



C. T. R. I.

NEWS LETTER



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MAJOR ACTIVITIES

Unusual drought conditions prevailed during the major part of the period under report resulting in belated sowings of Kharif crops in and around our Institute's farm. Dry spell prevailed in Guntur, Prakasam and Nellore districts of Andhra Pradesh resulted in failure of crops like gingelly, green gram etc. at our Regional Research Station's farm at Guntur and around. Kharif short fall in respect of food grains in 8 States may be to the tune of 12 million tonnes amounting to a national loss of 1300 crores. As per the meteorological reports, 30% deficiency in rainfall was recorded in Andhra Pradesh which had its major impact on Kharif crop production. Late showers received during the period could only facilitate in taking up the preparatory tillage operations and programming for sowing of tobacco nurseries as per the schedule. The weather conditions at Vedesandur, Dinjata, Pusa and Hunsur are normal but for the initial dry spell at Vedesandur.

Annual Research Programme workshop on Tobacco was convened from 4th to 6th July, '79 in order to discuss and finalise the research programmes to be implemented during 1979-80 season at the Central Institute and its Regional Research Stations. A number of Scientists Traders, Tobacco farmers, representatives of fertilizer and insecticide companies, officers of the Agricultural department, Financial organisations etc. have participated in the deliberations. The inaugural speech highlighting the important achievements in various fields of research by CTRI and its Regional Research Stations during 1978-79 season was delivered by Dr. N. C. Gopalachari, Director, CTRI followed by the detailed discussions on various programmes. The work shop which concluded on July 6th approved 80 new research projects for implementation out of 85 projects proposed.

The AICRP Sub-Committee convened in conjunction with Annual Research Programme Workshop on 5-7-79 recommended the low profile barn for adoption by the farmers.



Dr. N. C. Gopalachari, Director, delivering inaugural address during Annual Research Programme workshop at C. T. R. I. Rajahmundry on 4-7-79.

The Research Council of C.T.R.I. met on 20-9-79 considered the release proposals of the varieties viz. "Bhagyalakshmi," "Thangam," and "Bhavani Special" submitted by CTRI Research Station, Vedesandur and approved for release of these new varieties for commercial cultivation in the areas of recommendation after release through the State Variety Release Committee.

The river water pumping scheme at Vedesandur was inaugurated on 24-9-79 by Dr. N.C. Gopalachari, Director, CTRI and with the commissioning of this, quality cigar-filler and wrapper can be grown successfully hereafter, enabling the out turn of exportable quality tobacco in Tamilnadu.

An additional area of 60 ha was acquired for the Regional Research Station, Hunsur in Sollepur State forest, 10 Km away from the Research Station farm at Hunsur on free basis from State Government of Karnataka for extending f.c.v. tobacco cultivation.



Scientists participating in the deliberations at Annual Research Programme Workshop at C.T.R.I. Rajahmundry on 4-7-1979.

RESEARCH HIGHLIGHTS

Research contributions from various departments, disciplines emanated from organised scientific research and endeavour undoubtedly contributed a lion's share for the betterment of tobacco farming community by and large, in turn increasing the quality tobacco production and export. Recommended package of practices for different types of tobacco and recent improvements in flue curing are summarised.

I Recommended package of practices for different tobacco types. (Table 1)

Recent detailed investigations on the package of practices for growing White burley tobacco in agency area of East Godavari District confirmed the following to be optimum and recommended for adoption.

1. Optimum time	Last week of July
2. Topping level	24 leaves
3. Optimum nitrogen dose	60 Kg/ha
4. Suitable variety	Burley-21

For chewing tobacco of Tamil Nadu, a modified schedule of application of N through urea 50% through soil on the 45th day and remaining 50% as foliar spray (2% concentration) in three weekly intervals of 12.5 Kg N each was found to be advantageous, giving an additional income of Rs. 408/- per ha and was recommended for adoption in the place of the conventional method of application of 75 Kg N/ha in two splits through soil.

Three years experimentation on lanka tobacco indicated that topping at 14 leaf level as optimum and can be adopted in place of the topping at 10 leaves presently in vogue.

II. Recent improvements in flue-curing :

An improved curing schedule involving temperature and relative humidity variations at periodical intervals has been formulated for flue-curing.

An improved design of the barn has been developed as 'low profile barn' of dimensions 7.32 m × 4.88 m × 3.20 m for Andhra Pradesh and of dimensions 7.32 m × 4.88 m × 3.96 m for Karnataka state respectively. Low profile barn accommodates 284 Kg more of green leaf than the existing barns, besides saving of 243 Kg. coal, 21 hours curing duration and Rs. 158/- curing expenditure per charge. These barns have already become very popular with the farmers.

In the search for cheaper alternative fuels in the place of coal or wood, paddy husk was found to be a cheaper substitute saving Rs. 142/- per charge. A suitable furnace has also been designed to feed the husk in the place of the usual furnace costing only Rs. 158/-.

In order to save the transporting costs incurred, the husk was briquetted to 9 per cent of its original volume and used as fuel. Similarly saw dust was also briquetted to 10 per cent of its original volume. These briquettes when used as fuel did not show any difference in respect of cured leaf out turn, Total Bright Leaf Equivalent and curing duration in comparison to coal as fuel, resulting in monetary saving of Rs. 100/- and Rs. 126/- respectively with paddy husk briquettes and saw dust briquettes per charge.

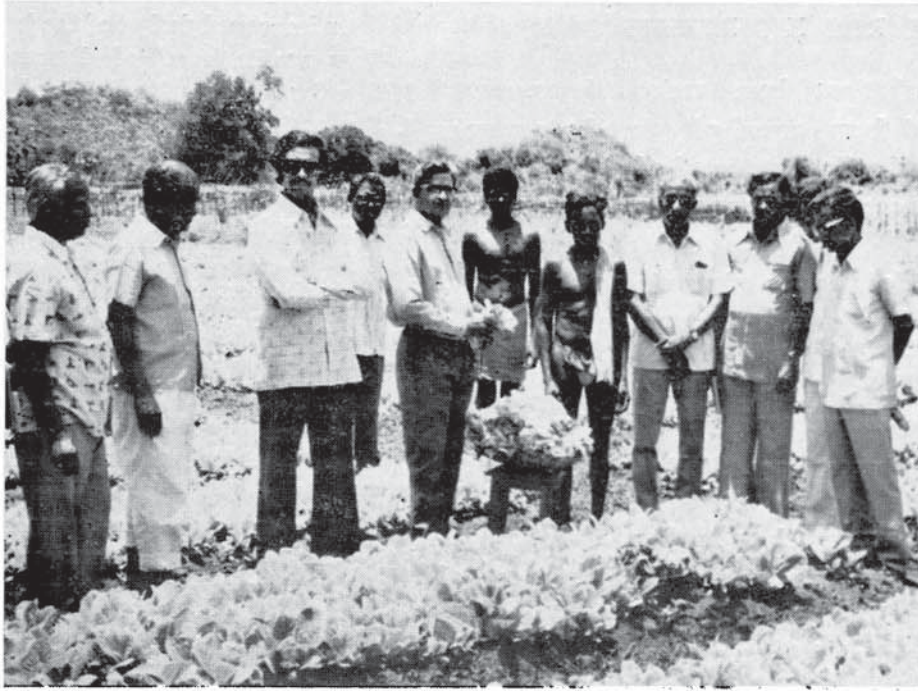
Attempts are also being made to use solar energy for curing tobacco.

New Equipment Recently Acquired :

1. Emencee make Rotary Shaker 1 No.

'LAB TO LAND' PROGRAMME BY CTRI

White burley nurseries raised at tribal centre Kindra Colony by the ten tribal farmers under the programme for landless labourers were quite successful and the tribal farmers were trained fully in the methods of raising nurseries. The seedlings produced from these nurseries from 0.5 acre were sold to M/s ILTD Co. as per the earlier agreement, realising about Rs. 5,159/- @ Rs. 77/- acre seedlings and the amount was received through cheque on 27-8-79. If the subsidy given by ITDA is taken into consideration the net return received by each tribal farmer would be Rs. 440/- for a period of two months and 10 days. Raising of burley nurseries in agency tract proved to be very attractive and remunerative venture for tribal farmers in view of Rs. 7,370/- net returns per acre of nursery.



White burley nurseries raised at Kindra colony by tribal farmers. Director, CTRI, R. D. O., Peddapuram, State Agricultural Department officials and Scientists of CTRI inspecting the nursery at the time of pulling and sale.



Presenting of a cheque by M/s I. L. T. D. Co. to members of tribal nursery at Kindra colony in presence of Director, C. T. R. I., and R. D. O., Peddapuram.

'Mahila tobacco nursery' raised at Jeddangi by the six landless women labourers of agency area for the first time during the Golden Jubilee year of ICAR, was quite successful and remunerative. White burley seedlings sufficient for 43 acres were produced from 0.35 acre area and sold to M/s ILTD Co. @ Rs. 77/- per acre and a sum of Rs. 3,311/- was received through cheque on 27-8-79 from M/s ILTD. If the cost of inputs are taken into account a sum of Rs. 7,939/- net returns per acre was received (subsidy given by ITDA not taken into account) and raising of white burley nurseries in the agency tract proved to be a very attractive and remunerative venture for the tribal farmers.

Inauguration of 'Lab to Land' programme at Burugupudi in East Godavari District was done on 25-8-79 and 'Farmers forum' was arranged. Shri Suryanarayana,

President, Panchayat Board, Burugupudi welcomed the gathering and requested the farmers to adopt the improved methods of cultivation recommended by CTRI and derive maximum benefits. Dr. N. C. Gopalachari, Director, highlighted the research findings, activities of CTRI and importance of 'Lab to Land' programme activities and requested the farmers to adopt the proven practices for better profitable farming. The meeting ended with vote of thanks by Shri M. J. Wilson, Scientist S-1 (Agricultural Extension). An exhibition stall containing charts and photos depicting the improved methods of nursery raising, disease control measures, benefits of neem kernel suspension spray etc. was arranged and the farmers were taken round and explained. Later, the inaugural sowing of nursery under demonstration of the improved package of practices for obtaining healthy and vigorous seedlings was done.



'Mahila Tobacco Nursery' raised by six tribal women at Jeddangi. Director, CTRI, R. D. O., Peddapuram and other Scientists of C. T. R. I., inspecting the nursery.



Presenting of a cheque by M/s I. L. T. D. Co., to members of Mahila Tobacco nursery in presence of Director, CTRI, and R. D. O., Peddapuram.



Dr. N. C. Gopalachari, Director, CTRI, delivering inaugural address in connection with 'Lab to Land Programme' inauguration at Burugupudi on 25-8-79.



Inaugural sowing of f. c. v. nursery, by Director under demonstration of the improved package of practices for obtaining healthy and vigorous seedlings at Burugupudi, on 25-8-'79



Inauguration of 'Lab to Land Programme' at Burugupudi. Gathering at the meeting after visiting the stall arranged.

Inauguration of 'Lab to Land' programme of CTRI Research Station, Vedasandur, Tamil Nadu was done and a get together was organised at Thadicombu in 'Ragi-Tobacco' plot of Shri T. G. T. Jaganathan on 24-9-79.

Dr. N. C. Gopalachari, Director, inaugurated the function and Sri R. Gopala Ratnam, Branch Manager, State Bank of India, Dindigul presided over the meeting. Research highlights were focussed and farmers forum was organised.

TABLE 1 : PACKAGE OF PRACTICES FOR

Type	Spacing	Planting time	Manures Per hectare	Fertilisers per hectare
FLUE-CURED (Black soils)	80 cm × 60 cm	October middle to November 1st week	7.5 tonnes FYM	N-P ₂ O ₅ -K ₂ O 20-30 to 30 to 50 50
FLUE-CURED (Northern light soils)	100 cm × 60 cm	October	6 to 12 tonnes FYM or FPC depending on soil texture	40-60-60 + 15 Kg MgO; N & K in equal splits
FLUE-CURED (Transition belt light soils)	100 cm × 60 cm	May end to June 1st week	5 to 6 tonnes FYM	40-80-80 + 15 Kg MgO; N & K in two equal splits
BURLEY (Light soils)	100 cm × 50 cm	July end to August 1st week on ridges	10 tonnes FYM	N-P ₂ O ₅ -K ₂ O 60-40-40; N in 3 splits and K in 2 splits
BURLEY (Black soils)	80 cm × 80 cm	October end	15 tonnes FYM or 2500 sheep penning or 300 Kg groundnut cake	40-15 to 50-10 to 25
NATU (Rainfed)	90 cm × 90 cm	October middle to November 1st week	40 Kg N/ha as groundnut cake	40 Kg N
CHEROOT	60 cm × 45 cm (Bhavani area) 60 cm × 60 cm (Thammampatti)	October middle to November 1st week	Sheep-penning or 5-10 tonnes FYM	50-50-100 (N on 45th and 60th days equally)
CIGAR FILLER	75 cm × 50 cm	October middle to November 1st week	Sheep penning 12,000 or 25 tonnes FYM	75-50-100 N on 45th and 60th days equally
CIGAR FILLER	75 cm × 45 cm	October middle to November 1st week	10 tonnes FYM	150-100-100
CIGAR WRAPPER	90 cm × 45 cm	October middle to November 1st week	15 tonnes FYM	125-112-224
CHEWING	75 cm × 75 cm	October middle to November 1st week	25 tonnes FYM or night soil compost 25 tonnes/ha	75 to 100-50-0, N on 45th day (50N) and 60th day (25N)
CHEWING	90 cm × 60 cm	October middle to November 1st week	45 tonnes FYM or Tank silt	112-168 Kg N, 50 percent as mustard cake and 50 per- cent as ammonium sulphate
HOOKAH & CHEWING	60 cm × 45 cm	November 1st week	10 tonnes FYM	112-112-0
HOOKAH & CHEWING	90 cm × 90 cm	October	20 tonnes FYM	112-112-0

DIFFERENT TOBACCO TYPES

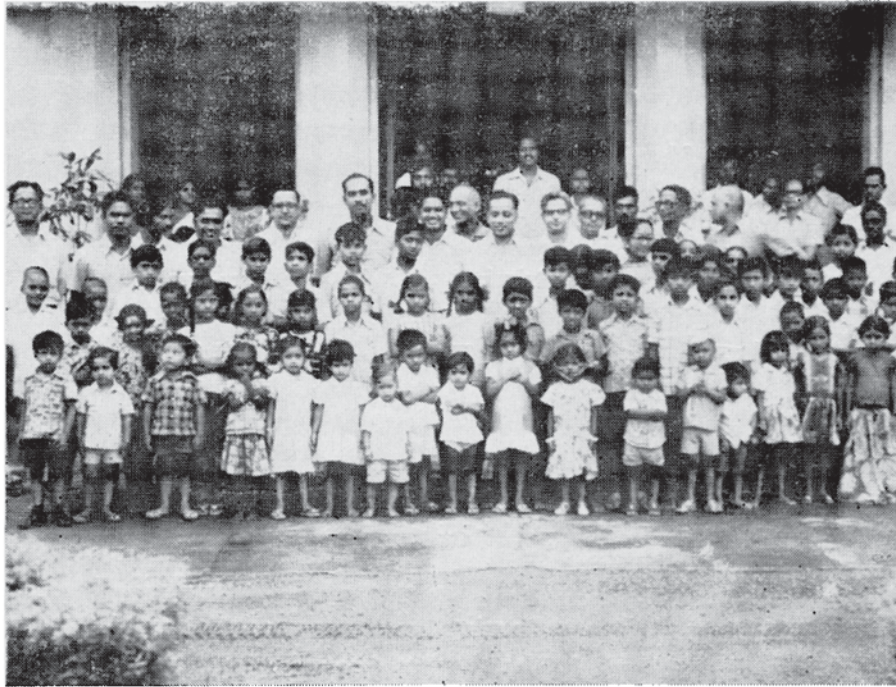
Varieties	Topping	Harvesting	Curing	State
Kanakaprabha CTRI Special	At flower-head	Priming	Flue-curing	Andhra Pradesh
16/103	At flower-head	Priming	flue-curing	Andhra Pradesh
Line 1494 Line 2359 E-2	At flower-head	Priming	Flue-curing	Karnataka
Burley-21	12 to 24 leaf level	Priming	Air curing	Andhra Pradesh (Agency area)
KY-58, KY-21 KY-16	14 to 16 leaf level	Priming	Sun curing	Andhra Pradesh (Guntur Dist)
DG-3 DG-4	At flower-head	Priming	Sun-curing	Andhra Pradesh
OK-1, 1-737, HV, 69-8 (Bhavani Special)	14-16 leaves	Stalk-cut	Sun-curing	Tamilnadu
VV-2, KV-1, 1-452, 1-462, Olor-10	12-14 leaves Olor 18-20	Stalk-cut Olor : Partial Priming & Stalk-cut	VV-2, KV-I : Sun-curing. Olor : Primed leaf-air curing-Stalk cut-Suncuring	Tamilnadu
Havana-381, Olor-10, 1-452 Swarrhibshman	14-16 leaves Olor: 18-20	Priming	1st one week sun-curing and then air- curing	West Bengal
Dixie shade S-5	No topping	Priming	Air curing	West Bengal
1-64, HV 67-9 HV 67-10 (Bhagya- lakshmi), PV-7, HV 67-30 (Thangam), VR-2, VD-1, S-1, I-115, VTK-1 Vairam	7 to 9 leaves	Stalk-cut	Sun and air curing	Tamilnadu
Sona, Gandak Bahar and DP 401	14 leaves	Stalk-cut	Sun-curing	Bihar
Motihari (<i>N. rustica</i>) (Hemti, Bitri) DD-437, HD 65-40	8 leaves	Priming	Air curing	West Bengal
Jati (Chama, Podali) DD 413, 414, 415, 417	8 leaves	Priming	Air curing	West Bengal

**CTRI ACTIVITIES IN CONNECTION WITH GOLDEN
JUBILEE OF ICAR.**

1) International year of the Child :

In connection with the 'International year of the child,' a detailed free medical check-up for the children of the CTRI staff by the eminent local doctors was arranged by the Institute on 25-7-79. Free medical check-up rendered

by the Doctors viz., Dr. M. Sitaramachoudary, Children Specialist, Dr. K. Sagar, Children Specialist, Dr. (Smt) Nagarajakumari, Children Specialist, Dr. Daniel E. N. T. Specialist, Dr. P. Atchutaramarao, Skin Specialist, Dr. A. S. R. Murty, Eye Specialist, Dr. Y. Krishna, Orthopedics, and Dr. (Capt.) R. V. Rao, Dental Surgeon is acknowledged by awarding letters of appreciation to them. 'Srinivasa Diagnostic Laboratory' who extended their free service in taking X-rays of children was also awarded with a letter of appreciation.



Group photo consisting children of staff who were given free medical check up, visiting doctors, Director and other officials of CTRI in connection with 'International year of child' celebrated on 25-7-79 at CTRI, Rajahmundry.

2) Inter Institutional Tournaments :

Sports Committee comprising members Sarva Shri M.C.M. Reddy, S. K. Naidu, S. S. Prasad K. Venugopalarao, G. S. Subbarao was constituted to select the teams/individuals for various events in Sports and games on behalf of CTRI. Sri M.C.M. Reddy was deputed for the first Zonal (South) Management Committee meeting at Central Institute of Fisheries Technology, Cochin on 11-9-79. Preliminary and final selections for various games and sports are being conducted at the Institute level (including the Regional Research Stations) to depute the

players at the ensuing Zonal meet during 1st week of November, '79 at Cochin.

The second Zonal Management Committee meeting to finalise the programme of sports and games is scheduled on 27-10-79 at Cochin and Shri M.C.M. Reddy will participate in the meetings.

TOBACCO INSTITUTE CLUB

Shri M.N. Chari, B.A., LLB. Personnel Officer, Food, Fats and Fertilisers, Tadepalligudem gave a very interesting lecture on 5-7-79 about his visit to U. S. A. with the aid of a good number of colour slides.

SEMINARS AND EXHIBITIONS

1. Dr. S.S. Hussaini, Scientist S-1 (Nematology) gave an interesting seminar on 7-7-79 with the help of slides on his experiences during his visit to Florida, sponsored by Rotary Club.

2. Shri Paul Dryksta, a post-graduate student from Holland gave a talk on 8-8-79 covering agricultural system, education pattern and social life in Netherlands.

3. Exhibition stall was arranged in Godavari Pushkaram exhibition held in stadium grounds, Rajahmundry from 17-8-79 to 21-9-79.

4. Exhibition stall was also installed for three days in the premises of C.S.R. Sarma College, Ongole in connection with Silver Jubilee Celebrations of the College.

MANAGEMENT COMMITTEE OF CTRI

First meeting of the Management Committee was held on 7-7-79 at CTRI, Rajahmundry. The members of committee for the period from 1979 to 81 are as follows:

- | | |
|---|----------|
| 1. Dr. N. C. Gopalachari, Director, CTRI | Chairman |
| 2. Senior Joint Director of Agriculture (Cotton)
Incharge of Tobacco
Govt. of Andhra Pradesh. | Member |
| 3. Director of Agriculture
Government of Gujarat
Ahmedabad. | -do- |
| 4. Dr. A. Apparao
Director of Research
A.P. Agricultural University | -do- |
| 5. Dr. B. V. Ramakrishnayya
Scientist S-3 (Soil Science) | -do- |
| 6. Shri K. Apparao
Scientist Gr. S-2 (Genetics) | -do- |
| 7. Shri B. V. Kameswararao
Scientist S-1 (Biochemistry) | -do- |
| 8. Shri T. Sitaramachari
Scientist S-1 (Pl. Breeding) | -do- |
| 9. Shri A. Balasubramaniam
Scientific Secretary to D. G.,
ICAR. | -do- |

- | | |
|--|--------|
| 10. Accounts Officer
CTRI, Cuttack | Member |
| 11. Administrative Officer
C.T.R.I. | -do- |
| 12. Shri D. Polireddy | -do- |
| 13. Shri Bhanumoorthy | -do- |

All the members except those mentioned at 4, 9 and 13 above attended the meeting.

INSTITUTE JOINT COUNCIL

The following officials have been elected as members, on staff side and members nominated on official side at CTRI for the period 1979-81.

a) Members on staff side :

- | | |
|--|------------------|
| 1. Shri J. A. V. Prasadarao,
Scientist-S | (Scientific) |
| 2. Shri K. L. Narasaiah, T-5 | (Technical) |
| 3. Shri V. Soundararajan, T-I-3 | (-do-) |
| 4. Shri M. Narasimharao, T-2 | (-do-) |
| 5. Shri A. V. H. Prasadarao,
Superintendent | (Administrative) |
| 6. Shri N. Venkatarao, Sr. Clerk | (Administrative) |
| 7. Shri S. A. Rahiman Khadri,
S. S. Gr. III | (Supporting) |
| 8. Shri K. Satyanarayana, S.S.Gr.II | (Supporting) |

b) Members on official side :

- | |
|--|
| 1. Shri K. Apparao, Scientist S-2 (Genetics) |
| 2. Shri B. V. Kameswararao, Scientist S-1 (Biochemistry) |
| 3. Shri T. Sitaramachari, Scientist S-1 (Pl. Breeding) |
| 4. Shri B. Nageswararao, Farm Superintendent |
| 5. Shri M. Suresh Kumar, Administrative Officer |
| 6. Shri G. V. Ramanarao, Accounts Officer |

Shri M. Suresh Kumar, Administrative Officer is nominated as Member and Secretary on the Official side.

PERSONNEL

Shri B. S. Ramachandrudu, LME, joined CTRI as Technician T-5 cadre consequent to his completion of his term of deputation to C. P. P. T. I., Hyderabad.

Shri D. Ramachandram, Technician T-II-3 transferred from CTRI Research Station, Kandukur, joined at Light Soil Farm, Devarapalli on 12-9-79

Dr. A. P. Gandhi, Scientist S-1 (Biochemistry) has been relieved of his duties at the Institute consequent to his selection to Scientist S-2 (Biochemistry) at C. I. A. E., Bhopal.

PAPERS, BULLETINS AND LEAFLETS PUBLISHED :

1. Effect of Ethrel on ripening, curing and physico-chemical characteristics of flue-cured tobacco.

Chakraborty, M. K., Prabhu, S. R., and Suryanarayana, T. K.
'79. Indian J. Agric. Sci. 49(7) 520-5, July,

2. Paddy husk and saw dust briquettes as fuel in curing of Virginia tobacco (Telugu).
N. C. Gopalachari and B. Nageswararao
Annadata, July 79; P. 32-3

3. Fertility status of soils growing f. c. v. tobacco in West Godavari District.
V. Krishnamurthy, B. V. Ramakrishnayya and N. C. Gopalachari
Technical Bulletin No. 3

4. Multiple advantages of rabbing with paddy husk on tobacco seed beds.
Leaflet No.5 (English & Telugu), July, 1979.
5. Saw dust and paddy husk briquettes as fuel for flue curing of tobacco.
Leaflet No.6 (English & Tejugu) August, '79.
6. Control of Orobanche;
Leaflet (Revised) August, 1979.

'LAB TO LAND' POPULAR LEAFLETS

1. Package of practices for foliar application of Urea to chewing tobacco (Tamil and English)
Published by CTRI Research Station, Vedsandur, Tamilnadu.
2. Package of practices for growing Ragi in Kharif and Tobacco in Rabi. (Tamil and English)
Published by CTRI Research Station, Vedsandur, Tamilnadu
3. "Get more profits by adopting multiple cropping with tobacco (Hindi).

Published by CTRI Research Station, Pusa, Bihar.

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

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