

Proceedings

45th Vice Chancellors' Convention

20-21 December, 2021

**Improving Standard, Sustainability and
Societal Impact of Agricultural Universities (ISAU)**



Sponsored by
**Indian Agricultural Universities Association,
New Delhi**



Organized by
Birsa Agricultural University, Ranchi

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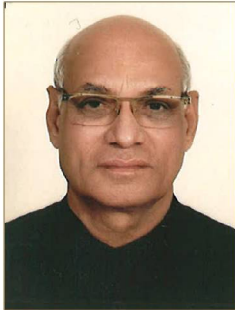
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Ramesh Bais



GOVERNOR OF JHARKHAND

**RAJ BHAVAN
RANCHI-834001
JHARKHAND**

Message

It is a matter of great satisfaction that Birsa Agricultural University, Ranchi has organized 45th Vice Chancellors' Convention of Indian Agricultural Universities association on December 20-21, 2021.

Agricultural sustainability is sine-qua-non not only for food and nutrition security but also for peace and order in the society. Agricultural Universities have been the major partner in the agricultural development process. These are becoming more and more crucial because of the emerging challenges in agriculture sector. The challenges include small and fragmented land holding, depleting soil and water quality, timely access of inputs on affordable price, lack of mechanization, climate change, agricultural marketing, inadequate storage facility, post-harvest losses, uneven access to new technologies in different regions, etc. National Education Policy-2020 gives adequate focus to address these issues and produce competent human resources to face the emerging challenges.

Birsa Agricultural University, Ranchi is the lone university of Jharkhand which creates capable human resources, generates viable technology and employs state-of-the art technology in extension education.

I have been informed that the proceedings of the convention will be the basis of policy changes at national level. I congratulate Dr. O.N. Singh, Vice chancellor, BAU, Ranchi for his exemplary leadership in successfully organizing the convention of national importance.

A handwritten signature in black ink, appearing to be 'R. Bais', written over a horizontal line.

(Ramesh Bais)

dreamstime.

Birsa Agricultural University, Ranchi
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Dr. O.N. Singh
Vice Chancellor



PREAMBLE

The present situation demands a renewed thrust for enhanced quality and relevance of higher agricultural education so as to facilitate and undertake human capacity building for developing self-motivated professionals and entrepreneurs in view the changing scenario of globalization of education, emergence of new areas of specialization such as IPRs, other WTO-related areas, techno-legal specialties, etc. and the cutting edge technologies such as biosensors, genomics and biotechnology, alternate sources of energy, nanotechnology, etc.

Education is the important factor of change, but at times education system has to change itself to cater to the emerging needs of the society. The discussions and deliberations are going on across the country at various levels to devise strategies for the implementation of National Education Policy-2020. In this background, the theme of 45th Vice Chancellors' Convention of Indian Agricultural Universities Association (IAUA) was selected which was divided into four themes comprising teaching, research, extension and entrepreneurship. There were four technical sessions excluding inaugural and plenary sess.

I express my sincere gratitude to IAUA for selecting Birsa Agricultural University, Ranchi to host 45th Vice Chancellors' Convention. I feel happy that even in COVID situation, altogether 22 Vice Chancellors and 5 representatives of Vice Chancellors participated offline in the convention besides online participation and presentation by several other Vice Chancellors.

I am indebted to Shri Ramesh Bais, Honorable Governor and Chancellor of the Universities, Jharkhand for inaugurating 45th IAUA VC's Convention and hosting dinner party for IAUA member Vice Chancellors.

I am thankful to Dr. R.K. Mittal, President, IAUA and Vice Chancellor, SVPUAT, Meerut; Dr. R.C. Srivastava, Secretary General, IAUA and Vice Chancellor, DrRPCAU, Pusa, all member Vice Chancellors and Dr. Dinesh Kumar, Executive Secretary, IAUA for making this convention a success. I thank all Deans and Directors, Committee Members and support staff of Birsa Agricultural University, Ranchi for working tirelessly for the success of the convention.

O. N. Singh

About the Convention

The Agricultural Universities have been springs of knowledge for the farmers and the significant partners in the overall progress of agriculture in the country. The Indian farmers, agricultural scientists and other stakeholders have been contributing continuously towards food and nutritional security of the nation.

However, the role of Agricultural Universities is becoming more and more crucial because of the challenges of agriculture sector in India. The challenges include small and fragmented land holding, depleting groundwater and its' quality, timely access of inputs on affordable price, lack of mechanization, erratic weather behaviour due to climate change, agricultural marketing, inadequate storage facility, post-harvest losses, uneven access to new technologies in different regions, etc. Along with overcoming these challenges, educational needs also have to be looked into for the overall improvement and sustainability of the agriculture sector. In view of above, the 45th Vice Chancellors' Convention of Indian Agricultural Universities Association (IAUA) was organized on the theme "Improving Standard, Sustainability and Societal Impact of Agricultural Universities" at Birsa Agricultural University, Ranchi on 20-21 December, 2021.

The Vice Chancellors of State Agricultural/Horticultural/Animal Science Universities, Central Agricultural Universities and Deemed Universities of India shared their experience, knowledge and expertise and gave an overview that how to improve standards and social impact of Agricultural Universities. The deliberations were made to align research and education in agricultural and allied disciplines in India during following four technical sessions conducted on the sub-themes selected for the Convention:

- I. Achieving International Standard in Agricultural Education and Research in the Context of New National Education Policy.
- II. Strategies to Increase Agricultural Productivity and Profitability with Development and Application of Appropriate Technologies.
- III. Enabling Farmer's Access to Technology, Market, Credit and Extensions Services.
- IV. Creating Favorable Ecosystem for Entrepreneurship Development in Agricultural and Allied Sectors.

The Vice Chancellors or their representatives made technical presentations. Panel discussions were conducted during above mentioned four technical sessions and the plenary session of the Convention. The Convention was inaugurated by His Excellency, Governor and Chancellor of Universities, Jharkhand Shri Ramesh Bais ji.

Inaugural Session

Forty-fifth Indian Agricultural Universities Association (IAUA) Vice Chancellors' Convention was jointly organized by Birsa Agricultural University (BAU), Ranchi and IAUA on 20-21 December, 2021. The Convention was inaugurated by Shri Ramesh Bais, Honourable Governor and Chancellor of the Universities, Jharkhand on 20 December, 2021. Dr. R.C. Agarwal, Deputy Director General (Agricultural Education), Indian Council of Agricultural Research (ICAR), New Delhi was the Guest of Honour. The ceremony was also graced by Dr. R.K. Mittal, President, IAUA & Vice Chancellor, Sardar Vallabhbhai Patel University of Agriculture & Technology (SVPUAT), Meerut; Dr. R. C. Srivastava, Secretary General, IAUA & Vice-Chancellor, Dr. Rajendra Prasad Central Agricultural University (Dr. RPCAU), Pusa, Samastipur and Dr. O.N. Singh, Vice Chancellor, Birsa Agricultural University (BAU), Ranchi.



Hon'ble Governor, Jharkhand Shri Ramesh Bais (centre) and Dignitaries releasing Souvenir of 45th IAUA VCs' Convention during Inaugural Session

Shri Ramesh Bais, Hon'ble Governor-cum-Chancellor of Universities of Jharkhand urged the agricultural scientists to spread the message of natural farming in at least one village of every panchayat of the State so that the ill effects of chemical-based farming on soil, environment and human health could be minimized. He said "I am well aware of the pains and predicament of farmers as I come from a farmers' family. No one in my extended family is in government job and all are associated with farming".



Shri Ramesh Bais, Hon'ble Governor-cum-Chancellor of Universities, Jharkhand addresses during 45th IAUA VCs' Convention

He appealed to the scientists to devise strategies for ensuring the availability of soil health card to all farm families so that they could use fertilizers as per requirement only. Overdose of nutrients will certainly have adverse effect on soil health, he added. He said that 80 percent of farming operations in Jharkhand are performed by women, therefore, scientists should devise ways and means to improve their conditions. Farmers of low soil-fertility status regions should incorporate horticulture, animal husbandry and fisheries in their farming system for sustainable return. He advised all Agricultural Universities to strengthen digitization of their data because availability of authentic data related to farm sector is a precondition for framing of any development policy/programme. A comprehensive policy should be drafted on use, storage, maintenance and ownership of the data. BAU as the brain of State's farm sector, should come forward for publishing annual data Bank which could serve as basis of policy formulation for rural development, the Governor stressed. He appreciated the theme of the convention and emphasized that serious attention of not only the administrators of agricultural education but policymakers, planners and political leadership is also required.

Dr. R.C. Agarwal, Deputy Director General (Agricultural Education), ICAR said that country's agricultural education is more focused on quality and relevance than that of

placement. Nearly 80% of New Education Policy recommendations like entrepreneurship development, community connect and 4-year degree programme are already being implemented in Agricultural Universities. He stated that emphasis of NEP is on inclusion, accessibility, equity, quality and other parameters required by the society and stakeholders. He informed that about 3 months back, the Prime Minister had asked ICAR for annual data regarding the Master and Ph.D. thesis done on issues of national priorities.

Dr. Agarwal, who is also the National Director of World Bank-aided National Agricultural Higher Education Project (NAHEP), said NAHEP is the most ambitious project of ICAR so far, not in terms of budget but in terms of quality, priorities and functioning. Online monthly monitoring of physical and financial achievements is done both at ICAR and World Bank levels. Over 500 students from across the country have been sent to world's best Universities for training, exposure and skill development during last three years with about Rs 20 lakhs average cost involvement per student. The World Bank with permission of ICAR, is planning to implement the model of this project in other countries also. BAU, Ranchi is fortunate to be one of the partners of the project as a Centre for Advanced Agricultural Science & Technology (CAAST) on Integrated Farming System (IFS). An IFS model has also been set up here under NAHEP. The Centre should further develop and expand the model in such a way that researches on IFS from across the country feel it essential to visit BAU to study the IFS models developed/ to be developed here.

Dr. R.K. Mittal, President, IAUA & Vice Chancellor, SVPUAT, Meerut said that IAUA founded in 1967, has about 70 members and is actively engaged in promoting, supporting and undertaking activities of national importance in the field of Agricultural Research and Education. He said that India would become world's most populous country by 2027 surpassing China and 1.5-fold increase in foodgrains production will be required to feed the countrymen by 2030. We are concerned not only about the yield but nutritional contents also. Vertical farming, multi-layer farming, protected cultivation, alternative farming, diversification, strengthening post-harvest technology, value chain management and ready to eat, easy to cook food will be priority area of future. Attracting and retaining rural youths in agriculture is a big challenge and serious efforts are needed to make farming attractive and lucrative for them. Increased application of artificial intelligence, new technologies and devices, innovative practices will attract their mind and give satisfaction they don't find at present in farming as a profession. He asked the Heads of all the Krishi Vigyan Kendras to collect and publish 100 success stories per KVK where farmers have achieved considerable increase in income during last 3-4 years.



Dr. R.K. Mittal, President, IAUA and Vice Chancellor, SVPUAT, Meerut addresses during inaugural ceremony

Dr. R.C. Srivastava, Vice Chancellor, Dr. RPCAU, Pusa, Samastipur and Secretary General, IAUA dwelt on the role and activities of IAUA for betterment of agricultural education and solution of member Universities' problems. He said IAUA is think tank of agricultural education and research and has come up with roadmap for successful and speedy implementation of National New Education Policy in Agricultural Universities. He urged the Hon'ble Governor of Jharkhand to use his good offices for speedy recruitment of faculty and staff, implementation of 7th pay package and career advancement scheme (CAS) for teachers in BAU and increased investment in States Agricultural Research and Education. Farm sector's importance for country's economy can be gauged from the fact that it contributes about 17% to the GDP and provides livelihood to nearly 47% population.

Welcoming the guests, Vice Chancellor, BAU, Ranchi Dr. Onkar Nath Singh said Jharkhand has rich diversity not only in climate, soil, biodiversity but also in culture, custom and language which is unique strength of this State. Underlining the importance of coordination among farm varsities, he said Agricultural Universities have to play a big role in imparting skills. For achieving global standard in education, world class facilities are also needed, the Vice Chancellor stressed.

Dr. S.K. Pal, Dean, Faculty of Agriculture proposed a vote of thanks. Dr. Shashi Singh anchored the event.

Recommendations:

1. All Agricultural Universities must implement the relevant parts of National Education Policy 2020 (NEP 2020).
2. All Agricultural Universities must strengthen digitation of agricultural data which would help immensely in development and execution of policies/programmes for farming as well as farming communities.
3. Agricultural University should demonstrate natural farming practices at least in one village of each Panchayat within its jurisdiction.
4. Agricultural Universities must join hands with respective State governments in preparing soil health cards and making it available to all the farm families to promote judicious use of chemical fertilizers.
5. Integrated farming system modules, developed or to be developed by the Agricultural Universities for different farm situations, must be showcased at universities for visiting farmers, scientists and other stakeholders with brief description of its advantages over mono farming system. Information on IFS modules developed at various universities must be shared among the universities for the benefit of farmers.
6. The agriculture sector has to keep pace with the changing time keeping in view the requirement of market and end users. Hence, future priority areas of Agricultural Universities should include vertical farming, multilayer farming, protected cultivation, crop diversification, post-harvest technology, value chain management, use of artificial intelligence, promotion of easy to cook and ready to eat food.
7. Serious efforts are needed by the AUs to make farming an attractive and profitable venture for attracting and retaining the rural youths in Agriculture.

Technical Session – I

Achieving International Standard in Agricultural Education and Research in the Context of New National Education Policy

- Chairperson** : Dr. Arvind Kumar, Vice Chancellor, RLB CAU, Jhansi, Uttar Pradesh
- Co-Chairperson** : Dr. A. S. Dhawan, Vice Chancellor, VNMKV, Parbhani, Maharashtra
- Rapporteurs** : Dr. D. K. Shahi, Director Students Welfare, BAU, Ranchi
 Dr. P. Mahapatra, Assistant Professor, Department of Soil Science & Agril. Chemistry, Faculty of Agriculture, BAU, Ranchi

The session started with welcome by Dr. O. N. Singh, Vice-Chancellor, BAU, Ranchi. He expressed gratitude to Dr. R. C. Agarwal, DDG (Agril. Education), ICAR; Dr. R.K. Mittal, President IAUA and Vice Chancellor, SVPUAT, Meerut; Dr. R.C. Srivastava, Secretary General, IAUA and Vice Chancellor, Dr. RPCAU, Pusa, Samastipur, Bihar; Dr. Arvind Kumar, Vice Chancellor, RLBCAU, Jhansi; Dr. A. K. Singh, Director-cum-Vice Chancellor, IARI, New Delhi; and all the honorable Vice-Chancellors participating offline and online.

Dr. R.C. Srivastava, Secretary General, IAUA and Vice Chancellor, Dr. RPCAU, Pusa extended a warm welcome to all the participants and briefed about IAUA. He informed that IAUA started with only 9 members in 1967 and now the regular member Universities have swelled up to 70. There are 44 Agricultural, 6 Horticultural, 17 Veterinary and Animal Sciences and 3 Fishery Science Universities. The convention gives an opportunity to discuss on problems, challenges and to develop roadmap to meet new challenges.

Presentations were given by-

1. Dr. R. C. Agrawal, DDG (Agricultural Education), ICAR, New Delhi on the topic **“Strategies and Planning for Improving Agricultural Higher Education in India”**.
2. Dr. R.K. Mittal, President, IAUA and Vice Chancellor, SVPUAT, Meerut on the topic **“National Educational Policy for Quality of Agricultural Higher Education & Research in India- An Analysis”**.
3. Dr. A. K. Singh, Director-cum-Vice Chancellor, Indian Agricultural Research Institute (IARI), New Delhi delivered on the topic **“Internationalization of Agricultural Education: Way Forward”**.



Dr. Arvind Kumar, VC, RLBCAU, Jhansi, Chairperson, Technical Session-I interacts with the participating VCs and Dignitaries during Technical Session

Dr. R. C. Agarwal, DDG (Agricultural Education), ICAR, New Delhi in his presentation highlighted that the undergraduate degree would be restructured with multiple exit and entry options by 2022, with appropriate certifications like, a certificate (after completing one year) or, a diploma (after completing two years of study). Agricultural Universities (AUs) will have the flexibility to offer different designs of Master's programmes. With regard to implementation, he suggested relaxation in residential requirements of UG and PG. Agricultural Universities should increase at least 10% seats starting from 2021-22 academic session on annual basis. For bringing resilience in agriculture education system, digital technology should be promoted in a big way through digital infrastructure, digital content and digital capacity building. He also suggested that there should be representation of industry experts in devising course curriculum, limited flexibility in course selection for students and establishing resilience against ever growing macro complexities impacting delivery of education.



Dr. R. C. Agarwal, DDG (Agril. Education), ICAR, New Delhi addresses during Technical Session

Dr. R.K. Mittal, President, IAUA and Vice Chancellor SVPUAT, Meerut in his presentation informed that the National Education Policy-2020 is based on the five foundational pillars, viz., access, equity, quality, affordability and accountability; about fifteen broad principles and a vision to transform India into a Global Knowledge Superpower. Agricultural Universities though may be considered as single-stream university but in fact, they are multidisciplinary. However, they may be considered for further expansion by including arts and humanities subjects as well for providing holistic education. To start optional courses (online/offline) like Religion and Culture, Indian History, Foreign Languages, Agricultural Journalism, Corporate Communication, Environmental Conservation, Yoga, Physical Education, Dance, Music, Agricultural Law, Mass Communication, Soft Skills Development, Rural Development, etc. may be taken up. The IAUA should prevail upon State Governments to initiate separate budget line for agricultural research and education in the State Plan Budget so that the State funding to AUs is enhanced. All Agricultural Universities are not on equal footing, hence, there should be three tier specific strategies for quality improvement i.e., for premier institutions, better performing institutions and under performing AUs. Existing sectorial universities like Veterinary, Fishery and/or Horticulture universities need be merged in Agriculture University before adding new faculties of arts and humanities.

In UG programmes, enhancement of Gross Enrolment Ratio (GER) in the University to be increased by 10% seats each year so that exit of few students with certificate/diploma do not hamper the numbers of degree pass-out students. Residential requirement should be relaxed. Common entrance test through National Testing Agency (NTA) may be conducted by ICAR for admission of the students in UG/PG degree programmes in the University. India needs Techno-commercial graduates. Therefore, education should be able to address the requirements to produce hardcore agriculturists, educationists/scientists and/or Agri-business managers.

Dr. A. K. Singh, Director-cum-Vice Chancellor, IARI, New Delhi stated that for Internationalization of Higher Education, the Agricultural Universities should set up an International Students Office and develop research/teaching collaborations with overseas Institution of eminence. Incentives need to be given to high performing Institutions/ Universities to set up campuses in other countries. Government should allow top Universities in the world to operate in India. He compared the IARI with Wageningen University and presented a roadmap to make IARI international. In a global university, at least 15% students and 15% faculty should be from outside the country. Internalization requires capacity building of teachers, strengthening research, technology commercialization and revenue generation. Preference should be given to candidates in selection as faculty who have Ph.D./PDF from abroad.



Dr. A. K. Singh, Director&Vice Chancellor, IARI, New Delhi addresses during Technical Session

After presentations, panel discussion was conducted. Panelists included-

Dr. V. M. Bhale, Vice Chancellor, Dr. PDKV, Akola, Maharashtra

Dr. N. H. Kelawala, Vice Chancellor, Kamdhenu University, Gandhinagar, Gujarat

Dr. Bidyut Chandan Deka, Vice Chancellor, Assam Agricultural University, Jorhat, Assam

Dr. S. K. Chakraborti, Vice Chancellor, Uttar Banga Krishi Viswavidalya, Coochbehar, West Bengal

Dr. V. M. Bhale, Vice Chancellor, Dr. PDKV, Akola stated that implementation strategies should address the local requirements. Dr. N. H. Kelawala, Vice Chancellor, Kamdhenu University, Gandhinagar suggested that intra and inter-institutional collaborations would be required. Dr. Bidyut Chandan Deka, Vice Chancellor, AAU, Jorhat shared his experiences and stated that for increasing profitability of the farmers, focus should shift from primary to secondary agriculture. Dr. S. K. Chakraborty, Vice Chancellor, UBKV, Coochbehar emphasized the need to initiate course on market intelligence.

Dr. Arvind Kumar Vice Chancellor, RLB CAU, Jhansi summed up the proceedings of technical session.

Following recommendations emerged out of the deliberations and discussions:

1. The undergraduate degree programme needs to be restructured with multiple exit and entry options with appropriate certifications like a certificate after completing one year and a diploma after completing two years.
2. Enhancement of Gross Enrolment Ratio (GER) in the university with increase of 10% seats each year so that in-between exit of students with certificate/ diploma do not affect the numbers of degree pass-out students. Residential requirement in agricultural universities and deemed Universities to be relaxed.
3. To enhance competitiveness, transparency and bring uniformity in time line and have Pan Indian status, common entrance test through National Testing Agency (NTA) may be conducted by ICAR for admission of the students in UG/PG degree programmes in the Agricultural Universities.
4. The optional courses (online/offline) like Religion and Culture, Indian History, Foreign Languages, Agricultural Journalism, Corporate Communication, Environmental Conservation, Yoga, Physical Education, Dance, Music, Agricultural Law, Mass Communication, Soft Skills Development, Rural Development, etc. may be started in phased manner meeting the timeline of NEP-2020.
5. In view of the global developments and future needs of the agriculture sector, the Agricultural Universities have to go for internationalization of higher agricultural education for which the AUs need to emphasize and put concerted efforts for faculty diversity, creation of different colleges /centres offering degrees from UG to Ph.D., initiation of self-finance schemes, international student fellowship, creation of international canter, sandwich/dual degree programme, initiation of post doctoral fellowships (for both Indians and foreign students) and teaching assistantship, engaging experts from industry as adjunct faculty.

Technical Session – II

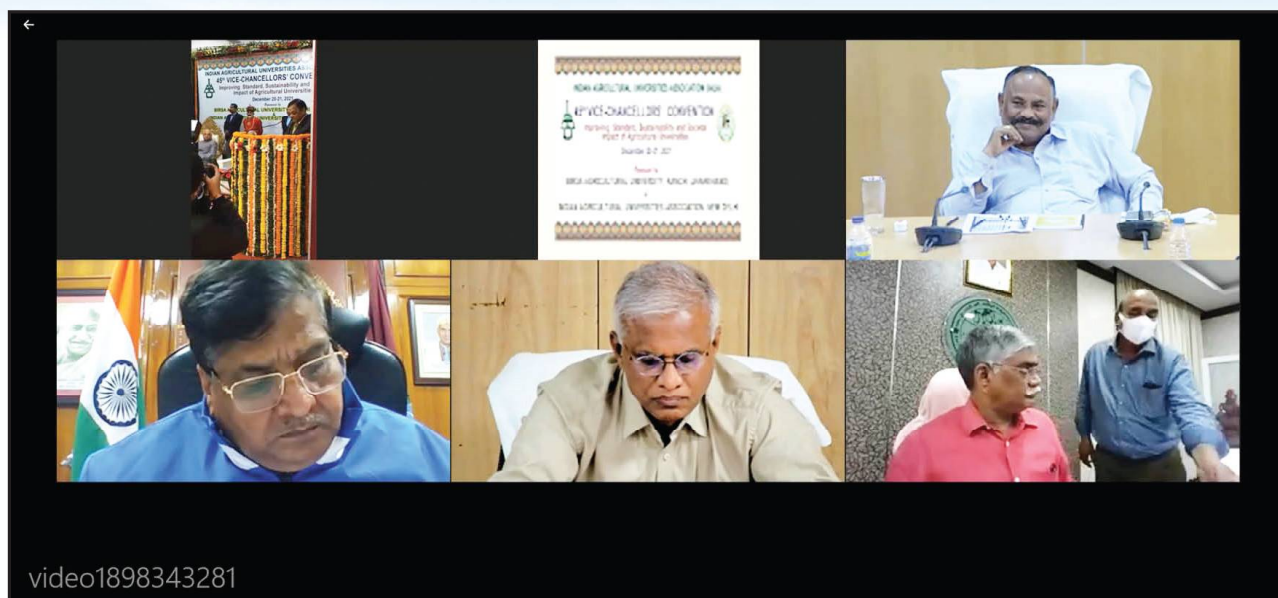
Strategies to Increase and Sustain Agricultural Productivity and Profitability with Development and Application of Appropriate Technologies

- Chairperson** : Dr. R. C. Agarwal, Deputy Director General (Agril. Edn.) ICAR, New Delhi
- Co-Chairperson** : Dr. Parvinder Kaushal, Vice Chancellor, Dr YSPUH&F, Nauni, Solan, Himachal Pradesh
- Rapporteurs** : Dr. M. S. Malik, Dean Forestry, BAU, Ranchi
Dr. Kaushal Kumar, SMS & Head, Department of Forest Products and Utilization, Faculty of Forestry, BAU, Ranchi

Four presentations were made in this session.

1. Dr. V. Praveen Rao, Vice Chancellor, Prof. Jayashankar Telangana State Agricultural University (PJ TSAU), Hyderabad presented online as keynote speaker on the topic **“Agri Food System: Current Challenges and Data Driven Technological Solutions”**.
2. Dr. P. K. Agarwal, Vice Chancellor, Odisha University of Agriculture & Technology (OUAT), Bhubaneswar, Odisha presented online on the topic **“Agriculture Education in India during COVID and Post COVID Situation in the Context of National Education Policy”**.
3. Dr. J. S. Kennedy, Dean, School of Post Graduate Studies jointly presented with Dr A.S. Krishnamurthy, Registrar and acting Vice Chancellor, Tamil Nadu Agricultural University (TNAU), Coimbatore on the topic **“Tactical Blue Print for Developing World Class Agricultural University: In-Situ Learning from Peers”**.
4. Dr. S.K. Chakraborty, Vice Chancellor, Uttar Banga Krishi Vishwavidyalaya (UBKV), Pundibari, Coochbehar presented on **“Conservation Agriculture for Sustainable Intensification of Cropping System: Lesson Learnt from Eastern India”**.
5. Dr. N. K. Gontia, Vice Chancellor, Junagadh Agriculture University (JAU), Gujarat presented on **“Water Management for Sustainable Agriculture Through Application of IoT”**.

Dr. V. Praveen Rao, Vice Chancellor, PJ TSAU, Hyderabad as keynote speaker addressing through online stated in details about Agri-food, the state-wise growth in gross value added in crop sector, global food supply, sustainable food system, agri-food system, vulnerability to climate change. He proposed for more uses of drone, solar system, robotic in horticulture, orchard rainwater harvesting, climate and water technologies, minor irrigation and Integrated Nutrient Management, etc.



A view of online participation (left to right): Dr. J.P. Sharma, VC, SKUAST-J, Jammu; Dr. V. Praveen Rao, VC, PJTSAU, Hyderabad; Dr. T. Janaki Ram, VC, Dr. YSRUH, Venkataramannagudem; (top right) Dr. M.K. Naik, VC, UAHS, Shimoga.

Dr. P. K. Agarwal, Vice Chancellor, OUAT, Bhubaneswar, highlighted the importance of agriculture education and emphasized that focus of agriculture education should be changed in the changing scenario of climate, economy, technology and environment due to COVID-19 pandemic. Based on his experiences of OUAT, he stated that online pedagogy has worked wonders and all the teaching, research and extension activities of the University were undertaken without any disturbance.



Dr. P. K. Agarwal, VC, OUAT, Bhubaneswar delivers his talk online

Dr. J. S. Kennedy, Dean, School of Post Graduate Studies jointly presented with Dr. A. S. Krishnamurthy, Registrar and acting Vice Chancellor, Tamil Nadu Agricultural University, Coimbatore on "Technical Blue Print for Developing World Class Agricultural University: In Situ Learning Peers". He elaborated about strategies of ranking measures, drawback in ranking system, characteristics of a world class university, inadequate hands on skills, policy etc. He emphasized the need for establishment of world class basic structure for establishment of world class Universities, long-term vision, government support for financial assistance, autonomy, transparency and meritocracy.



Dr. J.S. Kennedy, Dean, School of Post Graduate Studies, TNAU, Coimbatore addresses during technical session

Dr. S.K. Chakraborty, Vice Chancellor, UBKV, Pundibari, Coochbehar presented on "Conservation Agriculture for Sustainable Intensification of Cropping System: Lesson Learnt from Eastern India" and showed the success story on improving the cropping system of high yielding varieties through crop management, farm management, insect management. He advocated pilot scale trials on farm management, development of crop modules, intercropping and establishment of service providers.

Dr. N.K. Gontia, Vice Chancellor, JAU, Junagadh presented on "Water Management for Sustainable Agriculture through Application of IoT". He discussed about key issues of water resources, water energy foot print, excellence of drip irrigation, etc. He proposed for promotion of web based mobile application, IoT in smart automated green house,

artificial intelligence and Robotics and Drone laboratory use developed by the faculty students under NAHEP.



Dr. N. K. Gontia, Vice Chancellor, Junagadh Agricultural University makes presentation

After presentation panel discussion was held. Panelists included-

Dr. N. P. Singh, Vice Chancellor, BUA&T, Banda, Uttar Pradesh

Dr. Arun Kumar, Vice Chancellor, BAU, Sabour, Bihar

Dr. Nazir Ahmad, Vice Chancellor, SKUAST-K, Srinagar, J&K

Dr. M. S. Bhadwal, Dean, SKUAST-J, Jammu, J&K

In panel discussion, Dr. N.P. Singh, Vice Chancellor, BUA&T, Banda also advocated the promotion of web based mobile application, IoT in smart automated green house, artificial intelligence and robotics. Dr. Arun Kumar, Vice Chancellor, BAU, Sabour emphasized establishment of world class basic infrastructure for establishment of world class Universities with long-term vision. Dr. Nazir Ahmad, Vice Chancellor, SKUAST-K, Srinagar stressed on government support for financial assistance, autonomy, transparency and meritocracy. Dr. M.S. Bhadwal, Dean and Vice Chancellor's representative, SKUAST-J,

Jammu submitted in the context of hill agriculture in hilly states, UT of J & K. He stressed the need for intelligent production system that saves water and energy for irrigation and fertilizers, introduction of low volume high income crops and encouragement of mixed farming system and livestock production systems resilient to climatic changes.

Salient recommendations

1. Agricultural Universities must have very good liaisoning with the respective State Governments to get required financial support, autonomy, transparency and meritocracy.
2. There is need of region-wise Pilot scale trials on farm management, development of crop modules with genotypes for intercropping with special emphasis on plant protection measures for promoting conservation agriculture on larger scale.
3. Today, many private sector companies have established state-of-the art facilities and have also expertise in certain areas of agricultural research. Agricultural Universities should prefer to get services of such companies/experts through outsourcing in identified sectors instead of having their own establishments, to enhance the optimum utilization of National resources.
4. There is a need to promote web based mobile application for quick transmission of advisories and use of IoT in smart automated green house, artificial intelligence and robotics and Drones for enhancing automation in farm activities at affordable price for the benefit of farming community.
5. For hilly States/UT like J&K, there is a need to develop intelligent production system that will save water and energy for irrigation and fertilizers through introduction of low volume, high income crops, encouragement of mixed farming system, livestock production systems resilient to climatic changes.

Technical Session – III

Enabling Farmers' Access to Technology, Market, Credit and Extension Services

- Chairperson** : Dr. Z. P. Patel, Vice Chancellor, Navsari Agricultural University(NAU), Navsari, Gujarat
- Co-Chairperson** : Dr. N. P. Singh, Vice Chancellor, Banda University of Agriculture and Technology (BUAT), Banda, Uttar Pradesh
- Rapporteurs** : Dr. Sushil Prasad, Dean Veterinary, BAU, Ranchi
Dr. Suresh Mehta, HOD, Anatomy & Histology, Faculty of Veterinary Sc. & AH, BAU, Ranchi

Four presentations were made in this session.

1. Dr. J. P. Sharma, Vice Chancellor, Sher-e-Kashmir University of Agricultural Sciences & Technology (SKUAST), Jammu presented on the topic **“Enabling Farmers' Access to Technology, Market, Credit and Extension Services”**.
2. Dr. Bidyut Chandan Deka, Vice Chancellor, Assam Agricultural University (AAU), Jorhat, Assam presented on the topic **“Ecosystem Management for Entrepreneurship Development in Agriculture and Allied Sector”**.
3. Professor Samar Singh, Vice Chancellor, Maharana Pratap Horticultural University (MPUH), Karnal, Haryana presented on the topic **“Strategies to Increase and Sustain Agricultural Productivity and Profitability with Development and Application of Appropriate Technologies”**.
4. Dr. Z. P. Patel, Vice Chancellor, Navsari Agricultural University (NAU), Navsari, Gujarat presented on the topic **“Utilization of Banana Pseudo-stem Technology Developed by NAU, Navsari for Increasing Agricultural Sustainability and Profitability”**.

Dr. J.P. Sharma, Vice Chancellor, SKUAST, Jammu in his keynote address highlighted status of access of farmers to technology, market, credit and extension services. He said that Indian agriculture should be ready to produce 377 million tons of foodgrain by 2050 with shrinking acreage, environmental degradation, climate threat and disenchantment of youth with agriculture. He emphasized that technology helps in increasing productivity, employment and income if, supported by credit, market and extension services. For future agriculture, he suggested to work on changing the mindset with Key Mantras namely, Think Commercial rather than Sustenance Farming, Think Agribusiness rather than Agriculture, Global Vision & Local Action and Vocal for Local.



Dr. J.P. Sharma, VC, SKUAST, Jammu presents online

Dr. Bidyut Chandan Deka, Vice Chancellor, AAU, Jorhat shared his experience of AAU Incubator Model. He said that incubator is an organization established to accelerate the growth of startups, through an array of business support, resources, mentorship, networking and other common services such as physical space, capital and coaching. He informed that 4th year students were enrolled in a structured 2-month fundamental programme on “Agri entrepreneurship – essential elements in start-ups” through Psychometric Assessment (PA) to analyze the “entrepreneurship” element in students. The University did not get encouraging result reflected in PA test. Now it has been decided to introduce the above program in the second year of graduation itself.



Dr. Bidyut Chandan Deka, VC, AAU, Jorhat addresses participants

Prof. Samar Singh, Vice Chancellor, MPHU, Karnal, Haryana analyzed challenges and opportunities of present-day agriculture. He highlighted the interventions required for cost reduction with examples like changes in agronomic practices, mass adoption of RCTs like zero tillage, soil test based fertilizer application, use of bio-fertilizers, vermicompost, FYM in addition to fertilizers, supplementing soil with micro nutrients like Mn, S, Zn and Fe (if deficient), introduction of a legume crop like short duration green gram under Rice-Wheat system, changes in machinery and equipments, adoption of micro irrigation techniques like drip and sprinkler, solar-energy-based tube-wells, changes in institutional arrangements to encourage adoption of co-operative/collective/joint farming.



Prof. Samar Singh, VC, MPHU, Karnal, Haryana addresses during technical session

Dr. Z. P. Patel, Vice Chancellor, NAU, Navsari shared research outcome of his University. The project “Utilization of Banana Pseudo-stem Technology Developed by NAU Navsari for Increasing Agricultural Sustainability and Profitability” has generated 36 MoUs. From pseudo-stem of banana, fibre, scutcher, sap and central core were extracted. Scutcher is being used for vermicompost and fish feed. From central core, juice and candy are being prepared. From sap, plant growth regulators and botanical pesticides have been prepared. This technique has generated minimum net return of Rs. 70-80 thousand per hectare from banana cultivation.

After presentation panel discussion was held. Panelists included-

Dr. K. B. Kathiria, Vice Chancellor, AAU, Anand, Gujarat

Dr. N. K. Gontia, Vice Chancellor, JAU, Gujarat

Dr. J. S. Kennedy, Dean, School of PGS, TNAU, Coimbatore, Tamilnadu

Dr. A. K. Shukla, Registrar, GBPUAT, Pantnagar, Uttrakhand

Dr. K. B. Kathiria, Vice Chancellor, AAU, Anand highlighted the issue of reducing net profit of the farmers. Dr. N. K. Gontia, Vice Chacellor, Junagadh Agricultural University raised the challenges of agri-entrepreneurship. Dr. J. S. Kennedy, Dean, School of PGS, TNAU, Coimbatore suggested the strategies for promoting agribusiness. Dr. A. K. Shukla, Registrar, GBPUAT, Pantnagar appreciated the initiative of NAU, Navsari and suggested its promotion in the regions of banana cultivation.

Salient recommendations

1. The Agricultural Universities should work towards changing mindset with key Mantras like, think commercial rather than sustenance farming, think agribusiness rather than agriculture, global vision & Local action and vocal for local, etc. and accordingly need to take necessary steps keeping in view the future market demand of the sector.
2. Emphasis should be given on development of Incubation Center in all Universities for entrepreneurship development, and technical and business coaching start-ups at early stage.
3. AUs must promote diversification through horticulture in suitable areas to improve and sustain the agricultural productivity and production.
4. Apart from quantity production, quality production too, should be encouraged for food and nutritional security. Biofortification would be one of the effective and sustainable options to enhance the quality of food crops by increasing the micronutrient contents for nutritional security along with food security.

Technical Session – IV

Creating Favorable Ecosystem for Entrepreneurship Development in Agriculture and Allied Sectors

Chairperson : Dr. V.M. Bhale, Vice Chancellor, Dr. Punjabrao, Deshmukh Krishi Vidyapeeth (PDKV), Akola, Maharashtra

Co-Chairperson : Dr. B.S. Mahapatra, Vice Chancellor, Bidhan Chandra Krishi Vishwavidyalaya (BCKV), Mohanpur, West Bengal

Rapporteurs : Dr. M. K. Gupta, Dean PG & DRI, BAU, Ranchi
Dr. (Mrs.) Swati Sahay, Assistant Professor, Department of Veterinary Medicine, Faculty of Veterinary Science & AH, BAU, Ranchi

Three presentations were made

1. Dr. B. C. Deka, Vice Chancellor, AAU, Jorhat, Assam presented on the topic **“Roadmap for Inculcating Entrepreneurial Qualities and Establishment of Incubation Centre”**.
2. Dr. M. K. Naik, Vice Chancellor, University of Agricultural & Horticultural Sciences (UAHS), Shimoga, Karnataka presented on the topic **“Bio-entrepreneurs in Agriculture”**.
3. Dr. V. M. Bhale, Vice Chancellor, Dr. PDKV, Akola, Maharashtra presented on the topic **“Organic Farming for Sustainable Agricultural Development”**.

Dr. B.C. Deka, Vice Chancellor, AAU, Jorhat distinctly deliberated on the roadmap for inculcating entrepreneurial qualities and establishment of incubation centre. Universities can supplement and compliment idea generated in the incubation centre. Incubation centre should be financially supported by NITI Ayog or other agencies so that financial help could be provided to the trainees. It should be headed by a professional CEO for effective training. The centre should provide 360° technical support to the trainees. At the same time, link should be created with industry to get novel ideas. His most important suggestion was that the entrepreneurial training should be initiated early in 1st and 2nd year of UG Programme.

Dr. M. K. Naik, Vice Chancellor, UAHS, Shimoga deliberated on strengthening Agri processing linkages in the face of pandemic. He clarified factors that affect food security during pandemic and how to overcome it. Through bio-entrepreneurship, bio economy, microbes for bioenergy, probiotics in food etc., entrepreneurship may be developed.

Dr. V. M. Bhale, Vice Chancellor, Dr. PDKV, Akola discussed on the different aspects of organic farming. Agriculture can be made sustainable through recycling of biomass by shredding techniques, mulching process, organic nutrient management, crop diversifications etc. He highlighted several options for pest management in organic farming which is considered major impediment in success of organic farming system. Measures like Neem cake application, yellow sticky trap, solar lamp trap, pheromone trap, etc are available. The usefulness of organic farming system was debated at length, and it was agreed that at small scale level it has great entrepreneurship development potential. Organic farming cannot give maximum yield, but it can give optimum yield. He emphasized that organic farming system should be included in ELP, and one hectare of land should be given to the students for hands-on-training.

After presentation, panel discussion was held. Panelists included-

1. Dr. R.P. Singh, Vice Chancellor, SKRAU, Bikaner, Rajasthan
2. Dr. Ravindra Kumar, Director Research, BASU, Patna, Bihar
3. Dr. S.K Chakraborty, Vice Chancellor, UBKV, Coochbehar, West Bengal
4. Dr. A.S. Dhawan, Vice Chancellor, VNMKV, Parbhani, Maharashtra

Dr. R.P. Singh, Vice Chancellor, Swami Keshwanand Rajasthan Agricultural University (SKRAU), Bikaner, Rajasthan opined that Agricultural Universities (AU) s have to identify specific areas for viable entrepreneurship and create favourable environment for attracting the youths. Further, he added that this is high time AUs need to set their thrust areas with changing times and stressed upon enabling farmers' access to technology, market, credit and extension service.

Dr. S.K. Chakraborty, Vice Chancellor, UBKV, Coochbehar stated that there is lack of technology for developing favourable ecosystem. It will come from agricultural universities because they are store house of technology. Students should be introduced to entrepreneurship programme, and they should be trained and encouraged to take up start-ups.

Dr. Ravindra Kumar, Director Research, Bihar Animal Science University (BASU), Patna shared that there is need to explore entrepreneurship opportunities in animal sector such as vaccine production, animal nutrition, dairy sector, milk processing plant, fisheries sector, etc.

Dr. Hulash Pathak, Head & CEO, Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur showed concern on diminishing interest among UG and PG students. He suggested

that entrepreneurship cells need to be created and promoted mandatorily. Institutes should be given some degree of autonomy for inclusion of entrepreneurship programmes. Curriculum revisions are required to include courses on entrepreneurship areas.

Salient recommendations

1. Incubation centre should be financially supported by Central/State government so that financial help could be provided to the trainees to attract the eligible youths towards entrepreneurship. Institutions should also be given some degree of autonomy for inclusion of entrepreneurship programmes.
2. AUs to take up appropriate steps for curriculum revisions to include courses on entrepreneurship in different areas as per market demand.
3. Organic farming could be a viable option for entrepreneurship development. Organic farming may not give higher or at par yields as compared to inorganic farming but it can give optimum yield with higher market value and higher returns. One hectare model of organic farming system should be included in ELP.

Plenary Session

Chairperson : Dr. R. C. Srivastava, Secretary General, IAUA and Vice Chancellor, Dr. RPCAU, Pusa, Samastipur, Bihar

Co-Chairperson : Dr. O. N. Singh, Vice Chancellor, BAU, Ranchi, Jharkhand

Co-Chairperson : Dr. S.K. Chakraborty, Vice Chancellor, UBKV, Coochbehar, West Bengal

Rapporteurs : Dr. S. K. Pal, Associate Dean Agriculture College Garhwa, BAU, Ranchi

Dr. B. K. Jha, Assistant Professor, Department of Agricultural Extension & Communication, Faculty of Agriculture, BAU, Ranchi

With due permission of the Chairman, Dr. N.P. Singh, Vice Chancellor, BUAT, Banda stated that weak entrepreneurship development programme may be due to problem with faculty, institutes or students which may be studied. Separate discussions and brainstorming sessions may be organized on this issue. Dr. Hulash Pathak, Head & CEO, IGKV, Raipur highlighted that funding should be increased. Dr. N. K. Gontia, Vice Chancellor, JAU, Junagadh, highlighted that specialists should be engaged in entrepreneurship development programmes. Dr. A. K. Shukla, Registrar, GBPUAT, Pantnagar raised the issue of certificate and diploma courses. Dr. A. Wadood, Director

Research, BAU, Ranchi requested to strike balance in credit hours and course contents in Sixth Deans' Committee Recommendations. Dr. O. N. Singh, Vice Chancellor, BAU, Ranchi shared the experiences and said that as agriculture education is State subject and there may be variations among states in respect of autonomy and financial support. Hence, IAUA should take step to convincingly influence centre as well as state leadership for enhanced autonomy and financial support. Dr. R. C. Srivastava, Secretary General, IAUA and Vice Chancellor, Dr. RPCAU, Pusa shared his experiences regarding implementation of NEP-2020.

The convention ended with vote of thanks by Dr. A. Wadood, Director Research, BAU, Ranchi and Dr. Dinesh Kumar, Executive Secretary, IAUA, New Delhi.



Dr. Dinesh Kumar, Executive Secretary, IAUA, New Delhi proposes Vote of Thanks

List of Participants

| Vice Chancellors | |
|------------------|---|
| 1 | Dr. Arvind Kumar Vice Chancellor Rani Laxmi Bai Central Agricultural University (RLBCAU), Jhansi, Uttar Pradesh |
| 2 | Dr. R. K. Mittal Vice Chancellor & President IAUA Sardar Vallabhbhai Patel University of Agriculture & Technology (SVPUAT) Meerut, Uttar Pradesh |
| 3 | Dr. R C Srivastava Vice Chancellor Dr. Rajendra Prasad Central Agricultural University (Dr. RPCAU), Pusa Samastipur, Bihar |
| 4 | Dr. Parvinder Kaushal Vice Chancellor Dr. Y.S. Parmar University of Horticulture and Forestry (Dr. YSPUHS), Nauni, Solan, Himachal Pradesh |
| 5 | Dr. O. N. Singh Vice Chancellor Birsa Agricultural University (BAU), Ranchi, Jharkhand |
| 6 | Dr. A. K. Singh Director & Vice Chancellor Indian Agricultural Research Institute (IARI), New Delhi |
| 7 | Dr. V. M. Bhale Vice Chancellor Dr. Panjabrao Deshmukh Krishi Vidyapeeth (Dr. PDKV), Akola Maharashtra |
| 8 | Dr. R.P. Singh Swami Keswhwan and Rajasthan Agricultural University (SKRAU), Bikaner, Rajasthan |
| 9 | Dr. A. S. Dhawan Vice Chancellor Vasantrao Naik Marathwada Krishi Vidyapeeth (VNMKV), Parbhani, Maharashtra |
| 10 | Dr. N. H. Kelawala Vice Chancellor Kamdhenu University (KU), Gandhinagar, Gujarat |

| | |
|---|--|
| 11 | Dr. Z. P. Patel Vice Chancellor Navsari Agricultural University (NAU), Navsari, Gujarat |
| 12 | Dr. B.S. Mahapatra Vice Chancellor Bidhan Chandra Krishi Vishwavidyalaya (BCKV), Mohanpur, West Bengal |
| 13 | Dr. K.B. Kathiria Vice Chancellor Anand Agricultural University (AAU), Anand, Gujarat |
| 14 | Dr. N. K. Gontia Vice Chancellor Junagadh Agricultural University (JAU), Junagadh, Gujarat |
| 15 | Dr. S. K. Chakraborty Vice Chancellor Uttarbanga Krishi Vishwavidyalaya (UBKV), Pundibari, Coochbehar, West Bengal |
| 16 | Dr. Bidyut Chandan Deka Vice Chancellor Assam Agricultural University (AAU), Jorhat, Assam |
| 17 | Dr. N. P. Singh Vice Chancellor Banda University of Agriculture & Technology, Banda, Uttar Pradesh |
| 18 | Dr. Nazir Ahmad Vice Chancellor Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST) Srinagar, Jammu & Kashmir |
| 19 | Dr. Arun Kumar Vice Chancellor Bihar Agricultural University (BAU), Sabour, Bihar |
| 20 | Prof. Samar Singh Vice Chancellor Maharana Pratap Horticultural University (MPHU), Karnal Haryana |
| 21 | Dr. R.S. Kureel Vice Chancellor Mahatma Gandhi University of Horticulture & Forestry (MGUHF), Patan, Durg, Chhattisgarh |
| Representative of Vice Chancellors | |

| | |
|----------------------|---|
| 22 | Dr. Ravindra Kumar Director Research Bihar Animal Science University (BASU), Patna, Bihar |
| 23 | Dr. A.K. Shukla Registrar Govind Ballabh Pant University of Agriculture and Technology (GBPUAT), Pantnagar, Uttarakhand |
| 24 | Dr. Hulash Pathak Head & CEO, Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur, Chhattisgarh |
| 25 | Dr. Mohinder Singh Bhadwal Dean, (Prof. Veterinary Surgery) Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST) Jammu, Jammu&Kashmir |
| 26 | Dr. J.S. Kennedy Dean, School of Post Graduate Studies Tamil Nadu Agricultural University (TNAU), Coimbatore, Tamil Nadu |
| ICAR | |
| 27. | Dr. R. C. Agarwal Deputy Director General (Agricultural Education) Indian Council of Agricultural Research, KAB-II, Pusa Campus, New Delhi |
| IAUA Official | |
| 28. | Dr. Dinesh Kumar Executive Secretary Indian Agricultural Universities Association NASC Complex, New Delhi |
| BAU Officials | |
| 29. | Dr. S. K. Pal, Dean Agriculture |
| 30. | Dr. A. Wadood, Director of Research |
| 31. | Dr. J. Oraon, Director Extension Education |
| 32. | Dr. Sushil Prasad, Dean Veterinary |
| 33. | Dr. M. S. Malik, Dean Forestry |
| 34. | Dr. M.K. Gupta, DRI-cum-Dean PGS |
| 35. | Dr. N. Kudada, Registrar |
| 36. | Dr. D. K. Shahi, Director Students' Welfare |

PROGRAMME

Inaugural Ceremony

Venue: RAC Auditorium, BAU, Ranchi

Date: 20 December 2021; Time: 17.00 -18.30 hrs.

Chief Guest : Shri Ramesh Bais, Hon'ble Governor and Chancellor of Universities of Jharkhand

Guest of Honour : Dr. R.C. Agarwal, Deputy Director General (Agril. Education), ICAR, New Delhi

| Time | Event | Speaker/ Facilitators |
|-------------|---|---|
| 17.00-17.02 | Arrival of the Chief Guest in the University premises | |
| 17.02-17.05 | Garlanding of Statue of Bhagawan Birsa Munda | Chief Guest and Dignitaries |
| 17.05-17.10 | Arrival of Chief Guest and Dignitaries on the Dais | |
| 17.10-17.15 | Recitation of BAU Kulgeet | Students of BAU |
| 17.15-17.20 | Presentation of Bouquets | Dr. O. N. Singh Vice Chancellor, BAU, Ranchi |
| 17.20-17.25 | Lighting of the Lamp | Chief Guest and Dignitaries on the Dias |
| 17.25-17.35 | Welcome Address | Dr. O. N. Singh Vice Chancellor, BAU, Ranchi |
| 17.35-17.45 | Introductory Remarks by Secretary General, IAUA | Dr. R. C. Srivastava Secretary General, IAUA & Vice-Chancellor, Dr. RPCAU, Pusa |
| 17.45-17.55 | Remarks by the President, IAUA | Dr. R. K. Mittal President, IAUA & Vice Chancellor, SVPUAT, Meerut |

| Time | Event | Speaker/ Facilitators |
|---------------|--|--|
| 17.55-18.00 | Release of Souvenir by Chief Guest | Shri Ramesh Bais, Hon'ble Governor and Chancellor of Universities of Jharkhand |
| 18.00 – 18.20 | Address by the Guest of Honour | Dr. R. C. Agarwal Deputy Director General, Agril. Education, ICAR, New Delhi |
| 18.20-18.45 | Inaugural Address | Shri Ramesh Bais Hon'ble Governor and Chancellor of Universities of Jharkhand |
| 18.45-18.50 | Felicitations of the Chief Guest & Dignitaries on the Dias | Dr. O. N. Singh Vice Chancellor, BAU, Ranchi |
| 18.50-18.55 | Vote of Thanks | Dr. S. K. Pal, Dean Agriculture, BAU, Ranchi |
| 18.55 | National Anthem | |

TECHNICAL SESSIONS

| Time | Speaker | Topic |
|---|--|----------------------------|
| 20 December, 2021 (Venue: Senate Hall) | | |
| Technical Session – I | | 10.00 AM – 12.00 PM |
| Achieving International Standard in Agricultural Education and Research in the Context of New National Education Policy | | |
| Chairperson: Dr. Arvind Kumar, Vice Chancellor, RLB CAU, Jhansi, Uttar Pradesh Co-Chairperson: Dr. A. S. Dhawan, Vice Chancellor, VNMKV, Parbhani, Maharashtra | | |
| Rapporteurs: Dr. D. K. Sahi, Director Students Welfare, BAU, Ranchi Dr. P. Mahapatra, Assistant Professor, Department of Soil Science & Agricultural Chemistry, Faculty of Agriculture, BAU, Ranchi | | |
| 10.00-10.05AM | Dr. O. N. Singh, Vice Chancellor, BAU, Ranchi | Welcome Address |

| Time | Speaker | Topic |
|---|---|--|
| 10.05-10.10AM | Dr. R. C. Srivastava Secretary General, IAUA & VC, Dr RPCAU, Pusa | Welcome & Briefing about the Convention |
| 10.10-10.25AM | Dr. R.C. Agarwal DDG (Agricultural Education) ICAR, New Delhi | Strategies and Planning for Improving Agricultural Higher Education in India |
| 10.25-10.40 AM | Dr. R. K. Mittal, Vice Chancellor, SVPUAT, Meerut, Uttar Pradesh | National Educational Policy for Quality of Agricultural Higher Education & Research in India- An Analysis |
| 10.40-10.55AM | Dr. A. K. Singh Director & Vice Chancellor of IARI, New Delhi | Internationalization of Agricultural Education: Way Forward |
| 10.55-11.15AM | Tea Break | |
| 11.15-12.00PM | Panel Discussion Panelists: Dr. V. M. Bhale, VC, DPDKV, Akola, Maharashtra Dr. N. H. Kelawala, VC, Kamdhenu University, Gandhinagar, Gujarat Dr. Bidyut Chandan Deka, VC, Assam Agricultural University, Jorhat, Assam Dr. S. K. Chakraborti, VC, Uttarbanga Krishi Vishwavidalya, Coochbehar, West Bengal. | |
| | | |
| Technical Session – II | | 12.00 PM – 02.15 PM |
| Strategies to Increase and Sustain Agricultural Productivity and Profitability with Development and Application of Appropriate Technologies | | |
| Chairperson : Dr. R. C. Agarwal, DDG (Agril. Edn.) ICAR, New Delhi Co-Chairperson : Dr. Parvinder Kaushal, Vice Chancellor, Dr YSPUH & F, Nauni, Himachal Pradesh | | |

| Time | Speaker | Topic |
|--|--|---|
| Rapporteurs: Dr. M. S. Malik, Dean, Forestry, BAU, Ranchi Dr. Kaushal Kumar, SMS & Head, Department of Forest Products and Utilization, Faculty of Forestry, BAU, Ranchi | | |
| 12.00-12.20PM | Dr. V. Praveen Rao Vice Chancellor PJ TSAU, Hyderabad | Agri Food System : Current Challenges and Data Driven Technological Solutions. (on-line) |
| 12.20-12.40PM | Dr. P. K. Agarwal Vice Chancellor OUAT, Bhubaneswar | Agriculture Education in India during COVID and Post COVID Situation in the Context of National Education Policy (on-line) |
| 12.40-01.00PM | Dr. J. S. Kennedy Dean, School of Post Graduate Studies, TNAU, Coimbatore | Tactical Blue Print for Developing World Class Agricultural University: In-Situ Learning from Peers. |
| 01.00-1.20PM | Dr. S. K. Chakraborty Vice Chancellor UBKV, Coochbehar | Conservation Agriculture for Sustainable Intensification of Cropping System: Lessons Learnt from Eastern India |
| 01.20-01.40PM | Dr. N. K. Gontia Vice Chancellor JAU, Junagadh | Water Management for Sustainable Agriculture through Applications of IoT |
| 01.40-02.00PM | Panel Discussion Panelists: Dr. N. P. Singh, VC, BUA&T, Banda, Uttar Pradesh Dr. Arun Kumar, VC, BAU, Sabour, Bihar Dr. Nazir Ahmad, VC, SKUAST-K, Srinagar, J&K Dr. M. S. Bhadwal, Dean, SKUAST-J, Jammu, J&K | |
| 02.00-02.45PM | Lunch break | |
| 02.45–04.10PM | General Body Meeting of IAUA (Venue: Senate Hall) | |
| 4.30-6.30 PM | Inaugural Ceremony (Venue: RAC Auditorium) | |

| Time | Speaker | Topic |
|--|---|---|
| By 4.15 PM | Assembling in RAC Auditorium | |
| 04.30-06.30PM | Inaugural Session of 45 th VCs Convention | |
| 06.30-07.30PM | Cultural Programme | |
| 08.00-9.30PM | Dinner at Raj Bhavan, Ranchi, Jharkhand | |
| 21 st December, 2021 (Venue Senate Hall) | | |
| Technical Session – III | | 09.00 – 10.45 AM |
| Enabling Farmers’ Access to Technology, Market, Credit and Extension Services. | | |
| Chairperson: Dr. Z. P. Patel, Vice Chancellor, Navsari Agricultural University, Navsari, Gujarat | | |
| Co-Chairperson: Dr. N. P. Singh, Vice Chancellor, Banda University of Agriculture and Technology, Banda, Uttar Pradesh | | |
| Rapporteurs: Dr. Sushil Prasad, Dean Veterinary, BAU, Ranchi Dr. Suresh Mehta, Head, Department of Anatomy & Histology, Faculty of Veterinary Sc. & AH, BAU, Ranchi | | |
| 09.00-09.20AM | Dr. J. P. Sharma Vice Chancellor SKUAST, Jammu | Enabling Farmers’ Access to Technology, Market, Credit and Extension Services (on-line) |
| 09.20-09.40AM | Dr. Z. P. Patel, Vice Chancellor NAU, Navsari | Utilization of Banana Pseudo-stem Technology Developed by NAU Navsari for Increasing Agricultural Sustainability and Profitability |
| 09.40-10.00AM | Dr. Bidyut Chandan Deka Vice Chancellor AAU, Jorhat | Ecosystem Management for Entrepreneurship Development in Agriculture and Allied Sector |
| 10.00-10.20AM | Professor Samar Singh Vice Chancellor MPHU, Karnal | Strategies to Increase and Sustain Agricultural Productivity and Profitability with Development and Application of Appropriate Technologies |

| Time | Speaker | Topic |
|--|---|---|
| 10.20-10.45AM | Panel Discussion Panelists: Dr. K. B. Kathiria, VC, AAU, Anand, Gujarat Dr. N. K. Gontia, VC, JAU, Junagadh, Gujarat Dr. J. S. Kennedy, Dean, School of PGS, TNAU, Coimbatore, Tamil Nadu Dr. A. K. Shukla, Registrar, GBPUAT, Pantnagar Uttarakhand | |
| 10.45-11.00AM | Tea Break | |
| | | |
| Technical Session – IV | | 11.00 12.30 AM |
| Creating Favorable Ecosystem for Entrepreneurship Development in Agriculture and Allied Sectors | | |
| Chairperson : Dr. V. M. Bhale, Vice Chancellor, Dr. PDKV, Akola, Maharashtra Co-Chairperson : Dr. B. S. Mahapatra, Vice Chancellor, BCKVV, Mohanpur West Bengal | | |
| Rapporteurs: Dr. M. K. Gupta, Dean, PG & DRI, BAU, Ranchi Dr. (Mrs.) Swati Sahay, Assistant Professor, Department of Veterinary Medicine, Veterinary Faculty of Veterinary Science & AH, BAU, Ranchi | | |
| 11.00-10.20AM | Dr. B.C. Deka Vice Chancellor AAU, Jorhat | Roadmap for Inculcating Entrepreneurial Qualities and Establishment of Incubation Centre |
| 11.20-11.40AM | Dr. M. K. Naik Vice Chancellor, University of Agricultural & Horticultural Sciences, Shimoga | Bio-entrepreneurs in Agriculture (on-line) |
| 11.40-12.00PM | Dr. V. M. Bhale Vice Chancellor, Dr. PDKV, Akola, Maharashtra | Organic Farming for Sustainable Agricultural Development. |

| Time | Speaker | Topic |
|------------------------|---|-----------------------|
| 12.00-12.30PM | Panel Discussion Panelists: Dr. R.P. Singh, VC, SKRAU, Bikaner, Rajasthan Dr. Ravindra Kumar, DR, BASU, Patna, Bihar Dr. S.K. Chakraborty, VC, UBKV, Coochbehar West Bengal Dr. A.S. Dhawan, VC, VNMKV, Parbhani, Maharashtra | |
| Plenary Session | | 12.30 – 2.00PM |
| Chairperson | Dr. R. C. Srivastava, Vice Chancellor, Dr. RPCAU, Pusa | |
| Co-Chairperson | Dr. O. N. Singh, Vice Chancellor, Birsa Agricultural University, Ranchi | |
| Co-Chairperson | Dr. S. K. Chakraborti, Vice Chancellor, UBKV, Coochbehar West Bengal | |
| Rapporteurs | Dr. S. K. Pal, Dean Agriculture, BAU, Ranchi Dr. B. K. Jha, Assistant Professor, Department of Agricultural Extension & Commercial, Faculty of Agriculture, BAU, Ranchi | |
| Events | Presentation of Recommendations of the Technical Sessions by Rapporteurs of respective Technical Sessions, Dr. D. K. Sahi, Rapporteur of Technical Session-I Dr. M. S. Malik, Rapporteur of Technical Session-II Dr. Sushil Prasad, Rapporteur of Technical Session-III Dr. M. K. Gupta, Rapporteur of Technical Session-IV Discussion and Adoption of Recommendations | |
| | Vote of Thanks: Dr Dinesh Kumar, Executive Secretary, IAUA, New Delhi | |
| | NATIONAL ANTHEM | |
| | LUNCH | 02.00-03.00PM |
| | Site Seeing to Patrattu DAM | 03.00-05.00PM |

Organizing Committees

| Sl. No. | Name of Committee | Convener | Members | |
|---------|---------------------------------|------------------------|---------------------------|-------------------------|
| 1 | Registration Committee | Dr. R. P. Singh | 1.Dr. Supriya Singh | 2.Dr. C. S. Mahato |
| | | | 3.Dr. Arun Kumar | 4.Dr. Nutan Verma |
| 2 | Program Committee | Dr. A. Wadood | 1.Dr. Ramesh Kumar | 2.Dr. Supriya Surin |
| | | | 3.Dr. Nutan Verma | 4.Dr. C. S. Mahato |
| 3 | Transport Committee | Er. D. K. Rusia | 1.Dr. Uttam Kumar | 2.Dr. C. S. Mahato |
| | | | 3.Dr. H. C. Lal | 4. Dr. Neeraj Kumar |
| 4 | Accommodation Committee | Dr. D. K. Sahi | 1.Dr. Amrit Jha | 2.Dr. Promod Rai |
| | | | 3.Dr. C. S. Singh | 4.Dr. S. B. Kumar |
| 5 | Food Committee | Dr. Sushil Prasad | 1.Dr. Ravindra Kumar | 2.Dr. Praveen Kumar |
| | | | 3.Dr. Basant Oraon | 4.Dr. S. Kullu |
| 6 | Technical Session Committee | Dr. M. K. Gupta | 1.Dr.A. K. Singh | 2.Dr. S. Chattopadhyay |
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| 14 | Campus Decoration Committee | Er. Kamaleshwar Prasad | 1. Er. Prabhat Kumar | 2. Er. Mokhtar Ansari |
| | | | 3. Er. Ziauddin Ansari | 4. Er. Ratnesh Kumar |
| | | | 5. Er. Manish Kumar Singh | |

About IAUA

Indian Agricultural Universities Association, (IAUA) was established on 10th November, 1967. The founder member agricultural universities (9 only) and their VC's were: founder president Dr P.N. Thaper, Vice Chancellor, Punjab Agricultural University, Chandigarh (now Ludhiana); and members Shri V. Pulla Reddy, Vice Chancellor, Andhra Pradesh Agricultural University (now ANGRAU), Hyderabad; Dr. J.S. Patel, Vice Chancellor, Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur; Shri D.P. Singh, Vice Chancellor, Uttar Pradesh Agricultural University (now GBPUAT), Pantnagar; Dr K.C. Nair, Vice Chancellor, University of Agricultural Sciences, Bangaluru; Dr S.N. Das Gupta, Vice Chancellor, Kalyani University, Kalyani (now BCKV, Mohanpur); Dr. K. Ramaiya, Vice Chancellor, Odisha University of Agricultural & Technology, Bhubaneshwar; Dr G.S. Mahajani, Vice Chancellor, Udaipur University (now MPUAT), Udaipur; and Dr M.S. Swaminathan, Director & Vice Chancellor, Indian Agricultural Research Institute, New Delhi. The main objective of the Association is to promote agricultural research, education and extension in the universities and the states, and thereby rural development in the country. It also acts as a bureau of information to facilitate communication, co-ordination and mutual consultation among agricultural universities. Presently, IAUA have 70 regular member universities, viz. 62 SAUs; 4 DUs (IARI, New Delhi; IVRI, Izatnagar; NDRI, Karnal and CIFE, Mumbai) and 4 CAUs (CAU, Imphal; BHU, Varanasi; Dr. RPCAU, Pusa and RLBCAU, Jhansi). On specialization there are 44 Agricultural, 6 Horticultural, 17 Veterinary and Animal Sciences and 3 Fishery Science Universities. The number of events organized by IAUA since its establishment included 75 which include 44 Annual VCs Conventions, 13 National Symposia, 10 Brain Storming Session and 8 Regional Committee Meetings. All the SAUs and institutions (deemed-to-be universities) and (Central Agricultural Universities) in India, which provide an integrated programme of teaching, research and extension education in agricultural sciences are qualified to become regular members of the Association.



IAUA Office bearer on the dais during Annual General Body meeting

About BAU, Ranchi

Birsa Agricultural University was established on 26th June, 1981 after its formal inauguration by the then Prime Minister of India, Late Smt. Indira Gandhi. Its primary objective is to develop area specific technologies and manpower in the field of agriculture, animal husbandry and forestry for the agricultural development of the plateau region of Jharkhand and economic upliftment of tribal and other backward class population of the region. The programmes and activities of teaching, research and extension are carried out through three faculties (Agriculture, Veterinary Sciences & Animal Husbandry and Forestry) with 11 colleges viz. Agriculture College, Ranchi; College of Veterinary Sciences & Animal Husbandry, Ranchi; College of Forestry, Ranchi; Biotechnology College, Ranchi; Rabindra Nath Tagore Agriculture College, Deoghar; College of Agriculture, Garhwa; Tilka Manjhi Agriculture College, Godda; College of Dairy Technology, Hansdiha, Dumka; College of Fisheries Science, Gumla; College of Agricultural Engineering, Ranchi and College of Horticulture, West Singhbhum. The University also has one Centre for Agri-business Management, six Directorates, three Zonal Research Stations and farms, one University farm, sixteen Krishi Vigyan Kendras, Computer Centre, Central Library, ATIC and other infrastructure and service units. Being a completely residential university, limited hostels for boys and girls, and residential facilities for Teachers/Scientists and supporting staff have been provided in the campus.





Sitting in the chair (Left to Right):

1.Dr. N.H. Kelawala, 2. Dr. Arvind Kumar 3.Dr. Arun Kumar, 4 .Dr. R.P. Singh, 5. Dr. O.N. Singh, 6. Sri. Ramesh Bais, Hon'ble Governor, Jharkhand, 7. Dr. R.C. Agarwal, 8. P. Kaushal, 9. R.C. Srivastava, 10. Dr. K.B. Kathiria, 11.Dr. R.S. Kureel, 12. Dr. A.S. Dhawan 13. Dr. V. M. Bhale

Standing in the back (Left to Right):

1. Dr. Dinesh Kumar, 2.Dr. A.K. Shukla, 3. Dr. S.K. Chakrabarti, 4. Dr. Hulash Pathak, 5.Dr. M.S. Bhadwal, 6. ADC to Governor, 7. Professor Samar Singh, 8. Professor Chanchal Guha, 9. Dr. B.C. Deka, 10. Dr. N.K. Gontia, 11. Dr. Z.P. Patel, 12. Dr. Nazir Ahmad, 13. Dr. Ravindra Kumar, 14. Dr. J.S. Kennedy, 15. Dr. B.S. Mahapatra



A view of Technical Session

Dignitaries on the dias during Convention



Rapporteur receives Memento from Dignitaries

A glimpse of cultural programme organized during Convention

