have participated in the meetings. The inaugural session was presided over by Sri C. C. Appayya, Managing Member, ITC Ltd., (ILTD Division). The inaugural speech highlighting the important achievements

in various fields of research by CTRI during 1983-84 was delivered by Dr. N. C. Gopalachari, Director Tobacco Research, followed by detailed discussions in various disciplines.

RESEARCH HIGHLIGHTS

Release proposals of five newly evolved high yielding varieties have been presented by the respective breeders during Technical Programme Review meetings for consideration and approval of the house. The varieties are



Sri C. C. Appayya, Managing Member, ITC Ltd., (ILTD Division)
presiding over the inaugural function.

(1) G. 11/1 (2) G.8/1 (FCV tobacco varieties) for adoption in black soils of FCV tobacco growing belt of East Godavari, Guntur and Prakasam districts of Andhra Pradesh, yields 1800 Kg/ha. The varieties are named as HEMA and KANCHANA respectively. (3) Jayasri (MR) (FCV tobacco variety) for adoption in black soils and Southern light soils of Andhra Pradesh, yields 1,600 Kg/ha.

(4) HV. 75-10 (Cigar filler variety) for adoption in cigar tobacco growing areas of Tamil Nadu viz., Madurai and Trichi districts, yields 2400-2600 Kg/ha. The variety is named as KRISHNA and (5) II-435 (*Natu* tobacco) for adoption in *Natu* tobacco growing belt of Guntur district of Andhra Pradesh, Yields 3200 Kg/ha under irrigated conditions and 2000 Kg/ha under unirrigated conditions. The variety is named as VISWANATH.

The house has recommended the cigarfiller variety HV. 75-10 for release under the name KRISHNA. The variety was developed by S/Shri M. Someswara Rao J. S. L. Moses, G. S. B. Prasannasimha Rao, K. Balagopal, M. Illyas Ahmed, S. Krishnamurthy and Dr. R. Lakshminarayana. The other four varieties will be released shortly.

Two new interspecific hybrids were obtained through the fertilized ovule culture technique (i. e) (1) *N. repanda* x *N. tabacum* hybrid: *N. repanda* is an important wild species resistant to as many as 11 diseases and 2 insects to which cultivated *N. tabacum* is susceptible. Direct hybridization between these two species through conventional methods of breeding is a failure due to post-

NEW TOBACCO STRAINS EVOLVED



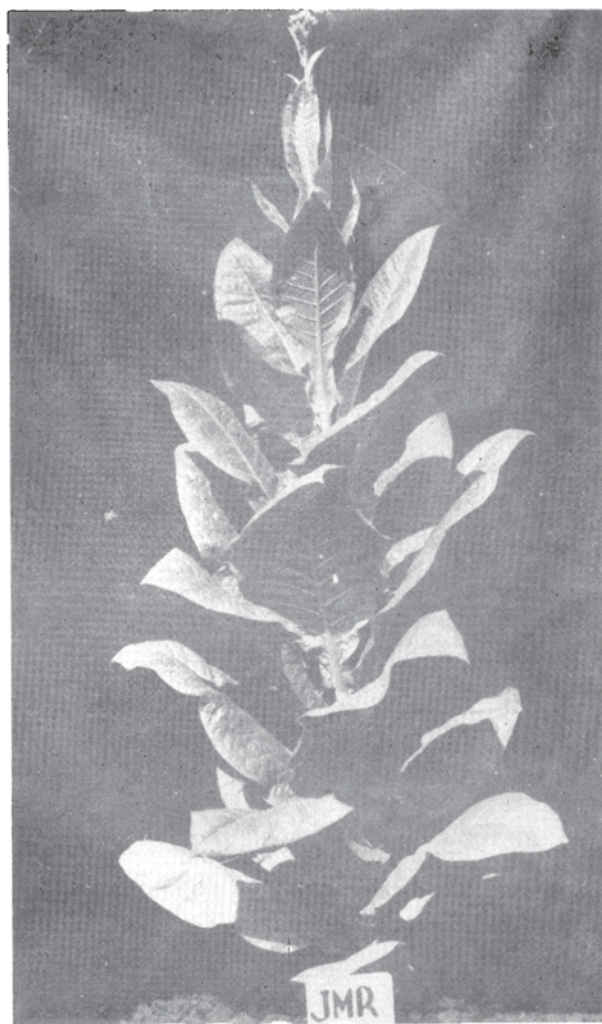
KRISHNA



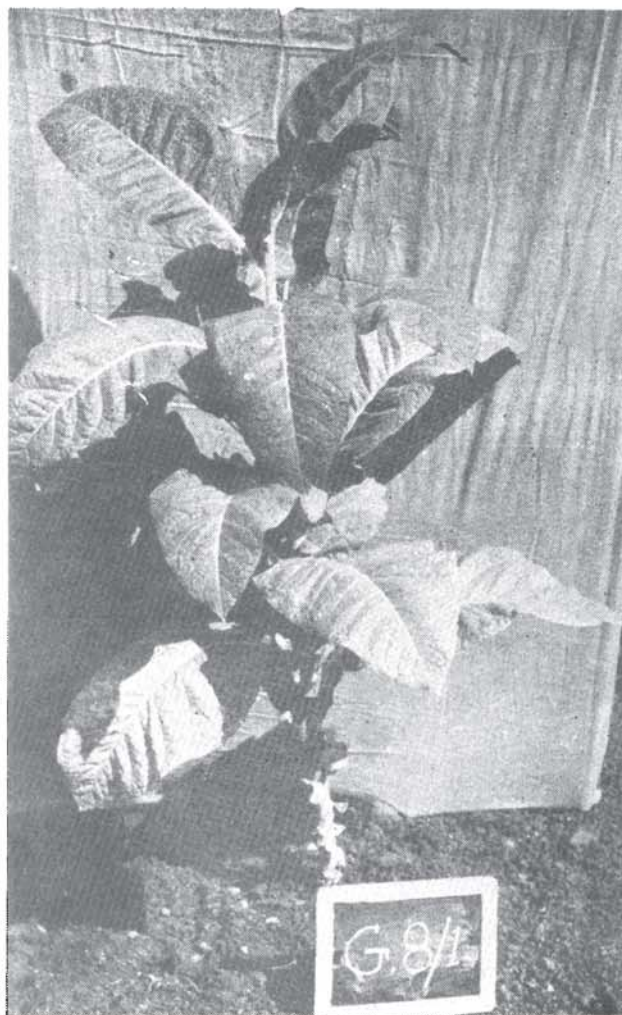
VISWANATH



HEMA



JAYASRI (MR)



KANCHANA

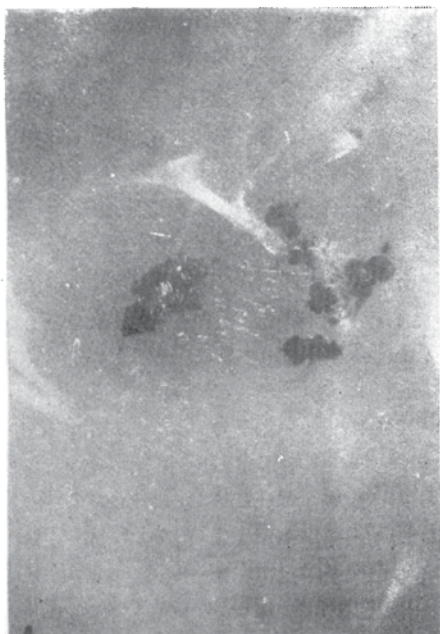
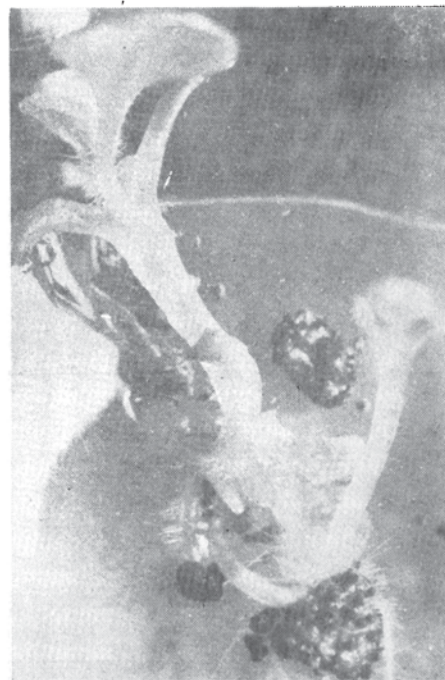
fertilization barriers like somatoplastic sterility. Developing embryos could be rescued successfully on artificial nutrient medium at the critical stage of 72 hours of pollination and interspecific hybrids were obtained (fig. 1).

(2) *N. rustica* x *N. tabacum* hybrid : These are the only two species of *Nicotiana* cultivated for their foliage. Again direct hybridization between these species is unsuccessful due to somatoplastic sterility. This barrier could be overcome through the culture of fertilized ovules

on artificial medium at the critical stage i. e. 10th day after pollination. Interspecific hybrid between these two species was obtained successfully adopting this technique. (fig. 2)

Wider spacing of 80cm x 60cm and high level of nitrogen at 30 Kg/ha were found effective in increasing the yields of FCV tobacco under mulched condition in Guntur. Cotton-fallow-FCV tobacco (2 years cycle) has been adjudged as the best crop rotation as compared to the individual cultivation in Guntur district.

NEW INTERSPECIFIC HYBRIDS IN NICOTIANA

(Fig. 1) *N. repanda* × *N. tabacum*.(Fig.2) *N. rustica* × *N. tabacum*

CTRI, Rajahmundry :

LAB-TO-LAND PROGRAMME

Under III phase of Lab-to-Land programme, 150 farm families have been adopted, out of which 100 are tribals of East Godavari and Visakhapatnam agency areas who are engaged in white Burley tobacco cultivation and the remaining 50 families are from traditional black soils of Prakasam district. The programme was started from 1st June, 1984 with the following technologies.

A) Traditional black soil - FCV tobacco : Guthikondavaripalem (Prakasam District)

- (a) Application of 20 : 50 : 50 NPK/ha in plant row plough furrow method (b) growing, G. 11/1 or Jayasri being the high yielding varieties to be adopted by the farmers (c) topping and application of neem oil emulsion as suckercide.

B) Tribal area-White Burley tobacco of East Godavari and Visakhapatnam agency areas. The number of families adopted in each village are as follows : Pedamunakalagadda (15), Singampalli (20), Surampalem (20), Vankarai of East Godavari Dt. (30), and Rajupakala of Visakhapatnam Dt. (15).

- (a) Planting at 80 cm x 50 cm spacing (b) application of 80 : 50 : 50 NPK/ha (c) topping and application of neem oil emulsion. Each family was allotted one acre demonstration plot and supplied 40 kg DAP, 96kg CAN and 8,000 seedlings of improved variety of white Burley.

Fertilizer demonstration with FACT 20 : 20 in collaboration with M/s. Fertilizers and Chemicals Travancore Ltd. Travancore, has been arranged in East and West Godavari Districts, in order to show the farmers that the complex fertilizers could also be applied for FCV tobacco and also to show that they are equally effective as the straight fertilizers.

LAB-TO-LAND ACTIVITIES

Plant-row-plough furrow method adopted by a progressive farmer on a large scale



She goats supplied under Lab-to-Land Programme during 1982 produced 3rd generation,

At CTRI Research Station, Pusa, under the III phase of Lab-to-Land programme with 200 farm families, farmers training on improved technologies of tobacco cultivation was organised in the nearby villages during September, 1984. The training programme was inaugurated by Sri Harish Chandra Jha, Deputy Director of Agriculture (Tobacco Development), Bihar on 1st September, '84. Critical inputs viz., fertilizers, seeds, seedlings, pesticides and plant protection appliances were distributed to the small and marginal farmers adopted under the programme and demonstrations were held in the farmers' fields.

KRISHI VIGYAN KENDRA OF CTRI

To impart training in various activities to the farmers, the KVK technical staff has conducted base line survey in eleven villages covering Korukonda, Rajanagaram and Rangampet samithis and finally selected four villages viz., Chendredu, Kalavacherla, Dosakayalapalli and Burugupudi. So far, 35 off campus and 9 on campus training classes of one day duration were conducted in horticulture, agronomy and home-science. About 334 farmers in horticulture, 512 farm women and school drop-outs in home science and 312 farmers in agronomy were trained by the Kendra both in off and on campus classes.

Lab to Land work is also in full swing with the 150 farm families adopted. An educational tour to Karnataka State was undertaken alongwith 48 cultivators to study the tobacco sales under tobacco auction platforms and conducted by the Tobacco Board and other places of interest under Lab to Land Programme of Kendra.

Conferences & Symposia :

Sri T. Sitaramachari, Officer-in-charge and Sri M. Umamaheswararao, Scientist S-2 (Agronomy) CTRI

Research Station, Guntur have participated in the Zonal Research Advisory Council meeting on Rabi cropping sponsored by the Andhra Pradesh Agricultural University, Lam Farm.

Sri S. Krishnamurthy, Officer-in-charge & Scientist S-3, CTRI Research Station, Vedasandur has attended the Seminar at Vadavalli village near Mettupalayam, Coimbatore district on 17th September, '84. The package of practices given by the Research Station were highly appreciated.

Sri D. Ch. Raja Rao, Documentation Officer, CTRI, Rajahmundry has attended the 1st Micrographic Convention and Exposition organised by the Micrographic Congress of India from 19-21st September, 1984 at New Delhi.

TRAINEES & VISITORS

CTRI, Rajahmundry :

Trainees :

Sri Y. V. Suryanarayana, Assistant Librarian, CTRI, Rajahmundry (on study leave) is undergoing advanced training at the Documentation Research & Training Centre, Bangalore for one year from 1st August, 1984.

Visitors :

Sri V. Ramachandraiah, Assistant Chief, Indian Institute of Foreign Trade, New Delhi.

Miss, Anita Majoo, Cimmco International, New Delhi.

Mr. Syed F. Ahmed M/s. Rhone Power NC Agro Chemicals (India) Ltd., Bombay.

Sri G. R. Kumar, M. Sc., (Ag.) Sales Representative, Coromandal Indag Products, Rajahmundry.

Sri G. V. S. Reddy, Development Officer, Coromandal Indag, Guntur.

Mrs. Elise Ward, Account Representative, Tobacco Reporter, Specialised Agricultural publications, North Carolina.

Prof. V.M Kalyan Sundaram, Chief Entomologist and Sri M. Narasimharao, Regional Manager, Coromandal Indag Products Ltd., Madras.

Dr. I. V. Subba Rao, Associate Professor and Sri M.L.K. Prasad, Asst. Professor of College of Agriculture, Bapatla along with 50 agricultural students.

CTRI Research Station, Guntur :

Sri S.C. Talwar, Engineer, National Industrial Development Corporation, New Delhi, visited the Research Station in connection with survey and performance of solar thermal devices installed in India. He has gone through the Solar thermal devices installed by the Nagarjuna University at CTRI Research Station, Guntur.

CTRI Research Station, Vadasandur :

A study team lead by Sri V. Ramachandraiah of IIFT, New Delhi visited the station on 3rd August, 1984 to find out feasibility for setting up a Cigar Manufacturing Unit in India in collaboration with Cuba.

CTRI Research Station, Pusa :

Dr. M.L. Punj, Project Coordinator, AICRP, Agri-By Products, Jabalpur and Dr. S.C.Srivastava, Project Coordi-

nator, Sugarcane Research Institute, Lucknow have visited the Station.

APPOINTMENTS AND PROMOTIONS

Sri K. Raman, Assistant has been appointed as Superintendent at CTRI, Rajahmundry w. e. f. 11.7.1984,

Sri R. Sudhakar has been appointed as Technician T-4 (Rural Crafts) under Krishi Vigyan Kendra of CTRI, Rajahmundry w. e. f. 9.8.1984.

Sri Mummidi Satyanarayana Murty, Senior Clerk has been appointed as Assistant at CTRI, Rajahmundry w. e. f. 13.9.1984.

Sri P.V. Prasada Rao, Technician T-5 has been appointed as Technician T-6 (Agronomy) under Krishi Vigyan Kendra of CTRI, Rajahmundry w.e.f. 18.9.1984.

Sri G. Ananda Rao, S.S.Gr. II has been appointed as Technician T-1 at CTRI, Rajahmundry w. e. f. 26-9-84.

Sri P. Ramkumar, Senior Clerk has been appointed as Assistant at CTRI Research Station, Pusa w. e. f. 24-9-1984.

Sri T. V. N. Achari, S. S. Gr. IV has been appointed as Technician T-1 at CTRI, Rajahmundry w. e. f. 29.9.1984.

Sri K. Subba Rao, S. S. Gr. IV has been appointed as Technician T-1 at CTRI, Rajahmundry w.e.f. 29.9.1984.

Sri R. L. Paswan, S. S. Gr. IV, CTRI Research Station, Pusa has been appointed as Technician T-1 w.e.f. 29.9.1984,

RETIREMENTS

Sri M. Israel, Technician T-1-3 (Electrician), CTRI, Rajahmundry retired w. e. f. 31.7.1984 from the Council's service.

Sri K. V. Venkata Rao, Technician T-1-3, CTRI, Rajahmundry retired w. e. f. 31.8.1984 from the Council's service.

PAPERS PUBLISHED

Effect of systemic and non-systemic fungicides on frog-eye spot (*Cercospora nicotianae*) control on tobacco in seed beds.

Ramjilal *et al*

Tob. News 7 (3) : 3-5, 1984.

Directory of periodicals and Annual Reports available in the library of Central Tobacco Research Institute, Rajahmundry.

Ramam, M. Syamprasad, N and Suryanarayana, YV (Comp) CTRI., Rajahmundry. July 1984. 71p.

LATEST I. C. A. R. PUBLICATIONS

AGRICULTURAL ENTOMOLOGY AND PEST CONTROL
by S. Pradhan.

vi + 268 pp 16 cm x 24 cm Figs 32 Price Rs. 33.00
(Postage Rs. 4.00)

The book deals with the principles of agricultural entomology and control of pests of agricultural importance. The pesticides of plant origin have also been described.

GRASSES AND LEGUMES FOR FORAGE AND SOIL CONSERVATION

by K. A. Shankarnarayan and Vinod Shankar

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Presents a connected picture of varied roles that grasses and legumes play in forage production and soil conservation under various ecological conditions.

BANANA

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ORGANIC MANURES

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Describes the potential of various organic manures, their preparation, processing and preservation, and recycling of organic materials as fertilizers, biogas etc.

INDUCED BREEDING OF CARPS

by Hiralal Chaudhuri and S. B. Singh

iv + 82 pp 16 cm x 24 cm Figs 38 Price Rs. 16.00
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Gives information on the technique of hypophysation, with special reference to major Indian and Chinese carps, its advantages and its role in the development of aquaculture.

MICROBIAL DIGESTION IN RUMINANTS

by S. P. Arora

iii + 78 pp 16 cm x 24 cm Figs 14 Price Rs. 11.50 (Postage Rs. 3.50)

A concise account of the present knowledge of the role of microbes in rumen digestion is presented in this book.

Copies available from :

The Business Manager,

Indian Council of Agricultural Research,

Krishi Bhavan, New Delhi - 110 001.

Edited & Compiled : **M.C.M. REDDY & A. HARANATH**