



समाचार Newsletter

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Central Tobacco Research Institute, Rajahmundry

RESEARCH HIGHLIGHTS

CTRI, RAJAHMUNDY

The advanced breeding lines V-3634 (L-1037 x V-156), V-3643 (L-1037 x V-156) and V-3603 (V-3030 x Hema) developed during 1992-94 proved superior on over all basis with yield increment of 25%, 14% and 8% and grade index increment of 16%, 16% and 14% respectively over control Hema. These lines have been retained for bulk plot trials and supply to AICRP initial evaluation trials of 1995-96 season.

From three years concluded experiment the advanced breeding lines 1171/1, 1099/2/1, 1099/2/2, 1099/2/3, 1099/2/4, and 1117/2 recorded higher yield of 25% to 30% coupled with better quality over control Hema. All the four selections, 1099/2/1, 2, 3, and 4 were resistant to black shank besides giving higher yields. Selection 1099/2/2 was passed to AICRP trial for conducting multilocal trials.

Three B.t. strains Viz; Dipel, Delfin and Bactospeine were superior to endosulfon and untreated check in reducing the leaf and capsule damage by *Heliothis armigera*. Dipel and Delfin were superior to Bactospeine in reducing damage to tobacco nurseries by *Spodoptera litura*.

The root bug, *Stibaropus tabulatus* was effectively controlled in lanka tobacco fields by application of phorate 10G @ 10 kg/ha or endosulfan 4% dust @ 40 kg/ha or carbaryl 5% dust @ 30 kg/ha or fenvalerate @ 0.4% dust @ 20 kg/ha

In an IPM demonstration trial for control of *S. litura* by using bioagents Viz. *Telenomus remus*, *Apanteles africanus* and Sl. NPV, botanical NSKS

and castor as trap crop, the C:B ratio was found to be 1:2.74 whereas by conventional chemical control it was 1:1.52. Further IPM was safe and eco-friendly.

Studies on the monitoring of development of resistant strains of *Phythium aphanidermatum* to Ridomil MZ 72 WP indicated that the present formulation of Ridomil MZ 72 WP @ 0.2% as foliar spray 2 or 3 times at weekly interval, commencing from 3 weeks after germination is safe and the fungus has not developed resistance to the fungicide even after continued usage for 3 years.

Varieties such as Labu, HDM-1, T.238 (*N. rustica*) and TN 86 (Burley) were resistant to tobacco mosaic virus. FCV tobacco varieties viz., Q. 29, Coker 176, Bhavya, ISN-430, NLS.3, NLS.4, showed low root-knot index to *M. javanica*.

CTRI RESEARCH STATION, HUNSUR

Tilt 25% EC (Propiconazole), score 25% EC (Difenoconazole) at low concentration and Bavistin 50% WP at higher concentration were found most promising when given as 2 to 3 foliar sprays for control of stem and leaf infection of anthracnose in FCV tobacco nurseries.

Lines with resistance to all, the three races of black shank pathogen were identified from F3 generation of Bhavya and FCV Spl cross under artificial inoculation.

Aspergillus spp. formed predominant component of storage molds on cured FCV tobacco. Succession of fungal molds was evident on cured tobacco stored for longer periods.

CTRI RESEARCH STATION, KANDUKUR

The advanced breeding line CY-79 evolved through recombination breeding produced significantly higher yields over the control in respect of cured leaf, bright leaf, and grade index. In all the experiments and in bulk trials they are found highly promising.

The progenies of the crosses of the mutant CM-16 with standard varieties, performed well in all kinds of yield characteristics. The results were highly promising and well appreciated by the Quinquennial Review Team.

Improvement in yield due to inoculation with V A mycorrhiza has indicated the scope for saving costly nutrient phosphorus upto 25 kg/ha under SLS conditions. The effects were more clear under low available "P" conditions.

Studies with methods and levels of Nitrogen application indicated Tractor drilling as a suitable alternative to plant row plough furrow (PRPF) method.

About 173.19 quintals of FCV tobacco cured leaf was produced in the farm against the record of 114 quintals produced during the last year, and the productivity in an average was enhanced upto 5 quintals per acre.

Application of FYM and castor cake improved the number of transplantable seedlings significantly.

Damping-off, black shank and leaf blight diseases were less in nursery sown during 4th week of August and 1st week of September. The number of transplantable seedlings were considerably decreased in delayed sowing.

Foltaf 0.2% applied at 25 to 55 days after sowing proved superior in controlling Anthracnose and Frog-eye spot diseases followed by Bavistin 0.05%.

CTRI RESEARCH STATION, VEDASANDUR

In the pre-release bulk trial conducted in grower's field in the Vedaranyam tract, selections HV. 92-1, and HV.92-4 of chewing tobacco were found to give 20 and 14.3 per cent increase in cured leaf yield respectively over the local check variety VR.2.

Evaluation of two pre-release genotypes (HV.86-2 and HV. 86-5) of chewing tobacco along with the check variety Meenakshi under different

spacing levels, topping and doses of 'N' revealed that HV. 86-5 recorded significantly higher total leaf yield of 3528 kg/ha and cured leaf yield of 2938 kg/ha compared to the check variety Meenakshi which recorded 2738 kg/ha and 2236 kg/ha of total and cured leaf yields respectively. The existing recommended spacing of 75 x 75 cm was found to be significantly superior to wider spacing of 90 x 90 cm.

Quinquennial Review Team Visit

The Quinquennial Review Team visited the station on 13.4.94 and reviewed the stations activities for the past five years. Farmers and traders meet was arranged on that day to interact them with QRT members.



Dr. G.J. Patel, Chairman, QRT inaugurating the scientist's guest house



Dr. G.J. Patel, Chairman, QRT addressing the farmers and traders

CTRI RESEARCH STATION, DINHATA

Balanced nutrition of NPK by dollop method resulted in the production of higher and quality cured leaf in Motihari tobacco.

TRANSFER OF TECHNOLOGY

CTRI, RAJAHMUNDRY

Training Programme

One day training programme was organised on Tobacco Production Technology to fifty tribal farmers deputed by ITDA, Parvathipuram on 3.5.94.

RADIO TALKS

- ☆ "तम्बाकू का शोधन, वर्गीकरण तथा भण्डारण" by Dr. S. Amarnath on AIR, Darbhanga, 17.4.94.
- ☆ గ్రామీణులకు చేతి వృత్తులు An Interview with Sri R. Sudhakar on AIR, Vijayawada, 18.4.94.
- ☆ వర్షానికి పాగాకు సాగుకు గాను భూసారపరీక్ష by Dr. B.V. Ramakrishnayya on AIR, Vijayawada, 18.4.94.
- ☆ ఆహారంలో కల్పిలు, తీసుకొనవలసిన జాగ్రత్తలు An Interview with Smt. V. V. Lakshmi Kumari on AIR, Vijayawada, 21.4.94.
- ☆ రాజమండ్రి కేంద్ర పాగాకు పరిశోధనా స్థానం సాధించిన ప్రగతి by Sri M.C.M. Reddy on AIR, Visakhapatnam, 21.4.94.
- ☆ వర్షానికి పాగాకు వేసిన భూములలో చేయవలసిన పనులు by Sri N. Prabhakara Rao on AIR, Vijayawada, 12.5.94.
- ☆ పాగాకు వేసే భూములలో వేసవి దుక్కుల అవశ్యకత by Sri M. Sannibabu on AIR, Vijayawada, 20.5.94.
- ☆ నల్లరేగడి భూములలో పాగాకుతయ్యత తొలకరిపంటల సరళి by Sri M. Umamaheswara Rao on AIR, Visakhapatnam on 22.5.94.
- ☆ నాణ్యమైన బర్లీపాగాకు పెంచుటకు సేద్య పద్ధతులు by Dr. J.A.V. Prasada Rao on AIR, Visakhapatnam, on 6.6.94.
- ☆ లేగదూడల పెంపకము An interview with Dr. P.V.V. S. Siva Rao on AIR, Vijayawada, 9.6.94.
- ☆ కృషి విజ్ఞానకేంద్ర లబ్ధిదారుల అభిప్రాయాలు An interview with beneficiaries of KVK from Sitarampuram village on AIR, Visakhapatnam 19.6.94.

In an experiment breeding for brown spot resistance in hookah and chewing tobacco, the brown spot count has come down to the 0-25 scale at the F₆ generation which is not hinderance to quality.

- ☆ బర్లీపాగాకు రకాల ఎంపిక, భూముల తయారీ, నారుమళ్ళు పెంపకము by Sri T. Krishna Murthy on AIR, Visakhapatnam 29.6.94.
- ☆ తూర్పుగోదావరి జిల్లాలోని గ్రామీణ అభివృద్ధిలో కృషి విజ్ఞానకేంద్రము పాత్ర An interview with Sarva Sri P.V. Prasada Rao, B. John Babu, B. Narasimha Rao and Smt. N. Arunakumari on AIR, Visakhapatnam, 29.6.94.

CONFERENCES / SYMPOSIA / SEMINARS / WORKSHOPS / TRAINING COURSES

Dr. S.N. Tripathi delivered a lecture on "Nutrient Management for Sustainable Tobacco Production in India" in the summer Institute held at Rajendra Agric. University, Pusa on 8.6.94.

Dr. M.M. Sheno and Sri Ramesh participated in the bimonthly programme of subject matter specialists on 9.6.94 organised by Agric. Res. Centre, Naganahalli and gave lecture on FCV tobacco cultivation in Mysore District.

Sri N. Mallikarjuna Swamy attended Agrometeorology Training programme organised by Indian Meteorological Department, Pune from 9.5.94 to 27.5.94.

Sri B. Narasimha Rao, attended training programme on "Vermiculture" from 19th to 21st April 1994 at KVK, PAL, Jalgaon District, Maharashtra.

Sri P.V. Prasada Rao, attended training programme on "Farm Management" on 11th and 12th June 1994 at Arabindo Krishi Vigyan Kendra, Gaddipalli.

Sri P.V.V. Siva Rao, attended "Working Group Meeting on Participatory Technology Development in Animal Husbandry Programme" on 29.6.94 and 30.6.94 at CRIDA, Hyderabad.

AD HOC RESEARCH PROJECT

An ad hoc Research Project "Natural Pesticides from Neem and Pongamia" at a cost of Rs. 27,75,800/- was inaugurated by Dr.M.S. Chari on 6.4.94.

KRISHI VIGYAN KENDRA

Special training programmes

Two Special Training Programmes on "Management of Dairy Animals to increase milk production" were conducted to 52 trainees of Polavaram, Chittavaram, Teki and Yandagandi villages in collaboration with Andhra Bank Institute of Rural Development from 18.5.94 to 20.5.94 and 14.6.94 to 15.6.94

First line-demonstration on oilseeds

The KVK is one of the model agencies in implementing oilseed production programme in East Godavari District. During Kharif season sesamum was laid in four hectares in Pallakadim village with high yielding varieties YL M-17 and GAURI covering 19 farmers and groundnut was laid in four hectares in Subhadrapeta village with high yielding varieties KGS-44, JL-24, RSHY-1, TGE-2, AK 12-24, RG-141 covering 10 farmers.

संक्षिप्त समाचार

अनुसंधान उपलब्धियाँ

कै.त.अ.सं., राजमन्दी

* अग्रिम प्रजनन लाइन वी-3634 (एल-1037x वी-156) वी-3643 (एल-1037x वी-156) तथा वी-3603 (वी-3030x हैमा) सन् 1992-94 के बीच विकसित की गयी। ये लाइनें उपज वृद्धि में क्रमशः 25% 14% तथा 8% तथा वर्ग सूचांकांक वृद्धि में 16% 16% तथा 14% नियन्त्रित किस्म हैमा की तुलना में पूर्ण रूप से सर्व श्रेष्ठ साबित हुई।

* अग्रिम प्रजनन लाइनो 1171/1 1099/2/1, 1099/2/2, 1099/2/3, 1099/2/4 तथा 1117/2 ने हैमा की तुलना में गुणवत्ता के साथ 25% अधिक उपज दी। सभी चार संलकशन्स ब्लैक शैक के प्रतिरोधी थे।

* सभी बी.टी. स्ट्रेन्स जैसे डिपेल, डैल्फिन तथा बैक्टो स्पाइन हिलियोथिस आरभीगैरा द्वारा पत्तियों और फलियों की क्षति को कम करने में अच्छे साबित हुए।

* लंका तम्बाकू के खेतों में फोरेट 10 जी @ 10 किलो प्रति हैक्टर अथवा एण्डोसल्फान 4% धूल 40 किलो प्रति हैक्टर अथवा कारबोराइल 5% धूल 30 किलो प्रति हैक्टर अथवा फेनवलग्रेट 4% धूल 20 किलो प्रति हैक्टर की दर से प्रयोग करने से रूट बग का अच्छा नियन्त्रण हुआ।

* लाबू एच.डी.एम-1, टी. 238 तथा टी.एन 86 टोबैको मोजेक वायरस के प्रतिरोधी थे।

सी.टी.आर.आई. अनुसंधान केन्द्र हुनसूर

* एफ.सी.वी. तम्बाकू की पौधशालाओं में तने एवं पत्तियों में एनथ्रेकनोज के संक्रमण के नियन्त्रण में टिल्ट 25% ई.सी. (प्रोषिकोनाजाले) स्कोर 25% ई.सी. (डिफैनोकोनाजोल) कम आन्द्रता में और वैविस्टन 50% डब्लू. पी. अधिक सांद्रता में प्रयोग प्रभावशाली रहा।

सी.टी.आर.आई. अनुसंधान केन्द्र कन्दुकूर

* अग्रिम प्रजनन लाइन सी.वाई-79 ने नियन्त्रित किस्म की

तुलना में अधिक उपज दी। सभी प्रयोगों एवं परीक्षणों में यह अधिक अशाजनक रही।

* माइकोराइजा के निवेशन से दक्षिणी हल्की मिट्टियों में फास्फोरस तत्व की बचत 25 किलो प्रति हैक्टर रही। यह असर निम्न 'पी' उपलब्धि में अधिक स्पष्ट था।

* गोबर की खाद तथा अरण्डी की खली के प्रयोग से अधिक संख्या में रोपित कीये जाने वाले पौधे प्राप्त हुए। बुआई के 25 से 55 दिनों के बाद फोल्टोफ 0.2% का प्रयोग तथा उसके बाद वैविस्टन 0.5% का प्रयोग एन्थ्रेकनोज और फोग आई. स्पोट रोग के नियन्त्रण में अच्छा साबित हुआ।

पंचवर्षीय समीक्षा दल का भ्रमण

* पंचवर्षीय समीक्षा दल ने इस केन्द्र का दिनांक 13-4-94 को भ्रमण किया तथा पिछले पाँच वर्षों में इस केन्द्र की गतिविधियों की समीक्षा की।

प्रोद्योगिकी का हस्तांतरण

* इस संस्थान में 50 अनुसूचित जनजाति के कृषकों के लिए प्रशिक्षण कार्यक्रम आयोजित किये गए। आकाशवाणी के विजयवाडा, विशाखपट्टनम और दरभंगा केन्द्रों द्वारा 13 वार्ताएँ प्रसारित हुईं।

* वैज्ञानिकों और तकनीकी अधिकारियों ने 6 प्रशिक्षण कार्यक्रमों/सम्मेलनों में भाग लिया।

कृषि विज्ञान केन्द्र

विशेष प्रशिक्षण कार्यक्रम

* आन्ध्रा बैंक ग्रामीण विकास संस्थान के सहयोग से क्रमशः दिनांक 18-5-94 से 20-5-94 और 14-6-94 से 15-6-94 तक 'दुग्ध उत्पादन की वृद्धि के लिए दुधारू पशुओं का प्रबन्ध के बारे में' पोलवरम, चिट्टाबरम, टेकी और चैडगन्दि ग्रामों के 52 प्रशिक्षणार्थियों के लिए 2 विशेष प्रशिक्षण कार्यक्रम आयोजित किये गये।

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