

# ICAR - CENTRAL TOBACCO RESEARCH INSTITUTE - 533105, A.P.

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# From the Director's Desk

### Curing FCV Tobacco - Need for Integrated and Efficient Energy Use



India produced a total of about 800 million kg tobacco in 2014-15, of which the Flue Cured Virginia (FCV) accounted for about 300 million kg representing 38 per cent. Almost all of the FCV tobacco in the country is produced in the states of Andhra Pradesh and Karnataka. Post-harvest drying of tobacco leaves is done through a process of flue curing in the specially constructed structures called 'Barns' under controlled conditions by regulating the temperature and humidity to obtain desired leaf qualities. There are about 97 thousand flue curing barns possessed by 88 thousand registered FCV tobacco growers in the country.

At present, firewood is the predominantly used source of energy to fuel the flue curing barns, with coal and agro-biomass residues like coffee husks making small contribution to total energy requirement. Some conservative estimates on wood fuel requirement suggest that on an average 5 kg wood is needed for each kg of cured leaf. Assuming that 80% FCV tobacco produced is cured using wood as source of energy, the quantity of wood consumed annually for tobacco curing comes to 1.2 million tons. The fuel use efficiency in traditional curing barns is also often very low, contributing to large requirement of fuel wood. Such large scale use of wood fuel for tobacco curing can result in deforestation and represents a serious environmental issue. This situation highlights the need for exploring alternative green energy sources on one hand, and integrated and efficient use of all available fuels on the other.

Exploiting solar energy use for tobacco curing is one of the options available for us to reduce dependency on fuel wood. Fortunately the FCV tobacco growing regions are under high solar radiation during the months coinciding with the tobacco curing periods. Besides being renewable, the solar energy also represents environmental friendly energy source and thus, the potential for its use to provide some of the heat requirement for tobacco curing appears bright. Another important fuel source for tobacco curing is agricultural biomass residues. There exists a myriad of agri biomass residues available locally in abundance. However, the use of agri-horti based biomass wastes is limited owing to their bulkiness and low fuel efficiency. Briquetting and pelletting techniques need to be promoted to enhance their energy efficiency from these low-density bulk materials. Apart from exploring and exploiting alternative energy sources, the fuel use efficiency in tobacco curing needs to be enhanced through redesigning of barns, furnace, flue distribution system etc.

Integrated use of different sources of energy along with redesigned energy efficient barns for tobacco curing will be a promising strategy to sustain the tobacco farming without causing depletion of forest wood reserves.

(D. DAMODAR REDDY)

# SECRETARY, DARE & DG, ICAR VISITED ICAR-CTRI

Dr. S. Ayyappan, Secretary, DARE & DG, ICAR, New Delhi visited ICAR-CTRI, Rajahmundry on 17.07.2015. He visited CTRI laboratories and interacted with all the staff members of the institute. Dr. Ayyappan called upon the scientists to be sensitive towards the current research needs and work hard to improve the research productivity.



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### RESEARCH HIGHLIGHTS

#### **Varieties Released**

Two FCV tobacco varieties (LT Kanchan & N-98), one FCV tobacco hybrid (CH-1) and one bidi tobacco (Nandyala Pogaku-1) were for commercial released cultivation by State Sub-Committee on Varietal Release. Andhra Pradesh on 03.08.2015 at Hyderabad. The 'LT Kanchan', a high yielding (2,500 kg cl/ha) FCV tobacco variety with a desirable trait of reduced level (10% less harmful) tar in main stream smoke is also recommended for commercial cultivation in NLS Region. The 'N-98' is a high vielding (2,200 kg/ha) FCV tobacco variety suitable for cultivation in Southern Light Soils and Southern Black Soil regions covering Prakasam and Nellore districts of Andhra Pradesh. CH-1, a high yielding flavourful CMS-FCV tobacco hybrid, with the yield potential of 2900 kg/ha, is released for Northern Light Soils (NLS) covering West Godavari & East Godavari districts in Andhra Pradesh and Khammam district in Telangana. Nandyala Pogaku-1 is high yielding bidi tobacco variety released for cultivation in bidi tobacco areas in Kurnool district of Andhra Pradesh and has yield potential of around 2200 kg/ha.



LT Kanchan



N-98

### **VISITS**

#### **ICAR-CTRI** Team Visits

- Dr. S. Kasturi Krishna, Dr. C. Chandra Shekar Rao, Dr. K. Suman Kalyani and Dr. G. Raghupathi Rao visited NLS area on 21.12.2015 and monitored the crops situation and advised the farmers about the measures to be taken for the control of prevailing pests and diseases.
- Dr.M.Kumaresan and Sri.R.Rajendran visited tobacco nursery growing areas in Tamil Nadu on 25.09.2015, 05.10.2015 and 16.10.2015 and on-farm varietal trial plots on 18.12.2015.

#### **Monitoring Visit**

The Institute Project Monitoring and Evaluation Committee monitored the Institute and AINPT projects conducted at CTRI RS, Hunsur and also FCV tobacco crop situation in KLS 02.10.2015.

Dr. T.G.K. Murthy monitored the AINPT experiments conducted at AINPT Centre, Nandyal on 28<sup>th</sup> December, 2015.

### **ICAR-CTRI VISION 2050 PREPARED**

The Vision 2050 prepared by ICAR-CTRI articulates perspective of CTRI built on the past experiences, present trends and future requirements. The



document envisages a long-term vision in terms of providing vibrant research back-up for Indian tobacco to be less harmful, remunerative and globally competitive in the changing milieu of national and international policy regimes. The research framework of the Institute found to built on innovative approaches and new opportunities with focus on promoting formers' interests and minimizing consumers' health risks.

### MERA GAON MERA GAURAV

Mera Gaon Mera Gaurav (My Village My Pride): Under this programme each scientist adopted one village and base line survey/information collected. Scientists are assisting the farmers through appropriate advices as per their needs.

#### SOIL HEALTH CARDS ISSUED

World Soil Day was celebrated on 05.12.2015 at CTRI Research Station, Hunsur, Karnataka. CTRI-KVK. Kalavcharla (East Godavari dt.), A.P and CTRI-KVK. Kandukur (Prakasam dt), A.P. The farmers were sensitized about the importance of the soil health and its management. In this connection, 606 Soil Health Cards were distributed to farmers. MLA of Kandukur constituency, Sri Pothula Ramarao, M.Sc. (Ag) attended as chief guest of the function at CTRI RS, Kandukuru.



Distribution of Soil Health Cards at CTRI RS, Hunsur



Distribution of Soil Health Cards at KVK, Kalavacharla



Distribution of Soil Health Cards at CTRI RS, Kandukur

### **MEETINGS**

#### **IRC Meetings**

The Institute Research Committee Meetings (IRC) were held during 24-26 August, 2015 at ICAR-CTRI, Rajahmundry for reviewing the research carried out during the year 2014-15 and finalizing technical programme for 2015-16. Dr. D. Damodar Reddy, ICAR-CTRI. Director. Rajahmundry, Dr. K. Gopal, IAS, Chairman, Tobacco Board, Guntur, Dr. K. Deo Singh, Former Director, ICAR-CTRI, trade representatives, Tobacco Board officials, farmers and scientists participated in the meetings. In this connection, a Scientist-Farmer-Trade-Board Interface organized for was the identification and prioritisations of researchable issues.



## AINPT Workshop

XXII Tobacco Workshop of All India Network Project on Tobacco (AINPT) was held on 30.09.2015 and 01.10.2015 at ICAR-CTRI Research Station, Hunsur. The progress of research work carried out during the year 2014-15 was reviewed and the technical programme for the crop season 2015-16 was finalized during the deliberations.



#### **QRT Review**

The QRT team reviewed the research work carried out at the ICAR-CTRI, Rajahmundry under the chairmanship of Dr. R.R. Hanchinal. Chairperson, Protection of Plant Varieties and Farmers Right Authority, New Dehi on 28.11.2015. QRT members, Dr. B.N. Bhat, Dr. R. Lakshminarayana, Dr. R.K. Samanta and Dr. T. Ramesh Babu participated in the review. The committee compiled its report on 29-30 November, 2015.



### **IMC and IJSC Meetings**

49<sup>th</sup> Institute Management Committee meeting was held on 20.11.2015 at the Institute and discussed about various management issues related to the institute. The 2<sup>nd</sup> meeting of XIII Institute Joint Staff Council held on 20.11.2015 examined various issues related to staff welfare including issue of health cards. updating of roster registers, providing facilities to IJSC members, timely filling up of posts, promotions etc.



## **Training Programme**

Training programme on Burley Tobacco Cultivation was conducted during 21-23 September, 2015 to the newly recruited Executives of M/s. Godfrey Phillips India Ltd., Guntur.

### **PERSONALIA**

### **Appointments**

□ Dr. (Smt.) K. Sarala, Pr. Scientist has been appointed to the post of Head, Division of Crop Improvement,



ICAR-CTRI, Rajahmundry w.e.f. 04.09.2015.

☐ Sixteen Temporary Status Casual Labourers has been regularized as Skilled Supporting Staff during the second half of 2015.

### **Promotions & Transfers**

- ☐ Fifteen Technical Personnel has been promoted to next higher grade during the second half of 2015.
- Smt. B. Swarna Kumari working at the Institute has been promoted as SAO at Indian Institute of Oil Seeds, Hyderabad and Sri A.V.G.K. Murthy as AO at Project Directorate of Poultry, Hyderabad. Sri Y. Prabhakar, AAO was transferred to Indian Institute of Agrl. Biotechnology, Ranchi.

#### Retirements

☐ Sri B.K. Champramari, Smt. K. Savitri, Sri N. Ayyappa Naidu, Sri Ch. V. Rangacharyulu and A. Sambraivam superannuated on 31.08.2015 AN. Sri N. Veerraju, Sri M. Yesuratnam, Sri P. Venkata Ratnam and Smt. Sambrajyam superannuated on 30.09.2015 AN. Sri K. Narasimham, and Sri B.S.N. Reddy superannuated on 31.10.2015 AN. Sri P.N.M. Swamy, and Sri Alla Lakshmi Devi, superannuated on 30.11.2015 AN. Sri K. Naga Subbaiah superannuated on. 31.12.2015 AN.

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# **CELEBRATIONS**

### Vigilance Awareness Week

Vigilance Awareness Week celebrated during 26-31 October, 2015 starting with the administering of pledge by the Director to the Staff members of the Institute on 26-10-2015. In the concluded meeting organized on 30.10.2015 under the chairman ship of Dr. D. Damodar Reddy, Director, ICAR-CTRI, Mr. T. Rama Prasada Rao, Regional vigilance & Enforcement Officer, E. Godavari, Rajahmundry, chief guest and Dr. K. Sarala, Vigilance officer addressed the staff on issues relating to Preventive Vigilance as a tool of Good Governance.



# Jai Kisan Jai Vigyan Week

Jai Kisan Jai Vigyan week was celebrated at the institute from 23-29 December, 2015 for promoting the use of science for the welfare of farmers. The week long celebrations were inaugurated by the Chief Guest, Mr. Chiranjeevi Choudhary, IFS, Commissioner of Horticulture, Govt. of Andhra Pradesh on 23.12.2015. Innovative farmers and farm women were felicitated in recognition of their contribution to agriculture and allied sectors. A farmers day was conducted at CTRI RS, Hunsur on 23.12.2015 in association with the State Department of Agriculture and College of Horticulture, Mysore.



#### **Hindi Week**

Hindi week was celebrated at the Institute and its research stations from 19-26 September, 2015 for the promotion of use of official language, Hindi. Sri A. Srinivasa Rao, ITS, General Manager, BSNL, Rajahmundry acted as Chief Guest for the Valedictory Function and gave away the prizes to the winners of various events/competitions held during the week.



### **Independence Day**

National Flag was hoisted on the eve of 69<sup>th</sup> Independence Day on 15 August, 2015 and Dr. D. Damodar Reddy, Director inaugurated the Aadhar Based Biometric Attendance System for registering the staff attendance.

### **Swachch Bharat Programme**

Leaf manure making and Eco Friendly Ganesha were the important activities observed in connection with Swachch Bharath Abhiyan during second half of 2015. Dr. D. Damodar Reddy, Director has advised the staff on the use of Eco friendly idols to save the river water pollution from heavy metals, colours, hardness etc.



### KRISHI VIGYAN KENDRA

Krishi Vigyan Kendra (KVK), Kalavacharla organised 10 training programmes for rural women in the areas of Value addition to millets, Fruits and vegetables, Milk and Coir; Milky mushroom production, Palmyrah fibre extraction and handicrafts with palmyrah leaves, Coirpith compost making, Maggam Embroidary & Garment making etc.



A Training-cum-Awareness Programme on "Protection of Plant Varieties and Farmers' Rights Act" was organised on 5.12.2015 at KVK, Kalavacharla.

In collaboration with ATMA-East Godavari District, a 'Kisan Mela' was organised on 9.11.2015 at KVK, Kalavacharla. Dr. D. Damodar Reddy, Director, ICAR-CTRI, Rajahmundry and Hon'ble Sri Pendurthi Venkatesh, MLA, (Rajanagaram, East Godavari District) graced the occasion. About 300 farmers participated in the programme.



In association with National Institute of Food Technology Entrepreneurship and Management, New Delhi, a Skill Development Programme on Food Processing was organized during 22-26 September, 2015 at KVK Kalavacharla.