



10th National Symposium

on

Innovative Approaches Harnessing Agricultural Sciences for Society

July 21-23, 2015

MPKV, Rahuri



PROCEEDINGS

Sponsor

Indian Agricultural Universities Association (IAUA), New Delhi

10th National Symposium of IAUA

on

Innovative Approaches Harnessing Agricultural Sciences for Society

PROCEEDINGS



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**Proceedings of 10th National Symposium on Innovative Approaches
Harnessing Agricultural Sciences for Society held during
July 21-23, 2015 at MPKV, Rahuri, Maharashtra**

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Acknowledgements

The 10th National Symposium of Indian Agricultural Universities Association (IAUA) was organized at Mahatma Phule Krishi Vidyapeeth, Rahuri during July 21-23, 2015. It was for the second time that the university has hosted such a event of the IAUA on the theme Innovative Approaches Harnessing Agricultural Sciences for Society. The event was a grand success because of the participation of delegates across the country.

The university is grateful to the IAUA Executive Committee including Dr. M. L. Chaudhary, Ex President and Ex Vice Chancellor, BAU, Sabour; Dr. K.S. Khokar, Vice-President and Vice Chancellor, CCSHAU, Hissar; Dr. K.M. Bujarbaruah, Secretary-General and Vice Chancellor, AAU, Jorhat; Dr. N.C. Patel, Treasurer and Vice Chancellor, AAU, Anand; Dr. R. P. Singh, Executive Secretary and all the members for giving an opportunity to MPKV, Rahuri for organizing this event. I express my deep sense of gratitude to Prof. M. C. Varshneya, Vice Chancellor, KU, Gandhinagar for presiding over the inaugural function of this National Symposium and for his valuable guidance to the delegates. I owe to Dr. S. N. Puri, Former Vice Chancellor, CAU, Imphal and MPKV, Rahuri for his gracious presence and Chief Guest address in the inaugural function. I am thankful to Dr. T. A. More, Vice Chancellor, MPKV, Rahuri and Chairman of the National Symposium for his guidance in organizing this symposium.

I extend my sincere thanks to all the delegates who participated in this event and contributed significantly during the technical sessions. Special appreciation is extended to all the Chairs, Co-Chairs, Panelists, Speakers and Rapporteurs for their contribution in various technical sessions during the National Symposium. Special thanks are mentioned to Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalana for sponsoring this event and organizing the visit of the delegates to MAHYCO, Jalana. I am thankful to KVK, Babhaleshwar for organizing an informative visit to their NICRA village and the KVK.

As the Convener of this National Symposium I thank all the Chairmans, Co-Chairmans, Member Secretaries and Members of the different university level committees constituted for effective planning and organization of the event.

At the end I thank one and all for making this event a grand success.

(K. D. Kokate)

Director of Extension Education, MPKV, Rahuri
and Convener, IAUA National Symposium



Executive Summary

The 10th National Symposium of Indian Agricultural Universities Association (IAUA) was organized at Mahatma Phule Krishi Vidyapeeth, Rahuri during July 21-23, 2015 on the vital theme on Innovative Approaches Harnessing Agricultural Sciences for Society. The delegates across the country participated in this National Symposium.

The inaugural session was presided by Prof. M. C. Varshneya, Senior Vice-President, IAUA and Vice Chancellor, KU, Gandhinagar. Dr. S. N. Puri, Former Vice Chancellor, CAU, Imphal and MPKV, Rahuri was the Chief Guest of the inaugural function. Dr. T. A. More, Vice Chancellor, MPKV, Rahuri and Chairman of the National Symposium briefed about the contribution of the University in agricultural development.

The inaugural function was followed by various technical sessions on different sub themes. The various Technical Sessions on the sub themes *viz.*, Innovations for Coping with Climate Variability, Conservation Agriculture and System Based Diversification, Post-Harvest Technology, Value Addition and Specialty Agriculture, Harnessing Innovative Experiences of Technology Applications and Livestock - Cattle, Poultry, Goatery, Fishery were organized during this National Symposium. Eminent speakers gave informative presentations on the various topics during these Technical Sessions. The Panelists offered their views during the discussions. The delegates participated in the interactions during the various sessions. Finally during the Valedictory Session the rapporteurs presented the sessionwise recommendations. This National Symposium has brought out important recommendations for implementation by policy makers, researchers and development practitioners in harnessing agricultural sciences for the society.

During this symposium the delegates had an opportunity to visit Nirmal Pimpri, Dist. Ahmednagar, a NICRA village under KVK, Babhaleshwar. The delegates had healthy interactions with the farmers. They also visited KVK, Babhaleshwar and seen their multifarious activities including their Instructional Farm and Community Radio Station (CRS). The delegates also visited the Agricultural Technology Information Centre (ATIC), Horticulture Nursery, Cattle Project, State level Biotechnology Laboratory, Farm Implements and Machinery Centre, Residue Laboratory, University Library and various research projects of the university. They were briefed about education, research, extension and other development activities of MPKV, Rahuri. On the last day of the event the delegates were enriched with a very informative visit to MAHYCO Life Sciences Resource Centre, Jalana.



General Recommendations

- There should be maximum utilization of solar energy for agriculture work. Out of Box Thinking or new thoughts are very much essential in the agriculture sector.
- There is a need for including the agriculture subject in primary education in view of large population (around 66 percent) which still lives in rural areas and 52 per cent of them dependent on agriculture and allied sectors for livelihood. For this purpose the investment in agriculture education should be at least one per cent of the GDP of agriculture sector.
- Agricultural emissions can be reduced by adopting conservation tillage, re-growth of perennial vegetation, reducing summer fallow, etc. Livestock and green house gases emission can be controlled by use of high quality forages, legumes in grazing rotations, alternate land use systems, encouraging organic farming, use of bio fuels, avoiding deforestation and promoting reforestation.
- In North-East region of India, Conservation Agriculture encompasses practices of zero tillage, crop diversification such as paddy followed by mustard, development of water harvesting structure (farm ponds), use of liquid biofertilizers and honey bee keeping practices. These practices have been found to enhance the net profit and sustainable production in North-East region of India.
- Enhancing the agricultural input use efficiency through best management practices, good agricultural practices and reducing the input cost for crop production is recommended.
- Adoption of Integrated Farming System comprising of horticulture and livestock is key to successful sustainable and profitable agriculture.
- Development of need based and practically feasible post harvest technologies and their application in establishment of small scale processing units at farm level.
- Establishing network of requirements for efficient food supply chain and brand oriented production of food products.
- Entrepreneurship Development Programme (EDP) may be worked at University level for skill development amongst the youths.
- There is need to promote Diversified Agricultural System (DAS) for sustainable Agril. Production.
- The Govt. of India started *Kisan Wani* (24/7 hours) channel dedicated to farmers Community. In this context, more number of success stories of the respective KVK jurisdiction may be sent for wider publicity. Initiation of the innovative techniques like use of hydroponics, azolla etc. for amalgamation of existing drought condition is required.
- Conservation of region and resource specific indigenous breeds of all the livestock species.
- There is need to initiate the Animal Feed and Food Security Mission for the livestock on the basis of National Food Security Mission.



INAUGURAL SESSION

The 10th National Symposium of Indian Agricultural Universities Association (IAUA), New Delhi was organized at Central Campus, Rahuri in co-ordination with Mahatma Phule Krishi Vidyapeeth, Rahuri on the theme Innovative Approaches Harnessing Agricultural Sciences for Society during July 21 to 23, 2015.



Dr. S. N. Puri, Former Vice Chancellor, CAU, Imphal and MPKV, Rahuri was the Chief Guest for the inaugural function. Prof. M. C. Varshneya, Senior Vice-President, IAUA and Vice Chancellor, KU, Gandhinagar presided over the function. At the outset Dr. T. A. More, Chairman of the National Symposium and Vice Chancellor, MPKV, Rahuri welcome and felicitated the dignitaries on the dias.

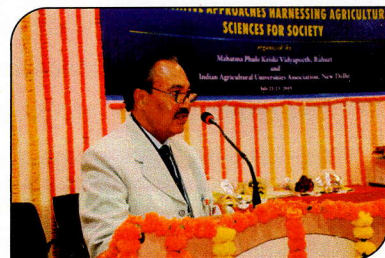
In his welcome address Dr. More highlighted the significant education, research and extension achievements of the university. He said that 18 international students are admitted in the University



under India-Africa and India-Afghanistan Fellowship programmes. MPKV has also started UG degree programmes in collaboration with Van Hall Larenstein University, a part of Wageningen University, the Netherland. Further, he said that since inception MPKV has developed and released 237 improved varieties / F1 hybrids of 60 crops, 1250 crop production technologies and 120 different types of farm implements and

machineries. Dr. More in his address briefed about the extension education activities of the university. He said that a FARMER FIRST project has been sanctioned to the university under RKVY.

Dr. R. P. Singh, Executive Secretary, IAUA in his introductory remarks highlighted the theme of the symposium. He said that innovations are needed for supporting agriculture. There should be maximum utilization of solar energy for agriculture work. Out of Box Thinking or new thoughts are very much essential in the agriculture sector. He emphasized on low volume and high value crops. He cited the example of earthquake devastated Bhuj area of Gujarat State where farmers have come up with fruit crops like Cashewnut, Desert Apple and Olive plantation.

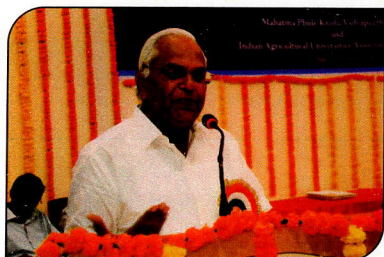


Prof. M. C. Varshneya, Senior Vice-President, IAUA and Vice-Chancellor, KU, Gandhinagar delivered the presidential address. He said that 66 per cent of the

population still lives in rural area and 52 per cent of them are dependent on agriculture and allied sectors for livelihood. Considering this, he highlighted the need of agriculture subject in primary education. For this purpose the investment for agriculture education should be at least one per cent of the GDP of agriculture sector. For quality education, research and extension there is a need for filling the vacant posts in all SAUs on top priority. Autonomy is essential for SAUs and Vice Chancellors should be empowered for filling of posts on priority. Further, he narrated his experiences of Anand Agriculture University, Anand. Initiation of AAU activities like Soil Health Cards, organization of *Krusha Rath Yatra*, district wise rainfall calendar with advisory services have been expanded throughout the country. He focused on the implementation of Animal Based Farming System for livelihood sustainability of small and marginal farmers.



Dr. S. N. Puri, Former Vice-Chancellor, CAU, Imphal and MPKV, Rahuri delivered the Chief Guest address in this inaugural function. He said that India accounts for only 2.4 percent of world's



geographical area, 4 per cent of its water resources, but has to support about 17 per cent of the world human population. In spite of the record food grain production of 262 million MT, there are several challenges before us. While narrating his experiences of North East Region, he opined that Manipur could be a 'Treasure House' for edible oils if supported by adequate efforts. Regarding animal husbandry he felt that cattlefeed is a bottleneck for

expansion of dairy business. Thus, sufficient availability of quality seed of fodder crops is very much required for improvement of dairy sector. He emphasized an urgent need for rethinking and revisiting the policies in view of farmers suicides. He put forward the fact that at village level there is a lack of resource personnel for advising the farmers on their problems. At present the farmer is unable to share his problems and difficulties. Thus, an effective extension system like the Training and Visit (T & V) is needed to be revisited in the present context.

At the end Dr. K. D. Kokate, Director Extension Education, MPKV, Rahuri and Convener, IAUA National Symposium proposed the vote of thanks to the participating delegates. Dr. S. D. Gorantiwar anchored the programme. The inaugural function ended with the National Anthem.





Technical Session I

Sub Theme: Innovations for Coping with Climate Variability

Chairman	Dr. P. Rajendran Vice-Chancellor, KAU, Thrissur
Co-Chairman	Dr. M. Premjit Singh Vice-Chancellor, CAU, Imphal
Rapporteurs	Dr. D.W. Thawal Associate Dean, College of Agriculture, Pune
	Dr. R.P. Andhale Asstt. Prof. Agro Meteorology
Panelists	Dr. A. S. Rao Nodal Officer, ANGRAU, Hyderabad
	Dr. N. S. Murty Dean, GBPUA&T, Pantnagar

At the out set Chairman Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur welcomed the Co-Chairman, Speakers, Panelists, Rapporteurs and members of IAUA. Following speakers delivered their speech on the topics given below.

Topic	Speaker
Innovative Approaches for Application of Climate Resilient Farm Technologies	Dr. B. Venkateswarlu Vice-Chancellor, VNMAU, Parbhani
Policy issues : Weather Based Advisory	Prof. M. C. Varshneya Vice-Chancellor, KU, Gandhinagar

The Chairman of the Technical Session, Dr. P. Rajendran in his introductory remark stated that Climate Change/Variability is affecting the Indian Agriculture in various ways, by affecting crops, livestock, groundwater resources due to the unprecedented drought and intermittent long dry spells. This session is expected to bring out recommendations that can address the issues regarding coping with the climate change and mitigation strategies to be adopted for combating the adverse effects of climate change. The same recommendations could be forwarded to the ICAR for preparing the policy on climate resilient farm technologies.

Dr. B. Venkateswarlu, Vice-Chancellor, VNMAU, Parbhani delivered the talk on “Innovative Approaches for Application of Climate Resilient Farm Technologies”. In his talk he focused on steps to be undertaken to initiate research to be carried out to cope up with climate change issues like increased aberrations in rainfall, frequent heat and cold waves



(frost), heavy rainfall events leading to floods and submergence, prolonged dry spells, hailstorms, etc.

He mentioned that current Research and Development Programme carried out by IMD and IITM in Pune had documented the basic understanding of global warming, crop simulation models and adaptation strategies for mitigation. He mainly emphasized on a ten point programme for the effective mitigation of climate change which includes:

1. **Climate ready varieties** : Short duration and heat tolerant varieties, both tailoring new varieties and screening the existing varieties.
2. **Building soil organic carbon** : Green leaf manuring, crop rotation, cover cropping and vermicompost for improving the organic carbon status of soils.
3. **In-situ and ex-situ water conservation**: Dry spells can be tied over with use of water conservation techniques like BBF, Dead furrow, Compartment Bunding, Check nala, etc.
4. **Intercropping and crop diversification**: Intercropping can reduce risk of monocropping which is highly vulnerable to climate change.
5. **Protected cultivation**: It is energy intensive technology but ideal strategy to cope up with extreme climates.
6. **Agro forestry**: Develops moderate micro climatic conditions, supply fodder for small ruminants, provides supplementary income to the farmers, enhances carbon sequestration and serve adaptation and mitigation.
7. **Weather based agro-advisory**: The modern communication technologies can be used to push the weather based agro advisories to farmers to take best decision at right time.
8. **Off-farm livelihood opportunities**: The sources other than agriculture should be tapped for employment generation. The best examples are MGNREGA and EGS implemented by Government of Maharashtra.
9. **Crop Livestock based integrated farming system**: The various component included in the IFS can give assured employment and income generation.
10. **Weather based insurance**: The losses due to the climate extremities can be overcome by implementing weather based crop insurance system which will act as a safety net for the farmers.



Weather extremities experience in recent years:

Frequent hailstorms causes damage to fruit crops, shade net and green houses. The farmers with their own experiences have used metallic cons to protect grape bunches, plastic cover to protect the crop from hail damage. During long dry spells as experienced this year during the month of July can be fought by using simple treatments like spraying

2% KNO₃ for saving the crops from moisture stress.

The Government of Maharashtra has launched a wide spread programme “*Jalyukta Shivar*” for water conservation and de-silting of water tanks for improving the storage capacity. Similarly, Telangana State has implemented mission *Kakatiya* for water harvesting. These projects can definitely make positive impact on climate resilient farm technologies.

The next speaker Prof. M. C. Varshneya, Vice-Chancellor, Kamdhenu University, Gandhinagar (Gujarat) gave informative speech on “Building adaptive capacity for climate change via Agrimet Advisory Services”. He explained that climate change results in the creation of a changed environment for crop production, forests, biota and fauna, human living, land-water-ecology interactions. Based on his vast experience in the field of Agricultural Meteorology he narrated that rainfall and temperature are the key weather parameters which govern the whole process of climate change. The green house gases viz., CO₂, methane and nitrous oxide are responsible for increasing the global temperatures. The CO₂ is the largest contributor for the increased global temperature followed by methane and nitrous oxide. The projected increase in temperature in 2080s is more prominent in *Rabi* season as compared to *Kharif*. The monsoon months may experience marginal changes where as non monsoon months will show large changes in rainfall with increased intensity. The frequency of cyclonic storms will be increased under the climate change. The various research studies indicate that increase in temperature (by about 2°C) will reduce potential grain yield (Wheat, Barley, Chickpea, Mustard, Paddy).

For mitigation of climate change, reducing emission of green house gases, sequestering carbon, use of nuclear and renewable energy is suggested. Agricultural emissions can be reduced by adopting conservation tillage, re-growth of perennial vegetation, reducing summer fallow, etc. Livestock and green house gases emissions can be controlled by use of high quality forages, legumes in grazing rotations, alternate land use systems, encouraging organic farming, use of bio fuels, avoiding deforestation and promoting reforestation. Use of neem coated urea reduces nitrous oxide emissions, multiple drainage system in paddy field reduces methane emission and organic agriculture reduces soil erosion considerably. For mitigation of methane emission from animals, use of high quality forages, soluble carbohydrate rations, processing of forages, dietary fat sources like fish oil, additives to alter rumen fermentation, use of probiotics, essential oils and protozoal defaunation are suggested.

Carbon credit, carbon trading, carbon taxation and carbon foot prints are some of the measures which individual persons, incorporated associations, business enterprises, government machinery or geographic community should undertake to reduce evolution of green house gases responsible for global warming and climate change.

He briefly narrated the types of weather forecast viz., now casting, short range, medium range and long range forecasting. Out of these now casting, short range forecasting are more accurate and reliable. Based on the medium range weather forecast the agrimet advisories play pivotal role in giving the beforehand information of crop



production technologies to the farmers under aberrant weather situations.

Dr. A. S. Rao, Nodal Officer, ANGRAU, Hyderabad opined that Dr. Varshneya rightly pointed out the benefits of direct seeding method instead of transplanting of paddy under delayed onset of monsoon. However, the weed problems gain severity under this condition.

Dr. N. S. Murty, Dean, GBPUA & T, Pantnagar suggested to identify critical gaps for implementing crop insurance by developing saleable insurance products so that crop losses can be quantified and farmers can be paid accordingly by insurance company.

Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur and Chairman of the session in his concluding remarks mentioned that both the speakers have given very informative and excellent presentations. The adaptive strategies suggested by the speakers include soil water conservation, water harvesting, agro forestry, livestock management, protected cultivation and enhanced farm income generation measures through livestock based integrated farming systems. He suggested to consider the losses likely to occur under unprecedented drought situation. The chairman pointed out that Dr. Varshneya has rightly mentioned that temperature and rainfall variations at different combinations are the important factors that decides crop production ultimately. The ruminants play major role in methane emission which should be addressed by adopting proper strategic measures.

Technical Session –II

SUB THEME: Conservation Agriculture and System Based Diversification

Chairman	Dr. B. Venkateswarlu Vice-Chancellor, VNMAU, Parbhani & Dr. BSKKV, Dapoli
Co-Chairman	Dr. K.K. Katoch Vice-Chancellor, CSKHPKV, Palampur
Rapporteurs	Dr. A.L. Pharande Head, Dept. of SSAC, MPKV, Rahuri
	Dr. S.A. Ranpise Head, Dept. of Horticulture, MPKV, Rahuri
Panelists	Dr. V.S. Thakur Vice-Chancellor, Dr. YSPUH & F, Nauni
	Dr. J. Kumar Registrar, GBPUA&T, Pantnagar
	Dr. D.K. Dora Dean PGF-cum-DRI, OUA&T, Bhubaneswar

The Chairman Dr. B. Venkateswarlu, Vice-Chancellor, VNMAU, Parbhani and Dr. BSKKV, Dapoli welcomed the Co-Chairman, Speakers, Panelists, Rapporteurs and members of IAUA. Following speakers delivered their speech on the topics given below

Topic	Speakers
Horticulture Led Diversification in Maharashtra : An Innovative Experience for Outscaling	Dr. T.A. More Vice-Chancellor, MPKV, Rahuri
Conservation of Agriculture and Zero Tillage Practices for North-East Region of India	Dr. M. Premjit Singh Vice-Chancellor, CAU, Imphal

Dr. T.A. More, Vice-Chancellor, MPKV, Rahuri focused the significance of horticulture in Indian Agriculture and specifically in state of Maharashtra. He explained the efforts taken by four SAU's in Maharashtra and their contributions in development of horticulture crops. He reviewed the present status and varietal development programmes and technology development in respect of horticultural crops, since inception of Universities of Maharashtra. He stressed the need for inclusion of horticultural crops under crop diversification programme in integrated farming system models for enhancing farm income under rainfed as well as irrigated condition. He opined that more emphasis should be given to integrated nutrient management system for achieving higher production rather than adopting organic farming system under rainfed and irrigated condition of Maharashtra.

In second presentation Dr. Premjit Singh delivered his speech on Conservation of agriculture and zero tillage practices for North-East region of India. He explained the scenario of present agricultural practices followed in North-East region of India. The technologies for conservation of agriculture includes: crop diversification (Paddy followed by Mustard), zero tillage, development of water harvesting structures, use of liquid biofertilizers and honey bee keeping practices helped to enhance the farmers income as compared to conventional farming practices.

Dr. Thakur, Vice-Chancellor, YSPHU & F, Nauni opined that for achieving successful conservation of agriculture the inclusion of agro-forestry system in crop diversification programme is a essential step. In state like Himachal Pradesh the barrier crops viz., cherry, almond, peach etc. in apple cultivation is basic need for minimizing the incidence of pest and diseases. He also suggested inclusion of green manuring in orchard cultivation for improving soil health and enhancing the soil biodiversity. He shared his experiences for





cultivation of garlic in nematode sick soils in Himachal Pradesh to minimize the nematode infestation.

Dr. J. Kumar, Registrar, GBPUA&T, Pantnagar explained the significance of food security in context to Indian agriculture and discussed the negative impact of green revolution on soil resource degradation and input use efficiency. Therefore, he emphasized the need for enhancing input use efficiency for sustainable agriculture production and productivity levels and for remunerative agriculture. He also stressed the need for maintaining the soil biodiversity for enhancing nutrient bio-availability by adopting best practices *viz.*, zero tillage, organic farming module and agro-forestry system for reduction of green house gases emission.

Dr. P. Rajendran, Vice Chancellor, KAU, Thrissur emphasized the need for crop diversification in relation to conservation of agriculture.

Dr. R.P. Singh, Executive Secretary, IAUA discussed and signified the role of zero tillage and practice of organic farming for North-East state.

Prof. Varshenya, Vice-Chancellor, KU, Gandhinagar stressed the need for proper utilization of crop residues with view to enhance the harvest index of field crops and also for promoting organic farming practices.

Co-Chairman, Dr. Katoch, Vice Chancellor, CSKHPKV, Palampur explained the significance of horticultural crops in crop diversification. He also stressed the need for increasing the nutrient use efficiency, permanent vegetative soil cover, provision of micro irrigation system specifically sub surface irrigation, promotion and production of vermicompost and FYM, avoiding crop residue burning, adoption of best management practices and conservation of soil and water techniques for mitigating the climate change and attending food security in future.

While concluding the technical session Chairman Dr. B. Venkateswarlu, Vice-Chancellor, VNMAU, Parbhani and Dr. BSKKV, Dapoli reviewed different practices on conservation of agriculture *viz.*, zero tillage and crop residue management for enhancing soil organic carbon stock. He expressed his views that the farmers will prefer to grow horticultural crops rather cereal crops in future. Therefore, he stressed the need for development of location specific guidelines for establishment of ideal orchard considering the soil properties. He also pointed out that the research planning should be based on location specific challenges, and considering the water, nutrient and input use efficiency.





Technical Session –III

SUB THEME: Post-Harvest Technology, Value Addition and Specialty Agriculture

Chairman	Prof. M. C. Varshneya Senior Vice President and Vice-Chancellor, KU, Gandhinagar
Co-Chairman	Dr. S. L. Goswami Vice-Chancellor, MSKUAT, Banda
Rapporteurs	Dr. S. S. Thorat Head, Dept. of FST, MPKV, Rahuri
	Dr. A. S. Jadhav In-charge, Biotechnology Center , MPKV, Rahuri
Panelists	Dr. J. Kumar Registrar, GBPUA&T, Pantnagar
	Dr. D. K. Dora Dean PGF- cum-DRI, OUA & T, Bhubaneshwar

The Chairman Prof. M. C. Varshneya, Senior Vice President and Vice-Chancellor, KU, Gandhinagar welcomed the Co-Chairman, Speakers, Panelists, Rapporteurs and members of IAUA. Following speakers delivered their speech as per the details given below.

Topic	Speaker
Postharvest Approaches to Improve Food Security: Cross-Cutting Products	Dr. D.C. Joshi Dean, Faculty of Food Processing and Bio-energy, AAU, Anand
Specialty Agriculture: Frontier Technologies	Dr. Chandrashkhar Chaporkar Advisor Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalana
Value Chain for Fruits/Vegetables: An Innovative Experience	Shri Vilas Shinde Managing Director, Sahyadri Farmers Producer Co. Ltd., Nashik

The chairman Prof. M.C. Varshneya, Senior Vice President, IAUA and Vice-Chancellor, KU, Gandhinagar enumerated the various reasons for post harvest losses. He opined that the food security of the nation would be guaranteed through appropriate post harvest technologies. He stressed the need for awareness of the post harvest technologies among the farming community. He further highlighted the need for value addition of farm produce for getting higher returned to the producer i.e. farmers for achieving the food security.



The value chain mode need to be established and strengthened by the concern agencies.

Dr. D.C. Joshi, Dean, Faculty of Food Processing and Bio-energy, AAU, Anand in his presentation on Postharvest Approaches to Improve Food Security: Cross-Cutting Products stressed the lead for three dimension approach to save food, increased food production and reduced population. He said that roughly one-third of food produced (*about 1.3 billion tons per year*) for human consumption is lost or wasted globally, and mitigating food loss and waste can make enormous contribution to food security. He cited the causes of post-harvest losses and food waste are mainly connected to financial, managerial and technical limitations in harvesting techniques, on-farm handling, storage and cooling facilities, infrastructure, packaging, transportation and marketing systems. Finally he gave the key message.

Dr. Chandrashekhar Chaporkar, Advisor, Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalana in his presentation on Specialty Agriculture: Frontier Technologies asserted that GM Technology can help the Indian farmer for insect and weed management, efficient use of nitrogen, tolerance to draught and salinity. He highlighted the importance of training and education to build right skills needed for advanced research. A positive environment for creating new technologies and sharing of resources is very much needed. In his presentation he briefed about the contribution of Maharashtra Hybrid Seeds Co. Ltd (MAHYCO) to the seed industry.

The emerging entrepreneur Shri Vilas Shinde, Managing Director, Sahyadri Farmers Producer Co. Ltd., Nashik in his presentation on Value Chain for Fruits/Vegetables: An Innovative Experience put forth the challenges in post harvest technologies in the country. He narrated his experiences in establishment of the Sahyadri Farmers Producer Co. Ltd., Nashik, which has major mandates of delivery solutions to problems of small farmers, overcoming challenges of Agro- entrepreneur and making farming as a profitable venture with sustainable development of agricultural and rural community.

The panelist Dr. J. Kumar, Registrar, GBPUA&T, Pantnagar stressed the need for confronting challenges in post harvest technology and value addition through establishing a good network of value change.

Dr. D. K. Dora, Dean PGF- cum-DRI, OUA & T, Bhubaneshwar highlighted the need for location specific and practically feasible post harvest technologies in Indian condition.

The Co-Chairman Dr. S. L. Goswami, Vice-Chancellor, MSKUAT, Banda emphasized on proper infrastructure facilities at the ground level for minimizing post harvest losses in fruits and vegetables.

In concluding remarks the Chairman Prof. M.C. Varshneya appreciated the group efforts of the farmers and entrepreneurs of Sahyadri Farmers Producer Co. Ltd., Nashik and contribution of Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalna in seed industry.





Technical Session IV

Sub Theme: Harnessing Innovative Experiences of Technology Applications

Visit to NICRA village - Nirmal Pimpri, Ahmednagar

Visit to KVK, Babhaleshwar, Ahmednagar

Chairman	Dr. A.C. Varshney Vice-Chancellor, U.P. Pt. DDUPCVM, Mathura
Co-Chairman	Dr. V.S. Thakur Vice-Chancellor, Dr YSPUH & F, Nauni
Rapporteurs	Dr D. B. Yadav Head, Dept. of Agril. Economics, MPKV, Rahuri
	Dr S. B. Shinde Head, Dept. of Extension Education, MPKV, Rahuri

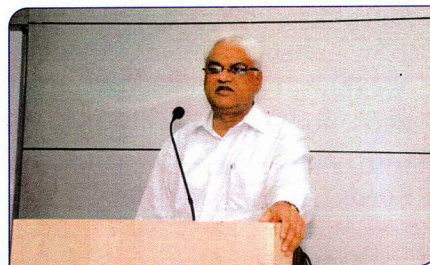
The visit of the delegates was arranged to National Innovative for Climate Resilient Agriculture (NICRA) village Nirmal Pimpri, under jurisdiction of KVK, Babhaleshwar. Dr. K.D. Kolate, Director of Extension Education, MPKV, Rahuri and Convener of the National Symposium, explained the purpose of the visit and working of the KVK.

Dr. Bhaskar Gaikwad, explained the village baseline information, problems of the village, rainfall, natural resource management, crop production technology, livestock management, change in cropping pattern of the village, integrated farming system model. The delegates visited the exhibition arranged on this occasion. The delegates shared the experiences of the farmers from the village. The delegates shared the experiences with the farmers about the Capsicum cultivation under the polyhouse.

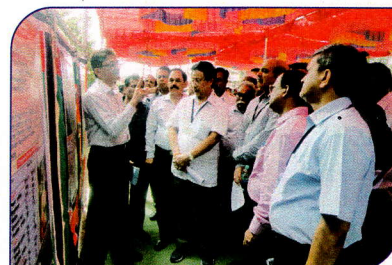
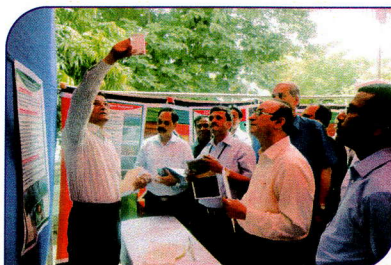
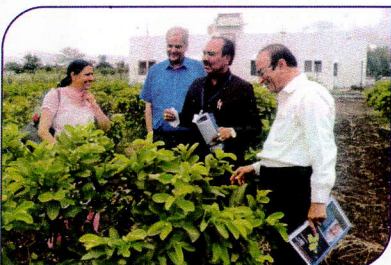
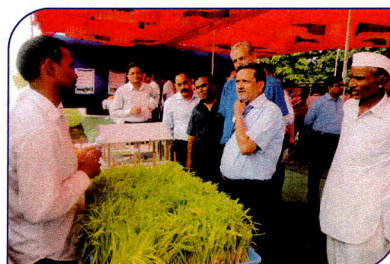
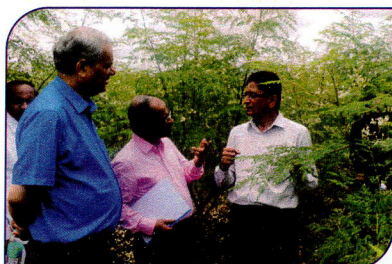
Dr. Bhaskar Gaikwad, Programme Co-ordinator, KVK, Babhaleshwar welcomed all the delegates from Indian Agricultural Universities Association and MPKV, Rahuri. Dr. Gaikwad made the presentation on the various activities being performed by KVKs for the farmers and extension personnel.

Further, he explained the various activities such as Group Dynamics, use of IT in Agriculture, use of applied Biotechnology in Agriculture, Good Infrastructure, Technical inputs and services, Demonstration Units and Farms, Projects and Schemes and Linkages with Organizations. The interactive session was arranged at end of the lecture. The various issues such as training, impact, plant protection, adoption, diversified farming, farmer suicides, similarly of designation of SMS and scientists from SAUs and KVKs were discussed.

The visit to the Community Radio Station, Exhibition was also arranged. The delegates also visited Guava and Drumstick plantation at KVK farm.



Dr. K.D. Kokate, acknowledged and praised the working of KVK, Babhaleshwar and hospitality rendered for the visit. Finally, Chairman Dr. A.C. Varshney, Vice-Chancellor, Mathura praised the KVK, Babhaleshwar for its working, awards and field visit.





Technical Session V

Sub Theme: Livestock - Cattle, Poultry, Goatery, Fishery

Chairman	Dr. K. M. Bujarbaruah Vice-Chancellor, AAU, Jorhat
Co-Chairman	Dr. A.C. Varshney Vice-Chancellor, U.P. Pt. DDUPCVV, Mathura
Rapporteurs	Dr Y.G. Fulpagare Head, Dept. of AHDS, MPKV, Rahuri
	Dr. S. D. Mandakmale Associate Professor, AHDS
Panelists	
	Dr. S.L. Goswami Vice-Chancellor, MSKUAT, Banda
	Dr. G. K. Singh Dean, Vet. and Animal Sciences, GBPUA&T, Pantnagar
	Dr. N. K. Chadha Head, Division of Aquaculture, CIFE, Mumbai

The Chairman Dr. K. M. Bujarbaruah Vice-Chancellor, AAU, Jorhat welcomed the Co-Chairman, Speakers, Panelists, Rapporteurs and members of IAUA. Following speakers delivered their speech as per the details given below.

Topic	Speaker
Innovative Livestock Production Technologies for Socio-Economic Transformations	Prof. A.K. Misra Vice-Chancellor, MAFSU, Nagpur

The Chairman Dr. K. M. Bujarbaruah, Vice-Chancellor, AAU, Jorhat highlighted the vital role of livestock in the country. He focused on the role of animal components in the socio economic transformation of rural people. Further, he highlighted the contribution of fishery sector in the total agricultural GDP of the country.

The Co-Chairman Dr. A.C. Varshney, Vice-Chancellor, U.P. Pt. DDUPCVV, Mathura said that





livestock production systems in India are mostly based on traditional knowledge, low livestock productivity and profitability. Therefore, these issues need to be addressed on priority.

Prof. A.K. Misra, Vice-Chancellor, MAFSU, Nagpur in his presentation on Innovative Livestock Production Technologies for Socio-Economic Transformations put forth the issues like land degradation, global warming, erosion of animal and plant genetic resources, livestock mediated environmental pollution, severe water shortages and the threat of emerging infectious diseases in livestock rearing. Therefore, meeting the increasing demand for animal products while protecting the environment is the major challenge today. Considering the adaptation of our local breed the high yielding indigenous cows and buffaloes needs to be multiplied at a faster rate using currently available reproductive biotechnologies. He stressed the need for a favorable policy environment to take long-term measures towards fodder cultivation as an integral part of the land use planning, improve common property resources (CPRs), besides addressing technical and socio-economic constraints.

Panelist Dr. S.L. Goswami, Vice-Chancellor, MSKUAT, Banda in his remarks said that improving productivity of low producing animal is one of the major challenge in livestock development of the country which need to be addressed through appropriate intervention.

Dr. G. K. Singh, Dean, Vet. and Animal Sciences, GBPUA&T, Pantnagar said that livestock is base of Indian agriculture and hence the development of this sector is very much needed.

Dr. N. K. Chadha, Head, Division of Aquaculture, CIFE, Mumbai addressed the concern of fishery sector and further emphasized on proper strategies for strengthening it.

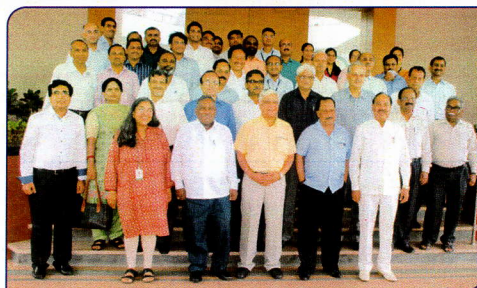
Valedictory Session

Chairman	Dr. K. M. Bujarbaruah Secretary General, IAUA and Vice-Chancellor, AAU, Jorhat
Co-Chairman	Dr. T. A. More Vice-Chancellor, MPKV, Rahuri
Rapporteurs	Dr. P. A. Turbathmat Associate Dean, Dr AS College of Agril. Engg. , MPKV, Rahuri
	Dr. S. D. Gorantiwar Head, Dept. of IDE, MPKV, Rahuri

The valedictory session was held under the chairmanship of Dr. K. M. Bujarbaruah, Vice-Chancellor, AAU, Jorhat, Co-Chairman Dr. T. A. More, Vice-Chancellor, MPKV, Rahuri, Dr. K.D. Kokate, Convener, National Symposium and Director of Extension Education, MPKV, Rahuri and Dr. R.P. Singh, Executive Secretary, IAUA.

The proceedings of various technical sessions of the National Symposium were presented by the concerned rapporteurs. The Chairman, Dr. K. M. Bujarbaruah, Vice-Chancellor, AAU, Jorhat praised efforts of MPKV, Rahuri for organizing 10th National Symposium of IAUA in a systematic manner. He said that MPKV has set a role model for other SAUs of the country in terms of teaching, research and extension education. The Co-Chairman Dr. T. A. More, Vice-Chancellor, MPKV, Rahuri thanked the IAUA for organizing this important event on the very vital theme. The convener of this National Symposium Dr. K.D. Kokate complemented all the delegates for their valuable interaction during the technical sessions. Dr. R.P. Singh thanked the university for successful organization of the event.

The delegates of the symposium visited the different research projects of the university on July 22, 2015. A visit to the MAHYCO Life Sciences Resource Centre at Jalana was also organized on July 23, 2015.





Annexure I

List of Delegates

Sr. No.	Name and Designation
1.	Dr. S. N. Puri Ex Vice-Chancellor, CAU, Imphal and MPKV, Rahuri
2.	Prof. M. C. Varshneya Senior Vice President, IAUA and Vice-Chancellor, KU, Gandhinagar
3.	Dr. K. M. Bujarbaruah Secretary-General, IAUA and Vice-Chancellor, AAU, Jorhat
4.	Dr. R. P. Singh Executive Secretary, IAUA
5.	Prof. A.K. Misra Vice-Chancellor, MAFSU, Nagpur
6.	Dr. P. Rajendran Vice-Chancellor, KAU, Thrissur
7.	Dr. A. C. Varshney Vice-Chancellor, U.P. Pt. DDUPCVV, Mathura
8.	Dr. V.S. Thakur Vice-Chancellor, Dr YSPUH & F, Nauni
9.	Dr. K. K. Katoch Vice-Chancellor, CSKHPKV, Palampur
10.	Dr. B. Venkateswarlu Vice-Chancellor, VNMAU, Parbhani
11.	Dr. M. Premjit Singh Vice-Chancellor, CAU, Imphal
12.	Dr. S. L. Goswami Vice-Chancellor, MSKUAT, Banda
13.	Dr. D. C. Joshi Dean, Faculty of Food Processing and Bio-energy, AAU, Anand
14.	Dr. N. S. Murty Dean, GBPUA&T, Pantnagar
15.	Dr. G. K. Singh Dean, Vet. and Animal Sciences, GBPUA&T, Pantnagar
16.	Dr. D. K. Dora Dean PGF- cum-DRI, OUA & T, Bhubaneswar
17.	Dr. J. Kumar Registrar, GBPUA&T, Pantnagar
18.	Dr. A.S. Rao Nodal Officer, ANGRAU, Hyderabad
19.	Dr. N. K. Chadha Head, Division of Aquaculture, CIFE, Mumbai
20.	Dr. Chandrashekhar Chaporkar Advisor, Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalana
21.	Shri Vilas Shinde Managing Director, Sahyadri Farmers Producer Co. Ltd., Nashik



Annexure II

Executive Committee of IAUA

President	Dr. M. L. Chaudhary Vice-Chancellor, BAU, Sabour
Vice- President	Dr. K.S. Khokar Vice -Chancellor, CCSHAU, Hissar
Secretary- General	Dr. K.M. Bujarbaruah Vice -Chancellor, AAU, Jorhat
Treasurer	Dr. N.C. Patel Vice -Chancellor, AAU, Anand
Member	Dr. V.S. Tomar Vice-Chancellor, JNKV, Jabalpur
Member	Dr. A.R. Pathak Vice-Chancellor, JAU, Junagarh
Member	Dr. A.K. Gahlot Vice-Chancellor, RUVAS, Bikaner
Executive Secretary	Dr. R. P. Singh



Annexure III

10th NATIONAL SYMPOSIUM OF IAUA

ON INNOVATIVE APPROACHES HARNESSING AGRICULTURAL SCIENCES FOR SOCIETY

organized by
MPKV, Rahuri and IAUA, New Delhi

July 21-23, 2015

July 21, 2015

Registration : 0900 - 1000 hrs

Venue: Dr. Nanasaheb Pawar Auditorium,
MPKV, Rahuri, Maharashtra

Inaugural Function : 1000 - 1200 hrs

Inaugural Programme

Time	Details	Speaker
1000 - 1005 hrs	Lighting of lamp	
1005 - 1010 hrs	Invocation	
1010 - 1025 hrs	Welcome Address	Dr. T. A. More Vice-Chancellor, MPKV, Rahuri
1025 - 1035 hrs	Felicitation of dignitaries	
1035 - 1045 hrs	Introductory Remarks	Dr. R. P. Singh Executive Secretary, IAUA
1045 - 1100 hrs	Presidential Address	Prof. M. C. Varshneya Senior Vice President, IAUA and Vice-Chancellor, KU, Gandhinagar
1100- 1125 hrs	Address by Chief Guest	Dr. S. N. Puri Ex Vice-Chancellor, CAU, Imphal & MPKV, Rahuri
1125 - 1130 hrs	Vote of thanks	Dr. K. D. Kokate Director of Extension Education and Convener, IAUA National Symposium
1130 - 1200 hrs	High Tea	



Venue: Conference Hall, Directorate of Research, MPKV, Rahuri

July 21, 2015

Day 1: Technical Session I

SUB THEME: Innovations for Coping with Climate Variability

1200 - 1400 hrs

Chairman	Dr. P. Rajendran Vice-Chancellor, KAU, Thrissur
Co-Chairman	Dr. M. Premjit Singh Vice-Chancellor, CAU, Imphal
Rapporteurs	Dr D.W. Thawal Associate Dean, College of Agriculture, Pune
	Dr. R.P. Andhale Asstt. Prof. Agro Meteorology
Panelists	Dr. A. S. Rao Nodal Officer, ANGRAU, Hyderabad
	Dr. N. S. Murty Dean, GBPUA&T, Pantnagar

Time	Topic	Speaker
1200-1225 hrs	Innovative Approaches for Application of Climate Resilient Farm Technologies	Dr. B. Venkateswarlu Vice-Chancellor, VNMAU, Parbhani
1225-1250 hrs	Genesis and Growth of the Yield Revolution in Maize in India: Lessons for Climate Change	Dr. Baldev Singh Dhillon Vice-Chancellor, PAU, Ludhiana
1250-1310 hrs	Policy issues : Weather Based Advisory	Prof. M. C. Varshneya Vice-Chancellor, KU, Gandhinagar
1310-1350 hrs	Views of Panelists	
1350-1400 hrs	Remarks of the Chairman	
1400-1500 hrs	Lunch Break	



Technical Session II

SUB THEME: Conservation Agriculture and System Based Diversification

1500-1630 hrs

Chairman	Dr. B. Venkateswarlu Vice-Chancellor, BSKKV, Dapoli
Co-Chairman	Dr. K. K. Katoch Vice-Chancellor, CSKHPKV, Palampur
Rapporteurs	Dr. A. L. Pharande Head, Dept. of SSAC, MPKV, Rahuri
	Dr S. A. Ranpise, Head, Dept. of Horticulture, MPKV, Rahuri
Panelists	Dr. V.S. Thakur Vice-Chancellor, Dr YSPUH & F, Nauni
	Dr. J. Kumar Registrar, GBPUA&T, Pantnagar
	Dr. D. K. Dora Dean PGF- cum-DRI, OUA & T, Bhubaneswar

Time	Topic	Speaker
1500-1515 hrs	Horticulture Led Diversification in Maharashtra : An Innovative Experience for Outscaling	Dr. T.A. More Vice-Chancellor MPKV, Rahuri
1515-1530 hrs	Micro Irrigation : Outscaling Perspective	Dr. K.B. Patil Vice- President Jain Irrigation, Jalgaon
1530-1545 hrs	Conservation Agriculture Sustainability: Why, How and What Next?	Dr. M. Premjit Singh Vice-Chancellor, CAU, Imphal
1545-1620 hrs	Views of Panelists	
1620-1630 hrs	Remarks of the Chairman	
1630-1700 hrs	Tea Break	



Technical Session III

SUB THEME: Post-Harvest Technology, Value Addition and Specialty Agriculture

1700-1830 hrs

Chairman	Prof. M. C. Varshneya Senior Vice President, IAUA and Vice-Chancellor, KU, Gandhinagar
Co-Chairman	Dr. S. L. Goswami Vice-Chancellor, MSKUAT, Banda
Rapporteurs	Dr. S. S. Thorat Head, Dept. of FST, MPKV, Rahuri
	Dr. A. S. Jadhav In-charge, Biotechnology Center, MPKV, Rahuri
Panelists	Dr. J. Kumar Registrar, GBPUA&T, Pantnagar
	Dr. D. K. Dora Dean PGF- cum-DRI, OUA & T, Bhubaneswar

Time	Topic	Speaker
1700-1715 hrs	Postharvest Approaches to Improve Food Security: Cross-Cutting Products	Dr. D.C. Joshi Dean, Faculty of Food Processing and Bio-energy, AAU, Anand
1715-1730 hrs	Specialty Agriculture: Frontier Technologies	Mr. Raju Barwale Managing Director Dr. Chandrashkhar Chaporkar Advisor Maharashtra Hybrid Seeds Co. Ltd (MAHYCO), Jalana
1730-1745 hrs	Value Chain for Fruits/Vegetables: An Innovative Experience	Shri Vilas Shinde Managing Director, Sahyadri Farmers Producer Co. Ltd., Nashik
1745-1820 hrs	Views of Panelists	
1820-1830 hrs	Remarks of the Chairman	
2000 hrs	Dinner	



July 22, 2015

Day 2: Technical Session IV

SUB THEME: Harnessing Innovative Experiences of Technology Applications
0900 - 1300 hrs

Visit to NICRA village - Nirmal Pimpri, Ahmednagar

Visit to KVK, Babhaleshwar, Ahmednagar

Chairman	Dr. A.C. Varshney Vice-Chancellor, U.P. Pt. DDUPCVV, Mathura
Co-Chairman	Dr. V.S. Thakur Vice-Chancellor, Dr YSPUH & F, Nauni
Rapporteurs	Dr D. B. Yadav Head, Dept. of Agril. Economics, MPKV, Rahuri
	Dr S. B. Shinde Head, Dept. of Extension Education, MPKV, Rahuri
Panelists	
	Prof. Biswanath Bandyopadhyay Vice-Chancellor, UBKV, Coochbehar
	Prof. Munna Singh Vice-Chancellor, AUA&T, Kanpur
	Prof. R. K. Singh Vice-Chancellor, IVRI, Izatnagar
	Dr. Umesh K. Mishra Vice-Chancellor, CKV, Raipur
	Dr. Manmohan Singh, IAS Vice-Chancellor, SVVU Tirupati (Acting)
	Dr D. L. Maheshwar Vice-Chancellor, UHS, Bagalkot
	Dr. Ashok A. Patel Vice-Chancellor, SDAU, Sardarkrushinagar



Technical Session V

SUB THEME: Livestock - Cattle, Poultry, Goatery, Fishery
1500 – 1630 hrs

Chairman	Dr. K. M. Bujarbaruah Vice-Chancellor, AAU, Jorhat
Co-Chairman	Dr. A.C. Varshney Vice-Chancellor, U.P. Pt. DDUPCVV, Mathura
Rapporteurs	Dr Y.G. Fulpagare Head, Dept. of AHDS, MPKV, Rahuri
	Dr. S. D. Mandakmale Associate Professor, AHDS
Panelists	
	Dr. S.L. Goswami Vice-Chancellor, MSKUAT, Banda
	Dr. G. K. Singh Dean, Vet. and Animal Sciences, GBPUA&T, Pantnagar
	Dr. N. K. Chadha Head, Division of Aquaculture, CIFE, Mumbai

Time	Topic	Speaker
1500-1520 hrs	Innovative Livestock Production Technologies for Socio-Economic Transformations	Prof. A.K. Misra Vice-Chancellor, MAFSU, Nagpur
1520-1540 hrs	Innovations in Fishery Technology: Ensure Food Safety and Nutritional Security	Dr. C. Vasudevappa Vice-Chancellor, UAHS, Shimoga
1540-1620 hrs	Views of Panelists	
1620-1630 hrs	Remarks of the Chairman	
1630-1640 hrs	Tea Break	



Valedictory Session

1640-1730hrs

Chairman	Dr. K. M. Bujarbaruah Secretary General, IAUA and Vice-Chancellor, AAU, Jorhat
Co-Chairman	Dr. T. A. More Vice-Chancellor, MPKV, Rahuri
Rapporteurs	Dr. P. A. Turbathmat Associate Dean, Dr AS College of Agril. Engg. , MPKV, Rahuri
	Dr. S. D. Gorantiwar Head, Dept. of IDE, MPKV, Rahuri
	Presentation of session wise Recommendations by the Rapporteurs

Committees for organization of 10th National Symposium of IAUA

I. STEERING COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. T. A. More	Vice Chancellor	Chairman
2.	Dr. K. D. Kokate	Director of Extension Education and Convener, IAUA National Symposium	Co-Chairman
3.	Dr. B. R. Ulmek	Dean (F/A) & DI	Member
4.	Dr. R.S. Patil	Director of Research	Member
5.	Dr. D. D. Pawar	Registrar	Member
6.	Shri. B.G. Nirmal	Comptroller	Member
7.	Shri M. P. Dhoke	University Engg.	Member
8.	Dr. P. A. Turbhatmat	Associate Dean, DrASCAE	Member Secretary

II. FINANCE COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1	Dr. S.A. Ranpiše	Head, Deptt. of Horticulture	Chairman
2	Shri B.G. Nirmal	Comptroller	Co-Chairman
3	Dr. M. N. Bhalekar	Sr. Vegetable Breeder	Member
4	Shri. R. B. Jondhale	Pay and Accounts Officer	Member
5	Shri S. T. Giri	Office Superintendent, DEE office	Member
6	Shri A. M. Dubale	Senior Clerk, DEE office	Member
7	Shri. V.B. Jadhav	Asstt. Comptroller (IV)	Member Secretary

III. TECHNICAL SESSION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. K. D. Kokate	Director of Extension Education & Convener IAUA National Symposium	Chairman
2.	Dr. J. V. Patil	Head, Department of Botany	Co-Chairman
3.	Dr. S. G. Borkar	Head, Department of Plant Pathology	Member
4.	Dr. D. B. Yadav	Head, Department of Agril. Econ.	Member
5.	Dr. A. L. Pharande	Head, Department of SSAC	Member
6.	Dr. V. D. Shende	Asso. Director of Research	Member
7.	Dr. B. A. Deshmukh	Jr. Res. Asstt.	Member
8.	Dr. P. B. Kharde	Asso. Prof. of Agril. Extn.	Member Secretary



IV. BOARDING COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. M. B. Dhonde	Head, Department of Agronomy	Chairman
2.	Dr. S. S. Thorat	Head, Department of FST	Co-Chairman
3.	Shri. B. G. Nirmal	Comptroller	Member
4.	Dr. J. B. Shinde	Asso. Prof. of Agronomy	Member
5.	Dr. A. B. Kamble	Asso. Prof. Agronomy	Member
6.	Dr. U. S. Surve	Asso. Prof. Agronomy	Member
7.	Dr. V. S. Patil	Asstt. Prof. SSAC	Member
8.	Dr. A.V. Solanke	Manager, ATIC	Member
9.	Dr. B. D. Bhakare	Asso. Prof. SSAC	Member Secretary

V. TRANSPORTATION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. P. A. Turbhatmat	Associate Dean, Dr ASCAE	Chairman
2.	Dr. S. G. Borkar	Head, Department of Plant Pathology	Co-Chairman
3.	Dr. R. D. Bansod	Head, SWCE	Member
4.	Dr. A. A. Atre	Head, IDE	Member
5.	Dr. C. D. Deokar	Prof. of Microbiology	Member
6.	Dr. V. D. Deshmukh	PI FMP	Member
7.	Prof. M.H. Gawade	SMS, Horticulture, ATIC	Member
8.	Dr. S. D. Gorantiwar	Head, Department of IDE	Member Secretary

VI. ACCOMODATION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. D.D. Pawar	Registrar	Chairman
2.	Shri. M.P. Dhoke	University Engg.	Co-Chairman
3.	Dr. A. M. Musmade	Prof. of Horticulture	Member
4.	Prof. D. N. Hajare	Dy. Director of Research	Member
5.	Shri G. C. Motagi	Dy. University Engg.	Member
6.	Dr. S.D. Patil	Public Relations Officer	Member
7.	Dr. Y.B. Kandhalkar	SMS, Dairy, ATIC	Member
8.	Dr. S. B. Bhanage	Asso. Prof. of Agril. Extn.	Member Secretary



VII. PUBLICITY COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. S. B. Shinde	Head, Department of Extension Education	Chairman
2.	Dr. G. K. Sasane	I/c Communication Center	Co-Chairman
3.	Dr. P. B. Kharde	Asso. Prof. of Agril. Extn.	Member
4.	Dr. S. D. Patil	Public Relations Officer	Member
5.	Dr. A. M. Chavai	Asstt. Prof. of Agril. Extn.	Member
6.	Dr. S. S. Sadaphal	Jr. Res. Asstt.	Member Secretary

VIII. STAGE DECORATION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. S. A. Ranpise	Head, Department of Horticulture	Chairman
2.	Shri M. P. Dhoke	University Engineer.	Co-Chairman
3.	Dr. A. M. Musmade	Prof. of Horticulture	Member
4.	Dr. D. B. Kshirsagar	Asstt. Prof. of Horticulture	Member
5.	Shri A. D. Badhe	Jr. Electric Engineer	Member
6.	Dr. H. K. Shirsath	Asstt. Prof. of Horticulture	Member Secretary

IX. REGISTRATION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. R. M. Naik	Head, Department of Biochemistry	Chairman
2.	Dr. A. D. Kadlag	Asso. Prof. of Soil Sci. & AC	Co-Chairman
3.	Dr. A. A. Kale	Asso. Prof. of Biochemistry	Member
4.	Dr. D. P. Kachare	Asstt. Prof. of Biochemistry	Member
5.	Dr. G. K. Waman	Asstt. Prof. Agril. Extn.	Member
6.	Dr. R. D. Satbhai	SRA, Dept. of Biochemistry	Member
7.	Prof. P. K. Lokhande	Asso. Prof. of Biochemistry	Member Secretary

X. LIASION COMMITTEE

Sr. No.	Name of the staff	Designation	Position
1.	Dr. R. W. Bharud	Cotton Breeder	Chairman
2.	Dr. A. V. Gawali	Dy. Director of Research	Co-Chairman
3.	Dr. S. D. Patil	Public Relations Officer	Member Secretary



Annexure V

List of Liaison Officers

Liaison Officers	Liaison Officers
Dr. Y. G. Fulpagare Head, Dept. of AHDS, MPKV, Rahuri	Dr. S. B. Shinde Head, Dept. of Extension Education, MPKV, Rahuri
Dr. S. R. Gadakh Professor (Botany), MPKV, Rahuri	Dr. V. S. Shirke Professor (Agril. Extension), MPKV, Rahuri
Dr. U.D. Chavan Associate Professor (FST), MPKV, Rahuri	Dr. S.T. Pachpute Associate Professor (AHDS) MPKV, Rahuri
Dr. A.V. Solanke Associate Professor (Agronomy), MPKV, Rahuri	Dr. S. D. Mandakmale Associate Professor (AHDS) MPKV, Rahuri
Dr. R. S. Wagh Associate Professor (Botany) MPKV, Rahuri	Dr. A. D. Kadlag Associate Professor (SSAC) MPKV, Rahuri
Dr. A.M. Navale Associate Professor (Pl. Pathology) MPKV, Rahuri	Dr. A. E. Narwade Associate Professor (AHDS) MPKV, Rahuri
Dr. C. S. Patil Associate Professor (Entomology), MPKV, Rahuri	Dr. M. R. Chauhan Associate Professor (SSAC), MPKV, Rahuri
Dr. U. S. Surve Associate Professor (Agronomy), MPKV, Rahuri	Dr. S.R. Zanjare Associate Professor (Plant Pathology), MPKV, Rahuri
Dr. Y.S. Saindane Assistant Professor (Entomology), MPKV, Rahuri	Dr. Shrikant Kulkarni Assistant Professor (Horticulture) MPKV, Rahuri
Dr. R. J. Desale Assistant Professor (AHDS), MPKV, Rahuri	Dr. V. P. Kad Assistant Professor (PHT) MPKV, Rahuri
Dr. R. P. Andhale Assistant Professor (Agronomy) MPKV, Rahuri	Dr. S. A. Kadam Assistant Professor (Agril. Engineering) MPKV, Rahuri

'Farmer First' - Our Philosophy

Since its beginning in 1964, Mahyco has been a pioneer in agri-research and introduced more than 115 hybrid seeds in over 30 crop species.


For over 50 years, Mahyco's endeavor has been to develop advanced seeds that ensure higher yields, helping farmers to grow crops successfully against biotic and abiotic stresses. With a wide range of products and a network covering the length and breadth of the country, Mahyco brings smile on the face of over 10 million farming families, who are our valued customers.


We at Mahyco firmly believe that all our success stems from one philosophy : Putting "Farmer First".




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