# Proceedings



5<sup>th</sup> Regional Committee Meeting of Indian Agricultural Universities Association

19 - 20 December 2014 Thrissur





Organized by Kerala Agricultural University



Proceedings of the 5<sup>th</sup> Regional Committee Meeting of Indian Agricultural Universities Association and National Seminar on Family Farming for Sustainability organized by the Kerala Agricultural University, Thrissur on 19-20 December 2014





December 2014



Kerala Agricultural University Thrissur 680 656, Kerala, India

#### **Organizing Committee**

Chairman: Dr. P. Rajendran, Vice-Chancellor
Secretary: Dr. T.E. George, Director (Academic & PGS)
Members: Dr. P.V. Balachandran, Registrar
Dr. Joy Mathew, Comptroller
Dr. T.R. Gopalakrishnan, Director of Research
Dr. Sverup John, Dean (Ag.)
Dr. M. Sivaswamy, Dean (Ag. Engg.)
Dr. K. Sudhakara, Dean (Forestry)
Dr. V.R. Ramachandran, Director of Physical Plant
Dr. P. Ahmed, Director, Planning

Edited by: Dr. T.E. George Dr. K. Lila Mathew Dr. Sarah T. George

Published in connection with the 5<sup>th</sup> Regional Committee Meeting of the Indian Agricultural Universities Association and National Seminar on Family Farming for Sustainability

Printed at Lumiere Printing Works, Thrissur 680 020

## Proceedings of the 5<sup>th</sup> Regional Committee Meeting of Indian Agricultural Universities Association and National Seminar on Family Farming for Sustainability organized by the Kerala Agricultural University, Thrissur on 19-20 December 2014

Fifth Regional Committee Meeting of Indian Agricultural Universities Association was organized by the Kerala Agricultural University, Thrissur on 19 - 20 December 2014 at Hotel Joys Palace, Thrissur, Kerala. On this occasion, a National Seminar on Family Farming for Sustainability was also conducted.

Day One : 19-12-2014

## **Inaugural Session**

The function started at 10.00 am with the invocation song by the University Choir. Dr. P. Rajendran, Vice-Chancellor, Kerala Agricultural University welcomed Dr. A.K. Srivastava, President, IAUA, Dr. Swapan K. Datta, Deputy Director General (Crop Science) ICAR, Dr. Arvind Kumar, Deputy Director General (Education) ICAR, Hon'ble Vice-Chancellors, Dr. R.P. Singh, Executive Secretary, IAUA, senior officers and all other participants.

Dr. R.P. Singh, Executive Secretary, IAUA in his introductory remarks detailed the importance of the Regional Committee Meeting of IAUA and its relevance in the area of agriculture education in India.

Dr. A.K. Srivastava, President IAUA presided over the meeting and delivered the presidential address. Dr. Swapan K. Datta, Deputy Director General (Crop Science), ICAR inaugurated the function by lighting the traditional lamp and delivered the inaugural address. Dr. Arvind Kumar, Deputy Director General (Education) ICAR was the guest of honour. List of participants is annexed.

Dr. A.K. Srivastava, President IAUA in his presidential address urged the scientists to motivate young Indians to Agriculture which is the need of the day. For achieving this, he focused on modernization of research and instructional farms, increasing use of ICT tools towards enhancing quality education, research and technology development capabilities and also inculcating corporate practices in them. Dr. Swapan K. Datta, Deputy Director General (Crop Science) ICAR in his inaugural address stressed the need for the universities across the country to join hands and share the knowledge and strive to take on programmes which are nationally relevant. Interventions to reduce labour cost in agriculture through mechanization should be encouraged. The universities must also give due importance for the quality assurance of higher agricultural education. Dr. Arvind Kumar, Deputy Director General (Education), emphasized the need for a big boost in the higher education sector in agriculture and allied subjects in terms of investment and technology. He also emphasized the need for sustainable models of public–private partnerships in this sector. Dr. T.E. George, Organizing Secretary, Kerala Agricultural University thanked all the dignitaries, Vice-Chancellor participants and other senior officers attending the function.

Recommendations of the 5<sup>th</sup> Regional Committee Meeting of Indian Agricultural Universities Association and National Seminar on Family Farming for Sustainability organized by the Kerala Agricultural University, Thrissur on 19 - 20 December 2014

- 1. Developing different family farming models to suit various agro-climatic conditions, namely, Agri-Agri, Agri-Horti, Agri-Horti-Silvi, Agri-Horti-Livestock, Agri-Horti-Fisheries, Agri-Horti-Dairy systems.
- 2. Demonstration and implementation of new models of integrated farming systems with high-tech Agriculture and high-tech Horticulture developed under the leadership of IAUA.
- 3. Promotion of farm mechanization, pooling of machinery and custom hiring to reduce the drudgery of elderly family members in family farming and to address labour shortage.
- 4. Developing and disseminating new packaging technologies and regional level branding systems of produce and planting materials involving SHGs and market-oriented groups for increasing the marketable surplus of small farms.
- 5. Motivation and attraction of qualified youth towards high-tech Agriculture and sensitization about the whole range of Agri-business, high-tech production systems, and markets, through training, demonstrations and interfaces at different levels.
- 6. Inter University and inter institutional collaborations in teaching and research have to be promoted.
- 7. Establishment of a multi-university Research Centre of the South Indian Agricultural Universities is to be given importance.
- 8. Family farming is to be upgraded from subsistence farming to high-tech farming by the involvement of agricultural universities and bringing the IT professionals in farming.
- 9. Indigenous Technical Knowledge is to be documented and revalidated by research system and is to be integrated to the farming systems particularly family farming.
- 10. Urban Horticulture should be promoted.























## NATIONAL SEMINAR ON FAMILY FARMING FOR SUSTAINABILITY

## **Technical Session I**

Sub theme	: Family farming in relation to food and nutritional security
Chairman	: Dr. A.R. Pathak, Vice-Chancellor, JAU, Junagadh
Co-Chairman	: Dr. S.K. Patil, Vice-Chancellor, IGKVV, Raipur
Panelists	<ol> <li>Dr. H.S. Gaur, Vice-Chancellor, SVBPUAT, MEERUT</li> <li>Dr. V.S.Thakur, Vice-Chancellor, Dr. YSPUH&amp;F, Nauni</li> <li>Dr. P. Rajendran, Vice-Chancellor, KAU</li> <li>Dr. A.A. Patel, Vice-Chancellor, SDAU, Sardarkrushinagar</li> </ol>
Speakers	<ul><li>1. Dr. A.R. Pathak, Vice-Chancellor, JAU, Junagadh</li><li>2. Dr. K. Ramaswamy, Vice-Chancellor, TNAU, Coimbatore</li></ul>
Rapporteurs	<ul><li>1. Dr. Sajan Kurian, Director (Planning), KAU</li><li>2. Dr. Jose Mathew, Associate Director of Extension, KAU</li></ul>

The session started at 11.45 am

Dr. A.R. Pathak, Chairman welcomed the Co-chairman and panelists of the session and presented the paper on 'Fighting hunger-plurality in family farming'.

He stated that according to the latest FAO statistics from 2013, there are 842 million hungry people in the world and 98 percent of them are in developing countries. Three-quarters of all hungry people live in rural areas of Asia and African countries. It is also estimated that around half of the world's hungry people are from small holder farming communities surviving on marginal lands prone to natural disasters like drought or flood. During 2009 to 2012, about 13 million workers are reported to have changed from agriculture to non-farming employment. Even though, this will raise the income of agriculture workers and reduce the disparity between workers in agriculture and non-agriculture sectors, it will have detrimental effects, as agriculture is still a labour intensive activity. It was emphasized that, in this context, family farming assumes greater importance for conservation as well as cultivation. India has 2<sup>nd</sup> largest arable land, maximum agricultural area under irrigation in the world and ranks among top five countries in terms of area and production of major cereals, pulses, beverages and spices, fruit and vegetable crops, and animal products. Self-sufficiency in food grains was achieved in 1970's as a result of green revolution and has sustained it since then. The country has moved from 65 to 63 in Global Hunger Index. In India, 20 percent of children below 5 years suffer from under nutrition and over 225 million Indians remain chronically under nourished. Results of National Family Health Survey shows that over 7000 Indians die of hunger every day and over 25 lakh Indians die of hunger every year.

Family farming involves about 570 million families consisting of over two billion people of

which 88% are family farms and out of this 84% are small and marginal farms. Family farms produce 80% of the food worldwide. Small farmers cultivate 44% of land and contribute to >50% of total farm output in India. The diverse activities of family farms help in conservation of bio resources, promotion of environmental sustainability, and contribution to healthier and balanced diets. Climate change is another challenge which has adverse impacts on food security and living conditions of family farms. Equal attention should be paid to women and men in the farm families. The interventions in agricultural and horticultural crops will address the prevailing malnutrition. Naturally occurring bio fortified crops and those developed by agriculture institutions using crop improvement strategies should be promoted.

Shrinking agricultural land is a reality and total area in the country affected by different forms of land degradations is over 121 m ha of which 105 m ha fall under arable land and 16.53 million ha under open forest .Productivity enhancement, post-harvest management and value addition are critical for ensuring sustainability and increasing farm income and profitability. Acute labor shortage and rising cost of agricultural production have brought engineering inputs in agriculture into focus. It is estimated that present levels of post-production losses are about 2.8-10 % in durables, 6.8 -12.5% in semi-perishable and 5.8-18% in perishable products.

The small holder farmers face challenges and opportunities of a rapidly changing market environment brought about by trade liberalization and globalization. As the population grows, agriculture will face competition for land and water resources from non-agricultural sector also. Since land is a state subject, the states need to formulate and enact appropriate legal frame work and institutions in place to protect prime agricultural land from being lost.

He concluded his presentation with the statement that "The Zero Hunger vision can be converted into reality if family farmers are placed at the centre of policy processes to continue their contributions based on the principles of ecology, economics, equity and employment".

Dr. K. Ramaswamy, Vice-Chancellor, TNAU, Coimbatore presented the paper on 'Periurban family farming in India'.

He stated that Hong Kong is the first country to practice peri- urban agriculture to utilize the recycled waste water. Netherlands take up vertical farming, underground farming and efficiently utilize solar radiation. In this context attracting and retaining youth in agriculture is of utmost importance. In U.S., area for food production, fuel production and construction are well demarcated. Investment in India is only 1% of GDP for agriculture production. Agriculture land has shifted to fallow lands and the land holding size has also changed in urban areas. In rural areas drastic changes have not taken place in land holdings. In Tamil Nadu 80% subsidy is given for purchase of land tillers. But changes in machine designs will have to be made to suit local needs. Grapes which was grown in pandal system in four regions is now restricted to one region whereas the three areas have switched over to vegetable cultivation on pandal system. Income with addition of backyard poultry has increased by 20% and that of cattle has increased to 50%. Even kennel can be introduced as component in family farming. Sprouted grains and pulses should also be included and form integral part of our diet.

He presented in detail the world scenario and Indian scenario of peri-urban agriculture and suggestions to improve this system in India.

In his concluding remarks he stated that Urbanization processes are leading to an 'urbanization of poverty' and increasing food insecurity and malnutrition of poor urban households. Under pressure of the urbanization process, municipalities increasingly encounter problems in providing employment for the growing population and in managing the wastes produced by the city. The urgency of growing urban poverty and food insecurity requires innovative ways of managing cities and alternative strategies towards improving urban livelihoods, local governance, waste management, as well as nutrition. An increasing number of cities have recognized the potential and risks of urban agriculture for realizing their policy priorities with respect to social development (poverty alleviation, social inclusion of disadvantaged groups), economic development (income and employment generation, enterprise development), health (food security and nutrition) and the environment (waste recycling, greening, micro climate, and landscape management).

The urban policy-makers and support institutions, both governmental and non-governmental, can substantially contribute to enhancing its profitability and sustainability by formally accepting Urban and Peri-urban Agriculture (UPA) as an urban land use and creating a conducive policy environment, enhancing access to vacant open urban spaces, supporting the establishment and strengthening of urban farmer organizations, enhancing the productivity and economic viability of UPA by improving access of urban farmers to training, technical advice and credit. Multi-stakeholder efforts are needed to find effective ways to integrate UPA into urban sector policies and urban land use planning and to facilitate the development of safe and sustainable UPA. The funds taken by SAUs and ICAR are 1.8% from DST and 4% from DBT.

In the panel discussion that followed the presentations, Dr. H. S Gaur told that India is mother of all systems of farming and so also family farming. The labour scarcity can only be addressed through mechanization. User friendly machines for various agricultural activities are available and cooperative system for purchase and maintenance of agricultural machinery should be adopted. Custom hiring system can also be adopted .Cooperative farming and marketing of produce should be done.

Dr.V.S.Thakur stated that of the total 500million small family farmers in the world, 280million are in China and India. The post-harvest losses in agriculture estimated to be approximately worth Rs.1,40,000crores is the biggest curse in India. Agriculture should be introduced as a subject in schools also.

Dr. P. Rajendran told that the most energy efficient farming system is the one which involve crops, animal husbandry and pisciculture along with value addition. The average size of holding in the state is 0.11 ha and even with this land base an eco-friendly cropping system with a cafeteria of crops can be practiced. Marketing system should be strengthened to empower farmers. They should be given credit support. In Kerala, there is mechanism of support price for farmers for certain crops whereby they are insulated from price volatility.

Dr.A.A. Patel, mentioned that major responsibility of agricultural scientists is standardization

of technology to produce healthy food and policy decision should be taken for fixing price of agricultural produce.

The Chairman summarized with the following recommendations:

- Skill development programme should be developed to improve agricultural situation in the country.
- It is nutritional security rather than food security that is the challenge of the day.
- It is essential to include horticulture, fisheries and poultry components in family farming wherever they are not integrated.
- Planning and policy making in agriculture should be given prime importance in future.

The session was concluded at 2.30 p.m.

#### **Technical Session II**

Sub theme	:	Socioeconomic aspects of family farming
Chairman	:	Dr. N.C. Patel, Vice-Chancellor, AAU, Anand
Co-Chairman	- 17	Dr. B.Ashok, IAS, Vice-Chancellor, KVASU, Pookode
Panelists	:	Dr. C.Vasudevappa, Vice-Chancellor, UAHS, Shimoga
Speaker	:	Dr. P. Rajendran, Vice-Chancellor, KAU, Vellanikkara
Rapporteurs	:	Dr. T.R. Gopalakrishnan, Director of Research, KAU Dr. I. Johnkutty, Assoc. Director of Research, KAU

The session started at 3.00 pm with Dr. N.C. Patel, Vice-Chancellor, AAU, Anand in the chair and Dr. B. Ashok, Vice Chancellor, KVASU, Pookkode as Co-chairman.

Dr. P. Rajendran, Vice-Chancellor, KAU presented the paper '**Revisiting indigenous farming knowledge in family farming**'. He explained the importance of Indigenous Technical Knowledge (ITK) and narrated the knowledge in various fields transferred over generations through family farming. The common issues are (i) access to capital, (ii) access to land, (iii) access to market and (iv) challenges faced by youth and women. The importance of paddy cultivation in recharging the ground water was highlighted by the speaker. ITK is to be used in all aspects of family farming starting from selection of crops upto post-harvest utilization. He emphasized that various traditional knowledge on 'Kumbham' (Malayalam month) as the ideal season for planting tuber crops, pest and disease resistant indigenous rice varieties etc as very important components for sustainable family farming. It is to be remembered that life style diseases are not present in farming families due to better food habits. He pointed out the advantages of various aspects of ITK such as farm as a place for beauty parlour in the natural herbs, pest control, climate related knowledge etc. The need of incorporating ITK in family farming was highlighted by the speaker. Conduct of on-station experiments, on-farm experiments, validating farmer experiments and finally bringing out them as technologies should be looked into by Agricultural Research System.

## **Technical Sessions**



## **Technical Sessions**



Dr.Rajendran emphasized the need of setting up ITK centres in the Universities at state level and also at national level.

Dr. C.V. Vasudevappa, Vice-Chancellorof UAHS, Shimoga as a panelist, explained various dimensions in urban horticulture including terrace gardening where the organic wastes in the family can be safely used for vegetables and mushroom production. Water availability and its management are very much important in family farming. He was also of the opinion that co-operative / contract farming with mechanization of various operations involving all the families who do not have real man power or capacity could also be popularized whenever possible. A case study of Kodagu district in Karnataka was also explained.

Dr. B. Ashok, Co-chairman pointed out that the number of farm families are decreasing and new entrepreneurs such as small and big companies are entering into the arena. He also emphasized the need for skill development for family members rather than simply transferring the knowledge theoretically.

The Chairman summarized the discussions stating that importance of income in family farming is very much important to maintain his family. Employment generation is another aspect. Small farm machineries, micro irrigation, fertigation facilities etc. are other aspects to be considered in family farming.

The following recommendations were presented by the Chairman:

- Indigenous Technical Knowledge is to be documented and revalidated by research system and is to be integrated to the farming systems particularly family farming.
- ITK centres are to be set up at state level and also at national level for research and development.
- ITK in agriculture should be included in the syllabus for agricultural education.
- New entrepreneurs (small / big) need to be encouraged
- Urban Horticulture should be promoted
- Co-operative / contract farming with mechanization should be given importance.

The session ended by 4.00 pm.

After the Technical Session II, a visit was arranged for the participants to the various institutions in the Kerala Agricultural University main campus at Vellanikkara and Mannuthy campus of Kerala Veterinary and Animal Sciences University from 4.00 pm to 7.00 pm.

A cultural programme showcasing the traditional art forms of Kerala performed by the renowned artists of the esteemed Kerala Kalamandalam was arranged for the participants from 7.00 pm to 9.00 pm.

## Day Two : 20.12.2014

A visit to the famous Guruvayur Sri Krishna Temple was arranged for the participants from 5.00 a.m.to 7.00 a.m.

## **Special Session**

Sub theme	:	Universities' role to help family farming
Chairman	:	Dr. S.K. Patil, Vice-Chancellor, IGKVV, Raipur
Co-Chairman	:	Dr. D.P. Biradar, Vice-Chancellor, UAS, Dharwad
Panelist	:	Dr.AktharHaseeb, Vice-Chancellor, NDUAT, Faizabad
Speaker	:	Dr. T.A. More, Vice-Chancellor, MPKV, Rahuri
Rapporteurs	:	Dr. Philip Sabu, Director, MBA (ABM), CCBM Dr.Shaheena. P., Head, Dept. of Development Economics, CCBM

The session started at 10.30 am.

Dr. S.K. Patil, Chairman welcomed the Co-chairman and Panelists. Dr.T.A. More presented the theme paper on '**Future of family farming with special reference to Horticultural Crops**'.

Dr.T.A. More dwelled upon India's position in the global horticultural scenario. He pointed out that due to the sub division of holdings; there is a rise in the number of small holders, world over. It is in this context that the 120 commercially exploited horticultural crops have a significant role in making family farming socially, economically and ecologically sustainable.

The presentation focused on the role of MPKV, Rahuri in developing the horticultural sector in Maharashtra which developed and transferred production, plant protection and post-harvest technologies and waste management techniques with special reference to crops like pomegranate, banana, onion, mushroom and vegetable crops. Technologies ideal for nine agro-climatic zones of Maharashtra were developed and disseminated. As a result of the adoption of hybrid technology by the farmers, commercialization of agriculture has taken place which resulted in higher net income to the farmers and has also attracted a new breed of agri-preneures particularly in high-tech farming. The role of high-tech agriculture for increasing productivity, high density farming, meadow orchards, protected cultivation, and precision farming in increasing production, productivity and higher net income to the farmers were emphasized.

Dr. More had his own reservations about making horticulture cultivation fully organic mainly because of the lack of availability of organic inputs, ineffectiveness of bio-control agents towards viral diseases affecting horticultural crops. Therefore, the present need is on integrated nutrient management, leaf and soil test based fertilizer recommendation, use of micro-nutrients and understanding nutrient dynamics.He also stressed the importance of micro-irrigation as it has

**Field Visit** 















## **Cultural Programme**



hundring

increased yield by 100 percent, reduced fertilizer usage by 40 to 60 percent and water usage substantially. He also shared the experiments of MPKV in developing model farm plans for diversified crops to suit the requirements of small holders. The University has also commercialized protocols for micro-propagation of recalcitrant crops.

Dr. Akthar Haseeb, reflected on the theme of the session and presented paper stressing the need for refocussing the existing agricultural extension methodology of 'lab to land' to 'land to lab and to land'. He agreed with Dr. More regarding the development of area specific models based on a study of agricultural practices under the jurisdiction of each Agricultural university. The SAUs have to assign importance to plant protection technology as is given to crop production technology.

Dr. Biradar, pointed out that, scientists must develop a holistic view on agriculture rather than becoming too specialized since farmers are looking for holistic solutions.

The Chairman Dr.S.K. Patil summarized the deliberations emphasizing the following recommendations:

- Farming technologies appropriate to small holders must be differentiated by the Universities.
- Delineate farming situation of each village or similar farming situations and appropriate integrated farming models must be developed for each region.
- The farmers are willing to use hybrid seeds for cultivation, however there is an acute shortage of quality seeds. Production of hybrid seeds is an area where Universities should play a dominant role.
- Site specific integrated nutrient management systems should be put in place.
- Mass multiplication of bio-control agents is required, the market for which is at present dominated and controlled by private companies. The Universities can play a dominant role in this area provided the licensing procedures of CIBRC are simplified. The ICAR may take up this issue with CIBRC.
- The Universities should develop area specific model farm plans bringing out the cost and benefit from the plans.
- The SAUs may accord equal importance in developing technology for plant protection as it is given to crop production technology.
- Farmers should be given readymade green houses

The session ended by 11.15 am.

## **Technical Session III**

Sub theme :	Family farming and inclusive growth
Chairman :	Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur
Co-Chairman :	Dr. H.S. Gaur, Vice-Chancellor, SVBPUAT, Meerut
Panelists :	<ol> <li>Dr. D.P. Biradar, Vice-Chancellor, SVBPUAT, MEERUT</li> <li>Dr.V.S.Thakur, Vice-Chancellor, UAS, Dharward</li> <li>Dr.D.P. Kumar, Vice-Chancellor, UAS, Bangalore</li> <li>Maj. Gen. Shrikant SM, VSM, Vice-Chancellor, LLRUVAS, Hissar</li> </ol>
Rapporteurs :	Dr. M. Sivaswami, Dean (Ag. Engg.), KAU Dr. E.G. Ranjith Kumar, Assoc. Director MBA, KAU

The session started at 11.15 am.

The Chairman, Dr. P. Rajendran in his address stressed the importance of family farming to be upgraded from subsistence farming to high tech farming. The Agricultural Universities can play a vital role for this transformation while developing the family farming. The issues of farming in South and North India have to be considered separately because of the variation in holding size and the agro-climatic parameters. He also emphasized the need to change the definition of family farming by including peri-urban family farming. He further highlighted the need for developing technology suitable for small holding.

Collateral income generating activities like apiculture, mushroom production pisciculture etc. should be taken along with family farming with an integrated approach.

To enhance and support the bargaining power of the farming community, value addition is to be strengthened by organizing farmer producer companies, small farmers-agri-business consortium, farmers' co-operatives, etc.

Credit facilities for infrastructural development and mechanization are to be considered. He also emphasized the need for recycling of waste and imparting training to farmers for value addition and mechanization. Social security support to farming families like subsidized education is to be given to the children of farmers.

The Chairman had emphasized on the following aspects:

- 1. Establishing an Inter-University collaborative research centres for different regions like South, East, North and West covering SAUs.
- 2. Multi-disciplinary / multi-institutional projects on relevant topics of common interest.
- 3. Exchange of students and faculty in emerging areas among universities.

Co-chairman, Dr. H.S. Gaur highlighted the role of women in agriculture as women have the major contribution in all aspects of agriculture and family too.

He emphasized the need for gender friendly machinery, handy to the women folk. Proper training is to be imparted to women in the area of processing and agri-business. He quoted China as an example for women empowerment. Youth are alienated from agriculture and hence efforts to attract youth to agriculture by convincing them that agriculture can give them a respectful profession. He, by taking example of the United States underlined the need to adopt co-operative extension and market maker, farmer-consumer and industry based on software wherein the price as well as place of availability of the product is informed.

Dr. D.P. Biradar stated that family farming is more sustainable than any other form of farming wherein the land exploitation is at minimum. He also emphasized the need for honouring the women and youth for taking up farming.

He stated that the press is not favourable for promoting agriculture. Thus the print and visual media should project the positive aspects of farming. The Universities should never go for violating the laws governing the sector. He also supported the proposal mooted by Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur.

Maj. Gen. Shrikant, SM, VSM., explained his own experience of backyard cultivation which guarantees nutritional safety and supplementary income to family. The experience gained from his family was practiced in army during his term of service. He emphasized the need of value addition and market linkage for increasing the income of the farmers. He urged the need to adopt community farming by the staff of Agricultural Universities and to be role models to the community in general.

He also emphasized the need for developing model, suitable for family farming.

Dr. D.P. Kumar stated that agriculture is to be transformed into a profitable occupation so as to attract youth to this profession. Community centres for living have to be set up to reduce the cost of production. Dry land farmers / dry land farming is to be given more emphasis and appropriate technology is to be developed for the specific category.

Agricultural Universities can utilize all the like departments for extension activities. He also emphasized the need for scientific waste management.

The whole deliberation was concluded by Dr. P. Rajendran, Chairman by summarizing the recommendation and suggestion of the session with an additional recommendation of adopting the "Kudumbashree Model" of Kerala and the "Horticulture Therapy" for the benefit of the farming family.

Recommendations:

- Family farming is to be upgraded from subsistence farming to high-tech farming by the involvement of agricultural universities and bringing the IT professionals in farming.
- Credit facilities are to be extended for infrastructural development, training, farm mechanization etc. with emphasis on youth and woman in the farming activities.

- Inter University and inter institutional collaborations in teaching and research have to be promoted.
- Establishment of a multi-university Research Centre of the South Indian Agricultural Universities is to be given importance.
- Faculty and student exchange programmes in the emerging areas of research among the agricultural universities are to be considered.

The session came to a close at 1.00 pm.

#### **Technical Session IV**

Sub Theme	:	Future of Family Farming
Chairman	:	Dr. T.A. More, Vice-Chancellor, MPKV, Rahuri
Co-Chairman	:	Dr. V.S. Thakur, Vice-Chancellor, YSPUH, Solan. Himachal Pradesh
Speaker	:	Dr. S.K. Patil, Vice-Chancellor, IGKV, Raipur
Rapporteurs	:	Dr. D. Girija, Professor, KAU Dr. E.K. Kurien, Special Officer, ACCER, KAU

The session started at 1.30 pm.

Dr. S.K. Patil, Vice-Chancellor, IGKV, Raipur who presented a paper on 'Strengthening family farming - policy changes', detailed about the problems faced in family farming and the future of it. He said that there has been a decrease in the size of farm holding over the years and this fragmentation of land has led to problems like difficulty in farm mechanization, timely availability of inputs, providing credit and technical knowledge on real-time basis, limited risk bearing ability, poor infrastructure, increasing cost of cultivation and inadequate marketing system. In future, there will be more pressure on land, water and other resources, hence intensification of farming will be required. Increasing productivity and profitability and ensuring sustainability is the key to make family farming viable. Timeliness, precision & resource conservation in farm operations are of utmost importance to realize potential yields of technologies. Entire production system has to be shifted towards sustainability by promotion and adoption of integrated farming systems based on principles of conservation agriculture, organic farming and self sustained, least external input dependency. If power of technology and economy of scale at production, post-harvest, and marketing ends are provided, family farms can be made more viable. There should be a change from farming for livelihood to farming as business. This would further require promotion of input arrangements, implement efficient resources use program, post harvest, value addition and marketable surplus of uniform quality. Community centres for farm implements, post harvest and value addition facilities at door step of farmers will help to generate economic opportunities and additional income.

Development of new institutions with emphasis on social engineering, consolidation of holdings for community/ contract farming, farmer's companies, SHGs, and resource sharing

will be required. Capacity building of small farms by seed banks of biotic and abiotic stress tolerant improved varieties and NRM technologies is required. Innovative knowledge management system is also equally important. ICT must be given top priority. Integrated farming technology needs to be practiced. In integrated farming system, land and water use policy planning must be adopted at cadastral level/sub zonal agro-ecological level.

Dr. Thakur, Co-chairman of the session stressed the importance of soil health programmes and subsidy programmes by way of supply of seeds and other inputs. Quarantine measures must be strictly followed to restrict the entry of pests and diseases from other countries. As per the instructions from ICAR, 'Farmers first' approach must be adopted by every University. Strengthening of extension work is required.

Dr. More, while summing up the session, said that the resource use efficiency must be enhanced. Inefficient use of resources and inputs result in high cost of cultivation and threat to increase in biosphere pollution. Timely availability of quality inputs, including seed, planting materials and fertilizers must be ensured. Mechanization of small farms is the need of the hour, along with efficient energy management. Gender-friendly tools need to be developed for reduction in drudgery of farm workers. Use of non-conventional and renewable sources of energy in agriculture is urgently required. Appropriate and cost-effective packaging technologies are needed to ensure safe transportation. To promote the transformation of a farmer to an entrepreneur, SHGs must be formed for resource sharing or as commodity-based and market-orientated groups. Farmers must be sensitized about the whole range of agri-business, production systems, research institutions, schemes of the development departments, open markets both at domestic and global scale, to be provided through training, demonstration, literature, and other HRD support, including interface at different levels. To increase the marketable surplus of smaller farms, there is greater need to develop and disseminate eco-technologies, rooted in principles of ecology, economics, equity and employment generation. Promotion of co-operative, community and contract farming will be required. Linkage of farmers with market will enable them to augment their income and engage in more production activities. Direct marketing through SHGs or informal groups, NGOs, cooperatives, farmers associations, companies, partnerships, joint ventures should be encouraged. Farmer Producer Organizations (FPOs) can also play a very important role. Diversion of prime agricultural land for other uses must be discouraged. Capital flows towards rural areas need to be improved and innovative institutional models of financial institutions need to be put in place.

#### Recommendations

- Increasing productivity and profitability and ensuring sustainability is the key to make family farming viable
- Timeliness, precision and resource conservation in farm operations are of utmost importance to realize potential yields
- Development of new institutions with emphasis on social engineering
- To promote the transformation of a farmer to an entrepreneur, SHGs must be formed for resource sharing or as commodity-based and market-orientated groups. Farmers must be sensitized about the whole range of agri-business
- Consolidation of holdings for community/ contract farming, farmer's companies, SHGs,

and resource sharing will be required.

- Capacity building of small farms by Seed Banks of biotic and abiotic stress tolerant improved varieties and NRM technologies is needed.
- Innovative knowledge management system is required. ICT must be given top priority.

The session ended at 3.00 pm.

## VALEDICTORY SESSION

Time : 3.00-4.00 pm

Chairman	:	Dr. A.K. Srivastava, President, IAUA			
Co-Chairperso	ns :	Dr. C. Vasudevappa, Vice-Chancellor, UAHS, Shimoga			
		Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur			
Rapporteurs :		Dr. T.E. George, Director (Acad&PGS), KAU			
	:	Dr. I. Johnkutty, Associate Director (Planning), KAU			

The session started at 3.00 pm

The Chairman Dr. A.K. Srivastava, President IAUA and VC, NDRI, Karnal welcomed the cochairpersons, distinguished delegates and rapporteurs of the session and invited the session rapporteurs to present their respective recommendations.

The proceedings and salient recommendations of technical sessions on Family farming for sustainability, Family farming in relation to food and nutritional security, Socio economic aspects of family farming, Universities' role to help family farming, Family farming and inclusive growth and Future of family farming were presented.

#### RECOMMENDATIONS

## Theme : Family Farming for Sustainability

Technical Session I : Family farming in relation to food and nutritional security

Presented by : Dr. Sajan Kurian, Director (Planning), Kerala Agricultural University.

- Shrinking agricultural land is a reality. States should formulate and enact appropriate legal frame work and institutions in place to protect agricultural land
- Subsidies or smart subsidy to be given for purchase of machinery
- Machinery pooling or custom hiring to be promoted
- Backyard poultry, cattle, sheep and goat rearing to be integrated into home gardens.
- Consumers to be educated to improve nutritional security by adding sprouts to our diet.
- Post harvest products and value addition to be strengthened to increase income and to avoid loss.
- Marketing channels and systems to be streamlined to support and improve farm income

## **Valedictory Session**











5<sup>th</sup> Regional Committee Meeting of INDIAN AGRICULTURAL UNIVERSITIES ASSOCIATION

> 19, 20 DECEMBER 2014 Organissed by

Keral ficultural University, Thrissur

## Valedictory Session









Technical Session II : Socioeconomic aspects of family farming

Presented by : Dr. T.R. Gopalakrishnan, Director of Research, Kerala Agricultural University.

- Indigenous Technical Knowledge is to be documented and revalidated by research system and is to be integrated to the farming systems particularly family farming.
- ITK centres are to be set up at state level and also at national level for research and development.
- ITK in agriculture should be included in the syllabus for agricultural education.
- New entrepreneurs (small / big) need to be encouraged
- Urban Horticulture should be promoted
- Co-operative / contract farming with mechanization should be given importance.

Special Session	:	Universities'	role to	o help	family	farming	
	100						

Presented by : Dr. Philip Sabu, Director (MBA), Kerala Agricultural University.

- Farming technologies appropriate to small holders must be differentiated by the Universities.
- The farmers are willing to adopt hybrid seeds for cultivation, however there is an acute shortage of quality seeds. Production of hybrid seeds is an area where Universities should play a dominant role.
- Site specific integrated nutrient management systems should be put in place.
- Mass multiplication of bio-control agents is required, the market for which is at present dominated and controlled by private companies. The Universities can play a dominant role in this area provided the licensing procedures of CIBRC are simplified. The ICAR may take up this issue with CIBRC.
- The Universities should develop area specific model farm plans bringing out the cost and benefit from the plans.
- The SAUs may accord equal importance in developing technology for plant protection as it is given to crop production technology.
- Farmers should be given readymade green houses

Technical Session III : Family farming and inclusive growth

Presented by : Dr. M. Sivaswami, Dean (Ag. Engg.), Kerala Agricultural University.

- Family farming is to be upgraded from subsistence farming to high-tech farming by the involvement of agricultural universities and bringing the IT professionals in farming.
- Credit facilities are to be extended for infrastructural development, training, farm mechanization etc. with emphasis on youth and woman in the farming activities.

- Inter University and inter institutional collaborations in teaching and research have to be promoted.
- Establishment of a multi-university Research Centre of the South Indian Agricultural Universities is to be given importance.
- Faculty and student exchange programmes in the emerging areas of research among the agricultural universities are to be considered.

## Technical Session IV : Future of family farming

Presented by : Dr. E.K. Kurien, Special Officer, ACCER, Kerala Agricultural University.

- Increasing productivity and profitability and ensuring sustainability is the key to make family farming viable
- Timeliness, precision and resource conservation in farm operations are of utmost importance to realize potential yields
- Development of new institutions with emphasis on social engineering
- To promote the transformation of a farmer to an entrepreneur, SHGs must be formed for resource sharing or as commodity-based and market-orientated groups. Farmers must be sensitized about the whole range of agri-business
- Consolidation of holdings for community/ contract farming, farmer's companies, SHGs, and resource sharing will be required.
- Capacity building of small farms by Seed Banks of biotic and abiotic stress tolerant improved varieties and NRM technologies is required
- Innovative knowledge management system is required. ICT must be given top priority.

After the presentations of the session-wise recommendations, Dr. P. Rajendran, Vice-Chancellor, KAU, addressed the gathering. He emphasized on the role of IAUA in popularizing the importance of family farming through universities. He highlighted the need for a inter university research centre of south Indian Agricultural universities under IAUA to promote inter institutional collaboration in teaching and research in frontier areas of agriculture and horticulture. He suggested that the following points also should be included in the recommendations.

- Upgradation of family farming with modern high-tech activities
- Linking of farmers with credit support as well as price and market support
- Sharing input cost, machinery rentals and getting banking deals and marketing linkages to make Family farming more viable
- Mechanization of small farms with low-cost, light-weight, multi-purpose farm equipments
- Working out appropriate crop livestock combinations for each locality.
- Providing on-farm training for family farmers in post-harvest handling, value addition and packaging of farm produce.
- Strategies to address issues relating to social security of the farm families

Dr. C. Vasudevappa, Co-chairman suggested that terrace gardening / family farming may be taken up on group basis by involving families of residential colony or a street to ensure availability and access to inputs and technical know-how. He emphasised the need for technology changes involving energy efficient farm machinery and irrigation system. He also pointed out the importance of appropriate post-harvest measures and establishment of on-farm primary processing facilities to reduce post-harvest losses across the supply chain.

Dr. A.K. Srivastava, President IAUA opined that the following points also should find a place in the recommendations.

- Developing different family farming models to suit various agro-climatic conditions, namely Agri-Agri, Agri-Horti, Agri-Horti-Silvi, Agri-Horti-Livestock, Agri-Horti-Fisheries, Agri-Horti-Dairy systems.
- Demonstration and implementation of new models of integrated farming systems with high-tech Agriculture and high-tech Horticulture developed under the leadership of IAUA
- Promotion of farm mechanization, pooling of machinery and custom hiring to reduce the drudgery of elderly family members in family farming and to address labour shortage
- Organization of programmes such as Krishimela, Exhibitions and other media friendly activities by the State Universities to enhance the general awareness and to popularize the proven technologies
- Developing and disseminating new packaging technologies and regional level branding systems of produce and planting materials involving SHGs and market-oriented groups for increasing the marketable surplus of small farms
- Motivation and attraction of qualified youth towards high-tech Agriculture and sensitization about the whole range of Agri-business, high-tech production systems, and markets, through training, demonstrations and interfaces at different levels.

Dr. A.K. Srivastava placed on record his appreciation and gratitude to the Kerala Agricultural University for the excellent conduct of the 5<sup>th</sup> Regional Committee meeting and National Seminar on Family Farming for Sustainability.

Dr. P.V. Balachandran, Registrar & Director of Extension, KAU proposed vote of thanks to all dignitaries, participants and organizing committee. The 5<sup>th</sup>Regional Committee Meeting and National Seminar on Family Farming for Sustainability came to an end at 3.45p.m. with the National Anthem.

## **Annexure I**

**PROGRAMME SCHEDULE APPROVED BY THE PRESIDENT, IAUA** 5<sup>TH</sup> REGIONAL COMMITTEE MEETING OF IAUA SPONSORED BY INDIAN AGRICULTURAL UNIVERSITIES ASSOCIATION AND ORGANISED BY KERALA AGRICULTURAL UNIVERSITY, VELLANIKKARA, THRISSUR, KERALA ON 19-20. **DECEMBER 2014** 

## Theme:

## "Family farming for sustainability"

#### Registration

- 9.00 a.m. to 10.00 a.m.

#### Inaugural session

- 10.00 a.m. to 11.30 a.m. 10.00 a.m. to 10.05 a.m. Invocation University Choir 10.05 a.m. to 10.15 a.m. Welcome address Dr. P. Rajendran, Vice-Chancellor, KAU 10.15 a.m. to 10.25 a.m. Introductory remarks Dr. R.P. Singh, Executive Secretary, IAUA 10.25 a.m. to 10.35 a.m. Presidential address Dr. A.K. Srivastava, President, IAUA 10.35 a.m. to 10.55 a.m. Lighting the lamp and Dr. Swapan K. Datta, Inaugural address by Deputy Director General (Crop Science), Chief Guest **ICAR** 10.55 a.m. to 11.10 a.m. Address by Guest of Dr. Arvind Kumar, Honour Deputy Director General (Edn), ICAR 11.10 a.m. to 11.15 a.m. Vote of thanks Dr. T.E. George, Organizing Secretary, KAU 11.15 a.m. to 11.45 a.m. High tea

## Session-wise programme 19th December – 2014

Registration	- 9.00 a.m. to 10.00 a.m.
Inaugural session	– 10.00 a.m. to 11.15 a.m.

## **Technical Session I**

## SUB THEME: Family farming in relation to food and nutritional security 11.45 a.m. to 1.35 p.m.

	-	
Chairman	:	Dr. Tej Pratap, Vice-Chancellor, SKUAS&T(K), Srinagar
Co-Chairman	:	Dr. A.R. Pathak, Vice-Chancellor, JAU, Junagadh
Rapporteurs		1. Dr. P.V. Balachandran, Registrar and Director of Extension, KAU, Thrissur
		2. Dr. Jose Mathew, Associate Director of Extension, Communication Centre,
		Mannuthy
Panelists	:	1. Dr. S.K. Patil, Vice-Chancellor, IGKV, Raipur
		2. Prof. A.K. Misra, Vice-Chancellor, MAFSU, Nagpur
		3. Dr. H.S. Gaur, Vice-Chancellor, SVBPUAT, Meerut
		4. Dr. V.S. Thakur, Vice-Chancellor, Dr YSPUH&F, Nauni
		5. Dr. P. Rajendran, Vice-Chancellor, KAU, Thrissur

- 6. Dr. Manjit Singh, IAS, Vice-Chancellor, SKNAU, Jaipur
- 7. Dr. S.N. Puri, Vice-Chancellor, CAU, Imphal
- 8. Dr. Purnendu Biswas, Vice-Chancellor, WBUAFS, Kolkata
- 9. Dr. Ashok A. Patel, Vice-Chancellor (Acting), SDAU, Sardarkrushinagar

	in the state of the	
Time	<b>Title of the paper</b>	<u>Speaker</u>
11.45 a.m. to 12.25 p.m.	Fighting hunger	Dr. A.R. Pathak, Vice-Chancellor,
12.25 nm to 12.55 nm	- plurality in family farming	JAU, Junagadh
12.25 p.m. to 12.55 p.m.	Peri-urban family farming	Dr. K. Ramaswamy,
	in India	Vice-Chancellor, TNAU,
12.55 p.m. to 01.25 p.m.	Views of panelists	Coimbatore
01.25 p.m. to 01.35 p.m.	Remarks by the Chairman	
or.20 p.m. to or.55 p.m.	itemarks by the channian	
01.35 p.m. to 02.30 p.m.	LUNCH BREAK	
<i>SUB TH</i> 02.30 p.m. to 05.00 p.m.	IEME: Socio-economic aspects	s of family farming
-	Dr. M.L. Choudhary, Vice-Chanc	ellor BAU Sabour
	Dr. O.P. Gill, Vice-Chancellor, M	PUA&T Udainur
		in Orteen, Odaipui
Rapporteurs : 1	. Dr. T.R. Gopalakrishnan, Dired	ctor of Research, KAU, Thrissur
2	. Dr. I. Johnkutty, Associate Dire	ector of Research, KAU, Thrissur
Panelists 1	Dr C Vagudavanna Vias Cha	modiler LIAIIG GL
	. Dr. C. Vasudevappa, Vice-Cha . Dr. Umesh K. Mishra, Vice-Ch	ancellor, UAHS, Shimoga
3	. Dr. V.K. Taneja, Vice-Chancell	lor GADVASU Ludhiana
4	Dr. George John, Vice-Chance	llor. BAU. Ranchi
5.	. Dr. H.S. Dami, Vice-Chancello	or, GBPUAT, Panatnagar
	Dr. N.C. Patel, Vice-Chancello	
Time	Title of the new or	C I
02.30 p.m. to 02.50 p.m.	<u><b>Title of the paper</b></u> Persistence of family	Speaker Dr. M.L. Chaudhann
02.50 p.m. to 02.50 p.m.	farming in India in the	Dr. M.L. Chaudhary, Vice-Chancellor, BAU,
	context of land reforms	Sabour
02.50 p.m. to 03.10 p.m.	Revisiting indigenous	Dr. P. Rajendran,
	farming knowledge in	Vice-Chancellor,
		KAU, Thrissur
03.10 p.m. to 03.30 p.m.	Climate change, sustainability	Dr. V.S. Tomar,
	and socio-economics of	Vice- Chancellor, JNKV,
02.20		Jabalpur
03.30 p.m. to 04.15 p.m.	Views of panelists	
04.15 p.m. to 04.25 p.m. 04.25 p.m. to 05.00 p.m.	Remarks by the Chairman	
04.25 p.m. to 05.00 p.m.	Tea Break	
-		

## Special Session **SUB THEME:** Universities' role to help family farming 05.00p.m. to 06.00 p.m.

Chairman	:	Prof. (Dr. & Col.) A.K. Gahlot, Vice-Chancellor, RUVAS, Bikaner
Co-Chairman	:	Dr. S.K. Patil, Vice-Chancellor, IGKVV, Raipur
Rapporteurs	:	1. Dr. A. Sukumaran, Associate Dean, College of Co-operation,
		Banking and Management, Vellanikkara
	-	2. Dr. Philip Sabu, Director MBA, College of Co-operation,
		Banking and Management, Vellanikkara
Panelists	The second	1. Dr. Manmohan Singh, Vice-Chancellor, SVVU, Tirupati
		2. Dr. P.K. Sharma, Vice-Chancellor, SKUAST (J), Jammu
		3. Dr. B. Ashok, IAS, Vice-Chancellor, KVASU, Wayanad
		4. Dr. Manoranjan Kar, Vice-Chancellor, OUA&T, Bhubaneshwar
		5. Dr. K.M. Bujarbaruah, Vice-Chancellor, AAU, Jorhat
		6. Dr. A.R. Pathak, Vice-Chancellor, JAU, Junagadh
		7. Dr. T.J. Hari Krishnan, Vice-Chancellor, TNVASU, Chennai
		8. Dr. Akhtar Haseeb, Vice-Chancellor, NDUAT, Faizabad
		9. Sri. Subir Kumar, IAS, Vice-Chancellor, SKRAU, Bikaner

Time	Title of the paper	Speaker
05.00 p.m. to 06.45 p.m.	Help to family farming :	
05.00 p.m. to 05.15 p.m.	Major on live stock	Dr. B. Ashok, IAS.
		Vice-Chancellor, KVASU, Wayanad
05.15 p.m. to 05.30 p.m.	Major on fish farming	Dr. W.S.Lakra
		Director, CIFE, Mumbai
05.30 p.m. to 05.45 p.m.	Major on Horticultural &	Dr T.A.More, Vice-Chancellor,
	vegetable crops	MPKV, Rahuri
2		
05.45 p.m. to 06.30 p.m.	Views of the panelists	A
06.30 p.m. to 06.45 p.m.	Remarks by the Chairman	
07.30 p.m. onwards	DINNER	

#### 20th December - 2014 Tool I Canai \*\*\*

1	e	CI	in	icui	3	ession	111	
								-

SUB THEME: Family farming and inclusive growth
10.00 a.m. to 11.15 a.m.
Chairman : Dr. V.S. Tomar, Vice-Chancellor, JNKV, Jabalpur
Co-Chairman : Dr. W.S.Lakra, Director, CIFE, Mumbai
Rapporteurs : 1. Dr. K. Sudhakara, Dean (Forestry), College of Forestry,
Vellanikkara
2. Dr. M. Sivaswamy, Dean (Ag. Engg.), KCAET, Tavanur
Panelists : 1. Dr. A.C. Varshney, Vice-Chancellor, UP Pt. DDUPCVV, Mat
2. Dr. R.K. Mittal, Vice-Chancellor, RAU, Pusa
3. Dr. A. Padmaraju, Vice-Chancellor, ANGRAU, Hyderabad

32

Mathura

33

- 4. Dr. D.P. Biradar, Vice-Chancellor, UAS, Dharwad
- 5. Dr. D.P. Kumar, Vice-Chancellor, UAS, Bangalore
- 6. Dr. Mathew Prasad, Vice-Chancellor, UUHF, Bharsar
- 7. Dr. Biswanath Bandyopadhyay, Vice-chancellor, UBKV, Coochbehar
- 8. Maj. Gen, Shrikant SM, VSM, Vice-Chancellor, LLRUVAS, Hissar
- 9. Dr. D.L. Maheshwar, Vice-Chancellor, UHS, Bagalkot

Time	Title of the paper	Speaker
10.00 a.m. to 10.20 a.m.	Changing role of women	Dr R.K. Mittal, Vice-Chancellor,
	and youth in agriculture with	RAU, Pusa
	reference to family farming	
10.20 a.m. to 10.40 a.m.	In harmony with nature –	Dr. Padmaraju, Vice-Chancellor,
	Biodiversity in family farms	ANGRAU, Hyderabad
10.40 a.m. to 11.10 a.m.	Views of panelists	
11.10 a.m. to 11.15 a.m.	Remarks by the Chairman	
11.15 a.m. to 11.30 a.m.	TEA BREAK	

## Technical Session IVFuture of family farmingSUB THEME:

11.30 a.m. to 01.30 p.m.		
Chairman :	Dr. K.S.Khokhar, Vice-Chancel	lor, CCSHAU, Hisar
Co-Chairman :	Dr. T.A. More, Vice-Chancellor,	, MPKV, Rahuri
Rapporteurs :	1. Dr. Sverup John, Dean (Ag.)	, College of Agriculture, Vellayani
	2. Dr. Sajan Kurien, Director (F	Planning), KAU, Thrissur
Panelists :	1. Dr. R.G. Dani, Vice-Chancell	or, DPDKV, Akola
	2. Dr. K.K. Katoch, Vice-Chano	cellor, CSKHPKV, Palampur
	3. Prof. Munna Singh, Vice-Ch	ancellor, AUA&T, Kanpur
	4. Prof. R.K. Singh, Director, I	VRI, Izatnagar
	5. Prof. Rajeev Sangal, Vice-Ch	nancellor, BHU, Varanasi
	6. Dr. Kisan E. Lawande, Vice-	Chancellor, Dr.BSKKV, Dapoli
	7. Dr. Chitranjan Kole, Vice-Ch	ancellor, BCKVV, Mohanpur
	8. Dr. B.S. Janagoudar, Vice-Ch	nancellor, UAS, Raichur
Time	Title of the paper	Speaker
11.30 a.m. to 11.50 a.m.	Strengthening family	Dr. S.K. Patil, Vice-Chancellor,
	farms – policy changes	IGKVV, Raipur
11.50 a.m. to 12.10 p.m.	Sustainability of family	Dr. R.G. Dani, Vice-Chancellor,
	farms in the changing political	DPDKV, Akola
	economic socio scenario	
12.10 a.m. to 12.50 p.m.	Views of panelists	
12.50 p.m. to 01.00 p.m.	Remarks by the Chairman	
01.00 p.m. to 02.00 p.m.	LUNCH BREAK	

Valedictory Session

02.00 p.m. to 04.00 p.m.

Chairman Co-Chairman Rapporteurs Dr. A.K. Srivastava, Vice-Chancellor, NDRI, Karnal
Dr. K. Ramaswamy, Vice-Chancellor, TNAU, Coimbatore
1. Dr. T.E. George, Director (Academic & Post Graduate Studies), KAU, Thrissur

: 2. Dr. P. Ahamed, Director of Students' Welfare, KAU, Thrissur Presentation of session-wise recommendations 04.00 p.m. to 4.30 p.m. TEA TIME

## Annexure II

## LIST OF PARTICIPANTS of the 5<sup>th</sup> REGIONAL COMMITTEE MEETING OF IAUA HELD ON 19-20 DECEMBER 2014 AT THRISSUR, KERALA

Sl. No	ICAR Officials
1	Dr. Swapan K. Datta, Deputy Director General (Crop Science), Indian Council of Agricultural Research, New Delhi
2	Dr. Arvind Kumar, Deputy Director General (Education), Indian Council of Agricultural Research, New Delhi
3	Dr. A.K.Srivastava, Director, National Dairy Research Institute, Karnal-132 001, Haryana
4	Dr. R.P. Singh, Executive Secretary, Indian Agricultural Universities Association, New Delhi
Sl. No	University Officials - Vice-Chancellors
1	Dr. K.S. Khokhar, Vice-Chancellor, CCS Haryana Agricultural University, Hissar-125 004, Haryana
2	Dr. N.C. Patel, Vice-Chancellor, Anand Agriculture University, Anand-388 110, Gujarat
3	Dr. A.R. Pathak, Vice-Chancellor, Navsari Agricultural University, Erea Char Rasta, Dandi Road, Navsari-396 450, Gujarat
4	Dr. T.A. More, Vice-Chancellor, Mahathma Phule Krishi Vidyapeeth, Rahuri-413 722, Dt. Ahmadnagar, Maharashtra
5	Dr. B. Ashok, IAS, Vice-Chancellor, Kerala Veterinary and Animal Sciences University, Pookot, Wayanad, Kerala
6	Dr. S.K. Patil, Vice-Chancellor, Indira Gandhi Krishi Viswa Vidyalaya, Krishaknagar, Raipur-492 012, Chhattisgarh
7	Dr. K. Ramasamy, Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore- 641 003, Tamil Nadu
8	Dr. P. Rajendran, Vice-Chancellor, Kerala Agricultural University, Vellanikkara, Thrissur- 680656, Kerala
9	Dr. H.S. Gaur, Vice-Chancellor, Sardar Vallabhbhai Patel University of Agriculture And Technology, Meerut, Maharashra
10	Dr.V.S.Thakur, Vice-Chancellor, Dr.Y.S. Parmar University of Horticulture and Forestry, Nauni, Dist. Solan-173 230, Himachal Pradesh
11	Dr. K.K. Katoch, Vice-Chacellor, Ch. Sarwan Kumar Krishi Vishwa Vidyalaya, Palampur-176 062, Himachal Pradesh

12	Prof.(Dr.) Biswanath Bandyopadhyay, Vice-Chancellor, Uttar Banga Krishi Vishwa Vidyalya, P.O. Pundibari, Coochbehar -736 165, West Bengal			
13	Dr. D.P. Biradar, Vice-Chancellor, University of Agricultural SciencesYeltinagu Campus Krishinagar, Dharwad -580 005, Karnataka			
14	Dr. C.Vasudevappa, Vice-Chancellor, University of Agricultural and Horticultural Sciences, Shimoga-577 225, Karnataka			
15	Maj. Gen.Shrikant SM, VSM (Retd.), Vice-Chancellor, Lalalajpat Rai University of Veterinary and Animal Sciences, Hissar-125 004, Haryana			
16	6 Dr. Ashok A. Patel, Vice-Chancellor, Sardarkrushinagar Dantiwaba Agricult University, Sardar Krushinagar-385 506, Gujarat			
17	Dr. Akthar Haseeb, Vice-Chancellor, Narendra Dev University of Agriculture and Technology, Kumarganj, Faizabad-224 001, Uttar Pradesh			
18 Dr. D.P. Kumar, Vice- Chancellor, University of Agricultural Sciences, GKV -560 065, Karnataka				
19	Dr. Salimath, Vice-Chancellor, University of Agricultural Sciences, Raichur, Karnataka			
20	Dr. Ravi Pratap Singh, Vice-Chancellor, Banaras Hindu University, Uttar Pradesh			
SI. No	Other Officials			
1	Dr. M.A. Shankar, Director of Research, University of Agricultural Sciences, GKVK, Banglore -560 065 Karnataka			
2	Dr. B.M. Khardi, Director of Research, University of Agricultural Sciences, Yeltinagud Campus, Krishinagar, Dharwad-580 005, Karnataka			
3	Dr. H.S. Vijayakumar, Director of Extension, University of Agricultural Science Yeltinagudda Campus, Krishinagar, Dharwad-580 005, Karnataka			
4	Dr. N. Nagaraja, Director of Extension, University of Agricultural Sciences, GKVK, Banglore -560 065, Karnataka			
5	Dr. A.R. Alagawadi, Dean (PGS), University of Agricultural Sciences, Dharward 580 005, Karnataka			

