



# CTRI News

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CENTRAL TOBACCO RESEARCH INSTITUTE, RAJAHMUNDRY-533 105, A.P.

## GLOBAL AND NATIONAL TOBACCO SCENARIO

At present, the annual world tobacco production is ~ 7 billion kg. China (2,350 million kg) is the largest producer while Brazil (550 million kg) and USA (227 million kg) are the other major FCV tobacco producing countries. India is the second largest producer of tobacco with 750 million kg leaf production. Further, India occupies third place in flue-cured tobacco production with 340 million kg after China and Brazil. Tobacco cultivation in many countries is a family business.

In India, tobacco is grown on 0.45 M ha of area, accounting for only 0.31% of net cultivated area in the country. In the country, 36 million people depend on this crop for their livelihood security. There are ten distinct tobacco types grown in 15 states of the country which include cigarette types (FCV, Burley and Oriental) and non-cigarette types (*Bidi*, chewing, *hookah*, *natu*, cheroot, cigar and HDBRG). FCV tobacco, the major exportable type, is grown in an area of 2,40,000 ha by about 85,000 registered growers in Andhra Pradesh and Karnataka.

India also ranks second in tobacco exports in the world after Brazil. Tobacco earns annually ₹ 4,402 crores as foreign exchange and ₹ 13,853 crores as excise

revenue. Its total contribution to the national economy is ₹ 18,255 crores. During the last five years, there has been a significant growth in the production exports of FCV tobacco.

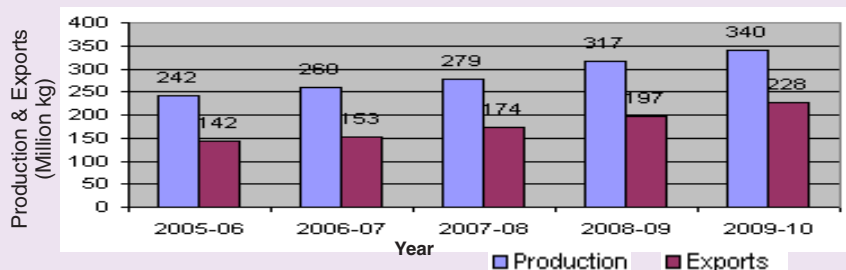
In India, annually ~ 100 billion pieces of cigarettes and ~ 950 billion pieces of bidis are produced. The tobacco consumption pattern in India is contrary to the rest of the world. Out of the total amount of tobacco produced in the country, 48% is consumed in the form of chewing products, 38% as bidis and only 14% as cigarettes whereas in the other countries, consumption of cigarettes alone accounts for 90%. Exports of tobacco products constitute 12% of the total exports. During 2009-10, 29,772 tonnes of tobacco products valued at ₹ 749 crores were exported from the country.

### Exports of Tobacco Products

Product	Quantity (Tonnes)	Value (₹ crores)
Chewing tobacco	8,852	319
Cigarettes	8,022	277
Hookah paste	7,540	44
Cut tobacco	4,785	84
Bidis	488	23
Snuff	85	1
Total	29,772	749

(Source: Tobacco Board Annual Report, 2010)

Trends in FCV Tobacco Leaf Production and Exports



## RESEARCH HIGHLIGHTS

- ✧ In Alfisols (NLS), potash application led to a significant increase in cured leaf yield of FCV tobacco over the control (N-K), with average yield increase being in the order of 37 and 25% at 120 and 80 kg K<sub>2</sub>O/ha, respectively. K application in 4 splits (1:1:1:1 at 10, 25, 40 and 70 DAT) resulted in higher yields as compared to its addition in 3 splits (1:2:1 at 10, 25 and 40 DAT or 10, 40 and 55 DAT or 25, 40 and 70 DAT).
- ✧ The promising Burley tobacco lines, YB-4 and YB-10 recorded 3,136 and 3,065 kg/ha, respectively at 90x45 cm spacing.
- ✧ The feasibility studies on organic production of FCV tobacco in KLS revealed consistent reduction in the smoke constituents (Tar, CO, TPM, TSNA) of cured leaf during the fourth year of the study
- ✧ Application of *Pochania chlamydosporia* (PDBC strain) 10<sup>8</sup> spores @ 100 g/m<sup>2</sup> in solarized soil caused 60.2% increase in healthy transplants, 52.5% decrease in Root-Knot Index (RKI) and 47.7% decrease in soil nematode population compared to the check.
- ✧ As per the test protocol, 10 cigarette samples were analysed adopting the ISO method (each sample replicated 20 times) and Health Canada Intense Smoking (HCIS) method (each sample replicated 35 times). Higher levels of TPM, nicotine and Co were recorded with the HCIS method (TPM: 30.16 to 52.47 mg/cig; Nicotine: 1.24 to 3.08 mg/cig; CO: 17.32 to 25.14 mg/cig) as compared to the ISO method (TPM: 0.92 to 17.78 mg/cig; Nicotine: 0.10 to 1.59 mg/cig; CO: 0.57 to 11.27 mg/cig).

## TRANSFER OF TECHNOLOGY

### RESEARCH PUBLICATIONS

- ✧ Dam, S.K., S. Roy and S. Dutta (2010). Biological control of brown spot caused by *Alternaria alternata* in *Motihari* tobacco (*Nicotiana rustica*) in West Bengal, India. **Journal of Mycology & Plant Pathology** 40(3):356-9.
- ✧ Subhashini, D.V. and K. Padmaja (2009). Exploitation of *Pseudomanas fluorescens* for the management of damping off in tobacco seedbeds. **Indian Journal of Plant Protection** 37(1&2):147-50.
- ✧ Subhashini, D.V. and K. Padmaja (2010). బయోఫెర్టిలైజర్లతో నేలసారం వ్యవసాయ అభివృద్ధి. **Swarna Sedyam** 13(11):10-2.
- ✧ Subhashini, D.V. and K. Padmaja (2010). Role of biofertilizers, soil fertility and agriculture. **Swarna Sedyam** 13(11):43-4.
- ✧ Suman Kalyani, K., V. Krishnamurthy and N. Aruna Kumari (2010). పచ్చిరోట్ట పైర్లసాగు పంటకు మేలు - రైతుకు లాభం. **Swarna Sedyam** 13(11):13-5.

### CONFERENCES/ TRAININGS/ WORKSHOPS ATTENDED

- ✧ Dr. T.G.K.Murthy, Head, Crop Improvement attended the workshop on "Use of NISM-GPA software" at NBPGR on 09.07.2010.
- ✧ Dr. K. Sarala, Principal Scientist attended the Interactive session on "Biotechnology research in the ICAR" at NASC, New Delhi during 26-27 July, 2010.
- ✧ Dr. D. Damodar Reddy, Head, CC & SS attended the verification of soil test procedures being followed at STL of Tobacco Board, Ongole and Periyapatna at Ongole during 8-9 July, 2010 and at Periyapatna on 03.08.2010.
- ✧ Dr. C.V. N. Rao, Principal Scientist attended the Meeting of technical Bid evaluation Committee for procurement of equipment for tobacco testing labs under NTCP at Nirman Bhavan, New Delhi on 10.08.2010.
- ✧ Dr. J.V. Prasad, Head, CTRI RS, Guntur attended the ZREAC meeting of Krishna Zone for Rabi, 2010 at Lam Farm, Guntur during 16-17 August, 2010.
- ✧ Dr. Y. Subbaiah, Sr. Scientist attended the ZREAC meeting of Godavari Zone for Rabi, 2010 at Kakinada during 18-19, August, 2010.
- ✧ M. Nageswara Rao and S. Nageswara Rao, Technical Officers attended the Training programme to farmers and field staff on "Nursery management and pest & disease control measures in tobacco nurseries" at Devarapalli on 15.09.2010 and at Gopalapuram on 16.09.2010.
- ✧ Dr. K. Suman Kalyani, Sr. Scientist attended the International Conference on "Traditional practices in conservation agriculture" at Udaipur during 18-20 September, 2010.
- ✧ Dr. C.A. Raju and Dr. P. Harishu Kumar, Principal Scientists attended the Training programme to farmers and field staff on "Nursery management" at Kannapuram on 21.09.2010.
- ✧ Dr. K. Nageswara Rao, Head, CTRI RS, Jeelugumilli attended the Training programme to farmers and field staff on "Nursery management" at Nimmalagudem, Ramannagudem and M.V. Gudem on 23.09.2010.
- ✧ M. Nageswara Rao, S. Nageswara Rao and Dr. SK Dam, Technical Officers attended the Training programme to farmers and field staff on "Seedbed preparation, nursery management practices, pest & diseases control on seedbeds" at Nimmalagudem, Ramannagudem and M.V. Gudem on 23.09.2010 and at Morampudi, Rajahmundry and Mirthipada on 29.09.2010.

## VISITORS

Dr. S. Ayyappan, Secretary, DARE and DG, ICAR visited the ARS, Nipani and AINRPT Bidi Tobacco trials at Nipani in Belgaum district of Karnataka on 27.10.2010



DG, ICAR visiting Bidi tobacco trial at ARS, Nipani

Sri C. V. Subba Rao, IFS, Executive Director, Tobacco Board, Guntur visited CTRI on 05-08-2010.

Dr. P. K. Guha, Director, Central Drugs Laboratory, Kolkata; Dr. R. A. Singh, Director, Regional Drugs Testing Laboratory, Chandigarh; Dr. N. Murugesan, Director, Central Drugs Testing Laboratory.; Dr. Gopa Ghosh, Director i/c, Central Drug Testing Laboratory, Mumbai; Dr. J.P. Prasad, Scientist Gr. II & Head, Blood Products Lab, Enzymes and Hormones Lab Bio-Chemistry Lab, National Institute of Biologicals, Noida; Sri Bijendra Paul, Junior Analyst, FRSL, Ghaziabad and Sri Shantnu Gupta, Lab Consultant, Dte. G.H.S, MoH & FW, GOI visited CTRI on 20-08-2010 and interacted with the CTRI Scientists. They also visited Quality Evaluation Laboratory and Smoke Research Laboratories of the Institute.



Directors of Drugs Labs, MoH & FW visiting Tobacco Museum

### INDEPENDENCE DAY CELEBRATIONS

Dr. V. Krishnamurthy, Director hoisted the National Flag on the eve of 64<sup>th</sup> Independence Day on 15-08-2010. On this auspicious occasion, the Tobacco Institute Club of CTRI organized the cultural programmes. The meritorious children of the employees who secured the highest marks in SSC and Intermediate were awarded under ICAR Welfare Fund Scheme and also under CTRI Employees Co-operative Credit Society.



Independence Day Celebrations at CTRI



Director with the students who won CTRI ECCS Medals

### COCOA SEMINAR

State Level Seminar on 'Cocoa as an Intercrop and Improved Management Practices' was organized by CTRI-KVK in collaboration with Directorate of Cashewnut and Cocoa Development (DCCD), Cochin at CTRI, Rajahmundry on 22-09-2010. About 250 farmers from different districts have participated in the seminar.

### HINDI FORTNIGHT CELEBRATIONS

Hindi Fortnight Celebrations were organized at the Institute from 20.09.2010 to 04.10.2010. Dr. V. Krishnamurthy, Director, CTRI inaugurated the celebrations by lighting the lamp on 20.09.2010. Officers/ Staff of CTRI participated in various events/ competitions held in Hindi during the Fortnight.

The Valedictory Function was organized on 07.10.2010. Smt. B. Swarna Kumari, SAI I/c has welcomed the gathering. Sri Ch. Srirama Rao, Member-Secretary, OLIC read the messages received from the Hon'ble Minister of Agriculture Shri Sharad Pawar and Hon'ble Secretary, DARE and Director-General, ICAR Dr. S. Ayyappan and submitted the

report. Smt. V. Jhansi Eswaramma was the Chief Guest and Dr. V. Krishnamurthy presided over the function. Dr. Krishnamurthy appealed that all the officers and staff should learn and speak in Hindi in the office and to do maximum correspondence in Hindi.

Smt. V. Jhansi Eswaramma opined that Hindi will be more useful as a link language to show that the people of different regions and languages of India are one and that Hindi will be useful for the growth, development and unity of the country. She distributed prizes to the officers/ staff who have participated and won the prizes in various competitions held during the Hindi Fortnight.



Inauguration of Hindi Fortnight Celebrations on 20.09.2010



Valedictory function of Hindi Fortnight Celebrations on 07.10.2010

## PERSONALIA

### APPOINTMENTS

- Dr. C. Panduranga Rao, Director (Seeds), SRTC (ANGRAU), Rajendra Nagar, Hyderabad was appointed as Head, CTRI Research Station, Hunsur w.e.f. 03.09.2010.
- Mrs. C. Nanda, Scientist (Plant Breeding) reported to duty at CTRI Research Station, Guntur w.e.f. 30.08.2010.
- Sri K. Prabhakara Rao, Scientist (Biotechnology) reported to duty at CTRI, Rajahmundry w.e.f. 17.09.2010.

### RETIREMENTS

- G. Prakash, Assistant, CTRI RS, Hunsur retired from Council's service on 31.07.2010.
- A.V. Sekhara Babu, Tech. Officer T(7-8), CTRI RS, Guntur retired from Council's service on 31.07.2010.
- K.P.S.N. Murthy, Tech. Officer T(7-8), CTRI, Rajahmundry retired from Council's service on 31.07.2010.
- S.K. Dhar, Tech. Officer T-5, CTRI RS, Dinhat retired from Council's service on 31.07.2010.
- P.S. Gopalakrishna, SSS, CTRI, Rajahmundry retired from Council's service on 31.07.2010.
- P. Ramana Rao, Technician T-3, CTRI, Rajahmundry retired from Council's service on 31.08.2010.
- A.B.V.V. Satyanarayana, Technician T-4, CTRI, Rajahmundry retired from Council's service on 31.08.2010.
- G. Nageswara Rao, Tech. Officer T-5, CTRI, Rajahmundry retired from Council's service on 31.08.2010.
- R. Sreenivasulu, Pr. Scientist, CTRI RS, Kandukur retired from Council's service on 30.09.2010.
- M. Barman, Tech. Officer T-5, CTRI RS, Dinhat retired from Council's service on 30.09.2010.

## MEETINGS/ VISITS OF DR. V. KRISHNAMURTHY, DIRECTOR, CTRI

- Attended the ICAR Directors' Conference held on 15<sup>th</sup> & 16<sup>th</sup> July, 2010 at NASC Complex, Pusa Road, New Delhi.
- Attended the Selection Committee Meeting as DG's nominee at ASRB, New Delhi on 28.07.2010.
- Attended the Input Committee Meeting at Tobacco Board, Guntur and inspected the CTRI Research Station, Guntur on 29.07.2010. As per the Agenda of the Meeting, prices of various fertilizers for supply to growers during 2010-11 crop season were finalised keeping in view the quality.
- Inspected the CTRI Research Station, Hunsur and reviewed the progress of work under the Institute/AINRP(T) projects/trials. Visited the FCV tobacco growing areas in Hunsur, Marur, HD Kote, Kampalapura, Periyapatna, Doddabyalalu, Neelangala Ramanathapura, Arkalgud and Coorg area etc. and seed plots in Hunsur and Marur villages along with the Monitoring Team from 2-4 August, 2010. The crop situation was assessed and the farmers were suitably advised on the problems and suggestions for improvement were given in the light of the constraints noticed.
- Inspected the CTRI Research Station, Guntur and farm fields on 22.08.2010.
- Attended the 2<sup>nd</sup> meeting of the Input Committee for Andhra Pradesh held in the Conference Hall of the Tobacco Board, Guntur on 23.08.2010. As per the Agenda of the Meeting, prices of various fertilizers for supply to growers during 2010-11 crop season were finalised keeping in view the quality.
- Visited to CTRI Research Station, Guntur and monitored the alternative crops to tobacco in CBS and other administrative works at the Station. Visited the AINRP(T) Centre, Nandyal in Kurnool district and inspected the AINRP(T) trials, Pilot Project on Alternative Crops to *Bidi* tobacco sponsored by MoH & FW, Govt. of India, New Delhi and Oriental/Fire-cured tobacco growing areas around Nandyal. Inspected the Oriental and Sun-cured natu tobacco growing areas and interacted with the farmers of tobacco nursery growing areas of Kurnool and Mahabubnagar districts from 2-4 Sep., 2010.
- Attended the XX<sup>th</sup> Meeting of ICAR Regional Committee-II and Interactive Meeting with KVKs at CARI, Port Blair, A & N Islands from 13-16 Sep., 2010. Director made a presentation on the "Tobacco situation in the states of Andhra Pradesh, Orissa and West Bengal, covering area, production and productivity trends; research support; major achievements; major constraints and suggestions for improvement".



Healthy crop



Field visit



Interculture



Leaf stringing