



C. T. R. I.

NEWS LETTER



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The unprecedented cyclone on 12th May, 1979 caused enormous damage to the barns, godowns and houses in Prakasam and Nellore districts of Andhra Pradesh. The damage caused to our Kandukur Station was estimated to be about Rs. 75,000/-. Damages to the barns were severe in Ongole and Kandukur taluks. In most of the cases the roofs were blown off and in some cases the walls also collapsed. It is estimated that out of a total number of 26,710 barns, 7,189 were partially damaged valued at Rs. 1.02 crores and 8,416 barns were fully damaged valued at Rs. 4.45 crores, thus totalling 15,605 barns valued at 5.47 crores. Tobacco Board has approved the sanction of relief of Rs. 6,000/- per barn for fully damaged barn, Rs. 3,000/- per barn for partially damaged barn, out of which 25% is as out-right grant.

It is estimated that about 0.75 million Kg of tobacco left with the growers and 2.7 million Kg in the custody of various Growers' Cooperative Societies in the districts of Nellore and Prakasam is also reported to have been lost.

The estimated loss to structures belonging to exporters, dealers and packers especially in and around Tangutur and

Singarayakonda is Rs. 3.93 crores. An estimated quantity of 10.82 million Kg (valued Rs. 9.34 crores) of tobacco of all types pertaining to 1977, 1978, and 1979 crops was reported to have been damaged.

The crop yields at the Institute's farms at Kateru and Devarapalli were normal. The weather conditions at Vedesandur were normal and the crop yields are satisfactory. Crop yields at Hunsur were adversely affected owing to prolonged spell of cloudy weather earlier although bright grade leaf yield was not affected much. Crop yields at Pusa (Bihar) and Dinjata (W. Bengal) were satisfactory although marketing in the latter place posed problem.

RESEARCH HIGHLIGHTS

Organised scientific research and further intensification in recent past in various disciplines undoubtedly contributed a major share for betterment of tobacco farming by and large by increasing the out turn of quality tobacco. Recommended crop rotation and safeguard measures for pests and diseases are summarised.

I) Recommended crop rotations :

<i>Crop Rotations :</i>	<i>Area of recommendation :</i>
1. Kharif Gingelly - Rabi tobacco for three years, Sorghum alone in fourth year.	Black soils of Guntur and Prakasam districts of Andhra Pradesh.
2. Kharif paddy or blackgram-Rabi tobacco for three years, Sorghum alone in fourth year.	Black soils of East Godavari, West Godavari and Krishna districts of Andhra Pradesh.
3. Gingelly or groundnut in Kharif tobacco in Rabi followed by groundnut and redgram next year.	Northern light soils of West Godavari, East Godavari, and Khammam districts of Andhra Pradesh.
4. Tobacco from May to October, Ragi in Rabi followed by groundnut - Bengalgram in the next year.	Transitional belt of Karnataka.
5. Maize in Kharif—tobacco in Rabi and Maize in summer with onion, radish or garlic as intercrop with tobacco.	Chewing tobacco belt of North Bihar.
6. Kharif paddy, Rabi tobacco and summer paddy.	Motihari tobacco belt of West Bengal.
7. Kharif Jute- Rabi tobacco and Summer paddy.	Wrapper tobacco tract of West Bengal.
8. Kharif ragi - Rabi tobacco.	Chewing tobacco belt of Tamilnadu.

Multiple cropping studies with chewing tobacco undertaken at Pusa (Bihar) in recent past indicated that altogether seven crops in two years cycle can be had and the most profitable cropping sequence is :

Ist year : Paddy - Potato + Maize - Tobacco
IInd year : Blackgram - Tobacco - Maize

By adopting this crop sequence and growing improved chewing variety 'Sona' one can fetch Rs. 20,000/- net monetary returns per hectare in a year.

II) Recommended safeguard measures against pests and diseases :

Integrated approach comprising chemical, cultural, genetic and biological control measures has been formulated for safeguarding the crop against pests and diseases.

1. Against caterpillars, Cutworm, Stem borer and grass hoppers.
 - a) Endosulfan, Carbaryl, monocrotophos, Trichlorofos; Chloropyrifos, acephate at recommended concentration. N. K. S. (1% initially and 2% later) against caterpillar and cut-worms in seedbeds.
 - b) Dipping of roots of seedlings in 0.02% Chloropyrifos for protection against stem borer.
 - c) Multiplication and release of *Telenomus remus*, egg parasite on tobacco caterpillar initiated and extended to coastal Andhra Pradesh districts.
2. Against ground beetles : Pongamia cake @ 5 g per plant. Endosulfan, chloropyrifos at recommended concentration.
3. Against White flies: Demeton - S - methyl at recommended dose.
4. Against aphids:
 - a) Demeton - S - methyl, Dimethioate, Thiometon, Phosphamidon at recommended dose.
 - b) Disulfoton granules: soil application at recommended dose for Lanka tobacco.

5. Against 'damping off' and black shank : a) Rabbing beds with slow burning fuel such as paddy husk spread 15-20 cm thick.
b) Bordeaux mixture 5: 5: 500; Fytolan, Blitox, Miltox, Shell copper, Dithane Z-78 at recommended doses before sowing. Bordeaux mixture 2:2:500 or any other fungicide as above after germination.
6. Against leaf spot diseases: Bordeaux mixture Blitox, Cuman, Fytolan at recommended concentrations.
7. Against Anthracnose, Brown spot, Frog eye spot : Dithane Z-78, Cercobin at recommended doses.
8. Against powdery mildew: a) Powdery mildew resistance imparted to CTRI Special, Kanaka prabha etc. (Lines 1494, 2359, PMRR-3; Line 2331 Lanka)
b) Karathane, Thiovit, Bavistin and Benlate at recommended doses.
9. Against tobacco mosaic virus : a) Sanitary measures in seedbeds and fields.
b) Mosaic resistance imparted to CTRI Special, Kanaka prabha etc.
c) Combined mosaic and mildew resistant lines 2689, 2691, 2699, 2700.
d) 1% tannic acid (preventive)
10. Against leaf curl : Preventive to control White flies. Dimeton - S - methyl spraying at recommended dose.
11. Root-knot nematodes : 1) Rabbing the seedbeds, deep ploughing in summer.
2) Growing non-host crops like groundnut, redgram, gingelly or cotton in alternate years.
- 3) Applying Temik (Aldicarb) 10G, Dasanit and Mocop at recommended doses in seed beds or in fields.
12. Orobanche : Hand pulling before Orobanche sets seeds. Applying 0.1% allyl alcohol on Orobanche shoots. Trap crops like Jowar, gingelly, pillipesara, blackgram, and Deccan hemp in rotation with tobacco.

Search of potential plant inhibitors against TMV in recent past indicated that leaf extracts of *Besilla alba*, *Bougainvillea spectabilis*, *Agave americana* are strong in inhibition of TMV. Three years field experimentation with plant inhibitors from *Besilla alba* on 30th, 40th and 50th day after planting not only reduced the incidence of mosaic disease in field by 15 to 20% but also improved the green leaf, cured leaf, bright grade and TBLE yields.

In field of biological control it was found that *Trichoderma viride* a saprophytic fungus abundantly present in soil was able to inhibit "damping off" in petriplates and pots and nursery studies are in progress.

A new parasite on green peach aphids was found recently and identified as *Aphelinus flavipes*.

New Equipment recently acquired

1. B. O. D. Incubators — 2 Nos.
2. Refrigerated Centrifuge
3. Drip irrigation unit

'LAB TO LAND' PROGRAMME BY C. T. R. I

Hon'ble Sri Y. Venkatarao, Minister for agriculture and civil supplies, Andhra Pradesh inaugurated the 'Lab to Land' Programme on 28-5-79 at Kindra colony, tribal centre in Rajavommangi block. As per the scheduled programme sowing of burley nursery in the nursery plot was inaugurated and initiated by Hon'ble Minister followed by meeting at the colony. Good number of tribal farmers gathered at the inaugural meeting. Dr. N. C. Gopalachari, Director, welcomed the distinguished guests and the tribal farmers apprised about the activities of C. T. R. I. 'Lab to Land' programme and possibilities of growing burley tobacco in tribal area for stepping up their monetary

returns and improving economic status and standard of living of tribals of that region.

Mr. G. Prakasha Rao, M. L. A., Ellavaram spoke on this occasion advised the tribals to take up the new technologies developed by C. T. R. I. Hon'ble Minister in his inaugural address appreciated the venture taken by C. T. R. I. to transfer the improved technologies even to the remote part and wished that the lot of tribals will be definitely improved if they adopt these new technologies. He advised the tribal farmers to take up the technologies to get benefit and improve their economic status and standard of living. The meeting concluded with a vote of thanks by Sri R. Sreenivasulu, Scientist S-1 (Agronomy).

Later Hon'ble Minister inaugurated the "Mahila tobacco nursery" at Jeddangi raised by six landless women labourers on cooperative basis and visited C. T. R. I. Research Centre at Jeddangi. Dr. N. C. Gopalachari, Director, high-lighted the research activities undertaken at Jeddangi and focussed the importance of White Burley cultivation. Sri G. Prakasharao, M. L. A., spoke on the occasion and suggested to explore possibilities of extending further the Burley cultivation in "Aminabad colony." Meeting was concluded with a vote of thanks by Dr. B. V. Ramakrishnayya, Head, Division of Agronomy & Soil Science, C. T. R. I.



1. Hon'ble Sri Y. Venkata Rao, Minister for Agriculture and Civil Supplies, Andhra Pradesh inaugurating the burley nursery sowing at Kindra colony.



2. D. N. C. Gopalachari, Director, delivering welcome address at Kindra colony.



3. Hon'ble Sri Y. Venkata Rao, Minister for Agriculture and Civil Supplies, Andhra Pradesh, delivering inaugural address at Kindra colony.



4. Hon'ble Minister Sri Y. Venkata Rao, inaugurating the "Mahila tobacco nursery" raised at Jeddangi by six landless women labourers on cooperative basis.



5. Hon'ble Minister, Asst. Collector, Director, C. T. R. I., other scientists at Malila Tobacco Nursery at Jeddangi.

TOBACCO INSTITUTE CLUB

The Silver Jubilee Celebrations of the Tobacco Institute Club was held on 11th and 13th May, 1979.

On 11th, Shri A. Subbarao, Commissioner and Special Officer, Rajahmundry Municipality inaugurated the function. Dr. N. C. Gopalachari, President of the Club, welcoming the gathering, briefly described the activities of the Club. Sri D. Ch. Rajarao, Secretary in his report, gave a detailed account of the Club from its inception in 1953. He announced the receipt of donations from M/s. Fact, Trivandrum and M/s. Bommidala Brothers, Guntur, Viz; One Gold coated Shield and one Silver Cup, for conducting a regular Bridge tournament by the Club, in connection with the Silver Jubilee. Dr. K. Nagarajan read the messages received from various well wishers including Shri Bhanu Pratap Singh, Minister of State for Agriculture, Government of India, Dr. N. R. Bhat and Dr. G. S. Murty, Ex-Directors.

Shri A. Subbarao, released the Souvenir brought out by the Club in connection with its Silver Jubilee Celebrations.

Shri Subbarao, in his presidential address praised the activities of the Club, specially the cultural activities, and promised to help the new laboratory building in getting drinking water and other facilities.

The entertainments of the evening started with Fancy dress and monoaction competitions by the Club members. Afterwards, Dr. Korada Narasimharao presented the day's special feature with SIVATHANDAVAM, followed

by Smt. Nagamani Buddha Dev's Rangasayi. Further programme was cancelled due to heavy rain. The songs by Shri Budha Dev and the performances were very well applauded by the audience.

The second day's programme i. e., Annual Day was conducted on 13th May, 1979. Dr. (Smt.) C. Ananda Ramam presided over the function. Dr. Gopalachari, President of the Club, welcomed the gathering and introduced Dr. Ananda Ramam, a reputed novelist of Andhra Pradesh to the audience.

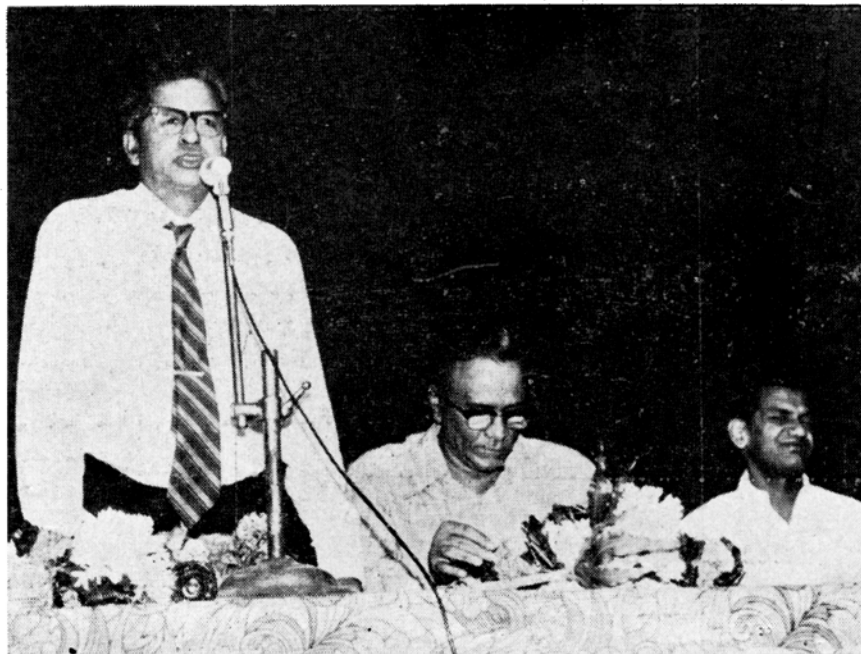
Dr. Ananda Ramam gave a stirring speech about the impact of Telugu novel on the thoughts and behaviour of the people in Andhra.

Rajahmundry Ladies Club and Andhra Mahila Sangham honoured Dr. Ananda Ramam. A memento was presented to her by the President of the Club.

Later, two playlets "GUNDELU MARCHABADUNU" and "EDRESULENI MANUSHULU" were enacted by the Club members. A programme of Bharatanatyam and folk dances was presented by Kum. Nagina and other children.

Sri B. Nageswararao, Farm Superintendent of the Institute, donated a sum of Rs. 1,000/- to the Club for giving a Silver medal every year to the winners in the games Viz. Table tennis (singles), Chess, Badminton (Singles) etc., with the interest on the sum kept in permanent fixed deposit, in memory of his late mother, Srimathi Barla Gangamma garu.

The functions were concluded with a vote of thanks by Dr. K. Nagarajan, Vice President of the Club.



1. Dr. N. C. Gopalachari, President of Tobacco Institute's Club delivering welcome address.



2. Sri A. Subba Rao, Commissioner & Special Officer, Rajahmundry Municipality delivering the inaugural address.



3. "Sivathandavam" by Sri Korada Narasimha Rao.



4. Dr. (Smt.) C. Ananda Ramam reputed novelist of Andhra Pradesh giving her speech about the impact of Telugu novel on the thoughts and behaviour of the people in Andhra.



5. Dr. N. C. Gopalachari, President of Tobacco Institute Club presenting a memento to Dr. (Smt.) Ananda Ramam.

PERSONNEL

Shri G. S. B. Prasanna Simha Rao, Scientist S-1 (Plant Breeding) transferred from C. T. R. I. Research Station, Vidasandur joined at C. T. R. I., Rajahmundry on 21-4-79.

Dr. R. Sreenivasarao, Scientist S-1 (Plant Breeding) transferred from C. T. R. I. Research Station, Dinhata, joined C. T. R. I., Rajahmundry on 10-5-79.

Sri P. Anand Kumar, Scientist S-1 (Plant Physiology) was relieved on 28-5-79 consequent to his transfer to IARI, New Delhi.

Sri K. Pratapa Reddy, Scientist S-1 (Agronomy) C. T. R. I. Research Station, Hunsur was transferred to National Academy for Agricultural Research Management, Hyderabad.

Dr. M. K. Chakraborty, S-3 Head, Division of Biochemistry, Technology and Pl. Nutrition, C. T. R. I., was relieved on 30-6-79, consequent to his posting as Professor, Gujarat Agricultural University, Anand on deputation basis.

PAPERS SUBMITTED FOR CONFERENCE/ SYMPOSIUM

The following papers were sent on 6-6-'79 for presentation in Symposium on "The role of induced mutation in crop improvement" programmed to be held at Hyderabad from September 10th to 12th.

1. Evaluation of some induced low nicotine mutants in flue cured tobacco.

Ramavarma, K. T., Apparao, K., and Narayanan,

A. I.

2. Use of induced mutants as parental material in tobacco cross breeding.

Krishnamurty, K. V., Apparao, K., Ramavarma, K.T., and Narayanan, A. I.

Ph D. Degree awarded

Shri A. Gopalam, Scientist 'S' (Biochemistry) has been awarded Ph. D. degree for his thesis entitled "Biochemical transformation during maturation and flue curing of tobacco" by Andhra University, Waltair.

Sri A. G. K. Murty, Scientist S-1 (Ag. Chemistry) has been awarded Ph. D. degree for his thesis entitled "Studies on the chemical quality characteristics of chewing tobacco (*N. tabacum*)" by Andhra University, Waltair.

Edited & Compiled by Shri G. S. B. PRASANNA SIMHA RAO

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