

**A REVIEW :**

# Information delivery innovations of Acharya N.G. Ranga Agricultural University of Andhra Pradesh

■ G. PRASAD BABU, P. GANESH KUMAR, PRADEEP KUMAR, B. VIJAYABHINANDANA, P. PUNNARAO AND M. JOHN SUDHEER

**ARTICLE CHRONICLE :****Received :**

19.07.2017;

**Accepted :**

03.08.2017

**KEY WORDS :**

Pocket card,  
Technical poster, Flag  
method, Farmer  
calendar

**SUMMARY :** The basic mandates of all the State Agricultural Universities (SAUs) in National Agricultural Research System (NARS) of India are teaching, research and extension. Among them extension is the one which meets the needs of the farming community on real time basis through various extension wings of the University like Krishi Vigyan Kendras (KVKs), Agricultural Technology Information Centre (ATIC), District Agricultural Advisory and Transfer of Technology Centre (DAATTC-Unique extension system of Andhra Pradesh), Agricultural Information Communication Centre (AICC), electronic media wings, community radio, extension specialists etc. In this direction Acharya N.G.Ranga Agricultural University (ANGRAU) of Andhra Pradesh has taken lead role to find and implement innovative, need based and relevant information delivery methods to meet majority of the needy farmers in the state and to reach unreached. Broadly these methods have been categorised into three groups like print, electronic and other methods. Innovative methods like Pocket card, Technical poster, Information badge, Flag method, Farmer calendar, Technical information bag, Technical stickers, Vyvasayam magazine, Vyvasaya panchangam book etc. comes under Print methods. Methods like Mobile Apps, district specific AKPS-IIDS (Annapurna Krishi Prasara Seva – Interactive Information Dissemination System – 1800 425 3141), Farmer call centre (1800 425 0430), Agritech hub, Dial out, City cable phone in live, WhatsApp groups, Multi-touch smart kiosks, Kisan Parshkar WhatsApp groups etc. comes under electronic methods of approach. Whereas other methods like Innovative Farmers Network (IFN), Master trainers development, Knowledge on wheels, Farm science club, Reach Every Panchayat and Exhibition stalls are under innovative information delivery methods adopted to reach the unreached.

**How to cite this article :** Babu, G. Prasad, Kumar, P. Ganesh, Kumar, Pradeep, Vijayabhinandana, B., Punnarao, P. and Sudheer, M. John (2017). Information delivery innovations of Acharya N.G. Ranga Agricultural University of Andhra Pradesh. *Agric. Update*, 12(TECHSEAR-7) : 2092-2100; DOI: 10.15740/HAS/AU/12.TECHSEAR(7)2017/2092-2100.

**Author for correspondence :**

G. PRASAD BABU  
Krishi Vigyan Kendra,  
Acharya N.G. Ranga  
Agricultural University,  
Rajendranagar,  
HYDERABAD  
(TELANGANA) INDIA  
Email : [prasadgereketi@gmail.com](mailto:prasadgereketi@gmail.com)

See end of the article for  
authors' affiliations

**Print methods :****Pocket card:**

It is a card which fits into pocket containing brief and technical information about single topic along with contact details

of concerned scientist to get clarification if necessary by farmer. It acts as ready reckner to the farmers

## Information delivery innovations adopted by ANGRAU

### Print Methods

1. Pocket card
2. Technical poster
3. Information badge
4. Flag method
5. Farmer calendar
6. Technical information bag
7. Technical stickers
8. Vyvasayam magazine
9. Vyvasaya panchangam book

### Electronic Methods

1. Mobile Apps
2. AKPS-IIDS
3. Farmer call centre
4. Agritech hub
5. Dial out
6. City cable phone in live
7. Whats App groups
8. Multi-touch smart Kiosk

### Other Innovative methods

1. Innovative farmers network
2. Master trainers development
3. Knowledge on wheels
4. Farm science club
5. Reach Every Panchayat
6. Exhibition stalls



#### Technical poster:

It is a poster with dimension of 3'x2' containing all the contact details of KVK scientists of all the disciplines along with basic mandate of KVK/DAATTC. This poster will be pasted in Panchayat offices, Market yards, Agricultural offices of Dpt.of Agriculture and other important locations where farmers meet frequently. As

and when farmers need some information related to agriculture and allied activities, he can directly contact concerned scientists to get their queries resolved on real time basis or otherwise



#### Information badge:

It was experienced by some of the extension

scientists that during their travel in public transport like bus, train etc. commuters used to ask whether you are a teacher or businessmen or somebody else. The moment they came to know that he is a Agricultural scientist, then started clarifying many queries regarding package of practices of various crops, phone numbers of crops specialists, seed availability, market led extension, land suitability etc. so, in order to spread agricultural knowledge among all and to recognize us immediately at a glance by our commuters a badge containing our University, working station name, our designation was written on a badge and hanged on our pocket so that they could easily recognize by them to get their farm queries clarified without any hesitation.



**Flag method:**

The scientists of extension wings of the University like KVKs, DAATTC while on tour visit farmers fields. If they notice any problem like pest, disease or nutritional disorder above the ETL (Economic Threshold Level) they put up conspicuously seen Flag labeled with Name of the centre, contact number, date of visit, crop, problem and remedial measures in the farmers fields itself with the help of twig/stick/support of plant material at a strategic point to be visible to the farmer. Whenever the flag is seen by the concerned farmer, he/she reads the message written on the flag and initiate instant action on the message. If farmer requires any clarification, he/she can calls on the scientist and clarifies their doubts. Thus the Flag method not only provides immediate solution to the diagnosed problem even in the absence of the farmer, but also brings awareness and buildings rapport with the

extension scientists of ANGRAU eventually strengthening the farmers – scientists’ linkage.



**Farmer calendar:**

In general every normal calander consists of January to December month wise dates. In farmer calendar prepared by ANGRAU consists of April to March because in Andhra Pradesh new year starts from a festival called Ugadi in the month of April every year in which farmers start their land preparation activities (Eruvaka) for forthcoming Kharif season. In this farmer calendar month wise agricultural practices to be carried out in different crops based on location in which it is being prepared are mentioned along with phone numbers of crop specialists, local scientists, toll free numbers, schedule of agricultural T.V. programmes, websites, agricultural apps etc. For example in the month of April the information like summer ploughings, soil samplings, soil testing and other relevant information for that month is mentioned.



**Technical information bag:**

A bagmade of fibre or plastic with 1.5’ x 1.0’ dimensions prepared with details like location specific crop wise fertilizer recommendation on one side and pest and disease management on other side are printed along

with phone numbers and address of extension wing of ANGRAU and supplied to the farmers. Farmer himself not only uses such information but also exchanges with commuters as and when he is travelling.



**Technical stickers:**

A common practice of adhering a sticker on the backside of auto riksha, Taxis etc. for advertisements to popularize their products, Similarly some of the extension wings of ANGRAU also prepared location wise crop specific technical poster containing improved varieties, seed rate, weed control, spacing, best management practices, pest and disease control, mechanization, value addition along with contact details of concerned extension wing. This sticker is made in such a way that it cannot be damaged by rains, and other climatic vagaries.

**ఆదార్శ ఎస్.జి.రంగా వ్యవసాయ విశ్వవిద్యాలయం, గుంటూరు.**  
**విరువాక కేంద్రం, విశాఖపట్నం.**  
 ఫోన్ : 08924 - 221711      ఫోన్ నెం. 18004254440  
 Cell : 9989623802, Mobile App : ERUVAKA      www.angrau.ac.in, apagrifanet.gov.in

**చెర్రెక్కు యోజనాస్యే పేర్లతులు**

<b>రకాలు</b>	<b>87 ఎ 298 (విశాఖపట్నం) కో 6907 93ఎ145</b>	
<b>ఎరువులు</b>	పశువుల గెతం	10 టన్నులు / ఎకరాకి
	యూరియా	100 కిలోలు / ఎకరాకి
	సింగిల్ సూపర్ ఫాస్ఫేట్	250 కిలోలు / ఎకరాకి
	ముల్సరేట్ ఆఫ్ పాటాష్	80 కిలోలు / ఎకరాకి
<b>కలుపు నివారణ :</b>	అక్టాటాప్ 2 కిలోలు / ఎకరాకి	
	ఫెర్టాకోస్ 1800 గ్రాములు / ఎకరాకి	
<b>చేదవీడల నివారణ :</b>	1) పెండివల్లి	రోగాన్ 400 మి.లీ. / ఎకరాకి
	2) పేకవులుగు	సువార్తాన్ 320 మి.లీ. / ఎకరాకి
	3) కాటుక తెగులు	టిల్డీ 200 మి.లీ. / ఎకరాకి

**Vyavasayam Magazine:**

ANGRAU is publishing monthly magazine in local language (Telugu) called *Vyavasayam* (Farming). Themagazine begins with forewards from the Hon'ble Vice-Chancellor and Director of Extension about the

weather conditions etc. Later the Principal Scientists of crops gives their crop specific recommendations, success stories of farmers and other relevant information to the farming community with phone numbers of principal scientist of various crops. This also consists of research findings of the University and management practices on real time basis will be published.



**Vyavasaya Panchangambasic book:**

Technical information in agriculture and allied disciplines is gathered and prepared as a ready recknor (basic book) in local language (Telugu). Every year the details in this book will be updated and released on Telugu New Year (*Ugadi*). This book contains seed to seed package of practices in cereals, pulses, oilseeds, commercial crops, home science and other relevant information in local and simple language easily understood by the farmers. These books are made available in all extension wings of the ANGRAU in the state at affordable price (Rs.110/-) throughout the year.

**శ్రీ విశ్వకేసరి నామ సంకల్పం**  
**వ్యవసాయ పంచాంగం**  
 2016-2017

దీక్షాగారానికి సమర్పించిన అన్నింటిని సమకాలిని చేసినది ఆదార్శ ఎస్.జి.రంగా వ్యవసాయ విశ్వవిద్యాలయం వారి ముఖ్య విశిష్ట ప్రొఫెసర్లు 'వ్యవసాయం' మాసపత్రిక

సంకల్ప వలయా : రూ. 200/-  
 కలితలాల రుదా : రూ. 1000/-

గుంటూరులోని ఆయుర్వేద వైద్యాల వ్యవసాయ సమాచార కేంద్రం, ఆదార్శ ఎస్.జి. రంగా వ్యవసాయ విశ్వవిద్యాలయం వారి గుంటూరు - 522 024  
 angrau.panchangam@gmail.com | టెలిఫోన్ : 9989623802

**Electronic methods :**

ANGRAU is making use of new Information Communication Technology (ICT) in a big way to promote e-agriculture and is developing and applying innovative ways to use ICTs with a primary focus on agriculture to

reach each and every farmer in the state by overcoming time, communication, cost and distance barriers. ICT in agriculture offers a wide range of solutions to some agricultural challenges. It is seen as an emerging field focusing on the enhancement of agricultural and rural development through improved information and communication processes. Some of the ICT initiatives of the ANGRAU are given in Table 1.

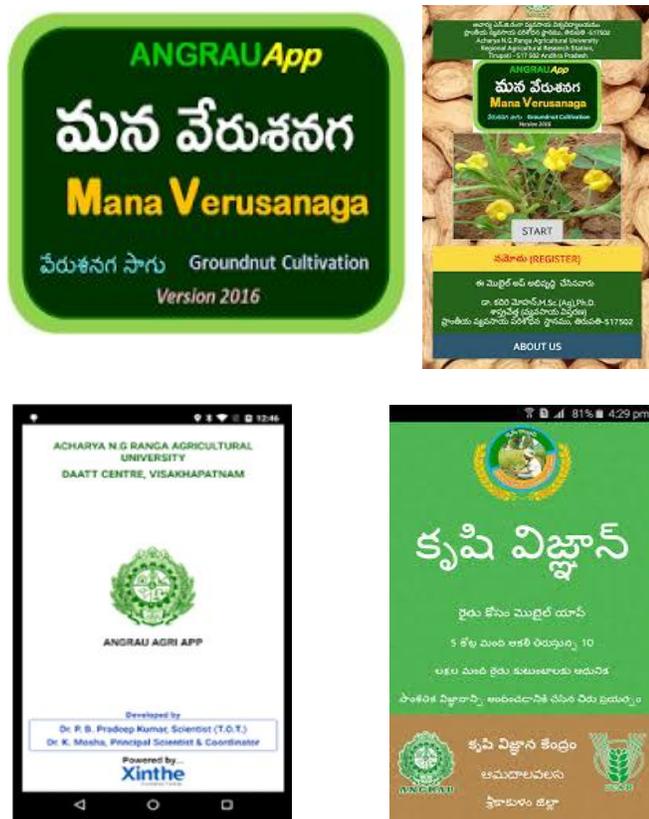
**AKPS –IIDS:**

Anna Purna Krishi Prasara Seva – is an Interactive Information Dissemination System model. It is an integrated model to address the problems of farmers by using IVRS (Interactive Voice Response System), web and mobile applications. The IIDS is developed under the NAIP sub project of ICAR, undertaken by a consortium led by Media Lab Asia, New Delhi and partnered by ANGRAU, NIRD and Mudra Institute of Communications, Ahmadabad, Gujarat. The IIDS was launched on 23<sup>rd</sup> March, 2013 as an alternative ICT model to meet the information needs of the farmers.

**Features of IIDS and Benefits to farmers:**

- Farmers can interact directly with the concerned district scientist of KVK/DAATTC over Toll free number (1800-425-3141) and provided with personalized advisories.
- Advisories on Agricultural, Horticulture, Animal Husbandry and Fisheries are given.
- Farmer can record their queries 24x7 through Toll free number
- Farmers are provided with text and voice messages in local language (Telugu)
- Farmers are provided emergency messages and alerts on their mobile from their KVK/DAATTC.
- Farmers can record their best practices and experiences to share with other friends to toll free number.

Farmer should register to get above benefits through IIDS. Registration is free. Concerned district KVK/DAATTC is attending this farmer registration process.



**Table 1 : Mobile Apps: ANGRAU has developed number of Apps to provide information to the farming community at their doorstep**

Sr. No.	Name of the App	Developed by	Uses/contents
1.	ANGRAU AGRI	DAATTC, Vishakhapatnam, ANGRAU, Andhra Pradesh during 2015.	Package of practices of cereals, pulses, oilseeds with PDF and Videos. This information is available in both in English and Telugu. This is available in Google play store and can be downloaded free of cost.
2.	Greeshma	RARS, Tirupati, ANGRAU, Andhra Pradesh, during 2015.	Disease management practices of rice, maize, groundnut, sugarcane and sunflower crops. This information is available in both in English and Telugu. This is available in Google play store and can be downloaded free of cost.
3.	Krishi Vigyan	KVK, Amadalavalasa, Srikakulam district, ANGRAU, Andhra Pradesh, during 2016.	Package of practices of various crops, plant population calculator, toll free numbers, success stories etc.
4.	Mana verusenaga	RARS, Tirupati, ANGRAU, Andhra Pradesh, during 2016.	Complete information about groundnut. Available only in Telugu.
5.	KVK ATMA KADAPA AGRI APP	KVK, Utukuru, Kadapa, ANGRAU, Andhra Pradesh, during 2016.	Package of practices of various crops

Note: all the above Mobile Apps are available in Google Play store at free of cost

As a joint initiative of ANGRAU and Media Lab Asia, the IIDS is being up scaled in all the 13 districts of Andhra Pradesh through KVKs/DAATTCs. So far nearly 17000 plus farmers registered are being served through IIDS.



**ANGRAU farmer call centre:**

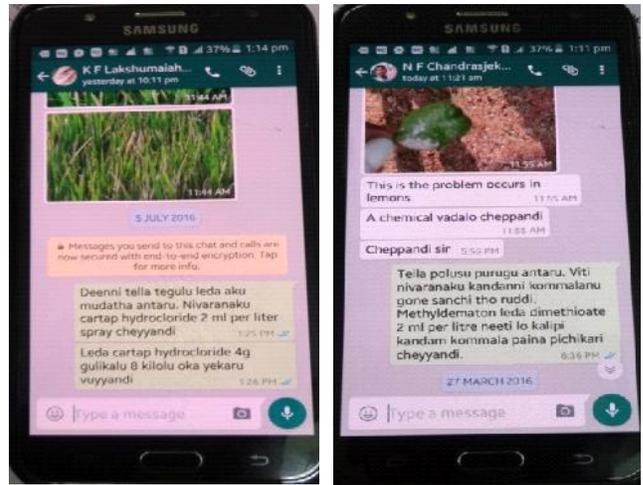
Timely availability of information is very much essential to get higher production and productivity. ANGRAU launched Kisan Call Centre (1800 425 0430) in November, 2016 to deliver extension services to the farming community. The purpose of this call centre is to respond to issues raised by farmers, instantly, in the local language. These call centre is expected to handle traffic from any part of the state. Queries related to agriculture and allied sectors are being addressed through these call centre. A farmer from any part of the State can contact the Kisan Call Centre by dialling the toll free Telephone No. 1800-425-0430 and present their problems/queries related to farming. The operator at the Kisan Call centre will attempt to answer the problems/queries of the farmers immediately.



**Agritech Hub - WhatsApp:**

It is an instant mobile based ICT agro advisory system started from 16<sup>th</sup> March, 2016. Through this farmers queries are being answered and sent text and

voice messages through WhatsApp number (9441670829) by the scientists. District wise groups are being maintained in this hub.



**Dial out:**

This programme is being carried by ANGRAU in collaboration with Reliance foundation in the state. Generally once in a week farmers –scientist interaction through telephone will be done with the help of crop specialists.



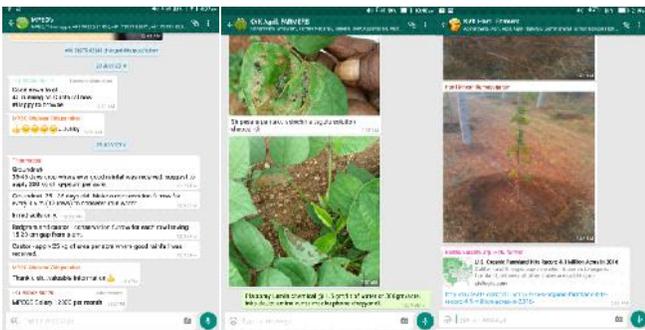
**City cable phone in live:**

There are many number of local channels evolved over a period of time in broadcasting entertainment, local news and other events. ANGRAU is making use of these channels to spread agriculture latest agriculture information, technologies, mechanization, location specific need based cost reduction technologies, best management practices in various crops etc. to make agriculture sector a remunerative.



**WhatsApp groups:**

Extension wings of ANGRAU across the state are maintaining whatsapp groups of farmers to provide timely required information to them. For this purpose farmers have been divided into agriculture, horticulture, dairy, etc. and groups like KVK Agril.farmers, KVK Horticulture farmers, KVK Dairy farmers etc. are being maintained. Some of the centers are maintaining these groups as *Kisan Parishkar*, Agritech Hub etc. and services are being provided on real time basis to provide 24x7 accesses to the information demanded by the farmers.



**Multi-touch smart Kiosk:**

ANGRAU has established Multi-touch smart Kiosk in adopted villages and at the entrances of the extension wings of University with location specific updated complete information on Agriculture, Horticulture, Animal Husbandry and other relevant subjects. This kiosk works without internet/offline mode on touch basis and farmers can access the needy information on their own. The extension units will be updating the latest information weekly or fortnightly or monthly based on its importance.

**Other innovative methods :**

*Innovative farmers’ network:*

In extension it is very well known fact that farmers believe what they see rather than what they hear. By keeping this in view extension wings of ANGRAU is identifying innovative farmers in their jurisdiction/area of operation with an aim to make use of their services to spread the new technologies. Innovative farmers thus identified across the state by different extension wings of ANGRAU will be grouped as Innovative Farmers Network (IFN) to share their innovations, experiences, achievements, successes and learning’s for about 30 farmers (10 each in his own village, Mandal and in his district). The progress of the network coordinators is being reviewed every crop season. They are also provided with training, exposure visits within and outside the state for upgrading their knowledge and skills.

**The functions of the IFN Coordinator:**

- Identified innovative farmer is coordinator of 30 farmers’ network in the district.
- His efforts in the educational/dissemination process are to be noted in the dairy.
- He should actively participate



### Master trainers development:

In order to enrich the knowledge, skills and attitude of the farmers in a focused way, on a selected crop an initiative called “Farmer Master Trainers” was introduced in ANGRAU during 2011. It is the process wherein an identified 15-20 farmers selected from adopted villages will be provided training (knowledge and skills) at critical stages of the identified crop to sensitize them on best management practices, critical interventions to improve the production and productivity of the crops. The training is staggered over the crop season to the same farmers’ who will be exposed to knowledge and skills at different critical stages of the crop cycle, (4-5 trainings) facilitating the farmers as Master Trainers. They are being used as Resource Persons while conducting trainings in their locality.



### Reach Every Panchayat:

Reach Every Panchayat is a novel programme of ANGRAU, proposed to reach every Panchayat of Andhra Pradesh state with university services. Village panchayat is a grass root level institution to implement the agriculture and allied sector programme. Village Sarpanch is the first citizen of panchayat who can influence other farmers in farming. With this back ground information it is proposed to train Sarpanch along with one progressive farmer in the village at KVK, MPDO office. The Sarpanch and the progressive farmer are to be oriented with the best management practices and critical interventions for increasing the productivity of the major crops grown in that area and these key informants in turn will communicate to other farmers in the panchayat to which he or she belongs. To begin with, it is decided to implement the programme in three districts viz., Guntur, Anantapur and Srikakulam districts on pilot basis. Subsequently, it will be extended to other districts.

All Panchayats are to be covered within short period in a year or two.



To begin with each Panchayat library is provided with Vyvasayam monthly magazine and Vyavasaya Panchangam (basic book) where in needy farmers can get information through library.

### Knowledge on wheels:

Still 70 per cent of the population lives in rural areas including remote villages. In order to reach the services of the ANGRAU to even remote farmers an initiative called “Knowledge on Wheels” was taken up in collaboration with Reliance foundation to enable them to get access to new technologies developed by ANGRAU. In this initiative a vehicle embedded with posters, miniature models of farm machinery machinery, cost reduction technologies, samples of new varieties released, LCD protector with screen, AV aids etc. would visit remote villages to enlighten farming community on latest technologies and to update their knowledge so as to make use of them to improve their socio economic status by adopting them.



**Farm science club:**

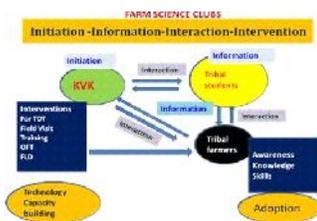
It is an innovative information delivery model developed exclusively for Tribal areas by ANGRAU. It is student mediated extension services for effective TOT & reaching the unreached. In this model technology is being delivered to targeted population through educated youth in Tribal areas for easy acceptability and adoption. Students will be trained, exposed, briefed, and updated with latest agriculture technologies that in turn will transfer the same to their parents and neighbours. After that the extent of gains or change in knowledge, skills, and attitudes among tribal farmers due to this model of transfer of technology are studied.

**Key features:**

- Fortnightly interaction on recent agricultural technologies
- Distribution of information material
- Organization of guest lectures
- Organization of quiz and essay writing competitions,

**Exhibition stalls:**

Single window showcasing of all the technologies of ANGRAU through exhibition stalls on various occasions resulted in not only increased awareness and knowledge among farming community but also received many awards at local and national levels. This is one of the TOT methods where in all the technologies, models, specimens, miniatures, posters, charts, sample seed materials, success stores, entrepreneurship development activities, achievements, solutions etc. required by the farming community is available at single location. ANGRAU is frequently organizing and setting up Exhibition stalls to reach as many as possible with in short period and getting appreciation from various stake holders with awards and rewards.



**Authors' affiliations :**

**P. GANESH KUMAR, PRADEEP KUMAR, B. VIJAYABHINANDANA, P. PUNNARAO AND M. JOHN SUDHEER**, Krishi Vigyan Kendra, Acharya N.G. Ranga Agricultural University, Rajendranagar, HYDERABAD (TELANGANA) INDIA

12<sup>th</sup>  
Year  
★ ★ ★ ★ ★ of Excellence ★ ★ ★ ★ ★