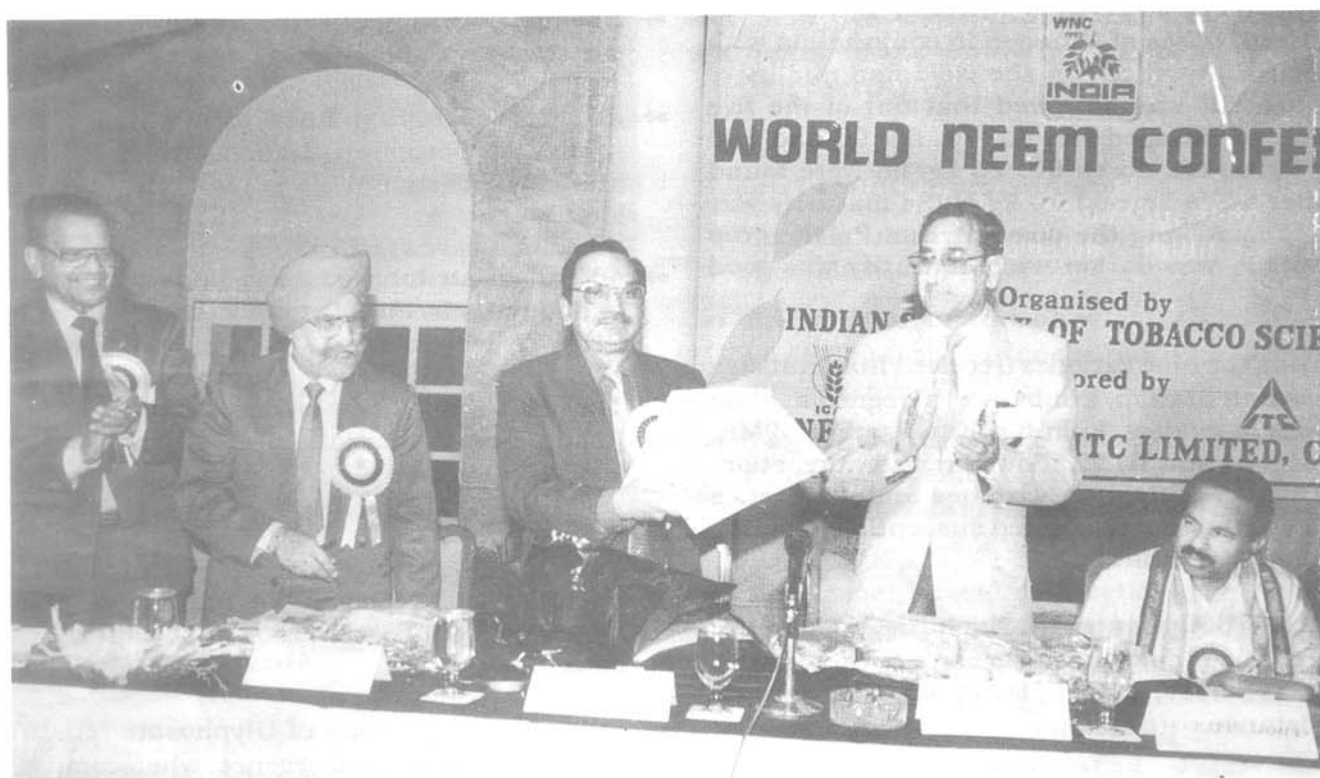




Central Tobacco Research Institute, Rajahmundry

## WORLD NEEM CONFERENCE



Dr. M.S. Chari, Dr. N.S. Randhawa, Shri G.K.P. Reddi,  
Prof. V.L. Chopra and Shri Veerappa Moily.

The World Neem Conference (WNC) was organised in India for the first time by ISTS and sponsored by ICAR in collaboration with M/s ITC Limited, from February, 24-28th, 1993 at Hotel Windsor Manor Sheraton, Bangalore. Shri Veerappa Moily, Hon'ble Chief Minister of Karnataka inaugurated the conference and released the special postal

cover brought out on the occasion. Shri Hutchamasti Gowda, Hon'ble Minister of Agriculture, Karnataka released the book on neem and Shri G.K.P. Reddi, Director, ITC, released souvenir on Neem brought out by ITC. The inaugural address of Dr. Balram Jakhar, Hon'ble Minister for Agriculture, Government of India who could not attend the conference, was

read by Dr. A.K. Raheja, Assistant Director General, ICAR. A number of eminent personalities from India and abroad like Dr. H. Rembold (Germany), Dr. W. Krauss (Germany), Murray B. Isman (Canada), Dr. D. Bhatnagar (USA), Dr. H. Schmutterer (Germany), Dr. R.C. Saxena (ICRPE, Kenya), Dr. Martin Rice (Australia), Prof. V.L. Chopra D.G., ICAR, Dr. M.V. Rao, Vice-Chancellor, Andhra Pradesh Agricultural University, Dr. R.S. Paroda, Dr. N.S. Randhawa, Former D.G., ICAR, Dr. T.P. Sriharan,

Principal Scientist, ICAR, Dr. A. Appa Rao, Former Vice-Chancellor, A.P.A.U. Dr. S. Jayaraj, Vice-Chancellor, Tamilnadu Agricultural University and a number of VIPs and delegates from all corners of World participated in the conference. Dr. T.S. Subrahmanyam, Research Manager, ITC and Conference executive welcomed the dignitaries while Dr. M.S. Chari, Director, CTRI and Conference executive proposed vote of thanks.

## RESEARCH HIGHLIGHTS

### CTRI, RAJAHMUNDRY

- ➔ Experiments conducted in the farmers fields in Northern light soils to know the effect of different doses of Nitrogen in conjunction with P and K nutrition, on the yield and quality of tobacco, it was observed that out of the five doses of Nitrogen viz. 60, 70, 80, 90 and 100 kg N/ha, the doses 60, 70 kg/ha were found better while beyond 70 kg N the maturity was erratic. Among the doses  $P_0$  and  $P_{75}$  the crop under  $P_0$  was darker while maturity was good in  $P_{75}$ .
- ➔ Among the nine varieties (received from Kutsaga Research Station, Zimbabwe) screened against Powdery mildew, Kokubu, Kutsaga 51E, PMR, Burley 21 and TB.22 showed resistant reaction. All the 27 Bulgarian varieties and 4 varieties from genetic stock showed susceptible reaction to powdery mildew.
- ➔ Out of 1600 plants, in which TMV resistance from various cultivars was incorporated, screened against TMV 1193 plants showed mosaic resistance.
- ➔ Among the different crosses of Jayalakshmi, RRC and L-1158, only the latter showed resistance to TMV.
- ➔ Three natu crosses developed from Beinhart 1000-1 did not show symptoms of black shank when artificially inoculated but indicated tolerant reaction.
- ➔ Screening tobacco cultivars (Jayasri and Hema) transformed with insecticidal crystal protein gene (Bt+) for resistance against *Heliothis armigera*

and *Spodoptera litura* larvae indicated that these transgenic plants had high toxic levels of protein to both the pests.

- ➔ Among 30 varieties screened, five Bulgarian varieties were observed to be resistant to TMV
- ➔ Advanced breeding lines of chewing variety from CTRI Research Station, Pusa, HP 21-3 and FCV variety CM-12 were tolerant to black shank disease.
- ➔ 40 Bulgarian tobacco accessions were tested and found susceptible to root-knot, while only BHAVYA was tolerant.
- ➔ The root-knot nematode prevailing around Rajahmundry area is identified as pathotype 1 of *M. javanica*.
- ➔ Phenamiphos (10 kg/ha), Rugby (15 kg/ha) were highly promising in reducing root-knot infection, while Basamid at 40, 50 and 60 kg/ha could reduce the root-knot index (RKI) marginally.
- ➔ Lower concentrations of Glyphosate (<0.05%) reduced *Orobanche* emergence, when compared to control, but slightly phytotoxic to tobacco.
- ➔ *Sclerotium rolfsii* was observed to infect *Orobanche* shoots under field conditions.

### CTRI RESEARCH STATION, KANDUKUR

- ➔ Slight increase in leaf curl disease was observed with increase in nitrogen level or P level from 0 to 80 kg  $P_2O_5$ /ha.
- ➔ The promising advanced breeding lines CM-16 and CM-12 showed tolerance to leaf curl incidence.

## CTRI RESEARCH STATION, HUNSUR

- ➔ Field screening of 110 germplasm entries for root-knot nematode revealed that 64 entries showed infection above 3.0 root-knot index (RKI) and 46 below 3.0 RKI in a 1-5 scale, and none was free of galls. F9-87, had low RKI 2.0.
- ➔ In *in-vitro* studies water soluble leaf extracts of Tagetes, Ocimum, Adhatoda and Catharanthus inhibited egg hatch of root-knot very effectively. Argemone, Tagetes, Adhatoda, Calotropis and Leucas showed high larval mortality. Out of 15

monocot and 10 dicot weeds screened against the three species, nine monocots and six dicots had egg masses which are pronounced as good susceptible hosts for *Meloidogyne* spp.

## CTRI RES. STATION, VEDASANDUR

- ➔ In the pre-release assessment trial conducted for the replacement of the variety VR-2 in the Vedaranyam area, advanced breeding lines F6-1-11 and F6-1-19 exhibited superior performance over VR-2 on visual basis.

# TRANSFER OF TECHNOLOGY

## CTRI, RAJAHMUNDRY

### Farmer's Meet and Field Visit

A team of senior scientists visited Guntur and surrounding places and studied the crop performance and participated in Farmers meet organised by Tobacco Board and clarified the doubts of the farmers on different aspects of tobacco cultivation. The Tobacco Board officials were given a refresher training on good quality tobacco production technology.



Tobacco Board officials visit to farmer's Safflower crop.

## CTRI RESEARCH STATION, PUSA

### Tobacco Day Celebration

Tobacco day was organised on 18-2-93 at the Research Station and presided by Dr. P.N. Narula,

Head, IARI Regional Station. Dr. T.P. Singh, Director, Residential Instruction and Dean Post Graduate Studies, Rajendra Agricultural University, Pusa, Bihar was the chief guest. Sri Dilip Kumar Roy, Hon'ble Bidhayak (MLA) and Sri N.P. Singh, Member, Indian Tobacco Development Council were the Special Chief guests on the occasion.

Dr. K.D. Singh, Principal Scientist and Officer-in-Charge of the Research Station while welcoming the guests and farmers, congratulated tobacco farmers and prize winners for their untiring efforts in establishing new records in production of quality tobacco through adaption of new high yielding varieties viz. Sona, PT-76 (Surya), Vaishali Special and improved tobacco production technologies developed by the Research Station.

Sri Dilip Kumar Roy, advised the scientists to devote more time with the farmers in villages to give necessary technical advise so that they may get better returns for their produce. He assured to extend help for better marketing system for better remuneration. Sri N.P. Singh, gave away the prizes and addressed the gathering. He informed that the Tobacco Board would look after and regulate the marketing of all types of tobacco.

Tobacco shield and first prize for the best tobacco grower of newly released variety PT-76 was given to Sri Surendra Prasad Jaisawal of Baruadih village. Second prize was bagged by Sri Ramsagar Bhakt of Mathnamal.

The programme was ended with vote of thanks by Dr. S.N. Tripathi, Sr. Scientist.

### Kisan Mela

CTRI Research Station actively participated in

the Kisan Mela organised by Rajendra Agricultural University, Pusa, Bihar at its Dholi Campus of Tirhut College of Agriculture and its stall got special prize for its excellent exhibits.

Dr. K.D. Singh also acted as member of the Multi-Disciplinary monitoring team (AICRP on Tobacco) to evaluate the *N. rustica* improvement programme in U.P, Bihar and West Bengal from 4-11th March, 1993.

### CTRI RES. STATION, KANDUKUR

Scientists of this station participated in Kisan Mela and installed a stall in the Agricultural exhibition organised by State Agricultural Research Station, Darsi on 9.1.93. Dr. M.V. Rao, Vice-Chancellor and a number of farmers visited the stall. Another stall was opened in the agricultural exhibition organised by Department of Agriculture at Prakasam Bhavan, Ongole from 1-3 February, 1993, in connection with a seminar on tobacco and other crops.

### CTRI RESEARCH STATION, GUNTUR

Training programme on curing and grading was conducted by Sri M. Umamaheswara Rao, Scientist (SG) to the farmers and field staff of Bhadrachalam, Kanchikacherla, Guntur and Chilakaluripeta tobacco platforms.

### OTHER ACTIVITIES

#### CTRI, RAJAHMUNDRY

##### Ph.D. Award

Sri K. Nageswara Rao, Sr. Scientist (Plant Physiology) was



awarded Doctorate degree for his thesis entitled "Production and distribution of dry matter in irrigated wheat in relation to grain yield under normal and late sown conditions" from Indian Agricultural Research Institute, New Delhi during February, 1993.

Congratulations.

#### CTRI RESEARCH STATION, PUSA

Dr. K.D. Singh, Officer-in-Charge acted as member of the World Bank Team NARP (ICAR) for evaluating Research Sub-Project, North East Alluvial plains (Zone-2), R.A.U, Pusa, Bihar from 15-20th March, 1993.

### RADIO TALKS

- Topping and desuckering in tobacco (In Tamil) by Sri R. Rajendran on AIR, Madurai, 2.1.93.
- లంక పొగాకు పంటలు - యాజమాన్య పద్ధతులు. (Management of Lanka Tobacco Crop Production) by Sri V.V. Ramanarao on AIR, Visakhapatnam, 4.1.93.
- Foliar application of urea in tobacco (In Tamil) by Sri V. Annadurai on AIR, Madurai, 9.1.93.
- तम्बाकू में गोकुरा पुलोप तथा नियंत्रण (*Orobanche* menace in tobacco and its control) by Dr. S.N. Tripathi on AIR, Darbhanga, 15.1.93.
- तम्बकू फसल का देख-भाल (Care of Tobacco Crop) by Dr. K.D. Singh on AIR, Darbhanga, 18.1.93.
- Tobacco diseases and their control (In Tamil) by Sri S. Chelliah on AIR, Madurai, 23.1.93.
- Harvesting and curing in Tobacco (In Tamil) by Sri K. Palanichamy on AIR, Madurai, 25.1.93.
- Pest Management in Tobacco (In Tamil) by Sri C. Muruganandam on AIR, Madurai, 25.2.93.
- An interview on Micronutrient deficiencies in Sweet Orange and Batavian gardens - its prevention by Sri B. Narasimharao on AIR, Visakhapatnam, 1.3.93.
- Intercropping in tobacco (In Tamil) by Sri A. James on AIR, Madurai, 3.3.93.
- An interview on common diseases of cattle and its prevention by Dr. B.R. John Babu on AIR, Vijayawada, 6.3.93.
- పొగాకు వండించే భూములలో భూసార పరీక్ష ఆవశ్యకత (Importance of Soil analysis in tobacco fields) by Dr. V. Krishnamurthy on AIR, Visakhapatnam, 20.3.93.
- గోదావరి లంకభూములలో వేసవిలో మొక్కజొన్న సాగు (Summer cultivation of maize in lanka soils) by Sri P.V. Prasada Rao on AIR, Visakhapatnam, 27.3.93.

✦ పాగాకు దిగుబడి నాణ్యత - తేలికభూములలో భూసార  
 పరీక్ష (Quality, soil analysis in light soils of  
 tobacco) by Sri K.S.N. Murty on AIR,  
 Visakhapatnam, 30.3.93.

## CONFERENCES/SYMPOSIA/SEMINARS/ WORKSHOPS/TRAINING COURSES

### RAJAHMUNDRY

Dr. M.S. Chari, Dr. K. Nagarajan, Dr. P.S.N. Murthy, Sri V.V. Ramanarao, Sri G. Ramaprasad, Sri S. Sitaramayya, Dr. P. Harishukumar, Sri K.S.N. Murty, Dr. T. Venkateswarlu, Sri M.C.M. Reddy, Sri A. Haranath, Sri C.R. Nageswara Rao, and Sri Y.V. Suryanarayana attended World Neem Conference organised by Indian Society of Tobacco Science, Rajahmundry and sponsored by ICAR and ITC Ltd., held in Bangalore from 24-28th February, 1993 and presented papers

Sri B. Narasimha Rao attended training programme on **Staff Course on Mango** from 23rd to 27th February at I.I.H.R., Bangalore.

Sri G.S.B. Prasannasimha Rao, Dr. R.V.S. Rao and Dr. T. Sitaramachari attended 80th Indian Science Congress at Goa during January, 1993 and presented the following papers :

- ⊗ Heterosis and combining ability in diallel crosses of divergent flue-cured cultivars from different geographical regions.
- ⊗ Performance of some promising flue-cured tobacco lines developed from divergent genotypes.
- ⊗ Effect of cytoplasmic male sterility in some hybrids of FCV tobacco on yield and quality.

### VEDASANDUR

Sri M. Mohan gave a seminar talk on **Improved tobacco cultivation** to Agricultural students of Ayakaran pulam, Vedaranya Tq. on 22.2.93.

Sri M. Mohan attended the Zonal workshop organised by Joint Director of Agriculture, Erode at Agric. Res. Stn., Bhavani Sagar and gave a special talk on **Processing of tobacco** on 9.3.93.

### DINHATA

Dr. A.G.K. Murty, Officer-in-Charge attended AICRP (Tob.) group meeting at Bidi Tobacco Research Station, Anand on 12 and 13th March, 1993 organised by AICRP (Tob.).

## HUNSUR

Sri J.S.L. Moses, Officer-in-Charge, Dr. S.S. Hussaini and Dr. M.M. Shenoi attended World Neem Conference held at Bangalore from 24-28th, February, 1993 and presented papers.

## PAPERS PUBLISHED

Abdul Wajid, S.M. and M.M. Shenoi. Chemical control of black shank disease in field planted tobacco. **Tob. Res.** 18(1&2) : 97-103, 1992.

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Harishukumar, P., R. Sinha, R.B. Narayana Rao and N. Prabhakara Rao. Effect of seed bed covers on nitrogen and water requirement of light soil tobacco nurseries. **Tob. Res.** 18(1&2) : 89-92, 1992.

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Krishnamurthy, A.S., V.V. Ramanarao, A.B. Sastry, K. Nagarajan and T.S.N. Reddy. Performance of TMV resistant lines of flue-cured tobacco (*N. tabacum* L.). **Tob. Res.** 18 (1&2) : 163-4, 1992.

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- Murty, P.S.N., G. Ramaprasad and S. Sitaramaiah. Efficacy of deoiled neem cake extracts against *Spodoptera litura* on tobacco. **Tob. Res.** 18(1&2) : 59-63, 1992.
- Nagarajan, K., T.S.N. Reddy and M.S. Chari. Black shank of tobacco. **The Hindu**, 31.1.93
- Naidu, S.K., C.R. Nageswara Rao, Rambir and T.K. Murty. Extent of adaption of production technologies by the tobacco nursery growers in the East Godavari District of Andhra Pradesh. **Tob. Res.** 18(1&2) : 145-9, 1992.
- Prabhu, S.R., M.S. Chari and D.G. Kumar. An improved ion-exchange technology for nicotine extraction from tobacco waste. **Tob. Res.** 18(1&2) : 125-8, 1992.
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- Ratnavathi, C.V. and K. Nageswara Rao. Nitrate reductase of tobacco in relation to age and nitrogen fertilization. **Tob. Res.** 18(1&2) : 121-4, 1992.
- Reddy, T.S.N., K. Nagarajan and Ramjilal. Effect of fungicides on the control of frog-eye spot disease (*Cercospora nicotianae*) of burley tobacco. **Tob. Res.** 18(1&2) : 159-61, 1992.
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- Suryanarayana, Y.V. and M. Ramam (Comp.) Bibliography on Neem in Agruculture. Feb. 1993, 64 p.
- Tripathi, S.N., A.K. Pandey, K.D. Singh and S. Amarnath. Influence of plant spacing, nitrogen and topping on yield, quality and economics of chewing tobacco (*N. tabacum* L.) variety PT-76. **Tob. Res.** 18(1&2) : 39-44, 1992.

## RETIREMENTS

S.No.	Name	Reason	Date
1.	Dr. K.V. Satyanarayana Principal Scientist CTRI, Rajahmundry.	Superannuation	31.1.93
2.	Sri K. Venugopala Rao Techl. Officer T-5 CTRI, Rajahmundry.	Superannuation	28.2.93
3.	Sri Y.Ch. Narasimhamurthy Techl. Officer T-5 CTRI, Rajahmundry.	Superannuation	31.3.93
4.	Sri R.D.P. Mohanarao Techl. Officer T-5 CTRI, Rajahmundry.	Superannuation	31.3.93

## KRISHI VIGYAN KENDRA



Sri N. Sanyasi Raju, Smt. V.V. Lakshmi Kumari, Dr. M.S. Chari



Dr. M.S. Chari, Director, CTRI releasing a pamphlet "Package of practices in oil seed production" on 29.1.93.



Trainees at work in making of Mesta fibre products.



A groundnut crop visit by farmers' and others

Fifty two training programmes were conducted and a total of 769 farmers, farm women and school dropouts were trained in different disciplines.

Under FLD (First Line Demonstration) on oil seeds and pulses programme, eight training classes on improved technologies for groundnut and sesamum cultivation and three training programmes on pest management were conducted for 244 farmers.

### Farmers' Day

Farmers' day was conducted at KVK, Kalavacherla on 29.1.93 and 200 farmers attended. On this occasion two folders on **Package of practices on sesamum and groundnut** and an audio cassette on **Calf rearing** were released by Dr. M.S. Chari.

### Special training programme

The following five special training programmes were conducted :

- **Preparation of squashes, jams and pickles** at ABIRD for 20 trainees of Purushothapalli village from 6.1.93 to 8.1.93.
- **Veterinary first aid and Calf rearing and Dairy management production** for 37 farmers from Chittavaram village at ABIRD from 3.2.93 to 4.2.93 and 8.2.93 to 9.2.93 respectively.
- Two women education programmes on **Biogas technology** for 150 farmers and school dropouts at Gadarada and Pedarayavaram villages on 18.2.93 and 20.2.93 with the collaboration of Regional Biogas Teaching and Development Centre (RBTDC), Hyderabad.
- Two training programmes of one week duration on **Palmyrah products and Mesta fibre products** from 1.2.93 to 6.2.93 for 30 trainees of Prof. N.G. Ranga KVK, Vinayashramam, Kavur.
- Smt. Padmaja and Kum Raghava Technical Personnel of Vinayashramam, Kavur on **Preparation of Palmyrah and Mesta fibre products** at KVK, Kalavacherla for one week.

## महत्वपूर्ण घटनाएं

भारत में आई.एस.टी.एस. द्वारा प्रायोजित तथा भारतीय कृषि अनुसंधान परिषद तथा आई.टी.सी. के सहयोग से पहली बार विश्व नीम सम्मेलन का आयोजन दिनांक 24 से 28 फरवरी 1993 तक विन्डसोर मैनेर शेरटोन होटल, बेंगलूर में किया गया। कर्नाटक के मुख्यमंत्री माननीय श्री वीरप्पा मोइली ने सम्मेलन का उद्घाटन किया तथा इस अवसर पर विशेष डाक लिफाफा जारी किया। कर्नाटक के कृषि मंत्री माननीय श्री हट्टमस्ती गौडा ने नीम पर एक पुस्तक का विमोचन किया। श्री जी.के.पी. रेड्डी निदेशक, आई.टी.सी. ने नीम पर एक सोविनियर का विमोचन किया। इस सम्मेलन में देश और विदेश के अनेक व्यक्तियों ने भाग लिया। डा. एम.एस. चारी, निदेशक, केन्द्रीय तम्बाकू अनुसंधान संस्थान तथा सम्मेलन के अधिशासी सदस्य ने धन्यवाद प्रस्ताव दिया।

## अनुसंधान उपलब्धियाँ

### सी.टी.आर.आई., राजमन्त्री

उत्तरी हल्की मिट्टियों में किसानों के खेतों पर नत्रजन की विभिन्न मात्राओं के प्रभाव पर किये परीक्षणों के आधार पर 60 से 70 किलों मात्रा प्रति हेक्टर अच्छी पायी गयी। जबकि 70 किलों से अधिक होने पर फसल के पकने पर इसका प्रभाव पडा। फास्फोरस की मात्रा पी<sub>0</sub> तथा पी<sub>75</sub> में पी<sub>0</sub> में फसल गहरे रंग की पायी गयी जबकि पी<sub>75</sub> में फसल अच्छी तरह से पकी।

## प्रौद्योगिकी का स्थानांतरण

### सी.टी.आर.आई., राजमन्त्री

#### कृषक गोष्ठी तथा खेत भ्रमण

वरिष्ठ वैज्ञानिकों के दल ने गुन्टूर तथा निकटवर्ती क्षेत्रों का दौरा किया तथा फसल का अध्ययन किया और तम्बाकू बोर्ड द्वारा आयोजित कृषक गोष्ठी में भाग लिया।

### सी.टी.आर.आई. अनुसंधान केन्द्र, पूसा

अनुसंधान केन्द्र पर डा.पी.एन.रुला, अध्यक्ष आई.ए.आर.आई.

क्षेत्रीय केन्द्र की अध्यक्षता में दिनांक 18.2.93 को तम्बाकू दिवस आयोजित किया गया। डा. टी.पी. सिंह, निदेशक तथा भवनिक आदेश तथा डीन, राजेन्द्र कृषि विश्वविद्यालय, पूसा, बिहार, समारोह के मुख्य अतिथि थे। माननीय विधायक श्री दिलीप कुमार राय तथा श्री एन.पी. सिंह, सदस्य भारतीय तम्बाकू विकास परिषद इस अवसर पर विशेष रूप से मुख्य अतिथि थे।

डा. के.डी. सिंग, प्रधान वैज्ञानिक तथा प्रभारी अनुसंधान केन्द्र ने अतिथियों तथा किसानों का स्वागत किया।

किसान मेला : सी.बी.आर.आई. अनुसंधान केन्द्र ने राजेन्द्र कृषि विश्वविद्यालय, पूसा, बिहारके डोली कैम्पस के तिरहुट कृषि विद्यालय में आयोजित किसान मेले में भाग लिया तथा इसके मंडप को इसके श्रेष्ठ प्रदर्शन के लिए विशेष पारितोषिक दिया गया।

### सी.टी.आर.आई., अनुसंधान केन्द्र, कन्दुकूर

इस केन्द्र के वैज्ञानिकों ने राज्य कृषि अनुसंधान केन्द्र दारसी द्वारा दिनांक 9.1.93 को आयोजित कृषि प्रदर्शनी में भाग लिया तथा अपना मंडप लगाया।

### सी.टी.आर.आई., अनुसंधान केन्द्र, गुन्टूर

श्री एम. उमामहेश्वरराव, वैज्ञानिक (एस.जी.) ने तम्बाकू क्योरिंग तथा वर्गीकरण पर भद्राचलम, कंचिकर्ला, गुन्टूर तथा चिलकलूरिपेटा प्लेटफार्म के अधिकारियों तथा किसानों के लिए प्रशिक्षण कार्यक्रम आयोजित किया।

## कृषि विज्ञान केन्द्र

विभिन्न विषयों में 52 प्रशिक्षण कार्यक्रम आयोजित किये गये तथा 769 कृषकों, कृषक महिलाओं तथा पाठशाला छोड़े हुए युवक युवतियों ने भाग लिया।

किसान दिवस : कृषि विज्ञान केन्द्र, कलवर्ला पर 29.1.93 को कृषक दिवस का आयोजन किया गया जिसमें 200 कृषकों ने भाग लिया।

डा. एम.एस. चारी ने बछड़े पालन पर कैसेट को जारी किया।