

V. EXTENSION

Extension is an important component of university services. The research findings and technologies developed have to be conveyed to the farmers and the stake holders and this transfer of technology takes place through extension services.

Objectives

- Technology Assessment and Refinement to develop location specific profitable technologies through on-farm research & adaptive research.
- Training of development personnel, non-officials and farmers in the latest techniques / skills in agriculture and allied fields and organizing periodic Research-Farmer-Extension interactions.
- Organizing diagnostic surveys and suggesting remedial measures.
- Processing and dissemination of production technologies relating to agriculture and allied aspects through mass media like press, radio, television, publications etc, as well as through other extension activities.

The organizational set up of the Extension services is shown in the flow chart – IV.

A. EXTENSION UNITS

The University extension service has network consisting of units as follows:

1. District Agricultural Advisory and Transfer of Technology Centre (DAATTCs) and *Krishi Vigyan Kendras* (KVKs)

- **DAATTCs**

In total there are 22 District Agricultural Advisory and Transfer of Technology

Centres located one in each of the 22 Rural Districts of the state. These centres are provided with multidisciplinary team of scientists to help the farmers in resolving their field problems.

- **KVKs**

The university has 12 Krishi Vigyan Kendras located at different places like Reddipalli, Anantapur dist; Amadalavalasa, Srikakulam dist; Rastakuntabai, Vizianagaram dist; Nellore; Adilabad; Malyal, Waranga dist; Garikapadu, Krishna dist; Undi, West Godavari dist; Utukur, Kadapa dist; Darsi, Prakasam dist; Wyra Khammam dist and Rudrur, Nizamabad dist.

The KVKs are engaged in technology evaluation, demonstration of technology on the farmer's fields, organizing training courses for the extension functionaries to update their knowledge and skill and imparting training to the farmers including farm women and youth.

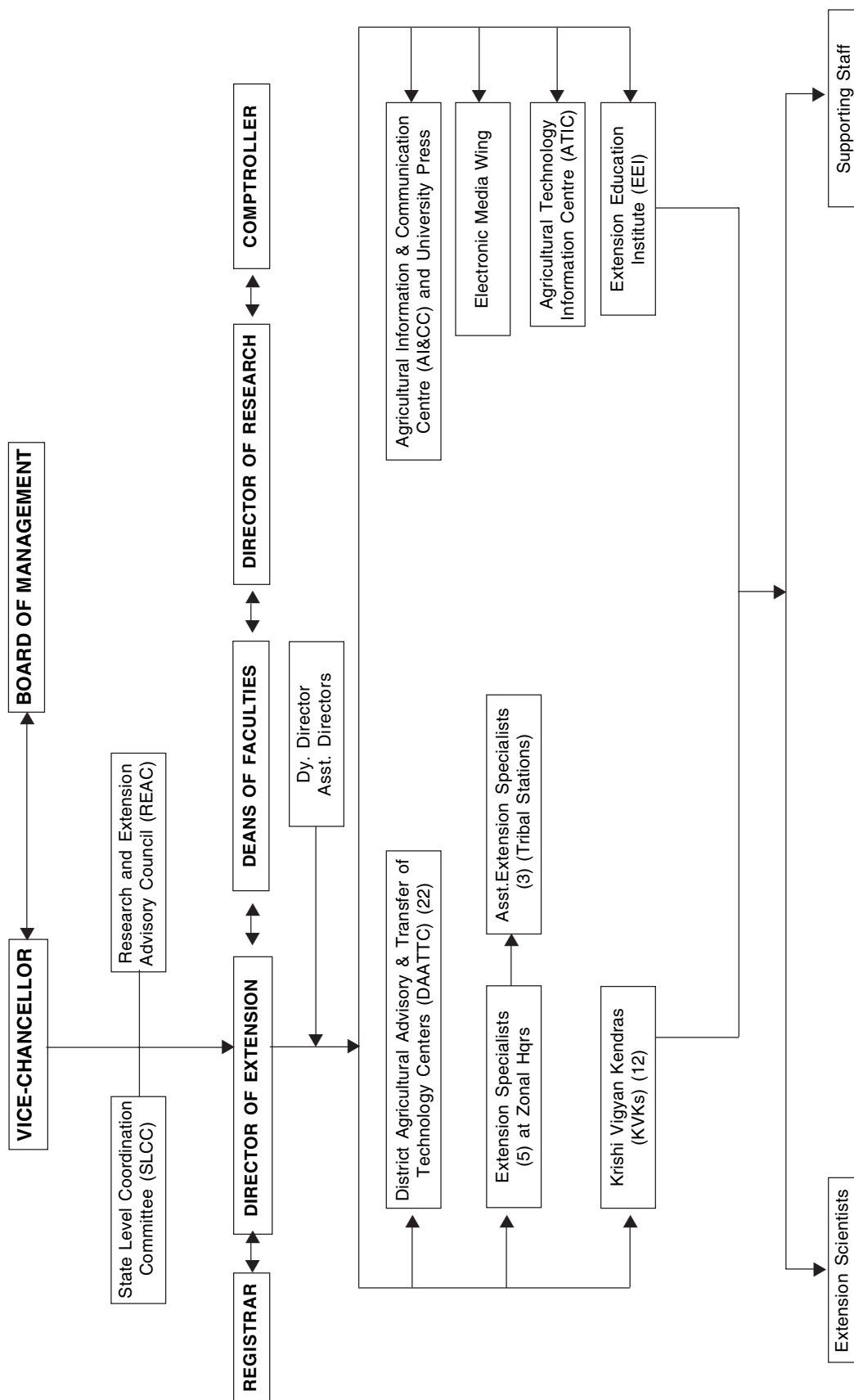
1.1 Technology Assessment and Refinement

The developed technologies are assessed by the DAATT Centres and KVKs at the farmers holdings and required refinement of the technologies is made to suit them to the field conditions.

During the period under report a total of 329 technologies were assessed. Some of the above technologies are summarized below.

- Drenching with pseudomonas was found effective in the control of wilt in maize in Nizamabad Dist.
- Working conoweeder in pathways in rice resulted in 8 per cent yield advantage in Anantapur Dist.
- An yield advantage of 20 per cent was observed in SRI method of rice cultivation in Anantapur Dist.

**FLOW CHART IV
ORGANISATIONAL STRUCTURE OF UNIVERSITY EXTENSION**



- By following Bio-intensive pest management module in paddy increase of 14.28 per cent yield was recorded at Utukur, Kadapa.
- Feeding of milch buffalows with sunflower head resulted in 33.46 per cent increased milk yield at Utukur, Kadapa.
- Farm women in Rudrur, Nizamabad Dist felt that improved sickles are drudgery relieving.
- Greengram-rice-maize cropping system in N.S.P. command area in Guntur recorded an increase of 80 per cent in income.
- IPM in groundnut consisting of raising of border maize crop, seed treatment with imidacloprid + Dithana M – 45 followed by need based plant protection recorded 19.6 per cent more pod yield in Chittoor Dist.
- Rice fallow maize with zero tillage came to maturity earlier by 20-25 days in Anakapalli, Visakhapatnam Dist.
- Paired row cultivation facilitated easy intercultivation and harvesting resulting in a 25 per cent saving on labour cost in Nellore Dist.
- By adopting soil test based site specific nutrient management in *kharif* and *rabi* the cost of cultivation got reduced by Rs.2500/- per hectare in Undi, West Godavari Dist in rice.
- The new sunflower hybrid APSH 66 recorded 23 per cent increased yield over control in Kurnool Dist.

1.2 Diagnostic Visits

During the period under report a total of 1413 visits by DAATTC and KVKs scientists alone and 772 visits with other scientists and officers were made.

To mention a few, the field problems diagnosed were as follows.

1. Rice	:	Hispa, stem borer, Leaf folder, BPH, BLBB, Zn deficiency, Neck blast, Gallmidge
2. Castor	:	Botrytis, Semilooper, <i>Spodoptera</i>
3. Cotton	:	Mealy bugs, Thrips, Pink boll worm, Aphids, <i>Spodoptera</i> , Boron deficiency, Black arm, Mg deficiency
4. Sesamum	:	Mealybug, Powdery mildew, <i>Alternaria</i> leaf spot
5. Safflower	:	Aphids
6. Cowpea	:	Thrips
7. Greengram /	:	Yellow mosaic, powdery mildew, pod borer, <i>Coryneospora</i> Blackgram leaf spot
8. Bengalgram	:	Dry root rot, Helicoverpa
9. Redgram	:	Wilt, Heliothis, Sterility mosaic virus
10. Maize	:	Stem borer, leaf blight, wilt
11. Sunflower	:	Necrosis, Powdery mildew, wilt, Helicoverpa
12. Groundnut	:	Late leaf spot, Rust, Stem rot, Leaf webber, Peanut bud necrosis, Peanut stem necrosis
13. Soybean	:	<i>Spodoptera</i>

- 14. Sugarcane : Early / late shoot borer, Red rot
- 15. Ragi : Blast
- 16. Mesta : Mealy bugs
- 17. Tobacco : Damping off, *Spodoptera*



Diagnostic Field Visit by DAATTC, Nalgonda and DAATTC, Chittoor

1.3 Training programmes

Extension personnel: A total of 92 training programmes were conducted for the extension personnel. The topics included pest and disease management in field crops, identification of micro nutrient deficiency in crops, weed control, organic farming, INM and IPM in field crops, crop insurance, polam badi and value addition in soybean.



Training to Extension Personnel by KVK, Undi



Training to Extension Personnel by DAATTC, Khammam



Meeting on Polam Badi at APWAM, Bapatla

Farmers: In order to train the farmers a total of 707 programmes were conducted on various aspects like IPM and INM in field crops, Identification of pests, diseases and nutritional disorders and their remedies. Water and fertility management in *rabi* rice, soil testing, soil borne diseases, stem application of pesticide in cotton, seed production practices, zero tillage in sunflower, boron application in sunflower, vermicompost preparation, bio pesticides, zero tillage in rice ecosystem, rain water harvesting, credit facilities through different sources, availability of latest agricultural implements and farm planning and budgeting.



Training programme to farmers by DAATTC, Kakinada



Training on Vermicompost preparation by KVK, Rudrur

Farm Women: Trainings were organized on nutritional deficiencies, improving the health condition of children, importance of iron rich

foods, preparation of low cost nutritious diets for school going children, anemia and its prevention, nutrition garden, garment making and embroidery, hand painting and orientation about druggery reducing implements for farm women.



Group discussion with women on preparation of low cost nutritious diets



Hand embroidery Training by KVK, Nellore



Nutrition Garden by KVK, Rudrur

NGOs and input agencies: A total of 26 training programmes were conducted on different aspects like *Bt* cotton, alternate crops to tobacco, cultivation practices in major *kharif* and *rabi* crops, non pesticide crop management and groundwater management.

Method demonstrations: A total of 218 method demonstration under field conditions were conducted for making farmers to learn the techniques like vermi composting seed treatment in different crops, soil reclamation, preparation of poison baits for *Spodoptera litura*, working cono weeder in SRI paddy, preparation of pesticide and weedicide solutions, stem application of cotton, direct sowing of paddy with paddy row seeder and Azolla cultivation.



Method demonstration on Stem application of pesticide in cotton by DAATTC, Prakasm

Group discussions: The farmers discussed about their field problems with the DAATTC and KVK scientists. A total of 370 group discussions were held on various topics like SRI cultivation in paddy, zero tillage in maize, types of paddy nurseries, importance of summer ploughing, importance of sulphur in groundnut cultivation, intercropping in sugarcane, rain water

harvesting, INM in different crops, hybrid rice, soil reclamation, importance of miner millets and need of complimentary foods to young children



Group discussion conducted by DAATTC, Chittoor

Field days: A total of 579 field days were conducted for farmers, extension personnel NGOs and input agencies to highlight the improved package of practices for increased crop production. The farmers were told about organic farming, zero tillage in maize, transplanting of rice by MANAM tranplanter, greengram-rice-maize cropping system in NSP area, bio-intensive pest management modeled in rice, eight row rice drum seeder and motorized cono weeder.



Field day organised by DAATTC, Khammam



Rice Transplanting by MANAM transplanter by DAATTC, Guntur

1.4 Mass communication

A total of 502 press notes were released besides 225 popular articles, 322 TV coverages, 229 Radio scripts and 152 publications.

1.5 Distance Education

ANGRAU has been telecasting distance education programme on ETV for cultivators since 2nd October 1998 in *Annadata Velugubata* programme twice a week on Tuesday and Friday at 6.30 am. During the period under report the electronic wing sent 105 programmes covering various topics in agriculture, horticulture and veterinary. For the phone-in-live TV programme, *Rythunestham* presented on Dooradarshan at 6.20 to 7.00 pm, 46 topics were identified in agriculture and allied subjects. Initially this programmes was for two day in a month but later was extended to three days in a month.

2.0 Agricultural Information & Communication Centre & ANGRAU Press

The publications brought out by the AI&CC included among other the *Vyavasaya Panchangam*, Journal of Research and News Letter of ANGRAU.

The AI&CC in collaboration with All India Radio, Hyderabad broadcasted everyday a 10 minutes news bulletin (*Vyvasaya Suchanalu*) at 6.50 pm on agriculture and allied aspects for the benefit of farmers. A total of 986 farm radio scripts were sent to All India Radio, Hyderabad on various topics in Agriculture & Home Science. The centre realized an amount of Rs.7,76,020 through sales of university publications like *Vyvasaya Panchangam* and diagnostic bulletin etc.

3.0 Electronic Wing

Besides participating in the TV programmes, *Annadata Velugubata* and *Rythunestham*, the wing produced 2 VCDs on cotton, 1 VCD on sunflower, master audio cassette and a CD consisting of 12 songs for the *Rythu Chaitanya Yatra* and one CD each for the *Rythu Runavimukthi Mela* (4 songs) and *Rythu Protsahaka Utsavalu* (4 songs). In all 4500 copies of audio CDs were multiplied and handed over to Commissioner and Director of Agriculture, A.P. The wing provided its assistance in extension of e-saagu project of International Institute of Information Technology (IIIT), Hyderabad.

4.0 Agricultural Technology Information Centre

Agricultural Technology Information Centre serves the purpose of a single window system for the delivery of products and services available at the institutes to the farmers and other interested groups thereby reducing the technology dissemination losses. It also gets feed back from the users.

During the year under report ATIC attended to 1115 visitors and 2649 phone call queries through Kisan Call Centre (Toll Free No.1551) There were 268 farmers who visited the centre in groups.

ATIC is an “Expert Node” to disseminate Agricultural Technology to the farmers through VSAT which facilitates video conferencing with the farmers conducted group meetings on cultivation aspects in paddy, maize, coconut, banana, drumstick and cotton.

5.0 Extension Education Institute

The Extension Education Institute has a mandate to improve the skills and professional competency of extension functionaries of developmental departments, SAUs, and voluntary organizations in six states and two union territories.



Extension Education Institute, Rajendranagar

During the period under report EEI conducted 25 on-campus training programmes to 367 trainees from Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Orissa. The off-campus training programmes conducted at Andaman and Nicobar Islands, Orissa, Tamil Nadu, Karnataka, Dept. of Agriculture, A.P., Lakshdweep and Kerala benefiting 245 participants.

The EEI brought out four quarterly news letters and has made a video film on the activities of the institute.

6.0 Farmers Call Centre

During the year 2008-09 the centre attended to 5958 phone calls received from different districts of A.P. Of these 1580 call were on crop production, 2083 calls on crop protection 1161 calls on horticulture and 1133 calls were for agriculture departments.

B. OTHER EXTENSION ACTIVITIES

1.0 Kisan Melas



Kisan Mela at Tandur, Ranga Reddy District

During the period under report five *Kisan Melas* were organized at Tandur, Maruteru, Nandyal, Lam and Anakapally.

2.0 Rythu Sadassus

Scientists from different disciplines participated in the *Rythusadassu* programme conducted by State Department of Agriculture from 5th to 9th June 2008. The Hon'ble Vice-Chancellor and ADRs of different zones also participated in some of the *Rythusadassus*. The farmers were given the information on IPM and INM in cotton, chillies, redgram and other major crops, management practices of *kharif* crops and seed treatment in pulses.



Rythusadassu by DAATTC, Nizamabad

3.0 Rythu Chaitanyya Yatras

Scientists of the university actively participated in *Rythu Chaitanyya Yatras* from 17th May to 3rd June 2008 and created awareness among the farmers about the latest technologies for ensuing *kharif* by visiting all the villages in every mandal along with officers of the line departments. They conducted village level training programmes to the farmers on various topics depending upon the local needs.



Rythu Chaitanyya Yatras by DAATTC, Eluru

4.0 Rythu Protsahaka Utsavalu

All DAATTC and KVK scientists have participated in *Rythu Protsahaka Utsavalu* organized by Department of Agriculture, Andhra

Pradesh in the state from 19th to 30th November 2008. The topics covered under this programme included cultivation of Bengalgram and other *rabi* crops and pest and disease management in paddy.



Rythu Protsahaka Utsavalu by DAATTC, Chittoor

5.0 Sagaku Samayatham

Scientists of the university have actively participated in the *Sagaku Samayatham* programme from 27th April to 10th May 2009 organized by Department of Agriculture, Govt. of Andhra Pradesh for creating awareness among the farmers regarding the technology gaps and strategies identified to improve the productivity in major crops like groundnut, maize, paddy, redgram, blackgram, greengram, cotton, soybean, castor, sunflower and seed production.



Sagaku Samayatham by DAATTC, Chittoor

6.0 Village Adoption Programme

The university has the programme of village adoption under which villages are adopted with an aim to develop these villages in all aspects by transferring technologies to the farmers without any time lag between technology generation and its adoption.

A total of 40 villages were adopted taking into consideration the land holding pattern, social economy background crops and cropping system, soils, irrigation potential, bench mark yield levels, input use etc. This programme acts as a window for the university activities.

Extension activities by DAATTCs and KVKs during the year 2008-09

S.No.	Activities	Total
1.	Training	
	To Farmers including farm women and rural youth	707
	To Extension personnel	92
	To NGOs and input agencies	26
2.	Technology Assessment and refinement	329
3.	Diagnostic Field visit	
	By DAATTCs and KVKs alone	1413
	Jointly with other scientists and officers	772
4.	Method demonstrations	218
5.	Group discussion	370
6.	Field days	579
7.	<i>Kisan Melas</i>	05
8.	Press notes	502
9.	TV coverages	322
10.	Radio scripts	299
11.	Publications	152
12.	Popular articles	225