



# NAARM NEWS



**ICAR-National Academy of Agricultural Research Management**  
(Indian Council of Agricultural Research, Ministry of Agriculture and Farmers Welfare, Govt. of India)  
Rajendranagar, Hyderabad-500030, Telangana, India; <https://naarm.org.in>

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## **Parliamentary Standing Committee on Agriculture visits ICAR- NAARM, Hyderabad on 11<sup>th</sup> November 2017**

The parliamentary Standing Committee on Agriculture headed by Hon. Sh.Hukumdev Narayan Yadav, Member of parliament along with eleven members of Parliament who are part of the Committee visited ICAR- National Academy of Agricultural Research Management. The Parliamentary Committee was received by the ICAR team from Headquarters, Director and faculty of NAARM



on arrival. The Committee visited some of the latest facilities at the Academy such technology enabled learning lab and the upcoming exhibition. Later Dr.Ch.Srinivasa Rao, Director, NAARM made a presentation to the Standing Committee members on National and International collaborations of ICAR. During the presentation Dr. Rao highlighted various pioneering and path breaking research collaborations with various partners of national agricultural research and education system, memoranda of understanding that are in force with Consultative Group of International Agricultural Research Institutions and leading global universities. He also

emphasized on the major achievements of the ICAR institutions in solving issues of food security for all, poverty and income sustainability among farmers and other stakeholders. The members and the chairman of the committee complemented the efforts of ICAR in general and NAARM in particular in enabling progress of agricultural research for the benefit of

Farmers. The Committee members gave suggestions for making the system more responsive and effective such as enabling better coordination of units/ partners of ICAR and agriculture universities, integrated and single window solutions to farmers' problems etc. Other issues such as shortage of scientific manpower, slow rate of technology diffusion were also discussed in the interactions of the scientists with the Parliament members. The Chairman of the standing Committee released two publications namely "Forty Years of NAARM" and NAARM brochure (Hindi version) on this occasion.

## **ASRB Foundation Day was celebrated at ICAR-NAARM**

The Agricultural Scientists Recruitment Board (ASRB) of Indian Council for Agricultural Research (ICAR) based at Delhi which is 44 years old was celebrated on November 1<sup>st</sup>, 2017 in the National Academy of Agricultural Research Management (NAARM), Rajendranagar, Hyderabad. The chairman of the Board Dr. AK Srivastava welcomed the dignitaries such as Dr. R.S.Paroda former Secretary, Department of Agriculture Research and Education, Government of India & DG ICAR, former chairmen and members of ASRB, former member of UPSC, Vice Chancellors of agriculture



universities from Andhra Pradesh, Telangana and Maharashtra, Directors of ICAR institutes of AP and Telangana, scientists from various Institutes who graced the foundation day celebrations. Dr.Srivastava also made an emphatic presentation on the historical achievements of ASRB in selecting scientific staff for the ICAR institutes. Later Dr.Gurbachan Singh and

Dr. M.Mahadevappa former chairmen of ASRB and Dr. K.V.Raman former member ASRB spoke on the contributions of ASRB besides making suggestions for reforming the ASRB to adapt to the changing demands of

Indian agriculture. The foundation day lecture was delivered by Dr.R.S.Paroda, who is also the chairman of the Committee on revamping ASRB. Dr.CH.Srinivasa Rao, Director, NAARM proposed vote of thanks. The foundation day celebration was attended by around 200 scientists from various ICAR institutes of the region. The ASRB review

committee will hold formal consultations with the stakeholders such as agriculture University Vice chancellors, Directors and scientists of ICAR institutes from the region, former members of ASRB, other eminent scientists, retired ICAR scientists, agriculture company representatives among others during the next two days.

## Awards and Recognitions

### NAARM Awarded for Digital Media Initiatives

The academy won the second prize of PRSI National Award – 2017 in the category of “Digital Media – Best Viral Marketing Campaign – 2017”. The digital online live products such as MOOCs, AHP Analyser, AICRP Information System, Research Concept Writer, Digital Repository, TMIS, NAARM Geospatial Library, GIS based DSS on Retail Outlet developed and propogated by the Academy were recognized. The award was presented during its 39<sup>th</sup> All India Public Relations Conference –



*Smt G. Aneeya, Dr D. ThammiRaju, and Dr V.V. Sumanth Kumar (L to R) receiving PRSI National Award – 2017 in the category of Digital Media- Best Viral Media Campaign*

2017, Visakhapatnam by Sri Ganta Srinivasa Rao garu, Hon'ble Minister for Human Resouces Development, Govt of Andhra Pradesh, in the presnce of Shri M. Srinivasa Rao, Hon'ble Member of Parliament, Anakapalli of A.P. and other officials of PRSI. The award function held on 15<sup>th</sup> December, 2017 at Hotel Novotel, Visakhapatnam, was attended by Dr D Thammi Raju, Dr V. V. Sumanth Kumar and Smt G.Aneeya from the academy.

### Best Paper Award

Dr P. Krishnan, Principal Scientist (Agricultural Research Management), Research Systems Management Division, NAARM received the **Best Paper Award** under the theme of Fisheries Trade, Policy and Governance during the 11<sup>th</sup> Indian Fisheries



*Dr P. Krishnan receiving the honours from Dr K. Gopakumar,*

*Former DDG (Fisheries), while Dr KV. Devaraj, Former VC, UAS, Bangalore; Dr JK. Jena, DDG (Fisheries), ICAR; Dr Gopalakrishnan, Director, ICAR-CMFRI; Dr Mohan Joseph Modayil, Retd. Member, ASRB; Dr CN. Ravishankar, Director, ICAR-CIFT look on.*

and Aquaculture Forum (IFAF) held at Kochi during 21-24 Nov 2017. The triennial event was jointly organized by Asian Fisheries Society (Indian Branch) and ICAR-Central Institute of Fisheries Technology (CIFT), Kochi.

### ISEE Fellow Award

Dr Surya Rathore, Principal Scientist received the Indian Society of Extension Education Fellow Award during National Seminar on Doubling Farmers' Income and

Farm Production through Skill Development and Technology Application at Bihar Agricultural University, Sabour on 30-11-2017.

### Best Oral Presentation Award

Dr Ahire Laxman, ACTO received Best Oral Presentation Award and Outstanding Achievement Award in the National Conference on Promoting & Reinvigorating Agri-Horti Technological Innovations (PRAGAT-2017) held on 11-12

November 2017 at Dhanbad organized by Academy for Environment and Life Sciences and Bulletin of Environment, Pharmacology and Life Sciences.

### First Grant from a New Donor Award

Dr V.V. Sumanth Kumar, Scientist was awarded "First grant from a new Donor" for the project funded by AP State Skill Development Corporation, during ICRISAT Annual Day



Celebrations, and the certificate has been received by DG, ICRISAT on behalf of Dr V.V. Sumanth kumar on ICRISAT Annual Day on December 11, 2017.

## Awards for PGDMA students

EIMA AGRIMACH INDIA 2017, the only business to business event of its kind offering a single venue interface between Indian & global players in the agri-machinery sector was organized jointly by FICCI, FEDERUNACOMA in partnership with Ministry of Agriculture & Farmers Welfare and Indian Council of Agricultural Research, the event is inspired by EIMA International, the second largest exhibition and conference on farm mechanization in the world. It was Conducted during 07-09 December 2017 at ICAR- Indian Agriculture Research Institute, Pusa, New Delhi. Delegates from many countries participated and exhibited their Agricultural machinery and their innovations in other farm implements. As a part of the conference, a competition - "Gamechangers in Indian agriculture" was organized in which many students from



various Top Agri-Business Management Schools and Agriculture Universities participated.

Two teams from ICAR-NAARM participated in the event and bagged **SECOND** (Team Members: Ms. Sayyeda Salima Asra, Mr. Romit Kumar Singh, Mr. Rahul Kumar Singh Ms. Merin Maria Thomas, Ms. Sruthy Antony,) and **THIRD** (Team Members: Mr.Dhivagar B, Mr. Yogesh R, Ms. Anushree, Ms. Manjushree SN, Mr. Shailendra Nageshwar ) prizes. Second prize winning team made a presentation on: "BIOCHAR, Agent for Smart Agriculture"

And, the third winning team made a presentation on: "Making Agriculture Better and Smarter by Adopting PPP Model in Precision Agriculture".

## Research

### Research Project on "Documentation of Success Stories of Agri-graduates turned Entrepreneurs"

XSM Division got one Research Project entitled, "Documentation of Success Stories of Agri-graduates turned Entrepreneurs" funded by Education Division of ICAR. PI: Dr Surya Rathore, Co-P.I.: Dr VKJ Raghvendra Rao & Dr B. S. Sontakki [Budget: 2.9 Lakhs]

RSM Division got one Research Project entitled, "Rising StartUps of Agri Entrepreneurs : A Success Story " funded by Education Division of ICAR. PI: Dr Manju Gerard, Co-P.I.: Dr K Srinivas [Budget: 3.96 Lakhs]

### Integration of Online certification module for Online programmes (under TELAgE project)

In order to avoid delay, human error in printing and saving resources, the e-learning platform of online programmes is innovatively redesigned to generate online certification based on fulfillment of certain criteria by the successful online participants. Entire certification process is automated to facilitate generation of Online certificates. Suitable work-around is established in e-learning portal to

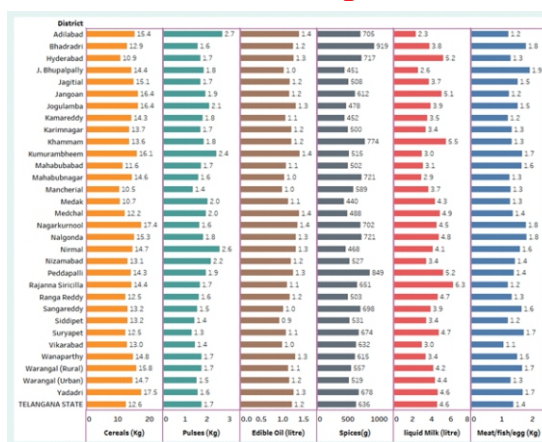


*Dynamically generated certificate*

generate certificates dynamically based on preset conditions. Two types of certificates were generated viz. certificate of participation and certificate of completion based on the level of learner's participation in the course. For more authenticity, the UR code is also embedded in certificate. This is first-of-its-kind in the history of NAARM to generate online certificates.

### Consultancy Project on "Food Consumption in Telangana State-2017"

The Academy conducted consultancy project on "Food Consumption Pattern in Telangana State-2017" sponsored by Government of Telangana State through PJTSAU, Hyderabad. Survey of 6200 households across all 31 districts of the State covering both rural as well as urban area was done using GPS-enabled tablet-based survey instrument. In the study, total 132 food items were covered. The per capita monthly consumption of different food items and total



*Fig. District-wise monthly per capita consumption of food items in Telangana State*

expenditure on food were also estimated for each district. The snapshot of consumption of different food groups in each district of Telangana state is given in the figure. The study would be helpful to the policy makers, and the Government in planning the domestic demand along with other production related factors.

The average monthly per capita consumption (MPCC) of cereals in Telangana is 12.6 Kg, with rice

comprising about 80 percent. Tur has maximum share (41%) in total MPCC of pulses (1.74 kg). Sunflower oil is the main edible oil preferred by the population. Ginger (146 g), tamarind (141 g) and dry red chilli (98 g) are the major spices consumed in the state. The MPCC of liquid milk is about 4.6

litres. The consumption of non-vegetarian items is about 1.38 kg. Among vegetables, onion and tomato occupies major share with about 1 kg MPCC. The final report has been submitted to the sponsoring agency. The same can be accessed online through [DOI: 10.13140/RG.2.2.24855.68008](https://doi.org/10.13140/RG.2.2.24855.68008)

## NAARM Develops Online Project Management Tools

Research concept writer and project logframe writer were developed using PHP, MySQL, Bootstrap, JavaScript, CSS. Web based open source software applications for conceptualization of research project and writing research projects bit by bit takes through various steps in a guided manner. The 'Research Concept Writer' was launched on 5<sup>th</sup> October 2017 at SVVU, Tirupati, while 'Project Logframe Writer' was launched on 14<sup>th</sup> December 2017 at NDRI, Karnal.



At present, more than 500 scientists / academicians in India, USA and Bangladesh are using these applications. While using, the software will trigger ideas and interactive discussion during the journey through various steps. The software also work as wonderful classroom teaching tool, and are available on following links;

<https://naarm.org.in/dwrp/>  
<https://naarm.org.in/logframe/>

## Capacity Building Programmes

### Project Prioritization, Monitoring and Evaluation (PME) of Agricultural Research Projects

A training programme on, “Priority setting, Monitoring and Evaluation (PME) of Agricultural Research Projects” was held at NAARM during 06-11 Oct 2017 in order to sensitize the participants on the concepts of PME in ICAR and equip them with various techniques of PME in different areas of agricultural research. A total of 15 participants from various ICAR institutions and State Agricultural Universities participated in the programme.



Apart from various interactive sessions and hands-on exercises, the training also included a Video Conference session with a faculty from Indira Gandhi National Forest Academy, Dehradun. The participants were introduced to “Participatory Action Plan Approach (PAPA)” for identifying actionable points after return their work place. The programme was coordinated by Dr K. Srinivas and Dr P. Krishnan from Research Systems Management Division of NAARM.

### Policy Dialogue on Mainstreaming Biodiversity into Inland Fisheries held at NAARM

A Policy Dialogue on mainstreaming biodiversity into inland fisheries was held at NAARM during 28-29 Nov 2017. The meeting was organized by the National Biodiversity Authority, Chennai jointly with NAARM, wherein eminent researchers from ICAR, State Agricultural Universities, other central and state research institutions; senior functionaries from state fisheries departments, state biodiversity boards; NGOs and policy makers deliberated on the core biodiversity concerns in the inland fisheries sector. Dr Dilip Kumar, Former Director, CIFE and Chairman of the Technical Committee for drafting the Inland Fisheries Policy for Government of India presented an overview of the draft policy and indicated that the current dialogue would help in identifying and accommodating specific concerns pertaining to biodiversity.



*Panel of Experts who participated in the Policy Dialogue on mainstreaming biodiversity in Inland Fisheries and Aquaculture*



*Panel of Experts who participated in the Policy Dialogue on mainstreaming biodiversity in cold water fisheries*

The focus area of deliberations on the first day was inland capture and culture fisheries, while on the second day it was cold water fisheries. Dr SD. Tripathi, Dr Maniranjana Sinha, Dr KK. Vass, Dr VR. Chitranshi, Prof. Dinesh K Marothia, Dr VV. Sugunan, Dr SK. Soam, Dr KK. Lal and Dr AK. Singh shared their experience and expertise during the deliberations. Prof. Brij Gopal, Dr RS Chouhan and Dr Bhalki provided their insights on the policy gaps based on their studies.

Dr Thompson Jacob, Consultant with Centre for Biodiversity Policy and Law, NBA provided an overview of the enabling provisions of the Biodiversity Act and moderated the deliberations. Dr P. Krishnan, Principal Scientist coordinated the event at NAARM.

## Training programme on Advanced Analytics in Developing Agricultural Market Intelligence

A Winter School Programme on “Advanced Analytics in Developing Agricultural Market Intelligence” sponsored by ICAR was conducted at ICAR-NAARM during Nov. 14– Dec. 04, 2017 with the following objectives:

- To acquaint the participants with advancements in the field of market intelligence,
- To impart skills in designing survey instruments and conducting surveys,
- To make the participants having practical exercises in handling and analyzing the data using advanced statistical software, and
- To equip the trainees with advanced statistical methods used in marketing intelligence.



Nineteen participants have attended the training programme. About 16 of them were from Agricultural Universities. The training modules includes Advances in data collection, Price forecasting, Modelling volatility, Big Data Analytics, Marketing information system, Social marketing tools, Marketing integration and ICT in agricultural marketing. The training also includes hands-on sessions on data analytics using SAS and R. Guest faculty from Market intelligence cell have shared their experience about the methodologies employed, funding and implementation, and stakeholders' feedback and expectations. Dr P.G. Chengappa, Chief Guest of the valedictory programme expressed the need for setting up

## Training programme on Enhancing Efficiency and Behavioural Skills of Stenographers Grade-III, PA, PS, PPS and Sr. PPS of ICAR

The week-long training programme on “Enhancing Efficiency and Behavioural Skills” for Stenographers Grade-III, Personal Assistants, Private Secretaries, and Principal Private secretaries of ICAR was organized at NAARM from Oct. 25 to 31, 2017. The main objectives of this training programme is to enhance efficiency with extended capabilities to achieve desired output and result in achieving the organizational excellence, and to impart behavioural skills which desirous of organizational needs and healthy working environment. Out of 34 registered trainees for the programme, stenographers grade III are – 4; PAs – 16; PS -13; and we have only one PPS. They are from 24 ICAR institutions belonging to six major SMDs of ICAR i.e., crop science, Ag. Engineering, animal science, Fisheries science, NRM, Horticulture science along with IP &TM. Best guest faculty were drawn to deal with topics like organizational

behaviour, self-motivated and behavioural aspects, excellence through inner peace, Enhanced attitude and behaviour, emotional intelligence, inter-personal communication skills, etc. The pedagogy included hand-on experience, practical exercises, interactive lectures, etc. A visit to AADHAAR office, where the applications of aadhaar were indepth explained to them. The participants have highly benefited of this exposure visit. Hand-on learning session was organised on FMS / MIS, PFMS. The participants took keen interest in all the learning sessions and expressed their complete satisfaction in their feedback. NAARM Director, Dr Ch. Srinivasa Rao awarded programme certificates to all the participants during the valedictory session. Programme Directors for this programme were Mrs G. Aneeja, ACTO and Mr K.R. Ghanshyam, AAO.

## Training Programme on Good Practices in Extension Research

Extension research has long played a significant role in maximizing the utility of socio-technological interventions. Extension research has evolved over the years by integrating scientific research methods and tools from other social sciences. However, the methodological evolution has stagnated in the last few decades thereby producing insignificant outcomes. Quality and relevance of extension research, therefore, has been the subject of serious concern. Further, evidence-based extension research with uncompromised methodological rigour can provide significant policy-oriented outputs.

Reorienting extension research is the need of the hour. It needs coordinated approach by integrating state-of-the-art methods from other social sciences to improve the utility and visibility of extension research outcomes. This training programme is organized from Dec. 11-16, 2017 aimed at developing the critical abilities of extension professionals to conduct quality research and evaluation. The major objectives were:

- To equip participants with knowledge and skills needed for conducting impact-oriented and quality extension research and evaluation;
- To provide hands-on practice in writing convincing research proposals in extension; and
- To facilitate networking among the participants for inter-institutional research in extension

The programme followed modular approach with two modules of 3-days each, namely i) Starter module: Basics of extension research – scientific approach, research process, designs, measurement, sampling frameworks, data collection methods and techniques, data analysis (including software) and interpretation and ii) Path finder module: Advanced research methods, ethical considerations, writing convincing research proposals and high quality research papers and other publications.

The programme intends to use a blend of interactive

approaches that include reflection of participants' prior knowledge and experience, card exercises, group work and hands on experience with data analysis using appropriate software, interspersed with few focussed presentations to

introduce the methods. The training programme was conducted for 21 participants from ICAR and SAUs. The Programme Directors were Dr Bharat S. Sontakki and Dr Surya Rathore.

## Short Course on Emerging Tools and Techniques for Agricultural Knowledge communications

This ICAR sponsored training programme was conducted from Nov. 1-10, 2017 to upgrade the knowledge and skills of agricultural professionals for sharing of knowledge management process in research, education. The training programme has been designed by the Academy in the present era of Digital technology led communication; the dissemination of agriculture knowledge faces certain challenges due to involvement of variety of stakeholders such as scientists, farmers, extension functionaries, inputs suppliers etc. The topic covered such as Open access tools for agriculture knowledge communications; Blogs, database creation and databases and internet resources, ICT Role in Agriculture Knowledge Management, Geospatial Knowledge Management, CMS Content Management and E-learning, Expert System language, Biostatistics and



Algorithms, VDSA, ODK (Open Data Kit) and data verse, Patent search databases, Bioinformatics and big data and cloud computing in agriculture, etc. Library information system, OERs and on line collaboration tools. Open source tools, social media and their applications. A comprehensive training programme has been designed. It encompasses a range of ICT mediated applications, data management tools, knowledge management initiative in ICAR and web based applications in a networked environment for the data sharing through open source knowledge management tools which will be very much useful to the ICAR/SAU Scientist. There are 13 participants were participated in the training programme. The Course Director was Dr M. Balakrishnan where as Dr S.K.Soam and Dr P.D.Sreekanth were Course Coordinators.

## Training on Software's (FOSS) – QGIS, ILWIS & R

The training programme on 'Geospatial Analysis for Natural Resources Management using Free and Open Source Software's (FOSS) – QGIS, ILWIS & R' was organised during November 16-25, 2017. Total 13 Scientist/Faculty/ Technical Officers and above cadre working in the area of Natural Resource Management from ICAR institutes, State Agricultural Universities and KVK's have participated in this training programme. The training topics covered were mainly on introduction to geospatial technologies in agriculture, relational database and geodatabases concepts



for GIS, Introduction to GIS, GPS and remote sensing, exploring data from open source platforms for geodata, spatial database design and implementation using quantum GIS open sour software, Spatial analysis like clipping, joining, buffering, interpolation, krigging etc., image processing and land use land cover using ILWIS & R open source softwares. As a part of course curriculum, arranged institutional visit to National Remote Sensing Centre (NRSC), Balanagar, Hyderabad to know about their research activities and about Bhuvan portal.

## Off-campus Training Programmes on 'Developing Winning Research Proposals'

Two training programmes on 'Developing Winning Research Proposals' were organised for 40 faculty members of Sri Venkateswara Veterinary University, Tirupati from Oct. 4 to 6, 2017, and 25 faculty members of National Dairy Research Institute, Karnal from Oct. 13 to 16, 2017 with the following objectives:

- To develop the skills for writing research proposals that can win funds from donors focusing on the needs of the stakeholders.

- To give practice in writing various components of a research proposal.
- To explain the use of log frame in research programme planning.
- To develop a good project design and estimate that is rationally accepted.

The programme directors for above two programmes were: Dr S.K. Soam and Dr Ch. Srinivasa Rao

## Massive Open Online Course on Teaching Management

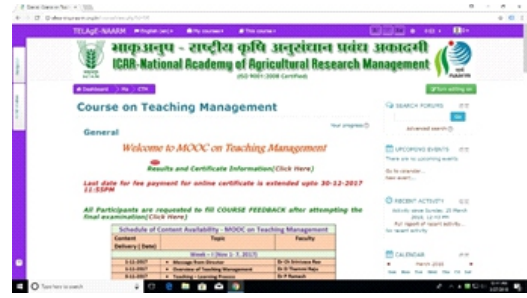
The Academy successfully organized one-month **MOOC on Teaching Management**, third in series, as a part of research project on *Asynchronous Learning in Agricultural Higher Education through MOOCs: A Case Study*. The objective of

this online course is to make participants understand various dimensions of teaching management and develop effective teaching styles for quality education. The programme had attracted 982 participants from 231 institutions related to

Agriculture (70), Veterinary Science (37), Dairy (6), Fishery (9), Horticulture (8), ICAR (26), General Universities (37), Govt. Organisations (24) and Private Organisations (14). The online programme recorded a success rate of 52.55% and earned Rs 4.41 lakhs through certification charges.



MOOC (online) participants interacting with Programme Director at Shivamogga (off line)



## Training Programme on “Web Based Educational Content Management

The training programme on “Web Based Educational Content Management” was organized during Oct 4 -123, 2017 under TELAge project with the objective to sensitize participants on the concept of E-Learning (EL) and its practice with emphasis on open source and to provide an insight into different methods of teaching and learning through Technology Enhancements. The programme was designed to impart practical training on effective teaching using e-media. Thirteen participants representing ICAR(1), SAU (11) and NGO(1) were attended. More emphasis was given on practical experience on e-



Dr. Ch. Srinivasa Rao, Director, ICAR-NAARM, addressing the participants



Participants feedback during Valedictory Programme

learning tools, video production, editing and publishing process, animation techniques, video scripting and open education resources. Apart from this two field visits were conducted namely, Educational

Media Research Center (EMRC), Osmania University and MedRec, Somajiguda. These visits exposed the participants on video editing and publishing on Academic curriculum. The trainings facilitated the participants to develop digital content modules on Azolla production, Tomato cultivation, Formation of cooperative society, Control of mastitis and Handling Vetero-legal postmortem examination.

## Management Development Programme on Leadership Development (a pre-RMP Programme)

Management Development Programme on Leadership Development (a pre-RMP Programme) was conducted during December 12-23, 2017 for the senior managers of NARS. Dr. RVS Rao, Head, HRM & Dr. GRK Murty, principal scientist of the academy organized this pre-RMP Programme in which a total of 28 participants from 12 states participated. The major topics covered during programme are Emotional Intelligence, Vigilance Management, Personality profiling for leadership development, Priority Setting, Monitoring and Evaluation (PME), Role Perception, Frame work for Transition from Scientist to Research Manager, Using FMS/IMS for managerial decision making, Leadership Challenges – Experience sharing, Motivational skills for leadership, Leadership Attributes, Leadership Issues, Leadership



excellence, Communication for Leadership, NAARM – Centre for Agri-Innovation, Visit to Incubation Centre (ICRISAT) - Managing Technology incubation centre, Personal Planning and Effectiveness, Research Programme Prioritization – AHP, Positive Thinking and How to face

selection process for Leadership, Public Procurement and Contract Administration, ICAR Data Management Policy, Stress management, New vistas in Technology Enhanced Learning – A case of NAARM, Leadership instrument debriefing, Issues of Governance InTechnology Management in NARS. Apart from classroom teaching, all the trainees were given exposure to regular yoga sessions in the early morning.

## Farmers FIRST Program Training on Methodological Framework by ICAR-NAARM Project Team

The Farmer FIRST initiative has been launched by ICAR to move beyond the production and productivity; to privilege the smallholder agriculture; and complex, diverse and risk prone realities of majority of the farmers through enhancing farmers-scientists interface. The acronym “Farmer FIRST” means the farmers' Farm, Innovations, Resources, Science

New Delhi funded the project Farmer FIRST Programme for ICAR Institutes/ Agricultural Universities.

The Project Management Team ICAR-NAARM along with ICAR- NIAP, ICAR-IASRI and ICAR-DKMA are involved in management, capacity building, impact assessment, content development and showcasing of the technological

interventions implemented by 51 FFP institutes all over the country in 23 States. As a part of this, NAARM team of Dr P.Venkatesan, PI, Dr B.S.Sontakki, Co-PI and Dr N Sivaramane, Co-PI and organized and coordinated. The

training workshops on “Methodological Framework for Implementation of Farmer FIRST Programme” for the benefit of 236 participants from 51 FFP institutes of 23 states with the support of host institutes as depicted below.

Sl.No.	Name of the Centre	Duration	Number of FFP Institutes	Number of Participants
01.	ICAR-CISH, Lucknow	3-6 <sup>th</sup> Oct 2017	11	45
02.	TANUVAS, Chennai	10-13 <sup>th</sup> Oct 2017	12	43
03.	ICAR-IARI, New Delhi	23-26 <sup>th</sup> Oct 2017	10	42
04.	ICAR-IISWC, Dehradun	6-9 <sup>th</sup> Nov 2017	8	57

These training workshops covered the following content

- Overview of FFP
- Participatory Technology Development
- Select PRA tools
- Impact Assessment and Qualitative and Quantitative analysis
- Content Development and Management

Showcasing of intervention outputs and outcomes

Process Documentation

The above contents were delivered with lectures, interactions, video modules, field visits, case study and discussions. The programmes were well received by the participants with impressive feedback on the content, relevance, design, delivery and learning.

## Let's listen to farmers: A workshop on farmers' feedback on doubling farm income by 2022

In a transition economy like India, consistent performance of farm sector of paramount importance. Ensuring sustainable livelihoods of all sections of the country including farmers is very much a need in times of changing global equations due to global trade and climate change. Thus, Doubling Farmers Income (DFI) by 2022 has become an explicit policy statement and intent of the government to adapt to these challenges.



As a step towards assimilating experiences of farmers and placing the same in front of policy makers, a farmers' workshop was organized by ICAR-NAARM during 22-23 December 2017. The overarching goal of the workshop is to acknowledge the fact that farmers are 'partners' in agricultural development agenda and they do and can contribute immensely in planning and implementation of suitable action plans. Partner farmers of the Farmers FIRST programme were the delegates for the workshop. 200 delegates including about 139 farmers from 25 states participated in this workshop. For the inaugural session Dr V.P.Chahal ADG (Agri.Ext.) was the guest of honour while Dr V.Praveen Rao was the Chief Guest. The programme was presided by Dr Ch.Srinivasa Rao, Director of ICAR-NAARM.

Four concurrent technical sessions were organized where the farmers of a group of states convened for two days shared their views towards doubling farmers' income by 2022. The farmers narrated their experiences in augmenting their

resources and also flagged issues and challenges in achieving the targeted double income. The technical sessions were chaired by Dr V.P. Chahal, ADG (Agri. Extn), Dr M.B. Chetti, ADG (Education), Dr S.K.Singh, Director of DKMA, ATARI Directors and the Directors from IIOR, IIRR and CRIDA. Hon'ble Minister of State for Agriculture and Farmers Welfare, Govt. of India, Shri Gajendra Singh

Shekhawat interacted with the farmer delegated along with Dr N.S. Rathore, DDG (Education) on the second day of the workshop.

The plenary session on 23 December 2017, was presided by the Hon'ble Minister of State for Agriculture and Farmers Welfare. He highlighted the importance of the day, as it coincided with the birth anniversary of former Prime Minister of India Sh.Chaudhary Charan Singh and is celebrated as “Kisan Diwas”. He highlighted the importance of farmer in the developmental path of the country. Earlier Dr N.S.Rathore, DDG (Education) highlighted to the farming community the importance to do intelligent and informed farming besides praising the contributions of the farmers in making India proud with self-reliance in many ways. Dr Ch.Srinivasa Rao, Director ICAR-NAARM spoke on the importance of such a workshop at a crucial juncture. Earlier, the Joint Director of the Academy Dr S.K. Soam welcomed the guest and the farmer delegates. The workshop was conducted and convened by Dr B.S. Sontakki and Dr P. Venkatesan. At the end, all the farmers were felicitated by the Minister.



## Other Events

### Accreditation of PGDMA by National Board of Accreditation

The Expert Team from National Board of Accreditation visited the Academy for on-site evaluation of the ongoing Post-Graduate Diploma in Management-Agriculture (PGDMA) program. The team interacted with all the Faculty, Guest Faculty and students of both the batches. Some of the PGDMA Alumni, parents of the

students as well as industry-recruiters were also invited to give their feedback about the programme to the team. After comprehensive evaluation of different facets of the PGDMA program, NBA approved the accreditation status to the program. This is a new feat for the PGDMA@ICAR-NAARM.

### Financial and PFMS review meeting

Shri S.N. Tripathi, IAS, Additional Secretary & Financial Adviser (DARE/ICAR), took a review meeting with Directors of ICAR institutes located in Hyderabad in the afternoon of 27-10-2017 at ICAR-NAARM, Hyderabad. The focus of this meeting was to emphasize the need for implementation of PFMS by ICAR and its units located throughout the country. Directors and Finance & Accounts Officers of all local ICAR Institutes viz; ICAR-NAARM, ICAR-CRIDA, ICAR-IIRR, ICAR-IIMR, ICAR-IIOR, ICAR-ATARI, ICAR-DPR, ICAR-NRCM have participated in the above interactive meeting with AS&FA, DARE/ICAR. At the outset Director, ICAR NAARM welcomed the AS&FA, DARE/ICAR, Directors and Finance & Accounts Officers of the participating institutes and expressed happiness over his maiden visit to NAARM after assuming charge as AS&FA, DARE/ICAR.

The AS&FA, DARE/ICAR in his opening remarks informed

that PFMS is a tool for transparency in financial management system and is operated in three modules i.e, EAT, Expenditure, Advance and Transfer. All ICAR Institutes have to implement PFMS in full and there is no substitute for PFMS. He informed the house that 1226 agencies are to be mapped under ICAR and however only 928 have been mapped so far. He also informed that participating Institutes that funds for the 4<sup>th</sup> quarter should not be released to those ICAR Institutes, which do not comply with PFMS implementation in Toto. He reviewed the status of PFMS compliance by all the Hyderabad based Institutes. All institutes presented the status, and pointed out the problems faced by them while implementing the PFMS in their respective institutes. AS&FA insisted the Institutes to upload the historical data and match the progressive expenditure until date, and advised to share screen shots through mail when problems are encountered. The meeting ended with vote of thanks to the chair.

### Krishi Kala Utsav

The Academy organized 5 days “**Krishi Kala Utsav**” during October 2017 with the objective to create works of art to capture agricultural, livestock and fisheries related activities which can represent the walls of NAARM buildings – Faculty Blocks, Halls of Residences, Guest Houses and Offices.



*Concept presentation by one of the participants*

The team of artists led by Shri Deepak Khogre, ACTO (Artist), ICAR-CIFE, Mumbai and Dr. Anant Nikam, Professor, J.J School of Arts, Mumbai were invited to create customized works of art - paintings. Twenty artists with a background of painting, murals and art design etc. were

attended the workshop and produced 44 canvas paintings depicting various themes in agriculture and allied sector. Every participant presented the theme of his or her painting and received appreciation certificates from the Academy. The canvas paintings have been placed in different places of the Academy. This workshop was initiated by Dr. M. Krishnan, Head ESM Division

in view of his earlier experience of similar outputs by JJ School of Arts at CIFE, Mumbai. Mr. P. Namdev, ACTO and Dr. S. Senthil of this Academy has facilitated the entire programme.

### Happenings @ Centre for Agri-Innovation

#### Cohort Finalization Event of Agri Udaan, Food & Agribusiness Accelerator 2.0

Out of the 579 startup application received for Agri Udaan, Food & Agribusiness Accelerator 2.0, the top 40 startups were shortlisted and invited for a cohort finalization event to NAARM campus on 9<sup>th</sup> & 10<sup>th</sup> of October 2017 and were made to pitch before the panel comprising of eminent mentors from business, agriculture, technology, industry,



investors and partner organizations. Based on the average of all the evaluators top 10 startups were taken to cohort, namely: Gen Agritech, Muddy Puddle Foods, Delmos Research Pvt. Ltd., GrowYi, Intello Labs, Yukti Harvest Pvt. Ltd. Jivabhumii, RF Wave Technologies Pvt. Ltd., Agricx Lab, and Odaku.

## (I)Capacity Building workshop, Agri Udaan, Food & Agribusiness Accelerator 2.0

A four day capacity building workshop was held for the shortlisted cohort of Agri startups of the Agri Udaan, Food & Agribusiness Accelerator 2.0



Capacity building workshop for Cohort of 10 startups from 13th - 16th November 2017 at a-IDEA, Technology Business Incubator of NAARM.

## World Food India, Startup Awards: a-IDEA,

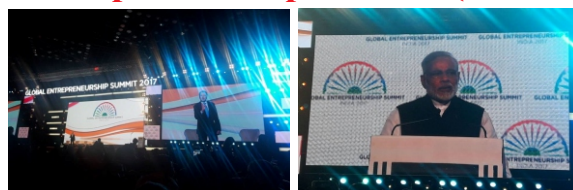
Technology Business Incubator of NAARM represented as a knowledge partner for the startup awards event of the World Food India, organized by Ministry



of Food Processing Industries (MOFPI) in association with CII, Yes Bank and startup India on 4<sup>th</sup> Nov 2017.

## Global Entrepreneurship Summit (GES 2017):

a-IDEA, Technology Business Incubator of NAARM, was one of the very few incubators selected by NITI Aayog to represent the Global Entrepreneurship Summit (GES



2017) organized by NITI Aayog in association with Govt. of the United States of America and Govt of Telangana, during 28<sup>th</sup>-30<sup>th</sup> Nov 2017

## World Soil Health Day

World Soil Health Day was celebrated by ICAR-NAARM, Hyderabad at Vemulanarva Village, Kesmpet Mandal, Ranga Reddy district on 5<sup>th</sup> December 2017 to stress the importance of soil as a critical component of the natural system and as a vital contributor to the human commonwealth through its contribution to food, water and energy security and as a mitigator of biodiversity loss and climate change.

In this programme, about 100 farmers (Vemulanarva and Baljarala Thanda) including NAARM PGDMA students and scientists along with Agricultural department personnel have participated. During the programme, awareness about application of soil health card based recommendation of fertilizer was created. Video on soil health was screened before

the farmers ensuring its importance.

Mr. Anjaiah Yelganamoni, MLA of Shad Nagar graced the occasion and Dr Venku Reddy, President and Executive Director of PRDIS was the guest of honour, who created awareness about the Government sponsored soil health based programme.

Dr Ch. Srinivasa Rao, Director of ICAR-NAARM presided over this occasion with the remark on the importance of soil testing. He emphasized on integrated management of soil, water, vegetation and biodiversity to enable sustainable agricultural production that is good for the environment and farm profits. Dr V.K.J Rao coordinated and organized the programme with the support of XSM team of ICAR-NAARM.

## Celebration of Women Farmers' Day & World Food Day

In order to empower women farmers in India, the Ministry of Agriculture and Farmers' Welfare has decided to celebrate Women Farmers' Day on October 15th every year, and also, World Food Day on October 16<sup>th</sup> worldwide. Accordingly, Women Farmers' Day & World Food Day were celebrated on October 15, 2017 by Extension Systems Management Division of the Academy. This event was organized in Village Baljirala Tanda under Vermulanarva Village, Keshampet Mandal of Ranga Reddy district of Telangana. On this

occasion, Women farmers were enlightened with knowledge related to involvement of nutritive food in their diet and various non -farm entrepreneurial ventures that, women farmers can go for in order to supplement their farm income. For this, various resource persons invited from National Institute of Nutrition, Indian Institute of Millet Research and National Institute of Rural Development & Panchayati Raj along with Dr Surya Rathore & Dr V.K. Jayaraghvendra Rao. Around 65 Women and 20 Men attended the programme.

## Agriculture Education Day

The ICAR- National Academy of Agricultural Research Management celebrated the Agriculture Education Day on 3<sup>rd</sup> December 2017. To commemorate the Birth Day of Bharat Ratna Dr Rajendra Prasad, the First President of Independent India, the Ministry of Agriculture, Government of India celebrate this day as Agriculture Education Day. Dr Rajendra Prasad happen to be the First Agriculture Minister of the country; the main purpose of agriculture education day is to attract talent towards agricultural education.

Several inter school competitions on painting, debate and elocution were done involving seven High Schools in Rajendranagar, Hyderabad, about 200 school students participated in these competitions. In the morning 3K Run was organized on Himayat Sagar Road in Rajendranagar, about 400 college and school students participated in the run. During formal ceremony, Dr S.K. Soam, Joint Director (Incharge) & the Nodal Officer of the event shared his

research results explaining that during perception analysis, the respondents found BSc (Agriculture) better than BSc (Biology) and B. com on many parameters and criteria.

Dr David Bergvisnson, Director General, ICRISAT, Chief Guest in certificate and prize distribution ceremony said that India has the challenges of malnutrition, lack of micronutrients etc for which top brains are required for innovative agricultural research, therefore talented students must join agriculture education, he said 'Jai Jawan Jai Kisan'.

## Vigilance Awareness Week Report

As per instructions from ICAR the vigilance awareness week was observed during 30.10.17-04.11.17 on theme 'My Vision- Corruption Free India'. The pledge on vigilance was adopted on 30<sup>th</sup> October. Dr SK Soam, Vigilance Officer coordinated the vigilance awareness week. About 150 staff, students and trainees took ePledge, the ePledge of the organization is presented below;

Several competitions were held, the results are given below.

**Elocution competition for college students:** About 220 BSc (Agric.) final year students from Tamil Nadu Agricultural University (TNAU) participated in the event (120 were from Vanavarayar Institute of Agriculture, and 99 were from Agricultural College and Research Institute, Trichy), the results are below;

- First Prize- Chavi Rawat
- Second Prize- Keerthana Krishna Kumar
- Third Prize- Gobinath Vijaya Kumar

**Debate competition for students of professional course:** About 50 PGDMA students of NAARM attended the competition and 12 students participated in debate competition, the results are below;

- First Prize- Anushree (PGDMA 2017-19)
- Second Prize- Aditya Pandey (PGDMA 2016-18)
- Third Prize- Siddarth Bhattacharya (PGDMA 2016-18)

## Participation / presentation of papers in Conference/ Workshop

- Dr Bharat S. Sontakki, Head, XSM Division attended SKILLS2017: International Conference –Leveraging Digital India for Rural Empowerment during 16 – 17 November 2017 at Dr MCR HRD Institute of Telangana, Hyderabad. He served as member of the International Advisory Board of the conference and provided expert advice on planning and conduct of the proceedings besides screening and review of abstracts for oral presentation and awards.
- Dr Ranjit Kumar, Head, ABM Division was invited as a Discussant in the Conference on “Green Revolution in Eastern India: Constraints, Opportunities and Way Forward” on Oct 09-10, 2017 at New Delhi, jointly organized by IFPRI and Tata Cornell Institute for Agriculture and Nutrition.

Dr Ch. Srinivasa Rao, Director, NAARM in his address emphasized upon the role of teachers and parents for motivating students for taking up agriculture education as career option. He also stressed that talented students can be an asset in providing quality food, livelihood security and develop secondary agriculture through innovative agri-business ideas.

The winners of several events were distributed the certificates. Mr G. Srikant, Xth class student of Government High School, Rajendranagar was the overall Champion in 3K run.

**Painting competition for school children:** About 100 students of class VIII to X of Krishi High School, EEI Campus, Rajendranagar participated, the results are below;

- First Prize- M. Bhavana
- Second Prize- T. Reni Rachel
- Third Prize- K. Keerthana
- Consolation prizes- E. Aishwarya, Syed Kaifuddin, M. Jahnavi

**Essay competition for faculty, officers and staff of NAARM:** About 15 persons participated, the results are below:

- Best Essay in Hindi- Dr A. Debnath
- Best Essay in Telugu- R. Praveen Kumar
- Best Essay in English- Dr GRK Murthy

Several other activities were also organized on the occasion which are listed below:

**Sensitization workshop on vigilance:** The Chief Guest- Shri PVK Ramana Prasad, Principal Chief Legal Advisor, Anti-Corruption Bureau, Govt. of Telangana delivered a lecture and distributed certificates to winners of various events. About 100 persons including staff from other ICAR institutes participated in the workshop.

**Gram Sabha at adopted village:** The vigilance awareness campaign was done at village Vemulanarva, the integrity pledge was taken in 'Telugu' language, and farmers were sensitized about digital initiatives of Govt. of India, which helped in curbing corruption in public life.

- Dr Ranjit Kumar, Head, ABM Division Chaired the Panel Discussion in one-day workshop on 'Promoting Pulses in Bihar' at Motihari, Bihar on 12 Oct 2017.
- Dr Ranjit Kumar, Head, ABM Division Co-chaired the Technical Session on 'Agribusiness and Market Reforms' in the Silver Jubilee Conference of Agricultural Economics Research Association at NAARM, Hyderabad on Nov 7-9, 2017.
- Dr Ranjit Kumar, Head, ABM Division attended Brainstorming Session on 'Emerging issues for socio-economic and policy research in Asian Rice-based Systems' jointly organized by PJTSAU and IRRI on 26 Dec 2017.
- Dr P. Krishnan Participated in the 11<sup>th</sup> Indian Fisheries and Aquaculture Forum (IFAF) held at Kochi during 21-24

Nov 2017, jointly organized by Asian Fisheries Society (Indian Branch) and ICAR-Central Institute of Fisheries Technology (CIFT), Kochi.

- Dr. P. Ramesh attended "International Meeting and Workshop on Building Perspective and Capacity to Measure Climate Change Impacts due to Changes in Agricultural Practices" during 1-2 November 2017 At Vijayawada, Andhra Pradesh and presented a lead paper on "Organic Farming towards Climate Change Adoption and Mitigation".
- Dr S. Ravichandran participated in MDP on "Business Analytics for Strategic and Tactical Level Decision Making" at IIM, Calcutta, organized during Dec. 18-22, 2017.
- Dr Surya Rathore presented a paper entitled, "Geographical Indications in Agriculture: A Single answer to Doubling Farmers' Income in National Seminar on Doubling Farmers' Income & Farm production through Skill Development and Technology Application at Bihar Agricultural University, Sabour during November 28-30, 2017.
- Dr M. Krishnan, Head, ESM attended 77<sup>th</sup> Annual Conference of the Indian Society of Agricultural Economics at Central Agricultural University, Umiam, Barapani, Meghalaya during 12-14, Oct., 2017
- Dr M. Krishnan, Principal Scientist attended the 25<sup>th</sup> Annual Conference of the Agricultural Economics Research Association at ICAR-NAARM, Hyderabad during 7-9 November, 2017
- Dr Sumanth Kumar, Scientist participated in International Conference SKILLS2017 at MCRHRD, Hyderabad during 16-17 November 2017
- Dr D. Thammi Raju, Principal Scientist participated in National Consultation on Fostering Faster Reach of Innovations from Aquaculture Research through Media;

### Chair/Co-chair/Resource person

- Dr B.S. Sontakki and Dr P. Venkatesan chaired and attended National Consultation Meet on "Faster reach of innovations from Aquaculture Research through Media: A Science Communication Perspective" on 27 October, 2017 at ICAR-CIFA Campus, Bhubaneswar.
- Dr P. Venkatesan was as a resource person for topic entitled "Tools for facilitation skills for community mobilization" in "Community Forestry and JFM" for the in-service SFS officers of State Forest Department conducted by Central Academy for State Forest Services, GOI, Ministry of Environment and Forest, Coimbatore on 31.10.2017.
- Ahire Laxman Co-Chaired a Technical Session during National Conference on Promoting & Reinvigorating Agri-Horti Technological Innovations (PRAGAT-2017) held on 11-12 November 2017 at Dhanbad organized by Academy

### Papers published:

- Ranjit Kumar, Sanjiv Kumar and PC Meena (2017) National Agricultural Market in India: Long Way to Solve the Agri-marketing Conundrum. *Indian Farming*, 67(11): 40-41.
- Ranjit Kumar and KV Raju (2017). Transforming Pulses Sector in India: How Can We Leverage Policies for Self Sufficiency? *SSRN Electronic Journal*. DOI

A Science Communication Perspective, CIFA, Bhubaneswar, held on 27-10-2017 and presented a paper on *Social Media as a strategic tool in Agricultural Research, Education and Outreach Organizations: Opportunities and Challenges*

- Dr D. Thammi Raju Principal Scientist attended 39<sup>th</sup> Public Relations Society of India Annual Convention and Received PRSI National Award – 2017 in the category of Digital Media- Best Viral Media Campaign award on behalf of ICAR – NAARM at Novotel Hotel, Vizag on 15-12-2017
- Gomathi P., M. Krishnan, Ramasubramanian, V., V. Saravanakumar, Swadesh Prakash and Neha W. Qureshi (2017, November) *Marine ornamental fisheries – A study on marketing in Ramanathapuram district of Tamil Nadu*, Paper Presented at 11<sup>th</sup> Indian Fisheries and Aquaculture Forum (11<sup>th</sup> IFAF), Asian Fisheries Society, Kochi, Nov. 21-24, 2017.
- Nishant Gaurav, K Srinivas, Subash S.P and P.D. Sreekanth, 2017. Assessing nutrient status and market potential for Fertilizers at district level using geospatial analysis, Silver Jubilee Conference of Agricultural Economics Research Association during 7-9 November, 2017 at ICAR-NAARM, Hyderabad.
- Sivaraman I., M. Krishnan and Ananthan P.S. (2017, November) *Governance of shrimp farming in India – some insights*, Paper Presented at 11<sup>th</sup> Indian Fisheries and Aquaculture Forum (11<sup>th</sup> IFAF), Asian Fisheries Society, Kochi. Nov. 21-24, 2017.
- Sivaraman I., M. Krishnan, Ananthan P.S. (2017, November) *BMPs for sustainable shrimp farming: A farmers' perspective*, Paper Presented at 11<sup>th</sup> Indian Fisheries and Aquaculture Forum (11<sup>th</sup> IFAF), Asian Fisheries Society, Kochi. Nov. 21-24, 2017.

for Environment and Life Sciences and Bulletin of Environment, Pharmacology and Life Sciences.

- Dr S. Senthil Vinayagam, Principal Scientist participated and deliver lecture during TELAgE workshop at TANUVAS, Chennai on 11-12-2017.
- Smt G. Aneja, ACTO attended a consultative meeting on "Agri-journalism programme" organized by National Institute of Agricultural Extension Management (MANAGE) on Dec. 5, 2017.
- Dr. Manju Gerard gave an invited lecture "Role of Intellectual Property Rights in leveraging Public Private Partnerships", in National Conference on "Food and Nutritional Security through Vegetable Crops in Relation to Climate Change", ICAR-IIVR, Varanasi, 9-11th Dec. 17.

10.2139/ssrn.3053809.

- Ranjit Kumar (2017). Stumbling agriculture in Bihar: Linkages with institutional mechanism and public investment. *SSRN Electronic Journal*. DOI 10.2139/ssrn.3054330.
- P.C. Meena, Ranjit Kumar, N. Sivaramane, Sanjiv Kumar, K

- Srinivas, A. Dhandapani and Elias Khan (2017). Non-Farm Income as an Instrument for Doubling Farmers' Income: Evidences from Longitudinal Household Survey. *Agricultural Economics Research Review*, Vol. 30: 127-138.
- Shakti Ranjan Panigrahy, Dilip Vahoniya and Sanjiv Kumar (2017). Production and Consumption of Marine Fish after Globalization. *Indian Journal of Economics and Development*, 13(4), 741-746.
  - Sibin C. Baby, B. Shashank Reddy and M. Balakrishnan (2017). Chipping the Problem: Nendran Chips in Kerala. *FIIB Business Review(FBR)*, Volume 5, Volume 6 Issue 3, July - September 2017 pp.18-20.
  - S. Rathore (2017) 'Performance of 60-day Cowpea in the Fields of Uttarakhand Farmers: An Adoption Study', *Indian Journal of Extension Education*, Vol. 53, No. 1, 2017. Pp. 111-118.
  - S. Rathore and V.K. Jayaraghvendra Rao (2017) 'Geographical Indications in Agriculture: A Single Answer to Doubling Farmers' Income and ARYA', National Seminar on Doubling Farmers' Income and Farm Production through Skill Development and Technology Application from November 28030, 2017. Souvenir and Abstract Book, BAU, Sabour & ISEE, New Delhi. Pp. 57. [ABSTRACT]
  - Alok Kumar and A.K. Jaiswal, (2017), Knowledge Level of students via capacity building programme on Scientific lac cultivation, processing, uses & their correlates, *Indian Journal of Extension Education*; Vol. 53, No.-1, (2017), Page No. 94-99.
  - Arun Kumar, Alok Kumar and K.P. Singh, 2017, Effect of split application of nitrogen on physiological maturity of rice (*Oryza sativa*), *International Journal of Pure and Applied Bioscience* 5(2): 960-970 (2017). doi: <http://dx.doi.org/10.18782/2320-7051.2857>
  - Vijay Sekhar and Aneeraja Guttikonda (2017). "Communication and connectivity: Key for smart cities development in India". Compendium of All India Public Relations Conference by Public Relations Society of India
  - P. Venkatesan and M. Sundaramari, (2017). Indigenous technical knowledge in little millet cultivation among "Malayali" tribes of India, *Journal of Environmental Biology*, Vol: 38: 1255-1260.
  - S. Rathore (2017). Performance of 60-day Cowpea in the Fields of Uttarakhand Farmers: An Adoption Study, *Indian Journal of Extension Education*, Vol. 53(1):111-118.
  - B. S. Yashavanth, K. N. Singh, A. K. Paul, and R. K. Paul, (2017). Forecasting prices of coffee seeds using Vector Autoregressive Time Series Model. *Indian Journal of Agricultural Sciences*, 87(6): 754-758
  - B.S. Yashavanth, K.N. Singh, and A.K. Paul, (2017). Genetic Algorithm Approach for Estimation of Parameters of Vector Autoregressive Models under Heteroscedasticity. *International Journal of Agricultural and Statistical Sciences*, 13(2): 615-621.
  - Satyanarayana Rao, R. V., Hanumantha Rao, K., Yashavanth, B.S., Indu Priya, M., Anwer, M.M., Srinivasa Rao, Ch. (2017). Strategic Thinking Ability of Scientists in The Indian Agricultural Research and Education System. *International Journal of Knowledge and Research in Management & E-Commerce*, 7(1):1-7.
  - H. Ravisankar, K. Sarala, D. Damodar Reddy and N. Srinivasa Rao (2017). Online Expert System on Indian Tobacco Varieties. *International Journal of Current Microbiology and Applied Sciences*. 7(1):2320-2326
  - D.T. Raju, G.R.K. Murthy, S.S. Vinayagam, (2017). Teaching Competencies of Newly Recruited Faculty of Agricultural Universities (AUs): An analysis. *Journal of Indian Education*, ISSN:0377-0435
  - G.R.K Murthy, D.T. Raju, S.S. Vinayagam, M. Krishnan, (2017). MOOC in Agriculture – An experiment, A Case Study. *CEMCA Newsletter*, 3(2).

### Book Chapter

- Kumar Alok, R. Kumar, R. K. Yogi, and R. Kumar (2017). Fruit Farming and Sustainable Livelihood Security: e-Resources. In: A.K. Dutta, and B. Mondal, (Eds.), *Fruits for Livelihood: Production Technology and Management Practices* Published by Agrobios (India), Jodhpur, India. pp. 541-552.
- Ch. Srinivasarao, Sumanta Kundu and B.S. Yashavanth, (2017). Soil Carbon Sequestration and its Potential in Mitigation of Climate Change. In B. Gangaiah, A. Kundu, K. Abirami, S. Swain, T. Subramani, and S.K.Z. Ahmed, (Eds.), *Organic Farming in Tropical Islands of India* (pp 268-280), ICAR-Central Inland Agricultural Research Institute, Port Blair.
- D. Thammi Raju., G.R.K. Murthy and B.S. Sontakki (2017) Social Media as a strategic tool in Agricultural Research, Education and Outreach Organizations: Opportunities and Challenges. Book Chapter in E-Souvenir: Fostering Faster Reach of Innovations from Aquaculture Research through Media; A Science Communication Perspective. Pp 70-74; Edited by P. N. Ananth, H.K. De, and J.K. Sundaray. (2017). ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar, Odisha India.

### **Technical Bulletin**

- Yogi RK, Kumar Alok and Jaiswal AK 2017. Lac, Plant Resins and Gums Statistics 2015: At a Glance. ICAR-Indian Institute of Natural Resins and Gums, Ranchi (Jharkhand), India. Bulletin (Technical) No. 17/2017. 01-72 pp.

### **Book Review**

- A book review of "Create, Copy, Disrupt: India's

Intellectual Property Dilemmas" by Prashant Reddy T and Sumathi Chandrasekaran, Oxford University Press was published by Kalpana Sastry R and Gerard Manju, Nov. 2017,

### **Souvenir**

- Ranjit Kumar, A Amarendra Reddy, Alok Kumar & N Shivaramane, 2017, Souvenir: Silver Jubilee conference of Agricultural Economic Research Association on Doubling farmer's income: Options & Strategies, Agricultural

### Invited Lectures / Lecture delivered:

- Dr M. Krishnan, Head, ESM Division Delivered Lecture on “Suitable models for rainfed aquaculture” in a training programme on Entrepreneurship Development in Rainfed Aquaculture at MANAGE, Hyderabad on 15/12/2017
- Dr Sumanth Kumar, Scientist delivered Guest lecture on IT applications in higher education at MANUU, Hyderabad on 5 December 2017.
- Dr Sumanth Kumar, Scientist delivered Guest lecture on Elearning and Educational Technology at MANUU on 3 November 2017.
- Dr D Thammi Raju, Principal Scientist was invited as Guest Speaker by Extension Education Institute, Hyderabad to deliver a talk on *Innovative ICT initiative in agriculture and allied sectors* as a part training programme on ICTs for Effective Knowledge and Extension Delivery on 7-10-2017
- Dr D Thammi Raju, Principal Scientist delivered a talk on *ICT in Livestock Extension – Research Evidences* in a Model Training Course on Improving the core competencies of Women Livestock Extension Professionals on 24<sup>th</sup>, October, 2017 at College of Veterinary Science, Gannavaram, Sri Venkateswara Veterinary University, Andhra Pradesh.
- Dr Bharat S. Sontakki, Head, XSM Division delivered guest lectures and conduct exercises on Scientific Communication at University of Agricultural Sciences, Dharwad on 27 November 2018.
- Dr D Thammi Raju, Principal Scientist delivered a talk on *Online Education in Agriculture* in a Model Training Course on “Capacity building of Extension Professionals on Emerging Digital Extension Strategies”, at Professor Jaya Shankar Telangana State Agricultural University, Hyderabad on 21-11-2017.
- Dr D Thammi Raju, Principal Scientist delivered lectures on *Innovative Teaching Methods and Oral Communication* as a part of training programme on

Early Career Motivation for faculty and Scientists of University of Agricultural Sciences, Dharwad on 28-11-2017.

- Dr S. Senthil Vinayagam, Principal Scientist invited to talk on *Competency enhancement for technology transfer* in a Model Training Course (MTC) on “Improving the core competencies of women livestock extension professionals”, organized by College of Veterinary Science, Gannavaram, Vijayawada on 27-10-2017.
- Dr S. Senthil Vinayagam, Principal Scientist invited to talk on *Grassroots level Innovations for rural entrepreneurship and Strategies* in a “Winter School on Farmers Empowerment and Entrepreneurship Development in Agriculture” organized by UAS, Bangalore on 06-11-2017.
- Dr VV Sumanthkumar delivered a lecture on “ICT Applications in Agribusiness” @ PJTSU Training programme on “Developing Competency for Harnessing New Agribusiness Opportunities for Doubling Farmers' Income” on 24<sup>th</sup> Nov 2017.

### Foreign Visit:

- Dr B. Ganesh Kumar, Principal Scientist, attended 2017 GFRA Scientific Meeting held in Incheon, South Korea during 25-27 October, 2017. He chaired a technical session on 'Socio-economics of FMD: Endemic and Non-endemic Settings' and also presented a paper on 'Economic Impact of Foot-and-Mouth Disease in India: An Evidence from Andhra Pradesh'.
- Dr Ranjit Kumar, Head, Agri-Business Management Division presented paper in the International Conference on 'Agriculture and Rural Transformation in Asia' at Bangkok, Thailand during December 12-14, 2017.

### Personnel

- Mrs. Radha Sujatha, Stenographer voluntarily retired from service on Oct. 4, 2017.
- Dr R. Kalpanan Sastry, Joint Director voluntarily retired from ICAR service on Nov. 16, 2017.

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