



National Agricultural Higher Education Project (NAHEP)

Component 2: Investments in ICAR Leadership in Agricultural Higher Education (March 2019 – August 2024)

Final Report



भाकृअनुप-राष्ट्रीय कृषि अनुसंधान प्रबंध अकादमी
ICAR-National Academy of Agricultural Research Management

Rajendranagar, Hyderabad-500030, Telangana, India

<https://naarm.org.in>



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Executive Summary

The Indian Council of Agricultural Research (ICAR) carries the mandate for the coordination and quality assurance of agricultural higher education at AUs in India. In this direction, ICAR has embarked upon an ambitious step in strengthening the National Agricultural Education system in the country through National Agricultural Higher Education Project (NAHEP) with financial assistance of the World Bank by investing on infrastructure, competency and commitment of faculty, and attracting talented students to agriculture. While NAHEP has three main components, Component 2, deals with Investments in ICAR Leadership in Agricultural Higher Education. The project has been conceived keeping the Four SDGs at the centre stage i.e. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; Promoting inclusive and sustainable economic growth, employment, and decent work for all; Building resilient infrastructure, promoting sustainable industrialization, and fostering innovation and take urgent action to combat climate change and its impacts.

The project has been implemented in a consortia mode involving Indian Agricultural Statistical Research Institute, New Delhi, National Academy of Agricultural Research Management, Hyderabad and National Institute of Agricultural Economics & Policy Research, New Delhi, with each institute having their specific objectives and activities with expected outputs and outcomes and indicators measuring the same. The major objectives (pertaining to NAARM) are: 1) To establish partnerships with globally recognized agricultural higher education institutions, 2) To promote the establishment of career development centre at agricultural universities, 3) To improve curricula review processes and methods to consolidate and disseminate global best practices in agricultural education, 4) To assist agricultural universities in strengthening their linkages with industry, 5) Structuring dialogue with the state government to catalyse their participation in raising the quality and relevance of agricultural higher education.

The project activities, achievements, outputs and outcomes are discussed under 5 major heads: 1) Academic Partnerships and Collaboration, 2) Establishment of Career Development Centres (CDC) and Faculty Development Centre (FDC) 3) Improvement of Curriculum Development Mechanisms, 4) Strengthening Academia Linkages with Industry 5) Systemic Quality Improvements in Agricultural Education, apart from success stories and infrastructural development.

Academic Partnerships and Collaboration:

Academic partnerships and collaboration are integral components to nurture innovation, knowledge exchange, and advancement in various fields of study. Such partnerships typically involve institutions coming together to share resources, expertise, and best practices, thereby enriching the academic experience for students and faculty together. Through collaborative research projects, joint degree programs, student and faculty exchanges, and shared facilities, academic institutions empowered each other's strengths to address challenges, motivate impactful research, and enhance educational opportunities.

With the overarching goal of academic excellence, the key objective of this initiative was to assess the existing partnerships and identify globally recognized agricultural institutions. The approach employed to achieve the objectives involved a multi-faceted strategy such as: reviewing existing global partnerships, developing online questionnaires, scouting globally recognized institutions, studying MoUs, mapping alumni, conducting network meetings, and implementing collaborative partnerships, dialogue with stakeholders through focused group meetings, seminars/ webinars, workshops, engagement of international experts in the educational quality enhancement etc.

Major achievements include data collection from scientists to identify the premier institutions and experts in respective filed for facilitating collaborations. Scouted Globally Recognized Institutions renowned for their work in agriculture for potential collaborations, which enabled to understand the global landscape of agricultural research / education. Worked in tandem with State Agricultural Universities through Career Development Centres (5 SAUs) and 20 private universities for empowering the students' soft skills and personality development. Identified potential areas for partnership between national/ international organisation in the areas of research, extension, education and capacity

building through analysis of 667 MoUs. The Public-Private Partnerships assumed significance for agricultural development in general and education in particular (MoUs reached with four institutions). The databases / networks of inspired teachers and students is very important in this direction (National Web Portal for AU Alumni). Stakeholder engagement in enhancing the quality of education is achieved through several workshops/ seminars / FGDs on exclusive themes such as - Academic Excellence through Building Partnerships and Resources Generation, Fostering Collaborations of Research and Education for Quality Agricultural Higher Education, Fostering Global Collaborations among Agricultural Higher Educational Institutions, Networking of Agricultural Universities Alumni, Strengthening International Agribusiness Trade etc. at National and International level.

The key learnings from this sub domain include fostering international / interdisciplinary collaboration, technology transfer and innovation, joint funding initiatives for research, theme based joint organisation of capacity building programs, faculty / exchange programmes etc. are critical for academic partnerships and collaboration.

Establishment of Career Development Centres (CDC) and Faculty Development Centre (FDC)

Institutionalisation of initiatives focusing on empowerment of students and faculty is strategic move by the project for overall improvement of agricultural education and teaching – learning continuum. Career Development Centres (11 CDCs in several agricultural universities) and Faculty Development Centre (FDC) at GBPUAT, Pantnagar were established through dialogue, deliberations and consensus among stakeholders (through workshops/ meetings) to operate within an established framework for achieving the stated objectives. The primary objective of Career Development Centres (CDCs) was empowering and enriching the students to cope up with global challenges in agriculture & allied sectors and contribute to Atmanirbhar Bharat as a professional or agripreneur. The objective of Faculty Development Centre (FDC) was enhancement of quality and relevance of agricultural education through faculty excellence fortified with institutional innovations, academic leadership, etc.

The implementation approach by Career Development Centres / Faculty Development Centre involved a multi-faceted strategy with an institutional framework, well defined activities and the landscape. The (CDCs) have been critical in ensuring that agricultural higher education students from a diversity of backgrounds are provided the best-in-class professional development training through career education, information and counselling, in addition to training on soft skills etc. for higher education. The FDC focused on facilitating continuous education of the faculty on pedagogy, teaching-learning, teaching methodologies, educational technology, university administration and governance etc. based on the stages of their careers. All the eleven CDCs organised more than 290 programme benefitting more than 30000 students. The FDC organised 11 programmes benefitting 661 faculties over the project period. Overall, the establishment of CDCs and FDC contributed significantly to the advancement of agricultural education and human resource development in the country. The most important learning was how to make these CDCs as self-sufficient and sustainable in long run and also scaling up mechanism. The strategies were evolved for sustenance through engaging different stakeholder universities. Thus these strategies would lead to policy prescription for establishment of such career development centres across all Public / Private Universities and continuation of FDC. Considering the benefits of FDC, the GBPUAT had converted FDC as a permanent wing of the University for professional development of faculty.

The Improvement of Curriculum Development Mechanisms

In the context of agricultural higher education, the curriculum enables a student's understanding of the subject matter while also allowing her/him to use the information to address "real-world" problems. Aside from employability, students' capacity to use their higher education to disrupt the agriculture and allied sectors through entrepreneurship is critical. The improvement of curriculum development mechanisms in agricultural education aims to align educational practices with global standards. Through rigorous studies, consultations, and best practices, progress has been made in enhancing curriculum quality, relevance, and effectiveness, fostering stakeholder collaboration, and continuous improvement. The project developed a college-ready, career-ready, and future-ready curriculum framework for agricultural education, through stakeholder engagement and international consultations.

A pilot study was conducted by NAARM to understand the approach and philosophy of agricultural curriculum development, including students' attributes, stakeholder engagement, and challenges. A research study was conducted to identify students' learning approaches and their implications for curriculum development. Also identified global best practices in higher education. A comprehensive curriculum framework was formulated, focusing on teaching-learning methodologies from countries like the USA, Finland, and Brazil. Workshops were organized for academic leaders to discuss curriculum planning, development, and implementation and National Education Policy -2020 in Agricultural Education.

A research study on student learning approaches was conducted, involving 1951 students from 30 State Agricultural Universities (SAUs) and one ICAR Institute from 19 Indian states. The findings revealed that most students used a strategic approach, followed by a deep approach and a surface approach. Female students followed a strategic approach (44.8%), while male students followed a deep approach (40.8%).

The project sub domain emphasizes the importance of student-centric learning, continuous adaptation to global best practices, stakeholder collaboration, and adaptability in higher education. It emphasized the need for college-ready, career-ready, and future-ready curriculum. It also highlights the need for diverse stakeholders, including educators, industry experts, and policymakers, to ensure quality and relevance of curriculum development initiatives and the need for timely revisions and need-based alterations.

Strengthening Academia Linkages with Industry

Academia-industry linkage is the interaction between higher education and industry, promoting knowledge and technology exchange, innovation, and economic growth. It bridges expertise gaps, converts research-based technology into products, and provides alternative funding sources for both parties. Academia and industry are interconnected, benefiting from collaboration for research, development, innovation, and knowledge creation. Collaboration increases industry's problem-solving capacity, while universities gain awareness of industry technologies and access to funding opportunities. Early collaboration leverages strengths, driving advanced research and innovation. These partnerships integrate industry expertise into academic curricula, equip students with market skills, and drive economic growth. The rise in academia-industry collaboration in developed nations like the US, Canada, Japan, Singapore, and the EU is driven by pressures on industries and universities, potentially reducing time lag between discovery and practical application. However, barriers like conflicting interests, career progression limitations, and lack of grant access hinder productivity.

Seven workshops were conducted in India to strengthen academia-industry-government linkages, involving experts from various states and union territories. The workshops focused on improving the quality of agricultural higher education (AHE) in India. A survey questionnaire was distributed to participants, aiming to gather information on the role of academia-industry linkages in improving AHE. A national workshop on academic excellence focused on infrastructure, faculty, student advancement, and governance enhancement was organised. An international webinar on fostering global collaboration among Agricultural Higher Educational Institutions was organized to identify enabling factors for nurturing international partnerships. A National Conference on Policy Development was held to discuss policy development and implementation strategies for A-I-G framework. Critical studies were conducted to identify needs and challenges in academia-industry linkages, and a model for nurturing these linkages was developed.

The primary objective of this sub – domain is strengthening academia-industry collaborations and thereby improve agricultural higher education quality and relevance, fostering a skilled workforce for the evolving agricultural sector. Initiatives like workshops, brainstorming sessions, and conferences aim to identify bottlenecks, facilitate dialogue, develop frameworks, and foster partnerships for promoting academia-industry linkages in agricultural education etc., were taken up.

Systemic Quality Improvements in Agricultural Education

Systemic quality improvements in agriculture education are essential for ensuring the relevance, effectiveness, and sustainability of educational programmes. This entails a comprehensive approach

that encompasses curriculum development, pedagogical strategies, faculty capacity building, infrastructure enhancement, stakeholder engagement, and partnerships/ linkages/ collaborations etc. The Agricultural Education system has been improved through a multi-pronged approach. State Agricultural Universities have also been provided with policy prescriptions. This approach promoted excellence, knowledge exchange, innovation, and practical relevance, contributing to the development of a skilled workforce and sustainable agricultural practices.

One of the paths chosen for the project was to connect important stakeholders to deliberate-discuss-decide the ways and means for improving the overall quality of education through building an enabling environment by connecting the stakeholders of national and international institutions. The global collaborations were nurtured through various means such as visits to different HEIs abroad, regular meetings, webinars, theme based discussion groups, collaborative development of policies etc.

The Academy organized a series of workshops to foster academic-industry partnerships, promoting networking among alumni, policy development and implementation strategies for Academia-Industry-Government Linkages. Career Development Centres were established in five SAUs. A cluster of 'Master Trainers' were developed in 51 SAUs to impart one-day awareness on 'Soft skills and Entrepreneurship' to agri-graduates of their universities, finally around 6000 students were exposed to this subject. A model of public-private universities was developed through 10-days skill development courses imparted in joint manner. After study of private universities, a national workshop was conducted for mainstreaming of agricultural higher education by private universities. As follow up action, ICAR issued several policy communication benefitting such universities with quality education. Post-independence, several colleges were opened in core rural areas, these colleges have 'Faculty of Agriculture' and cater to the needs of local rural students from lower and lower-middle strata of the society and produce high number of agricultural students. These colleges are affiliated to traditional universities. A national level policy dialogue was done through interface meeting with Principals of such colleges. A faculty development centre was established at GBPUAT Pantnagar to cater to faculty training needs. The project also developed policies and frameworks to help policymakers to focus on curriculum development, student approaches to learning, socio-economic development, human resource development, career opportunities, and creating jobs. The Participatory Training Approach was used to develop soft skills among agricultural graduates. The External Advisory Panel (EAP) is a group of renowned educational experts from India, the USA, and Australia, working together to improve agricultural education. The key focal areas for the panel was to enhance the quality and relevance of agricultural education, align with National Education Policy, and promote globalization through collaboration with national, international, and private sectors. A national workshop was conducted for fostering collaborations and enhancing revenue generation. Most of the workshops/ seminar in this domain were Chaired by the Deputy Director General (Agricultural Education), ICAR.

The Participatory Training Approach was used to raise awareness about innovativeness and entrepreneurship among agricultural graduates. The training involved 51 faculty members from 50 State Agricultural Universities as Master Trainers and thus benefitted 6227 students in various agricultural sciences disciplines, including Agriculture, Horticulture, Forestry, Community Science, Veterinary, Dairy Technology, and Agricultural Engineering.

This sub domain of the project lays emphasis on international collaboration, exchange programs, and exposure visits are crucial for promoting global competitiveness in agricultural education. ICAR, SAUs, and privately funded universities should develop collaboration modalities for research, education, capacity building, and resource sharing. Technology integration, student-centric learning, and sustainable development are essential for maximizing resource use and infrastructure. Government and private institutes should work together to create a "Knowledge Grid" for research and resource utilization.

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Chapter-1: Academic Partnerships and Collaborations

Academic partnerships and collaboration are integral components to nurture innovation, knowledge exchange, and advancement in various fields of study. Such partnerships typically involve institutions coming together to share resources, expertise, and best practices, thereby enriching the academic experience for students and faculty together. Through collaborative research projects, joint degree programs, student and faculty exchanges, and shared facilities, academic institutions can empower each other's strengths to address challenges, motivate impactful research, and enhance educational opportunities. These collaborations not only broaden the scope of learning but also promote cultural understanding and global engagement. Overall, academic partnerships and collaborations serve as catalysts for academic quality, innovation, and societal development.

Objectives:

With the overarching goal of academic excellence, the key objective of this initiative was to assess the existing partnerships and identify globally recognized agricultural institutions. Subsequently, precisely studying the existing Memoranda of Understanding (MoUs) among and between ICAR/AUs and foreign universities to delineate potential areas of collaboration. Simultaneously, efforts to develop networks of inspired teachers across various disciplines and map alumni abroad to foster engagement and knowledge exchange were also initiated. Guidelines development to streamline collaboration, complemented by network meetings to facilitate MoU negotiations was also one of the objectives. The focus is on facilitating and implementing partnerships for selected universities, promoting exchanges and short-duration studies. Parallel efforts are also directed towards exploring digital solutions and consultations with relevant stakeholders to ensure comprehensive engagement and progress in agricultural education.

Approach:

The approach employed to achieve the objectives involved a multi-faceted strategy such as: reviewing existing global partnerships, developing online questionnaires, scouting globally recognized institutions, studying MoUs, mapping alumni, conducting network meetings, and implementing collaborative partnerships.

Activities:

Range of activities were undertaken to fulfil the objectives:

- **Development of Online Questionnaires:** Online questionnaires were created to gather feedback and insights from scientists who had visited abroad (under NAIP, NATP, DST, DBT etc.), aiding in understanding partnership needs and preferences.
- **Scouting of Globally Recognized Institutions:** Extensive research and analysis were conducted to identify higher educational institutions globally renowned for their major core areas and work in agriculture.
- **Analysis of Partnerships:** The Memorandum of Understandings between Indian Agricultural Universities and foreign institutions were analyzed to identify trends, strengths, and areas for improvement.

- **Network of Inspired Teachers:** Efforts were made to develop a platform for network of inspired teachers across India, with detailed information such as expertise, experience, strengths, contact details etc.
- **National Web Portal for SAU Alumni:** The framework for a National Web Portal dedicated to Agricultural Universities Alumni was established following extensive consultations during a meeting convened at NAARM on January 22, 2020. Key participants from IASRI, New Delhi, academia, and industry joined in this collaborative effort. As per the agreed-upon responsibilities, IASRI, New Delhi was tasked with developing the online platform, while ICAR-NAARM took charge of structuring the dataset, collecting relevant information, and contributing to the national portal. This concerted effort resulted in the launch of the fully operational web portal known as the "Krishi Vishwa Vidyalaya Chhatr Alumni Network".
- **Initiation of Collaborative Partnerships:** Collaborative partnerships were initiated with universities based on criteria such as faculty and student exchange, short-duration studies, etc.
- **Conduct of Workshops:** Establishment of networks / collaborations among the stakeholders are envisaged through various means. In this direction several workshops / network meetings/ focused group meetings etc were organized as a part of the project.
 - National Workshop on Academic Excellence through Building Partnerships and Resources Generation was organized on 30 April and 1 May, 2019. The main focus of the workshop was to develop resources and mechanism for supporting infrastructure, faculty and student advancement, and providing means for better governance and management of Agricultural Universities (AUs) in India. It was also focused to establish a partnership with different institutions globally in order to improve the quality of education and resource generation at AUs.
 - Workshops were organized to explore and develop digital solutions in agriculture, leveraging technologies such as Artificial Intelligence (AI), Blockchain, and Internet of Things (IoT). The 'Pre-Proposal Workshop' on Development of Digital Solutions through application of AI, Blockchain Technology, and IoT in Agriculture" was organized during November 19-23, 2019, at NAARM, Hyderabad.
 - A workshop titled "Developing Winning Research Proposals (DWRP) on Digital Solutions in Agriculture and Food Systems" took place on 27-28 December, 2019, at Sharda University, NOIDA.
 - International Webinar on Fostering Global Collaborations among Agricultural Higher Educational Institutions 8-9 November 2021.
 - A Dialogue on Fostering Collaborations of Research and Education for Quality Agricultural Higher Education on 10th May 2022.
 - Collaboration with International Universities viz. Cornell University and Texas A& M University through training workshop on 'Education Management and Academic Leadership'
- MoUs between NAARM and 08 SAUs for establishing Career Development Centres and Faculty Development Centre at GBPUAT, Pantnagar

Achievements:

Throughout the project duration, several notable achievements were realized:

- 1. Data Collection from Scientists:** Collection of data from around **500 scientists** through online questionnaires enriched the understanding of partnership needs and preferences. Enabled to identify the premier institutions and experts in respective filed for facilitating collaborations.
- 2. Scouting of Globally Recognized Institutions:** Identified of **215** Higher Educational Institutions (HEIs) renowned for their work in agriculture for potential collaborations, which enabled to understand the global landscape of agricultural research / education.
- 3. Analysis of Partnerships:** A total of **667 MoUs** were analyzed providing insights into existing linkages and served as a basis for developing future partnerships. Most of the time, collaboration is in the areas of research, extension, education and capacity building, in that order. Many of the SAUs had collaboration with National Organizations (73.4%) than International organizations (25.56%). The SAUs viz. Navsari Agricultural University, Navsari; University of Agricultural Sciences, Bangalore; IARI, New Delhi, etc., collaborated more with industries than others. The collaboration with international organizations and industry is focused more on research, education, extension, and capacity building. So the dynamics are to be relooked at regarding the purpose, organization, and process of MoUs.
- 4. Academic Collaborations between SAUs and Private Universities:** Through Career Development Centres collaboration of 05 SAUs were developed with approximately 20 private universities to provide guidance to students in the area of soft skills and personality development.
- 5. Fostering Academic Partnership between SAUs and Private Universities:** Two models were studied, where a SAU and a private university jointly conducted skill development 10-days certificate course for their agricultural students. One model was with GBPUAT, Pantnagar as a lead with a private university called Shobhit University, Meerut. Another was DrYS Parmar University of Horticulture and Forestry, Nauni as leade with Shoolini University, Solan. Interestingly in both the cases, the certificate courses were organized at the campus of private universities. With these two PPP model studies its clear that trust need to be developed and collaboration between locally available private university and public university can bring societal good far beyond the academic achievements only.
- 6. NAARM MoUs with Private Universities:** As part of efforts to strengthen Public-Private Partnerships, ICAR-National Academy of Agricultural Research Management, Hyderabad, signed Memoranda of Understanding (MoUs) with the following institutions: Bharatiya Engineering Science & Technology Innovation University (BESTIU), Gorantla, Andhra Pradesh, IES University, Bhopal, Madhya Pradesh, Vellore Institute of Technology, Vellore and Sanskriti University, Mathura, Uttar Pradesh (MoUs signed on 17 July, 31 July and 21 September 2023). Another MoU is done with Malla Reddy University, Hyderabad. Few more in pipe line.

7. **Establishment of Network of Inspired Teachers:** Establishment of a network of **1600 inspired teachers** collected from **50 universities** nurtured innovation and excellence in education across India.
8. **National Web Portal for AU Alumni:** The national web portal named "*Krishivi Vishwavidyalaya Chhatr Alumni Network*" was successfully developed, with NAARM providing an initial dataset comprising approximately **50000 alumni records** from various State Agricultural Universities (SAUs). Operationalization of this online platform facilitated alumni engagement and networking opportunities. Interested parties can access the Alumni Portal via the ICAR website at <http://alumni.icar.gov.in/>
9. **Global Collaborations External Advisory Panel:** The project roped in the international expert from Texas A&M University, Western Sydney University, Cornell University, Ohio State University etc. for continuous guidance and collaboration in improvement of Indian Agricultural Education System.
10. **Empowerment through Workshops on Digital Solutions:** Workshops on digital solutions in agriculture empowered participants with skills to develop research proposals, thus contributing to technological advancement in the field. In this regard NAARM, Hyderabad had organized a 10-day Training-cum-Certificate Course on Drone Technology in Agriculture, in collaboration with G B Pant University of Agriculture and Technology, Pantnagar and Shobhit Institute of Engineering & Technology (Deemed to-Be-University), Meerut on December 4th to 13th, 2023, at Shobhit University, Meerut. The programme benefitted 36 participants of three Universities - GBPUAT, Shobhit University, SVPUAT.
11. **National Workshop on Academic Excellence through Building Partnerships and Resources Generation:** It was organized on 30 April and 1 May, 2019. The objectives were 1) to discuss, deliberate and brainstorm on how to escalate revenue generation in AUs, 2) to build partnerships in strengthening National Agricultural Higher Education and Research and Extension Systems, and 3) to sensitize participants about the activities of the NAHEP Component 2A project. Dr.N. S Rathore, DDG (Education), ICAR was the Chief Guest for the inaugural function. The other dignitaries include Prof. Vishnu Sharma, Vice-Chancellor, RAJUVAS, Bikaner; Dr. Prabhat Kumar, National Coordinator, NAHEP, New Delhi; Dr. Ch. Srinivasa Rao, Director, NAARM, Hyderabad; Dr. G Venkateswarlu, ADG (EQR), ICAR; Dr. SK Soam, Joint Director and CCPI of the project from NAARM; Dr. Sudeep Marwaha, PI from Lead Institute (IASRI), Project team members, delegates from various universities. The main focus of the workshop was to develop resources and mechanism for supporting infrastructure, faculty and student advancement, and providing means for better governance and management of Agricultural Universities (AUs) in India. Emphasis was also to establish a partnership with different institutions globally in order to improve the quality of education and resource generation at AUs. A total of 78 participants including Nodal Officer, PI, Co-PIs of the partner institutions of NAHEP and scientists, faculty members of NAARM, IASRI and ICAR took part in the workshop, representing 27 Institutions.
12. **A Dialogue on Fostering Collaborations of Research and Education for Quality Agricultural Higher Education:** It was done on 10th May 2022. This programme was organized to discuss the collaboration among private and government institutions for quality agricultural higher education. Forty-Five participants including several Deans

from SAUs and Private Universities, Directors from ICAR and SAUs participated in the brainstorming workshop. Dr Ch. Srinivasa Rao, Director, NAARM and Dr G. Venkateshwarlu, Joint Director, NAARM guided the whole process for highly successful outcomes. Dr AK Singh, Director, IARI, New Delhi; Dr Praveen Rao, Vice Chancellor, PJTSAU, Hyderabad and Dr Neeraja Prabhakar, Vice Chancellor, SKLTSU, Hyderabad were the prominent speakers in the event.

13. **International Webinar on Fostering Global Collaborations among Agricultural Higher Educational Institutions:** Organised online during 8-9 November 2021. The major objective of this international webinar was 1) to foster global collaborations among agricultural HEIs and define the modalities/framework for such collaborations, 2) Implementation of global collaborative partnerships between SAUs and global educational institutions. In his address, Dr R.C. Agrawal, Deputy Director General (Agricultural Education), ICAR & National Director, NAHEP emphasized on the internationalization of agricultural education, aligning to the National Educational Policy, Human Kansas State University Resource Development and multi-global practices, etc. Shri Bekzod Shamsiev, Task Team Leader, World Bank suggested for utilizing the World Bank's Network across different countries to foster the global collaborations. Dr Ch. Srinivasa Rao, Director, ICAR-NAARM and Dr Rajender Parsad, Director, ICAR-IASRI, New Delhi were also present during the occasion. The Webinar registered participation from more than 200 participants from the State Agricultural Universities, International Universities, National Coordinators, NAHEP Component - 2 team members and other ICAR Institutes. The key recommendations of the International webinar were 1) Flexible Curriculum with integrating cutting edge technologies 2) Students' exposure to global best practices, 3) adoption of "Growth Mindset" with continuous improvement in skills and intelligence for sustainability 4) awarding joint degrees and transfer of credits, 5) developing global collaborative research and policy development programmes, which will create "Global Partnership Culture" among Agricultural Higher Education Institutions (AHEI), 6) establishing international unit for global knowledge sharing and global cooperation for expert & expertise sharing by ICAR, lead role by SAUs in global partnerships especially in regions like Africa and South Asia for improving the agricultural ecosystems.
14. **Collaboration with International Universities viz. Cornell University and Texas A& M University:** A process followed through training workshop on 'Education Management and Academic Leadership' during 3-17 September 2020 with an objective to enhance the efficiency of Indian Agricultural Education System. Forty-five enthusiastic administrators and senior faculty from agricultural universities including 10 lady participants from 18 states participated in the online training workshop.
15. **Brainstorming Workshop on Networking of Agricultural Universities Alumni:** This workshop was organised at ICAR-NAARM, Hyderabad on 22nd January, the objective was to build a robust alumni platform for National Agricultural Research and Education System (NARES), and to map alumni through technological interventions and other strategies. The focus of this workshop was to build a robust alumni platform for National Agricultural Research and Education System (NARES) and mapping the alumni of agricultural universities. Senior officials from Professor Jayashankar Telangana State Agricultural University, Hyderabad, Sri Konda Laxman Telangana State Horticultural University, Hyderabad and P.V.Narasimha Rao Telangana Veterinary University, Hyderabad attended. IT experts from various industries were

also present during the workshop and demonstrated existing alumni mapping mechanisms including data harvesting through various social networks. In total 25 participants contributed in this workshop. Dr S K Soam, Joint Director I/C & CPI, NAHEP emphasized the need for a robust and sustainable alumni platform for NARES. Dr V V Sumanth Kumar, Senior Scientist & Co-PI, NAHEP gave overview about existing alumni platforms and workshop objectives. Dr D Thammi Raju Principal Scientist & Co-PI, NAHEP presented the overview of NAHEP activities related to mapping of Alumni.

16. **International Workshop on Strengthening International Agribusiness Trade:** In collaboration organized at 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- from November 14 to 15 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.
17. **Mainstreaming of Agricultural Higher Education by Colleges/ Departments in Core Rural set-up and Affiliated with Public Traditional Universities:** Through one-day awareness workshops, around 400 students in 03 colleges were trained on 'Soft Skills and Entrepreneurship Development', their faculty members were also trained for futuristic approaches. Through NAHEP the attention of ICAR was drawn towards such colleges, who engage around 10000-15000 students in agricultural higher education. The mainstreaming of agricultural higher education in such colleges is very important due to two valid strong reasons. First, these colleges provide opportunity of agricultural higher education to the less privileged section of the society. Secondly the number of agricultural students in such colleges is high and they are the core supplier to the lower level positions in state government and fertiliser/ pesticide / crop solutions etc industries at local level. Several of the alumni of such colleges are high achievers too like Vice Chancellors and even FRS too. Under this project an interface meeting with Principals of more than 10 colleges was done in 27.08.2024 at ICAR, New Delhi, the meeting was Chaired by Dr RC Agrawal, DDG (Education). Several action points were identified.

Learnings:

1. **Interdisciplinary Collaboration:** Foster interdisciplinary collaboration between different departments within academic institutions to address complex challenges and promote holistic solutions.
2. **International Collaboration:** Establish partnerships with foreign universities and research institutions to promote exchange programs, joint research projects, and cross-

cultural learning experiences for students and faculty. The NARES can play a role in fostering direct and indirect collaborations with international collaborations which can be through ICAR also.

3. **Technology Transfer and Innovation:** Facilitate the transfer of technology and innovation between academia and industry by establishing technology transfer offices, incubators, and innovation hubs to support commercialization of research outcomes.
4. **Joint Funding Initiatives:** Collaborate on funding initiatives with industry partners, government agencies, and international organizations to support research projects, infrastructure development, and capacity-building programs.
5. **Capacity Building Programs:** Develop joint capacity-building programs, workshops, and training sessions aimed at enhancing the skills and competencies of students, faculty in areas relevant to agriculture and allied sectors.
6. **Exchange Programs:** Facilitate student and faculty exchange programs with partner institutions to promote cross-cultural understanding, international exposure, and knowledge sharing.
7. **Joint Research Initiatives:** Initiate joint research initiatives focused on addressing pressing agricultural challenges, developing innovative solutions, and contributing to the advancement of knowledge in the field.
8. **Monitoring and Evaluation Mechanisms:** Establish monitoring and evaluation mechanisms to assess the impact of collaboration initiatives, track progress towards mutually agreed-upon goals, and ensure accountability and transparency in partnership activities.
9. **Collaboration** with Indian Agricultural Universities Association / other organizations for enhancing the quality and relevance of agricultural education.

Recommendations from International Webinar on Fostering Collaborations during 8-9 November 2021

- Curriculum with required flexibility and integrating cutting edge technologies like Artificial Intelligence (AI), Internet of things (IoT) and Machine learning etc
- Mutual activities for exposure of students with best practices in global Universities and Indian Universities
- Identification of reliable partners and develop shared vision with long-term commitments and understand sustainability DNA of each partner organisation
- Adoption of “Growth Mindset” with continuous improvement in skills and intelligence as being the key to sustainability
- Building trust through institutional backing of evidenced through MoU or LoU
- Building a roadmap for change with a clear set of key performance indicators (KPIs) to measure the success
- Awarding joint degrees and transfer of credits
- Equating foreign degrees with Indian degrees (Based on number of credits)
- Identifying “Champions of Change” for need identification and strategic partnership planning

- Developing global collaborative research and policy development programmes, which will create “Global Partnership Culture” among Agricultural Higher Education Institutions (AHEI)
- ICAR may consider to establish international unit for global knowledge sharing and global cooperation for expert & expertise sharing
- Collaborations through shared protection of Intellectual Property Rights (IPRs)
- Indian Agricultural Universities must take the lead in global partnerships especially in regions like Africa and South Asia for improving the agricultural ecosystems there.

Annexure – Photo & Media Gallery





ICAR-National Academy of Agricultural Research Management

Rajendranagar, Hyderabad- 500030



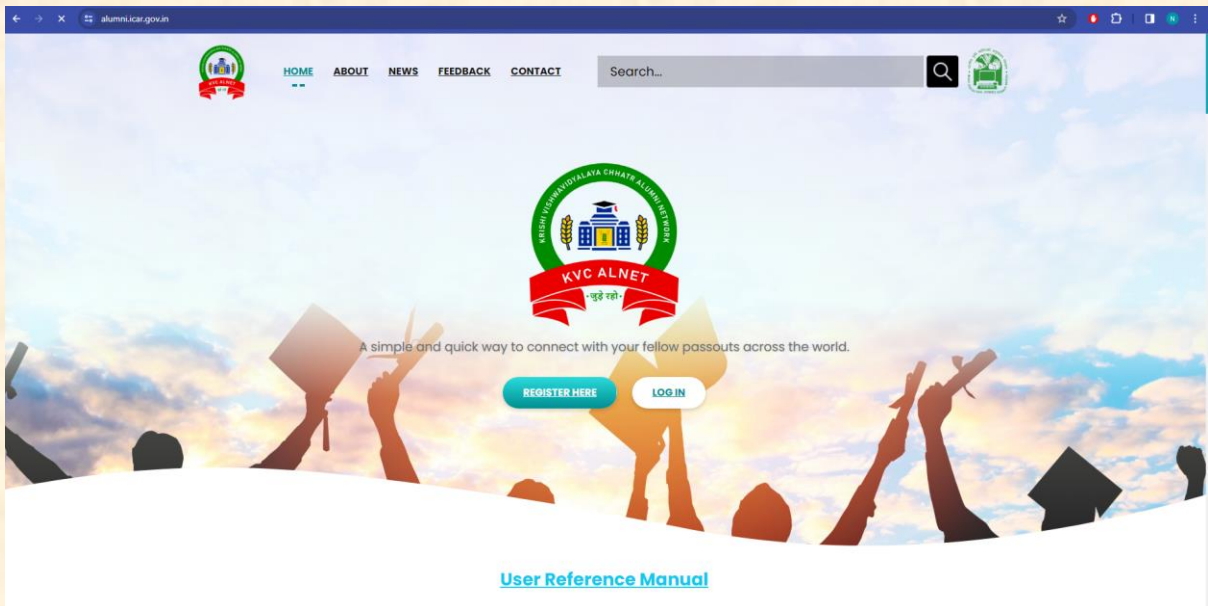
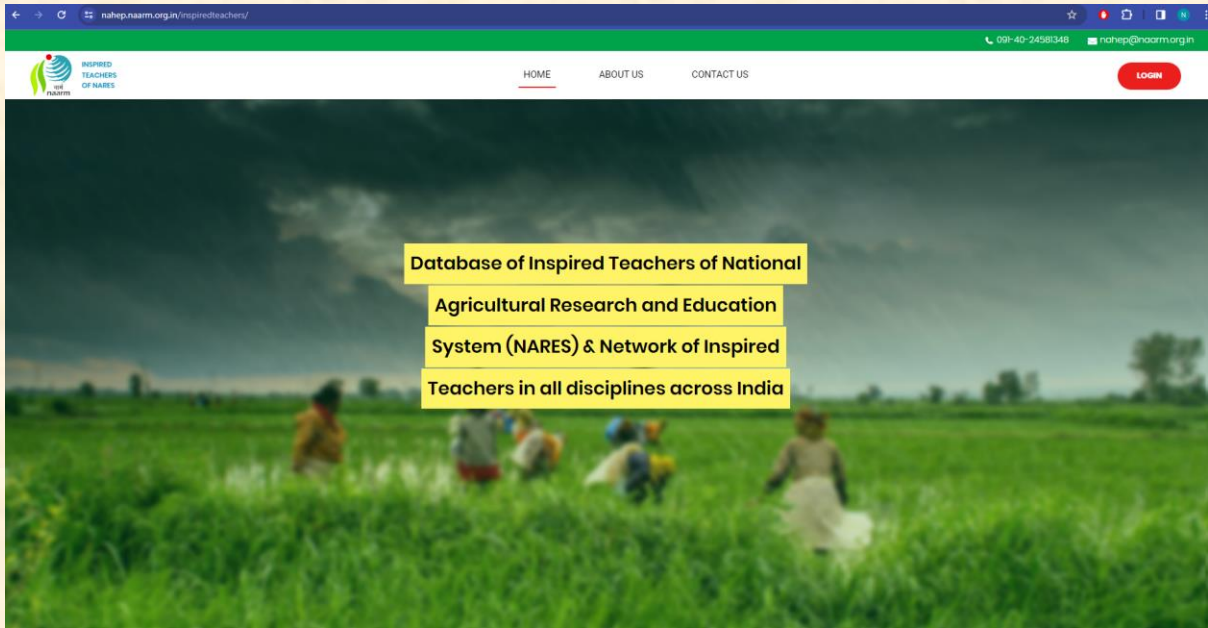
Training cum Workshop on

Developing Winning Research Proposals on Digital Solutions in Agriculture

(Under NAHEP Component 2A), November 19-23, 2019









NAARM inks pact with six agricultural universities

July 10, 2020 11:44 pm | Updated 11:44 pm IST - Hyderabad

SPECIAL CORRESPONDENT

COMMENTS SHARE

READ LATER

The ICAR-National Academy of Agricultural Research Management (NARM), Hyderabad, signed tripartite Memorandums of Understanding (MoUs) with six other State agricultural universities.

The MoUs were signed through a virtual ceremony for establishment of Career Development Centres and Faculty Development Centres under the Component - 2 of ICAR-National Agricultural Higher Education Project (NAHEP). These centres are meant for enhancing soft skills, and entrepreneur skills of students besides building competencies of the faculty of respective universities.

THURSDAY 2 MAY 2019

HANS INDIA

National workshop at NAARM concludes

ICAR in collaboration with World Bank is implementing National Agricultural Higher Education Project with the goal of developing resources and mechanism for supporting infrastructure, faculty and student advancement, and providing means for better governance and management of agricultural universities.

HANS NEWS SERVICE

Rajendranagar: The 2-day National Workshop on 'Academic Excellence through Building Partnerships and Resources Generation' at NAARM (National Academy of Agricultural Re-

search Management) concluded on Wednesday.



search Management) concluded on Wednesday. The chief guest of the workshop Dr Narendra Singh Rathore, Deputy Director General (Education), ICAR (Indian Council of Agricultural Research), New Delhi, emphasised on building partnerships with the local

institutions for the Universities in order to achieve academic excellence and resource generation as well. 'Objectivity, transparency, effectiveness, fairness and inclusiveness are the key-points for having well and good partnerships,' said Dr Rathore.

This workshop was organised as a part of World Bank funded ICAR research project on 'National Agricultural Higher Education Project (NAHEP) Component 2A: Investments in Indian Council of Agricultural Research Leadership in Agricultural Research Leadership in Agricultural Higher Education' implemented by NAARM and IASRI (Indian Agricultural Statistics Research Institute).

The NAHEP Component 2A focuses on Investments in Indian Council of Agricultural Research Leadership in Agricultural Higher Education. The implementation agencies are Indian IASRI NAARM, Hyderabad and NIAI of Indian Council of Agricultural Research with a budget outlay of Rs 6941 crores for a period of three years (2020-21).

The Indian Council of Agricultural Research in collaboration with the



World Bank is implementing NAHEP with the goal of developing resources and mechanism for supporting infrastructure, faculty and student advancement, and providing means for better governance and management of agricultural universities. Its objective is to develop a holistic model to raise the standard of current agricultural education system and is entrepreneurship oriented and on par with the global agriculture education standards. It also envisaged to contribute for the achievement of Sustainable Development Goals like Quality Education, Decent Work and Economic Growth, Industry, Innovation and Infrastructure and Climate Action.

During the inaugural session of the workshop, Dr Vishnu Sharma, Vice-Chancellor, Rajasthan University of Veterinary and Animal Sciences, Bikaner categorically stated that the rote type of MoUs does not serve the purpose, but requires effective partnerships with the diverse agencies.

While speaking on the occasion, Dr Ch Srinivasa Rao, Director, NAARM stressed on generating resource is very much essential for its excellence and

survived for the organization. He urged the stakeholders to be at the centre stage. Dr Prabhat Kumar, National Coordinator, Component 2A, stressed on the learning perspectives and over all development of students.

The programme was organized by the ICAR-NAARM, IASRI and Education Division of the Council including all the Principal Investigators of NAHEP and ICAR's Nodal Officers of 26 SAAs. Dr Sudha Mysore, CEO, Agri Innovate India Limited, New Delhi; Dr.

K. Vijayaraghavan, Chairman, Sathguru Management Consultants, Hyderabad; and Dr. Suman Prasad Singh Khanna, Former Director, Central Institute of Medicinal and Aromatic Plants (CIMAP) CSRI, Lucknow were also present as the key-speakers of the programme. A total of 80 participants including professors, Assistant professors, associate professors of various universities, principal scientists, senior scientists of ICAR took part in the workshop.



NAHEP

डेली हिन्दी मिलाप

नार्म में दो दिवसीय राष्ट्रीय कार्यशाला आयोजित



हैदराबाद १ मई-(मिलाप न्यूज) राष्ट्रीय कृषि अनुसंधान प्रबंध अकादमी (नार्म), राजेंद्रनगर में 'आकाशमिळ सुबिस्लेस थू बिलिंग पार्टनरशिप एंड रिसेसिबल मनेरेशन' विषय पर 2 दिवसीय कार्यशाला का आयोजन किया गया। कार्यशाला में बतौर मुख्य अतिथि आईसीएआर, नई दिल्ली के डीडीजी (शिक्षा) डॉ. एन एस. राठीय उपस्थित थे।

आज राई जारी वेस विज्ञप्ति के अनुसार, अपने संबोधन में एन.एस. राठीय ने विश्वविद्यालय से स्थानीय संस्थाओं को साझेदारी से आकाशमिळ उपकृष्टता तथा संसाधनों के निर्माण पर जोर दिया। उन्होंने कहा कि शिक्षाशास्त्र, पारदर्शिता तथा मन्ववरीयता के समावेश साझेदारी के लिए मुख्य बिन्दु हैं। कार्यशाला का आयोजन नार्म और

आईएसआरआई द्वारा क्रियावित्ति राष्ट्रीय कृषि उन्नयन शिक्षा परियोजना (एनएएचईपी), निम्ने विश्व बैंक द्वारा अनुसंधान हेतु अनुदान दिया जा रहा है, के तहत किया गया। कार्यशाला के उद्घाटन सत्र में राजस्थान पशु चिकित्सा और पशु विज्ञान विश्वविद्यालय, बीकानेर, राजस्थान के कुलपति डॉ. विष्णु शर्मा ने भाग लिया। उन्होंने कहा कि इस प्रकार के समझौते

ज्ञानों से उदरगत प्राप्त नहीं होता, लेकिन विभिन्न एजेंसियों के साथ जवाबी भागीदारी से उदरगत की प्रतिष्ठा की जा सकती है। कार्यशाला में नार्म के निदेशक डॉ. सीएच. बीनिवास राव ने संयोजन के लिए उपकृष्टता और अतिथि के लिए संसाधन निर्माण पर जोर दिया।

कॉन्फिडेंट टूर के राष्ट्रीय समन्वयक डॉ. पद्मनाभ कुमार ने सीखने के दृष्टिकोण और छात्रों के समाज विकास पर जोर

दिया। अवसर पर आईसीएआर-नार्म, आईएसआरआई, एनएचईपी, आईसीएआर के सेइल अधिकारियों के अलावा अतिथि इन्वोलेट इंडिया लिमिटेड नई दिल्ली की सीईओ डॉ. सुधा, सद्गुरु मैनेजमेंट कंसल्टेंट, हैदराबाद के अध्यक्ष डॉ. के.स. बिलाराराधनन, सीआईएएपी, सखनक के पूर्व निदेशक डॉ. सुमनप्रसाद सिंह उपस्थित उपस्थित थे।

NAHEP

NAHEP National Workshop on Academic Excellence organized at ICAR-NAARM

30th April, 2019, Hyderabad

The ICAR-National Academy of Agricultural Research Management, Hyderabad under National Agricultural Higher Education Project Component 2A organized the National Workshop on Academic Excellence through Building Partnerships and Resources Generation at its campus today.



The Chief Guest, Dr. N.S. Rathore, DDG (Education), ICAR, New Delhi emphasized on objectivity, transparency, effectiveness, fairness and inclusiveness to be the key-points for having well and good partnerships. Dr. Rathore stressed on building partnerships with the local institutions for the Universities in order to achieve academic excellence and resource generation as well.

Dr. Vishnu Sharma, Vice-Chancellor, Rajasthan University of Veterinary and Animal Sciences, Bikaner categorically stated that the role type of MoUs doesn't serve the purpose; but requires effective partnerships with the diverse agencies.

Dr. Ch. Srinivasa Rao, Director, NAAARM stressed on generating resource for its excellence and survival for the organization. He urged the stakeholders to be at the centre stage.

Dr. Prabhat Kumar, National Coordinator, Component 2A stressed on the learning perspectives and the overall development of students.

The programme was organized by the ICAR-NAARM, IASRI and Education Division of the Council including all the Principal Investigators of NAHEP and ICAR's Nodal Officers of 26 SAUs.

Dr. Sudha Mysore, CEO, Agri Innovate India Limited, New Delhi; Dr. K. Vijayaraghavan, Chairman, Sathguru Management Consultants, Hyderabad; Dr. D. Rama Rao, Ex-Director, ICAR-NAARM, Hyderabad and ICAR Emeritus Scientist, FJTSAU, Hyderabad and Dr. Suman Preet Singh Khanuja, Former Director, Central Institute of Medicinal and Aromatic Plants (CIMAP/GSIR), Lucknow were also present as the key-speakers of the programme.

(Source: ICAR-National Academy of Agricultural Research Management, Hyderabad)



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India's largest rural media network

NEWS (/NEWS/)

TERI School of Advanced Studies to Organize International Workshop on 'Strengthening International Agribusiness Trade'

13 November, 2019 9:44 AM IST By: Chandar Mohan (/authors/chandar-mohan/)

TERI School of Advanced Studies is organizing a two-day international workshop on Strengthening International Agribusiness Trade in collaboration with Global Centre for Land-Based Innovation- Western Sydney University, National Academy of Agricultural Research Management (NAARM) and National Agricultural Higher Education Project (NAHEP) from November 14th to 15th in New Delhi.

The workshop will be inaugurated by Ramesh Chand, Member of Niti Aayog, Government of India in the presence of Guest of Honor, Ashok Dalwai, (IAS) & CEO, National Rainfed Area Authority.

The objectives of the workshop are to prioritize action plan for strengthening International agribusiness trade from emerging countries to developed countries, and to initiate stakeholder dialogue and facilitate stakeholder partnerships between actors of food supply chains from developing and developed countries.

The major themes around which the discussion will revolve are:

- Increasing Farm Productivity through Resource Efficient Techniques and Practices
- Fostering Academia-industry-Government Partnerships for Excellence in Higher Agricultural Education
- Doubling Farmers Income: Technologies, Business Models and Sustainable Livelihoods
- Building Sustainable Agri-food Supply Chains
- Climate Change, Food and Nutritional Security
- Indo-Australia Agribusiness Trade



Chapter-2: Establishment of Career Development Centres (CDC) and Faculty Development Centre (FDC)

Career Development Centres (CDCs) and Faculty Development Centre (FDC) play a critical role in the growth and excellence of agricultural education and research institutions. CDCs are dedicated spaces aimed to enhance students' employability by providing them with essential soft skills, entrepreneurship training, and career guidance. On the other hand, FDC focus on nurturing the professional development of faculty members to ensure the delivery of high-quality education and research outcomes. These centres serve as bridging the gap between academia and industry, preparing students and faculty to meet the evolving demands of the agricultural sector. Through a range of initiatives and collaborative efforts, CDCs and FDC contribute significantly to the holistic development of individuals and the advancement of agricultural education and research on a broader scale.

Fulfilling one of the objectives of National Agricultural Higher Education Project (NAHEP) component-2 “Investments in Indian Council of Agricultural Research Leadership in Agricultural Higher Education”, the ICAR- National Academy of Agricultural Research Management NAARM) in July 2020 established Career Development Centres (CDCs) at five agricultural universities in the country:

1. Central Agricultural University, Imphal
2. Indira Gandhi Krishi Vishwavidyalaya, Raipur
3. Sri Karan Narendra Agriculture University, Jobner
4. Sri Venkateswara Veterinary University, Tirupati
5. Uttar Banga Krishi Viswavidyala, Cooch Behar

In addition to these five CDCs, few universities like Kerala Veterinary and Animal Sciences University (KVASU), Waynad, Kerala; Anand Agricultural University (AAU), Anand, Gujrat; Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya (CSKHPKV), Palampur, Himachal Pradesh established the CDCs at their own initiative.

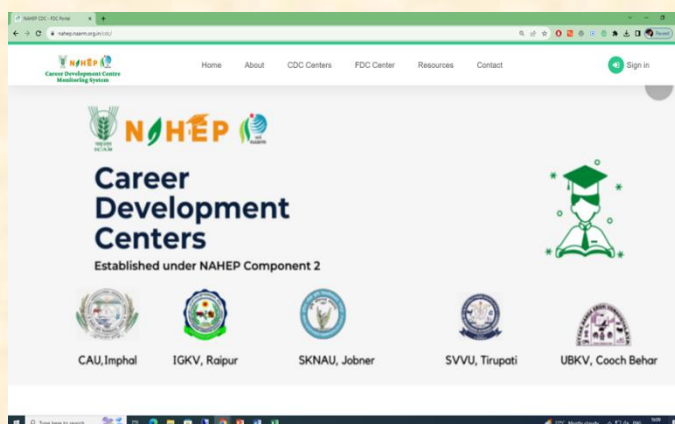
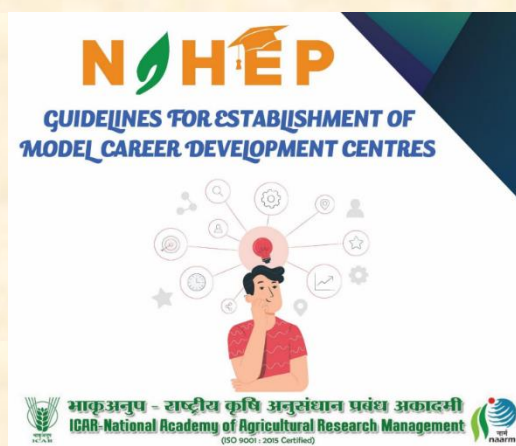
Further during FY 2024-25 three more Career Development Centres were established at following universities: Dr. YSR Horticultural University, Venkataramannagudem, Andhra Pradesh; Karnataka Veterinary, Animal and Fisheries Sciences University (KVAFSU), Bidar, Karnataka; Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu).

Guiding principles and monitoring of CDCs

The guidelines for CDCs were developed through the process of nationwide consultations with stakeholders of agricultural development i.e. Academia- Industry-Governments. The outcome of various regional workshops, brainstorming sessions conducted under NAHEP Comp 2 during FY 2019-2020 nurtured the idea of the establishment of career development centres in agricultural universities. The brief information about National Workshop on Career Development Centres is given in below table:

S. No	Place of the Workshop	Date	No of Participants
1	Kerala Agricultural University (KAU) Thrissur	07-02-2020	50(34)
2	Sri Karan Narendra Agriculture University, Jobner	12-02-2020	50(03)
3	Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur	14-02-2020	51(03)
		Total	151(40)

The guidelines were developed for effective management of CDCs (Details are available at: <https://nahep.naarm.org.in/>). For day to day monitoring at the level of each CDC and also remote monitoring of all the CDCs at NAARM level, an IT platform titled as “Career Development Monitoring System” was developed and implemented. This is to provide an online monitoring in terms of indicators with live visualization capabilities. This IT tool was also registered as copyright (No. SW-15437/2022). In the year 2023, ICAR appreciated this tool and has given ICAR technology ID [ICAR-AED-NAARM-Technology-2023-006].





Objectives:

The primary objective of establishing Career Development Centres (CDCs) and Faculty Development Centre (FDC) under the National Agricultural Higher Education Project (NAHEP) was to enhance the employability and professional development of students and faculty in agricultural universities across India. Specifically, the goals included creating awareness among students on soft skills, innovativeness, and entrepreneurship, as well as improving the performance of faculty members to ensure the quality education.

Objectives of CDCs:

- Create an ecosystem for the development of soft skills and enable the environment for the acquisition of overall national and global knowledge for the holistic development of students beyond the curriculum.
- Build confidence among students through institutional support in career planning, career counselling, and career exploration for further advancement in professional life
- Foster a culture of entrepreneurship through training, mentoring and providing opportunities for networking with various institutions.

Objectives of FDC:

- To enhance the teaching competencies of faculty of agricultural universities through capacity building programmes for entry-level, mid-career and senior faculty
- To improve engagement in research and integrated network practices that would improve the education management
- To evolve a result-oriented ecosystem by incorporating best global practices in agricultural higher education, and establishing high standards of Academic Leadership

- To enable, encourage, develop, implement teaching innovations leading to better learning abilities of students and improved quality of education

Recognition FDC:

ICAR-NAARM under National Agricultural Higher Education Project (NAHEP) Component 2 established “Faculty Development Centre (FDC)” at G.B. Pant University of Agriculture & Technology, Pantnagar. Now the FDC has been made a permanent part of GBPUAT by Board

Established Faculty Development Centre (FDC) with support of NAARM, Hyderabad under NAHEP Component 2

The country's first in an SAU

It is a matter of pride that GBPUAT, Pantnagar has been bestowed with the Faculty Development Centre (FDC) by National Academy of Agricultural Research Management (ICAR-NAARM) Hyderabad, validating its excellent performance and potential. The IDP-NAHEP, Pantnagar under PI, Dean Dr. S.K. Kashyap, has undertaken the responsibility of establishing the FDC in NAHEP building and instilling a need-based robust programme series to support all the Agricultural Universities across the country. Vice-Chancellor Dr. Tej Partap is leading the FDC as its Chairman.

of Management approval. The IDP component of NAHEP at GBPUAT in their publication “The 50 path finding academic innovations- The 60th year Pantnagar storey (1960-2020)” at page number 12 has mentioned FDC as one of the important innovation.

URL: Faculty Development Centres Monitoring System:

<https://nahep.naarm.org.in/fdc>

Approach:

Creation of CDCs in itself was the novel approach, these centres were established for the first time in NARS and established as ‘Model Centres’. Similarly, FDC was unique experiment as sub-centre of NAARM in northern India. The implementation approach by CDCs/ FDC involved a multi-faceted strategy, including organizing workshops, developing training manuals, conducting regional workshops, and establishing online monitoring systems. These efforts aimed to spread knowledge, provide training opportunities, and follow established guidelines for the effective functioning of CDCs and FDCs. Collaboration with various agricultural universities and stakeholders was integral to the implementation process.

Activities:

The activities include a wide range of topics and training programs aimed to improve the skills and knowledge of participants in various fields related to agriculture and allied sectors. Here are the **diversified activities performed** through CDCs:

1. Webinar and talks

- Exploring Possibilities and Trends for a Robust Career.
- Managing stress in all spheres of life
- Data Handling Skills
- Introduce yourself through powerful headings: an art of CV preparation
- Motivational Talk on Career in Civil Services

- Career Counselling and Personality Development program for Agricultural Students
- Employability Skills for 21st Century
- Job opportunities for Veterinarians
- Interaction of Police with male students for career development in Police Services
- Career opportunities and entrepreneurship development

2. Workshops

- Developing Presentation Skills among PG students using PowerPoint.
- Phonetics and Phonology of English.
- Workshop on Time management & Procrastination
- Email Writing Workshop and Medha eCAB Program Pitching
- Building Team Spirit Among Students for Career Development and Soft Skills for Professional Growth.
- Soft Skills for Professional Growth
- Corporate and Media Coordination for UG students
- Corporate and Media Coordination for PG students.
- Learning and Career Opportunities in Agribusiness, Plantation, Food and Agri-exports
- Career Changes: Understanding your path dynamically

3. Training programs

- Entrepreneurship Opportunities in Milk Sector: Fortification of Milk with Micronutrients, Healthful Aspects of Probiotics and Functional Dairy Foods: New Dimensions, Quality and Safety Assurance of Dairy Products.
- Entrepreneurship Opportunities in Sheep, Goat Sector and Meat Processing
- Entrepreneurship Development in Agriculture
- International Training Program on Recent Advances in Nutritional Management of Dairy Cows in Changing Paradigm
- International Virtual Training Programme on advanced Microscopic Techniques in Biomedical Research
- Aflatoxin analysis for food safety
- ARC HPLC More options for Chromatographic separations (Virtual)
- Recent advances in Animal Feeding to maximize productivity and health of domestic animals
- Preparation and Marketing Program of Value Added Livestock Products for Farmers/Beneficiaries under SC Clusters
- Communication Skill Training Program
- Career Advancement Bootcamp (CAB) program
- Diagnosis Services of SLDL on Zoonotic Diseases
- CODEX HAPP Implementation Training
- Research paper writing

4. Sportsmanship, Fitness and Keeping active programs

5. Career Expo (Job Fair, Career Guidance, Academia Industry Interface)
6. Campus Placements Drives
7. JRF Coaching
8. Remedial class on word Formation for late admitted students
9. Alumni Meet & Reunion Program

Additionally, interaction meetings were held with students to gather feedback on the effectiveness of CDCs.

Here are the **diversified activities performed by FDC at GBPUAT, Pantnagar:**

- Workshop on Systems and Contemporary Trends in Students Counselling
- 5-Day capacity building program on Essential Skills for Effective Online Teaching
- Capacity building program: Teaching Taxonomies and Student-Centred Teaching Practices
- Training Program: Academic Management System: Functionality & Management
- Training Program: Academic Management System: Utilities and Troubleshooting
- Exploring Counselling Strategies: The Way to Institution Building
- Training Workshop on Fostering Academic Leadership in Agriculture
- Sustainability of Career Development Centres

#	Centre Type and University Name	No. of Programme organized					No. of Beneficiaries					Total Programmes	Total Beneficiaries
		2020-21	2021-22	2022-23	2023-24	2024-25	2020-21	2021-22	2022-23	2023-24	2024-25		
1	CDC at CAU Imphal	5	15	3	2	0	587	1041	138	180	0	25	1946
2	CDC at IGKV Raipur	12	16	51	22	0	1284	1575	6662	1866	0	101	11387
3	CDC at SKNAU Jobner	8	32	40	11	0	725	3960	6166	857	0	91	11708
4	CDC at SVVU Tirupati	6	14	3	5	0	1234	2800	1065	1065	0	28	6164
5	CDC at UBKV Cooch Behar	0	6	14	0	0	0	897	1091	0	0	20	1988
6	FDC at GBPUAT	5	5	1	0	0	281	350	30	0	0	11	661
7	CDC at Dr YSRHU, A.P	0	0	0	0	5	0	0	0	0	2946	5	2946
8	CDC at SKUAST, Jammu	0	0	0	0	1	0	0	0	0	40	1	40
9	CDC at KVAFASU, Bidar	0	0	0	0	10	0	0	0	0	849	10	849
	Total	36	88	112	40	16	4111	10623	15152	3968	3835	292	37689

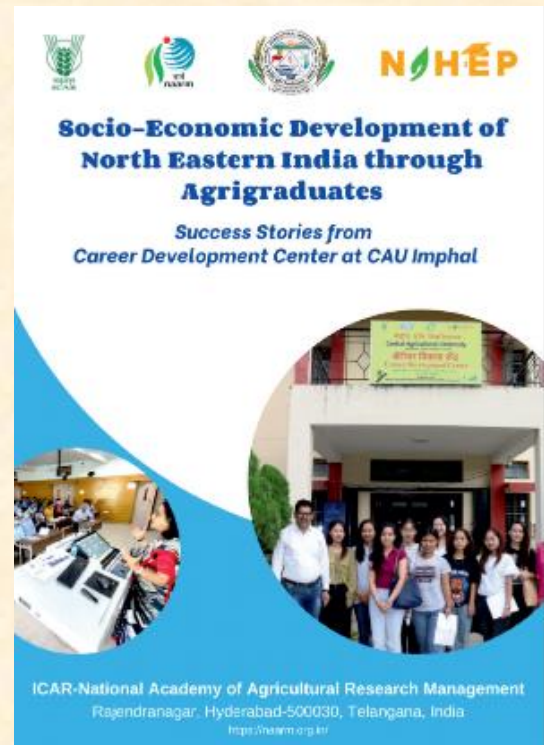
Achievements:

Over the four-year period, significant achievements were realized, including the establishment of CDCs in five agricultural universities, the conduct of numerous awareness workshops benefiting thousands of

students, and the development of online monitoring systems for transparent and standardized operations. Guidelines for FDCs were prepared, and career fairs were organized to enhance students' knowledge for career opportunities. Workshops participation from various stakeholders, highlighted the importance of CDCs in agricultural education. Up to financial year 2023 around 26000 participants in 256 programmes and around 35% were women participants. At the end of the project the number was around 38000.

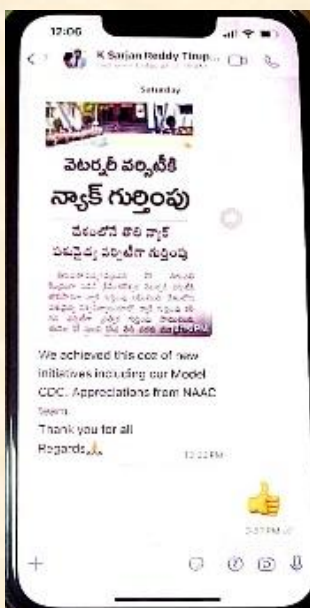
Success Stories from CDCs

The success story titled “Socio-Economic Development of North Eastern India through Agrigraduates” makes it clear that CDC at CAU, Imphal, brought significant improvement in the quality and relevance of agricultural higher education with a more profound impact on "Personality Development", "Communication & Soft skills", "Empowerments", "Confidence Building" and creating an ecosystem to foster a culture of entrepreneurship. Furthermore, the testimonials from CDC organizers and student beneficiaries further substantiate these facts. ICAR-NAARM also documents the various success stories from all the CDCs.



Learnings:

Through these initiatives, several key learnings were derived, emphasizing the importance of collaborative partnerships, effective monitoring systems, and continuous feedback mechanisms. The need for sustained efforts in promoting soft skills and entrepreneurship among students, as well as the professional development of faculty, was underscored. Additionally, the success of career fairs and workshops highlighted the value of experiential learning and industry-academia linkages in enhancing students' employability and career readiness. Overall, the establishment of CDCs and FDCs contributed significantly to the advancement of agricultural education and human resource development in the country. The most important learning was how make these CDCs as self-sufficient and sustainable in long run and also scaling up mechanism. Dr K. Sarjan Reddy, Chairman, CDC at SVVU, Tirupati in his WhatsApp message informed that CDC at their university played highly significant role in getting NAAC grade. Therefore it is clear that CDC is very important instrument in



improving the rating of the university

Strategies for sustenance of CDCs

The pilot project had been very successful, therefore to find out the success parameters for post-NAHEP sustainable operations of these CDCs, three national workshops were conducted involving senior functionaries like Deans and Directors from State Agricultural Universities (SAUs) and also from private universities, who are offering agricultural higher education in the country. These national workshops were conducted at those SAUs, who have taken initiatives at their own and also represent the diversity of the country i.e. South, North and Western India.

The purposes of these workshop were:

1. Sharing the activities done by five CDCs and impact on students' well being
2. Identification of the sustainability indicators/ parameters for expanding CDCs in future
3. Finding solutions to the issues relating 'Finance' and 'Networks' for CDCs
4. Analysis of operational features such as- management, administration, student engagements etc. for institutionalization of CDCs and revisiting the guidelines
5. Policy advocacy and creating opinion leaders for establishment of CDC in each agricultural university as innovative initiative of students' overall development in tune with national objectives particularly NEP 2020
6. Visualizing the monitoring and evaluation features of online system
7. Discussing challenges in integration of CDC with the available systems like 'training & placement cells', 'counselling & placement cells', 'centre of professional enhancement', 'university start-up cell', 'competitive examination cell' etc. in various universities.





छात्रों को अनुकूल और उत्कृष्ट वातावरण प्रदान किया जाना आवश्यक : कुलपति

कृषि विश्वविद्यालय में सी.डी.सी. और बी.एल.पी. पर राष्ट्रीय कार्यशाला आयोजित, देश भर से जुड़े शिक्षाविद, कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण अपनाने पर बत

कृषि विश्वविद्यालय में सीडीसी और बीएलपी पर राष्ट्रीय कार्यशाला आयोजित करियर विकास केंद्रों को गतिशील केंद्र बनाए : कुलपति

कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण को अपनाए (कार्यशाला में भाग ले रहे शिक्षाविदों के साथ)।

कृषि विश्वविद्यालय में सीडीसी और बीएलपी पर राष्ट्रीय कार्यशाला में बसे हुए शिक्षाविदों ने 'कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण को अपनाने'

कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण को अपनाने (कार्यशाला में भाग ले रहे शिक्षाविदों के साथ)।

Vice Chancellor HPKV inaugurated national workshop at CSKHPAU

A national workshop on Sustainability of Career Development Centers (CDCs), National Agricultural Research Education System and Blended Learning Platform (BLP) was held at Chaudhary Swarn Kumar Himachal Pradesh Agricultural University, Himachal Pradesh. Vice Chancellor Dr. S.K. Sonu, in his inaugural address called for making CDCs as a bridge between academic excellence and practical application. BLP integrates traditional teaching methods and power of technology. BLP integrates traditional teaching methods and power of technology. BLP integrates traditional teaching methods and power of technology.

प्रदेश कृषि विश्वविद्यालय में देश भर से जुड़े शिक्षाविद कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण अपनाने पर बत

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कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण को अपनाए : डा. डीके वत्स

कृषि शिक्षा में नवाचार के लिए मिश्रित शिक्षण दृष्टिकोण को अपनाए (कार्यशाला में भाग ले रहे शिक्षाविदों के साथ)।



Webinar on Communication and Negotiation Skills for Entrepreneurship Development

Dr. S.K.Patil
Chief Patron & Vice-Chancellor
Indira Gandhi Krishi Vishwavidyalaya
Raipur (CG)

Date : 30 January 2021
Time: 11.45 AM to 2:00 PM

Online Registration (free)
Link <https://meet.google.com/opb-dhby-yqi>
open at 11.15 AM on 30 January 2021

Participants
Students & Faculty members of IGKV.

Dr. G.K. Shrivastava
DSW & Chairperson, CDC
Indira Gandhi Krishi Vishwavidyalaya
Raipur (CG)

Lead Speakers

Webinar Convenors

Dr. Jitendra Sinha (9425559418)
Dr. Shubha Banerjee (9993583206)
Dr. Rama Mohan (9425515922)
Dr. Deepthi Jha (8109132602)
Dr. Deepak Gauraha (9424217252)
Dr. Harsh Verdhan Puranik (8349747746)
Miss Kalpana Banjare (8962163245)

Dr. Bharat S. Sontakki
Head, Extension System Management division,
ICAR-NAARM, Hyderabad

Shri Sourabh Janghel
National awardee entrepreneur

Time	Title of Lecture	Name of Speaker
11:45AM to 11:55AM	Welcome address	Dr. G.K. Shrivastava
11:55AM to 12:15 PM	Innovations for Entrepreneurship Development	Dr. S.K.Patil
12:15 Noon to 01:00PM	Communication and negotiation Skills	Dr. Bharat S. Sontakki
01:00PM to 01:30PM	Mushroom cultivation-An entrepreneurial approach	Shri Sourabh Janghel
1:30PM to 01:35PM	Vote of Thanks	Dr. S.S. Tuteja

Organized By : Career Development Centre, Indira Gandhi Krishi Vishwavidyalaya, Raipur (CG)
Sponsored By : NAHEP (ICAR-NAARM), Hyderabad
Facilitators - Dr S.S.Tuteja, Dr. R. R. Saxena, Dr. N. Lakpale and Dr. M. A. Khan

श्री वेंकटेश्वर पशुचिकित्सा विश्वविद्यालय Sri Venkateswara Veterinary University

Dr. Y.S.R. Bhavan, Tirupati, Andhra Pradesh - 517 502

करियर विकास केंद्र Career Development Center

Dr. V. Prabhakar Reddy
Asst. Prof. & Head,
Vet. Pathology

Dr. P. Raju Reddy
Asst. Prof. & Head,
Vet. Pathology

Workshop on
Orientation to Overseas Education for Veterinary Students

Date: 30.03.2021
Time: 10.00 AM to 5.00PM

Venue: College of Veterinary Science, Proddatur

Dr. Srinivas
Asst. Prof.

Dr. Rajashekhari
Asst. Prof.

Organized by
Career Development Center, SVVU, Tirupati

Sponsored by
राष्ट्रीय कृषि उच्च शिक्षा परियोजना (रा.क.उ.शि.प.) - घटक 2
के अंतर्गत स्थापित
Established under
National Agricultural Higher Education Project (NAHEP) - Component 2

Dr. Srinivas
Asst. Prof.

Dr. P. Raju Reddy
Asst. Prof. & Head,
Vet. Pathology

Dr. S. Karim
Asst. Prof. & Head,
Vet. Pathology

Dr. Srinivas
Asst. Prof.

Dr. P. Raju Reddy
Asst. Prof. & Head,
Vet. Pathology



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श्री कर्ण नरेंद्र कृषि विश्वविद्यालय में बनेगा कैरियर डेवलपमेंट सेंटर : डॉ.संधू

जोबनेर (हुक्मनामा समाचार)। राष्ट्रीय कृषि अनुसंधान प्रबंधन अकादमी हैदराबाद द्वारा एकदिवसीय कैरियर डेवलपमेंट पर राष्ट्रीय कार्यशाला का उद्घाटन करते हुए श्री कर्ण नरेंद्र कृषि विश्वविद्यालय के कुलपति डॉ जे एस संधू ने कहा कि राष्ट्र स्तर की तरह की कार्यशाला के मध्यम से कृषि में शिक्षा ग्रहण करने वाले छात्र छात्राओं को उनके कैरियर चुनने में स्वर्णिम अवसर प्राप्त होंगे।

डॉक्टर सिंह ने कहा कि कृषि व्यापार से जुड़े उद्योगपतियों को इस कार्यशाला से जोड़ने से कृषि उद्योगों में छात्रों के कैरियर में नौकरियां प्राप्त करने के अवसर प्राप्त होंगे तथा कृषि उद्योगों को भी इसका लाभ मिलेगा डॉक्टर सिंह ने कहा कि शीघ्र ही विश्वविद्यालय में कैरियर डेवलपमेंट सेंटर की स्थापना की जाएगी तथा इसके माध्यम से जहां पर छात्रों को राष्ट्रीय अंतरराष्ट्रीय स्तर पर कैरियर बनाने की संपूर्ण

जानकारी प्राप्त हो सकेगी इस कार्यशाला को संबोधित करते हुए डॉ. आलोक कुमार वरिष्ठ वैज्ञानिक एवं को- पी आई नेशनल एग्रीकल्चर हायर एजुकेशन प्रोजेक्ट राष्ट्रीय कृषि अनुसंधान प्रबंधन अकादमी हैदराबाद ने बताया कि इस राष्ट्रीय कार्यशाला के माध्यम से कैरियर डेवलपमेंट केंद्र का महत्व आवश्यकता सुविधाएं इसकी स्थापना हेतु दिशा निर्देश तथा ब्रेनस्टॉर्मिंग से आगे बढ़ाने पर गहन चिंतन किया किया जाएगा तथा शीघ्र ही देश में पांच कैरियर डेवलपमेंट सेंटर की स्थापना होगी जो कृषि के क्षेत्र में शिक्षा प्राप्त कर रहे छात्र छात्राओं को लाभान्वित करेंगे कार्यक्रम में श्री कर्ण नरेंद्र कृषि विश्वविद्यालय के निर्देशक एचआरडी डॉ एस मुखर्जी ने इस कार्यशाला के बारे में एवं उपयोगिता के बारे में अवगत कराया इस राष्ट्रीय कार्यशाला में देश के 12 कृषि विश्वविद्यालयों के वैज्ञानिकों ने भाग लिया।

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नार्म व 6 कृषि विश्वविद्यालयों के बीच समझौता

ईराक, 11 जुलाई (इराक-एनए) - राष्ट्रीय कृषि अनुसंधान परिषद (NARS) द्वारा संचालित और 6 अंतरराष्ट्रीय स्तर पर राजधानी पर आयोजित किया गया।

उक्त कार्यक्रम में अंतरराष्ट्रीय अनुसंधान, कार्य तथा राष्ट्रीय कृषि विकास विभाग (NARS) के अध्यक्ष डॉ. अहमद अली अली और अंतरराष्ट्रीय कृषि विकास विभाग (NARS) के अध्यक्ष डॉ. अहमद अली अली के अध्यक्षता में आयोजित किया गया।

कार्यक्रम में अंतरराष्ट्रीय कृषि विश्वविद्यालयों के अध्यक्षों और प्रमुखों के बीच समझौता किया गया। समझौते के अंतर्गत अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

कार्यक्रम में अंतरराष्ट्रीय कृषि विश्वविद्यालयों के अध्यक्षों और प्रमुखों के बीच समझौता किया गया। समझौते के अंतर्गत अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

कृषि विश्वविद्यालय में कैरियर डेवलपमेंट सेंटर प्रारंभ

विद्यार्थियों को राष्ट्रीय एवं अंतरराष्ट्रीय स्तर पर रोजगार के अवसर मिलेंगे

राजपुर, 11 जुलाई (इराक-एनए) - राष्ट्रीय कृषि अनुसंधान परिषद (NARS) के अध्यक्ष डॉ. अहमद अली अली के अध्यक्षता में आयोजित किया गया।

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उक्त विश्व परियोजना के माध्यम से अंतरराष्ट्रीय कृषि विश्वविद्यालयों में शामिल हैं विभिन्न राष्ट्रीय कृषि विश्वविद्यालयों के अंतर्गत



कार्यक्रम में अंतरराष्ट्रीय कृषि विश्वविद्यालयों के अध्यक्षों और प्रमुखों के बीच समझौता किया गया। समझौते के अंतर्गत अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

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कार्यक्रम में अंतरराष्ट्रीय कृषि विश्वविद्यालयों के अध्यक्षों और प्रमुखों के बीच समझौता किया गया। समझौते के अंतर्गत अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

अवसरों के बारे में तकनीकी सहायता प्रदान करने के लिए। व्यवसाय एवं रोजगार के विकास के लिए बेहतर वातावरण निर्मित करने के लिए अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

कार्यक्रम में अंतरराष्ट्रीय कृषि विश्वविद्यालयों के अध्यक्षों और प्रमुखों के बीच समझौता किया गया। समझौते के अंतर्गत अंतरराष्ट्रीय कृषि विश्वविद्यालयों के बीच सहयोग, अनुसंधान, प्रशिक्षण, विनिमय और अन्य क्षेत्रों में सहयोग किया जाएगा।

शताब्दी गारा

Chapter-3: The Improvement of Curriculum Development Mechanisms

In the context of higher education in general, and agricultural higher education, in particular, a curriculum that facilitates a student's mastery over subject matter while enabling her/him to utilize the knowledge to solve "real-world" issues, is becoming critical. To this end, the effectiveness of agricultural higher education curriculum may be evaluated by analyzing the employability of graduates. How suitable are they – in knowledge and practice – to dispense their services to potential employers (private or public). In addition to employability, students' ability to leverage their higher education and create disruptions in the agricultural and allied sectors through enterprises and start-ups to bolster new trends is also an indicator of a curriculum that produces competent graduates who are skilled to tackle multiple goals to include not only rigorous benchmarks in core academic subjects but also technological literacy and interpersonal skills, also known as 21st-century skills.

The Improvement of Curriculum Development Mechanisms in agricultural education has been a principal attempt aimed at aligning educational practices with global standards. Through rigorous studies, consultations with educational experts, and documentation of best practices worldwide, significant progress has been made in enhancing the quality, relevance, and effectiveness of curricula. Efforts are focused on understanding and integrating diverse student learning approaches, fostering stakeholder collaboration, and developing comprehensive frameworks for curriculum development. These initiatives underscore a commitment to adaptability, innovation, and continuous improvement in agricultural education, ensuring that graduates are equipped with the skills, knowledge, and competencies necessary to address the challenges of a rapidly changing world.

Objective:

The primary objectives of the initiative were to:

1. Refine curricula review processes in alignment with global best practices.
2. Identify and integrate effective student learning approaches into curriculum development.
3. Develop a comprehensive framework for curriculum development in agricultural education.

Approach:

The project adopted an 'inclusive and systematic approach' in developing college-ready, career-ready, future-ready curriculum through stakeholders' engagement in the process. The process has considered well the four questions of 'Ralph Tyler' in curriculum development framework. International reviews / consultation of curriculum experts in developing a curricular framework for agricultural education was also undertaken.

Activities:

Several activities were undertaken, leading to notable achievements in the improvement of curriculum development mechanisms:

1. **Pilot study on Curriculum Development Process:** A pilot study was undertaken by NAARM to understand the approach and philosophy of agricultural curriculum development, students' attributes, means of stakeholders' engagement and

innovativeness, extent of change over previous curriculum, issues and challenges in curriculum development involving the Chairman and Conveners of National Core Group and Broad Subject Matter Area committees constituted for restructuring Masters and PhD Curriculum, syllabi and academic regulations.

2. **Research Study on Student Learning Approaches:** Comprehensive studies were conducted to identify students' learning approaches using validated inventories like the Approaches and Study Skills Inventory for Students (ASSIST). Questionnaires were administered across numerous agricultural universities, yielding significant data for analysis and subsequent curriculum adjustments.
3. **Identification of Global Best Practices:** Extensive research was undertaken to document global best practices in higher education, with a specific focus on teaching-learning methodologies. Practices from various countries including the USA, Finland, Brazil, and others were documented and analyzed for potential integration into Indian agricultural education.
4. **Development of Curriculum Framework:** A comprehensive framework for curriculum development in agricultural education was formulated. Initiatives were launched to **strengthen connections between academia and industry**, fostering a culture of entrepreneurship among agricultural graduates.
5. **Workshops on Curriculum Development:** The workshops on curriculum planning, development and implementation, issues and challenges, requirements etc. were discussed in the workshops organized for academic leaders, the following 05 workshops were organized and 172 participated.

S. No.	Title	Duration	No of Participants
1.	Training Workshop on Fostering Academic Leadership in Agriculture	04 - 08 September, 2023	31
2.	Training Programme on Education Management and Academic Leadership	06 - 10 February, 2023	22
3.	Online Training Workshop on Education Management and Academic Leadership	23 - 28 September, 2021	47
4.	Online Training Workshop on Education Management and Academic Leadership	03 - 17 September, 2020	45
5.	Training Workshop on Education Management and Academic Leadership	20 - 25 September, 2019	27
		Total	172

The following questions were addressed in the workshops.

- What is the impact of curriculum on quality of agricultural education?
- What are the review process and methodologies for curriculum development and implementation?
- Global Best Practices used in agricultural higher education
- What are the employability skills required by the Agri- Graduates and how to integrate into agricultural education?
- What are the ways to improve the quality of education in agriculture?
- How to engage the Academia-Industry-Government in improving the quality and relevance of Agricultural Education?

6. **Workshops & Brainstorming Sessions on National Education Policy:** The following four workshops conducted and brainstorming sessions on Development of Implementation Framework for National Education Policy -2020 in Agricultural Education and 145 participated.

S. No.	Title	Duration	No of Participants
1.	Training Workshop on Fostering Academic Leadership in Agriculture	04 - 08 September, 2023	31
2.	Training Programme on Education Management and Academic Leadership	06 - 10 February, 2023	22
3.	Online Training Workshop on Education Management and Academic Leadership	23 - 28 September, 2021	47
4.	Online Training Workshop on Education Management and Academic Leadership	03 - 17 September, 2020	45
		Total	145

The participants addressed the following issues during the sessions:

- a. Evolution into large multidisciplinary universities at least 3000 students by 2030
- b. Enhancing gross enrolment ratio >10 per cent per year
- c. Education Management-Curriculum pedagogy, assessment, student support for enhanced student experiences
- d. Governance & academic leadership
- e. Integration of vocational & Private education
- f. Digital Education

Achievements:

1. Pilot Study on Curriculum Development Process:

- The study, while creating awareness on the curriculum development process, focused on the criteria for curriculum development, their relevance and their consideration in designing the curriculum etc. included. Also the student attributes, their relevance and consideration of the same in the development was also ascertained.
- Some of the changes reflected in curriculum development process include – focus on skill upgradation and development of professional competency of the students, understanding the ground realities; vertical and horizontal integration of courses with stress on Problem Based Learning (PBL); engagement of all stakeholders including Subject Matter Experts, Agri-business entrepreneurs, government functionaries and senior (retired) academicians, in the curriculum development process, benchmarking core competencies of prospective passing students; matching with global and national developments.
- The student attributes viz. Teacher-Student interaction, Curricular materials(availability/development), Student learning approaches, Learning Styles, Technology enhanced learning in learning / teaching / assessment etc. received top priority while development of agricultural higher education curriculum. Also the committees were also made aware on key parameters while development of curriculum - Objectives for each course formulated (broad content and teaching intentions), Division of content into units/ modules, Stated

Learning Outcomes of each course, Assessment / Evaluation methods of students suggested, Teaching Methods / Methodologies suggested etc.

2. Study on Student Learning Approaches:

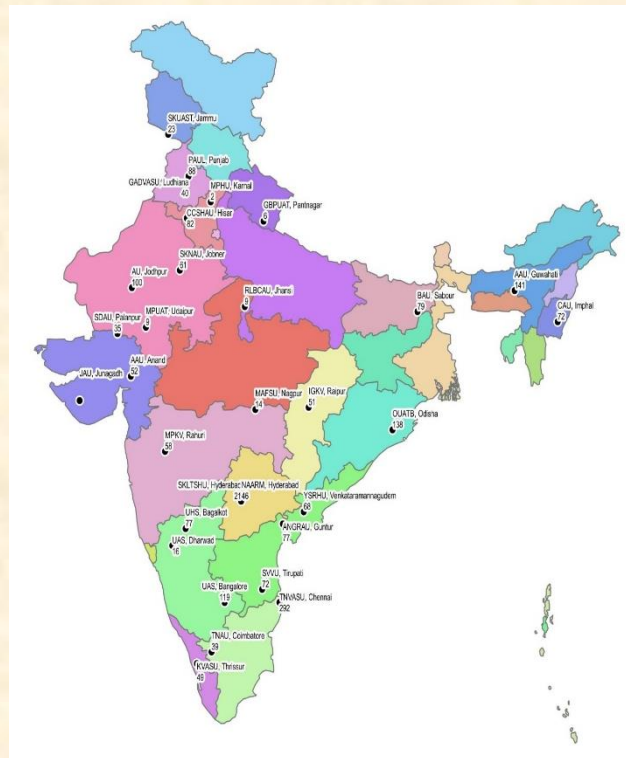
- Developed a questionnaire using the Approaches and Study Skills Inventory for Students (ASSIST) to identify students' learning approaches. Pre-tested the questionnaire with PGDMA students for validity and reliability.
- The study adopted the stratified random sampling. The population of the study included students of 30 SAUs and one ICAR Institute from 19 states of India from agriculture, forestry, community science, animal husbandry, horticulture, agricultural engineering and various other allied departments. The sample of the study included 1951 students including 1091 female and 860 males from different departments of SAUs. This study used descriptive survey research design. Analyzed the data using survey tools like Survey Monkey.
- The findings on the learning approaches of the students revealed that most of the students used Strategic approach (87.71%) followed by 6.96% of students who use Deep approach and 4.16% of students used surface approach of learning. It was also found that there are some students (1.17%) who use more than two approaches of learning. This may be interpreted agricultural students generally adapt the strategic learning approach, focusing mainly on summative assessment.



Capturing Students' Learning Approaches

- In this study, higher number of female students were found to be following strategic approach (44.8%) followed by deep approach (39.9%). Whereas, in case of male students, Deep approach (40.8) was found to be followed by many. Surface approach was found to be followed by male students in comparison to female students. The chi-square test for association rejected the null hypothesis that there

is no association between gender and learning approaches (chi-square value = 14.817, $p < 0.001$)



University wise distribution of respondents

3. Identification of Global Best Practices:

- Conducted a desk study to document global best practices in higher education. Explored practices from countries like the USA, Finland, Brazil, etc., focusing on teaching-learning methodologies.
- The best global practices in higher education varied across different countries, unique to specific Higher Education Institutions are analyzed.
- Best practices focused on various dimensions of teaching – learning process emphasizing principles, practices and methodologies leading to quality education.
- Best practices adopted in USA in Higher Education include Transfer of Students among Universities; Academic flexibility in changing the courses, Interpretation of Grades based on the standards of institutions, Internationalization of education system; Funding / scholarships for students; diversity in learning; learning communities, Interdisciplinary; Innovative Instructional Methods; Transparent Student Requirement practices; Collaboration among colleges and universities; Incentive approach for degree completion and web based data management system for curriculum development etc.
- In Finland, Curriculum planning is the responsibility of schools and municipalities.
- One of the top Universities in the world i.e. Cambridge University focuses on the use of Information & Communication Technology (ICTs) in the classroom for better learning and involves the local community and parents in the process of curriculum development.

- Britain follows the centralized course design and assessment process in education system. In Brazil, students are entrusted the teaching responsibilities and Australia uses the teaching standards framework to develop the teaching learning standards.
- Good practices of Germany education system include low or very low tuition fee; ensure tension free environment for the students; low cost of living for students and exposure of students to diverse culture.
- Teaching Innovation Fund(TIF) is one of the good practice used in Switzerland to foster institutional change and develop research projects on teaching & learning. France adopted sandwich courses for better employment of the students on the bases of SWOT analysis of education system.
- In Netherland, inter-sectoral collaboration; proactive education and ambitious study culture are some of the good practices used for quality education system. Simulations, case studies and design-based professional learning used in Belgium. In Denmark MatchPol - an initiative to support practice-based research at the bachelor level used as one of the good practices.
- In European countries, the various teaching approaches viz. student centered learning; institutional collaboration on teaching; digitalization etc. are the major good practices.

4. Development of Curriculum Framework:

- Developed a framework for curriculum development in agricultural education. Emphasized the need for timely review and revisions of curricula across undergraduate and postgraduate studies.
- The framework will assist stakeholders in streamlining the process towards developing the curriculum itself and will be informed by research-based guiding principles and recommendations.
- The framework contains 5 stages in development of curriculum, as indicated below.



- An initiative is taken to develop a **Certificate Course for Enhancing Employability of Agricultural Graduates-** A certificate course of small duration (six weeks) specifically designed for skill development to bridge the

existing gap between theoretical knowledge and practical application (practical skills required in the industry) is proposed keeping in mind that as academic programs provide a strong foundation, practical skills are equally crucial for enhancing their employability in the agricultural sector.

Learnings:

1. **Importance of Student-Centric Learning:** Emphasizing student-centric learning approaches is crucial for fostering skill development and innovation among students. Emphasis to be given on **college-ready, career-ready, future-ready curriculum.**
2. **Need for Continuous Adaptation to Global Best Practices:** The landscape of higher education is continually evolving, necessitating ongoing engagement with global best practices to remain relevant and competitive.
3. **Significance of Stakeholder Collaboration:** Involving diverse stakeholders including educators, industry experts, and policymakers is essential for ensuring the quality and relevance of curriculum development initiatives.
4. **Adaptability and Flexibility:** Curriculum development mechanisms must be adaptable and flexible to accommodate changing educational trends, technological advancements, and societal needs. **Timely revisions and need-based alterations** to be focused.

Annexure of Photo gallery and Media coverage





Chapter 4: Strengthening Academia Linkages with Industry

Strengthening academia linkages with industry is crucial for promoting innovation, enhancing research outcomes, and ensuring the relevance of academic programs to real-world needs. Forming robust partnerships between academic institutions and industry players for expanding opportunities for knowledge exchange, collaborative research, and technology transfer. Such partnerships lead to impactful solutions for agricultural challenges. These linkages facilitate the integration of industry expertise into academic curricula, ensuring that students are equipped with the skills and knowledge demanded by the market. Furthermore, collaborative initiatives such as joint research projects, internships, and guest lectures provide students with valuable practical experience and industry insights. Through sustained collaboration, academia and industry can co-create innovative solutions, drive economic growth, and address demanding agricultural issues effectively, thus adopting a dynamic ecosystem of learning and innovation.

Academia–industry linkage refers to the interaction between parts of the higher education system and industry to facilitate knowledge and technology exchange. Academia–industry collaborations have been recognized as crucial in promoting innovation with the ecosystem. Collaborations between academia and industry help in converting research-based technology into new products and services, bridge the gaps in expertise and skill sets, and foster innovation, thereby sustaining economic growth. In addition, academia–industry collaboration provides an alternative source of funds to academia and rich academic knowledge to industry, thus benefitting both parties.

Academia and industry are interconnected and rely on each other for their goals. This collaboration between academia and industry also benefits both parties in many other ways. Collaboration between academia and industry is essential in advancing research and development, solving practical problems, fostering innovation, and maximizing the potential for knowledge creation and application. Industry–academia collaboration increases industry’s problem-solving capacity by granting access to university equipment and specialized knowledge. In turn, universities benefit from the collaboration by gaining awareness of the current technologies used in industry and accessing new funding opportunities. Initiating an early collaboration between academia and industry is crucial to leverage the strengths of both sectors and maximize the potential for innovation and knowledge creation. Collaboration between academia and industry drives advanced research and innovation.

In recent years, there has been a significant increase in academia–industry collaboration in many developed nations, such as the United States, Canada, Japan, Singapore, and the European Union. The reasons for this increase can be attributed to various factors that place pressure on both industries and universities, and such collaborations can lead to a reduction in the time lag between discovery and practical application. Unfortunately, several barriers hinder the productivity of the relationship between academia and industry. Barriers to academic collaboration with industry can be attributed to individual and organizational factors. On an individual level, factors such as conflicting interests and expectations, limitations to career progression, and a lack of knowledge about access to grants hinder collaboration. Studies suggest that academia–industry collaborations offer benefits, such as improved research uptake, but face challenges, like intellectual property management, publication freedom, value conflicts, and limitations in academic and managerial theorizing.

Objectives:

The objective of strengthening academia linkages with industry is to enhance the quality and relevance of agricultural higher education by encouraging collaborations between academic institutions, industry players, and government bodies. This aims to bridge the gap between theoretical knowledge and practical applications, thereby nurturing a skilled workforce equipped to address the evolving needs of the agricultural sector.

Approach:

Various initiatives have been undertaken to achieve this objective, including consultative workshops, brainstorming sessions, critical studies, model development, international webinars, and policy development conferences. These efforts aim to identify bottlenecks, facilitate dialogue, develop frameworks, and foster partnerships conducive to promoting academia-industry linkages in agricultural education.

Activities:

- Consultative Workshops:** Seven workshops were conducted Pan-India, bringing together experts from academia, industry, and government to deliberate on strengthening linkages. Participants from various states discussed existing collaborations and expectations, raising dialogue for future partnerships. The details of the workshops conducted are given in the below table:

Sl. No.	Venue	Date	No. of participants
1.	ICAR-National Academy of Agricultural Research Management, Hyderabad	23-24, August 2019	21
2.	Mahatma Phule Krishi Vidyapeeth, Rahuri	21-22, September 2019	33
3.	Orissa University of Agriculture and Technology, Bhubaneswar	23-24, September 2019	29
4.	University of Agricultural Sciences, Bangalore	06-07, November 2019	24
5.	Sardar Vallabhbhai Patel University of Agriculture, Meerut	27-28, November 2019	21
6.	Assam Agriculture University, Guwahati	27-28, January 2020	38
7.	Punjab Agricultural University, Ludhiana	28-29, January 2020	33

Stakeholders from all the states and union territories (except Goa) participated in these workshops. Faculty members from Central Agricultural Universities (CAUs) and State Agricultural Universities (SAUs), professionals from agri-based industries involved in producing and marketing farm inputs, agri-service providers, and consultancy firms were randomly selected from each of these strata and were invited to participate in the work-shop. This workshop discussed the current status, challenges and prospects of academia-industry-government linkages. After the deliberation, a structured survey questionnaire was distributed among the participants, and the responses were collected. The questionnaire was developed by the authors using a Likert-type standardized scale. The questionnaire aimed to gather information on the role of academia-industry linkages in improving the quality of AHE in India.

The gender-wise and sector-wise distribution of the respondents of the workshop is given in the below table.

Category	Male	Female	Total
Academia	140	28	168
Industry	31	00	31
Total	171	28	199

- National Workshop on Academic Excellence:** A workshop held during 30 April 2019 to 01 May 2019 aimed at sensitizing 78(08 Female) participants about project activities and building partnerships among higher education institutions was conducted. The focus of the workshop was on infrastructure, faculty, student advancement, and governance enhancement. Dr N S Rathore, DDG(Education), ICAR; Dr Prabhat Kumar, National Coordinator, NAHEP Component 2; Dr Sudha Mysore, CEO, Agri Innovate; Dr K Vijaya Raghavan, CEO, Sathguru Consultants and several Vice Chancellors, Directors of ICAR institutions also participated.
- International Workshop on Strengthening International Agribusiness Trade at TERI, SAS, New Delhi:** A two-day workshop held during 14-15 November 2019 in collaboration with global partners was conducted addressing international agribusiness trade, facilitating discussions on global collaborations and trade strategies. Around 300 participants from 11 countries attended this conference. Prof. Brajesh Singh, Director, Global Centre for Land-based Innovation, Western Sydney University and Member, External Advisory Panel of NAHEP; Prof. Ramesh Chand, Member NITI Aayog, GOI; Sh. Ashok Kr Dalwai,(IAS) : CEO, National Rainfed Area Authority; Dr. Bhasker Mitra, Associate Director, Tata-Cornell Institute of Agriculture; Dr Prabhat Kumar, National Co-ordinator, NAHEP, ICAR; Dr. Santosh Kumar Sarangi, IAS, Joint Secretary, Ministry of Commerce and Industry, GOI; Dr P K Joshi (Former Director IFPRI & Former Director, NAARM); Dr. Anand Kr. Singh, DDG (Horticultural Science),ICAR; Shri Pawan Kohli, (Chief Advisor & CEO, NCCD).Department of Agriculture, Cooperation & Farmers Welfare, GOI; were also attended the workshop.
- Critical Studies:** Studies on academia-industry linkages have been conducted to identify needs and challenges, by using both primary and secondary data. Subsequently, brainstorming sessions were conducted and model was developed for nurturing these linkages.

The below table summarises respondents' views on enhancing higher education through linkages, suggesting vast opportunities for academia and industry to collaborate towards shared objectives. Both groups agree that collaboration would provide academic students with practical exposure and hands-on training in industry settings. Academia members strongly felt that the linkage could help in increasing students' employability (average score = 4.44), securing internships and scholarships (average score = 4.25) and improving entrepreneurial skills (average score = 4.20). Industry representatives strongly feel that linkage helps in developing entrepreneurial skills among students (average score = 4.37) and that universities adopting newer technologies (average score = 4.28) and designing curricula based on industry needs (average score = 4.22) can benefit the industry. However, respondents expressed less strong support for the notion that linkages would lead to greater academic, administrative and financial autonomy (average score = 3.83).

Statements	Average Score		
	A.U. (n = 151)	Ind. (n = 17)	Overall (n = 168)
Students will get practical exposure/hands-on training in Industry	4.44	4.60	4.46
Students' employability will be increased	4.24	4.05	4.22
Industry can adopt new technologies with the help of the University	4.06	4.28	4.09
Will help in designing/modification of the curricula in academia according to the need of the industry	4.09	4.22	4.10
Will facilitate sponsoring of students' research and internship/fellowships	4.25	3.79	4.20
Will develop entrepreneurship among students	4.20	4.37	4.22
Will encourage greater academic, administrative and financial autonomy	3.83	3.84	3.83

- International Webinar:** An International Webinar on “Fostering Global Collaboration among Agricultural Higher Educational Institutions” was organized during 08-09 November 2021 to foster global collaborations and identify enabling factors for nurturing international partnerships in agricultural education. Around 200 stakeholders including Vice-Chancellors of SAUs; Deans/Directors of SAUs; National Coordinators of NAHEP (IG, CAAST, IDP, M&E); ADGs of Education Division; PIs of NAHEP of SAUs; Faculty members of the Committee of CDCs/FDC; ICAR Nodal officers of SAUs; Senior Faculty/Officers of SAUs were participated to elicit their experience and vision to develop global collaboration among Agricultural Higher Education Institutions and define the modalities for fostering collaborations for the future. Dr R C Agrawal, National Director, NAHEP; Dr Prabhat Kumar, National Coordinator, NAHEP; Dr K V Raman, Research Professor, Cornell University, USA; Dr Glen C. Shinn, Professor Emeritus, Texas A&M University, USA; Dr. David Kraybill, Professor Emeritus, Ohio State University, USA; Prof Brajesh Singh, Director, Global Centre for Land-Based Innovation, Western Sydney University, Australia; Dr. P.L. Gautam, Former Chairman, PPVFRA, PPVFRA, New Delhi; Dr. J.C. Katyral, Former DDG (Education), ICAR; Dr P K Joshi Former Director, South Asia, IFPRI, South Asia; Dr. B. Venkateswarlu, Former VC, VNMKV, Parbhani; Dr. Pankaj Mittal, Secretary General, Association of Indian Universities (AIU), New Delhi; Dr. Vaidya Rajesh Kotecha, Secretary, Ministry of AYUSH, Government of India, New Delhi; Dr Hanu R. Pappu Distinguished Professor, Washington State University, Pullman, USA and senior officials of ICAR were also participated.
- National Conference on Policy Development:** A National Conference on “Policy Development and Implementation Strategies for Academia-Industry-Government Linkages for Agricultural Higher Education in India” was organized during 12-13 March 2023. The deliberations from the conference led to the release of a policy paper

on A-I-G framework. Around 65 participants including under the leadership of Dr R.C Agrawal, National Director, NAHEP & DDG (Agricultural Education), ICAR. Sixty-five eminent personalities attended this conference. The list includes the members of the External Advisory Panel of NAHEP, viz. Dr P. L Gautam (Former Chairman of PPVFRA, NBA, and Former DDG Crop Sciences, ICAR, Vice-Chancellor of GBPUAT, Pantnagar), Dr B. Venkateswarlu (Former Vice Chancellor of VNMKV, Parbhani). Dr N.S Rathore, Former DDG (Agricultural Education), ICAR, Dr Ch. Srinivasa Rao, Director, ICAR-NAARM, and Dr Rajender Parsad, Director, IASRI, New Delhi, also shared their views. In addition, Vice Chancellors of 12 State Agricultural Universities from various states and the nominees of VC from 15 SAUs also participated in the conference. The representation from other sectors was also significant- Shri. Chiranjiv Choudhary, Principal Secretary, Marketing & Cooperative, Govt of AP, Shri. BL. Meena, Former Additional Chief Secretary, Higher Education, Govt of Karnataka, Dr Rupa Vasudevan, Chancellor, BEST Innovation University, Bangalore. Dr Anuradha Agrawal, National Coordinator, Component-2, was also present. Around 20 senior representatives from Industry and bureaucrats of different state governments also participated. In addition, a Professor of Practice from IIT Delhi, Vice Presidents and Senior Executives from private companies and start-ups also participated.

- Career Fairs Organized:** Career development centres conducted fairs and expos to enhance students' knowledge of career opportunities. These events facilitated placements and promoted industry-academia collaborations.

Achievements:

- Identification of needs and bottlenecks in academia-industry linkages through critical studies and consultative workshops.

The study indicated a critical requirement for linkages between the industry and academia in the AHE sector. More than 50% of the respondents from academia and more than 46% of respondents from the industries felt that the need for collaborations is exceptionally high. However, the respondents from academia felt that the need for collaboration among academia is higher than that of academia and industry. Similarly, respondents from industry opined that the need for collaboration among industries is higher than that between industry and academia.

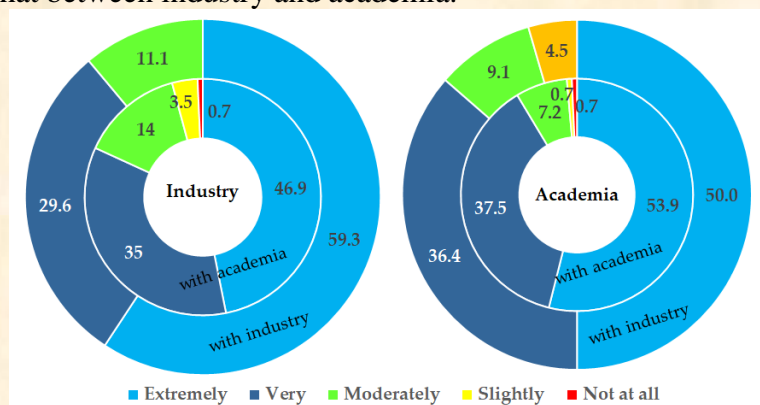


Figure. Respondents' perceptions on 'Need for collaboration' (values in %).

In the study, more than 90% of respondents from academia and more than 85% of respondents from industry felt that linkages would significantly enhance AHE quality.

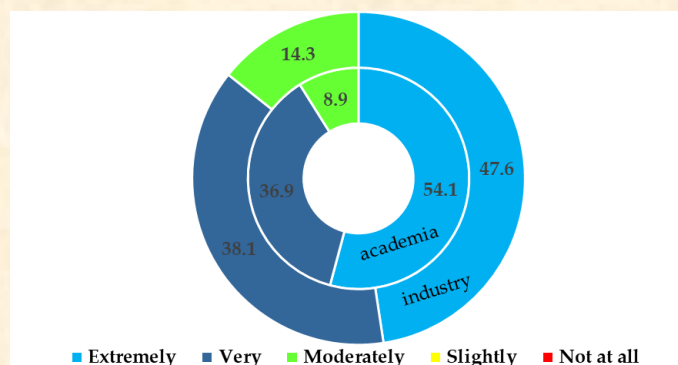


Figure. Respondents' perceptions about 'improvement in the quality of higher education by collaboration' (values in %)

- Development of models and agendas for nurturing academia-industry partnerships.
- Facilitation of international collaborations through webinars and conferences, enhancing global perspectives in agricultural education.
- Establishment of policy frameworks and curriculum development strategies for academia-industry-government linkages.
- Successful organization of career fairs and expos, facilitating placements and enhancing students' awareness of professional opportunities.
- Identified the priority areas requiring linkage among academia and industry.

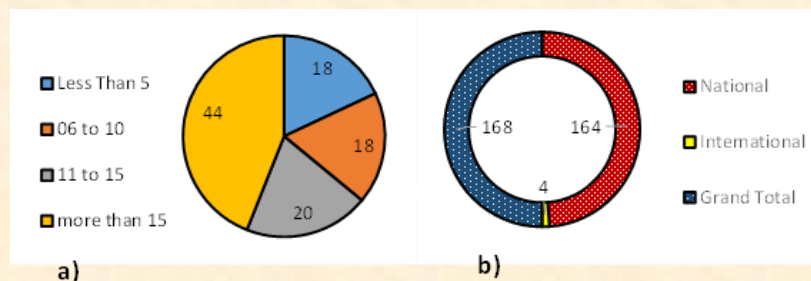
The respondents were asked to rate 14 different pre-identified areas in a five-point continuum on a Likert scale. The results indicate that among these areas, sharing hi-tech lab facilities (average score = 4.63), networking (average score = 4.47), and soft skills & career development for students (average score = 4.46) were rated to be the most critical areas requiring collaboration. This was followed by entrepreneurship development (average score = 4.43), training & internships (average score = 4.4), and human resource development (average score = 4.41). The remaining variables were given comparatively less priority.

Variables	Mean Score
Trainings & Internships	4.40
Industrial Parks	3.89
Entrepreneurship Development	4.43
Technology Commercialization	4.38
Networking	4.47
Consultancy in Services (Product Testing, Certification, etc.)	4.30
Sharing Hi-tech Lab facilities	4.63
Soft Skills & Career Development for Students	4.46
Inclusion in Board of Directors	3.72
Knowledge Management	4.30
Databases for Information	3.99
Mutual Trust	4.15
Curriculum Design	4.07
Human Resource Development	4.41

- Studied the present status of academia-industry linkages

Some universities and industries already have some linkages with each other, but there is still much scope for improvement. The majority of the respondents from both universities (70.0%) and industries (65.0%) indicated that some linkages currently exist. However, only 50.7% of universities and 58.8% of industries have established models for linkages in the form of a Memorandum of Understanding (MoU), highlighting the need for developing other models to establish more linkages. Also, only 49.3% of universities and 28.6% of industries reported having institutional mechanisms such as representation and participation in boards, committees and councils related to academia-industry linkages.

It was found out that approximately 44% of universities have linkages with more than 15 industries concerning the career development and placement of students. Out of the total no. of MoUs (168) signed by the universities with industries, 164 were national, and only about four were international. On average, about 9 MoUs were signed by each university with the industries.



Learnings:

- Recognize the potential for academia-industry linkages in the seed business sector, where approximately 70% of seed industries lack adequate research facilities available in agricultural universities.
- Advocate for the commercialization of research at the university level, with the establishment of a single-window system for streamlining commercialization processes.
- Address the mismatch between curriculum and industry needs through need-based research, ensuring alignment of available technologies with industry requirements.
- Promote partnerships between academia and industry to meet future manpower requirements, involving industry experts in academia and vice versa for curriculum development, guest faculty arrangements, exposure visits, market research, and contract research.
- Encourage proactive studies addressing policy-level issues rather than reactive instances, such as pest outbreaks, and document and share lectures and knowledge resources across all State Agricultural Universities (SAUs).
- Propose the establishment of an Academia-Industry Linkage Matchmaking Portal to facilitate collaboration and partnership-building between academia and industry stakeholders.



2nd Consultative Workshop on Academia-Industry-Government linkages for Quality Agricultural Education Organized by ICAR-NAARM at OUAT, Bhubaneswar on 20-21, September 2019



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- International Relations
- Administration
- Finance

Academia-Industry-Government Linkages for Higher Education; National Conference Concluded at ICAR-NAARM

13th March 2023, Hyderabad

The National Conference on "Policy Development and Implementation Strategies for Academia-Industry-Government Linkages for Agricultural Higher Education in India" (12-13 March 2023) was inaugurated today at ICAR-National Academy of Agricultural Research Management, Hyderabad.

The Chief Guest, Dr. R. C Agrawal, National Director, NAHEP & DDG (Agril. Educatn.) highlighted the salient achievements of the project during the preceding years. He also shared the importance of the project in building the institutional mechanism for knowledge sharing, executing the actionable MoUs, and restructuring of agricultural curriculum.

Dr. Ch. Srinivasa Rao, Director, NAARM expressed his happiness for the active involvement of stakeholders from diverse areas and departments and assured them to bring out the actionable quality policy document.

Dr. P. L. Gautam, Member, External Advisory Panel, NAHEP flagged the issues relating to MoUs, agreements, and reciprocal sabbatical leaves to pursue higher education.

Dr. N. S. Rathore, Former DDG (Education) also spoke on the occasion.

Dr. Rajendra Prasad, Director, IASRI, New Delhi highlighted the role of his team in executing the project objectives.

A policy paper on the "Curriculum Development Framework" was also released during the conference.

More than 65 delegates including 15 serving and retired VCs from agricultural universities and 19 senior representatives from industry and different state governments participated in this conference.

(Source: ICAR-National Academy of Agricultural Research Management, Hyderabad)

News

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- Consortium for e-Resources in Agriculture (CeRA)
- Foreign Visit Management System of DARE-ICAR
- Human Resource Management System
- KRISHI Portal
- Knowledge Innovation Repository of Agriculture in the North East
- National Innovations on Climate Resilient Agriculture (NICRA)
- Other Knowledge Initiatives
- Agricultural Research Management System

Important Links

- Financial Assistance for Conference & Journal (FACJ)
- Weather Based Agro Advisory
- Reports of Swachhata Pakhwada, 2021

Industry-Government Linkages for Quality Agricultural Education Held in Bengaluru

12 November 2019 05:08 PM IST By: Chandan Mohan

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The '4th Consultative Workshop on Academia-Industry-Government Linkages for Quality Agricultural Education' was jointly organized by the ICAR-National Academy of Agricultural Research Management, Hyderabad and the University of Agricultural Sciences, Bengaluru. The workshop was organized at the Gandhi Krishi Vigyan Kendra Campus, UAS, Bengaluru from 9th to 7th November, 2019.

Prof. S. Rajendra Prasad, Vice-Chancellor, UAS, Bengaluru during the workshop underscored the need for strengthening the relations between university, industry and government. He highlighted the Organization's efforts undertaken in the designated direction. Prof. Prasad also urged the faculty of UAS, Bengaluru for accessing more funds from the industry for conducting research.

Prof. Chinnna Swamy KP, Coordinator, PMMC & Nodal Officer (Agricultural Education) to ICAR, UAS, Bengaluru presented the synthesis of all the inputs provided by all 80 participants.

The workshop was organized in an attempt to get the input for developing a framework for strengthening the relationship between 3

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लघु व सीमांत किसानों को बढ़ाई जाए आय

मोदीपुरा। सरदार बल्लभ भाई पटेल कृषि एवं प्रौद्योगिकी विश्वविद्यालय में नेशनल एग्रीकल्चर रिसर्च मैनेजमेंट (नार्म) हैदराबाद द्वारा कार्यशाला आयोजित की गई। इसमें लघु एवं सीमांत किसानों की आय बढ़ाने की बात कही गई। नार्म के संयुक्त निदेशक डॉ. एके सोम ने भी जानकारी दी। अण्ड्यक्ता विश्वविद्यालय के कुलपति डॉ. आरके मिश्र ने की। मुख्य अतिथि चौधरी चरण सिंह विश्वविद्यालय के कुलपति प्रो. एनके तनेजा रहे। उन्होंने बताया कि वर्तमान समय के अनुरूप शिक्षा एवं शोध की आवश्यकता है। जिससे कि इंडस्ट्री एवं किसानों को शिक्षा, शोध, सरकार की योजनाओं का फायदा मिल सके। डॉ. आरके मिश्र ने बताया कि विश्वविद्यालय द्वारा लघु एवं सीमांत किसानों की आय बढ़ाने के लिए डिप्लोमा एवं सर्टिफिकेट कोर्स भी प्रारंभ किए जा सकते हैं। डॉ. रामेश्वर सिंह, कुलपति, बिहार पशु चिकित्सा विज्ञान विवि, डॉ. एपी गर्ग, कुलपति शोभित विवि, अभय कुमार, डॉ. एके सोम, डा. सुर्या राठी ने भी विचार रखे। चार प्रदेशों से शैक्षणिक संस्थाओं, इंडस्ट्री, भारत तथा राज्य सरकारों के कृषि व इससे संबंधित विभिन्न विभागों के 60 से अधिक उच्च अधिकारियों ने कार्यशाला में प्रतिभाग किया। कुलसचिव डॉ. बीआर सिंह, डॉ. सुर्या राठी, प्रो. रामशेर, डॉ. एलके गंगवार, डॉ. दीपक सिंहीदिया, डॉ. यूपी शाही, डॉ. आरएस सेंगर, रितुल सिंह आदि मौजूद रहे।





2/4/2020

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29-01-2020

पंजाबी रिच पड्डे



The Consultative Workshop on "Academia-Industry-Government Linkages for Quality Agricultural Education" concluded at Punjab Agricultural University (PAU) today. The workshop was jointly organized by the ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad and PAU, Ludhiana under the project "Linkages for Quality Agricultural Education (National Agricultural Higher Education Project Component 2A)."

Chater-5: Systemic Quality Improvements in Agricultural Education

Systemic quality improvements in agriculture education are essential for ensuring the relevance, effectiveness, and sustainability of educational programs in meeting the evolving needs of the agricultural sector. This entails a comprehensive approach that encompasses curriculum development, pedagogical strategies, faculty capacity building, infrastructure enhancement, stakeholder engagement, and partnerships/ linkages/ collaborations etc.

Objectives:

By continually reviewing and updating curricula to incorporate the latest advancements, emerging trends, and industry-relevant skills, agricultural higher education institutions can ensure that graduates are equipped with the knowledge and competencies needed to address current and future challenges in agriculture. Moreover, investing in faculty development programs to enhance teaching methods, communication skills, and research capabilities strengthens the quality of instruction and promotes a culture of excellence within academic institutions. Additionally, developing partnerships with industry stakeholders, research organizations, and government agencies facilitates knowledge exchange, promotes innovation, and enhances the practical relevance of educational programs. By adopting an approach of quality improvement, agricultural education institutions can contribute significantly to the development of a skilled workforce, sustainable agricultural practices, and the overall advancement of the agricultural sector.

Approaches:

Multi-pronged approach was followed to bring in the Systemic Quality Improvements in Agricultural Education. Key strategies include creating enabling environment by connecting the stakeholders, connecting the alumni, focus on students' orientation towards entrepreneurship / soft skills, establishment of Career Development Centres, thrust on academic leadership, capacity building of faculty, mainstreaming of private education through policy interventions and use of ICTs in improving the quality and relevance of agricultural education. Based on the need policy prescriptions were also provided to the State Agricultural Universities of the country. An External Advisory Panel is also constituted for bring the changes and reforms in the agricultural education.

Activities:

The different activities pertaining to Systemic Quality Improvements in Agricultural Education are categorized as follows.

- Enabling environment by connecting the stakeholders – National and International institutions
- Connecting the alumni
- Students Orientation towards entrepreneurship / soft skills
- Career Development Centres
- Emphasis on Academic Leadership
- Capacity Building of Faculty
- Development of Frameworks / Policies
- Online Monitoring and Reporting Systems
- Mainstreaming of private education through policy interventions

Achievements:

1. **Enabling environment by connecting the stakeholders – National and International institutions:** One of the pathways chosen for the project was to connect relevant stakeholders to deliberate- discuss- decide the ways and means for improvement of the overall quality of education.
 - a. The global collaborations were nurtured through various means such as visits to different HEIs abroad, regular meetings, webinars, theme based discussion groups, collaborative development of policies etc. In this direction, an international webinar on “**Fostering Global Collaborations among Agricultural Higher Educational Institutions**” conducted during 08-09 November 2021, around 200 participants from various SAUs were participated in this webinar. This effort has resulted in connecting different Indian State Agricultural Universities with some of the International higher education institutions such as Cornell University, Texas A&M University, Ohio State University, Washington State University of USA, Western Sydney University of Australia.
 - b. The visits of NAHEP team to four European Countries also helped to establish linkages with HEIs viz. Wageningen University and Research of Netherlands, German Development Institute (DIE) and Development Research Institute (ZEF), University of Bonn of Germany, University of Ghent of Belgium, World Trade Organization at Geneva etc.



NAHEP Team Visit to Wageningen University and Research of Netherlands

- c. The national collaboration between different actors of agricultural education was also targeted systematically through bringing together different stakeholders viz. ICAR Research Organizations, Public Agricultural Universities and Private Universities. The dialogue on Fostering Collaboration for Quality Agricultural Education between Actors of Agriculture Research and Education organized at NAARM on 10th May 2022. This effort resulted in bridging the gap between different actors, especially the relationship with private universities is always weak in the system. This effort helped all to come together and discussed about the areas of teaching, research and education where they can share resources, expertise.
- d. Academia Industry linkages is another major which is often discussed and the results are not up to the mark. To address this issue a **Workshop on “Building**

Academia–Industry Partnerships through Alumni for Quality Agricultural Higher Education” was organized by the Academy on 14.05.2022. The workshop aimed at nurturing a platform for networking and developing the fraternity among Alumni and the participants get an opportunity to communicate with alumni students and get enlightened how the interactions between the higher educational system & industry promotes the professional career and technology exchange can be done by alumni meets.

- e. Another partner in triple helix model of Academia- Industry and Government (AIG), the participation of the later is often limited in the development planning. Often the Government is looked upon as the implementing agency. However, their role in designing curriculum and academic programs is enormous. In order to bring the harmony and synergy among all three elements AIG, the Academy initiated a dialogue through a **National Conference on Policy Development and Implementation Strategies for Academia-Industry-Government Linkages for Agricultural Higher Education in India** organized during 12-13 March 2023. The key recommendations are:
 - i. **Resource Sharing:** *Harping on the strengths of respective organisations and avoidance of duplicity, an ecosystem needs to be developed and implemented among the stakeholders for sharing of resources, including knowledge, expertise, infrastructure, innovations etc., through appropriate means.*
 - ii. **Reimagining the Research and Innovation:** *The technological advancement should address the community needs through stakeholder participation in the research-innovation continuum through changes in the curriculum, building synergies and convergence among the stakeholders.*
 - iii. **Triple Helix partnerships:** *The three key partners i.e. Academia- Industry, and Government, is essential for promoting agriculture research, innovation and business. Achievement of effective partnerships and trust building can be achieved through participatory decision-making in regulatory bodies of respective organisations.*
 - iv. **Tapping into Corporate Social Responsibility funding:** *CSR funds are critical means of enhancing the quality and relevance of Agri. Research and education due to the lack of funds in the public system. A consortium of agro-based industries can facilitate the flow of CSR funds to academia.*
 - v. **Administrative Simplification Strategies:** *A single window system for simplifying the procedures/processes in building effective collaboration through an institutionalised mechanism with functional autonomy is needed. Revisiting existing guidelines/ procedures and developing of user-friendly and simplified guidelines with a minimum time frame is the need of the hour.*
- f. A policy dialogue on “Agricultural Education System in USA and Potential Collaboration with India” was organised in hybrid mode on 07-09-2023 at NAARM in collaboration with NAHEP Component 2 and NAAS Hyderabad Chapter. Dr Ch Srinivasa Rao, Director, NAARM recited the importance of collaborations among higher educational institution in India and Abroad. Dr. Kumar Venkitanarayanan, Professor & Associate Dean of Research, College of Agriculture, Health and Natural Resources, University of Connecticut, USA and Dr Anup Kollanoor Johny, Associate Professor, Department of Animal Science, University of Minnesota, USA addressed the participants on Agricultural Education System in USA.

The above efforts have resulted in joint efforts between ICAR, State Agricultural Universities (SAUs), and privately funded universities in strengthened collaborations. Modalities such as MoUs and LoAs have been developed for collaboration in research, education, capacity building, and resource sharing. This has facilitated joint diploma/certificate courses, Faculty Development Programmes (FDPs), and sharing of laboratory facilities and other amenities.

2. **Connecting the alumni:** The **Krishi Vishwa Vidyalaya Chhatr Alumni Network, a Web Portal** was created to connect all the alumni of SAUs across the globe for collaboration in teaching, research, education and capacity building. Agricultural Universities Alumni was established following extensive consultations during a meeting convened at NAARM on January 22, 2020.
3. **Students Orientation towards entrepreneurship / soft skills**
The project targeted development of Soft Skills and Entrepreneurship among Agri Graduates by organizing 55 one-day workshop in 27 State Agricultural Universities, benefitting 6227 students during 2019 to 2023. The two pronged approach was followed – training of master trainers by NAARM and students master trainers of respective universities. by consisted of developing the master’s trainers and who in turn involved in soft skill development. Two master training programme were orgnaised and 61 faculties were trained as Master trainers from 50 SAUs.
4. **Career Development Centres:** A unique idea of establishing Career Development Centre was conceived and initially established 5 such CDCs in five State Agricultural Universities, later increased to 11 CDCs. The vision of these centres is empowering and enriching the students to cope up with global challenges in agriculture & allied sectors and contribute to *Atmanirbhar* India as a professional or agripreneur. Five verticals were targeted through CDCS - Capacity Building, Media & Corporate Communication, Alumni Co-ordination, Placement Co-ordination, Entrepreneurship & Innovation. This Systemic intervention resulted empowering around 30,000 students through more than 350 programmes.
5. **Emphasis on Academic Leadership:** The National Agricultural Higher Education Project (NAHEP) has been frontline in the encouragement of academic leadership within the domain of agricultural education. With a focused commitment to excellence, innovation, and alignment with national educational goals, NAHEP's initiatives resonate strongly with the principles outlined in the National Education Policy (NEP). Academic leadership is a keystone in the development of robust and innovative educational systems. Recognizing this, the National Agricultural Higher Education Project (NAHEP) has headed initiatives to nurture academic leaders in the field of agriculture through organizing training workshops for development of insights on education management and academic leadership. Five workshops were organized during the project period. Four Training Workshops on “Education Management and Academic Leadership” and one Fostering Academic Leadership in Agriculture' from 2019 to 2023 with an objective to enhance the efficiency of Indian Agricultural Education System under NAHEP – Component. 163 enthusiastic administrators and faculty of agricultural universities and ICAR institutes including across the country participated in these training workshops organized online/in presence at ICAR NAARM and GBPUAT.

Impact: There has been a giant leap in comprehensive understanding and enhancing teaching competencies coupled with implementing best leadership practices in their roles and responsibilities. These instilled confidence in enabled to design, manage and implement certain innovative practices with focused and student-centric

approaches. The levels of expertise have risen many folds and have enabled to pass on the accrued benefits to peers and all concerned through a positive shift from individualistic thoughts and actions to collaborative exchanges. Usage of digital technology enhanced competency levels of effective teaching for better delivery of contents and a sustained open source of knowledge. Feedback mechanisms and retrospect analyses helped construct future modules. The other benefits include - Cohesiveness and Increased Staff/Colleague Engagement, Team Spirit in Work and Responsibilities, Increased Goal Orientation, Strengthened Academic Leadership, Positive Approach towards Work etc.

6. **Capacity Building of Faculty:** Another activity followed in enhancing the competencies of faculty is through capacity building of faculty on Nurturing the Entrepreneurial Ecosystem in Agricultural Universities and Developing Winning Research Proposals and Soft Skills and Agri Entrepreneurship Development Training Master Trainers of SAUs. A faculty development centre was established at GBPUAT Pantnagar to cater the training needs of faculty. The FDC organized 11 programmes benefiting 661 faculties.
7. **Development of Frameworks / Policies:** In its constant endeavour to enhance the quality of agricultural education, the project developed policies / frameworks / publications to help the policy makers such as 1) Re-imagining Higher Agricultural Education in India on the Face of Challenge from COVID-19 Pandemic Strategies for Adapting to the New Normal 2) Curriculum Development Framework for Agricultural Education 3) Students' Approaches to Learning in Agricultural Higher Education 4) Socio-Economic Development of North Eastern India through Agri-graduates Success Stories from Career Development Centre at CAU Imphal 5) Preparing Agri-graduates beyond Curriculum: New Dimensions in Human Resource Development 6) Agricultural Education: Career Opportunities 7) Creating Jobs A Training Manual for Prospective Agripreneurs etc. These documents have reached many stakeholders and created an impact in implementing some of the policy changes.
8. **Online Monitoring and Reporting Systems:** The Information and Communication Technology interventions were used extensively for effective monitoring and of CDCs and FDCs (<https://nahep.naarm.org.in/cdc/?v=1>).
9. **Mainstreaming of Private Universities Education through Policy Interventions:** A major initiative undertaken in this project is to mainstream the private agricultural education in the country. A pre workshop meeting at ICAR and a National Symposium on **Mainstreaming of Agricultural Higher Education by Private Universities in India** at NAARM were organised. The one-day symposium deliberated on four important themes viz. equal opportunity in education and employment, quality assurance in agricultural education, enabling environment for quality education and accreditation in the context of national education policy. Among 99 participants, 42 were from 29 private universities from 10 states (AP, Telangana, UP, MP, Punjab, Uttarakhand, HP, Odisha, Maharashtra, Tamil Nadu). The prominent speakers were Dr R C Agrawal, DDG, ICAR; Shri Kunwar Shekar Vijendra, Chancellor, Shobhit University; Dr. Rupa Vasudevan, Chancellor, BEST Innovation University, AP; Dr. Atul Khosla, Founder and Vice Chancellor, Shoolini University, HP; Prof. Raghuvir Singh, Vice Chancellor, Teerthankar Mahaveer University, UP; and Dr. Supriya Pattanayak, Vice Chancellor, Centurion University of Technology and Management, Odisha. Shri BL Meena, IAS (Retd), Chairman, BEST Innovation University; Shri Ravi Verma, Vice Chairman, MNR University represented educational groups. Most other participants were Pro Vice Chancellors, Deans and Directors from private universities. Dr Anuradha Agrawal, National Coordinator (Component2), Dr Sudeep, Principal

Investigator (Component 2), and several senior faculty and officers from IASRI and NAARM also participated in the event in various capacities. The major recommendations for mainstreaming of private agricultural education is 1) Joint efforts to strengthen collaborations, 2) Accreditation as a tool for sustainable quality education, 3) Assuring quality and relevance of agricultural higher education, 4) Networks for efficiency enhancement and 5) Optimum use of resources and infrastructure.

10. **External Advisory Panel for guidance:** Regular meetings were held with globally renowned educational experts to solicit their insights and recommendations. Main purpose of EAP is to provide the ICAR/NAHEP with agenda to appraise the progress and formulate the way forward for the achievement of the overall objective of NAHEP i.e. enhancing the quality and relevance of agricultural education. **The panel comprises of renowned educationists and agricultural experts** – six from India (Dr. P.L. Gautam, Dr. J.C. Katyal, Dr. P.K. Joshi, Dr. B. Venkateswarlu, Dr. Pankaj Mittal & Dr. Vaidya Rajesh Kotecha) , three from the USA (Dr K.V.Raman, Dr Glen C. Shinn, Dr. David Kraybill)and one from Australia (Prof Brajesh Singh). The online meeting was chaired by Dr R C Agrawal, National Director, NAHEP and DDG (Education). Dr. Agrawal requested the External Advisory Panel to guide the ICAR pertaining to issues viz. how to bring transformative changes in agricultural education in tune with National Education Policy, interaction of global universities for globalization of agricultural education, collaboration with national, international and government departments, private sector, and sustainability of NAHEP efforts.

Soft Skills and Entrepreneurship Development among Agricultural Students

To create awareness regarding innovativeness and entrepreneurship and to develop soft skills among agricultural graduates Participatory Training Approach was followed. Training or workshop is an educational activity and has always been viewed as a learning process - learning of new skills, concepts and behaviour. In Participatory Training the facilitator influences the learners to learn new perspectives and behaviour towards the soft skill generation of agri- graduates. Learners are active participants in the educational process, and their needs and questions, their reflection and analysis, and their strategies for change carry the process forward. This Training of Trainers' (TOT) workshops was organized at ICAR – NAARM, Hyderabad during September 17-18, 2019 and January 23-24, 2023 in which 51 faculty members from 50 State Agricultural Universities of the country were trained as Master Trainers. who in turn were organised a one-day workshop on “Development of Soft skills for Entrepreneurship among Agri Graduates” at their respective Universities and cover 100 students of graduation in any of the disciplines of Agricultural sciences viz: Agriculture, Horticulture, Forestry, Community Science, Veterinary, Dairy Technology, Agricultural Engineering. A total of 6227(2973 Girls) were benefitted through these workshops. The brief information is provided in below in following page.

S. No	Year	No of Student Trainings	Total beneficiaries
1	FY 2019-20 & FY 2020-21	28	3108(1431 Girls)
2	FY 2022-23	27	2874(1489 Girls)
3	FY 2023-24	03	245(53 Girls)
	Total	55	6227 (2973 Girls)

Learnings:

1. **International collaboration**, exchange programs, and exposure visits are essential for broadening students' perspectives, fostering cross-cultural understanding, and promoting global competitiveness in agricultural education. **Need to look at models** wherein similar programmes have established offices (regionally/ locally) in different countries to promote ICAR globally.
2. Need for Policy framework & guidelines for quality education in private universities. Accreditation of private universities based on the prescribed standards is important for improving quality agriculture education. Regular review and enhancement of accreditation guidelines are necessary to align with evolving educational standards and objectives.
3. Education model required based on diversity, demography, geography, and technology availability for quality agricultural education.
4. The curriculum design should be dynamic, flexible, and aligned with industry needs, technological advancements, and emerging trends in agriculture. Incorporating interdisciplinary knowledge, practical skills, and outcome-based education can enhance the learning experience and relevance of agricultural programs.
5. Common platform should be designed for all public and private agricultural universities for information and data sharing. Constitution of state-level regulatory authorities for strictly monitoring the state's private agricultural education.
6. Attracting the best talent to choose agriculture as a career option after 12th class. More focus on Medical and Aromatic Plants in the curriculum of agricultural education and working in synergy with Ministry of Ayush in some of the areas like IFS etc.
7. Diversification, high impact factor publication, and intellectual properties generation, should be there to become world Class University.
8. The NARES can play a role in fostering direct and indirect collaborations with international collaborations which can be through ICAR also. The possibility of associating IAUA/ other organizations with this needs can be explored.
9. ICAR, SAUs and privately funded universities to develop modalities (through MoUs, LoAs etc.) for collaboration in areas of research, education, capacity building and sharing of resources. This may be in form of joint diploma/certificate courses, Faculty Development Programmes (FDPs), sharing of laboratory facilities and other amenities (e.g. sports, library, hostel etc.). ICAR to consider developing specialized training programmes for the young agricultural faculty of newly established private universities/colleges. Other innovative initiatives through professional bodies like

National Council of Education of ASSOCHAM will further bring the joint activities in national focus.

10. **Technology Integration:** Integration of cutting-edge technologies, such as computer science, artificial intelligence, and Internet of Things, into agricultural education can enhance the competitiveness and preparedness of students for the digital age. ICAR online platforms like CERA (Consortium for e-Resources in Agriculture) may be made accessible to private universities.
11. **Student-Centric Learning:** Shifting from teacher-centric to student-centric learning approaches can foster greater engagement, creativity, and skill development among students. Encouraging active learning, entrepreneurship, and soft skills development can prepare students for diverse career pathways in agriculture. A hybrid system of education needs to be promoted over time. for encouraging cross-learning among students. E-learning needs to be institutionalised by honouring the credits spent in e-learning.
12. **Sustainable Development: Optimum use of resources and infrastructure** - Creation of knowledge, integration of knowledge and application of knowledge are important purposes of higher education. Therefore, all the government and private institutes need to come together and work in harmony to create “Knowledge Grid” by optimum use of resources for research. Efforts should be made to ensure the sustainability of educational initiatives, revenue generation models, and resource utilization. ICAR/ SAUs laboratories may be permitted for use by for private universities for high level resource use efficiency, by developing suitable modalities of sharing mutually or through ‘pay-and-use modality’. Integrating these sustainable practices, leveraging technology, and fostering innovation can contribute to the long-term growth and impact of agricultural education.





Third External Advisory Panel Meeting

10 November 2021







लाकार कमलेश शर्मा ने भजनों की नमोहक प्रस्तुतियां दी। संत राम दिनमर इस संगीतमयी भागवत कथा का लुप्त उठाया। तथा संतों व भामाशाहों का सम्मान किया जाएगा। (निस)

करियर डेवलपमेंट सेंटर की समीक्षा बैठक आयोजित

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जोबनेर, श्री कर्ण नरेंद्र कृषि विवि, के करियर डेवलपमेंट सेंटर की समीक्षा बैठक का आयोजन नाहंप के सभागार किया गया। मीटिंग में मुख्य अतिथि एस.के. सोम हैदराबाद रहे। उपति डॉ. बलराज सिंह ने बताया के छात्रों के व्यक्तित्व विकास और ट स्किल्स का विकास होना बहुत सी है जो करियर डेवलपमेंट केंद्र संचालित विभिन्न कार्यक्रमों द्वारा हो सकता है। इस कार्यक्रम में आई.एम. खान, डॉ.बी.एल. जाट श्री कर्ण नरेंद्र कृषि महाविद्यालय, नेर भी मौजूद रहे। डॉ. मनोज कुमार शर्मा ने विश्विद्यालय में चल रहे करियर डेवलपमेंट सेंटर में आयोजित होने वाली विभिन्न गतिविधियों के बारे में जानकारी दी। महाविद्यालय की सीडीसी टीम और छात्रों से निकट भविष्य में होने वाले आवश्यक बदलावों और छात्रों की आवश्यकताओं पर विचार विमर्श किया गया। समीक्षा बैठक में डॉ. वी.एस बघाला, डॉ.पी.एस शेखावत, वी.एल. आशीवाल, विरंजीव कुमावत, मनोज कुमार मीणा व शोध छात्र संदीप कुमार, मृणाल पांडे, शीलाल, कोमल, महीपाल, भूपेश, अंजु उपस्थित रहे।

जोबनेर, समीक्षा बैठक के दौरान उपस्थित लोग।



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गाजियाबाद आसपास

गाजियाबाद, बृहस्पतिवार, 14 दिसंबर, 2021

आज कृषि का क्षेत्र जॉब करने वाला नहीं जॉब देने वाला बन रहा है : डॉ अनुराधा अग्रवाल

लोकतंत्र वाणी, संवाददाता

मेरठ। शोभित इंस्टीट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी, मोदीपुरम, मेरठ के स्कूल ऑफ एग्रीकल्चर साइंस एंड एग्रीकल्चर प्रोग्राम ऑन ड्रोन टेक्नोलॉजी इन एग्रीकल्चर का समापन समारोह आयोजित किया गया। जिसकी, शुरूआत मां सरस्वती के समक्ष दीप प्रज्वालित कर की गई। वहीं, कार्यक्रम में मुख्य अतिथि नेशनल एग्रीकल्चर हायर एजुकेशन प्रोजेक्ट आईसीएआर कोऑर्डिनेटर डॉ अनुराधा अग्रवाल रहली। उन्होंने अपने संबोधन में कहा कि आज के समय में हमें एग्रीकल्चर के क्षेत्र में जॉब करने वाला नहीं जॉब देने वाला बना है। आज टेक्नोलॉजी की मदद से अब हमारे किसान एग्रीकल्चर की पढ़ाई से अपनी कृषि को उसी फील्ड में बेहतर कृषि कर ज्यादा मुनाफा कमाया जा सकता है। आज हमें भारत में कृषि का वातावरण बनने की जरूरत है। कृषि में बढ़ती टेक्नोलॉजी के चलते आज भारत में कृषि से संबंधित स्टार्टअप बहुत आ रहे हैं, यह इसका बड़ा उदाहरण है। उन्होंने सभी लोगों को आर्ग्युमेंटेशन एवं ब्लॉक चैन पर काम करने पर जोर दिया। इस अवसर पर विश्वविद्यालय के कुलाधिपति श्री कुंवर शेखर विजेंद्र जी ने अपने संबोधन में कहा कि इस तरह के ट्रेनिंग कार्यक्रम स्टूडेंट्स के लिए बहुत जरूरी है, ड्रोन टेक्नोलॉजी बहुत



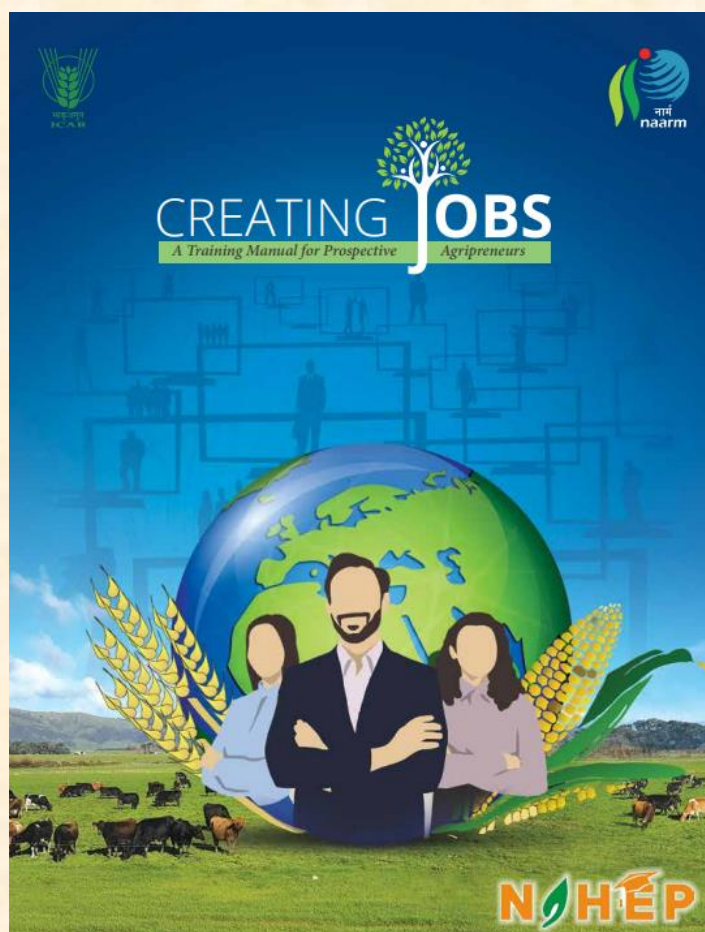
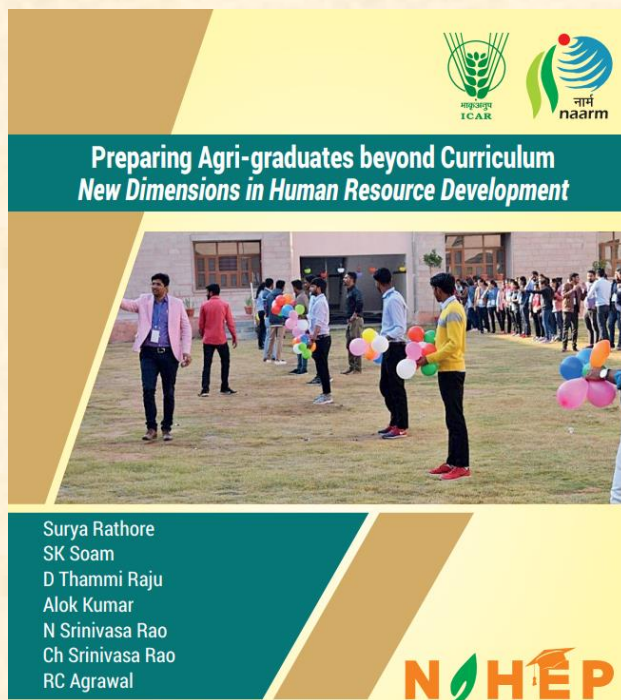
आवश्यक है। क्योंकि, हम कृषि प्रधान देश हैं और इसलिए हमें जॉब करने की आवश्यकता है। उन्होंने बताया कि इस ट्रेनिंग प्रोग्राम की विशेषता है कि इस कार्यक्रम में अलग अलग विभाग संस्थान एक साथ मिलकर कार्य कर रहे हैं। जिससे छात्र छात्राओं को हर संस्थान की महत्वपूर्ण जानकारी उपलब्ध हो पा रही है। जिसके लिए उन्होंने नोडल ऑफिसर को धन्यवाद दिया उन्होंने कहा कि भारत में छोटे किसान हैं। अगर हम टेक्नोलॉजी का इस्तेमाल करते हैं, तो हमारे किसान अपनी आब को बेहतर कर सकते हैं, जिससे ड्रोन टेक्नोलॉजी बड़ा रोल अदा कर सकते हैं। निम्न, हम बिजनेस मॉडल भी देखा जा सकता है। इसके अलावा आज डॉ अनुराधा अग्रवाल प्रधान वैज्ञानिक

सीपीआरआई रीजनल स्टेशन मोदीपुरम ने ड्रोन से संबंधित तथ्य पर विद्यार्थियों से समीची की। इसके उपरांत अतिथि वक्ता प्रो वीर सिंह जीबीपीव्यूटी पंतनगर द्वारा सभी विद्यार्थियों को संबोधित किया गया। इसके द्वारा बताया गया की आने वाले समय में हमें अपने मूल कृषि से संबंधित गतिविधियों में वापस आना होगा अन्यथा हम एक युगम जीवने की कल्पना मात्र भी नहीं कर सकते हैं। इसके बाद प्रो जयानंद कुलपति शोभित विश्वविद्यालय मेरठ द्वारा भी अपने विचार साझा किए गए। इसके पश्चात डॉ की के ल्यामी ड्रोन स्कूल आफ इंजीनियरिंग द्वारा वोट ऑफ थैंस दिया गया। अंत में सभी विद्यार्थियों को सर्टिफिकेट ऑफ पार्टिसिपेशन दिया गया और



उन्के उज्ज्वल भविष्य की कामना की गई। इस मौके पर सभी शिक्षकगण मौजूद रहे। इस दस दिवसीय ट्रेनिंग प्रोग्राम को सफल बनाने में नाम, जीबीपीव्यूटी पंतनगर, आईसीएआर, नोडल ऑफिसर विवेक शर्मा और

कार्यक्रम के संयोजक प्रोफेसर डॉ महदेव सिंह, तथा ऑर्गेनाइजिंग टीम डॉ मनोज कुमार, डॉ सोम अग्र, डॉ अंजली तोमर आशीष कुमार ल्यामी तथा छात्र छात्राओं का विशेष योगदान रहा।



Chapter-6: Infrastructure Development and Capacity Building

The ultimate goal of the project was to enhance quality and relevance of agricultural higher education; therefore, core activities were CDCs, FDC, students' awareness programmes on 'Skill development and entrepreneurship' and several others. Therefore, few additional activities were also done. These are presented in this chapter exclusively.

Strengthening Infrastructure at NAARM:

Knowledge center i.e. NAARM library was strengthened by providing high end photocopier machines and air conditioners with total expenditure of Rs 43.3 Lakhs. Smart board room consisting of ultra-modern features with the expenditure of around Rs 23.00 Lakhs was established so that other stakeholders/ organizations also can use it for interactive meetings and sessions etc. Electricity generator provided for DRC can also be used for NAARM.



Backup Support to ICAR:

As important backup support to the organization ICAR- Disaster Recovery Center (DRC) was established with the expenditure of around Rs 13.00 Crore. This is not only storage of around 225 Terra Bytes but also other capabilities like cloud Ready Technology with Smart Rack , 804 Cores and 2940 RAM, which can be used for variety of purposes such as cloud computing.



← Thread



Narendra Singh Tomar ✓

@nstomar



भारतीय कृषि अनुसंधान परिषद के राष्ट्रीय कृषि उच्च शिक्षा परियोजना के तहत कृषि मेघ (एन. ए. आर.ई.एस. - क्लाउड इंफ्रास्ट्रक्चर एंड सर्विसेज), उच्च कृषि शैक्षिक संस्थानों की प्रत्यायन प्रणाली पोर्टल और कृषि विश्वविद्यालय छात्र एलुमनाई नेटवर्क (केवीसी अलूनेट) का लोकार्पण किया...

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Capacity Building and Networking:

During 2019, two Co-PIs and National Coordinator were sent to 'International Training' covering several countries in Europe. A specific 'Developing Winning Research Proposal' training programme

for digital projects proposals was conducted, where about 40 faculty members were trained, the results were very encouraging.

Winning a research proposal_sincere gratitude to NAARM regarding

1 message

Pandya Parthsarathi A (CAET) <papandya@jau.in>

Sun, 18 Feb 2024 at 16:15

To: director@naarm.org.in, info@bobpigo.org, balakrishnan@naarm.org.in, NAARM TELAgE <murthy@naarm.ernet.in>

Respected Sirs

I am Dr. Parthsarathi A. Pandya, Assistant Professor, Junagadh Agricultural University, Gujarat. I was one of the trainee of 40th Training-cum-Workshop on, "Developing Winning Research Proposals (DWRP) organized during Nov. 2019. Dr. P. Krishnan & M. Balakrishnan were coordinators of the programme. I was also one of the participants of 3rd FOCFAU where Dr.GRR Murthy and Late Dr. Bharat Sontakki were course coordinators.

I am happy to share that my first ever submitted research proposal, submitted just after 4 months of completion of my in-service PhD, titled "Development of Taluka Scale Precise Crop Yield Prediction Application for Selected Districts of Gujarat Using Remote Sensing, AI, and Machine Learning" has been selected for funding worth Rs. 75 Lakh under the National Agricultural Science Fund by ICAR, New Delhi. The proposal was submitted by the Research, Training and Testing Centre (RTTC), JAU, Junagadh with myself as the Lead Centre PI. Notably, this project is one among only 23 selected projects, with just two from Agricultural Universities out of a total of 1093 pre-proposals submitted across India. Dr. M. K. Tiwari from AAU and Dr. M. J. Kaledhonkar from IISWC-ICAR, Vasad, will act as cooperating Centre PIs in this collaborative project.

I am writing this email to acknowledge that learning from the above mentioned two trainings at NAARM, that is how to formulate winning proposals from DWRP training and how to make effective presentation from FOCFAU had helped me greatly to be confident in submitting and presenting my first proposal and also got selection from such big competition.

Thanks and Regards

Dr. Parthsarathi A. Pandya
Ph.D.(Soil and Water Engineering)
Assistant Professor
College of Agricultural Engineering & Technology and
Technical Officer to Hon'ble Vice Chancellor
Junagadh Agricultural University, Junagadh-362001 (Gujarat)

There were several other special initiatives for capacity building and networking as explained in following paragraphs

Digital solution R&D projects in Public-Private-Partnership (PPP) mode

An initiative was taken up to fund 'Digital Technologies Projects' in PPP mode around 70 projects from SAUs with industry partners were received, a national level committee was formed to screen the proposals and identify around 10 best proposals so that functional networks are developed. The details of the committee and list of the proposals is given below:

Committee for conducting preliminary screening:

#	Name	Designation
1.	Dr S K Soam	CPI, NAHEP & Joint Director
2.	Dr D Thammi Raju	Co-PI & Principal Scientist
3.	Dr N Srinivasa Rao	Co-PI & Principal Scientist
4.	Dr Alok Kumar	Co-PI & Principal Scientist
5.	Dr S Senthil Vinayagam	Co-PI & Principal Scientist
6.	Dr P Krishnan	Co-PI & Principal Scientist
7.	Dr M Balakrishnan	Co-PI & Principal Scientist

Committee for evaluating digital solution projects:

S. No	Name and Designation	Committee Role
1.	Dr R N Chatterjee, Director, DPR, Hyderabad	Chairman
2.	Dr Sudeep Marwaha, Principal Scientist, IASRI, New Delhi	Member
3.	Dr Atul Negi, Professor, UoH, Hyderabad	Member
4.	Dr Shaik N Meera, Principal Scientist, IIRR, Hyderabad	Member
5.	Dr Suresh, Principal Scientist, IIOR, Hyderabad	Member
6.	Dr D Thammi Raju, Principal Scientist, NAARM, Hyderabad	Member
7.	Dr GRK Murthy, Principal Scientist, NAARM, Hyderabad	Member
8.	Dr M Balakrishnan, Principal Scientist, NAARM, Hyderabad	Member Secretary

The following proposals were screened by the committee for funding from NAHEP.

#	Title	University Name	Industry Name
1.	Real Time Out-reach of Agriculture Schemes and Programmes to Target Stakeholders Through Digital Extension	University of Agricultural Sciences, Bangalore 560065	Vasudhaika software solutions pvt.Ltd
2.	To Set up Virtual Reality classroom for strong training support of production breakthrough in agriculture	Krishi Vigyan Kendra-Mehsana Ganpat University MDEF, Ganpat Vidyanagar Ta & Dist - Mehsana 384012, Gujarat, India	**
3.	Designing a real time Crop Nutrient Disorder Diagnosis Application using Artificial Intelligence	Regional Agricultural Research Station, Tirupati 517502, Acharya NG Ranga Agricultural University, Regional Agricultural Research Station, Tirupati, Andhra Pradesh 517502	Vasudhaika software solutions pvt.Ltd,
4.	Digital writing vs Hand writing: A pilot study approach	Sri Konda Laxman Telangana State Horticultural University, College of Horticulture, Mojerla, Peddamandadi(post), Dist:	Eminent Apps,

#	Title	University Name	Industry Name
		Wanaparthy, Telangana (State)	
5.	Assessment of Source – Sink relationship in Areca nut (Areca catechu) with use of PGRs for improvement of nut quality and productivity in hilly area (Sirsi) of Karnataka.	University Of Agricultural Sciences, Dharwad Karnataka-580005	Totagars Co-operative Sales Society Ltd.
6.	Development of field specific weather based decision support system to restrict use of pesticides for the management of grapes diseases and to produce residue free grapes	University of Horticultural Sciences Udyanagiri, Bagalkot - 587104, Karnataka	Jayalaxmi Agrotech Pvt Ltd
7.	Cow-side expert system attached electric hoof trimming crush to promote the hoof health care in dairy cattle	Kerala Veterinary and Animal Sciences University, Pookode, Wayanad (Dist.) Pin: 673576. Kerala.	Xeoscript Technologies,
8.	Design and Implementation of IoT based Real Time Water Quality Monitoring Systems in GIFT (Genetically Improved Farm Tilapia) Culture	Tamil Nadu Dr.J.Jayalalithaa Fisheries University Nagapattinam-611 002	CropWit Smart farming Solutions
9.	Linking of Fruits and Vegetables Producers with Big Institutional Buyers through an Artificial Intelligence (AI) enabled Mobile Application Platform	University of Agricultural Sciences, G.K.V.K., Bangalore-560065	**
10.	Development of Decision Support System for identification and resolution of Nitrogen stress in tomato plants	Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh	Comax Consulting p Ltd, Noida
11.	Irrigation water management using multi-satellite data.	University of Agricultural Sciences, Bangalore	
12.	Forecasting apple production in Himachal Pradesh	Dr YS Parmar University of Horticulture & Forestry, Nauni, Solan Himachal Pradesh	JSR Technology Private Limited
13.	Digitization of Supply Chain Management: Connecting the Producers with Buyers using Android Based Application	Dr. Yashwant Singh Parmar University of Horticulture & Forestry, Nauni, Solan – 173230, Himachal Pradesh-India	Comax Consulting Pvt. Ltd.
14.	Desugbug Development of an integrated hybrid applications for effective advisory service delivery, emergency doorstep healthcare and consultative	College of Veterinary & Animal Sciences, Mannuthy, Thrissur, Kerala	Freedom Collective Pvt. Limited,

#	Title	University Name	Industry Name
	production management in animal husbandry (I-DISHAM)		
15.	Development Of Mobile Application Of Virtual Dairy Farming For Youth And Students To Catch Them Young Towards Dairy Farming (E-Cuty)	College of Veterinary & Animal Sciences, Mannuthy, Thrissur, Kerala	Takyon System Solutions Pvt Ltd,
16.	Deep Learning Based Expert System for Identification of Rice Crop Diseases	National Institute of Technology Warangal	
17.	Digital Solution for Crop Monitoring and Measurement using Web and App Enabled Framework	J.N.K.V.V. , Jabalpur	pageUp Software Services Pvt Ltd
18.	Development of sensor based automatic water temperature controlling and water quality monitoring in water trough to enhance water intake in dairy animals	ICAR-National Dairy Research Institute	IIT Delhi, Hauz Khas, New Delhi 110016
19.	Design and Development of a Mechanized Coconut Climber through 3D Design Software	Kerala Agricultural University	AgroMech Innovations,
20.	Study of the Kole land Ecosystem of Kerala using Geo-spatial Technology	Kerala Agricultural University	Forest Research Institute, Peechi; Global Urban Canopy LLP, Thrissur
21.	IOT System for Citrus Value Chain using Robotic Vision Graders	Indian Institute of Plantation Management, (An Autonomous Organization of the Ministry of Commerce & Industry, Govt. of India), Jnana Bharathi Campus, P.O.Malathalli, Bangalore 560 056 Website: http://iipmb.edu.in	**
22.	Artificial Intelligence based Mobile App for Decision Support in Rice	Professor Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad, Telangana, India -500 030	IT Business Solutions
23.	IoT enabled decision support system for water and fertilizer distribution in precision Agriculture.	MIT Academy of Engineering, Alandi (D)	Jacklean Venture LLP, Incubation Centre,

#	Title	University Name	Industry Name
24.	Innovative Research Project Proposals for Development of Digital Solutions in Agriculture	Jean Martin Systems India Pvt. Ltd 26 A, 4th Main Road, SIPCOT IT Park, Siruseri, Chennai 603103, India	**
25.	Integrative Need based transfer of Technology through Greeshma Plus Mobile APP	Acharya N G Ranga Agriculture University Lam, Guntur	PIXMINDS Labs Pvt. Ltd..
26.	Agrijobs.in-An Industry Institute Digital Interface	Swami Keshwanand Rejasthan Agricultural University, beechwal, Bikaner- 334006 (Rajasthan)	
27.	Extension in Virtual Mode for Optimal learning & Voluntary Education (EVOLVE) App	Horticultural College & Research Institute for Women, Trichy - 620027	Purple Clip Films
28.	Prediction for presence of moisture in spatial domain under soil surface with the help of multilevel soil moisture sensor	ABES Engineering College, Ghaziabad, Campus 1, 19 Km Stone, NH-24, Ghziabad, Pin: 201009 (U.P.), India.	**
29.	Popularization of Dryland technologies through animated scientific communication for effective Transfer of Technology (ToT).	Tamil Nadu Agricultural University, Coimbatore	J and J Media Solution
30.	Market Intelligence	Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Union Territory of JK	VAATIKA Agroservices
31.	Application of AI-ML in Animal Health Management by Veterinarian and Farmers	P V Narsimha Rao Telangana Veterinary University, Rajendranagar, Hydrabad	Nemus software solutions Pvt. Ltd.
32.	Converting Handwritten Data into Digital Data in Agriculture for Enabling Knowledge Management, Advanced Analytics and Predictive Modelling by Leveraging Machine Learning	Rajmata Vijayraje Scinndia Krishi Vishwa Vidyalaya, Raja Pancham Singh Marg, Gwalior - 474002 (M.P.)	SBSF Consultancy Pvt. Ltd.
33.	Image analysis based robotic arm automation system for greenhouse farms	ABES Engineering college, campus-1, 19th km stone, NH24, Gaziabad-201009 (U.P.), India	**
34.	Supply Chain Management Application for Small Scale Dairy Farmers	Tamil Nadu Veterinary and Animal Sciences Univeresity	**

#	Title	University Name	Industry Name
35.	Supply value Chain Management and Accounting Software for Dairy output	Tamil Nadu Veterinary and Animal Sciences Univeresity	**
36.	Leveraging small holder Backyard Poultry Farmer through Internet of Things (IoT)	Tamil Nadu Veterinary and Animal Sciences Univeresity	Enrick Technology Solution Chennai;
37.	Artificial Intelligence & Machine Learning based syndromic surveillance in veterinary medicine- Prototype Development	Tamil Nadu Veterinary and Animal Sciences Univeresity	Bow and Baan Technology Solutions Private Limited
38.	In-Time pest and disease detection in chili crop through Mobile App	Shri Konda Laxman Telangana State Horticulture University	Agri Central Technology Olam Information Services Ltd, Bengaluru
39.	Implementation of Smart Vertical Hydroponics Farming (SVHF) Using Intelligent Technique	Sona College of Technology, Junction Main Road, Salem- 636005	**
40.	Management of Agricultural Education System through digital platforms	Banda University of Agriculture & Technology, Banda, Uttar Pradesh	**
41.	Capturing / digitation of the phenotypic data of mango orchid	Shri Konda Laxman Telangana State Horticulture University	**
42.	Computer based Modeling of Swarm Intelligence for strengthening of group dynamics of the farmer's groups	G. B.. Pant University of Agriculture & Technology, Pantnagar - 263145, Dist. Udham Sigh Nagar, Uttarakhand, India.	**
43.	AI based Platform for Digitalization and Automation of RAWEP for effective monitoring and data utilization. (ARM)	Professor Jayshankar TenlanganaState Agricultural Univesity, Rajendranagar, Hyderabad	**
44.	Development of Ration Balancing Software for Dairy farmers of Malwa region of M.P. with Special reference to Prevention of Common Reproductive/ Metabolic Disorders	Nanaji Deshmukh Veterinary Science University, Adharatal Jabalpur (M.P.) 482004	**
45.	Development of Market-linked crop planning supply-chain management system	Tamil Nadu Agricultural University Lawley Raod Coimbatore 641003	**
46.	Weeding Robot: Complete autonomous machine for a more ecological and economical weeding of row crops	Universityof Agricultural Sciences, Dharwad-580005, Karnataka	HAEGL Tech. Pvt. Ltd.

#	Title	University Name	Industry Name
47.	End to End Monitoring of Organic Farm Produce Using Block Chain Technology	Chhattisgarh Kamdhenu Viswavidyalaya Anjora-Drug	Happy Tech Solutions
48.	Artificial Intelligence (AI) and Internet of Things (IoT) best automatic drip irrigation system using free satellite imagery for enhancing water conservation in rural India	Kongu Engineering College Perundurai Erode-638060 Tamil Nadu. principal@kongu.ac.in	Mobitech wireless solutions
49.	Building a Framework to identify crop disease and provide solution by analysing various agricultural parameters	Shree Guru Gobind Sing Tricentenary Univrsity, Budhera, Distict Gurugram (Hariyana)-122505 Phone: 0124-2278188 Fax: 0124-2278151 Website: www.sgtuniversity.ac.in	Samatrix Consulting Pvt Ltd
50.	Sensor based smart micro irrigation system using IoT	ABES Engineering college, campus-1, 19th km stone, NH24, Gaziabad-201009 (U.P.), India	**
51.	Up-lifiting of socio-economic status of farmer through digital solution in animal sector	Nanaji Deshmukh Veterinary Science University, Adharatal Jabalpur (M.P.) 482004	**
52.	Enhancing Academic Performance of Slow Learners (UG students) through Digital Learning Interventions	University of Agricultural Scinces, Dharwad.	Jaylaxmi Agrotech Pvt Ltd,
53.	Artificial Intelligence based Prediction of major pests in Rice	Tamil Nadu Agricultural University Coimbatore, Tamil Nadu	M/s. NANDHA INFOTECH New
54.	Technological Intervention for Smart Farming in paddy Fields.	Sri Krishna College of Technology, Kovaipudur, Coimbatorem, Tamilnadu, India- 641042	
55.	Automation of Irrigation scheduling- IOT Solution	Professor Jayshankar TenlanganaState Agricultural Univesity, Rajendranagar, Hyderabad Telangana, India- 500030	Stamp IT Business Solutions
56.	Development of Smart crop advisory interface for pomegranate to reduce losses using satellite data and machine learning	University of Horticultural Sciences, Bagalkot, Karnataka	Natura Crop Care
57.	Development of Mobile application for Dissemination about Scientific Dairy Practices	Nanaii Deshmukh Veterinary Science University, Adharatal Jabalpur (M.P.)	DAVV, Indore

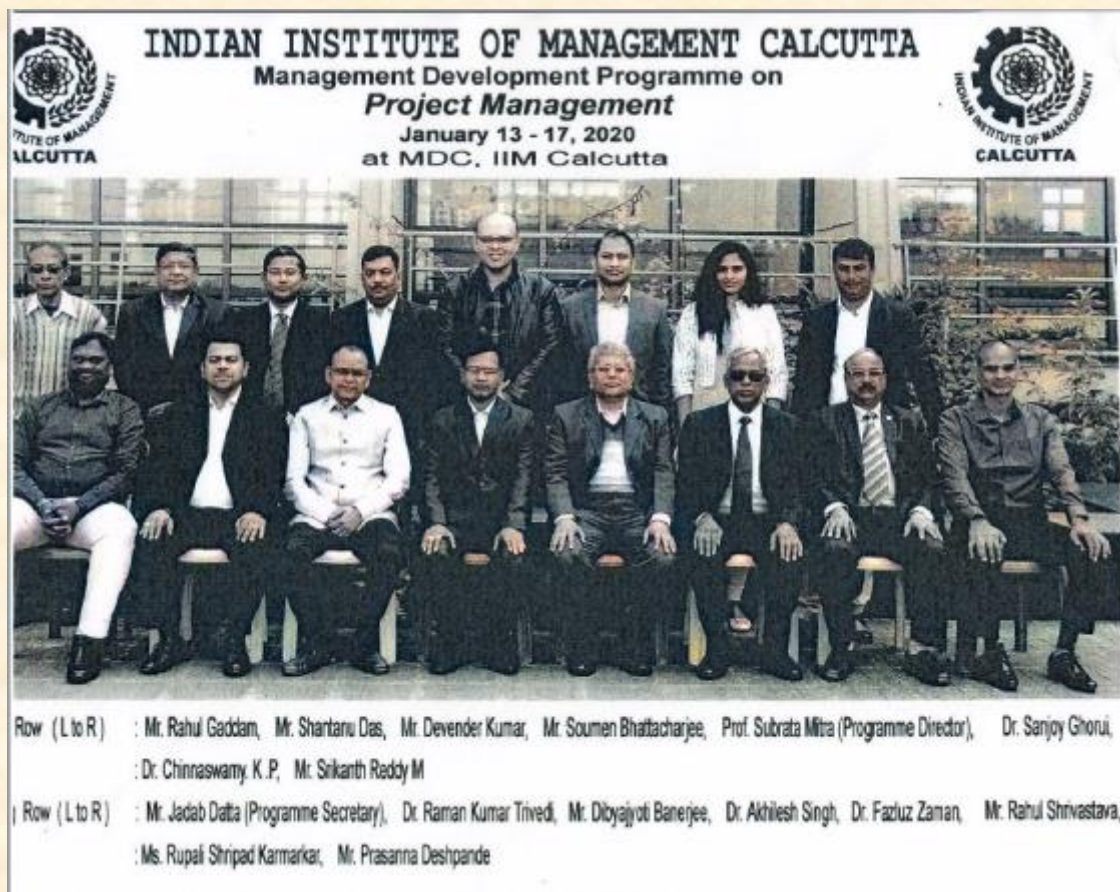
#	Title	University Name	Industry Name
58.	Development of Drone with Digital Technology for Agricultural Use	Dr. Yashwant Sing Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh	**
59.	Development of Single Window Cognitive Supply Chain Management System for organic agri products using IOT and ML	National Engineering College, K. R. Nagar, Kovilpatti, Thoothukudi District, Tamilnadu - 628503	WOTSAPP Technologies Pvt. Ltd.,
60.	Development of user friendly App for forecasting of foreign Body syndrome in dairy animals-Digital solution of dairy industry in western Maharashtra	Maharasta Animal & Fishery Sciences University, Nagpur, Futala Raod, Near Telangkhadi Temple, Nagpur -440004, Maharastra	**
61.	e-Solution For Enhancing the value chain in the Bundelkhand Region	Rani Lakshmi Bai Central Agricultural University (RLBCAU), Jhansi, UP- 284003	3SR Consultancy
62.	Development of real-time crop health diagnostic module for enhancing profitability of small holders' farmers in Bihar	Bihar Agricultural University, Sabour	Daybest Research Private Limited
63.	Development of rapid diagnosis and pest management technology for selected crops through application of unmanned aerial vehicle	AU, Kota	OM UAV Systems
64.	Development of A Prototype of Point of Care Cell Phone Based Diagnostic Microscope	PVNRTSVU	Neemus Software Solutions Pvt. Ltd.
65.	Mobile Application for Animal Health Schedules Management	PVNRTSVU	Neemus Software Solutions Pvt. Ltd.
66.	Development of a mobile application for the stakeholders of the University	PVNRTSVU	Neemus Software Solutions Pvt. Ltd.
67.	Supply Chain Management of Katarani Rice through IOT	Bihar Agricultural University, Sabour	Daybest Research Private Limited
68.	Enhancing the availability of farm machinery to small holder farmers through digital interventions	Bihar Agricultural University, Sabour	Daybest Research Private Limited

Training of SAU faculty members at Indian Institute of Management (IIMs)

The SAU faculty members seldom get opportunity of training at premier institutions like IIMs. Therefore, an initiative was taken up to train faculty members at various IIMs in the area of project management and leadership, such exposure would help them to go up in the ladder and also bring efficiency in their day-to-day functioning. Following are the details:

S.NO	Training Details	Name and Designation	University
1.	Batch-I: IIM, Kolkata Programme topic: Project management Duration: 13-17 Jan, 2020 No of participants: 3	Dr. K.P. Chinna Swamy, Professor	University of Agricultural Sciences, GKVK, Bangalore
2.		Dr. Akhilesh Singh, Technical Officer to Dean Faculty of Agriculture	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior
3.		Dr. Raman Kumar Trivedi , Director of Student Welfare	Bihar Animal Sciences University, Bihar
4.	Batch-II: IIM, Kolkata Programme topic: Interpersonal effectiveness and leadership excellence Duration: 20-24 Jan, 2020 No of participants: 4	Dr. D.B. Patil , Dean Faculty of Fisheries Science	Kamdhenu University, Gujarat
5.		Dr. Anand Chitra , Associate Professor	Tamil Nadu Veterinary and Animal Sciences University, Chennai.
6.		Dr. Shashank G. Bharad , Professor & Head, Department of Fruit Science	Dr. Panjabrao Deshmukh Agricultural Univeristy, Akola
7.		Dr. Pramod Mohnot , Associate Director of Research	Junagadh Agricultural University, Junagadh
8.	Batch- III: IIM, Ahmedabad Programme: HR auditing –preparing the ground for strategic HRM Duration: 24-26 Feb, 2020 No of participants: 8	Dr. Narender K. Sankhyan, Nodal officer of ICAR & Principal Scientist	CSK Himachal Pradesh Agricultural University, Himachal Pradesh
9.		Dr. N. Felix, Director, Directorate of Incubation and Vocational Training in Aquaculture	Tamil Nadu Dr. J. Jayalalithaa Fisheries University, Tamil Nadu
10.		Dr. M. Rajakumar, Director, Directorate of Extension Education	Tamil Nadu Dr. J. Jayalalithaa Fisheries University, Tamil Nadu
11.		Dr. M.K.Jhala , Associate Director of Research	Anand Agricultural University, Anand

12.		Dr. Sudhir Uprit, Dean Students Welfare	Chhattisgarh Kamdhenu Vishvavidyalay, Durg, Chhattisgarh
13.		Dr. Ishfaq Abidi, Deputy Director of Research	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, J&K
14.		Dr. Manzoor Rahman Mir, Professor	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, J&K
15.		Dr. N. Venkatesa Palanichamy, Professor	Tamil Nadu Agricultural University, Tamil Nadu



Few other academic activities were also done to develop functional networks, following are worth mentioning here

Support to PG alumni association of NAARM: A one-day workshop on “Building Academia–Industry Partnerships through Alumni for Quality Agricultural Higher Education” was organized by the Academy on 14 May 2022. The workshop aimed at nurturing a platform for networking and developing the fraternity among Alumni and the participants get an opportunity to communicate with alumni students and get enlightened how the interactions between higher educational system & industry promotes the professional career and technology exchange can be done by alumni meets. Around 300 PGDMA students and NAARM PGDMA alumni were participated in this workshop.



National conference on Geospatial Technologies in Agriculture: National conference on Geospatial Technologies in Agriculture organized at ICAR-National Academy of Agricultural Research Management (NAARM) during 20-21st February, 2020, which was jointly organized by the Association for Management of Agricultural Research and Agripreneurship (AMARA), Hyderabad and ICAR-NAARM and NAHEP Component 2 at ICAR-NAARM. Dr (Ms.) Tessy Thomas, DG (Aeronautical Systems), DRDO inaugurated this conference. Around 200 participants from various SAUs participated in this National Conference.





Dr (Ms.) Tessy Thomas, Dr. Ch. Srinivasa Rao and other dignitaries releasing the Practical Manual for GIS



Delegates of National conference on Geospatial Technologies in Agriculture

Network Meeting of Experts from USA and a policy dialogue on “Agricultural Education System in USA and Potential Collaboration with India”

A policy dialogue on “Agricultural Education System in USA and Potential Collaboration with India” was organised in hybrid mode on 07 September, 2023 at ICAR-NAARM in collaboration with ICAR-NAARM, NAHEP Component 2 and NAAS Hyderabad Chapter. Dr. Kumar Venkitanarayanan, Professor & Associate Dean of Research, College of Agriculture, Health and Natural Resources, University of Connecticut, USA and Dr Anup Kollanoor Johny, Associate Professor, Department of Animal Science, University of Minnesota, USA addressed the participants on Agricultural Education System in USA. The programme was organized in hybrid mode and a total of 70 participants offline and more than 100 participants online from various ICAR institutions, SAUs, NAAS, Regional Chapter-Hyderabad fellows and associates.



Success Story

(Sent to NAHEP HQs through email on 12 May 2022)

Students' Empowerment through Career Development Centres (CDCs)

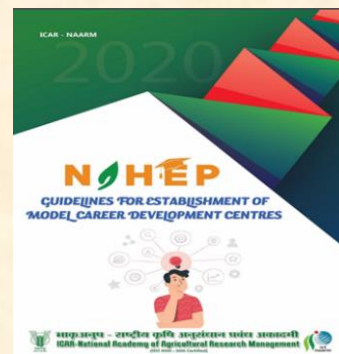
Journey of Career Development Centres

Through NAHEP Component 2, five career development centres (CDCs) have been established across five Agricultural Universities across the country. The establishment of these CDCs was based on outcomes of three workshops organised to prepare a standardized manual of guidelines, protocols and operations towards the establishment of CDCs.

Career Development Centres (CDCs)

1. Central Agricultural University, Imphal
2. Indira Gandhi Agricultural University, Raipur
3. Sri Karan Narendra Agriculture University Jobner
4. Sri Venkateswara Veterinary University, Tirupati
5. Uttar Banga Krishi Viswavidyalaya, Cooch Bihar

The CDCs have been established through a tripartite agreement. The guidelines for the establishment of Model Career Development Centres have been published through ICAR-NAARM and made available for utilization on the Academy's website.



Background

To the establishment of Career Development Centres at agricultural universities; to Improve curricula review processes and methods to consolidate and disseminate global best practices in agricultural education of agricultural higher education, Three "National Workshop on Career Development Centre" was organized to assist agricultural students in enhancing their soft skills, innovativeness and entrepreneurship with a focus on improving the employability of students by creating enabling environment for their career development in different spheres during 7th, 12th and 14th February 2020 at KAU, Thrissur, SKNAU, Jobner and IGKV, Raipur. The workshop was organized as a part of World Bank-funded ICAR research project on National Agricultural Higher Education Project (NAHEP) component 2- Investment in ICAR Leadership in Agricultural Higher Education implemented by ICAR-NAARM, IASRI & NIAP. Major themes discussed during the workshop were Career Development Centre: Importance, requirements & facilities, Strategies / Guidelines for Establishment of Career Development Centre (Vision, Mandate, Objectives, Operational Mechanism, Activities, Monitoring & Evaluation) and Brain Storming Session on Way Forward (i.e. How to develop a robust CDC? How to make it sustainable? and Academia / Industry Expectations from CDCs). Partner institutions presented and shared their presentation (5 minutes duration) covering the following:

- Importance / need of CDC in improving the quality of agriculture education


- Basic requirements for the establishment of CDC at the University
- The facilities are available at CDC / Placement Cell in the University if any. (kindly also mentioned the activities carried out in last five years)

Programme Details

Till now Career Development Centres (CDCs) conducted 60 workshops/ webinars for the benefit of students. In this number of beneficiaries are 3814. Including 55.57% (2119) male and 44.43% (1695) female students.

Students Testimonials


from all CDC Centres



Th. Pushpa Devi
B.Tech, CAU, Imphal

I have attended webinar on "Career counselling for JRF/GATE/ARS and UPSC IFS" and it was very helpful for me as I am preparing GATE 2021


★★★★★



L. Debala Devi
B.Tech (A.E), CAU, Imphal

I really thanks to all the CDC Coordinators, I have attended webinar on "Lerner counselling for JRF/GATE/ARS and UPSE-IFS". I really appreciate you for giving time and sharing valuable knowledge

★★★★



Kh. Priya
B.Tech,CAU,Imphal

I have attended online webinar on career counselling for JRF/GATE/ARS and UPSE-IFS and it was very helpful for me as. I am preparing for GATE 2021. As for GATE aspirants and other students. This type of career counselling helps to know about the pattern of exam, syllabus and how we should work the exam

★★★★★

Snapshots of CDC activities



Preparing Agri- graduates for Entrepreneurship through Soft Skills development

Journey of Student Awareness Programmes

ICAR – National Academy of Agricultural Research Management (NAARM) under World Bank-funded National Agricultural Higher Education Project (NAHEP) has taken up the responsibility to create awareness about ‘Agripreneurship’ among final year agri graduates from various State Agricultural Universities (SAUs) by providing one-day training through “Master Trainers” in each of these SAUs. Under NAHEP, 34 “Master Trainers” have already undergone a two-day training programme at ICARNAARM during 17-18 September 2019. The ‘Master Trainers’ provide training to 100 undergraduate students of Agriculture and allied sector of their respective university by using this training manual as resource material.

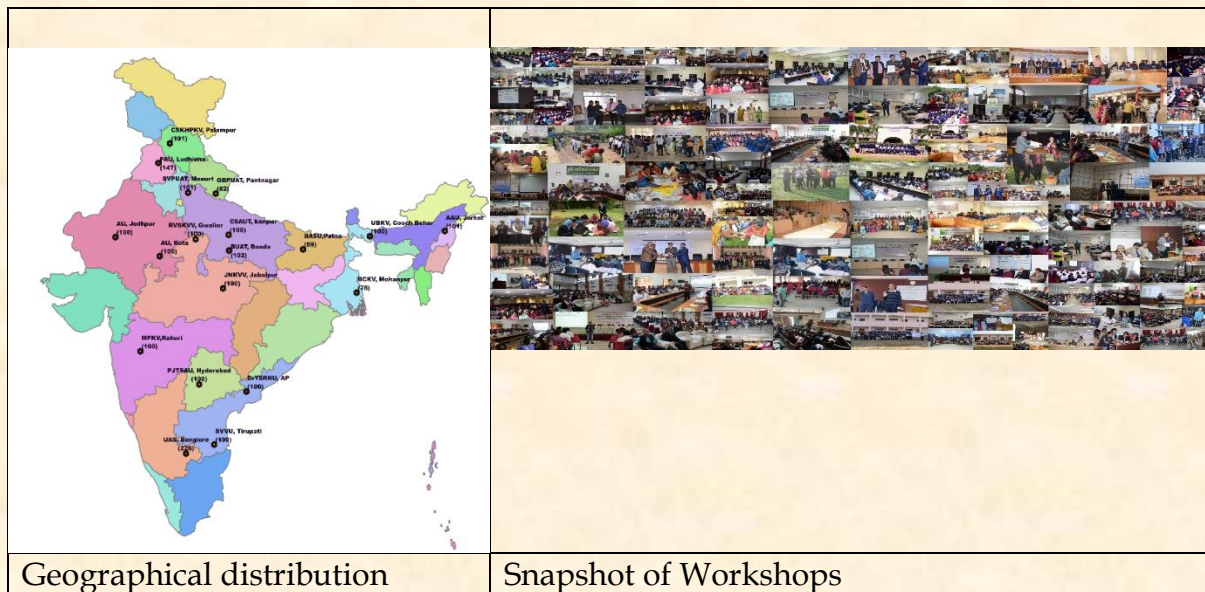
One training manual entitled “Creating Jobs: A Training Manual for Prospective Agripreneurs” has been published to equip the agri-graduates of the country with the necessary knowledge required for becoming agripreneurs, and to develop soft skills among them to excel in the competitive job market. It is encapsulated with information on team building, media, online resources, and communication tools and various government programmes & schemes for start-ups/entrepreneurship, especially in the agriculture sector including financial risk management by experts in the subject. 105 copies of the training manual have been sent to every 25 universities for conducting a One-day Awareness Workshop on the Development of Soft skills for Entrepreneurship among Agri-graduates. Out of the proposed 25 programmes total 28 programmes was completed. Total 3108 students including 1678 males and 1430 females were benefited from these programmes throughout the country.

Background

To create awareness regarding innovativeness and entrepreneurship and to develop soft skills among agricultural graduates *Participatory Training Approach* was followed. Training or workshop is an educational activity and has always been viewed as a learning process - learning of new skills, concepts and behaviour. In Participatory Training the facilitator influences the learners to learn new perspectives and behaviour towards the soft skill generation of agri- graduates. Learners are active participants in the educational process, and their needs and questions, their reflection and analysis, and their strategies for change carry the process forward. This Training of Trainers’ (TOT) workshop was organized at ICAR – NAARM, Hyderabad during September 17-18, 2019 in which 34 faculty members from 23 State Agricultural Universities of the country were trained as Master Trainers. who in turn were organised a one-day workshop on “Development of Soft skills for Entrepreneurship among Agri Graduates” at their respective Universities and cover 100 students of graduation in any of the disciplines of Agricultural sciences viz: Agriculture, Horticulture, Forestry, Community Science, Veterinary, Dairy Technology, Agricultural Engineering.

Programme Details

Total students who participated in the programme were 3108 including 54% male and 46% female students. Students belonged to age groups between 21 to 25, studying in B. Sc Agriculture (59.65%), B.Sc Horticulture (12.74%), B.V.Sc & AH (5.37%), B.Sc Community Science(4%), Agricultural Engineering (4%), Forestry (1.85%) and others (11.5%) from the different states of the country. Others category includes the students from B.Sc Biochemistry, Masters and Ph.D students. The majority of the students (54%) trained were in the 4th year of their study followed by 23 per cent were in 3rd year of study.



Key Outcomes

Knowledge Enhancement

- Students became aware of entrepreneurship in the agriculture sector.
- Students increased their awareness and deliberately practised the skills necessary to increase confidence and agency; foster self-efficacy and self-advocacy; improved their communication and problem-solving skills, managed strong impulses and feelings; and identified personal purpose.
- Students developed knowledge about the business opportunities in agriculture and the allied sector.
- Students developed advanced knowledge about key processes necessary to bring new products and services to market and key challenges facing entrepreneurs at different stages of the entrepreneurial voyage.
- Students become aware of the Government initiatives & support for Entrepreneurship among Agri-graduates.
- Students developed knowledge about Innovations & Start-ups in the agriculture & allied sector.

Skills

- Students have improved communication skills for career development.
- Students are able to plan, organize, and execute a project or new venture to bring new agricultural products and services to the market:
- Students have improved their interpersonal and collaborative skills.

Attitudinal Changes in Students on Entrepreneurship

- A usefully impact study about “Socio-economic Development of North Eastern India through Agrigraduates” has been published under NAHEP component 2



Chapter-8: Publications from NAHEP Component-2@NAARM

Annual Reports

- Annual Report, (2019-20). Investment in ICAR for Leadership in Agricultural Higher Education, Component 2 of ICAR-NAARM.
<https://krishi.icar.gov.in/jspui/handle/123456789/81829>
- Annual Report, (2020-21). Investment in ICAR for Leadership in Agricultural Higher Education, Component 2 of ICAR-NAARM.
<https://krishi.icar.gov.in/jspui/handle/123456789/81830>
- Annual Report, (2021-22). Investment in ICAR for Leadership in Agricultural Higher Education, Component 2 of ICAR-NAARM.
<https://krishi.icar.gov.in/jspui/handle/123456789/81831>
- Annual Report, (2022-23). Investment in ICAR for Leadership in Agricultural Higher Education, Component 2 of ICAR-NAARM.
<http://krishi.icar.gov.in/jspui/handle/123456789/81340>
- Annual Report, (2023-24). Investment in ICAR for Leadership in Agricultural Higher Education, Component 2 of ICAR-NAARM.

Books

- Soam, S. K., Kumar Prabhat, and Srinivasa Rao Ch., (2020). *Krishi- Udyamita Dvaara Aatmanirbhar Bhaarat: Chhaatropayogee Gyaan evam Kaushal Vikaas*. ICAR – National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500 030, Telangana, India, pp 156.
<http://krishi.icar.gov.in/jspui/handle/123456789/68205>

Book Chapters

- D Thammi-Raju, P Ramesh, P Krishnan, SK Soam, Ch Srinivasarao, RC Agrawal (2021) Re-imagining Higher Agricultural Education in India on the Face of Challenges from COVID-19 Pandemic: Strategies for Adapting to the New Normal; *In Higher Education Going Online: The Challenges in India* Eds: Sujin Babu and Ram Ramaswamy, Published by Indian Academy of Sciences, Bangalore pp 99-121.
https://www.ias.ac.in/public/Resources/Other_Publications/e-Publications/014/Higher-Education-Going-Online.pdf

Policy Papers

- Thammi Raju, D., Soam, S.K., Srinivasa Rao, N., Kumar, A., Sumanth Kumar, V.V., Kumar, S., Rathore, S., Vinayagam, S.S., Balakrishnan, M., Yashavanth, B.S., Krishnan, P., Sudeep Marwaha., Prabhat, K., Venkateshwarlu, G., Srinivasa Rao, Ch. and Agrawal, R.C. (2021). Curriculum Development Framework for Agricultural Education, National Agricultural Higher Education Project – Component 2, Indian Council of Agricultural Research (ICAR). National Academy of Agricultural Research Management (NAARM), Hyderabad-12.
<http://krishi.icar.gov.in/jspui/handle/123456789/68218>

Thammi-Raju, D., Ramesh, P., Krishnan, P., Soam, SK., Srinivasarao, Ch., Agrawal, RC. 2020. Re-imagining Higher Agricultural Education in India on the Face of Challenge from COVID-19 Pandemic - Strategies for Adapting to the New Normal. ICAR Policy Paper, Indian Council of Agricultural Research (ICAR), New Delhi, p14. <http://krishi.icar.gov.in/jspui/handle/123456789/58815>

Popular Articles

- Rathore S., Soam, S K., and Raghuvanshi R. (2020). Agripreneurship Development Programmes for Graduates: Striding towards Atmanirbhar Bharat Abhiyan. University News, A weekly Journal of higher education. Association of Indian Universities. Vol. 58. No 49.
- V V Sumanth, S Rakesh, **S K Soam**, Sudeep Marwaha and Prabhat Kumar. (2021). Agricultural Students' Alumni Network Implemented by NAHEP. In Magazine- *AGRICULTURE WORLD: India's Food Systems Approach to be Reimagined*. November issue. 7(11): 16-19. ISSN 2455-8184. Published by Krishi Jagran Media Group, New Delhi- 110 016.
- Soam,S.K., Raghuvanshi, R. and Raghupathi, B. (2021). Agricultural Higher Education in India: Status and Scope. *Just Agriculture e-magazine*. Vol 2(1): pp 24-29, e-ISSN Number: 2582-9149.
- Raghupathi B, S Rakesh, P Divakar Reddy & SK Soam (2022). Agro-meteorology Services for Crop Planning and other Allied Aspects. *Agriculture World Magazine*, May, 10-15. ISSN 2455-8184.
- Raghupathi B, Rakesh S, Balakrishnan M & Soam SK (2022). Application of 5G in Agriculture. *Agriculture World*, 8(1) ISSN 24558184.
- Sweetey, S., Srikanth, P.D. and Soam, S.K. (2021). Horticultural Education in Entrepreneurship Development. *Just Agriculture*, 2(3), Nov 2021: 1-7 e-ISSN: 2582-8223
- डी तम्मी राजू, श्रीकांत खाडे, स्वीटी शर्मा एवं एस के सोम) 2021). कोविड-19 महामारी का पशुधन क्षेत्र पर प्रभाव एवं न्यू नार्मल के लिये पहल .In Magazine- पशुधन प्रकाश के बारहवाँ अंक वर्ष 2021. प्रष्ठ संख्या) Page no) 40-42. ISSN: 0976-4569. भाकृअनुप-राष्ट्रीय पशु आनुवंशिक संसाधन ब्यूरो, करनाल द्वारा प्रकाशित.

Conference Proceedings

- Soam, S.K., Sudeep Marwah, Anuradha Agrawal (2024). Career Development Centres in Agricultural Universities: Policy Interventions for Sustainability and Scaling-Up. Proceedings and Recommendations of Regional Workshops on Sustainability of Career Development Centres (pp. 1-36) NAHEP component 2, ICAR-National Academy of Agricultural Research Management, Hyderabad, Telangana, India <https://krishi.icar.gov.in/jspui/handle/123456789/84114>
- Soam, S.K., Kumar, A., Balakrishnan, M., & Dhumantharao, T.R. (2023). Proceedings and recommendations of National Conference on Policy Development and Implementation Strategies for Academia-Industry Government (AIG) Linkages in Agricultural Higher Education in India (pp.50). Hyderabad, Telangana, India. NAHEP component 2, ICAR-National Academy of Agricultural Research Management. <http://krishi.icar.gov.in/jspui/handle/123456789/81341>
- Soam, S. K., Dhumantharao, T. R., Nukella, S. R., & Rathore, S. (2022). Proceedings of National Symposium on Mainstreaming of Agricultural Higher Education by Private Universities in India (pp. 1–76). Hyderabad, Telangana; NAHEP Component 2, ICAR- National Academy of Agricultural Research Management. <http://krishi.icar.gov.in/jspui/handle/123456789/80659>

- Alok Kumar, Srinivasarao. N and S K Soam (2020). National Workshops on Establishment of Career Development Centre in Agricultural Universities, Proceedings & Recommendations. ICAR-National Academy of Agricultural Research Management, Hyderabad, 500 030. Pp. 1-80. <http://krishi.icar.gov.in/jspui/handle/123456789/80023>
- D Thammi Raju, N Srinivasa Rao, Alok Kumar, Surya Rathore, Sudeep Marwaha, Prabhat Kumar, S K Soam and Ch Srinivasa Rao (2019). Academic Excellence through Building Partnerships and Resources Generation, Proceedings and Recommendations of National Workshop, held during 30 April – 1 May, 2019 at ICAR-National Academy of Agricultural Research Management, Hyderabad, Pp 1-74. ISBN 978-81-943090-0-0 <http://krishi.icar.gov.in/jspui/handle/123456789/75258>

Research Papers

- Rathore S, Kumar Soam S, Basavapatna Subbanna Y, Shankar Sontakki B, Raghuvanshi R. Exploring the Entrepreneurial Readiness of Indian Agri – Graduates: Pathway to the Enhanced Entrepreneurial Ecosystem. JAST 2024; 26 (4) :727-740 URL: <http://jast.modares.ac.ir/article-23-65482-en.html> and <http://dx.doi.org/10.22034/JAST.26.4.727>
- Soam SK, Subbanna YB, Rathore S, Sumanth Kumar VV, Kumar S, Vinayagam SS, Rakesh S, Balasani R, Raju DT, Kumar A, et al. Academia-Industry Linkages for Sustainable Innovation in Agriculture Higher Education in India. Sustainability. 2023; 15(23):16450. <https://doi.org/10.3390/su152316450>
- Soam SK, Rathore S, Yashavanth BS, Dhumantaroo TR, S. R, Balasani R. Students' Perspectives on Entrepreneurship and Its Intention in India. Sustainability. 2023; 15(13):10488. <https://doi.org/10.3390/su151310488>
- Soam SK, Yashavanth BS, Dhumantaroo TR, Maruthamuthu B, Balasani R and Rakesh S (2023). Factors influencing dietary patterns among the youth from higher educational institutions in India. Frontiers in Nutrition, 10:1134455. <https://doi.org/10.3389/fnut.2023.1134455>
- Soam, S. K., N, S. R., BS, Y., Balasani, R., S, R., Marwaha, S., Kumar, P., & Agrawal, R. C. (2023). AHP Analyser: A decision-making tool for prioritizing climate change mitigation options and forest management. Frontiers in Environmental Science, 10: 1099996. <https://doi.org/10.3389/fenvs.2022.1099996>
- Soam SK, Raghupathi B, Sharma S, Yashavanth BS, Balakrishnan M, NS Rao, Thammi-Raju D, P Kumar & RC Agrawal (2022). Mind Mapping as a Learning and Teaching Tool in Agricultural Higher Education in India. Indian Research Journal of Extension Education, 22(3), 176–181. [10.54986/irjee/2022/jul_sep/176-181](https://doi.org/10.54986/irjee/2022/jul_sep/176-181)
- Thammi-Raju D, P Ramesh, R Raghuvanshi, BS Yashavanth, BS Sontakki, P Krishnan, B Raghupathi, SK Soam & Ch. Srinivasarao (2022). Students' Approaches to Learning in Agricultural Higher Education. Asian Journal of Agricultural Extension, Economics and Sociology, 40(5), 19-29. <https://journalajaees.com/index.php/AJAEES/article/view/1372>

Training Manual

- S K Soam, Surya Rathore, Alok Kumar, N Srinivasa Rao and Ch Srinivasa Rao (2019). Creating Jobs – A Training Manual for Prospective Agripreneurs, ICAR-National Academy of Agricultural Research Management, Hyderabad. Pp 1-64. ISBN: 978-81-943090-3-1 <http://krishi.icar.gov.in/jspui/handle/123456789/68188>

Technical Bulletin

- Soam SK, Singh SB, Sarangthem I, Raju DT, Rao NS, -Kumar A and Haldhar SM. (2022). Socio-Economic Development of North Eastern India through Agri-graduates: Success Stories from Career Development Center at CAU Imphal. ICAR- National Academy of Agricultural Research Management, Hyderabad-500030. Pp 1-52. ISBN: 978-93-5779-988-1. <http://krishi.icar.gov.in/jspui/handle/123456789/80022>
- D Thammi Raju, BS Yashavanth, Sweety Sharma and S K Soam (2020). Agricultural Education: Career Opportunities. ICAR – National Academy of Agricultural Research Management, Rajendranagar, Hyderabad, Telangana, India, pp 38. <https://krishi.icar.gov.in/jspui/handle/123456789/81827>
- Rathore, S., Soam, S., Raju, D.T.R., Kumar, A., Rao, N. S. and Rao, Ch.S.R., Agrawal, R.C. (2021). Preparing Agri graduates beyond curriculum: new dimensions in Human Resource Development, ICAR – National Academy of Agricultural Research Management, Hyderabad, India <https://krishi.icar.gov.in/jspui/handle/123456789/81828>

Guidelines

- Soam S.K., Kumar Alok, Srinivasa Rao N., Thammi Raju D., Sudeep Marwaha, Prabhat Kumar and Srinivasa Rao Ch., 2020. Guidelines for Establishment of Model Career Development Centres (CDCs). ICAR – National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500 030, Telangana, India, pp 30. <http://krishi.icar.gov.in/jspui/handle/123456789/68201>
- Thammi Raju D., Alok Kumar, Srinivasa Rao N., Soam S.K., Sudeep Marwaha and Prabhat Kumar., 2020. Guidelines for Establishment of Model Faculty Development Centre (FDC). ICAR – National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500 030, Telangana, India, pp 18. <http://krishi.icar.gov.in/jspui/handle/123456789/68202>

Base Paper

- S. Senthil Vinayagam, V V Sumanth Kumar, Sanjiv Kumar, Surya Rathore, S.K. Soam, Shrikant Khade and Sweety Sharma (2020). Academia – Industry – Government Organization Linkages for Agricultural Higher Education.

Resource Materials

- D Thammi Raju, S Senthil Vinayagam, S K Soam and Ch Srinivasa Rao (2020). Training Workshop on Education Management and Academic Leadership, ICAR-NAARM, Hyderabad. Pp 397

Copyrights Registrations

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Soam SK, Thammiraju D, Srinivasarao N, Kumar A, Raghupathi B, Krishnan P, Vinayagam SS, Balakrishnan M, Marwaha S, Kumar P, Srinivasarao Ch and Agrawal RC (2022). **Faculty Development Centre Monitoring System**, ICAR-NAARM, Regn. No. SW-15439/2022.

Information Technology Tools and Web Portals

#	IT Tool/ Web portal Details	URL / Intranet Address
1.	NAHEP Web Portal	https://nahep.naarm.org.in/
2.	Career Development Centre Monitoring System	https://nahep.naarm.org.in/cdc/
3.	Inspired Teachers Portal	https://nahep.naarm.org.in/inspiredteachers/
4.	NAHEP Component 2 Events Information & Reporting System	http://192.168.44.69:8080/eirs/
5.	Faculty Development Centre Monitoring System	https://nahep.naarm.org.in/fdc/
6.	Academic Leadership - Training Reflections Tool	https://nahep.naarm.org.in/ema/
7.	KVC Alumni Portal	https://alumni.icar.gov.in/
8.	NAHEP Publications as EBooks	https://nahep.naarm.org.in/publications.php
9.	NAHEP Photo Gallery	http://192.168.44.69:8080/naarmgallery/
10.	NARES Scientist Abroad Training Information System	http://192.168.44.69:8080/abroad_training/

NAHEP Publications Received NAARM Best Publications Awards

Three publications from NAHEP were awarded best publications in the category of research article, policy and popular article on the occasion of ICAR-NAARM Foundation Day on September 01, 2022 and September 01, 2023.

Best Research Article – Awarded on September 01, 2023

Soam SK, Yashavanth BS, Dhumentarao TR, Maruthamuthu B, Balasani R and Rakesh S (2023). Factors influencing dietary patterns among the youth from higher educational institutions in India. *Frontiers in Nutrition*, 10:1134455. <https://doi.org/10.3389/fnut.2023.1134455>

Best Policy Paper – Awarded on September 01, 2022

Thammi Raju, D., Soam, S.K., Srinivasa Rao, N., Kumar, A., Sumanth Kumar, V.V., Kumar, S., Rathore, S., Vinayagam, S.S., Balakrishnan, M., Yashavanth, B.S., Krishnan, P., Sudeep Marwaha., Prabhat, K., Venkateshwarlu, G., Srinivasa Rao, Ch. and Agrawal, R.C. (2021). Curriculum Development Framework for Agricultural Education, National Agricultural Higher Education Project – Component 2, Indian Council of Agricultural Research (ICAR). National Academy of Agricultural Research Management (NAARM), Hyderabad-12.

Best Popular Article – Awarded on September 01, 2022

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NAHEP Information Technology Product Received ICAR-Technology Certification ID

The Career Development Centre Monitoring System (<https://nahep.naarm.org.in/cdc/>) developed under National Agricultural Higher Education Project - Component 2 titled “Investments in ICAR for Leadership in Agricultural Higher Education” has been recognized by ICAR and has been given ICAR Technology ID: **ICAR-AED-NAARM-Technology-2023-006**. Career Development Centre Monitoring System, ICAR-NAARM, Copyright Registration no. No. SW-15437/2022

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