The Academy has successfully organized the 89th Annual Session of National Academy of Sciences, India (NASI)-cum-Symposium which garnered lot of accolades from every corner of scientific fraternity. The event witnessed congregation of many science stalwarts of the country. With this, the Academy became the first ICAR institute to host one of the most prestigious event. The Governing Body meeting of ICAR was also successfully held in the Academy.

As far as training and capacity building activities are concerned, the Academy is continuously engaged in building the Capacity of scientists as well as non-scientific staff of entire NARES as well as other relevant stakeholders. More than 14 training programmes were organized during Sep-Dec period. It is gradually expanding its horizon by imparting training to industry professionals. During the quarter, two such training programmes were organized. The requests of State Agricultural Universities for organizing training programme are also honoured. The faculty of the Academy organized many off-campus training programmes for their faculty. I am very happy to share that our PGDMA students have proven their mettle by winning awards in national events at IIM, Ahmedabad and IARI, New Delhi.

The feats achieved by the Academy is because of the contribution of each and every member of NAARM. I hope we all will continue to work and bring many more laurels to the Academy.

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(Ch. Srinivasa Rao)
The “89th Annual Session of National Academy of Sciences, India (NASI)-cum-Symposium on Science and Technology based Entrepreneurship Development” was organized at Academy during Dec 21-23, 2019. The three-day event was jointly organized by the National Academy of Sciences, India and ICAR-NAARM, Hyderabad.

The prestigious event witnessed gathering of many science stalwarts of the country namely Dr. Trilochan Mohapatra, Secretary, DARE and DG, ICAR; Prof. (Mrs.) Manju Sharma, Former Secretary, Department of Biotechnology & Former President, NASI; Prof. G. Padmanabhan, President NASI and Former Director, IISc-Bengaluru; Dr. Balram Bhargava, DG, ICMR and Secretary, DHR; Dr. Ram Gopal Rao, Director, IIT-Delhi and many more.

Dr. Mohapatra underlined the three revolutions namely - Green Revolution, White Revolution and Pulse Revolution that have been possible with the efforts of the scientists and farmers of the country. He also highlighted about the benefits reaped in terms of production gains, self-reliance, greater cut in imports and exports of surplus, etc. He emphasized on the need for linking the science, technology and innovation with the entrepreneurship for not only retaining youth in agriculture, but also to create employment by making the entire value chain in agriculture, a profitable proposition. While recounting the current incubators across the country being supported by the ICAR, DST, DBT and other agencies, the Director General urged for a paradigm shift towards the science and technology led entrepreneurship that is evidence based.

The Director General along with the other dignitaries inaugurated the exhibition showcasing the products and services of the Research Institutes, Start-Ups and other companies.

Prof. (Mrs.) Manju Sharma, Former Secretary, Department of Biotechnology & Former President, NASI highlighted about the activities being undertaken by NASI for the betterment of science in particular and for the benefit of society at large. Prof. G. Padmanabhan, President, NASI emphasized on the importance of research in basic sciences. Dr. A.V Rama Rao, Chairman & MD, AVRA Labs, Hyderabad was awarded the P.C Ray Memorial Award for his outstanding contributions in the field of science. Dr. Anil Kakodkar, Former Chairman of the Atomic Energy Commission of India and Former Secretary, Government of India chaired the panel discussions on Science, Technology and Entrepreneurship. He accentuated on the critical need of entrepreneurship for taking forward the science led technology developments. Earlier, Dr. Ch. Srinivasa Rao, Director, ICAR-NAARM welcomed the dignitaries.

An event of mainstreaming the Biodiversity-UNDP was also organized during the occasion. The occasion also marked the release of a Souvenir and a Book on “Farm Innovations”. The Young Scientists of biological and physical sciences were also felicitated with the NASI-Springer Young Scientist Awards and NASI-Swarna Jayanti Puraskar Awards during the occasion. The distinguished NASI Fellows, Scientists including of eminence personalities - Padma Vibhushan, Padma Bhushan, and Padma Shri Award Winners and students participated in the symposium.
Consultative Workshops on Academia-Industry-Government Linkages

Two consultative workshops on Academia-Industry-Government Linkages were organized as a part of the World Bank funded National Agricultural Higher Education Project (NAHEP) Component - 2A. These were 4th and 5th workshops in the series of 8 workshops to be organized in different states so as to cover all the states of the country wherein representatives from industry, government and academia are invited. The 4th workshop was organized jointly with University of Agricultural Sciences, GKVK Bengaluru during Nov 06-07, 2019. There were 66 participants representing agri-universities, industry and government from the states of Karnataka, Kerala and Jharkhand.

The 5th workshop was organized jointly with Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh during Nov 27-28, 2019. There were 70 participants representing agri-universities, industry and government from the states of Uttar Pradesh, Uttarakhand, Madhya Pradesh and Bihar.

Workshop Directors:
4th Workshop (UAS, Bengaluru): Drs. VV Sumanth Kumar, S Senthil Vinayagam & BS Yashavanth
5th Workshop (SVPUAT, Meerut): Drs. Surya Rathore, S Senthil Vinayagam & Sanjiv Kumar

International Workshop on Strengthening International Agribusiness Trade at TERI, New Delhi

TERI School of Advanced Studies in partnership with Western Sydney University, National Academy of Agricultural Research Management (NAARM) and National Agricultural Higher Education Project (NAHEP) organized a two-day international workshop on Strengthening International Agribusiness Trade in collaboration with Global Centre for Land-Based Innovation during Nov 14-15, 2019 in New Delhi. Prof. Ramesh Chand, member, NITI Aayog was the Chief Guest and Shri Ashok Kumar Dalwai (IAS), CEO of National Rainfed Area Authority was the Guest of Honour during inaugural session. There were 7 thematic sessions in workshop namely, increasing farm productivity through resource efficient techniques and practices; fostering academia-industry-government partnerships for excellence in higher agricultural education; community institutions in agri-value chains; climate change, food & nutritional security; building sustainable agri-food supply chains; doubling farmers income: technologies, business models and sustainable livelihoods; and innovations in agricultural marketing and social entrepreneurship. Around 300 participants participated in the event.

(Coordinators: Drs. SK Soam, Surya Rathore & D Thammi Raju)
7th Research Advisory Committee (RAC) meeting

The third meeting of 7th Research Advisory Committee (RAC) of NAARM was conducted on Oct 28, 2019 under the Chairmanship of Dr. PK Joshi, Former Director for South Asia, International Food Policy Research Institute (IFPRI). Dr. Ch Srinivasa Rao, Director, NAARM welcomed and introduced the Chairman and members. He also presented an overview of the Academy. The RAC reviewed the research and capacity building progress, and suggestions were given for further improvements to attain global visibility. The RAC members viz. Dr. KC Bansal, Dr. C Shambu Prasad, Dr. Ishwar Murthy, Dr. RK Samanta, Shri V Venkateshwarlu and HoDs as co-opted members and Incharges as special invitees from NAARM attended the meeting. Dr. SK Soam, Member Secretary presented action taken report.

Research Projects

Adoption of Natural Farming and its Effect on Crop Yield and Farmers' Livelihood in India

NITI Aayog sponsored project on “Adoption of Natural Farming and its Effect on Crop Yield and Farmers' Livelihood in India” has been conducted by the Academy in collaboration with ICAR-CRIDA. Major objectives of the study were: to understand perception of the farmers adopting and not adopting the Natural Farming practices; analyze the properties of the soil and the plant parts from the adopted farmers’ fields; estimate the cost of cultivation and income gain by its adoption; and examine the scope of its sustainability and scalability in the study regions.

The study encompassed survey of 295 NF (Natural Farming) and 170 non-NF farmers in Andhra Pradesh, Karnataka and Maharashtra. The study revealed that NF is widespread in Andhra Pradesh due to concerted support by the state government during last 3 years. In other two states, its adoption has been sporadic, though few farmers have been practicing NF since more than 10 years. The practice is popularly known as ZBNF (Zero Budget Natural Farming), which is considered as agroecological approach of farming has four major components- use of Jeevamritha, Beejamritha, Mulching and inter /mixed cropping. The field survey revealed that farmers are tweaking with some of these practices according to local conditions, like use of Ghanajeevamritha and Azolla in paddy field in A.P. Inter or mixed cropping, as advocated in NF is found to be followed by some of the farmers, except in paddy.

It was interesting to note that by and large, crop yield has neither increased nor decreased significantly with NF as compared to conventional farming. However, when farmers supplemented NF practices with moderate application of FYM, the crop yield improved. However, there was substantial reduction in paid out cost due to

![Percentage change in B:C ratio over non-NF](https://naarm.org.in)
non-use of fertilizers/agro-chemicals. At the same time, when NF farmers could connect with urban consumers, as in the case of Karnataka farmers, they could get 200-300% higher price for the NF products. Therefore, the B:C ratio in case of NF has significantly improved. Thus, Natural Farming may not be looked as yield enhancing, rather as improving farmers’ income through cost reduction and better product price realization, as urban consumers seems to be ready to pay premium price for non-chemically grown agri-produce. Besides, NF farmers also expressed multi-pronged benefits from NF practices which ranged from crop resilience during non-conducive weather condition, lower pest incidence, ability to grow crops in all kinds of soil, better taste of the produce, improvement in health of farmer-family members (due to non-exposure to chemical pesticides and crop diversity), better soil health (appearance of earthworm after two crops), etc. However, the study couldn’t establish exact causality of several positive results observed in the farmers’ fields, which requires systematic long-term field and lab experiences for different agroecological regions and different cropping patterns. This would help in better understanding of implications of NF on carbon footprint, soil health, farmer’s health, per unit labour economics, response of high yielding cultivars, fertilizer subsidy, climate resilience, long-term sustainability, etc. Moreover, NF products may be recognized as niche product for which proper mechanism may be developed for its certification under PGS (Participatory Guarantee System) to attract premium price from the ever-increasing urban consumers.

Entrepreneurship Development through Farmer Led Innovations – A Case Study in the Plantation Sector

Under the NASF funded project on “Entrepreneurship Development through Farmer Led Innovations – A Case Study in the Plantation Sector” two workshops were organized at IIPM, Bangalore and ICAR-CPCRI, Kasaragod, Kerala by inviting consortium partners and experts in plantation sector covering the innovations in Coffee, Tea, Areca nut, Coconut, Rubber, Cocoa, Turmeric, Garlic and Ginger. The study documented 148 FLIs in a structured format under the broad areas of Crop Production, Crop Management and Crop Protection. The experts representing various specializations like breeding, agronomy, engineering, statistics, economics assessed the rationality of documented FLIs by assigning the weightages for the three identified indices viz., Novelty, Usability and Viability as 30, 40 & 30 respectively. Finally, top 28 FLIs were shortlisted for further probing and field testing.

Training Programmes

Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR

Senior Executive Development Programme on Developing Effective Organizational Leadership for Senior Officers of ICAR was conducted jointly by the Academy and Administrative Staff College of India (ASCI), Hyderabad. This programme is being organized with the cost of ₹ 1.88 Crore during 2019-20 with domestic component in India & international component in Netherlands, Germany, Belgium & Switzerland countries and with class -room lectures for two batches with 23 persons in each batch. Domestic component of Batch-I was completed during Aug 2-4, 2019, and for Batch-II during Aug 9-11, 2019. The International component for Batch-I with 23 participants (including two from NAHEP) has been completed during Sep 21-30, 2019. The training took place in Netherlands, Belgium, Germany and Switzerland. The International component for Batch-II was completed during Oct 12-21, 2019. (Coordinator: Drs. Ch Srinivasa Rao & SK Soam)
Intellectual Property Valuation and Technology Management

MDP on “Intellectual Property Valuation & Technology Management” was organized during Oct 15-19, 2019 for ICAR Scientists. 30 senior ICAR Scientists participated in the programme including 4 female participants. The sessions on the S&T in emerging economy, IP Valuation and monetization, Technology management, transfer and commercialization were covered. Concepts on marketing and business models were also discussed. To have a wider exposure of the incubation concepts, the group visited Atal Incubation Centre-CCMB, Hyderabad and hands on training of patent analytics at Patent Sciart Services. The programme dealt with the institutional innovations within NARS towards technology commercialization, entrepreneurship development and IP management.

Training Workshop for Vigilance Officers of ICAR Institutes

The Academy organised a two-days training workshop for vigilance officers of ICAR Institutes as a part of Vigilance Awareness Week during Oct 31-Nov 01, 2019. 32 Vigilance Officers from various institutes of ICAR participated in the training workshop. The participants were exposed to different vigilance procedures to be followed and preventive vigilance. The participants and the staff of the academy were sensitized on various aspects of vigilance i.e., duties and responsibilities of vigilance officers, disciplinary procedures, recruitment procedures, conduct rules, purchase and work procedures etc. Dr. B Maria Kumar IPS (Retd.), Former DGP, Madhya Pradesh was the Chief Guest for the valedictory function.

Entrepreneurial Skill Development of Graduating Students of SVVUU

A six-day Training Programme on “Entrepreneurial Skill Development of Graduating Students” of Sri Venkateswara Veterinary University (SVVU), Tirupati was organized at the Academy during Oct 21-26, 2019. The programme was sponsored by SVVU, Tirupati under the National Agricultural Higher Education Project (NAHEP). Total 34 students attended the programme, comprising of 24 girls and 10 boys from five constituent colleges of the University, viz. College of Veterinary Science-Tirupati, NTR College of Veterinary Science-Gannavaram, College of Veterinary Science-Proddutur, College of Dairy Technology-Tirupati and College of Fisheries Science-Nellore. The student-trainees comprised 23 veterinary, 5 dairy and 6 fishery students, of which 15 were UG and 19 were PG students. The training programme covered different aspects entrepreneurship such as idea generation, incubation, business plan development, financial management, business communication, etc. The pedagogy included classroom lectures, hands-on exercises, educational games and field visit to make them understand different nuances of businesses. In the valedictory programme, Dr. Ch. Srinivasa Rao, Director, ICAR-NAARM appreciated the student-trainees for attending this training.
Innovative Practices in Extension Research and Evaluation

The programme was designed to cater to an immediate need to build capacity of extension scientists and faculty of NARS to conduct quality research in extension. This is the 3rd successive programme of XSM division in the last 3 years. This fur-days programme was conducted during Nov 04-08, 2019, with the objectives of equipping the participants with knowledge and skills needed for conducting impact-oriented and quality extension research and evaluation; providing hands-on practice in writing convincing research proposals in extension; and facilitating networking among the participants for inter-institutional research in extension. The programme was attended by 17 participants consisting of 6 female participants and they represented working professionals (scientists and faculty members and research scholars). Progressive and experiential learning strategies were followed to allow participants to progress in learning from known to unknown and immediately applying the learnt KAS through structured exercises (individual and team). Participants were organized in to 4 teams to work on writing concept note on an assigned theme integrating 2-3 good practices covered in the workshop and the guidance of mentors.

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

A Management Development programme on Leadership Development (a pre-RMP Programme) was organized during Dec 02-13, 2019 with 22 participants consisting of 20 men and 02 women scientists from 19 ICAR Institutes. The major objectives of the programme were to help participants understand their own personality dimensions; to explore the leadership challenges and core competencies needed in present day context; to develop understanding and skills in research and technology management, information and knowledge management, and administration and finance management; and to adapt ideas of diverse skills for sharpening capacities to effectively execute various roles in the organization. Topics like leadership and personality development; research and technology management; information and knowledge management; and administration, finance, vigilance management, lessons from epics etc. were covered. Different pedagogical approaches included of presentations, video presentations, interactive discussions, etc. Apart from classroom sessions, regular early morning yoga sessions were conducted for the participants.

Developing Winning Research Proposals on Digital Solutions in Agriculture

A Pre-Proposal training cum Workshop on “Development of Digital Solutions through application of Artificial Intelligence (AI), Block Chain Technology and IoT in Agriculture” was organized during Nov 19-23, 2019 at the Academy under NAHEP project. This workshop was designed to enable participants to develop research proposals on potential applications of Artificial Intelligence, Machine Learning, Block Chain Technology, IoT in Agriculture. Total 28 participants including 3 female participants from SAUs, NIT, BITS attended the training.
Capability Building Programme for Marketing officers of Coromandel International Ltd

ICAR-NAARM in collaboration with Coromandel International limited (CIL) organized Capability Building Programme on ‘Marketing Officers’ Resurgence & Excellence (MORE)’ during Nov 09-11, 2019. Total 29 Marketing officers of CIL attended the training. The objective of the program was to expose the participants with advances in agriculture technologies, soil health and nutrition management and to provide knowledge in Coromandel product portfolio and to bring attitudinal & behavioral changes to enhance Business management skills to make them ready to take higher responsibilities.

The topics included Advances in agronomy practices of major crops, climate change and balanced nutrition landscape, Farmer Producers Organizations (FPOs), Data analytics & Forecasting, Agribusiness Management, Skill development, Business Model Canvas, Marketing Plan and Brand Management & Promotion strategies. The soft skills on Relationship Management, Negotiation and Conflict Management also covered during training programme.

Innovations in Educational Technology

The ICAR sponsored short course on “Innovations in Educational Technology” was organized at the Academy during Nov 13-22, 2019. The course was designed to sensitize and update on the latest methods of teaching and learning; to provide practical experience on Technology Enhanced Learning in agricultural education and to introduce innovative technology-based methodology in agricultural education. A total of 22 participants including 13 men and 9 women from nine states covering fifteen disciplines attended. An intensive training schedule with blended learning of theoretical lectures and practical exposure was followed. Lectures on overview of educational technology, approaches to educational planning, models of evaluation in educational technology, open source methodologies in education, social media in agricultural education, psychology of teaching learning process, introduction to TEL and MOOCs, introduction to LMS through MOODLE, micro teaching production and evaluation etc. were covered.

E-Office File Management System

A 3-days hands-on training on ‘e-Office File Management System (e-file)’ was organized at the Academy in collaboration with e-Office Support Team of ICAR-IASRI, New Delhi during Dec 5-7, 2019. The academy invited all master trainers, local administrators and nodal officers from all ICAR institutes situated at Hyderabad and IOPR, Pedavegi (Andhra Pradesh). A total of 83 master trainers and local admins from 10 institutes participated on 1st day of training. Dr. YS Murthy, Senior Technical Director, National Informatics Centre, Telangana State Centre, Hyderabad was the Chief Guest of inaugural event. On 2nd day, regular users of Administration and Finance of ICAR-NAARM were trained. On 3rd day all scientists and technical staff of ICAR-NAARM have been trained. The academy also organized a follow-up technical session on 9 Dec 9, 2019 for institutes who are facing some issues in creating the EMD (Employee Master Data). A total 126 participants have been trained during 3 days’ period.
Trainers’ Development Programme for Various Cadres of Administrative and Finance Staff

A trainers’ development programme for various cadres of administrative and finance staff, sponsored by ICAR, was conducted during Dec 4-9, 2019 with the objectives of equipping the participants with knowledge and skills on design, implementation and evaluation of training; providing hands-on practice in training design and management; and facilitating networking among the participants for training management. The main aim of the programme was to create a pool of master trainers to develop and organize training programmes for administrative and finance staff of ICAR in the areas of administration and finance management. Total 22 participants attended the programme. Two DoPT certified trainers along with core faculty of the Academy provided academic inputs. Progressive and experiential learning strategies were followed to enable smooth learning progression among participants from known to unknown and immediately applying the learnt KAS through structured exercises (individual and team). Learning log was used to track the formative evaluation.  

(Programme Directors: Drs. SK Soam & Bharat S. Sontakki)

Advances in Market Intelligence for Faculty of TANUVAS

An off-campus training programme on ‘Advances in Market Intelligence for Faculty of TANUVAS’ was organized at Madras Veterinary College, Chennai during Dec 13-18, 2019. The objectives of the training programme was 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; and to equip the trainees with advanced statistical tools. The training had mix of lectures, practical, Hands-on with software using R, Tableau and discussion. There were 25 participants in all from different colleges of TANUVAS.  

(Programme Directors: Drs. N Sivaramane, Sanjiv Kumar & B Ganesh Kumar)

Development of Soft skills for Entrepreneurship among Agri-graduates

ICAR-National Academy of Agricultural Research Management, Hyderabad in collaboration with Sri Venkateswara Veterinary University (SVVU), Tirupati organized a one-day awareness workshop on soft skills for entrepreneurship development for 100 final year veterinary and dairy technology students of College of Veterinary Science and College of Dairy Technology, Tirupati on Dec 30, 2019. This one-day awareness workshop, as a part of National Agricultural Higher Education Project (NAHEP)- Component 2, was organized with an object of creating awareness among agri-graduates on soft skills, innovativeness, and entrepreneurship. This is the first workshop in a series of 26 such workshops to be organised during Jan-Feb, 2020 by NAARM. Faculty of 26 Universities were trained as master trainers by NAARM for organising these workshops targeting 3000 students.  

Dr. Y Hari Babu, Vice Chancellor, SVVU inaugurated the awareness workshop and he highlighted the importance of soft skills in the context of agri entrepreneurship and enthused students with a few successful cases of entrepreneurship.  

(Programme Director: Dr. D Thammi Raju)
Capability Building Programme for Agronomists of Coromandel International Ltd

A capability-building program for agronomists of Coromandel International Limited held at the academy during Dec 16-18, 2019. Total 51 agronomists from different zones of the country attended the program. The program was aimed to expose the participants with current trends in agriculture, soil health and nutrition management and to provide knowledge in Coromandel product portfolio. The topics included agricultural scenario, basics of plant nutrition and crop production, importance of soil and leaf testing and soil health based nutrient marketing, SOP for agronomic and promotional activities, Coromandel unique Product Portfolio and ICTs in agriculture. The softer aspects such as personality development, values and ethics, and public speaking also covered during training programme.

(Programme Directors: Drs. KH Rao & Ranjit Kumar)

Developing Winning Research Proposals on Digital Solutions in Agriculture and Food Systems

An off-campus training workshop on Developing Winning Research Proposals (DWRP) on Digital Solutions in Agriculture and Food Systems under NAHEP was organized during Dec 27-28, 2019 at Sharda University, NOIDA. The main objectives of this training was to impart the skills for writing research proposals that can win funds from donors focusing on the needs of the stakeholders and sensitizing the participants on the various components of a research proposal. Total 29 including 19 Female participants of Sharda University attended the workshop.

(Programme Director: Dr. SK Soam)

Events

Krishi Kala Utsav

A five-days Krishi Kala Utsav (KKU) was conducted Academy during Nov 4-8, 2019. Twenty-four students of the famous Sir JJ School of Arts, Mumbai were invited to create paintings and works of art on agriculture and allied sector. Forty-eight paintings including a stone craft mural work were completed during the said days. ICAR-NAARM, Hyderabad has hosted this Krishi Kala Utsav for the third year in association NAAS-Hyderabad Chapter. Dr. T Mohapatra, Secretary DARE and Director General, ICAR also visited the KKU workshop hall as the
artists were at work on Nov 8, 2019 and appreciated the initiative taken by NAARM and the talent of the artists. He interacted with artists on their innovative presentation on various important aspects of agriculture and farmer’s welfare. The artists performed their work to display modern technologies and virtues of traditional agriculture practices, environmental aspects, youth in agriculture, rural markets, soil and water conservation, importance of trees, integrated farming systems, human health from healthy foods, mechanized agriculture systems etc. The programme was inaugurated by Dr. Ch Srinivasa Rao, Director, NAARM and the valedictory function was graced by Dr. AK Pal, Joint Director (Retired) of ICAR-CIFE, Mumbai. Dr. Laxman Ahide and Shri P. Namdev, CTO’s led by Dr. M. Krishnan, Head, ESM Division organised the event. Dr. Laxman Ahide and Shri P. Namdev, CTO’s led by Dr. M. Krishnan, Head, ESM Division organised the event.

**Vigilance Awareness Week**

The Academy observed ‘Vigilance Awareness Week-2019’ during Oct 28-Nov 2, 2019 on the theme "Integrity – A way of life" with great zeal and enthusiasm. During this week several activities viz. display of banners at strategic locations for creation of awareness for public, administration of integrity pledge, organization of different competitions (Debate, essay writing, drawing) for staff and students of the Academy were organized. Dr. T.K.K. Naidu, Professor and Head, Department of Forensic Medicine, Prathima Institute Medical Sciences and Vice Principal, Medico Legal Consultant, Karimnagar was invited as a Chief Guest for the valedictory function.

**248th Governing Body Meeting of ICAR**

The 248th Governing Body Meeting of Indian Council of Agricultural Research was organized at the Academy on Nov 30, 2019. Dr Trilochan Mohapatra Secretary DARE and Director General ICAR chaired the Governing Body meeting. Dr. AK Singh, DDG (Horticultural Science); Dr. Joykrushna Jena, DDG (Fisheries Science & Animal Science); Dr. K. Alagusundaram, DDG (Agricultural Engineering); Dr Ch Srinivasa Rao, Director, ICAR-NAARM along with senior dignitaries of ICAR marked their presence during the meeting.

**National Farmers’ Day**

The Academy celebrated National Farmers’ Day (Kisan Diwas) on Dec 23, 2019, with the theme “Igniting Young Minds by Innovative Farmers”. The day was celebrated by inviting two innovative farmer entrepreneurs – Shri Bachu Veera Reddy and Shri Hari Babu to motivate and inspire younger generations on the prospects of ‘new-generation farming’ as a career option among over 100 students of Bharatiya Vidya Bhavan’s Vidhyashram, NIRD Campus, Rajendranagar, Hyderabad and P. Obul Reddy Public School, Jubilee Hills, Hyderabad. Both the farmers emphatically stressed on the need to infuse young blood in farming sector, well supported by their rich and satisfying experience as innovative farmer and entrepreneur. These two innovative farmer entrepreneurs have won several awards at national, regional and state levels in recognition of their contributions to promoting eco-friendly farming for healthy living. Dr Ch Srinivasa Rao, Director of the Academy felicitated the two innovative farmers and addressed the students on this occasion.
PGDMA NEWS

PGDMA Students Bagged Prizes


Aayush Awasthi and Utkarsh Kokate of PGDMA 2019-21 bagged 2nd prize in business plan (B-Plan) competition in PITCHERS 2.0 #Krishi Manthan 2019 organized at IIM Ahmedabad on 28th Nov 2019. The participants presented their business ideas along with market segmentation, targeting, competition, marketing strategy, and valuation of the business.

PGDMA 2020-22 ADMISSION

ICAR-NAARM invites online application for admission into 12th Batch of PGDMA (Post-Graduate Diploma in Management- Agriculture), the AICTE-approved 2-year full-time Agribusiness Management course.

**Eligibility Criteria:** The minimum qualification for admission is a four (4) year Bachelor’s degree with 60% marks from any Agricultural University. The candidate must have a valid score of CAT-2019 or CMAT-2020.

For details, visit: [https://naarm.org.in/pgdma/](https://naarm.org.in/pgdma/)  

a-IDEA (Agri-business Incubator of NAARM) News

Global Bio India Roadshow 2019

Agri-BioNEST, an Agri-Biotech focused Bio-Incubator NAARM a-IDEA, & Agri-Biotech Foundation organized a Roadshow for Global Bio-India 2019 on Oct 11, 2019 at the Academy. About 80 aspiring entrepreneurs, students, researchers, Startups, Innovators and ecosystem stakeholders participated in the roadshow. The event had speeches from industry, innovators, Startups and government functionaries.

Cohort finalization program of Agri Udaan 3.0

a-IDEA organized a two-day cohort finalization program of Agri Udaan 3.0 during Oct 31-Nov 01, 2019 at the Academy. More than 415 applications were received after the launch of Agri-UDAAN 3.0 on Aug 31, 2019. These were evaluated by 15 evaluators online. Top 40 Startups were called for pitching out of which 10 were shortlisted for cohort.
IGNITE- The Innovative Idea Competition

NAARM-TBI, a-IDEA, organized IGNITE- The Innovative Business Idea Competition in collaboration with Professor Jayashankar Telangana State Agricultural University (PJTSAU) on Oct 21-22, 2019 at PJTSAU Campus, Hyderabad. The event was inaugurated by Her Excellency Dr. (Smt.) Tamilisai Soundararajan, The Hon’ble Governor, Telangana State. The Business Idea Competition received 100+ applications from aspiring entrepreneurs, students of agri and allied sciences, engineering and B-schools. The main focus of this ideation program was to sensitize students about agri-entrepreneurship and encourage them to choose entrepreneurship as their career. a-IDEA, the TBI of NAARM has also taken part in exhibition arranged by PJTSAU, Hyderabad.

Capacity building workshop of Agri Udaan 3.0

NAARM a-IDEA organized a four-day capacity building workshop of Agri Udaan 3.0 during Nov 11-14, 2019 at the Academy. The workshop was for the final Top 10 cohort startups. One of the primary aims of the program was to have focused sessions addressing key issues and enable these scale stage startups to fine-tune their businesses and develop a thorough holistic understanding of the various nitty-gritty of building a startup. The workshop had one-on-one mentor-mentee matchmaking and learning from industry, innovators, startups and government functionaries for setting up the milestones for the startups to work within the three-months of acceleration phase.

BIRAC BIG’s 15th Technology Evaluation Panel Round

Agri BioNEST of NAARM a-IDEA organized Technical Evaluation Panel (TEP) round for BIRAC’s BIG applicants during Dec 16-18 2019. The TEP program was organized to select the innovators who applied for Biotechnology Ignition Grant Scheme which prove grants in aid up to ₹ 50 lakhs. The TEP is the second round of evaluation in the process to select the BIG innovators. NAARM TBI a-IDEA has been inducted as partner from 15th BIG call and there were total 31 applicants in this round, out of which 17 were selected for TEP round which is still continuing in other venues of BIG partners. In the TEP entrepreneurs and startups working on innovative Idea/POC/Prototype in Agri, Allied and Agribiotech sectors presented their case in front of the panel consisting of researchers, academicians, industry experts, investors, BIRAC team and representatives of other BIG partners.

The Team of a-IDEA also actively participated in different events for startups, like Global Bio-India 2019 at New Delhi, Community Slate Accelerator at Hyderabad, IKMC Conference at Hyderabad, Sankalp Forum 2019 at Mumbai, STEM Conference at Hyderabad, Farmers Success Meet 2019 at Lucknow and TIE-Global Summit 2019 at New Delhi.
Faculty Achievements

Honors, Awards and Recognitions

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is elected as Fellow of the National Academy of Sciences, India (NASI).

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is elected as Honorary Fellow of Andhra Pradesh Akademi of Sciences (APAS), Amaravati, Andhra Pradesh.

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM received Life Time Achievement Award from Andhra Pradesh Akademi of Sciences (APAS), Amaravati, Andhra Pradesh.

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM received ‘Ch. Dimag Singh Award’ from Astha Foundation, Meerut, U.P. for outstanding contribution in soil science.

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is nominated as Member of Board of Management, Professor Jayashankar Telangana State Agricultural University (PJTSAU), Hyderabad as ICAR nominee for a period of three years (2019-22).

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is nominated as Member, ICAR Selection Committee for Netaji Subhas – ICAR International Fellowships – 2019-20.

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is nominated by President, ICAR Society as Member, Selection-cum-Standing Committee for Emeritus Scientist Scheme of ICAR for a period of three years with effect from December 2019.

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is nominated as Advisory Member, National Advisory Committee of Andhra Pradesh Science Congress (APSC-2019), Srikakulam (November 28-30, 2019).

Dr. Ch Srinivasa Rao, Director, ICAR-NAARM is nominated as Member of Agricultural Science Research Committee of 43rd Indian Social Science Congress, Bengaluru (January 17-21, 2020).

Drs. Ranjit Kumar, Sanjiv Kumar, BS Yashavanth & PC Meena received Dr. N.A. Majumdar Prize Award for best paper presentation at Annual conference of Indian Society of Agricultural Economics, Mumbai held at IGKV, Raipur on 21st to 23rd November, 2019.

Dr. S Senthil Vinayagam is nominated as IMC member of ICAR-NRC Meat for a period of 3 years w.e.f. Nov 26, 2019.

Dr. Alok Kumar received ISEE Fellow Award by Indian society of Extension Education, New Delhi at CCSHAU, Haryana on Nov 22, 2019.

Ms. G. Aneeja received Bharat Vikas Award sponsored by Institute of Self Reliance on Dec 14, 2019 at Bhubaneswar.

Foreign Visit

Drs. RVS Rao, D Thammi Raju and NS Rao visited four countries viz. Netherlands, Germany, Belgium & Switzerland during Oct 12-21, 2019 as a part of EDP on Developing Effective Organizational Leadership for Senior Officers of ICAR which included interactions and training sessions at Wageningen University and Research, The Netherlands; Carus - Research facility of the Department of Animal Sciences, part of Wageningen University; Royal Flora Holland, Aalsmeer; Dutch Ministry of Agriculture, Nature and Food Quality, Hague, The Netherlands; German Development Institute (DIE) and Development Research Institute (ZEF), University of Bonn, Germany; Ghent University, Ghent; Joint Research Centre, European Commission, Brussels, Belgium; European Commission & European Innovation Partnerships-Agri Network, Brussels, Belgium; Research Institute of Organic Agriculture, Frick, Switzerland and World Trade Organization, Geneva, Switzerland.

**Publications**

**Research Articles**


**Technical Reports**


**Training Manuals**


**Chapters in Conference Proceedings/ Book**


**Student Guidance**

**Dr. Bharat S Sontakki** Co-guided PhD student of PJTSAU, Hyderabad on thesis titled “Ecosystem analysis of KVKs in Southern India”

**Dr. Bharat S Sontakki** Co-guided MSc student of IGKV, Raipur on thesis titled “Transfer of learning of training on communication skills”

**Dr. D Thammi Raju** guided MVSc student of PVNRTVU, Hyderabad on thesis titled “Effectiveness of Livestock Farmers Producer Groups (Livestock Based SHGs) in improving the livelihood security”.

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https://naarm.org.in Vol 8 | Issue 4 | Oct-Dec 2019
Radio/ TV talk/ Video talk

<table>
<thead>
<tr>
<th>Name of the person and Topic of the talk</th>
<th>Name of the channel and Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Ch. Srinivasa Rao, regarding 89th Annual Session of the National Academy of Sciences, India (NASI) and Symposium on Science and Technology based Entrepreneurship Development during Dec 21-23, 2019 at NAARM, Hyderabad</td>
<td>ETV (Telugu) on Dec 21, 2019. DD Yadgiri (Telugu) Covered in news bulletins at 5pm, 7 pm and 9 pm on Dec 23, 2019.</td>
</tr>
</tbody>
</table>

Faculty / Staff Participation in Scientific Events

<table>
<thead>
<tr>
<th>Programme Name</th>
<th>Venue &amp; Date</th>
<th>Scientist Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Workshop on Strengthening Internal Agribusiness Trade: Stakeholder dialogue and partnerships towards SDGs under NAHEP.</td>
<td>TERI School of Advanced Studies, New Delhi Nov 14-15, 2019</td>
<td>Dr. Ch Srinivasa Rao Dr. SK Soam Dr. Surya Rathore Dr. Alok Kumar</td>
</tr>
<tr>
<td>Workshop and Review Meeting of National Agriculture Innovation Fund (NAIF) Scheme</td>
<td>NASC Complex, New Delhi Oct 4-5, 2019</td>
<td>Dr. Ch Srinivasa Rao</td>
</tr>
<tr>
<td>First meeting of Regional Advisory Group (RAG) on Farms, Farmers and Rural areas for Telangana State</td>
<td>NABARD Regional Office, Hyderabad Oct 15, 2019</td>
<td></td>
</tr>
<tr>
<td>Brainstorming Meet on City Knowledge and Innovation Cluster at Hyderabad organized by Office of Principal Scientific Adviser (PSA) to GoI and Research and Innovation Circle of Hyderabad (RICH)</td>
<td>Hotel Trident, Hyderabad Oct 18, 2019</td>
<td></td>
</tr>
<tr>
<td>Briefing Meeting for UNFCCC COP-25 in Chile under the Chairmanship of Joint Secretary (Climate Change), MoEFCC.</td>
<td>Indira Paryavaran Bhavan, New Delhi Oct 24, Nov 1 and Nov 25, 2019</td>
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<tr>
<td>110th Meeting of the Executive Council of National Academy of Agricultural Sciences</td>
<td>NAAAS, New Delhi Nov 27, 2019</td>
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<tr>
<td>IGNITE – Agripreneurial Idea Contest at Regional Workshop on “Youth as Torchbearers of Business Oriented Agriculture in South India”</td>
<td>PJTSAU, Hyderabad Oct 21-22, 2019</td>
<td>Dr. SK Soam</td>
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<tr>
<td>External expert committee meeting for grant of advancement under MARS.</td>
<td>MANAGE, Hyderabad Nov 02, 2019</td>
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<tr>
<td>Consultative Group Meeting on Geographical Indications for four GI applications</td>
<td>Sampada Bhawan, New Delhi Nov 22, 2019</td>
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<tr>
<td>27th Global Symposium dedicated to the World Project Management Forum (WPMF) meet</td>
<td>Le Meridien New Delhi during Dec 09-10, 2019</td>
<td></td>
</tr>
<tr>
<td>79th annual conference of Indian Society of Agricultural Economics</td>
<td>IGKV, Raipur Nov 21-23, 2019</td>
<td>Dr. Ranjit Kumar Dr. Sanjiv Kumar</td>
</tr>
<tr>
<td>Regional Expert Consultation on Gene Editing in Agriculture and its Regulation</td>
<td>ICRISAT, Hyderabad Oct 10-11, 2019</td>
<td>Dr. Manju Gerard</td>
</tr>
<tr>
<td>National Conference on Integrative Plant Biochemistry and Biotechnology</td>
<td>Hyderabad Nov 08-09, 2019</td>
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<tr>
<td>Kisan Mela</td>
<td>CMFRI, Cochin Nov 14-16, 2019</td>
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<tr>
<td>BioNEST Review Meet</td>
<td>BIRAC, New Delhi Nov 20, 2019</td>
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<tr>
<td>Programme Name</td>
<td>Venue &amp; Date</td>
<td>Scientist Name</td>
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<tr>
<td>Global BioIndia Road Show</td>
<td>DBT, New Delhi Nov 21-23, 2019</td>
<td>Dr. Manju Gerard</td>
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<tr>
<td>IP Powering the 5 Trillion Economy, STEM Annual Summit</td>
<td>Satguru Foundation, Hyderabad Dec 06-07, 2019</td>
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<tr>
<td>XIV Triennial National Conference of Indian Women Scientist Association (IWISA)</td>
<td>NIN, Hyderabad Dec 11-13, 2019</td>
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<tr>
<td>Meeting with NDRI, Bengaluru officials regarding Digital Content Modules (Collaborative projects of NAARM &amp; NDRI)</td>
<td>NDRI, Bengaluru Dec 03, 2019</td>
<td>Dr. S. Senthil Vinayagam</td>
</tr>
<tr>
<td>Discussion meet cum mentoring workshop as an Expert/Mentor for AAS projects</td>
<td>CSIR – CIMAP, Lucknow Dec 05, 2019</td>
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<tr>
<td>Brainstorming session to discuss the issue of utilization of unspent money under NAHEP component 1C – Innovation Grants</td>
<td>Krishi Anusandhan Bhavan, New Delhi Oct 10, 2019</td>
<td>Dr. D. Thammi Raju</td>
</tr>
<tr>
<td>Review meeting of NAHEP project (Component 2)</td>
<td>KAB 2, New Delhi Nov 27, 2019</td>
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<tr>
<td>8th International Conference on Agricultural Statistics</td>
<td>Hotel Ashoka, New Delhi Nov 18-21, 2019</td>
<td>Dr. PD Sreekanth Dr. BS Yashavanth</td>
</tr>
<tr>
<td>National level brainstorming workshop on NAHEP results framework</td>
<td>IARI, New Delhi Nov 11, 2019</td>
<td>Dr. Alok Kumar</td>
</tr>
<tr>
<td>ISEE National Seminar on “Socio-Digital Approaches for Transforming Indian Agriculture”</td>
<td>CCHAU, Hisar Nov 20-22, 2019</td>
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**Invited as Key Speaker in Scientific Meetings**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Topic</th>
<th>Event</th>
<th>Venue</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Dr. Ch Srinivasa Rao</td>
<td>Making (Indian) Drylands a good niche for carbon sequestration through soil and crop management practices: potential vs. realism</td>
<td>One day Workshop on “Carbon Management in Soils through resource conservations technologies (RCT): Issues and Strategies”</td>
<td>CAAST on Conservation Agriculture, BCKV, Mohanpur, West Bengal</td>
<td>Nov 2, 2019</td>
</tr>
<tr>
<td>Dr. S. Senthil Vinayagam</td>
<td>Innovations Led Agricultural Growth: Challenges and Opportunities</td>
<td>Kalasalingam Global Conference-2019</td>
<td>Kalasalingam Academy of Research and Education, Krishnankoil, TN</td>
<td>Dec 18-19, 2019</td>
</tr>
<tr>
<td>Dr. Thammi Raju</td>
<td>ICT and Social Media for Effective Advisory Services in Livestock Sector</td>
<td>Extension Management Approaches for Livestock Development</td>
<td>MANAGE, Hyderabad</td>
<td>Nov 14, 2019</td>
</tr>
</tbody>
</table>
Faculty | Topic | Event | Venue | Date
--- | --- | --- | --- | ---
Dr. K Srinivas | Challenges in igniting Agri-startups and emerging opportunities | Nutri Conclave-IIMR | HICC, Hyderabad | Nov 29, 2019

Trainings Attended by the Faculty/Staff

Dr. S Senthil Vinayagam attended residential workshop on “Administrative Vigilance with Disciplinary Rules” at NAHRD, Jim Corbett National Park, Uttarkhnd during Nov 04-07, 2019.

Staff News

Appointments/Joining
- Dr. Tavva Srinivas joined the Academy as Scientist w.e.f. 25.11.2019.
- Dr. Umesh Hudedamani joined the Academy as Scientist w.e.f. 25.11.2019.
- Dr. M. Ramesh Naik joined the Academy as Scientist w.e.f. 03.12.2019.

Promotions
- Dr. VV Sumanth Kumar, Scientist has been promoted under CAS to the grade of Sr. Scientist (RGP 8000) w.e.f. 14.10.2014 and Sr. Scientist (RGP 9000) w.e.f. 16.04.2017
- Shri Sohail Ahmad Khan, T (7-8) Assistant Chief Technical Officer [Jr Engineer (Civil)] has been promoted to the grade of T-9 Chief Technical Officer w.e.f. 01.01.2019
- Smt. Savithri Murali, T-6 Senior Technical Officer (Catering Incharge) has been promoted to the grade of T (7-8) Assistant Chief Technical Officer w.e.f. 01.01.2017

Transfers
- Dr. V. K. J. Rao, Principal Scientist was relieved w.e.f. 30.11.2019 (AN) on his request transfer to IIHR, Bangalore

Retirement/Superannuation
- Smt. B. Bharathamma, Skilled Support Staff retired on superannuated w.e.f. 30.11.2019 (AN)
- Shri Dr. M. Krishnan, Head retired on superannuation w.e.f. 30.11.2019 (AN)

Upcoming Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Training Programme on Developing Winning Research Project for Faculty Members of CTAE, MPUAT-Udaipur</td>
<td>Jan 3-5, 2020</td>
</tr>
<tr>
<td>110th Foundation Course for Agricultural Research Service (FOCARS)</td>
<td>Jan 07–Apr 04, 2020</td>
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<td>Event</td>
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<tr>
<td>Workshop under Extramural Project on Competency Analysis among faculty of AUs in TEL</td>
<td>Jan 11, 2020</td>
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<tr>
<td>Scientific Communication</td>
<td>Jan 16-21, 2020</td>
</tr>
<tr>
<td>National Conference on GIS and Remote Sensing applications in Agriculture</td>
<td>Jan 21-23, 2020</td>
</tr>
<tr>
<td>Technology Enhanced Learning</td>
<td>Jan 25-31, 2020</td>
</tr>
<tr>
<td>6th Consultative Workshop on Academia – Industry – Government linkages for Quality Agricultural Education in collaboration with Assam Agricultural University (AAU), Khanapara, Guwahati</td>
<td>Jan 27-28, 2020</td>
</tr>
<tr>
<td>Capacity Building Programme for CJSC Members of ICAR HQ's and ICAR- Institutes</td>
<td>Jan 27-31, 2020</td>
</tr>
<tr>
<td>7th Consultative Workshops on Academia-Industry-Government Linkages at PAU, Ludhiana</td>
<td>Jan 28-29, 2020</td>
</tr>
<tr>
<td>National workshop on Reforms in Agriculture Education</td>
<td>Jan 28-30, 2020</td>
</tr>
<tr>
<td>Training Programme on Developing Winning Research Project for Faculty Members of Kamdhenu University, Amreli</td>
<td>Jan 29-31, 2020</td>
</tr>
<tr>
<td>Training programme on Institutional Innovations for Inclusive Growth in Agriculture</td>
<td>Feb 11-15, 2020</td>
</tr>
<tr>
<td>Enhancing Efficiency and Behavioural skills on Stenographers Grade-III, PA, PS,PPS and Sr. PPS of ICAR (Off campus at CIFE, Mumbai)</td>
<td>Feb 17-22, 2020</td>
</tr>
<tr>
<td>Training programme on KOHA for Library Staff of ICAR</td>
<td>Feb 20-25, 2020</td>
</tr>
<tr>
<td>Training Programme on Geospatial Analysis using QGIS &amp; R</td>
<td>Feb 27-Mar 3, 2020</td>
</tr>
</tbody>
</table>

Participants of 89th Annual Session of NASI

Happy New Year 2020

Editors: Dr. Ranjit Kumar, Dr. Sanjiv Kumar and Dr. BS Yashavanth

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