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ALL INDIA NETWORK PROJECT ON TOBACCO

Biennial Report (2023-25) & Brief Technical Programme (2025-26)

भाकृअनुप
ICAR

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राष्ट्रीय वाणिज्यिक कृषि अनुसंधान संस्थान
National Institute for Research on Commercial Agriculture

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भाकृअनुप – राष्ट्रीय वाणिज्यिक कृषि अनुसंधान संस्थान

(FORMERLY ICAR-CENTRAL TOBACCO RESEARCH INSTITUTE)

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RAJAHMUNDRY - 533 105, ANDHRA PRADESH, INDIA

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तम्बाकू पर अखिल भारतीय नेटवर्क परियोजना
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Brief Technical Programme (2025-26)

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BIENNIAL REPORT

Tobacco is an important low volume- high value commercial crop, grown in an area of 0.43 M ha (0.30% of net cultivated area) and contributes > Rs. 84,000 crores to the national exchequer through foreign exchange earnings and excise revenue. India produces presently about 772 million kg of tobacco. Different types of tobaccos *viz*. Flue-cured Virginia (FCV), *Bidi, Natu, Chewing, Hookah,* Cheroot, Cigar Wrapper/ Filler, Dark Fire Cured and Oriental are cultivated in the country. Out of this around 201 million kg is FCV tobacco, produced in an area of 1.61 lakh hectares mainly in the states of Andhra Pradesh and Karnataka. About one lakh farmers raise FCV tobacco on in Andhra Pradesh and Karnataka. *Bidi* tobacco tops the list of non-FCV tobacco types and is cultivated in an area of about 1.52 Lakh hectares, mostly in the states of Gujarat, Karnataka and Andhra Pradesh with an annual production of nearly 375 million kg. *Hookah/ rustica/ motihari* tobacco is mainly grown in Uttar Pradesh, Gujarat and West Bengal in an area of 70,500 ha with a production of 1.22 m kg. Chewing tobacco grown in an area of 10,000 ha in Tamil Nadu with a production of 25,000 tonnes. Among different types of tobacco grown in the country, FCV and Burley are the main exportable types. India has got added advantage of producing FCV leaf of different styles ranging from coloury filler to semi-flavorful leaf and thereby catering to the needs of different importing countries.

To cater the location specific needs of different tobacco types, the All India Coordinated Project on Tobacco was established by Indian Council of Agricultural Research during 1970-71 with the headquarters of the Coordinating unit at Anand (Gujarat). The headquarters was subsequently shifted to ICAR-CTRI, Rajahmundry, Andhra Pradesh on 16-08-1998. Further, the AICRP on Tobacco was renamed as All India Network Research Project on Tobacco and kept under the administrative control of the Director, ICAR-CTRI, Rajahmundry. A total of numbers of 14 centres (3 Main centres, 7 sub-centres and 4 voluntary centres) are functioning at present.

AINPT Co-ordination Unit at Rajahmundry co-ordinates activities of all the centres and monitors the research programmes through four Project Investigators located at ICAR-CTRI, Rajahmundry. It also co-ordinates with ICAR on all the administrative, financial and research issues related to the coordinating centres and ensure implementation of all the mandated programmes as per the guidelines of ICAR.

Workshop/ Group Meetings organized

- The XXVI Tobacco Workshop of All India Network Project on Tobacco was organized on 21st September, 2023 in virtual mode at ICAR-CTRI, Rajahmundry. Dr. T. R. Sharma, DDG (CS) was the Chief Guest and Dr. D. K. Yadava, ADG (Seed) as the Guest of Honour. During the Workshop, experimental results of 2022-23 were reviewed and also future technical programme was finalized. In the plenary session seven technologies were released to the farming community

- The XIII Group Meeting of All India Network Project on Tobacco (AINPT) was held at ICAR-Central Tobacco Research Institute Research Station, Hunsur during 29-30th August, 2024 under the Chairmanship of Dr. T.R. Sharma, DDG (CS), ICAR, New Delhi. The experimental results of 2023-24 were reviewed and also formulated the future technical programme. A total of 113 experiments in different disciplines were conducted and monitored. A total of six publications were released by the Chief Guest, Dr. T.R. Sharma, DDG (Crop Science), New Delhi

Budgetary Support: The budget for the Network Project during 2023-24 and 2024-25 was Rs. 378.00 Lakhs and Rs. 516.20 Lakhs, respectively.

Multi-location testing of the entries

A total number of 83 experiments in 2023-24 & 73 in 2024-25 were conducted in the discipline of Crop Improvement.

Varieties released / notified

- Four tobacco varieties *viz.*, CTRI Navya (FCH-2), Sahyadri Swarna (FCS-4), 1353 (FCRH-11) and DTV 9 (NBD-316) were released and notified by 93rd CVRC
- The notification proposals of three tobacco cultivars *viz.*, Nandyal Pogaku-2, DJ-1 and ArR-27 (Nath) are under the consideration of 94th CVRC

Achievements of tobacco type wise trials during the biennium (2023-25)

FCV tobacco

- A total number of 16 entries were evaluated in IVT/IHT at 6 centres, and the promising lines were promoted to AVT-I/AHT-I
- During this biennium The IVT (repeat) was conducted in the KLS region with 5 entries, and the promising lines were promoted to AVT-I/AHT-I during the biennium
- In the AVT-I/AHT-I, 10 entries were tested each at Andhra Pradesh (4 FCV centres) and 3 entries at Hunsur and 5 entries at Shivamogga centre during the biennium
- During the biennium the entry FCRH-13 was evaluated at Jeelugumilli and two entries FCHH-2 and FCRH-13 were tested at Hunsur under AHT-II
- The entry FCHH-2 was evaluated under OFT during 2024-25

Bidi tobacco

- Ten *bidi* tobacco entries were evaluated during the period in IVT/IHT at 3 centres, and the promising lines were promoted to AVT-I/AHT-I.
- In the AVT-I/AHT-I, 6 entries were tested at Anand centre and 5 entries at Nandyal and Nipani centres
- In the AVT-II/AHT-II, 7 entries were tested each at Anand & Nipani centres, 2 entries at Nandyal centre
- The entries ABD-241, NyBTH-152, NyBTH-157 and NyBTH-171 were evaluated under OFT during 2024-25

***Rustica* tobacco**

- A total number of 5 lines were tested at 4 centres in the Initial Varietal Trials and the promising lines were promoted to AVT-I
- In the AVT-I, 5 entries were tested at 4 *rustica* centres
- In the AVT-II, 7 entries were tested at Anand, 5 entries at Araul centres and 3 entries each at Dinhata and Ladol centres
- The entries ArR-83 & AR-184 at Anand and ArR-69 & ArR-91 at Araul centre

***Natu* tobacco**

- A total number of 4 lines were tested at 3 centres in the IVT and the promising lines were promoted to AVT-I
- In the AVT-I, 3 (IET-118, IET-119 & IET-121) entries were tested at 3 centres

Chewing tobacco

- A total number of 2 lines were tested at 3 centres in the IVT during 2023-24 and the same entries were repeated in the IVT(R) during 2024-25 and both the lines were promoted to AVT-I

Germplasm maintenance

Around 3386 tobacco germplasm accessions including *Nicotiana* species were maintained at ICAR-NIRCA. All the AINPT centres maintains working collection of their mandated tobacco types

Total number of experiments conducted in crop production and protection and crop chemistry and soil science were 26 and 25 respectively during the biennium.

Recommendations to the Farming Community

SHIVAMOGGA

- Inter-cropping of groundnut in alternate rows of FCV tobacco for increased tobacco cured leaf yield, additional intercrop yield and monetary advantage over the sole crop of FCV tobacco

- Management of Tobacco leaf curl vector, Whitefly, *Bemisia tabaci* (*Hemiptera*: *Aleyrodidae*) by using different modules indicated that IPM module proved to be effective in minimizing the whitefly damage, reducing the tobacco leaf curl virus disease by sustained the natural enemies and making it economically beneficial.

- ❖ The Integrated module (IPM) involving sowing of Castor as a trap crop 15 days before planting, collection & destruction of egg masses, installation of pheromone traps (Spodlure/Litlure) @ 4/acre at 15 DAP, erection of bird perches @ 20/acre , need based spraying of Azadirachtin 10000 ppm @ 2ml/L, *Bt. kurstaki* @ 1.5 g/L, Emamectin benzoate 5SG @0.5 g/l is recommended for control of *Spodoptera litura* in FCV tobacco

ANAND

- *Bidi* tobacco farmers are advised to grow *bidi* tobacco hybrid GABTH 2 with application of N: P_2O_5: K_2O @ 180-50-50 for getting higher cured leaf yield as well as nicotine and potash contents with maximum net return and BCR

- *Rustica* tobacco farmers are advised to grow variety GCT 3 with application of N: P_2O_5: K_2O @ 200-50-50 kg/ha for getting the highest contents of N, P, and K in leaves.

- *Bidi* tobacco farmers are advised to continue to utilize Metalaxyl MZ 68 WP @ 2.16 kg g.ai/ha (32 g/200 l water /100 m^2) or Bordeaux mixture 0.6% at initiation of disease and later as drench for the effective management of damping-off disease in *bidi* tobacco nursery as the pathogen has not developed resistance against fungicide at this dose

- *Bidi* tobacco farmers are advised to continue the practice of spray drenching Azoxystrobin 23 SC @ 0.023% (230 g a.i./ha i.e. 10 ml/10 l water / 100m2) or Azoxystrobin + Difenoconazole 29.6 SC (372 g a.i./ha i.e. 12.6 ml/10 l water/100 m^2) at initiation of disease and later for the effective management of damping-off disease in *bidi* tobacco nursery as the pathogen has not developed resistance against fungicide at this dose.

- *Bidi* tobacco farmers are advised to spray azoxystrobin 11% + tebuconazole 18.3% SC, (15 ml/10 l water) or zineb 68% + hexaconazole 4% WP (20 g/10 l water) first at initiation of disease and second at 15 days after first spray for effective management of *alternaria* leaf spot and frog-eye leaf spot disease in *bidi* tobacco field.

VEDASANDUR

- Tobacco planted succeeding sesame with neem cake application at 30 days after and hand weeding at 90 days recommended for Orobanche management

Number of entries tested in various AINPT centres during 2023-24

Tobacco/ Centre	*IVT	AVT I	AVT II	BULK	OFT	IHT	AHT I	AHT II	BULK	OFT
	Varieties (V)					Hybrids (H)				
FCV tobacco										
Jeeluugumilli	3	-	-	-	-	-	-	1	-	-
Kandukur	3	-	-	-	-	-	-	-	-	-
Hunsur	3+5 (R)	-	-	-	1	-	-	2	-	-
Shivamogga	3+5 (R)	-	-	-	-	-	-	-	-	-
Guntur	3	-	-	-	-	-	-	-		
Rajahmindry	3	-	-	-	-	-	-	-		
***Bidi* tobacco**										
Anand	4	3	4	-	1	-	-	-	-	-
Nipani	4	2	5	-	-	-	-	-	-	-
Nandyal	4	2	-	-	5	-	-	-	-	-
***Rustica* tobacco**										
Anand	2	3	4	-	1	-	-	-	-	-
Araul	2	3	2	-	2	-	-	-	-	-
Dinhata	2	3	-	-	-	-	-	-	-	-
Ladol	2	3	-	-	-	-	-		-	-
***Natu* tobacco**										
Jeelugumilli	4	-	-	-	-	-	-	-	-	-
Nandyal	4	-	-	-	-	-	-	-	-	-
Berhampur	4	-	-	-	-	-	-	-	-	-
***Chewing* tobacco**										
Anand	2	-	-	-	-	-	-	-	-	-
Dinhata	2	-	-	-	-	-	-	-	-	-
Vedasandur	2	-	-	-	-	-	-	-	-	-

* IVT and IVT Repeat entries

Number of entries tested in various AINPT centres during 2024-25

Tobacco/ Centre	IVT	AVT I	AVT II	BULK	OFT
	Varieties (V)				
FCV tobacco					
Jeelugumilli	13	10		-	-
Kandukur	13	10	-	-	-
Hunsur	13	3	-	-	1
Shivamogga	13	5	-	-	-
Guntur	13	10	-	-	-
Rajahmindry	13	10	-	-	-
***Bidi* tobacco**					
Anand	6	3	3	-	1
Nipani	6	3	2	-	-
Nandyal	6	3	2	-	3
***Rustica* tobacco**					
Anand	3	2	3	-	1
Araul	3	2	3	-	-
Dinhata	3	2	3	-	-
Ladol	3	2	3	-	-
***Natu* tobacco**					
Jeelugumilli	-	3	-	-	-
Nandyal	-	3	-	-	-
Berhampur	-	3	-	-	-
***Chewing* tobacco**					
Anand	2	-	-	-	-
Dinhata	2	-	-	-	-
Vedasandur	2	-	-	-	-

Action Taken Report on the Proceedings of XXVI Workshop of AINPT

Action points and action taken report on the Proceedings of the XXVI Workshop of All India Network Project on Tobacco (AINPT) held on 21st September, 2023 (Hybrid mode) at ICAR-Central Tobacco Research Institute, Rajahmundry is given below:

S. No.	Centre	Action points/ Suggestions	Action Taken
1.	All centres	Emphasize the importance of establishing required facilities for screening under drought and water logging conditions wherever research is going on.	Facility for drought screening is being established and available irrigation facility being used for creating water logging conditions at Kandukur centre
		Pre-breeding for root knot nematode resistance may be intensified	Pre-breeding initiated for root knot nematode resistance at NIRCA, Rajahmundry
		Understand the mechanism of *Orobanche* resistance in the pre-breeding resistant materials before proceeding with the breeding programme.	Identification of genes, metabolites and microbes responsible for *Orobanche* resistance is in progress using multi-omics approach in collaboration with M/s ITC Ltd.
		Suggested to share the pre-breeding materials developed for *Orobanche* with the centers	The pre-breeding materials developed at NIRCA, Rajahmundry will be shared afterincorporating the recurrent parent characteristics with pre-bred *Orobanche* resistance
		It is also suggested that at least one variety has to be released per year from this AINPT.	During 2024-25, 4 tobacco varieties viz., CTRI Navya, 1353, Sahyadri Swarna & DTV-9 were released and notified.

S. No.	Centre	Action points/ Suggestions	Action Taken
			The proposals of 3 tobacco varieties DJ-1, ABD-132 & ArR-27 were submitted to 94th CVRC for State release and notification.
		Take up on-farm trials of pre-release lines with the help of State Department of Agriculture as required by the SVRCs.	The suggestion is being followed for conducting on farm trials by Nipani, Nandyal and all FCV centres
		Irrespective of superiority of lines in AVT-I or AHT-I, trials may be advanced to AVT-II or AHT-II in order to identify lines showing consistent performance in at least any of the two years (IVT, AVT-I & AVT-II or IHT, AHT-I & AHT-II) as few number of entries are tested	Followed by all the centres.
2.	ICAR – CTRI RS, Hunsur	Release of the lines FCH-2 and FCHH-2 to KLS region may be hastened up.	Released FCH-2 (CTRI Navya) and the identification proposal of FCHH-2 is being submitted to the VIC in the Workshop
		Seed production of FCHH-2 hybrid may be taken up at Headquarters.	Implementing the suggestion during 2025-26 season and parents were sown in the nursery.
3.	Shivamogga centre (UA&HS, Shivamogga)	Suggested to quickly complete the centre shifting process and take up intensified extension activities at Ramanathapura area.	A new experimental plot was established at Kodagu University, Jnana Kaveri campus ChikkaAluwara, Kushalanagar taluk, Kodagu district and AINPT experiments were initiated during 2025-26.

S. No.	Centre	Action points/ Suggestions	Action Taken
		Wind up the seed oil experiment as it is not relevant in FCV tobacco	The seed oil experiments are discontinued.
		Title of the experiment VFSAG 74 experiment is modified as "Alternative crops/ cropping systems in KLS for irrigated and rainfed conditions".	Modified the title as suggested.
		Title of the experiment VFSEN 37 modified as "Validation of IPM modules against *S. litura* in tobacco. The treatments are also modified accordingly.	Modified the title as suggested.
5.	ICAR–CTRIRS, Kandukur	Evaluate the entry, FCK-10 with check, CTRI Sreshta (FCR-15).	Evaluationof FCK-10 with CTRI-Shresta will be evaluated inBulk trials in the ensuing season.
		ICAR-CTRI RS, Kandukur was identified as centre for Burley breeding.	Burley breeding programme shifted from Rajahmundry to Kandukur centre.
		Explore the dark burley types grown in Vinukonda area for high nicotine content and the feasibility of developing "stalk cut" type burley as preferred by the trade companies.	The dark burley types were collected and planted at ICAR-NIRCA RS,Kandukur and Guntur centres for purification and selection of desirable types.
6.	ICAR–CTRI, Rajahmundry,	Suggested to conduct the trial "Effect of humic acid as bio-stimulants for healthy tobacco seedling production (VFRAGC1) at Rajahmundry, Jeelugumilli &Kandukur	Field experiment was conducted at 3 centres. No significant effect of humic acid was observed compared to recommended dose of fertilizers.

S. No.	Centre	Action points/ Suggestions	Action Taken
7.	Anand centre (AAU, Anand)	Continue root-knot resistance breeding along with yield improvement.	Resistance breeding for root-knot nematode is being continued
		Experiment BDAAG 166 will be continued with a modified title "Evaluation of different fertilizer doses on growth, yield and quality of *bidi* tobacco"	As suggested, the title of experiment modified, and experiment continued.
9.	Nandyal centre (ANGRAU, Guntur)	Informed to collect the data on *Orobanche* from farmer's field in bulk trail	Data collected in farmersfield and observed 70% infestation in farmers' field.
		BDNyAG 22, "Evaluation of pre and post emergence herbicides for weed management in *bidi* tobacco" may be modified after discussion with PI, Crop Production and Head, Hunsur Centre.	Modified the programme and executed at Anand, Nipani and Nandyal centres.
11.	Nipani centre (UAS, Dharwad)	Reduce the number of F_2 populations to four	5 selected F_2planted during 2023-24 and selections made.
		Experiments may be layout on different part of the Research Station as yield levels are consistently low since 2019.	After changing the planting area there is a yield improvement in the experiments (2024-25)
13.	Araul centre (CSAUA &T, Kanpur)	Accelerate the release of ArR-27	ArR-27releaseand notification proposal presented before 94th CVRC on 8.9.2025. Additional documents sought by the CVRC submitted for necessary action.

S. No.	Centre	Action points/ Suggestions	Action Taken
		Generate required data for release of ArR-58, ArR-69 and ArR-91 and compare with identified variety, ArR-27(Nath)	Data generated and ArR-69 found to be superior.
		Informed to address the problem of yield gap by proposing an experiment with GAP to improve yield.	Yet to be initiated.
14.	ICAR – CTRIRS, Dinhata	Identify the weakness in variety Podali and initiate its breeding	The variety Podali is a low yielder. A high yielding variety DJ-1developed using Podali is one of the parent is released by TVRC for West Bengal and presented before 94th CVRC on 8.9.2025 for notification. Additional documents sought by the CVRC submitted for necessary action.
		Initiate breeding work on *motihari* tobacco by procuring lines from *rustica* breeding centres.	Selections were made from motihari germplasm lines.Crosses were attempted between desired lines and F_1 seeds were harvested to evaluate during 2025-26.
		Popularize recently released variety, DJ-1	All efforts are being taken to popularize DJ-1 variety through interaction with farmers during training/awareness programme and field visits.
		Study hollow stalk and brown spot diseases in *Jati* tobacco and *Motihari* tobacco	Culture conditions and screening procedure standardised for hollow stalk and brown spot pathogens. Screened the germplasm

S. No.	Centre	Action points/ Suggestions	Action Taken
			against hollow stalk and identified the entry, SK101 as moderately resistant.
		Collect statistical data on *Jati* and *Motihari* tobacco area and production in West Bengal from department of Agriculture/other line departments	The available data collected up to 2023-24and presented in the AINPT Annual Report 2024-25.
15.	Berhampur centre (OUA&T, Bhubaneswar)	Provide the data on all the tobacco types grown in Odisha in order to decide the location of the centre.	Tobacco grown in Rayagada, Gajapati, Ganjam, Koraput and Malkanagiri district of Odisha. The details will be submitted after the survey.
		Explore the possibility of conducting burley experiments in Odisha.	After evaluation of 2 burley entries YB-22 and Banket A1 at Berhampur centre during 2024-25, YB-22 performed better than Banket A1.
16.	ICAR–CTRIRS, Vedasandur	Initiate work on Snus tobacco as the market for Snus is increasing	A total of 205 chewing tobacco germplasms assembled and multiplied for further screening for Snus purpose.

Action Taken Report on the Proceedings of XIII Group Meeting of AINPT

Action points and action taken report on the Proceedings of the XIII Group Meeting of All India Network Project on Tobacco (AINPT) held from 29-30 August, 2024 at ICAR-CTRI RS Hunsur, Karnataka is given below:

S. No.	Centre/ Presented by	Action point	Action taken
1.	**Action points received from the Council**	Emphasize on genome editing technologies for developing high yielding tobacco. Deploy marker assisted selection to speed up development of variety for biotic stresses such a *Fusarium* wilt, nematodes, *Orobanche*, and TMV	• Genome editing technology is being used for reducing TSNA in tobacco at ICAR-NIRCA, Rajahmundry. • Deploying marker assist technologies for the development of *Fusarium* wilt and nematode resistant cultivars by ICAR-NIRCA
		Pre-breeding selection of genotypes should be emphasized in AINPT to break yield barriers to broaden the genetic base of the varieties. Subsequently, trait specific mapping populations for early maturity, nutrient use efficiency, water use efficiency should be developed.	• Pre-breeding work is initiated for the development of *Orobanche* and nematode resistant tobacco lines and creating variability at ICAR-NIRCA • Efforts initiated to identify the parents for the development of mapping populations for K use efficiency and drought tolerance at Kandukur • Seven (2021-128-2-2-3-1, 2021-132-6-3-2-2, 2022-135-4-2-3, 2022-137-5-6-2, 2022-138-4-3-1, 2024-151-1, 2024-152-2) early maturing advanced breeding *bidi* lines are in advanced stages of evaluation at Nandyal centre
		Develop Agro-techniques for crop diversification, and value addition in tobacco to boost the farmer income.	• Alternative crops /cropping systems are being developed for tobacco growing areas,

S. No.	Centre/ Presented by	Action point	Action taken
		Experiment on Nano fertilizer should be taken to minimize eutrophication of ground water accruing by use nitrogen application.	Castor + Cluster bean/ground nut at Kandukur centre are found to be remunerative in rainfed areas of AP • Tobacco based Cropping systems for higher farm returns are also suggested *viz.*, FCV tobacco-radish (skip row) relay crop at Shivamogga; Tobacco + Bengal gram at Rajahmundry; Tobacco + Black gram at Hunsur; Onion/garlic + tobacco at Araul; Tobacco + aggregatum onion/ annual moringa at Vedasandur • A new experiment initiated on crop intensification at Hunsur • Field experiments on effect of nano urea and nano DAP are in progress at ICAR-NIRCA RS, Hunsur and Kandukur
		Develop and demonstrate location specific production systems and protection technologies of tobacco. In this regard demonstrable sensor -based irrigation and fertigation technologies by using IoT based sensors should be standardized.	• All the centers taking up demonstration of production and protection technologies • The sensor-based irrigation and fertigation technologies by using IoT based sensors are going to be demonstrated at Jeelugumilli during 2025-26

S. No.	Centre/ Presented by	Action point	Action taken
		Concluding observation of all the long-term experiments being carried out must be presented by compilation of data in next year meeting.	• The suggestion is being followed and the results are going to be presented by PI's.
		All the AINPT centers are advised to take up regular online interaction meetings amongst them during crop season should be conducted and contingency if any should be communicated to the Co-Unit, AINPT immediately along with photographs through concerned Director of Research.	• Conducted 5 virtual meetings on 20-02-2025; 19-03-2025; 08-05-2025; 24-06-2025; & 30-07-2025 for interacting with AINPT centres related to various issues. • Nandyal centre, where the crop was damaged due to rain, communicated the crop condition with photographs to the Co-unit
		AINPT must take up trials in coordinated mode at all the centers with uniform methodology with respect to distinct type of tobacco growing in their area. All the centers are requested to present production-oriented survey and report on pest and disease scenario in their area in next AINPT meeting	• As suggested, the experiments dealing with Integration of natural farming inputs, pre and post emergent herbicides for weed management; nematode antagonists enriched coco-peat for root knot nematodes; control of sucking pest *etc.*, were conducted at different selected centres • New experiments on IDM for damping off; leaf blight management are proposed in coordinated mode.
		AINPT centers are further advised to provide reliable data by following proper sampling procedures to avoid variation in chemical and filed data of the trials and use approved controls	• The suggestion is being followed.

S. No.	Centre/ Presented by	Action point	Action taken
		to reduce experimental errors.	
5.	Crop Improvement by Dr. K Sarala	The chairman suggested to give research priority on trait specific pre-breeding utilizing different wild resources, speed breeding and MAS to develop varieties.	• Trait specific pre-breeding work is being taken up for the development of *Orobanche* and nematode resistance at Rajahmundry. • MAS is being employed for the development of *Fusarium* wilt and MABC for nematode resistant cultivars.
		Focus should be given to develop early maturing climate resilient variety development	• The varieties CTRI-Sreshta and CTRI-Naveena having the ability to with stand rain damage during crop growth were released during 2024
		In some of the trials, the entries are very less. Therefore, all the centers should develop a pipe line of varieties that can be contributed regularly	• All the centres are generating new crosses and evaluating segregating generations/ advanced breeding lines so as to regularly contribute entries to AINPT system
		Screening against *Orobanche* should be done in systematically so that stable resistant materials can be developed.	• A *Orobanche* sick plot developed for field screening and a protocol standardized for screening under pot culture conditions. The ABLs were screening in pot and field condition for Orobanche reaction.
5.	Crop Production by Dr. S. Kasturi Krishna	The Chairman suggested to present the results after comprehensive analysis of the data of all the centers.	• The suggestion is being followed by the centres.

S. No.	Centre/ Presented by	Action point	Action taken
		Suggestion was made to work out *Orobanche* dynamics after Humic acid application	• This will be taken up during 2025-26
6.	Crop Protection by Dr. K. Rajasekhara Rao	The Chairman suggested to conclude all the long-term experiment compiling data of 24 years as there was no resistance development in pathogen.	• Compilation of data of 22 years with regard to long term experiment on monitoring of resistance development in *Pythium aphanidermatum* to fungicides conducted at BTRS, AAU, Anand is completed
		Studies should be carried out to see host pathogen interaction. The weather parameters should be taken into consideration.	• Host pathogen inter-action studies is being taken up for important diseases in relation to weather parameters
		The experiment on effect of organic amendments on root knot index (RKI) should be checked again.	• The experiment on effects of organic amendments on root knot nematode index is checked
7.	Crop Chemistry and Soil Science by Dr. L.K. Prasad	The Chairman suggested to present compiled results in Histogram.	• The 20 years historical chemical data of FCV and Non-FCV (entry-wise) from different centers was compiled.
		The entry-wise chemical composition for the last 10 years should be compiled. The chemical composition should be presented centre wise with specific type of tobacco.	• The trends of each chemical parameter centre wise with specific tobacco type will be illustrated through graphical representation
8.	ICAR-CTRI, RS, Kandukur Dr. K. Gangadhara	House approved the evaluation of entry, KrB-3 aphid resistant line across Rajahmundry, Jeelugumilli, Guntur and Kandukur with assistance of Entomologist	• Genotype KrB-3 was planted at Rajahmundry, Jeelugumilli and Kandukur for evaluation for Aphid tolerance, however due to insufficient pest population in field conditions, laboratory

S. No.	Centre/ Presented by	Action point	Action taken
			screening was done at NIRCA Rajahmundry
9.	ICAR – CTRI RS, Hunsur by Dr. C. Nanda	Collect seeds from IVT entries for next year evaluation	• Seeds of advanced breeding lines collected from IVT trial
10.	Shivamogga centre by Dr. Santhosh Pattanshetty	Drop the crossing programme on Sahyadri x VT 1158	• Dropped
		Maintain optimum plant population in F_2 generations	• A population of 500 plants raised for each F_2
		Variable performance of checks across the different trials and advised to manage experiments with proper management and avoiding the variability.	• Efforts made to manage the trials to ensure minimum variability
11.	Shivamogga centre by Dr. T.M. Soumya	Suggested to conclude the experiment 'VFSAG 70: Effect of hydrogel on FCV tobacco yield and quality in KLS' - take up bulk trial in farmers' field.	• Concluded during 2024-25. Will be taking up during the ensuing season.
		Suggested to conclude the experiment VFSAG 72: Crop intensification in FCV tobacco for additional farm income and approved for recommendation and informed to publish the technology and take up farm trial in larger area by restricting to one or two locations.	• The experiment was concluded, publication process is initiated, one year farm trials in large area was conducted at different locations and continued for second year during 2025-26.
		Experiments VFSAG 73: Effect of natural farming inputs on the performance of FCV tobacco to be conducted at Ramanathpura area during 2025-26 and VFSAG 74: Feasibility of crop intensification through relay intercropping in FCV tobacco" was approved to be continued	• Experiments VFSAG 73, is being conducting at Ramanathpura area during 2025-26 • VFSAG 74 experiments was completed during 2024-25 and concluding the results of the experiment

S. No.	Centre/ Presented by	Action point	Action taken
12.	Shivamogga centre by Dr. Prashantha C.	The experiment VFSEN 36 titled "Management of Tobacco leaf curl virus vector, Whitefly, *Bemisia tabaci* (*Hemiptera*: Aleyrodidae) by using different modules" was approved for recommendation and suggested to publish the data in good journal and also suggested to take up on-farm trials in large area of farmers field and get the data.	• The experiment data of VFSEN 36 titled "Management of Tobacco leaf curl virus vector, Whitefly, *Bemisia tabaci* (*Hemiptera*: Aleyrodidae) by using different modules is under process and farm trial has been taken up in farmers field (5 ha) at Kushalnagar area.
		The new experiment VFSENC/VFGENC/VFKENC 3 titled Validation of IPM module against sucking pests of FCV tobacco / integrated management of sucking pests of FCV tobacco has to be conducted in Shivamogga, Guntur and Jeelugumilli centres.	• Experiment conducted at Jeelugumilli, Guntur, Shivamogga centres.
13.	Anand Centre and Ladol centres by Dr. Delvadiya,	Report the productivity levels of the state for documentation in the Annual Report	• The data on productivity levels of the Gujarat state is collected and included in the AINPT Annual Report (2024-25)
15.	Anand centre by Dr. Y. Rojasara	Experiment BDAPP 126 titled "monitoring of resistance development in *Pythium aphanidermatum* to fungicides" Suggested to statistically analyze the 20 years data and conclude it and publish the results. In addition to that the experiment can be continued as demonstration plot in their farm. It also suggested to discuss with PI, Crop Protection regarding dosage of fungicide used for	• The experiment concluded and data of 22 years analyzed. The experiment will be continued as demonstration plot • Discussed with PI, Crop Protection. The dosage of fungicide used for the experiment was finalized in 2001 and considering the satisfactory results, the same doses are currently used in our

S. No.	Centre/ Presented by	Action point	Action taken
		the experiment.	farm and also recommending to farmers
		Experiment BDAPP 811 titled "Validation of prediction model for frog-eye spot disease" suggested to discontinue and publish the results. The predictions of the disease based on the model may be disseminated to the farmers for the disease control	• The experiment discontinued and the results published in Tobacco Research 42(1): 11-14, 2016 and Journal of Agro meteorology 20 (2): 131-133, 2018. • Disease predictions disseminated to the farmers for timely control
16.	Nipani centre by Dr. Sanjay B Patil	Avoiding frequent vitiation of trails allotted to the centres due to leaf curl infestation by growing the seedlings in tray nurseries.	• Plant protection measures to manage leaf curl has been implemented e.g. roughing of infected plants and vector control sprays to protect the trials
		Maintain the optimum plant population in F_2	• Handling maximum possible population in promising F_2's
		Efforts to develop male sterile lines for hybrid development programmes.	• Already seven MS lines were developed / maintained and NBD-316 is under conversion
17.	Nipani centre by Dr. D. Shivamurthy	Informed to statistically analyze the data with statistician and calculate the tobacco equivalent yield for the experiment BDNAG 57 titled "Doubling of farmer's income by tobacco based cropping system under mulches	• Due to change of 2 scientists for the agronomist position during the last year, the work could not be completed
		For the new experiment BDNAG 59 Response of tobacco to changing climate situation on yield suggested to thoroughly discuss with the PI, Crop production and	• Technical programme finalized after discussing with PI

S. No.	Centre/ Presented by	Action point	Action taken
		finalize the programme before conducting the experiment.	
		In all the experiments the tobacco yields are very low continuously from last three years.	• Ridges and furrow technique have been adopted to protect the yield under heavy rain situation
18.	Nandyal Centre by Smt. Pullibai	Efforts for seed production of NyBTH-152 for conducting OFTs and subsequent release of hybrid.	• Seed distributed to the farmers for conducting OFTs
19.	Nandyal centre by Dr. K. Sathish Babu	Suggested evaluating the soil fertility status with GPS tag in an experiment titled BDNyAG 20: Study on identification of soil fertility status of *bidi* tobacco growing areas of Nandyal district	• Collection of soil samples in particular location with GPS coordinates is being followed
21.	Araul centre by Dr. Keshav Arya	Serious efforts to speed up the release of recently identified varieties for cultivation in UP	• ArR-27 release proposal submitted to 94th CVRC
		Experiments should conduct in replication wise to analyse statistically.	• ATR not received
		RUArAG 31-A: Studies on economical viability of tobacco/non tobacco crop of rabi season suggested to present the pooled data with statistical analysis for all the experiments for its consideration in the next Workshop	• ATR not received
		Take up the experiments based on the local problems faced by farmers	• ATR not received
		Suggested to write a letter to University authority for the lacunae in implementation of the experiment.	• A letter addressed to University authorities

S. No.	Centre/ Presented by	Action point	Action taken
22.	ICAR CTRI RS Dinhata by Dr. Partha Saha	Efforts for Line development and subsequent contribution to AINPT trials may be given priority	• Breeding work initiated in *Jati* and *Motihari* tobacco • 12 germplasm lines were collected from Bidi tobacco Research station, Anand • Selections were made from *Jati* and *Motihari* germplasm lines • Crosses were attempted between desired lines and F_1 seeds were harvested to evaluate during 2025-26
23.	Berhampur centre	Efforts to fill vacant positions at centre	• Vacant positions not yet filled
		Initiate exploratory trail on burley tobacco at Berhampur /any other location in Odisha	• Exploratory trial conducted with 2 entries (YB-22 and Banket A1) during 2024-25

Brief Technical Programme Proposals for 2025-26

A. VFC TOBACCO

RAJAHMUNDRY

PLANT BREEDING

Experiment No	**VFRBRC 2:** IVT
Entries	IET-146, IET-147, IET-148, IET-149, IET-150
Checks	Siri, CTRI-Sulakshana, CTRI-Shresta and Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-I
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-131, IET-132, IET-134
Checks	Siri, CTRI-Sulakshana, CTRI-Shresta and Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-II
Entries	FCR-71, FCR-72, FCR-73, IET-101, IET-102, IET-103, IET-104, IET-107, IET-109 & IET-110
Checks	Siri, CTRI Sulakshana, CTRI Shresta and Kanchan
Design	RBD
Replications	03

CROP PRODUCTION

VFSAGC/ VFRAGC/CHVsAGC 2: Effect of integration of natural farming inputs on the performance of FCV tobacco

CROP PROTECTION

PLANT PATHOLOGY

NEW APPROVED PROJECT PROPOSALS

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

Objective: To evaluate and identify effective integrated management practice against damping-off disease in FCV and Non-FCV tobacco nurseries.

Experimental details:

Locations	:	10 Centres (Rajahmundry, Jeelugumilli, Kandukur, Hunsur, Shivamogga, Nipani, Nandyal, Anand, Dinhata and Vedasandur)
Tobacco type	:	**FCV:** Rajahmundry, Jeelugumilli, Kandukur, Hunsur, Shivamogga ***BIDI*:** Anand, Nipani, Nandyal ***RUSTICA*:** Anand, Dinhata **CHEWING:** Vedasandur
Design	:	RCBD
Duration	:	2 years
Year of start	:	2025-26
Replications	:	03
Treatments	:	08
Variety	:	Location specific variety
Plot size	:	**Gross-**2.2 m x1.2 m (**Net-**2 m x 1 m)

Treatment details:

T_1:	Pre sowing soil application of *Trichoderma* sp. (NIRCA T-1@ 10 grams/kg) enriched neem cake @ 500 grams/m^2
T_2:	Pre sowing soil drenching (1 day before) of carboxin 37.5%+ thiram 37.5% @ 0.2% (1 liter/m^2)
T_3:	T_2 + spraying of azoxystrobin 8.3% + mancozeb 66.7% @ 0.2% (20 and 35 DAS)
T_4:	**T_2+ T_1+** spraying of azoxystrobin 8.3% + mancozeb 66.7% @ 0.2% (20 and 35 DAS)
T_5:	**T_1+** Spraying of cyazofamid 34.5% @ 0.05% + copper oxychloride 50% @ 0.15% (20 and 35 DAS)
T_6:	**T_1**+ Spraying of copper sulphate 47.15% + mancozeb 30% @ 0.25%(20 and 35 DAS)
T_7:	Pre sowing drenching of metalaxyl 4% + mancozeb 64% @ 0.2% followed by spraying of metalaxyl 4% + mancozeb 64% @ 0.2% **(Existing recommended practices)**
T_8:	Untreated check

Observations:

1. Percent disease incidence
2. Phytotoxicity (1. Chlorosis, 2. Scorching and 3. Necrosis)
3. Number of transplantable healthy seedling

Note:

1. *Trichoderma* sp. (NIRCA T-1) @ 10 grams/kg of neem cake will be mixed 15 days before application.
2. If rainfall (drizzling) and cloudy weather persist for more than two days, additional sprays are required.
3. Metrological data during the experimental period should be recorded.

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

Objective: To evaluate the efficacy of different fungicides application for management of leaf blight disease in FCV tobacco nurseries.

Experimental details:

Locations	:	04 centers (Rajahmundry, Jeelugumilli, Guntur and Kandukur)
Tobacco type	:	**FCV**
Design	:	RCBD
Duration	:	2 years
Year of start	:	2025
Replications	:	03
Treatments	:	07
Variety	:	Location specific variety
Plot size	:	**Gross-**2.2 m x1.2 m (**Net-**2 m x 1 m)

Treatment details:

T_1:	Spraying of cyazofamid 34.5% @ 0.05% + copper oxychloride 50% @ 0.15%
T_2:	Spraying of azoxystrobin 8.3% + mancozeb 66.7% @ 0.2%
T_3:	Spraying of fluopicolide 4.44% + fosetyl-Al 66.67% @ 0.3%
T_4:	Spraying of cyazofamid 34.5% @ 0.05%
T_5:	Spraying of copper sulphate 47.15% + mancozeb 30%@ 0.25%
T_6:	Spraying of metalaxyl 4% + mancozeb 64% @ 0.2% **(Existing recommended practices)**
T_7:	**Untreated check**

Time of application: Immediately after disease incidence **(Three sprays at 7 days intervals)**

Observations:

1. Percent disease incidence
2. Phytotoxicity (1. Chlorosis, 2. Scorching and 3. Necrosis)
3. Number of transplantable healthy seedling

Note:

1. If rainfall and cloudy weather persist for more than two days, additional sprays are required.
2. Metrological data during the experimental period should be recorded.

GUNTUR

PLANT BREEDING

Experiment No	**VFRBRC 2:** IVT
Entries	IET-146, IET-147, IET-148, IET-149, IET-150
Checks	Siri, CTRI Sulakshana, CTRI Shresta and Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-I
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-131, IET-132, IET-134
Checks	Siri, CTRI Sulakshana, CTRI Shresta and Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-II
Entries	FCR-71, FCR-72, FCR-73, IET-101, IET-102, IET-103, IET-104, IET-107, IET-109 & IET-110
Checks	Siri, CTRI Sulakshana, CTRI Shresta and Kanchan
Design	RBD
Replications	03

CROP PROTECTION

VFSENC /VFGENC/ VFKENC3: Evaluation of different insecticides against sucking pest of FCV tobacco

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

JEELUGUMILLI

PLANT BREEDING

Experiment No	**VFRBRC 2:** IVT
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-129, IET-130, IET-131, IET-132, IET-133, IET-134, IET-135, IET-136
Checks	Siri, CTRI Sulakshana, CTRI Shrestaand Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-I
Entries	FCR-71, FCR-72, FCR-73, IET-101, IET-102, IET-103, IET-104, IET-107, IET-109 & IET-110
Checks	Siri, CTRI Sulakshana and CTRI Shresta
Design	RBD
Replications	03

CROP PROTECTION

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

KANDUKUR

Experiment No	**VFRBRC 2:** IVT
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-129, IET-130, IET-131, IET-132, IET-133, IET-134, IET-135, IET-136
Checks	Siri, CTRI Sulakshana, CTRI Shrestaand Kanchan
Design	RBD
Replications	03

Experiment No	**VFRBRC 1.1:** AVT-I
Entries	FCR-71, FCR-72, FCR-73, IET-101, IET-102, IET-103, IET-104, IET-107, IET-109 & IET-110
Checks	Siri, CTRI Sulakshana, CTRI Shrestaand Kanchan
Design	RBD
Replications	03

Experiment No	**VFKBRC1.2:** AVT-II
Entries	FCK-10
Checks	Siri, VT 1158 and N-98
Design	RBD
Replications	04

Experiment No	**OFT:** On Farm Trail
Entries	FCR-63 and FCR-47
Checks	Siri, CTRI Shresta

CROP PROTECTION

VFSENC /VFGENC/ VFKENC3: Evaluation of different insecticides against sucking pest of FCV tobacco

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

HUNSUR

PLANT BREEDING

Experiment No	**VFRBRC 2:** IVT
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-129, IET-130, IET-131, IET-132, IET-133, IET-134, IET-135, IET-136
Checks	Kanchan, FCH 222 and CH-3
Design	RBD
Replications	03

Experiment No	**VFHBRC 1.1:** AVT-I
Entries	FCR-72, FCR-73, IET-107, IET-109 and IET-110
Checks	Kanchan, FCH 222 and CH-3
Design	RBD
Replications	03

CROP PROTECTION

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

SHIVAMOGGA

PLANT BREEDING

Experiment No	**VFRBRC 2:** IVT
Entries	IET-124, IET-125, IET-126, IET-127, IET-128, IET-129, IET-130, IET-131, IET-132, IET-133, IET-134, IET-135, IET-136
Checks	Sahyadri,CH-3 and Kanchan
Design	RBD
Replications	03

Experiment No	**VFHBRC 1.1:** AVT-I
Entries	FCR-72, FCR-73, IET-102, IET-103, IET-104, IET-107& IET-109
Checks	Thrupthi, Sahyadri and Kanchan
Design	RBD
Replications	03

Experiment No	**BULK:**Bulk Trail
Entries	FCH-1 and FCH-2
Checks	Thrupthi, Sahyadri and Kanchan

Experiment No	**VFSBR 4.2:** Observational Trial - II
Entries	Tobios-6 x Thrupthi (Sel 2), Tobios-6 x Thrupthi (Sel 3), Tobios-6 x Sahyadri (Sel 2), Tobios-6 x Sahyadri (Sel 3), Tobios-6 x Kanchan (Sel 2), Tobios-6 x Kanchan (Sel 3), Tobios-5 x Thrupthi (Sel 2), Tobios-6 x Kanchan (Sel 3), Tobios-5 x Kanchan (Sel 1) and Tobios-5 x Kanchan (Sel 2)
Checks	Thrupthi, Sahyadri and Kanchan

Experiment No	**VFSBR-5:** Evaluation and evaluation of FCV tobacco germplasm (repeated)
Entries	113 germplasm lines/Twenty-five entries will be characterized once again for the morphological characters and the trial will be continued.
Germplasm characterization	
1.	VA-770
2.	V-373[SER]
3.	NC-2326
4.	Q-46
5.	RHOMAS-7
6.	SPEIGHT-G-103
7.	NC-940
8.	REAMS-744
9.	RG-17
10.	SPEIGHT-G-152
11.	SPEIGHT-G-172

12.	SPEIGHT-G-178
13.	SPEIGHT-NF-3
14.	VA-119
15.	YELLOW SPECIAL-A
16.	EC-554926
17.	EC-554930
18.	COKER-176
19.	NC-37-NF
20.	NC-729
21.	Delcrest-66
22.	A-23
23.	Olior-10
24.	VA-115
25.	VA-4219
26.	Thrupthi
27.	Kanchan
28.	Sahyadri

Experiment No	**VFSBR 6:** Back cross breeding programme: Conversion of Thrupthi, Sahyadri, Tobios-6, FCH-222 &Bhavya into male sterile lines
Entries	Maintenance of male sterile lines will be continued.

Experiment No	**VFSBR 7:** New crosses & early generation studies
Entries	All the nine F_3 (Sahyadrix FCR 68,Sahyadrix CTRI Sulakshana,Sahyadrix VT1158,) population will be evaluated for yield and disease resistance at field level.

Experiment No	**VFSBR11:** Conversion of FCH-1, FCH-2&FCS-4 into male sterile lines

CROP PRODUCTION

VFSAGC/ VFRAGC/CHVsAGC 2: Effect of integration of natural farming inputs on the performance of FCV tobacco

Experiment No.	**VFSAG 73**: Effect of integration of natural farming inputs on the performance of tobacco The modified experiment is to be conducted at **Ramanathapura** instead at Shivamogga during 2025-26. In this project, pest and disease data, along with yield measurements, should be recorded. Additionally, the experiment should also be implemented in Rajahmundry and Jeelugumilli, involving nematologists and pathologists from the concerned centre. The fertilizer recommendation should be changed to the following ratios : 60:40:120

Objective:	To study the performance of tobacco with the incorporation of natural farming components
Year of start	2025-2026
Location	Ramanathapura

Experimental details:

Design	:	RCBD
Replications	:	Three
Treatments	:	Seven
Gross plot size	:	7.2 m x 4.2 m (30.24 m^2)
Net plot size	:	5.4 m x 3.0 m(16.20 m^2)
Variety	:	KST-28 (Sahyadri) for Shivamogga Centre **The other centres can be changed accordingly with the respective type and variety of tobacco**
Year of start	:	2023-24 2025-26 (Modified) for Shivamogga Centre **2024-25 for Rajahmundry andVedasandur centres**
Duration	:	02 years
Location	:	Ramanathpura or its surroundings (Shivamogga Centre) Rajahmundry centre Vedasandur centre

NOTE: Packages of practices may be changed accordingly

Treatments

T_1: FYM 12.5 t ha^{-1} 15 days before planting + RDF (60:40:120 kg ha^{-1}) at 10 DAP
T_2: FYM 12.5 t ha^{-1} 15 days before planting + RDF (60:40:120 kg ha^{-1}) at 10 DAP + KNO_3 @ 2% at 45 DAP and 55 DAP
T_3:RDF (60:40:120 kg ha^{-1}) at 10 DAP + Ghanajeevamrutha @ 1 t ha^{-1} (Soil application at the time of planting)
T_4:RDF (60:40:120 kg ha^{-1}) at 10 DAP + Jeevamrutha @ 500 liter ha^{-1} (Soil application for 03 times at an interval of 15 days from 15 DAP)
T_5:RDF (60:40:120 kg ha^{-1}) at 10 DAP + Ghanajeevamrutha @ 1 t ha^{-1} (Soil application at the time of planting) + Jeevamrutha @ 500 liter ha^{-1} (Soil application for 03 times at an interval of 15 days from 15 DAP)
T_6:RDF (60:40:120 kg ha^{-1}) at 10 DAP + Ghanajeevamrutha @ 1 t ha^{-1} (Soil application at the time of planting) + Jeevamrutha @ 500liter ha^{-1} (Soil application for 03 times at an interval of 15 days from 15 DAP) + KNO_3 @ 2% at 45 DAP and 55 DAP
T_7:FYM 12.5 t ha^{-1} 15 days before planting + Ghanajeevamrutha @ 1 t ha^{-1} (Soil application at the time of planting) + Jeevamrutha @ 500liter ha^{-1} (Soil application for 03 times at an interval of 15 days from 15 DAP) + KNO_3 @ 2% at 45 DAP and 55 DAP

Treatment imposition

- Application of Ghana jeevamrutha**:** Ghana jeevamruthaat the rate of 1 t ha^{-1} (3.024 kg per 30.24 m^2) to be applied to the well-prepared soil at the time of planting of FCV tobacco to the plots as per the treatment.

- Application of Jeevamrutha: Jeevamrutha was applied at the rate of 500 l ha^{-1} (1.512 liters per 30.24 m^2) was applied to soil at the time of sowing and at 30, 60 and 90 days after sowing as per the treatment.Jeevamrutha is to be diluted by adding water to make it to apply @ 100 ml per plant.

Procedure to prepare 100 kg Ghana Jeevamrutha

Initially 100 kg of dried desi cow dung is spread on the polythene sheet, two litres of desi cow urine, 2 kg of powdered jaggery and 2 kg pulse flour is added to the desi cow dung. All the materials are thoroughly mixed with desi cow dung and the mixture is kept under shade by covering with wet gunny bag to maintain 60% moisture for 24 hours. On next day, this mixture is to be made into small balls or cakes and to be kept for drying under shade for 21days. Ghana jeevamruthais applied to the soil by powdering the balls or cakes as one-time application at the time of planting as per the treatment.

Procedure to prepare 200 litres of Jeevamrutha

Jeevamrutha is prepared by mixing 10 kg desi cow dung, 10 litres of cow urine, 2 kg jaggery, 2 kg pulse flour and hand full of soil collected from the field near bund. All these are put in 200 litres plastic or cement drum and mixed thoroughly by adding water until volume is made up to 200 litres. The mixture is stirred well in clock wise direction thrice a day using wooden stick until the mixture becomes homogeneous. Plastic drum is kept under shade covered with wet gunny bag.Turning of the mixture is done twice a day up to 7 days to improve the aeration and microbial population. After 7 days of turning jeevamrutha is ready for its application in the field. Well fermented jeevamrutha is applied manually at 15 DAP, 30 DAP and at 45 DAP as in the treatment. Prepared jeevamrutha could be used used for two to seven days.

Observations to be recorded

- Plant height (cm) at 30DAS, 45 DAS and at first picking
- Number of leaves per plant at 30DAS, 45 DAS and at first picking
- Cumulative number of leaves harvested per plant
- Leaf area of X and L position leaves
- Green leaf yield (kg /ha)
- Cured leaf yield (kg/ha)
- Microbial count (Initial and after harvest of the crop)
- Nutrient content and soil chemical properties pH, EC, OC, N, P and K content(Initial and after harvest of the crop)

NEW EXPERIMENT

VFSAG 75: Crop intensification & diversification options for FCV tobacco growing areas of Karnataka

1. **VFSAG 75 (A): Crop intensification strategies for FCV tobacco growing areas in Karnataka.**

Experimental details:

Location	:	ICAR- NIRCA Centre, Hunsur
Design	:	Randomized block design (RBD)
Duration	:	2 years
Season	:	*Kharif* 2025 & 2026
Replications	:	3
Treatments	:	8
Variety (Tobacco)	:	Kanchan
Plot size	:	8.0 m x 4.4 m = 35.2 m^2

Treatment details:

T_1: Tobacco- Rabi sorghum
T_2: Tobacco -Finger millet
T_3: Tobacco- Bajra
T_4: Tobacco- Foxtail millet
T_5: Tobacco- Chia
T_6: Tobacco- Field bean
T_7: Tobacco- Redgram
T_8: Tobacco

Observations to be recorded:

Growth & yield parameters: Plant height (cm), number of leaves per plant, number of branches, average leaf area (cm^2 $leaf^{-1}$), green leaf yield (kg ha^{-1}) and yield (kg ha^{-1})

Economic analysis: Cost of cultivation, gross return, net return and B: C ratio

Soil analysis: Initial and after harvesting of crop

2. **VFSAG 75 (B): Economic viability of different alternate cropping system to FCV tobacco in Karnataka.**

Experimental details:

Location	:	ICAR- NIRCA Centre, Hunsur
Design	:	Randomized block design (RBD)
Duration	:	2 years
Season	:	*Kharif* 2025 & 2026
Replications	:	3
Treatments	:	8
Variety (Tobacco)	:	Kanchan
Plot size	:	8.0 m x 4.4 m = 35.2 m^2

Treatment details:

T_1: Chilli + (1:2 ratio) Onion-Field bean
T_2: Redgram + Maize (1 row)
T_3: Cotton + Groundnut (2 rows)
T_4: Redgram + Groundnut (2 rows)
T_5:Maize + Cowpea (1 rows)
T_6: Maize + Potato (1 row)
T_7:Redgram + Ragi (2 rows)
T_8:Tobacco sole crop

Observations to be recorded:

Growth & yield parameters: Plant height (cm), number of leaves per plant, number of branches, number of tillers, average leaf area (cm^2 $leaf^{-1}$), green leaf yield (kg ha^{-1}) and yield (kg ha^{-1})

Economic analysis: Cost of cultivation, gross return, net return and B: C ratio

Soil analysis: Initial and after harvesting of crop

CROP PROTECTION

ENTOMOLOGY

Experiment No.	**VFSEN 34:** Population dynamics of insect pest complex and their natural enemies in tobacco ecosystem
	Ongoing project

Experiment No.	**VFSENC/VFGENC/ VFKENC3:** Validation of IPM module against sucking pests of FCV tobacco / integrated management of sucking pests of FCV tobacco
	Ongoing project

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

B. *BIDI* TOBACCO

ANAND

PLANT BREEDING

Experiment No.	**BDABRC 2:** IVT
Entries	IET-151, IET-152, IET-153, IET-154, IET-155, IET-156, IET-157 (07)
Checks	A 119, GT 7, GABT-11, GABTH-2
Design	RBD
Replications	03

Experiment No.	**BDABRC 1.1:** AVT-II
Entries	IET-113, IET-114, IET-115
Checks	A 119, GT 7, GABT-11, GABTH-2
Design	RBD
Replications	04

Experiment No.	**BDABR 22:** Search for Materials Resistant to Root-Knot Disease (Joint Study by Plant Breeding and Plant Pathology Sections)
Remarks	Continuing

Experiment No.	**BDABR 23:** Screening of Advanced Breeding Materials /Introductions for Leaf Curl and *Cercospora* Leaf Spot Diseases Under Field Conditions (Joint Study by Plant Pathology and Plant Breeding Sections)
	Continuing

Experiment No.	**BDABR 31:** Breeding for Resistance to Tobacco Mosaic Virus in*Bidi* Tobacco (Joint Study by Plant Breeding and PlantPathology Sections)
Remarks	Continuing

CROP PRODUCTION

Research project title	**BDAAG 166:** Evaluation of different fertilizer doses on growth, yield and quality of *bidi* tobacco grown in middle Gujarat
Year of start	2023-24 **(Modified)**
Year of completion	2025-26
Location	BTRS, AAU, Anand

BDAAGC/ BDNAGC / BDNyAGC 1: Evaluation of pre and post emergent herbicides for weed management in *bidi* tobacco

Objective	▪ To identify the suitable pre-and post-emergence herbicides for *bidi* tobacco ▪ To study the performance of pre-and post emergence herbicides on weed dynamics and crop growth and yield of *bidi* tobacco
Year of start	2024-25
Year of completion	2025-26 (**ON GOING**)
Locations	**Anand, Nipani & Nandyal centres**
Crop	*Bidi* tobacco (A 119) **The other centres can be changed accordingly with the respective variety**
Design	RBD
Replication	3
RDP	As per Package of practice

Treatment details

T_1:	Pre-plant application (before 3DAP) of Clomazone 50EC @ 400 g ai/ha (1.6 ml/lit of water)
T_2:	Pre- plant application of Clomazone 50 EC @ 450 g ai/ha (2.0 ml/lit of water)
T_3:	Pre-plant application of Sulfentrazone39.6% SC @ 0.25kg ai/ha (1.25 ml/litre)
T_4:	Pre-plant application of Sulfentrazone 39.6% SC (Authority) @ 0.30 kg ai/ha (1.5 ml/litre)
T_5:	Pre- plant application of sulfentrazone28%+ Clomazone30 WP (Authority NXT) @ 0.30 kg ai/ha (1.5 g/litre)
T_6:	Pre- plant application of sulfentrazone28%+ Clomazone30 WP (Authority NXT)@ 0.40 kg ai/ha(2.0 g/litre)
T_7 :	Pre-plant application of Clomazone 50 EC @ 400 g ai/ha + Post emergence (PoE) application of Quizalofop ethyl 5 EC @ 50 g ai/ha
T_8 :	Pre- plant application of Sulfentrazone 39.6% SC @ 0.25kg ai/ha (1.25 ml/litre) + Post emergence (PoE) application of Quizalofop ethyl 5 EC @ 50 g ai/ha
T_9 :	Pre- plant application of sulfentrazone28%+ Clomazone30 WP (Authority NXT)@ 0.28kg +030 ai/ha (Authority NXT) ai/ha (2.0 g/litre) + Post emergence (PoE) application of Quizalofop ethyl 5 EC @ 50 g ai/ha
T_{10} :	Two inter cultivation + Two hand weeding (Farmers practice)
T_{11} :	Weed free check
T_{12} :	Unweeded check

Note: Two inter cultivation at 30 and 45 DAS

Observations to be recorded

Weed parameters • Weed species identified monocots & dicots throughout season • Weed density (no./m2) at 45 & 90 DATP and at harvest • Weed dry weight (g/m2) at 45 & 90 DATP and at harvest • Weed control efficiency (%) • Weed index (%) • Phytotoxicity scoring, if any (0-10 scale)	Growth parameters • Plant height (cm) • Leaf length (cm) • Leaf width (cm) • Dry wt/unit leaf area(mg/cm-2)
Yield parameters • Green leaf yield • Cured leaf yield (kg/ha)	Chemical parameters • Nicotine (%) • Reducing sugars (%) • Chlorides (%)
Economics of herbicide treatments	

PLANT PATHOLOGY and NEMATOLOGY

Experiment No.	Remarks
BDAPP 128 : Screening for resistance to damping-off and root knot in tobacco	Ongoing project
BDAPP 511: Screening of Advanced Breeding Materials /Introductions/Genotypes to Diseases Under Field and Control Conditions	Ongoing project
BDAPP 686: Impact of Organic Amendments And Varieties on Incidence of Root-Knot Nematode In *bidi* Tobacco	Ongoing project
BDAPP 811: Validation of prediction model for frog eye spot disease	Ongoing project

BDANC / BDNNC /BDNyNC 1: Field evaluation and demonstration of nematode antagonists enriched coco-peat Technology against root knot nematodes in tobacco nursery and main field crop

Year of start	2024-25
Year of completion	2026-27 (ON GOING)
Locations	**Anand, Nipani & Nanydal centres**
Variety	Location specific variety
Design	RBD
Replication	5
Bed size:	Gross: 1.2 m x 1.2 m Net :1.0 m x 1.0 m

I and II Year

1. NURSERY EVALUATION

Treatments

TI	*Trichodermaviride*@ 15g+ *Paecilomyceslilacinus*@ 15g enriched coco-peat @ 500g / sq.m nursery bed
T2	Carbofuran 3G @ 10 g / sq.m nursery bed.
T3	Fluopyrum @ 0.05%
T4	Untreated Check

Observations

a. Seedlings growth characteristics
b. Root knot free and Disease-free seedlings count
c. Root knot Index at Final pulling
d. Per cent incidence of Damping off, blight and Black shank
e. Mean initial Soil population (juveniles / 100 g soil)
f. Mean Final Soil Population (juveniles / 100 g soil)

2. FIELD EVALUATION

Treatments

TI	Planting *Trichoderma viride*@ 30g/kg+ *Paecilomyces lilacinus*@ 30g/kg coco-peat enriched seedlings alone
T2	Planting *Trichoderma viride* @ 30 g/kg+ *Paecilomycesl ilacinus*@ 30g/kg coco-peat enriched seedlings + *T. viride* & *P. lilacinus* enriched coco-peat@ 10g/plant at planting + *T. viride* & *P. lilacinus* enriched coco-peat@ 10g/plant at 30 DAP
T3	Normal Seedlings + Carbofuran 3G @ 1g per plant at planting
T4	Normal Seedlings + Fluopyrum @ 0.05%drenching at planting
T5	Untreated Check (Planting Normal seedlings alone)

Plot size: 40 sq.m

Observations

a. Plant growth characteristics
b. Tobacco yield parameters
c. Root knot Index at Final pulling(0-5 Scale)
d. Mean initial Soil population (juveniles / 100 g soil)
e. Mean Final Soil Population (juveniles / 100 g soil)
f. Per cent incidence of *Fusarium* wilt or Black shank
g. Number of Egg mass / g. root
h. Cost: Benefit ratio

III year

Demonstration of **Nematode antagonists** (*Trichoderma viride* @ 30 g/kg + *Paecilomyces lilacinus* @ 30 g/kg coco-peat) **enriched Technology** under Farmer's Field Condition in both Nursery and Main Field

NEW APPROVED PROJECT PROPOSAL

PLANT PATHOLOGY

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

VFRPPC/VFJPPC/VFKPPC/VFHPPC/ VFSPPC 2: Management of leaf blight disease in FCV tobacco nursery

The experimental details are furnished at Rajahmundry centre.

NIPANI

PLANT BREEDING

Experiment No	**BDABRC 2:** IVT
Entries	IET-151, IET-152, IET-153, IET-154, IET-155, IET-156, IET-157
Checks	A-119, Bhavyasree, NBD-209, NBD-316
Design	RBD
Replications	03

Experiment No	**BDABRC 1.1:** AVT-II
Entries	IET-113, IET-114, IET-115
Checks	A-119, Bhavyasree, NBD-209
Design	RBD
Replications	04

Experiment No	**Bulk Trial**
Entries	IET-113
Checks	NBD-209, NBD-316
Design	RBD
Replications	03

Experiment No	**BDNBR 4.1:** SVT-I
Entries	NBD 411, NBD 415, NBD 418, NBD 425, NBD 426, NBD 427, NBD 430
Checks	A-119, Vedaganga-1, Bhavyasree, NBD-209
Design	RBD
Replications	03

Experiment No	**BDNBR 4.3:** SHT (R)
Checks	A-119, Vedaganga-1,Bhavyasree, NBD-209
Replications	02

Entries: (12+4)

S. No.	Entries	Pedigree	Parents
1	NBTH 1030	MS Bhavyashree x A 428	ABD 95
2	NBTH 1035	MS GT 5 x ABD 101	ABD 101
3	NBTH 1045	MS Bhavyashree x NBD111	NBD 111
4	NBTH 1052	MS NBD 209 x ABD 95	NBD 316
5	NBTH 1053	MS NBD 209 x Red Russian	A-428
6	NBTH 1054	MS PL 5 x 114-4 (RPK Type)	Red Russian
7	NBTH 1055	MS PL 5 x NBD 111	114-4 (RPK Type)
8	NBTH 1058	MS PL 5 x Red Russian	MS A-119
9	NBTH 1059	MS Vedaganga x NBD316	MS NBD 209
10	NBTH 1060	MS GT 5 x NBD 316	MS Bhavyahsree
11	NBTH 1062	MS A 2 x NBD 316	MS Vedaganga-1
12	NBTH 1063	MS A 119 x NBD 316	MS A-2
13	Check-1	Vedaganga-1	MS PL-5
14	Check-2	A-119	MS GT-5
15	Check-3	NBD 209	
16	Check-4	Bhavyashree	

Experiment No	**BDNBR 4.3:** SHT
Checks	A-119, Vedaganga-1,Bhavyasree, NBD-209
Replications	02

Entries: (25+4)

S. No.	Entry Code	Pedigree	Parents
1	NBTH 1067	MS A-119 x ABD 226	ABD 95 (GRPM 111)
2	NBTH 1068	MS A-119 x ABD 228	ABD 101 (GRPM 115)
3	NBTH 1069	MS A-119 x ABD 229	ABD 226 (AVT-II -1)
4	NBTH 1070	MS A-119 x NyBD 68	ABD 228 (AVT-II -2)
5	NBTH 1071	MS NBD 209 x ABD 226	ABD 229 (AVT-II -3)
6	NBTH 1072	MS NBD 209 x ABD 228	NyBD 68 (AVT-II -4)
7	NBTH 1073	MS NBD 209 x NyBD 68	NyBD 69 (AVT-II -5)
8	NBTH 1074	MS NBD 209 x S-20	S-20 (GRPM 11)
9	NBTH 1075	MS NPN 22 x A-119	A-119
10	NBTH 1076	MS NPN 22 x ABD 95	NPN 22
11	NBTH 1077	MS NPN 22 x ABD 226	A-428 (GRPM 206)
12	NBTH 1078	MS NPN 22 x ABD 228	MS A 119
13	NBTH 1079	MS NPN 22 x ABD 229	MS NBD 209
14	NBTH 1080	MS NPN 22 x NyBD 68	MS NPN 22
15	NBTH 1081	MS NPN 22 x NyBD 69	MS Bhagyashree
16	NBTH 1082	MS NPN 22 x S-20	MS Vedaganga
17	NBTH 1083	MS Bhagyashree x ABD 101	MS A-2

S. No.	Entry Code	Pedigree	Parents
18	NBTH 1084	MS Bhagyashree x ABD 228	MS PL- 5
19	NBTH 1094	MS PL- 5 x ABD 226	MS GT-5
20	NBTH 1095	MS PL-5 x ABD 228	
21	NBTH 1098	MS GT-5 x ABD 95	
22	NBTH 1099	MS GT-5 x ABD 101	
23	NBTH 1101	MS GT-5 x ABD 229	
24	NBTH 1102	MS GT-5 x NyBD 68	
25	NBTH 1103	MS GT-5 x NyBD 69	
26	Check-1	Vedaganga-1	
27	Check-1	A-119	
28	Check-1	Bhavyashree	
29	Check-1	NBD 209	

Experiment No	**BDNBR 4.4:** SHT-New
Design	RBD
Replications	2

Entries (7+4)

S. No.	Entry Code	Pedigree	Parents
1	NBTH 1105	MS A-119 x NBD 343	NBD 343
2	NBTH 1117	MS A-2 x NBD344	NBD 344
3	NBTH 1118	MS PL-5 x NBD 343	NBD 356
4	NBTH 1119	MS PL-5 x NBD 344	MS A-119
5	NBTH 1120	MS PL-5 x NBD 356	MS A-2
6	NBTH 1121	MS GT-5 x NBD 343	MS PL-5
7	NBTH 1122	MS GT-5 x NBD 356	MS GT-5
8	Check-1	Vedaganga-1	
9	Check-1	A-119	
10	Check-1	Bhavyashree	
11	Check-1	NBD 209	

Experiment No	**BDNBR 4.5:** PYT
Replications	3

Entries (25+4)

S. No.	Entry code	Pedigree	S. No.	Entry code	Pedigree
1	2021-1-1/2-4/3-9/3-5	A 119 x NBD 276	14	2021-3-2/9-4/4-6/3-2	NBD 209 x NBD 277
2	2021-1-1/2-4/3-9/5-6	A 119 x NBD 276	15	2021-3-2/9-4/4-6/6-3	NBD 209 x NBD 277
3	2021-1-1/6-3/6-4/2-1	A 119 x NBD 276	16	2021-4-1/8-2/3-8/1-2	Vedaganga 1 x NBD 277
4	2021-1-1/6-3/6-4/3-2	A 119 x NBD 276	17	2021-4-1/8-2/3-8/1-3	Vedaganga 1 x NBD 277

5	2021-1-1/6-3/7-6/3-4	A 119 x NBD 276	18	2021-4-1/8-2/3-8/1-7	Vedaganga 1 x NBD 277
6	2021-1-1/6-3/7-6/3-7	A 119 x NBD 276	19	2021-4-1/2-6/2-10/1-8	Vedaganga 1 x NBD 277
7	2021-1-1/6-3/7-6/4-1	A 119 x NBD 276	20	2021-4-1/2-6/2-10/2-2	Vedaganga 1 x NBD 277
8	2021-1-1/6-3/8-8/3-5	A 119 x NBD 276	21	2021-5-2/2-3/10-8/3-7	A 2 x NBD 277
9	2021-2-1/4-8/5-7/1-1	A 119 x NBD 277	22	2021-5-2/6-2/22-7/4-1	A 2 x NBD 277
10	2021-3-1/3-6/2-1/1-9	NBD 209 x NBD 277	23	2021-12-2/5-9/2-5/6-4	Bhagyashree x NBD 277
11	2021-3-1/3-6/2-1/5-2	NBD 209 x NBD 277	24	2021-12-2/5-9/2-9/2-1	Bhagyashree x NBD 277
12	2021-3-1/3-6/2-1/6-10	NBD 209 x NBD 277	25	2021-12-2/5-9/2-9/4-4	Bhagyashree x NBD 277
13	2021-3-1/3-6/3-9/1-9	NBD 209 x NBD 277			

Experiment No	Generation of Breeding Materials (F1's, F2, F3, F4, F5)
Entries	F1: 45; F2:8, F3:12; F4:16; F5:26

F1's 2025-26

S. No.	Crosses	S. No.	Crosses
1	A-119 x NBD 316	17	NBD 209 x IET 140
2	NBD 316 x A-119	18	NBD 209 x IET 141
3	NBD 209 x NBD 316	19	NBD 209 x IET 142
4	NBD 316 x NBD 209	20	IET 137 x NBD 316
5	NBD 316 x Bhavyashree	21	IET 138 x NBD 316
6	A-428 x A-119	22	IET 139 x NBD 316
7	A-428 x NBD 209	23	IET 140 x NBD 316
8	NBD 316 x IET 137	24	IET 141 x NBD 316
9	NBD 316 x IET 138	25	IET 142 x NBD 316
10	NBD 316 x IET 139	26	IET 137 x NBD 209
11	NBD 316 x IET 140	27	IET 138 x NBD 209
12	NBD 316 x IET 141	28	IET 139 x NBD 209
13	NBD 316 x IET 142	29	IET 140 x NBD 209
14	NBD 209 x IET 137	30	IET 141 x NBD 209
15	NBD 209 x IET 138	31	IET 142 x NBD 209
16	NBD 209 x IET 139		

F2 Population 2025-26

S. No	F2
1	A-119 x NBD 344
2	A-2 x NBD 344
3	Vedaganga-1 x A-428
4	NBD 209 x A-428
5	NBD 316 x A-428

F3 Population 2025-26

S. No.	Entry code	Pedigree	S. No.	Entry code	Pedigree
1	2023-1-14-9	ABD 226 x A 119	22	2023-4-11-4	ABD 228 x Vedaganga 1
2	2023-1-30-10	ABD 226 x A 119	23	2023-4-23-4	ABD 228 x Vedaganga 1
3	2023-1-32-2	ABD 226 x A 119	24	2023-5-6-4	ABD 228 x NBD 209
4	2023-1-32-8	ABD 226 x A 119	25	2023-5-6-7	ABD 228 x NBD 209
5	2023-2-7-6	ABD 228 x A 119	26	2023-5-8-8	ABD 228 x NBD 209
6	2023-2-32-3	ABD 228 x A 119	27	2023-5-8-10	ABD 228 x NBD 209
7	2023-2-10-8	ABD 228 x A 119	28	2023-6-8-10	A 119 x ABD 228
8	2023-2-5-4	ABD 228 x A 119	29	2023-6-7-10	A 119 x ABD 228
9	2023-2-4-6	ABD 228 x A 119	30	2023-6-10-1	A 119 x ABD 228
10	2023-2-3-6	ABD 228 x A 119	31	2023-6-13-8	A 119 x ABD 228
11	2023-3-11-8	ABD 228 x NBD 209	32	2023-6-26-3	A 119 x ABD 228
12	2023-3-17-6	ABD 228 x NBD 209	33	2023-7-4-3	NBD 209 x ABD 226
13	2023-3-8-9	ABD 228 x NBD 209	34	2023-7-4-9	NBD 209 x ABD 226
14	2023-3-37-1	ABD 228 x NBD 209	35	2023-7-7-3	NBD 209 x ABD 226
15	2023-4-13-6	ABD 228 x Vedaganga 1	36	2023-7-10-2	NBD 209 x ABD 226
16	2023-4-16-8	ABD 228 x Vedaganga 1	37	2023-7-12-7	NBD 209 x ABD 226
17	2023-4-18-1	ABD 228 x Vedaganga 1	38	2023-7-14-8	NBD 209 x ABD 226
18	2023-4-22-4	ABD 228 x Vedaganga 1	39	2023-7-17-8	NBD 209 x ABD 226
19	2023-4-9-4	ABD 228 x Vedaganga 1	40	2023-8-14-9	NBD 316 x ABD 226
20	2023-4-9-7	ABD 228 x Vedaganga 1	41	2023-8-2-4	NBD 316 x ABD 226
21	2023-4-11-1	ABD 228 x Vedaganga 1	42	2023-8-5-6	NBD 316 x ABD 226

F4 lines for 2025-26

S. No.	Entry Code	Pedigree	S. No.	Entry Code	Pedigree
1	2022-1-4-4/1-3	NBD 209 x ABD 101	12	2022-3-24-2/4-1	NBD 316 x ABD 95
2	2022-1-4-4/1-4	NBD 209 x ABD 101	13	2022-3-35-7/2-7	NBD 316 x ABD 95
3	2022-1-4-4/3-10	NBD 209 x ABD 101	14	2022-3-35-7/3-2	NBD 316 x ABD 95
4	2022-2-15-6/2-15	NBD 209 x ABD 95	15	2022-3-35-9/3-2	NBD 316 x ABD 95
5	2022-2-15-6/3-4	NBD 209 x ABD 95	16	2022-3-35-9/4-6	NBD 316 x ABD 95
6	2022-2-15-10/1-10	NBD 209 x ABD 95	17	2022-3-43-3/1-9	NBD 316 x ABD 95
7	2022-2-15-10/2-14	NBD 209 x ABD 95	18	2022-3-43-3/3-7	NBD 316 x ABD 95
8	2022-2-15-10/3-3	NBD 209 x ABD 95	19	2022-4-15-3/1-10	NBD 316 x NBD 111
9	2022-3-5-8/3-5	NBD 316 x ABD 95	20	2022-4-15-3/4-3	NBD 316 x NBD 111
10	2022-3-6-4/3-8	NBD 316 x ABD 95	21	2022-4-18-9/1-6	NBD 316 x NBD 111
11	2022-3-24-2/1-2	NBD 316 x ABD 95	22	2022-5-4-10/3-6	NBD 316 x S 20

Experiment No.	Collection, Evaluation and maintenance of germplasm lines in *bidi* tobacco
Experiment No.	Maintenance of A and B lines

Germplasms

Set-I					
S. No.	**Entry code**	**Entry Name**	**S. No.**	**Entry code**	**Entry Name**
1	1	Keliu-20	50	66	Bhavyashree
2	2	Anand-23	51	141	ArBD-4
3	3	Anand-119	52	142	ArBD-5
4	4	Anand-2	53	143	ArBD-7
5	5	GT-4	54	144	ArBD-8
6	6	Kukumarthi	55	145	ArBD-9
7	7	103-9-101	56	146	ArBD-32
8	8	783-51	57	147	ArBD-33
9	9	114-4 (RPK type)	58	153	G.M.Koyali
10	10	Peschtere 28	59	154	Line {34-30 X (A-119)^2} 103-6-1-40-22-34-26-35-22-25-2
11	11	S-20	60	155	Line 543-41-12-14 (RPK type)
12	12	S-12	61	156	Line-1-1
13	13	S-112	62	157	Pilliu-37
14	14	Akol	63	158	Line-169-119 (Upper leaves long internode)
15	15	Gundsurti	64	159	Black Spangle Parent (B.S.P)
16	16	Kodani	65	160	Necrotic Crinkle Dwarf(N.C.D)
17	17	V-54	66	161	Line 93-103-93 (88- 47 X Sokh)
18	18	Dumbara	67	162	Line 114-16 (Female parent of GT-4)
19	19	Smyrna	68	163	Line 181-83-1 (S-20 X K-20)
20	20	Sanand local	69	164	Line 134-2-2 {K-20 X Sokh} X K-20
21	21	Subhelav selection	70	165	Line 543-37-38-24 (A-119 X Olor)
22	22	Red Russion	71	166	Line 121-13-27-29 (108-15 X Olar)
23	23	Bankete A-1	72	173	C-11
24	24	V-58	73	174	KL
25	25	Keliu-49	74	175	Oriental
26	26	Pilliu-19	75	176	Xanthi
27	27	BL 4-2	76	177	Samsan
28	28	103-9-101-28-31 (A-2 X Olor)	77	178	Trabizonal
29	35	GT-9	78	179	Viswanath
30	36	TI-421	79	180	Sender Patti Special
31	37	TI-525	80	181	Bhagyalakshmi
32	38	KDH-959	81	182	HDBRG-LP-2
33	39	Abirami	82	183	F_7-127
34	40	Jayalaksmi	83	184	Margadhan

Set-I					
S. No.	Entry code	Entry Name	S. No.	Entry code	Entry Name
35	41	575-28-110	84	185	Bhagya
36	42	GT-5	85	186	320-2-30-28-18-I
37	43	GT-7	86	187	Jati Patti
38	53	K-20-Plule leaves	87	188	320-2-30-28-20-12
39	54	RPK-1-2	88	189	16-12-21-106-4-26
40	56	22-10-1 (11-47-Sokha)	89	190	DWFC
41	57	35 - 19 - 39 – 24	90	191	Thangam
42	58	169-19-16 (88-47-Sokha)	91	192	320-2-80-25-84-10-I
43	59	SB -154	92	193	Jati
44	60	169-19-6 (88-47-Sokha)	93	194	Kunkumarthi
45	61	A-1-11-65	94	195	GT-5
46	62	169-2 (N & L)	95	196	Vairam
47	63	Jhakhari Rampur	96	197	F-7-124
48	64	AKBT-03-02	97	206	A-428
49	65	ABT-10	98	212	ArBD-39
			99		Vin-5
			100		Ornamental Tobacco
			101		Natu Bhairavi
			102		ArR -104
			103		ArR-105
			104		N-b-r
			105		Gajapathi

Set-II					
S. No.	Entry code	Entry Name	S. No.	Entry code	Entry Name
1	44	NBD-119	31	199	NPN-64
2	45	NBD-239-2	32	200	NPN-65
3	46	NBD-257	33	201	NPN-66
4	47	NBD-259	34	202	NPN-73
5	48	NBD-260	35	203	NPN-75
6	49	NBD-239-4	36	204	NPN-81
7	50	NBD-209	37	205	NPN-30
8	51	NBD-122	38	207	NBD-289
9	52	NBD-261	39	208	NBD-290
10	55	NBD - 48 – 1	40	214	NBD-309
11	67	NBD-43	41	215	NBD-312
12	68	NBD-53	42	216	NBD-314
13	69	NBD-57-1	43	217	NBD-300
14	70	NBD-71	44	219	NBD-302
15	71	NBD-80-1	45	220	NBD-297
16	72	NBD-80-2	46	221	NBD-315
17	73	NBD-85	47	222	NBD-316
18	74	NBD-95	48	223	NBD-317
19	75	NBD-111	49	224	NBD-318

Set-II					
S. No.	Entry code	Entry Name	S. No.	Entry code	Entry Name
20	76	NBD-115	50	225	NBD-319
21	77	NBD-136	51	226	NBD-307
22	78	NBD-154	52	227	NBD-308
23	79	NBD-155	53	228	NBD-310
24	80	NBD-159	54	229	NBD-311
25	81	NBD-164	55	230	NBD-313
26	82	NBD-236	56	234	NBD-320
27	83	NBD-271	57	238	NBD-324
28	84	NBD-276	58	239	NBD-325
29	85	NBD-277	59	240	NBD-326
30	198	NPN-63	60	241	NBD 237

Set-III					
S. No.	Entry code	Entry Name	S. No.	Entry code	Entry Name
1	29	ABD-7	42	121	ABD-110
2	30	ABD-15	43	122	ABD-111
3	31	ABD-119	44	123	ABD-112
4	32	ABD-24	45	124	ABD-113
5	33	ABD-30	46	125	ABD-115
6	34	ABD-36	47	126	ABD-116
7	86	ABD-43	48	127	ABD-117
8	87	ABD-46	49	128	ABD-118
9	88	ABD-50	50	129	ABD-120
10	89	ABD-51	51	130	ABD-121
11	90	ABD-52	52	131	ABD-123
12	91	ABD-54	53	132	ABD-124
13	92	ABD-60	54	133	ABD-125
14	93	ABD-61	55	134	ABD-127
15	94	ABD-62	56	135	ABD-128
16	95	ABD-67	57	136	ABD-130
17	96	ABD-68	58	137	ABD-131
18	97	ABD-69	59	138	ABD-132
19	98	ABD-70	60	139	ABD-146
20	99	ABD-71	61	140	ABD-152
21	100	ABD-72	62	167	ABD-10
22	101	ABD-73	63	168	ABD-65
23	102	ABD-77	64	169	ABD-66
24	103	ABD-78	65	170	ABD-67
25	104	ABD-79	66	171	ABD-101 (GABT-11)
26	105	ABD-84	67	172	ABD-118
27	106	ABD-87	68	210	ABD-138
28	107	ABD-90	69	211	ABD-151
29	108	ABD-91	70	231	ABD-145
30	109	ABD-92	71	232	ABD-163
31	110	ABD-94	72	243	ABD 164
32	111	ABD-95	73	244	ABD 173
33	112	ABD-96	74		ABD 209

Set-III					
S. No.	Entry code	Entry Name	S. No.	Entry code	Entry Name
34	113	ABD-99	75		ABD 211
35	114	ABD-100	76		ABD 226
36	115	ABD-101	77		ABD 228
37	116	ABD-102	78		ABD 229
38	117	ABD-103			
39	118	ABD-104			
40	119	ABD-107			
41	120	ABD-109			

Set-IV			A/B Lines	
S. No.	Entry code	Entry Name	A lines	B lines
1	148	NyBD-3	MS A-119 x A-119	A-119
2	149	NyBD-4	MS NBD-209 x NBD 209	NBD-209
3	150	NyBD-5	MS Bhavyashree x Bhavyashree	Bhavyashree
4	151	NyBD-56	MS Bhagyashree x Bhagyashree	Bhagyashree
5	152	NyBD-59	MS Vedagandga x Vedaganga	Vedaganga
6	209	NyBD-55	MS A-2 x A-2	A-2
7		NyBD-68	MS PL-5 x PL-5	PL-5
8		NyBD-69	MS GT-5 x GT-5	GT-5

Experiment No.	Development of CMS lines for NBD-316

S. No.	Entry Name
1	MS A-119 X NBD 316
2	MS NBD-209 X NBD 316
3	MS Bhavyashree X NBD 316
4	MS Bhagyashree X NBD 316
5	MS Vedagandga X NBD 316
6	MS A-2 X NBD 316
7	MS PL-5 X NBD 316
8	MS GT-5 X NBD 316

Experiment No.	STATION TRIAL (ST)

S. No.	Entry Name
1	KS-1
2	KS-2
3	KS-8
4	KS-12
5	KS-13
6	KS-15
7	A-119 (C)
8	NBD-209 (C)
9	NBD 316 (C)

CROP PRODUCTION

Experiment No.	**BDNAG 58**: Integrated management of *Orobanche* in *bidi* tobacco
Year of start	2021-22
Year of completion	2025-26
Remarks	Ongoing

NEW PROJECT PROPOSALS

BDAAGC/ BDNAGC / BDNyAGC 1: Evaluation of pre and post emergent herbicides for weed management in *bidi* tobacco

Experiment No.	**BDNAG 59: Response of tobacco to changing climate situation on yield and quality** **A:** To study the impact of water logging on tobacco yield and quality
Objectives	▪ To find out the effect of water logging on growth and yield of tobacco ▪ To study the Impact of water logging on quality of tobacco
Year of start	2024-25
Year of completion	2025-26
Design	Split plot Design
Replications	3
Plot size	9 x 6 m
RDP	As per Package of practice

Treatment details:

I. Main Plot (Water stagnation period) (M)	**II. Sub Plot (Ameliorative measures / Control measures) (S)**
M_1: 2 days	S_1: Urea spray @2% before and after water stagnation
M_2: 4 days	S_2: Ammonium sulphate spray @2% before and after water stagnation
M_3: 6 days	S_3: K_2SO_4 spray @2% before and after water stagnation
	S_4: Humic acid spray @2% before and after water stagnation
	S_5: Control (No Control Measures)

Experiment No.	**BDNAG 59: Response of tobacco to changing climate situation on yield and quality** **B:** Response of tobacco to different Sowing windows
Objectives	▪ To find out the effect of different sowing windows on growth and yield of tobacco ▪ To the effect of different sowing windows on pest and disease incidenceand economics of tobacco cultivation
Year of start	2024-25
Year of completion	2025-26
Design	Split plot Design
Replications	3
Plot size	9 x 6 m
RDP	As per Package of practice

Treatment details:

T1	Planting I fort night of August
T2	Planting II fort night of August
T3	Planting I fort night of September
T4	Planting II fort night of September
T5	Planting I fort night of October
T6	Planting II fort night of October
T7	Planting I fort night of November
T8	Planting II fort night of November

PLANT PATHOLOGY and NEMATOLOGY

PLANT PATHOLOGY

NEW APPROVED PROJECT PROPOSAL

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

The experimental details are furnished at Rajahmundry centre.

NEMATOLOGY

BDANC / BDNNC /BDNyNC 1: Field evaluation and demonstration of nematode antagonists enriched coco-peat Technology against root knot nematodes in tobacco nursery and main field crop

The experimental details are furnished at Anand centre.

NANDYAL

PLANT BREEDING

Experiment No	**BDABRC 2:** IVT
Entries	IET-151, IET-152, IET-153, IET-154, IET-155, IET-156, IET-157
Checks	A 119, Nandyal Pogaku-1 and Nandyal Pogaku-2
Design	RBD
Replications	03

Experiment No	**BDABRC 1.1:** AVT-II
Entries	IET-113, IET-114, IET-115
Checks	A119, Nandyal Pogaku-1 and Nandyal Pogaku-2
Design	RBD
Replications	04

Experiment No	**OFT:** On Farm Trail
Entries	NyBTH 152, NyBTH 157, NyBTH 171, ABD-239
Checks	A119, Nandyal Pogaku-1, GABTH-2 and Nandyal Pogaku-2

Experiment No	**BDNyBR 4.4:** OVT-II
Entries	NyBD 97 (GT4 X ABD-145), NyBD 98 (GT4 X ABD-163), NyBD 99 (GT4X ABD-167), NyBD 100 (A119 X ABD-145), NyBD 101 (A119XABD163), NyBD-102 (A119 X ABD-167), NyBD 103 (GT7 X ABD132), NyBD 104 (GT7 X NBD289), NyBD 105 (GT7 X NBD-260), NyBD 106 (GT7 X ABD-119), NyBD 107 (GT4 X ABD-132), NyBD 108 (GT4 X NBD289), NyBD 109 (GT4 X NBD-260), NyBD 110 (GT4 X ABD119), NyBD 111 (A119 X ABD-132), NyBD 112 (A119 X NBD289), NyBD 113 (A119 X NBD-260) , NyBD 114 (A119 X ABD-119)
Checks	A119, Nandyal Pogaku-1 and Nandyal Pogaku-2
Design	RBD
Replications	02

BDNyBR 5.1: STUDY ON GENERATION OF BREEDING MATERIAL IN BIDI TOBACCO

Objective: To evolve higher cure leaf yield with high nicotine content, tolerance to drought and leaf burn disease

Fresh Crosses proposed for 2025-26 for improvement of *bidi* tobacco varieties

Females	Males
NP-2 : Higher cured leaf yield with good leaf quality	**A119**: Early, higher cured leaf yield, tolerance to drought and leaf burn disease with high nicotine content.
NP-1: Drought tolerant higher cured leaf yield	**NyBD-79:** High nicotine content (8.24)
GABT 11: High yielding high nicotine content	

S. No.	Cross combination	Objective
1	NP 2 X A119	High yielding tolerance to leaf burn disease
2	NP 2 X NyBD 79	High yielding high nicotine
3	GABT 11 X NP 2	High yielding high nicotine
4	NP 1 X A119	Early drought and leaf burn tolerance
5	NP 1 X NP2	Early drought and leaf burn tolerance
6	NP 1 X NyBD 79	Early high nicotine content

Experiment No	**BDNyBRC-1:** Collection, maintenance, cataloguing and utilization of germplasm lines of *bidi* tobacco
Entries	New germplasm lines received from different centers and already existing germplasm lines of 50 *bidi* tobacco will be evaluated.

CROP PRODUCTION

Experiment No.	**BDNyAG 20:** Study on identification of soil fertility status of *bidi* tobacco growing areas of Nandyal& Kurnool district
Year of start :	2023-24
Year of completion:	2026-27 (ON GOING)

Experiment No.	**BDNyAG 21:** Integrated Management of broomrape (*Orobanche spp*) in *bidi* tobacco
Year of start :	2023-24
Year of completion:	2026-27 (ON GOING)

Experiment No.	**BDAAGC/ BDNAGC / BDNyAGC 1:** Evaluation of pre and post emergent herbicides for weed management in *bidi* tobacco
Year of start :	2023-24
Year of completion:	2026-27 (ON GOING)

CROP PROTECTION
PLANT PATHOLOGY and NEMATOLOGY

BDANC /BDNNC /BDNyNC 1: Field evaluation and demonstration of nematode antagonists enriched coco-peat Technology against root knot nematodes in tobacco nursery and main field crop

The experimental details are furnished at Anand centre.

NEW APPROVED PROJECT PROPOSAL

VFRPPC/VFJPPC/VFKPPC/VFHPPC/VFSPPC/BDAPPC/BDNPPC/BDNyPPC/RUAPPC/ RUDPPC/CHVsPPC 1: Integrated management of Damping off disease in tobacco nursery (FCV and Non-FCV)

The experimental details are furnished at Rajahmundry centre.

C. *NATU/ PIKKA* TOBACCO

GUNTUR

Experiment No	**NTJBRC 1.1:** AVT-II
Entries	IET- 118, IET-119, IET-121
Checks	Bhairavi and WAF
Design	RBD
Replications	05

JEELUGUMILLI

Experiment No	**NTJBRC 1.1:** AVT-II
Entries	IET- 118, IET-119, IET-121
Checks	Kommagudem and Rangapuram
Design	RBD
Replications	05

NANDYAL

Experiment No	**NTNyBRC1.1::** AVT-II
Entries	IET- 118, IET-119, IET-121
Checks	Bhairavi and WAF
Design	RBD
Replications	05

BDNyBR 4: Hybridization and selection to evolve superior *natu* tobacco varieties /hybrids

Experiment No	**BDNyBR 4.1 & 4.2**: OVT-I & OVT-II
Entries	NyNT 107, NyNT 108, NyNT 105, NyNT 106
Checks	Bhairavi and WAF
Design	RBD
Replications	04

BDNyNT 5.1: STUDY ON GENERATION OF BREEDING MATERIAL IN BIDI TOBACCO

Females	Males
NyNT 98: High yielder good leaf quality	**II 1870:** High yielding, tolerance to pests and diseases
	Natu special: High yielding drought tolerant with good leaf quality

S. No.	Cross combination	Objective
1	NyNT 98 x II 1870	High yielding, tolerance to pests and diseases
2	NyNT 98 x Natu special	High yielding drought tolerant with good leaf quality

BERHAMPUR

Experiment No	**NTBBRC 2::** AVT-II
Entries	IET- 118, IET-119, IET-121
Checks	Gajapati and JP Local
Design	RBD
Replications	05

Experiment No.	**PBBR 2 :** Collection, evaluation and maintenance of tobacco germplasm
No. of treatments	139 + 3 Checks (BPT-50 , Gajapati and JP Local)
Design	Augumented
Blocks	11

Experiment No.	**PBBR 10:** Evaluation of Drought tolerant genotypes
Checks	Gajapati and JP Local
Design	RBD
Replications	03

No. of treatments

1.	BHAIRAVI
2.	CHEBROLU
3.	KOMMIPADU VITANAM
4.	II1068
5.	II 1873
6.	KAVALI
7.	KFC
8.	LINE 61
9.	NARASRAOPETA
10.	NATU NOONEPALLI
11.	NATU PARACHERU
12.	NATU SPECIAL
13.	NGP-89
14.	ONGOLE
15.	PEDA VITANAM
16.	POTTI VITANAM
17.	TALAMARI AKU
18.	WAF

Experiment No.	**PBBR 11 (A):** Exploratory trial on *Rustica* tobacco
No. of treatments	4 (GCT 2, GVT 3, DCT 4, DCT 5)
Checks	GC 1
Design	Unreplicated

Experiment No.	PBBR 11 (B): Exploratory trial on *Jati*tobacco
No. of treatments	3 (PODALI, MANASI, CHAMA)
Checks	DJ-1
Design	Unreplicated

NEW EXPERIMENT PROPOSAL

CROP PRODUCTION

Experiment No	PBAG 29 : Performance assessment of foliar nutrient supplements in *PIKKA* tobacco
Variety	Gajapati
No of treatments	T_{1-} RDF 80:40:40 N P_2 O_5 $K_2$0 Kg/ha. T_2- RDF + Nano urea spray @4ml/lit at Topping. T_3- RDF + Nano urea plus spray @ 2ml/lit at Topping. T_4- RDF + Urea spray @ 20g/lit at Topping. T_5- RDF + NPK (19:19:19) spray @20g/lit at Topping. T_6- 75% N + Full P + Full K + Nano urea at Topping. T_7- 75% N + Full P + Full K + Nano urea plus spray at Topping. T_8- 75% N + Full P + Full K + Urea at Topping. T_9- 75% RDF + NPK (19:19:19) spray at Topping.
Design	RBD
Replication	03

D. CHEWING TOBACCO

ANAND

PLANT BREEDING

Experiment No	**CHABRC 1.1:** AVT-I (R)
Entries	IET-122 and IET-123
Checks	GT 6, GT 8 and A 145
Design	RBD
Replications	06

DINHATA

PLANT BREEDING

Experiment No	**CHDBRC 1.1:** AVT-I (R)
Entries	IET-122 and IET-123
Checks	Chama, Podali and Manasi
Design	RBD
Replications	06

VEDASANDUR

PLANT BREEDING

Experiment No	**CHVBRC 1.1:** AVT-I (R)
Entries	IET-122 and IET-123
Checks	Meenakshi (CR), Bhagyalakshmi, Abirami
Design	RBD
Replications	06

CROP PRODUCTION

VFSAGC/ VFRAGC/CHVsAGC 2: Effect of integration of natural farming inputs on the performance of FCV tobacco

E. *RUSTICA* TOBACCO

ANAND

PLANT BREEDING

Experiment No	**RUABRC 2:** IVT
Entries	IET-158, IET-159 and IET-160
Checks	GC 1, GCT 2, GCT 3
Design	RBD
Replications	05

Experiment No	**RUABRC 1.1:** AVT-I
Entries	IET-143, IET-144 and IET-145
Checks	GC 1, GCT 2, GCT 3
Design	RBD
Replications	05

Experiment No	**RUABRC 1.1:** AVT-II
Entries	IET-116 and IET-117
Checks	GC 1, GCT 2, GCT 3
Design	RBD
Replications	05

CROP PRODUCTION

Experiment No	**RUAAG 23**: Evaluation of different fertilizer doses on growth, yield and quality of *rustica* tobacco grown in middle Gujarat
Year of start	2023-24
Year of completion	2025-26
Design	RBD (Factorial)
Replications	03

ARAUL

PLANT BREEDING

Experiment No	**RUArBRC 2:** IVT
Entries	IET-158, IET-159 and IET-160
Checks	Azad Kanchan, SK 417, GCT 3
Design	RBD
Replications	05

Experiment No	**RUArBRC 1.1:** AVT-I
Entries	IET-143, IET-144 and IET-145
Checks	Azad Kanchan and SK 417
Design	RBD
Replications	05

Experiment No	**RUArBRC 1.1:** AVT-II
Entries	IET-116 and IET-117
	IET-143, IET-144 and IET-145
Checks	Azad Kanchan and SK 417
Design	RBD
Replications	05

Experiment No	**RUArBR 5:** PYT-I
Entries	ArR-143, ArR-144, ArR-145, ArR-146, ArR-147, ArR-148, ArR-149, ArR-150
Checks	Azad Kanchan and SK 417
Design	RBD
Replications	03

Experiment No	**RUArBR 5A:** PYT-II
Entries	ArR-135, ArR-136, ArR-137, ArR-138, ArR-139, ArR-140, ArR-141, ArR-142
Checks	Azad Kanchan and SK 417
Design	RBD
Replications	03

CROP PRODUCTION

Experiment No.	**RUArAG31-B**: Studies on Economics of Tobacco-Bengalgram inter-cropping system.
Design	RBD
Replications	04
Remarks	Ongoing

Experiment No.	**RUArAG 32:** Evaluation of tobacco and vegetable based intercropping system.
Objective	To find out profitable tobacco and vegetable based intercropping system
Year of Start	Rabi - 2024-25
Year of completion	2025-26
Design	RBD
Replications	04
Plot Size	5.0 X5.0 m
Treatments	
• T1- Chilli	50 x30
• T2- Tomato	60 x 45
• T3-Onion	20 x 15
• T4- Garlic	45 x 20
• T5-Brinjal	20 x 15
• T6-Potato	45 x 45
• T7-Tobacco	50 x 30

DINHATA

PLANT BREEDING

Experiment No	**RUDBRC 2:** IVT
Entries	IET-158, IET-159 and IET-160
Checks	DD 437, Dharla, GCT 3
Design	RBD
Replications	05

Experiment No	**RUDBRC 2:** AVT-I
Entries	IET-143, IET-144 and IET-145
Checks	DD 437, Dharla, GCT 3
Design	RBD
Replications	05

Experiment No	**RUDBRC 2:** AVT-II
Entries	IET-116 and IET-117
Checks	DD 437, Dharla, GCT 3
Design	RBD
Replications	05

LADOL

PLANT BREEDING

Experiment No	**RULdRC 2: IVT**
Entries	**IET-158, IET-159 and IET-160**
Checks	**GCT 3, DCT 4, GCT-5**
Design	**RBD**
Replications	**05**

Experiment No	**RULdRC 2: AVT-I**
Entries	**IET-143, IET-144 and IET-145**
Checks	**GCT 3, DCT 4, GCT-5**
Design	**RBD**
Replications	**05**

Experiment No	**RULdRC 2: AVT-II**
Entries	**IET-116 and IET-117**
Checks	**GCT 3, DCT 4, GCT-5**
Design	**RBD**
Replications	**05**

Experiment No.	**RULdBRS 2: ST-2 (PYT)**
No. of Entries	**LR-22-2, LR-22-5, LR-23-10, LR-23-7, LR-23-9, LR-23-5, LR-23-3, LR-23-4, LR-23-8**
Checks	**GCT 3, DCT 4, GCT-5**
Design	**RBD**
Replications	**03**

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ALL INDIA NETWORK PROJECT ON TOBACCO

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