



**Proceedings of
41st Vice Chancellors' Convention**

**On the Theme
"Food for Health under Climate Change"**

**Sponsored by
Indian Agricultural University Association (IAUA), New Delhi**

&

**Organised by
Kamdhenu University (KU), Gandhinagar, Gujarat**

December 20-21, 2016



RECOMMENDATIONS

1. Establishment of early warning system to mitigate and devise managerial plan related to climate change in the country.
2. Establishment of efficient data base management system for agriculture and allied fields to develop policy tools.
3. Policy shall be developed for burning crops, diversification, cold refrigeration and digital documentations in agriculture.
4. Policy shall be developed for river cross linking, integrated farming, climate smart agriculture, organic farming etc.
5. Seed storage systems should be implemented in a decentralized manner.
6. Development of technologies for the agricultural by-product utilization needs to be implemented properly to reduce wastes. Various Agricultural Universities should take initiative for its proper implementation and utilization.
7. To devise and standardize the protocol for animal waste management in India.
8. Organization of One Health One World programme in collaboration with Indian Council of Medical Research (ICMR) and World Health Organization (WHO) for production of healthy food under climate change.
9. In Fisheries sector, due to climate change, especially there is drying up of streams in hills and mountains where stock broods are sustained for reproduction for the next season, the Government should take steps to establish gene banks and breeding units of all indigenous species to release sufficient young ones as a part of river ranging to sustain the stock.
10. Waste water from different sources (municipal, industries, hydroelectric plants) to be properly treated and reused for aquaculture.

INAUGURAL FUNCTION

Date: 20th December, 2016		Time: 09:30 to 12:00
Chief Guest	Shri Vijaybhai Rupani Hon'ble Chief Minister of Gujarat	
Guests of Honour	Shri Parshottambhai Rupala Hon'ble MoS for Agri., Farmers Welfare & Panchayati Raj, Government of India, New Delhi Shri Babubhai Bokhiria Hon'ble Minister for Animal Husbandry, Fisheries & Cow Breeding, GoG, Gandhinagar Shri Chimanbhai Sapariya Hon'ble Minister of Agriculture and Energy, Govt. of Gujarat, Gandhinagar Dr. Karsanbhai Patel President, Nirma University, Ahmedabad	
Convener	Prof. M. C. Varshneya President IAUA & Hon'ble Vice Chancellor, Kamdhenu University, Gandhinagar	
Guests	Shri Sanjay Prasad Principal Secretary, Agriculture and Cooperation, Government of Gujarat Dr. K. M. Bujarbaruah Vice-President, IAUA and Hon'ble Vice Chancellor, Assam Agricultural University, Jorhat (Assam) Dr. N. C. Patel Secretary General, IAUA and Hon'ble Vice Chancellor, Anand Agricultural University, Anand	
Rapporteurs	Dr. P. H. Vataliya Director of Extension Education, Kamdhenu University, Gandhinagar Dr. M. B. Rajput Veterinary Officer, Directorate of Extension Education, Kamdhenu University, Gandhinagar	

The Inaugural Function of 41st Vice Chancellors' Convention was held on 20th December at Nirma University, Ahmedabad organized by IAUA and Kamdhenu University, Gandhinagar.

Before the beginning of the inauguration "Revolution in Gujarat Agriculture" a short documentary video film on the growth of agriculture in Gujarat was shown in the auditorium.

Hon'ble Chief Minister along with other dignitaries first visited the exhibition of SAUs of Gujarat at the back foyer of the auditorium which depicted salient achievements of the Universities along with display of specimens of different plant varieties developed by each of the Agricultural Universities.

The inaugural ceremony began with Kamdhenu University song "Sarva Bhut Hite Rataha" followed by welcome address by Prof. M. C. Varshneya, President IAUA & Vice Chancellor, Kamdhenu University, Gandhinagar.

Prof. Varshneya welcomed the Hon'ble Chief Minister, Shri Vijaybhai Rupani, Hon'ble Ministers Shri Parshottambhai Rupala, Shri Chimanbhai Sapariya, Shri Babubhai Bokhiria and other dignitaries and all the Vice Chancellors of member Universities of IAUA and other invitees, guests, directors and deans, PhD scholars, progressive farmers and students.

Prof. Varshneya explained that IAUA is an association of 66 SAUs of India out of which 5 are Deemed Universities, 2 Central Agricultural Universities, 3 Central Universities with agriculture faculty, 45 State Agricultural Universities, 5 Horticulture Universities and 2 Fisheries Universities. He was pleased to inform that Vice Chancellors have assembled from far and wide i. e. from Himachal Pradesh, Assam, Kerala and other States of India.

He also narrated the key role of the Vice Chancellors in fulfilling the objective of 'Food for Health and Doubling the Farmers' income in five years' as per the wishes of Hon'ble Prime Minister of India Shri. Narendrabhai Modi. He hoped that Gujarat will achieve further in Agriculture under the able leadership of Shri. Vijaybhai Rupani and his hardworking ministers Shri. Chimanbhai Sapariya and Shri Babubhai Bokiria. He also praised the key catalytic role of Shri. Sanjay Prasad, IAS, Principal Secretary, Agriculture & Cooperation, Govt. of Gujarat, in boosting the growth in this sector.

After the welcome address and floral welcome of dignitaries, the Hon'ble Chief Minister along with other dignitaries lighted the lamp to formally inaugurate the function.

A book edited by Prof. M. C. Varshneya, along with Co-editors Shri Anil Javalekar, Dr. R. G. Shah and Dr. D. B. Patil entitled "Droughts and the Way Forward" published by Kamdhenu University was released by Shri. Vijaybhai Rupani, Hon'ble Chief Minister of Gujarat and other dignitaries.

Shri Parshottambhai Rupala, Guest of Honour addressed the gathering and advised the Vice Chancellors of Agricultural Universities for developing the varieties suitable for changing climate scenario in the country.

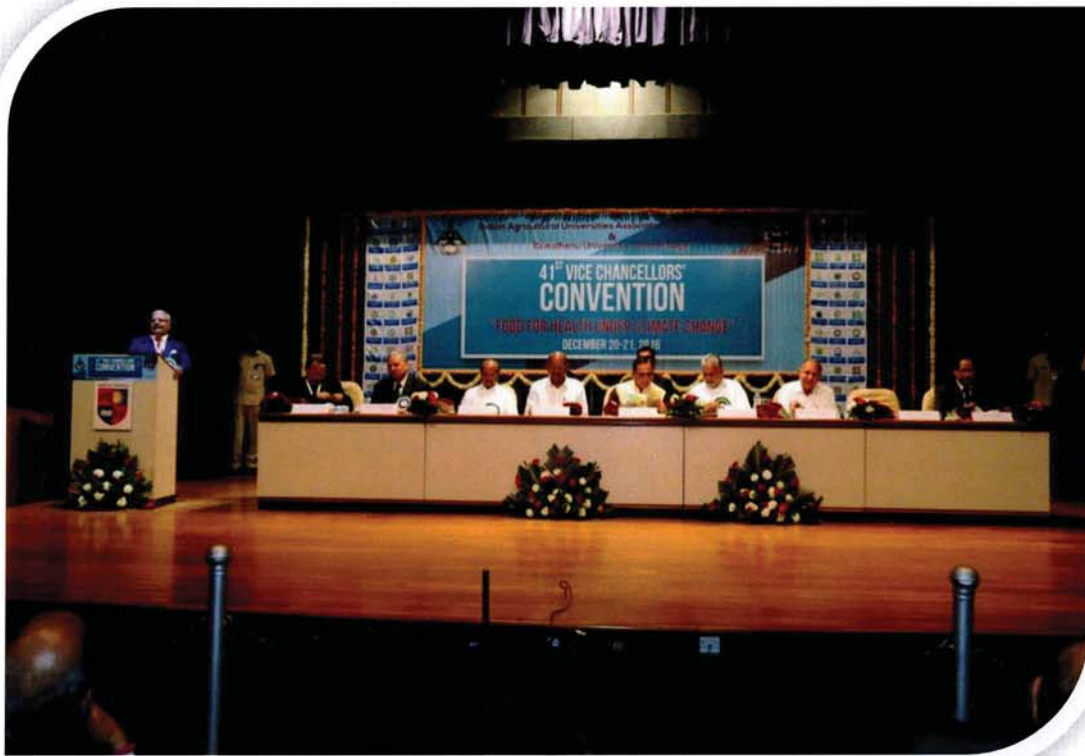
He stressed on the water use efficiency, value addition and strengthening the market of agricultural products and ensure food security for rising human population.

Hon'ble Chief Minister of Gujarat Shri Vijaybhai Rupani welcomed all Vice Chancellors coming from different states of India to the state of Gujarat, the land of Mahatama Gandhi and Sardar Vallabhbhai Patel. He also appreciated agricultural scientists and farmers of Gujarat for their hard work leading to double digit growth in agricultural sector of Gujarat. He also promised that Gujarat will continue to provide best inputs in terms of water, electricity, quality seeds and technological inputs to farmers of the state to further agricultural growth and increase the income of farmers.

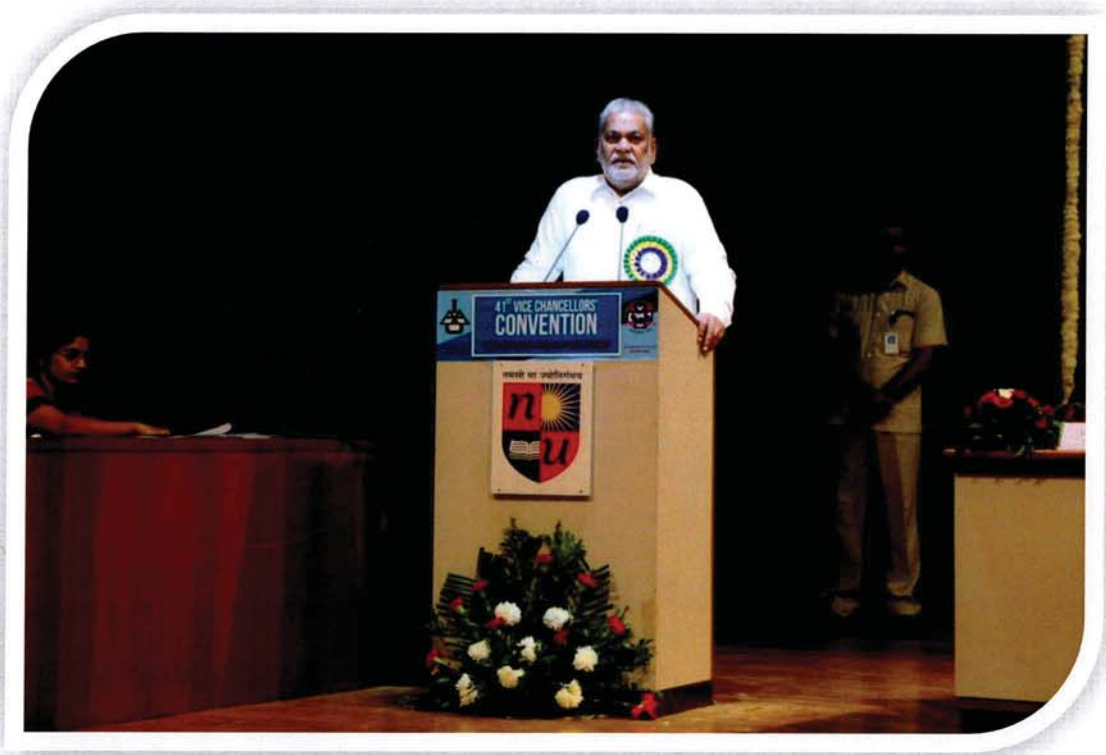
The Secretary General of IAUA and Hon'ble Vice Chancellor of AAU Anand, Dr. N. C. Patel, proposed the vote of thanks. He also promised on behalf of IAUA that the challenge of food for health under climate change will be taken by all universities in right spirit through MOU's, exchange of ideas, technologies and high yielding varieties across the States. He explained the role of Diploma education in Polytechnics in Gujarat which is being replicated in other States of the country. He also thanked Kamdhenu University and the IAUA officials for the arrangement and successful organization of this event.

PHOTOS OF INAUGURAL FUNCTION









Technical Session-I	
Date : 20/12/2016	Time: 11:30 to 13:30
Theme	Food for Health under Climate Change.
Sub Theme	Qualitative and quantitative impact of climate change on food security with reference to cereals, pulses, oil seeds, fruits, vegetables and flowers.

Chairperson	: Dr. V. S. Tomar, VC, JNKU, Jabalpur
Co-chairperson	: Dr. H. C. Sharma, VC, YSPUHF, Nauni
Panelists	: Dr. Ravinder Kaur, Director, IARI, New Delhi Dr. K. P. Vishwanathan, VC, MPKV, Rahuri
Rapporteur	: Dr. R. G. Shah Dr. A. I. Dadawala
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The following three Topics were presented and discussed:

1. Technologies Challenges and Disaster Management in Horticultural Crops by Dr. H.C. Sharma, YSP University of Horticulture & Forestry, Nauni, Solan, Himachal Pradesh, India.
2. Qualitative and Quantitative Impact of Climate Change on Food Security with Reference to Fruits, Vegetables and Flowers by Dr. C. J. Dangaria, Vice-Chancellor, Navsari Agricultural University, Navsari.
3. Climate Change: Scenario and Mitigation Options by Dr. P. S. Rathore, Vice Chancellor, Sri Karan Narendra Agril. University, Jobner, Jaipur.

Dr. H.C. Sharma addressed on Horticultural Crops, Climate Change and Disaster Management of India. He stated that globally, India is the second largest producer of fruits, with an annual production of 88.82 million ton from an area of 6.36 million hectare (2014-15), contributing 12.6% of world fruit basket. Although, India is the leader in mango, banana, papaya, cashew nut and pomegranate, overall productivity of 13.9 ton/ha is far below the world average of 25 ton/ha. He also highlighted the effect of climate change on horticultural crops such as changes in intra-species diversity, changes in morphological attributes and phenology, physiological and metabolic changes in the host plant, changes in composition and relative amounts of secondary metabolites. He focused on global warming and climate change and its effect on insect pests, pest management and effect of climatic factors on efficacy of pesticides.

Dr. C. J. Dangaria addressed on Qualitative and Quantitative Impact of Climate Change on Food Security with reference to Fruits, Vegetables and Flowers. He narrated various adverse effects of climate change on horticulture, fruit, vegetables and flower crops. He also discussed various adaptation options to climatic change, like tolerance varieties and protected farming, early planting and sowing, shorter rotations, alternate crops/cropping systems, altering fertilizer management strategies, altering timing and rate of irrigation application in drought prone areas, use of shelter belts in temperate regions, use of chemicals/hormones i.e growth promoter, growth retardants etc.,

Dr. P. S. Rathore addressed on Climate Change Scenario and Mitigation Options. He discussed about the global scenario of climate change and various disasters that occurred worldwide. He especially emphasised the impact of climate change visualized in Rajasthan State viz. problem of moisture stress in major kharif crops, heat stress in wheat, barley, mustard and gram, impact of frost in mustard, gram and pea, virus and root related diseases in major crops, sucking pests, mites, leaf minor and gram pod borer in selected crops, problem of new emerging weeds in field crops, new emerging areas of salinity due to lowering of water table, problem of nematode in pulse crops, terminal heat stress in pearl millet, increased incidence of blight diseases in crops and increased nutrient stress. He suggested various adaptation and mitigation strategies to resolve the issue of various crops like green agriculture for resilience to climate change, imparting redox homeostasis for crop tolerance to environmental stress, agro forestry for soil restoration and climate change mitigation, adoption of water saving agriculture including water harvesting and land treatment for *in situ* moisture conservation, adoption of integrated farming system approach for maximizing farm income, developing stress tolerant varieties and genotypes, use of crop simulation models for decision support system, emergency response system (ERS), crop weather insurance and drought contingency planning.

Recommendations:

1. Development of varieties and technologies as well as package of practices for protected cultivation under climate change and need of governmental support.
2. Conservation of biodiversity of area wise crops.
3. Conservation and management of water for its effective utilization under climate change.
4. Establishment of early warning system to mitigate and devise managerial plan related to climate change in the country.
5. Establishment of efficient data base management system for agriculture and allied fields to develop policy tools.
6. Relook the development and production of GM crops and invite separate debate on GM crops.
7. Breeder should give emphasis on disease resistance and drought tolerant crop varieties and develop package of practices to be adopted under climate change.

Technical Session-II	
Date : 20/12/2016	Time: 14:30 to 15:30
Theme	Food for Health under Climate Change.
Sub Theme	Adaptation of climate change in animal sector (including poultry).

Chairperson	: Dr. K. M. Bujarbaruah, VC, Assam Agricultural University, Jorhat
Co-chairperson	: Dr. A. K. Mishra, VC, MAFSU, Nagpur
Panelists	: Maj. Gen. Shri Kant, VC, LLUVAS, Hissar Dr. S. Thilagar, VC, TANUVAS, Chennai
Rapporteur	: Dr. T. P. Patel Dr. P. P. Makwana
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The following one Topic was presented and discussed:

“Effect of Climate Change on Reproduction in Livestock” by Dr. A. K. Mishra, VC, MAFSU, Nagpur.

Dr. A. K. Mishra addressed on Effect of Climate Change on Reproduction in Livestock. He discussed on climate change effects on Indian livestock, milk production, animal reproduction in male and female animals and livestock fertility. He also suggested mitigation strategies like reproductive biotechnology tools, improved estrus detection practices in animals, hormonal therapy and FTAI, use of embryo transfer technology and augmenting fertility through ET.

Recommendations:

1. To standardize comfort zone of animals by designing best animal housing model to reduce the effect of climate change.
2. To devise and standardize the protocol for animal waste management in India.
3. Establishment of regional climate control unit to study the effect of climate change and provide advisory services to mitigate the climate effect.
4. Organization of One Health One World programme in collaboration with Indian Council of Medical Research (ICMR) and World Health Organization (WHO) for production of healthy food under climate change.

Technical Session-III	
Date : 21/12/2016	Time: 09:00 to 10:30
Theme	Food for Health under Climate Change.
Sub Theme	Adaptation of Climate Change by Food Processing, Storage and Food Chain Logistics.

Chairperson	: Dr. N. C. Patel, VC, Anand Agricultural University, Anand
Co-chairperson	: Dr. K. Ramaswamy, VC, TNAU, Coimbatore
Panelists	: Prof. S. Pasupalak, VC, OUAT, Bhubneshwar
Rapporteur	: Dr. K. K. Ahuja Dr. Tejas Patel
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The following two Topics were presented and discussed:

1. Food Chain logistics under climate change by Dr. N. C. Patel, VC, AAU, Anand.
2. Tracking Climate change and technology for mitigation of impacts in food processing sector by Dr. K. Ramaswamy, VC, TNAU, Coimbatore.

Dr. N. C. Patel addressed on Food Chain Logistics under Climate Change. He discussed about risks due to climate changes and its various impacts on crop production, fish production, postharvest operations, food safety and requirements of food chain logistics to

mitigate climate change consequences, corporate strategies for food chain logistics and solutions to reduce food waste.

Dr. K. Ramaswamy addressed on Tracking Climate Change and Technology for Mitigation of Impacts in Food Processing Sector. He said that climate change is now widely recognized and accepted as common challenge for all nations. Developing countries are the most vulnerable to climate change. Agriculture and industrialization are the major causes for GHG emissions which cause climate change. He broadly discussed on effect of climate change on food processing, refrigeration, renewable energy, food packaging, food transport, cattle and dairy.

Recommendations:

1. Crop specific / Product based logistic system needs to be developed and requirements at rural level for infrastructure and transportation needs to be improved to maintain proper cold chain and ensure safe food from farm to consumers and minimize the post-harvest losses. Application of temporary storage systems on-farm needs to be looked up.
2. Developed technologies for the agricultural by-product utilization needs to be implemented properly to reduce wastes. Various Agricultural Universities should take initiative for its proper implementation and utilization.
3. Entrapment of CO₂ produced during food processes such as fermentation, and its utilization for the grain storage, modified atmospheric packaging and controlled atmospheric storage, grain storage *etc.* needs to be looked into.
4. Seed storage systems should be implemented in a decentralized manner.
5. National Action plan for Climate Change needs to be prepared for various regions.

Various region-wise Committees are formed to prepare the framework as under:

Central Region:

Dr. A. K. Singh, VC, RSKVV, Gwalior
Dr. Arvind Kumar, VC, RLBCAU, Jhansi
Dr. S. K. Patil, VC, IGAU, Raipur
Dr. V. S. Tomar, VC, JNKV, Jabalpur
Dr. U. K. Mishra, VC, CGKV, Raipur
Dr. R. K. Singh, VC, IVRI, Izzatnagar

Western Region:

Prof. M. C. Varshneya, VC, KU, Gandhinagar
Dr. Tapas Bhattacharya, VC, BSKKV, Dapoli
Dr. N. C. Patel, VC, AAU, Anand
Dr. Venkateshwarlu, VC, VNMKV, Parbhani
Dr. P. S. Rathore, VC, SKNAU, Jobner
Dr. U. S. Sharma, VC, MPUAT, Udaipur

Northern Planes Region: (Punjab, Haryana, Delhi and NCR)

Dr. Ravinder Kaur, Director, IARI, New Delhi

Dr. B. S. Dhillon, VC, PAU, Ludhiana

Prof. K. P. Singh, VC, HAU, Hisar

North Western Himalayan Region:

Prof. Ashok K. Sarial, VC, CSUHPKV, Palampur

Prof. H. C. Sharma, Dr Y S Parmar University of Horticulture and Forestry, Solan

Dr. Nazir Ahmed, VC, SKAUST, Kashmir

Dr. Mathew Prasad, VC, VCSG UUHF, Uttarakhand

Dr. J. Kumar, VC, GBPUAT, Pantnagar

East Coast Region:

Dr. S. Pasupalak, VC, OUAT, Bhubneshwar

Dr. A. Padma Raju, ANGRAU, Hyderabad

Dr. K. Ramaswamy, VC, TNAU, Coimbatore

Eastern Region:

Dr. K. M. Bujarbaruah, VC, Assam Agricultural University, Assam

Dr. M. Premjit Singh, VC, CAU, Imphal

Prof. P. Biswas, VC, West Bengal Uni. of Animal and Fisheries Science, Kolkata

Dr. C. Chattopadhyay, VC, Uttar Banga Krishi Vishvavidyala, Cooch Behar

Dr. R.C., Srivastava, RPCAU, Bihar

Southern Region:

Dr. C. Vasudevappa, VC, UAHS, Shivamogga

Dr. D. P. Biradar, VC, UAS, Darwad

Dr. D. L. Maheswar, VC, UHS, Bagalkot

Dr. J. Dilip Babu, VC, YSRHU, Venkataramannagudem

Dr. V. Praveen Rao, VC, PJTSAU, Telangana

Dr. P. Rajendran, VC, KAU, Thrissur

Dr. Manmohan Singh, SVVU, Tirupati

The framework structure and terms of reference (TOR) will be communicated by the President, IAUA within 15 days. The various Committees will prepare the framework and action plan for their regions. Formulated regional action plans will be submitted by the various regional committees to the President IAUA which will be discussed in the upcoming brainstorming session to be held in April at Allahabad.

The National Action Plan then will be finalized and submitted to the ICAR / Government for implementation.

Technical Session-IV	
Date : 21/12/2016	Time: 10:30 to 11:30
Theme	Food for Health under Climate Change.
Sub Theme	Adaptation of Climate Change in fisheries Sector.

Chairperson	: Dr. A. R. Pathak, VC, Junagadh Agricultural University, Junagadh
Co-chairperson	: Dr. C. Vasudevappa, VC, UAHS, Shivamoga
Panelists	: Dr. U. K. Mishra, VC, CKV, Chhattisgarh
Rapporteur	: Shri N. G. Akolkar Dr. Vivek Shrivastava
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The following two Topics were presented and discussed:

1. Impact of Climate Change on Fisheries and Aquaculture by Dr. C. Vasudevappa, VC, UAHS, Shivamoga
2. Technology Challenges in Fisheries Due to Climate Change by Dr. Ramchandran, VC, KUFOS, Kochi

Dr. C. Vasudevappa addressed on Impact of Climate Change on Fisheries and Aquaculture. He emphasized on farm water management with regard to rain, canal, groundwater and waste water management in order to obtain more crop per drop of water. He highlighted milestones for sustainability in aquaculture with regard to climate change. In a comparison of water requirement for aquaculture, agriculture, fish requires only 50 to 60 liters of water per kg of culture compared to 3000 liters of water for 1 kg of agricultural crops. Climate change has led to geographic shift of fish from lower to upper regions in the rivers and also migration in fish in the sea from present areas to distant comfort zones. Climate change has also led to high mortality of hatchlings of fish.

Dr. Ramchandran addressed on Technology Challenges in Fisheries Due to Climate Change. He stated that due to climate change atmospheric temperature has risen leading to 2.5 mm average rise in sea water level every year. This resulted in reduction of available land to mankind, enhancement in atmospheric emissions, coastal vulnerability and negative impact on species sensitivities. Due to climate change, unusual species of fish are appearing and secured commercial important fish stocks are depleting. Climate change also leads to heat stress, mortality, bleaching of corals, acidification of sea water which ultimately affects aquaculture production. In addition to this, over all food production is getting reduced. There are losses of assets and damage of infrastructure due to climate change and that has increased socio-economic problems.

Recommendations:

1. Proper understanding of "Impact of Climate Change" on fish growth, reproductive potential and production needs special attention.
2. Desilting of inland water bodies for increasing the resource potential and use these water bodies for sustainable aquaculture production.

3. River linking and its positive impact needs proper understanding.
4. Waste water from different sources (municipal, industries, hydroelectric plants) has to be properly treated and reused for aquaculture.
5. Promotion of local species for aquaculture in order to mitigate the Climate change impact.
6. There is sign of climate change especially rise in sea water and other natural calamities in the coastal India. Government of India and State Government shall take all mitigation measures to protect the life and property of fishermen and coastal communities.
7. Illegal fishing operations shall be banned to sustain marine and fresh water fish resources.
8. In Fisheries sector, due to climate change especially there is drying up of streams in hills and mountains where stock broods are sustained for reproduction for the next season, the Government should take steps to establish gene banks and breeding units of all indigenous species to release sufficient young ones as a part of river ranging to sustain the stock.

Technical Session-V	
Date : 21/12/2016	Time: 11:45 to 12:45
Theme	Food for Health under Climate Change.
Sub Theme	Policy issues: Union and State Government for Disaster management under climate change.

Chairperson	: Dr. Arvind Kumar, VC, RLBCAU, Jhansi
Co-chairperson	: Dr. A. K. Sarial, VC, CSKHPKV, Palampur
Panelists	: Dr. Tapas Bhattacharyya, VC, BSKKV, Dapoli
Rapporteur	: Dr. Pradeep Patil Dr. T. P. Patel
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The following one Topic was presented and discussed:

“Technology Challenges and Role of AUs in Mitigating the Effect of Climate Change in Hilly Areas Farming in India” by Dr. A. K. Sarial, VC, CSKHPKV, Palampur.

Dr. A. K. Sarial addressed on Technology Challenges and Role of Agricultural Universities in Mitigating the Effect of Climate Change in Hilly Areas Farming in India. He discussed about geographically hilly and mountainous region of Indian Himalayan and the agricultural scenario of Himachal Pradesh. He also, highlighted the food grain, vegetable and milk production of Himachal Pradesh, farmers’ perceptions about climate change, land use and crop productivity and cultivation of traditional crops in the State. He mentioned about the challenges of climate change in water resources, floriculture, spice crops, and pest & diseases incidences that happens in hilly areas. He emphasized on the important role of Agricultural Universities in mitigating the effect of climate change by adaptations for situation under climate change, genetic enhancement approaches to develop climate resilient crops, simulate

adaptations for different crops of HP, mitigation options for GHG emission from agricultural soils and adoption of soil moisture conservation techniques.

Recommendations:

1. Policy and action plan shall be developed by Agricultural Universities for Disaster Management and Prevention.
2. Policy shall be developed for burning crops, diversification, cold refrigeration and digital documentations in agriculture.
3. Disaster Preventions Cells shall be developed in each Agricultural University.
4. Policy shall be developed for transfer of Marginal farmer oriented technologies.
5. Policy shall be developed for river cross linking, integrated farming, climate smart agriculture, organic farming etc.
6. Policy shall be developed for utilization of available water resources of the rivers originating in Himachal Pradesh hills for generating electricity.
7. Policies for micro-irrigation shall be developed through engineered technologies similar to Beas and Satluj hydroelectric projects.

Plenary Session	
Date : 21/12/2016	Time: 13:00 to 14:00
Theme	Food for Health under Climate Change.

Chairperson	: Prof. M. C. Varshneya President IAUA & VC, KU, Gandhinagar
Co-chairperson	: Dr. K. M. Bujarbaruah, VC, Assam Agricultural University, Jorhat
Rapporteur	: Dr. R. G. Shah
Organizing Secretary	: Dr. D. B. Patil, Director of Research & Dean PG Studies, KU
Convener	: Dr. R. R. Shah, Dean, Veterinary Faculty, KU

The recommendations of the technical sessions were presented by the Rapporteur of the respective sessions and discussed in the house. Dr. Bujarbaruah appreciated the hospitality provided by the Kamdhenu University to the guests.

Hon'ble Vice Chancellor, Kamdhenu University, Gandhinagar emphasized on the critical input/availability of water for the agriculture in near future. Requirement and duration of the water for plants growth is one of the essential factors affecting the yield of various crops, which needs to be determined precisely. Good quality seeds and fertilizers may also fail to express their potentiality, if they are not optimally watered. Adequate availability of water for animal husbandry is also essential. Fishery activities also need to be looked into critically.

Further, he suggested the house to devise the way to solve the problem of water scarcity and to adopt strategy for "Per Drop More Crop". Therefore, we need to develop the tools and methods that will determine the optimal requirement of the crop plants with minimum wastage. He also suggested to devise the low cost technology for the use of

desalinated water in agriculture, for which he appealed to come out with the innovative ways and ideas to develop cheaper technology for desalination of sea water.

Members of the house were also of opinion for linking of the rivers of the country as well as exploring the possibility for extraction of the water from the clouds to mitigate the challenges of the water scarcity in context to the current climate change.

At the end all the Vice Chancellors / IAUA Members thanked Prof. M.C. Varshneya, President, IAUA and Vice Chancellor, Kamdhenu University and his team for the successful organization of the convention.

PHOTOS OF TECHNICAL SESSIONS











TECHNICAL PROGRAMME

DAY-1, December 20, 2016	
TECHNICAL SESSION-I	11:30-13:30 hr
Sub Theme	Qualitative and Quantitative Impact of Climate Change on Food Security with reference to Cereals, Pulses , Oil Seeds, Fruits, Vegetables & Flowers.
Chairperson	Dr. A. R. Pathak, VC, JAU, Junagadh
Co-Chairperson	Dr. H.C. Sharma, VC, Dr. YSPUHF, Nauni
Topics	<ul style="list-style-type: none"> - Risk analysis and planning in pulses/oil seed crops: Dr. V. Praveen Rao, VC, PJTSAU, Hyderabad - Technology challenges and Disaster Management in Horticultural crops : Dr. H. C. Sharma, VC, Dr. YSPUHF, Nauni - Qualitative and Quantitative Impact of Climate Change on Food Security with reference to Fruits, Vegetables and Flowers Dr. C. J. Dangaria, VC, NAU, Navsari
Rapporteurs	Dr. R.G. Shah Dr. A.I.Dadawala
Panelist	1. Dr. Ravinder Kaur, Director, IARI, New Delhi 2. Dr. K.P. Vishwanatha, VC, MPKV, Rahuri
Lunch	13:30-14:30 hr
TECHNICAL SESSION-II	14:30-15:30 hr
Sub Theme	Adaptation of Climate Change in Animal Sector (including Poultry).
Chairperson	Dr. K. M. L. Pathak, VC, Pt. DDUPCVV, Mathura
Co-Chairperson	Dr. A. K. Mishra, VC, MAFSU, Nagpur
Topics	<ul style="list-style-type: none"> - Effect of climate change on Reproduction in Livestock: Dr. A. K. Mishra, VC, MAFSU, Nagpur
Rapporteurs	Dr. Vishal Suthar Dr. P. P. Makwana
Panelist	1. Maj. Gen. Shri Kant, SM, VSM (Retd.), VC, LLRUVAS, Hissar 2. Dr. S. Thilagar, VC, TANUVAS, Chennai
G. B. Meeting	15:30-16:30 hr
Chairperson	Prof. M. C. Varshneya, President, IAUA
Co-Chairperson	Dr. K. M. Bujarbaruah, Vice President, IAUA And other Executive Committee Members
Tea	16:30
TECHNICAL SESSION-III	16:30-18:00 hr
Sub Theme	Adaptation of Climate Change by Food Processing, Storage and Food Chain Logistics.
Chairperson	Dr. N. C. Patel, VC, AAU, Anand
Co-Chairperson	Dr. V.S.Tomar, VC, JNKV, Jabalpur
Topics	<ul style="list-style-type: none"> - Food Chain Logistics under Climate Change: Dr. N. C. Patel, VC, AAU, Anand - Tracking climate change and technology for mitigation of impacts in Food Processing Sector: Dr. K. Ramaswamy, VC, TNAU, Coimbatore
Rapporteurs	Dr. VimalRamani Dr. Kunal Ahuja

Panelist	Prof. S. Pasupalak, VC, OUAT, Bhubaneswar Dr. Rajendra Singh, VC, CSAUAT, Kanpur
Break	18:00 hr
Cultural Programme	19:00 hr
Dinner	20:00 hr
DAY-2, December 21, 2016	
TECHNICAL SESSION-IV	09:30-11:00 hr
Sub Theme	Adaptation of Climate Change in Fisheries Sector.
Chairperson	Dr. K. M. Bujarbaruah, VC, AAU, Jorhat
Co-Chairperson	Dr. A. Ramachandran, VC, KUFOS, Kochi
Topics	<ul style="list-style-type: none"> - Climate change and its impact on production & productivity in fisheries sector: Dr. C. Vasudevappa, VC, UAHS, Shivamogga - Technology challenges in fisheries due to climate change Dr. A. Ramchandran, VC, KUFOS, Kochi
Rapporteurs	Shri. N. G. Akolkar Dr. VivekShrivastava
Panelist	Dr. P. S. Rathore, VC, SKNAU, Jobner
Tea	11:00-11:15 hr
TECHNICAL SESSION-V	11:15-12:15 hr
Sub Theme	Policy issues : Union and State Governments for Disaster Management under Climate Change.
Chairperson	Dr. Arvind Kumar, VC, RLBCAU, Jhansi
Co-Chairperson	Dr. A.A.Patel, VC, SDAU, Sardarkrushinagar, Gujarat
Topics	<ul style="list-style-type: none"> - Technology challenges and role of AUs in mitigating the effect of climate change in Hilly Areas Farming in India: Dr. A. K. Sarial, VC, CSKHPKV, Palampur
Rapporteurs	Dr. Pradeep Patil Dr. Tejas Patel
Panelist	Dr. Tapas Bhattacharyya, VC, BSKKV, Dapoli
Plenary Session & Valedictory Function	12:15-13:30 hr
Chairperson	Dr. M. C. Varshneya, VC, KU, Gandhinagar
Co-Chairperson	Dr. K. M. Bujarbaruah, VC, AAU, Jorhat
Rapporteurs	Dr. D. B. Patil Dr. R. G. Shah
Items	Presentations of recommendations of each Session by Rapporteurs.
Lunch	13:30 Onwards

LIST OF PARTICIPANTS

Sr. No.	Name, Designation and Address
1.	Prof. M. C. Varshneya Hon'ble President, IAUA, New Delhi & Hon'ble Vice Chancellor, Kamdhenu University, Gandhinagar, Gujarat
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26.	Dr. N. V. Naidu, Director of Research Acharya N. G. Ranga Agricultural University, Guntur, Hyderabad
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28.	Dr. B. S. Janagoudar Director of Education, University of Agricultural Sciences, Dharwad Krishi Nagar, Dharwad - 580005, Karnataka
29.	Dr. R. K. Joshi Director (Administration & Monitoring) N. D. University of Agriculture and Technology Dosti Faizabad, Kumarganj - 224229, UP
30.	Dr. R. P. Singh Executive Secretary, IAUA Indian Agricultural Universities Association (IAUA) IG-2, CGIAR Block, National Agricultural Science Complex (NASC), Dev Prakash Shastri Marg, Pusa Campus, New Delhi - 110012

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Vice Chancellor, AAU, Jorhat

Dr. N. C. Patel, Secretary General, IAUA
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