Central Tobacco Research Institute

ABOUT

Central Tobacco Research Institute in Rajahmundry, Andhra Pradesh, India and CTRI is an autonomous society managed by the Indian Central Tobacco Committee, Government of India and in year 1945. ICTC was constituted by Government of India in awe of, key role played in national economy and employment generation by tobacco. In 1965 Indian Council of Agricultural Research took over the function of CTRI. The Genus name of tobacco is *Nicotiana* and is one of the five major genera of family Solanaceae. Two commercially developed species in World are *Nicotiana tabacum L* and *Nicotiana rustica L*. Reginal Research Stations of CTRI are located at Guntur, Kandukur, Jeelugumilli, Hunsur, Vedasandur and Dinhata and a research centre at Kalavacharla. Institute is one of the biggest centres in Asia. It is fully equipped with latest instruments for carrying out research work in the areas like Biotechnology, Biochemistry and Smoke Research at Rajahmundry.

Research Centre Name	Central Tobacco Research Institute
Centre Type	Central
Governed By	Indian Central Tobacco Committee
Location	Andhra Pradesh, India
Topic Cover	Tobacco weed management, FCV Tobacco, Crop Improvement, Crop Production, Crop Chemistry and Soil Science
Application Mode	Online & Offline
Head	Dr. D. Damodar Reddy
How to Reach	Andhra Pradesh, India
Founded In	1945
Website Link	Click Here

MISSION AND VISION

CTRI vision is to provide vigorous research back-up for Indian tobacco to be less injurious, remunerative and Internationally competitive in the changing milieu of national and international policy management.

CTRI mission is developing environmentally sustainable agro technologies for production proficiency, product superiority and diversified uses of tobacco.

DIFFERENT PUBLICATIONS FROM CENTRE

Some of the published research work of centre. Some of the titles are listed in below table.

1) Ongoing Projects

1	Genetic Improvement of FCV tobacco genotypes.
2	Biogenesis and regulation of TSNA (Tobacco Specific Nitrosamines) in Tobacco.
3	Crop intensification and diversification for higher system productivity and profitability on tobacco growing Vertisols.
4	Development/ Adoption of the transplanter, stringing machine and hybrid curing barn for FCV tobacco.
5	Pesticide residues in tobacco: Development of analytical methods & monitoring.
6	Bio efficacy and field evaluation of new pesticides against tobacco insect pests and diseases.
7	Evaluation of management modules against tobacco budworm, Helicoverpa armigera (Hubner) in Southern Black Soils of Andhra Pradesh.
8	Crop, water and post harvest product management strategies for enhancing farm income and export potential in rainfed ecosystem of southern Andhra Pradesh

2) Published Projects

1	Evaluation of fungicides against leaf blight incited by Phytophthora parasitica f. sp. nicotianae in Virginia tobacco nurseries.
2	Elucidation of false detection of pesticides during residue analysis in Indian tobacco by multidimensional GC-MS.
3	Effect of methods of irrigation and dates of planting on the yield, economics and water use efficiency of hybrid chewing tobacco (*Nicotiana tabacum L.*)
4	Sustainability, energy budgeting, and life cycle assessment of crop-dairy-fish-poultry mixed farming system for coastal lowlands under humid tropic condition of India.
5	Genetic diversity among mutant germplasm accessions of Nicotiana tabacum as determined by morphological parameters.
6	Identification of Trichoderma isolates from tobacco growing regions of West Godavari district, based on sequence analysis of ITS region of rDNA and morphological variations in the strains.
7	Construction and standardization of knowledge test to measure the level of knowledge of tribal farmers on seed banking.
8	Field evaluation of new insecticides against budworm, Helicoverpa armigera (Hubner) in flue-cured Virginia tobacco.

DIFFERENT TECHNOLOGIES IN INSTITUTE

1) CTRI Sulakshana

Flue-cured Virginia (FCV) tobacco germinate in black soils and Southern light Soils of Andhra Pradesh is known for its neutral coloury filler qualities. For enhancing and maintaining the yield levels of these fields, ICAR-Central Tobacco Research Institute (CTRI), Rajahmundry has undertaken breeding schemes to grow aphid tolerant and TMV resistant superb yielding tobacco variety acceptable for these areas. A new high yielding, best quality and pest resistant FCV cultivar was developed through improved pedigree and back cross formulaes of breeding incorporating interspecific hybridization utilizing the cultivars, VT-1158, Hema and Nicotianagossai. After necessary tests, the cultivar was announced in the name of "CTRI Sulakshana" for commercial cultivation.

2) Tobacco Hybrid, CH-3

The Flue Cued tobacco germinates in Karnataka Light Soils (KLS) has unique requirement in the International industry as natural neutral filler. Enhanced production cost over years has resulted raise in cost of cultivation and gradual decrease in net income of farmers. In order to endure the competitive margin in the exports production cost need to be lower down through reduced cultivation or higher productivity or both. With the purpose to increase the monitory benefits accrued to KLS farmers and maintain the export demand, a high yielding hybrid, CH-3 having best quality and flavour differentiation has been developed by M/s ITC Ltd and ICAR-CTRI. CH-3

is a best producing Cytoplasmic Male Sterile FCV tobacco Hybrid generated by crossing CMS Kanchan with P18-1, a FCV germplasm line.

3) Insecticide Baits for Management of Tobacco Caterpillar, Spodopteralitura

Tobacco caterpillar, Spodopteralitura is the main pest of tobacco both in nursery and planted crops. Administration of the pest with foliar sprays of insecticides under breakout condition, cyclonic weather conditions and in grown up crop is a problem. Under such condition insecticide baits have been advised for management of the pest. However, the baits with chemical insecticides viz., chlorpyriphos, monocrotophos and carbaryl are not eco-friendly and creates a danger environment when used indiscriminately. Hence, there is need to find for alternative eco-friendly baits for management of the pest. A replicated research areas for experiment was performed for three seasons (2009-2012) in planted flue cured Virginia tobacco cv Kanchan. Baits were assembled with the test insecticide + rice bran + jaggery + water and executed in the leaf axils of the plant at 60 days after planting (DAP) in FCV tobacco.

4) Tobacco Stalk Biochar as a Soil Amendment

The tobacco stalk biochar (TS Biochar) was developed from tobacco stalk biomass (TS Biomass) through the technique of pyrolysis. The TS Biochar manufacturing parameters (heating temperature and duration) were optimized at ICAR-CIAE, Bhopal, India. The TS Biochar used in this research was developed by pyrolyzing TS Biomass at a temperature of 500 degree Celsius and holding time of 90 minutes and examined for important features. Laboratory and field research were conducted to check the effectiveness of TS Biochar vis-à-vis other amendments viz., untreated TS Biomass and synthetic zeolite (SZ). A laboratory leaching experiment was completed in duplicate to study the N and K leaching losses as mannered by tobacco stalk biochar and synthetic zeolite as soil modifications. The tests included: T1: N+K, T2: N+K+TS Biochar, T3: N+K+ SZ, T4: N+K+TS Biochar + SZ, T5: TS Biochar and T6: Control. The leachate samples were assembled after every leaching event and monitored for pH, ammonium and potassium residues.

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