



CTRI News Letter

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MAJOR EVENTS

The VI National Symposium on Tobacco and X AICRP (T) Workshop were held at Central Tobacco Research Institute, Rajahmundry from 13-17, February, 1986.

The inaugural function was held on 13th at 11-00 A. M. at Sri Venkateswara Anam Kala Kendram, with Dr. M. V. Rao, Deputy Director General (CS), Indian Council of Agricultural Research, New Delhi as President. Dr.



Inauguration of the function by Dr. A. Apparao, Vice-Chancellor.

A. Appa Rao, Vice Chancellor, Andhra Pradesh Agricultural University inaugurated the function and the Souvenir was released by Sri P. P. Williams, Chairman, Tobacco Board. Dr. C. Kempanna, Asst. Director General (ICAR) delivered the key-note address, while Dr. G. J. Patel, Ex-Project Coordinator (T) addressed the delegates. Dr. N. C. Gopalachari, President, Indian Society of Tobacco Science presented a report on the activities of the Society during the last two years, while

the progress report of the coordinated project was presented by Dr. B. G. Jaisani, Project Coordinator i/c. The meeting was concluded with a vote of thanks by Sri K. S. N. Murthy, Secretary of Tobacco Science.

About 250 delegates comprising of Scientists, Trade, Marketing, Development and Farmers attended the meetings and participated in the deliberations. Invited



Welcome address by
Shri B. G. Joshi, Director-
in-Charge.

Key-note address by
Dr. C. Kempanna Asst-
Director General (CC).

President's address by
Dr. M. V. Rao, Dy. Director
General (CS).



Sri P. P. Williams, IAS., Chairman, Tobacco Board released the Souvenir.



On the dias from left to right : Dr. C. Kempanna, ADG, Dr. A. Apparao, Vice-Chancellor, Dr. M. V. Rao, DDG (CS), Sri P. P. Williams, Chairman, Tobacco Board, Dr. N. C. Gopalachari, President ISTS, Dr. B. G. Jaisani, Project Coordinator i/c., Sri K.S. N. Murty, Secretary, ISTS.

lectures by distinguished Tobacco Scientists were delivered in the afternoon session, with Dr. M. V. Rao in the chair and Dr. M. K. Chakraborty as rapporteur. Several participants from the trade and research felt that there should be closer collaboration between these two agencies as well as manufacturers, development and extension staff to understand each others problems with the objective to serve the farming community. It has been suggested that these agencies should meet once in six months to work out details of this programme and to achieve this objective, a Committee has been constituted with the following members :

- 1) Dr. C. Kempanna-Chairman;
- 2) Dr. G. J. Patel
- 3) Director, C. T. R. I.
- 4) Project Coordinator (Tobacco)
- 5) Representative of Tobacco Board
- 6) Dr. N. C. Gopalachari
- 7) Sri T. D. Prasada Rao
- 8) Sri K. V. Krishnamurthy and
- 9) Representative of farmers.

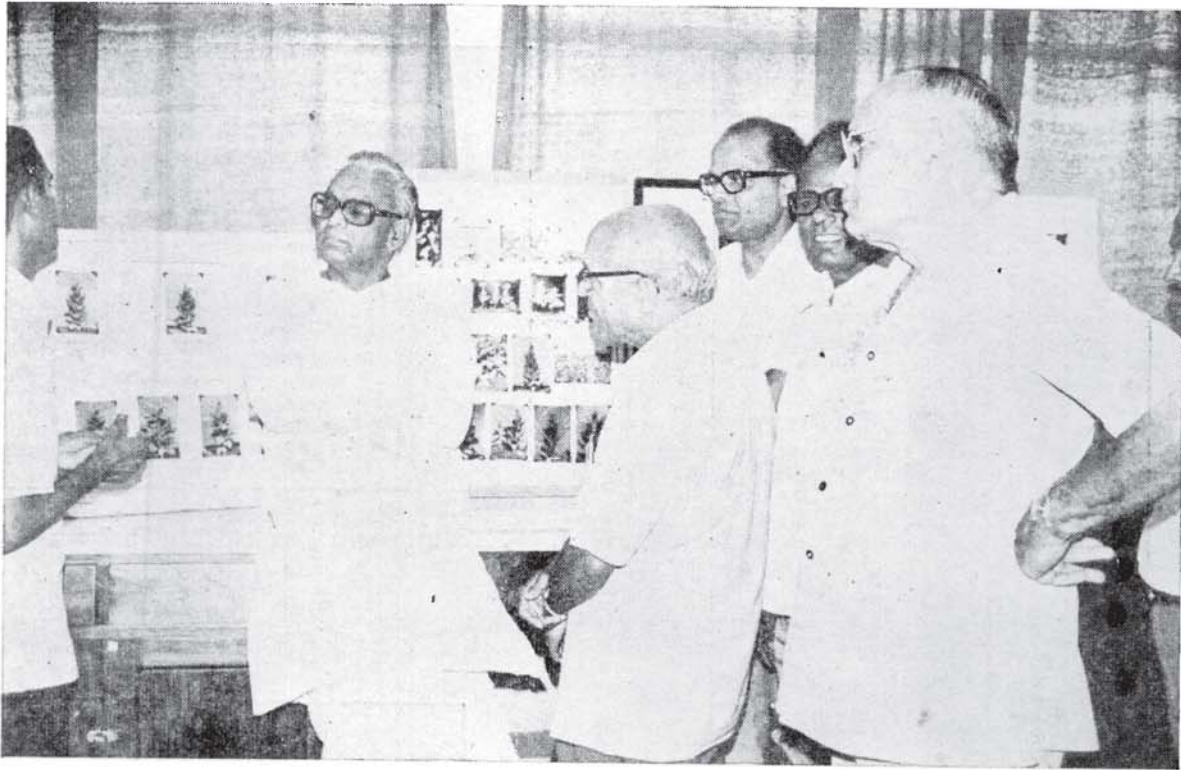
In all, 97 papers of various disciplines have been received for presentation during the Symposium. Seventy four papers were presented in two separate groups. The two days meetings were concluded with a vote of thanks by Dr. B. G. Jaisani, Project Coordinator in-charge.

Sri R. Rajagopala Reddy, Minister for Agriculture and Shri P. Indra Reddy, Minister for Labour, Andhra Pradesh visited the Institute on 29th March, 1986. Shri B. G. Joshi, Director in-charge briefed the research activities of the Institute and took them to the various Divisions and Sections.

After going round the Laboratories, Museum etc. the Hon'ble Ministers recorded the following remarks in the visitors book.



From L to R : Sri P Indra Reddy, Minister for Labour, Sri G. Butchayya Chowdary, MLA and Sri R. Rajagopal Reddy, Minister for Agriculture.



Sri R. Rajagopala Reddy, Minister for Agriculture, visited the Laboratories.

"I am very happy to have been able to spend some time with the officials of the Institute. I tried to learn what exactly has been going on here. The work done here with regard to the development of tobacco varieties from the nursery stage to the curing stage appears to be really useful to the farming community".

R. Rajagopala Reddy,
Minister for Agriculture.

"On the happiest occasion of visiting the Central Tobacco Research Institute I have to congratulate all the scientists who have done valuable research on tobacco which is highly useful to the farming community. The scientists should also find solutions for the marketing problems faced by farmers".

P. Indra Reddy,
Minister for Labour

RESEARCH HIGHLIGHTS

CTRI, Rajahmundry :

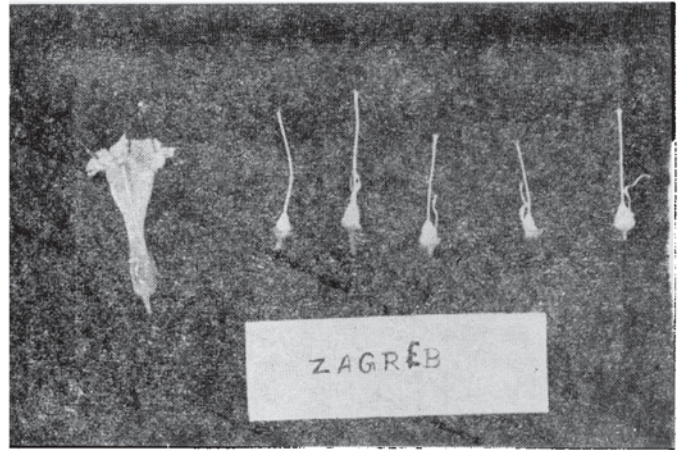
In the germplasm obtained from Bulgaria, two male sterile lines have been identified. They are "Zagreb" and "Burley-MB2" varieties of *Nicotiana tabacum*. Photographs showing the 2 varieties and the male sterile flowers together with the stages in the development of the protruding stigma are given in the next page.

Haploid plant-lets were raised from irradiated anthers (250 R to 1,000 R) and also from the anthers of mutants obtained by physical & chemical mutagens.

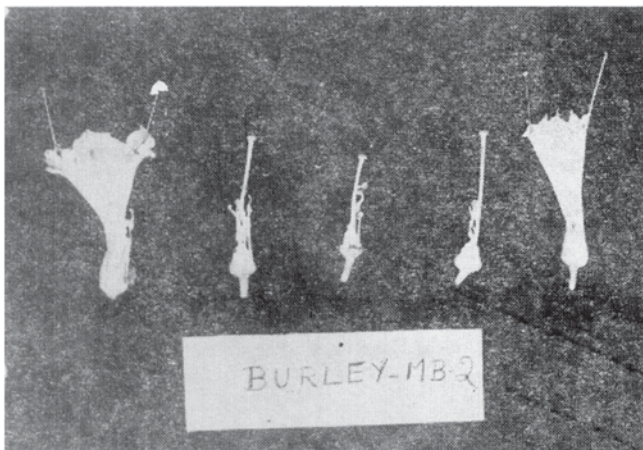
MALE STERILE LINES FROM BULGARIAN GERmplasm



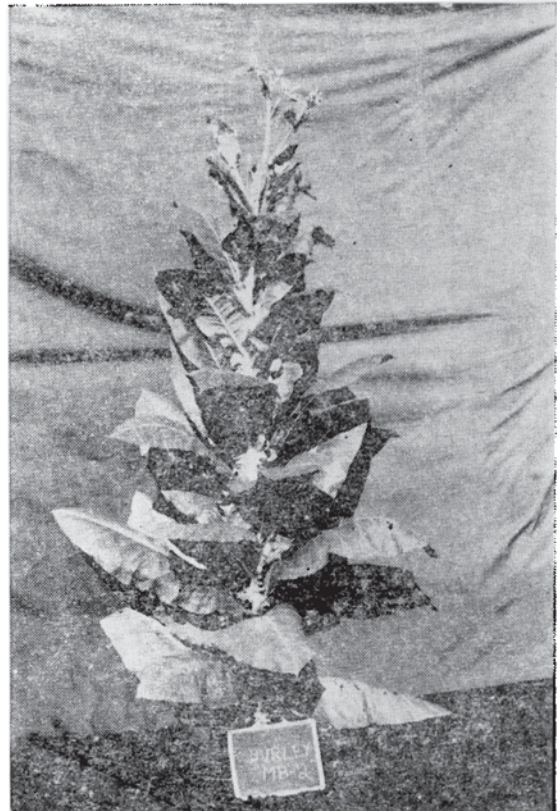
Male sterile line "Zagreb".



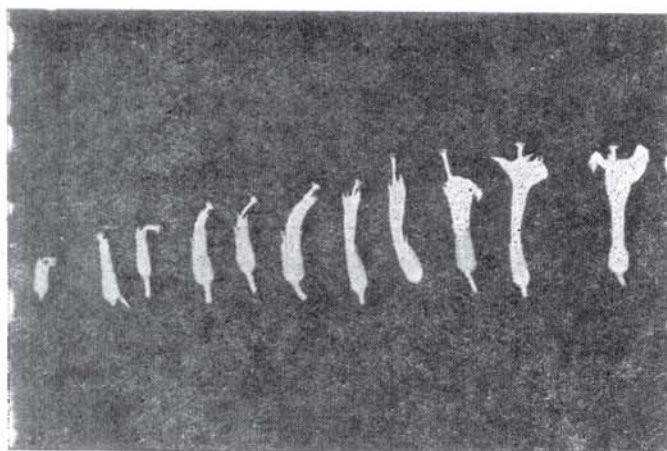
Male sterile flowers of "Zagreb" with corolla split open/removed.



Male sterile flowers of "Burley-MB2" with Corolla split and removed to show rudimentary style and stigma emerging from the ovary.



Male sterile "Burley MB - 2".



Various stages in the development of protruding stigma of the male sterile flower.

Two new interspecific hybrids were produced through 'embryo-rescue' method. They are,

- a) *N. rustica* x *N. benthamiana*
- b) *N. rustica* x *N. tabacum* (Bidi cultivars SBR. 1 & SBR. 2)

Indigenous variety 'Viswanath', proposed by Sri V. V. Ramana Rao, Scientist S-2 (Plant Breeding) for the *Natu* tobacco belt of Guntur and flue-cured mosaic resistant variety 'Jayasri (MR)' proposed by Sri K. T. Ramavarma, Scientist S-2 (Cytogenetics) for the black-soils and Southern light soils of Andhra Pradesh were approved for release during the 10th AICRP Workshop held at Central Tobacco Research Institute, Rajahmundry in February, 1986.

CTRI Research Station, Guntur :

Turkish tobacco varieties, Samsun, Soluky, Xanthi and Smyrna were successfully grown at Vinukonda and the prospects of growing aromatic tobacco in this area

is very encouraging. Bright air cured tobacco trial was also taken up at Vinukonda in collaboration with M/s. Godfrey India Limited.

CTRI Research Station, Dinahata :

Performance of HDM-1 (Motihari selection) was found to be superior to DD.437, Hemti and Bitri varieties.

Diammonium phosphate and single super phosphate showed better effects on yield and quality of Motihari tobacco than the Mussoorie Rock phosphate and Purulia phosphate.

Extension activities : CTRI, Rajahmundry :

1. Exhibits on tobacco were sent to the Indian Exhibition at Doha (Qatar) during February, 1986.
2. An Exhibition was arranged at Guntur from 30-31st January, 1986 in connection with 'Tobacco Meet' organised by the Tobacco Board and Agmark and another exhibition was arranged at Agricultural Research Station, Andhra Pradesh Agricultural University, Marteru from 16-17th March, 1986 in connection with Diamond Jubilee Celebrations.

3. (a) The tobacco varieties HR 74-75 and HR 81-83 are promising with higher bright grade outturn in the black soil varietal demonstration plots. (b) Application of neem oil emulsion resulted in effectively controlling suckers in the demonstration plots of Northern Light soils area. (c) The variety 'Jayasri' fared well

in planted area (27.80%) followed by Sp. cross (22.20%) in Southern light soils area of Prakasam district. (d) Intensive survey on 'Black shank' in the upper Northern light soil area of West Godavari district revealed that nearly 280 acres of f. c. v. tobacco and 34 acres of Natu tobacco was effected with black shank. The damage is estimated to be about 38% in FCV and 34% in Natu tobacco. Follow-up action for the ensuing season to control the disease is under progress.

KVK activities, CTRI Rajahmundry :

A number of training programmes have been organised in the disciplines of Agronomy, Horticulture, Home Science and Rural Crafts.

Under the improvement programme of Oil seeds, two demonstration plots were laid out (40 cents each) at Kalavacherla and Dosakayalapalli villages. Seeds (35 Kg. pods each) of the variety TMV-2 and other critical inputs (fertilisers, pesticides etc.) were supplied and necessary technologies were transferred from time to time. The crop growth was good and it is expected to be harvested by middle of April, 1986.

Dr. M. V. Rao, Deputy Director General, ICAR, visited the different disciplines of K-V. K. on 18-2-86 and appreciated the works done by K. V. K. and encouraged the staff to transfer more and more improved technologies to the farming community.

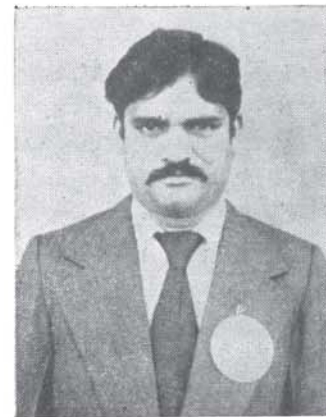
Honours & Awards :

The paper entitled 'Embryo rescue of *Nicotiana* hybrids by *in vitro* culture' contributed by Dr. (Mrs) U. Subhashini, Sri T. Venkateswarlu and Smt. K. Anjani

published in Plant Science Letters was adjudged as the best paper and bagged the prestigious award of 'Dr. G. S. Murty'.



Dr. (Mrs.) U. Subhashini



Sri T. Venkateswarlu

Dr. M. V. Rao, Dy. Director General (CS), ICAR, presented the awards to the authors during the inaugural session of National symposium on tobacco on 13th February, 1986.

Dr. B. V. Kameswara Rao, Scientist S-2 & Head of the Division of Biochemistry & Plant Physiology, Central Tobacco Research Institute, Rajahmundry has been elected as Fellow of Indian Chemical Society.

Sri S. Krishnamurthy, Scientist S-3 & Officer-in-charge, and Sri S. Srinivasan, Technician T-1-3, CTRI Research Station, Vendasandur, participated in the Zonal Workshop meeting on 8th January, 1986 at Agricultural Research Station, Bhavanisagar. Sri Krishnamurthy gave a talk on the improved package of practices.

Conferences, Symposia and Seminars :

Shri V. V. Ramana Rao, Scientist S-2 (Plant Breeding), Central Tobacco Research Institute, Rajahmundry gave a talk on 'Breeding for disease resistance' in the Division of Genetics & Plant Breeding.

Dr. D. V. Subba Rao, Scientist S-2 & Head, Ag. Statistics, Central Tobacco Research Institute, Rajahmundry has attended the Indian Tobacco meet held at Guntur and presented a paper entitled 'Analysis of Trends in area, production and exports of Tobacco in India as compared to its major competing countries' during January 30-31, 1986. Dr. Subba Rao has also attended the symposium on "Improvement of crop production on dry land and problem areas" organised by the Indian Society of Agricultural Science at New Delhi and presented a paper on use of Near Neighbour Analysis in agriculture experimentation".

Sri C. R. Nageswara Rao, Scientist S-1, Ag. Statistics Central Tobacco Research Institute Rajahmundry, has attended the 19th Orientation Course at NAARM, Hyderabad held during 27th January to 26th February, 1986.

Sri G. Rama Prasad, Scientist S-2, Division of Entomology, Central Tobacco Research Institute, Rajahmundry has participated in the National Seminar on Plant Protection in field crops held during January 29-31, 1986 at Central Plant Protection Training Institute, Hyderabad and presented a paper entitled 'Relative Efficacy of some insecticides and neem Kernel suspension against tobacco caterpillar *Spodoptera litura* F. on tobacco'.

Dr. R. Lakshminarayana, Scientist S-2 (Plant Breeding) CTRI Research Station, Vendasandur, participated in the State Variety Release Committee meeting of the Government of Tamil Nadu at Madras on 10th January, 1986. The newly evolved country cheroot variety 'Sendrapatty Special' has been recommended for release.

Sri S. Krishnamurthy and Dr. R. Lakshminarayana, CTRI Research Station, Vendasandur have participated in the Zonal monthly meeting at the Cotton & Millets Station, Kovilpatty and delivered lectures on 'Tobacco culture' and 'Tobacco varietal improvement' respectively on 20th January, 1986.

Sri S. Krishnamurthy, Scientist S-3 gave a seminar talk at M. V. M. Govt. Arts College, Dindigal on Tobacco research in India and the impact on the agricultural economy of the country on 7th March, '86.

Sri S. K. Naidu, Scientist S-1, Division of Ag. Extension, Central Tobacco Research Institute, Rajahmundry has attended the monthly workshop at Agricultural Research Station, Andhra Pradesh Agricultural University, Marteru and gave a talk on crop improvement in Northern light soil area on 3rd January, 1986.

Deputation Abroad :

Dr. K. Nagarejan, Scientist S-3 & Head, Division of Plant Pathology, Central Tobacco Research Institute, Rajahmundry has been deputed for training in U. K. for a period of 9 months with effect from 26-2-1986, in the



Sri B. G. Joshi, Director-in Charge briefing the research activities to Shri P. P. Williams, IAS, Chairman, Tobacco Board, Guntur on 12-3-1986.

field of Plant Pathology for Senior Level Indian Agricultural Scientists.

Two Tanzanians namely S Sri J. K. G. Kazembeh and E. C. Kalulo received training in curing and seed production technologies for a period of two days.

Visitros & Trainees :

CTRI Research Station, Guntur :

CTRI, Rajahmundry :

Two batches of field assistants consisting of 20 in each, under-went short term training in curing and grading on FCV tobacco at the Station from 20-28th January, '86.

80 Officials (Field Assistants/L. D. Cs) from Tobacco Board were trained in tobacco production technologies for a period of 4 days in two batches.

Sri P. P. Williams, Chairman, Tobacco Board, Guntur, visited the Research Station's farm.

12 Farmers have been trained in the technologies of VFC tobacco production, curing and grading for a period of 21 days, and certificates were issued.

Sri D. P. Bagohi, Joint Secretary, Ministry of Commerce, Govt. of India, New Delhi visited the Station's farm.

Sri P. R. Ramachandran and colleagues from M/s. Godfray India Limited, Delhi and Bombay visited the Station's farm.

Sri K. Koteswara Rao, Senior Marketing Officer, Guntur, has visited with a batch of 15 trainees.

Dr. Avadhani, Managing Director, IFFCO, New Delhi visited with 40 cultivators from Tamil Nadu, Maharashtra and Andhra Pradesh.

CTRI Research Station, Dinhat :

Dr. B. A. Harwade, Dist. Sangali, Maharashtra.
Justice Shri D. K. Sen, Judge, High Court, Calcutta.

Shri K. M. Roy & Shri P. K. Phookan, Scientists, Indo-British Education Project, Assam.

Shri A. K. Mitra, Assoc. Res. Scientist (Agronomy)
B. C. K. V. North Bengal Campus, Cooch Behar.

APPOINTMENTS & PROMOTIONS

Shri K. Appa Rao, Scientist S-2 has been appointed to the post of Scientist S-3 at CTRI, Rajahmundry, w. e. f. 1-7-1984 on Five yearly assessment.

Dr. C. V. S. S. V. Gopalakrishna, Scientist S-1 has been appointed to the post of Scientist S-2 at CTRI, Rajahmundry, w. e. f. 1-1-1984 on Five yearly assessment.

Dr. A. G. K. Murty, Scientist S-1 at CTRI, has been appointed to the post of Scientist S-2 at CTRI, Rajahmundry, w. e. f. 1-1-1984 on Five yearly assessment.

Shri G. S. R. Murty, Scientist S-1 has been appointed to the post of Scientist S-2 at CTRI, Rajahmundry, w. e. f. 1-1-1984 on Five yearly assessment.

Kum. V. Ushashree, Scientist S-1 has been appointed to the post of Scientist S-2 at CTRI, Rajahmundry, w. e. f. 1-7-1984 on Five yearly assessment.

Shri M. Sanni Babu has been appointed as S-2 (Ag. Extension) with effect from 28-1-1986 at this Institute.

Dr. B. Sarath Babu, has joined as S-1 (Entomology) at this Institute with effect from 28-2-1986.

Dr. B. John Babu has joined as Tech. T-6 (Animal Sciences Production) at K. V. K. of this Institute with effect from 14-3-1986.

Shri P. Sampath Kumar, Tech. T-6 (Horticulture) has been appointed as S-1 (Horticulture) at IHR, Bangalore and relieved on 10-3-1986 from K. V. K. of this Institute.

Shri B. L. Singh has been appointed as S-2 (Agronomy) at CSWR & TI, Dehradun and relieved on 24-2-1986 at CTRI Research Station, Dinhat.

Retirements :

Shri N. S. Murty, Scientist S-2 Division of plant pathology, CTRI, Rajahmundry, has retired from Council's service with effect from 28-2-1986 on superannuation.

Transfers :

Shri K. D. Singh, Scientist S-3 (Agronomy) has been transferred from CTRI Research Station, Kandukur and

has taken over charge as Head of the Division of Agronomy w. e. f. 9-1-1986 at CTRI, Rajahmundry.

Death :

Sri R. S. N. Murty, Tech. T-2 (Asst. projector Operator) CTRI, Rajahmundry, expired on 19-1-1986.

PAPERS PUBLISHED

Response of flue-cured tobacco varieties to different levels of topping.

Sastry, A B; Rao, R. V. S; Prasada Rao, P. V. and Nageswara Rao, C. R.
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Experimental embryogenesis in burly tobacco.
Venkateswarlu, T. and Subhashini, U.

National Symposium on production & exports of burley tobacco, Madras, 12th Oct., 1984. P. 45-6.

Genetic resources of white burley tobacco in evolving high yielding varieties together with better quality.
Rao, R. V. S. and Sastri, A. B.

National Symposium on production & exports of burley tobacco, Madras, 12th Oct., 1984; P. 47-49.

In vitro hybridization in an incompatible cross *Nicotiana glutinosa* x *Nicotiana megalosiphon*.
Subhashini, U; Venkateswarlu, T; Anjani, K. and Prasad, G. S. R.

Theor. Appl. Genet. 71:545-9, 1985.

Genetic improvement of chewing tobacco (*N. tabacum* L) in Tamil Nadu.

Ilyas Ahmed, M. and Prasanna Simharao, G. S. B.
Indian Tob. J. 17 (1) : 5-10, 1985.

A note on occurrence of calcium deficiency in the field crop of white tobacco and in FCV tobacco nurseries grown in Northern light soils of East Godavari District in Andhra Pradesh.

Sanni Babu, M; Sitaramachary, T. and Krishnamurthy, V.
Tob. News 8 (4) : 9-11, 1985.

Influence of plant population, densities, nitrogen and topping levels on the yield, quality and economics of monsoon grown white burley tobacco.

Balagopal, K; Someswara Rao, M; Subbarao, R. and Raghavaiah, C. V.

National Symposium on production & exports of burley tobacco, Madras, 12th Oct., 1984 : P. 59-64.

Sex differentiation among living larvae of *Spodopteralitura* Fabricius (FAM: Noctuidae ord: Lepidoptera).

Krishnananda, N and Satyanarayana, S. V. V.
Tob. Res. 11 (1) : 53-56, 1985.

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Krishnananda, N; Joshi, B. G. and Satyanarayana, S. V. V.
Indian Tob. J. 17 (4) : 10-12, 1984.

Performance of carbendazim on the control of frog-eye spot disease of burley tobacco and its influence on quality parameters.

Nagarajan, K. and Anjaneyulu, C.
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Effect of potassium fertilization on yield and quality of flue-cured tobacco grown in Northern light soils of Andhra Pradesh.

Krishnamurthy, V; Reddy, P. R. S ; Sannibabu, M. and Ramakrishnaya, B. V.

Tob. Res. 11 (1) : 57-63, 1985.

Available phosphorus status of flue-cured tobacco soils of Andhra Pradesh.

Krishnamurthy, V; Ramakrishnaya, B. V. and Gopalachari, N. C.

Tob. Res. 11 (1) : 64-9, 1985.

The study of factors influencing the production of FCV tobacco in Southern Light Soils of Andhra Pradesh.

Wilson, M. J. and Naidu, S. K.

Tob. Res. 11 (1) : 35-9, 1985.

The neem oil emulsion - A new approach to control tobacco suckers.

Wilson, M. J. and Naidu, S. K.

Tob. News 8 (4) : 12-3, 1985.

An analysis of growth rates in area, production and yield per hectare of burley tobacco.

Subbarao, D. V. and Nageswararao, C. R.

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An analysis of growth rates in area, production and yield per hectare of burley tobacco.

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Influence of sources of nitrogen on the yield, protein and non-protein nitrogen status of flue-cured tobacco at different stages of plant growth.

Sreeramamurty, Ch. and Gopalachari, N. C.

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Effect of different sources of nitrogen on the availability of major nutrients.

Sreeramamurty, Ch. and Gopalachari, N. C.

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Research orientation for burley tobacco development in India.

Gopalachari, N. C.

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The study of factors influencing the production of FCV tobacco in Southern light soils of Andhra Pradesh.

Wilson, M. J. and Naidu, S. K.

Tob. Res. 11 (1) : 35-9, 1985.

Studies on the effect of topping and method of harvesting on yield and physico-chemical characteristics of HDBRG tobacco.

Umamaheswararao, M; Tripathi, S. N; Balagopal, K. and Subbarao, R.

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Influence of plant spacings, topping and nitrogen levels on yield and quality of burley tobacco.

Tripathi, S.N; Rao, M U; Rao, R. S. and Balagopal, K.

National Symposium on burley tobacco, Madras, 12th Oct., 1984 : P. 54-6.

Prospects of burley tobacco cultivation in Tamil Nadu.

Krishna Murthy, S.

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Varietal performance of chewing tobacco at varying levels of topping under rainfed condition of North Bihar.

Amarnath, S and Sinha, R.

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Critical stage of chewing tobacco for irrigation

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Performance of chewing tobacco under varying doses and methods of compost application

Sinha, R; Dwivedi, S S L. and Pandey, A. K.

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Influence of nitrogen and topping levels on yield and quality of Natu tobacco (*N. tabacum* L.)

Tripathi, S. N. *et al.*

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1986 248p.

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Raja Rao, D. Ch.

1986. 25p.

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