

Annexure I

Minutes of 20th Research Council Meeting held on 7th January, 2021

The 20th Research Council Meeting (RCM) of Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu (SKUAST-J) was convened on 7th January, 2021 in the Conference Hall, SKUAST-J, Main Campus, Chatha under the Chairmanship of Prof. J. P. Sharma, Hon'ble Vice Chancellor, SKUAST-Jammu to assess the status of on-going research activities and chalk out road map for research to be taken in future.

Dr. Kuldeep Singh, Director NBPGR, and Prof. A. R. Naziki, Former Dean, Faculty of Veterinary Sciences, SKUAST-Jammu were present as the invited experts of eminence in Agriculture and Veterinary Sciences, respectively. Dr. Jag Paul Sharma, Director Research, SKUAST-J; Dr. S.K. Gupta, Director Extension, SKUAST-J; Dr. S. K. Gupta, Director Education, SKUAST-J; Dr. Deepak Kher, Director Planning & Monitoring, SKUAST-J; Dr. M. S. Bhadwal, Dean Faculty of Veterinary Sciences & Animal Husbandry; Mr. Rajesh Talwar, Comptroller and Registrar, Dr. S.E.H. Rizvi, Dean Faculty of Basic Sciences; Sh. Ram Sewak, Director Horticulture, Heads of Divisions of Faculties of Agriculture, Veterinary Sciences & Animal Husbandry and Basic Sciences, Chief/Senior Scientists & Heads of Krishi Vigyan Kendras, Incharge Stations/Sub-Stations, Principal Investigators of adhoc projects; Chief Agriculture Officers, Chief Horticulture Officers as well as other officers of Agriculture, Horticulture and other line departments participated in the meeting (Annexure I).

At the outset, Prof. Jag Paul Sharma, Director Research, SKUAST-J welcomed the Chairman, experts and participants and particularly acknowledged the generous attitude of Hon'ble Vice Chancellor for organizing such prestigious meeting. Prof. Sharma presented "Salient activities/achievements of Directorate of Research". It was apprised that mandates of Directorate of Research included identification of researchable issues; prioritization of researchable issues; development of research programmes, coordination of university research activities and implementation, monitoring and evaluation of research programmes. Prof. J.P. Sharma informed that focus areas of future research at SKUAST-Jammu and also discussed about twelve varieties released recently. Prof. Jag Paul Sharma apprised the house that the varieties released recently are pride of SKUAST-Jammu. These included three of Basmati (Jammu Basmati 138, 123 and 118), two of Lentil (Jammu lentil – 71, 144), Lobia (Lobia-60), Rajmash (Bhaderwah Rajmash-104), Radish (Jammu Radish-45), Broadbean (Jammu Broadbean-01/ RK-01), Cherry Tomato-01, Walnut (Jammu Bhushan walnut-0901), Pecannut (Jammu Pecannut/SKJPP-25). He further said that more varieties viz., toria, harad, rajmash etc are ready for release and the process will be completed soon. It was further informed by Prof. Jag Paul Sharma that 107 number of ongoing ADHOC/ AICRP projects funded by 25 external agencies are functional in university and 40 crore funding was approved during the year 2019-20. Under Product and Variety Testing at SKUAST-Jammu, products of different companies/organizations such as Syngenta, ADAMA, Adventa, DMR, Sanath Seeds and UPL have been tested thus realizing a revenue of Rs. 66.48 lakh.

Prof. Jag Paul Sharma further elaborated that Directorate of Research is concentrating on focused research programs and establishment of Organic Guava (Cv.L-49) orchard at OFRC, Chatha is an example for the same. It was also highlighted that in order to promote quality research, idea of recognition of 2 star, 3 star and super star scientists have been conceived, depending upon the grants received by the scientists under competitive mode.

Sh. Shahid Iqbal, Jt. Director Agri. (Extension), mentioned that research and intervention must be percolated to farmer's field with the strengthening of lab to land and land to lab programs. Most of the farms are small and marginal, therefore, focus should be to increase the income of farmers by helping in providing marketing facilities, protected cultivation, value addition and post harvest management which otherwise is the demand and need of the hour. Mr. Iqbal was also of the opinion that the projects at Central and Regional level must be framed by technical persons from University and according to situation and condition of that particular region.

Mr. Ram Sewak (KAS), Director Horticulture, Jammu appreciated the efforts of SKUAST-Jammu in developing and promoting new varieties for the benefit of farmers. He put forth the researchable issue regarding improvement in varieties of fruits and suggested drought prone root stock for mango, guava and citrus. He highlighted the problem of poor seed germination in Raj Harad and requested for improvement in variety. He also requested for recommendations for post harvest technology for strawberry and to lay focus on tissue culture in date and dragon fruit. Director Horticulture also demanded papaya hybrid seeds from SKUAST-Jammu.

Director, Department of Animal Husbandry, Jammu, in her message through Dr. Rajiv Manhas, Technical officer (General), AHD, Jammu conveyed that refresher courses on new diagnostic technologies, molecular and serological diagnostic techniques, etc. may be organized for the field veterinarians. Research programmes may be taken up to investigate the etiology of increasing intussusception, haematuria and infertility cases in cattle. The Director requested the University that perennial grass varieties for Kandi area for round-the-year fodder availability may be shared with the line department. The Director suggested collaborative efforts of KVKs and line Departments to increase farmer awareness regarding Government schemes run by the line Departments.

(Action: Director, Extension Education; Dean, FVSc& AH; Head, Division of Agronomy)

TECHNICAL SESSION-1

Dr. Anil Kumar, Professor, Agronomy put before the house Agenda item 1 i.e. Confirmation of Proceedings of 19th RCM. The same were confirmed by the Chairman, Prof. J.P. Sharma and the house.

With respect to Agenda No.2. i.e. Action Taken on the Report of 19th RCM, point by point threadbare discussions were held. With respect to improper harvesting of potential of released varieties which could be due to poor extension of technology, Hon'ble Vice Chancellor asked the Director Research, SKUAST-Jammu to test the varieties in field through KVKs. Dr. Kuldeep Singh, Director NBPGR remarked that the data related to varieties needs to be collected from farmers' also for actual position in the farmer's field.

Prof. Jag Paul Sharma apprised the Chairman and the house that actions have been taken with respect to all the issues raised by line departments in 19th RCM.

Agenda No.3. Research Findings/ Recommendations of concluded projects:

Results of different experiments entitled “Effect of System of Rapeseed Intensification on productivity of gobhi sarson (*Brassica napus*) under irrigated conditions of Jammu region” and Relative efficacy of different types of coated urea on growth and yield of wheat in irrigated sub tropics of Jammu region” and “Weed management in Kinnow basins (AICRP-WM)” under Division of Agronomy were presented by Dr. B.C. Sharma. Dr. Kuldeep Singh suggested to analyze the data excluding plane urea due to its unavailability in the market. Further he also remarked that the technology for Weed management in Kinnow basins and Effect of System of Rapeseed Intensification on productivity of gobhi sarson (*Brassica napus*) under irrigated conditions of Jammu region should be taken to farmer’s field through KVKs and then to Director Horticulture for dissemination to farmers on large scale. The expert also enquired about the permission to use glyphosate and suggested to consult National Policy for the same. He said before passing recommendations take advice from National Weed Research Institute about the use of glyphosate.

(Action: Division of Agronomy)

With respect to recommendations of experiment by Division of Soil Science on “Revival of Village Ponds through Scientific Interventions”, the expert remarked that the recommendations must be transferred to farmers for application of the same at field level. He further suggested to work out the economics of all the projects in consultation with Division of Agricultural Economics and ABM. With respect to the project entitled “Soil Fertility Mapping of Rajouri District of J&K using GIS approach”, expert appreciated the work conducted by the Division and suggested to contact National Remote Sensing Institute at Hyderabad for collaborative work with them.

The recommendations of concluded projects entitled “Morphometric and Molecular Characterization of Indigenous Soft Pear Germplasm in Doda and Kishtwar districts of Jammu” and “Molecular Characterization of Indigenous Lime Genotypes” at Division of Fruit Science were presented by Dr. Amit Jasrotia. The expert enquired about the surety of indigenous varieties and suggested that the University must get consent from farmer for release of variety where he is playing a major role. He strongly advised to follow National Biodiversity Act and take care of IPR issues of farmers.

The recommendations of concluded projects at Division of Agroforestry were presented by Dr. L. M. Gupta. The expert lauded the efforts of scientists at Division of Agroforestry and appreciated their findings. Dr. Kuldeep Singh remarked that recommendations of the projects may be further validated and clone may be supplied to KVK for trial on farmer’s field.

(Action: Division of Agro-forestry)

With respect to recommendations of experiment by Division of Plant Pathology on **Epidemiology and management of maydis blight caused by *Bipolaris maydis* in Maize and Studies on Variability of *Pyricularia oryzae* and Management of Rice**

Blast Disease, the expert suggested that the recommendations of the projects may be further validated before being transferred to end users.

The recommendations of concluded projects at Division of Food Science Technology were presented by Dr. Anju Bhat. With respect to project entitled “Utilization of pumpkin (*Cucurbita moschata*) for the development of blended toffee”, the expert, Dr. Kuldeep Singh remarked that one must have detailed information about benefit of individual ingredients in value added products. He also emphasized on analysis of Vitamin A content in Pumpkin seed which can be part of mid day meal programme of Govt of India.

(Action: Division of Food Science and Technology)

The recommendations of concluded projects at School of Biotechnology were presented by Dr. R.K. Salgotra. The expert lauded the efforts of scientists at School of Biotechnology and appreciated their findings. He also suggested to register local germplasm at NBPGR, New Delhi for conservation.

With respect to Screening of elite germplasm of Kagzi lime (*Citrus aurantifolia*) in Jammu subtropics and Standardization of rootstocks for Kinnow under rainfed conditions of Jammu sub-tropics were presented by Dr. Rakesh (RRSS, Raya). Expert remarked to come up with full package of practice for citrus crops to reduce the effect of wilt which is the major cause of decline in yield of citrus under rainfed conditions. He further suggested to standardized rootstock that would really induced resistance and advised scientists to go for Research and Development in that scale.

(Action: RRSS, Raya)

With respect to findings of experiment “Development of Moong bean variety (JAUM-0936) for rainfed areas of Jammu region” conducted at PRSS Samba were presented by Dr. Sanjeev Kumar. Dr. Kuldeep Singh asked the concerned scientist to give seed to Division of Pathology and Entomology for Validation. The concerned scientist informed the house that testing and mini kit trial are already conducted and presented in kharif 2018 ZREAC meeting. Moreover Advance Varietal Trial of MULLaRP are also completed.

Recommendations of the experiment on “**Agronomic evaluation of dual purpose sorghum and cowpea intercropping under rainfed condition**” were presented by Dr. Deepak Kumar. The expert, Dr. Kuldeep Singh asked the concerned scientist to give crisp recommendations with respect to fertilizer application for Sorghum and analyze its nutritive value also.

Dr. R K Sharma, Professor & Head, Division of Animal Nutrition, presented the findings of experiments on incorporating tanniferous leaf meal mixture in dairy cattle ration; incorporating boiled potato peel waste in sheep ration and efficacy of turmeric and garlic (*Allium sativum*) powder as feed additives for broiler chickens with the recommendations that condensed tannins containing leaf-meal mixture fortified functional feed can be supplemented to improve the udder health and reduce the gastro-intestinal parasitic load in dairy animals; boiled potato peel waste can be utilized as an alternative to green fodder in sheep ration and garlic powder supplementation at

the rate of 1% in the diet is a viable alternative to antibiotic growth promoter in the feed of broiler chicken.

Dr. Sunil Kumar, Prof.& Head, Division of Livestock Products Technology, presented the achievements of concluded DST-SEED project on Rural women technology park establishment. Dr. J. P. Sharma lauded the on-field impact of the work carried out under this project. Dr. Sunil Kumar also presented the recommendations of the concluded project 'Technological development of functional foods for life-style diseases and its entrepreneurial promotion among the farming community in Jammu & Kashmir.' Dr. J. P. Sharma advised that a third-party validation of the shelf life of developed functional foods must be carried out.

(Action: Head, Division of LPT)

Dr. Utsav Sharma, Professor & Head, Division of Veterinary Gynaecology & Obstetrics, presented the findings of the concluded DBT funded research project 'Endometrial Cytology and Histopathological Evaluations In Repeat Breeding Crossbred Cows.' Dr. A.R. Nazki advised the Division to pass on the recommendations regarding the use of foldoscope to the Department of School Education to make it a part of the curriculum.

(Action: Head, Division of VGO)

Dr. Rajiv Singh, Professor & Head, Division of Veterinary Medicine, presented the findings of concluded research projects 'Studies on iodine deficiency in livestock & its management'; 'Enhancement of Livelihood Security among Livestock rearers through Technological Interventions' and 'Investigations on proactive and therapeutic approaches for improving udder health in dairy cows' with the recommendations that Iodine deficiency is widely prevalent among the livestock of the region and supplementation of iodine must be carried out to improve the productive and reproductive performance of regional livestock. He further recommended that pre-partum micromineral supplementation and levamisole administration in dairy cows can be used to reduce the incidence of subclinical mastitis in dairy cows.

Dr. Dharendra Kumar, Assistant Professor, Division of Animal Genetics and Breeding, presented the finding of concluded research project 'Characterization of Poonchi Chicken.' Dr. Kuldeep Singh lauded the work done under the project and advised to take up the process to register Poonchi chicken as a breed.

(Action: Head, Division of AGB)

Dr. M.A. Malik, Professor & Head, Division of Veterinary Public Health and Epidemiology, presented the findings of the concluded research project 'Seroprevalence studies on brucellosis in animals and humans' with the recommendations that the medical fraternity should be made aware of considering brucellosis while diagnosing

cases of pyrexia of unknown origin and the livestock rearers should be advised to get the animals tested for brucellosis before its purchase.

Dr. J. S. Soodan, Professor & Head, Division of Teaching Veterinary Clinical Complex, presented the findings of the concluded research project 'Economic empowerment of rural goat farmers through scientific intervention in block R.S. Pura of Jammu division' with the recommendation that progesterone impregnated vaginal sponge (vaginal sponge) along with PMSG combination is recommended for induction of estrous and synchronization in goats.

Remarks of the invited experts of eminence

Dr. Kuldeep Singh, Director NBPGR observed that:

- The GI tagging is very important and therefore suggested to strive for GI tag and registration for local material of region specific crops like Bhaderwah Rajmash at NBPGR.
- Stress should be laid to uptake research projects on vegetable production at higher altitude.
- Prof. Singh appreciated the cultivation of underutilized fruit Karonda and advised for its value addition and further analysis for its nutritive value.
- Focus should be on local to global research and also suggested to incorporate short duration millets in research programs.
- Focus on promotion of off-season high value vegetable cultivation
- For increasing productivity under rainfed conditions in sub-tropical and intermediate areas, local sources of organic nutrients should be recommended besides the application of recommended doses of fertilizer.
- Hydroponics should be replicated at farmer's field and to establish demonstration units at different KVKs.

Dr. A. R Nazki, Ex-Registrar and Dean, FVSc& AH, SKUAST-Jammu, observed that:

- Significant improvement is visible in the research quality and concepts undertaken by the University.
- The inclusion of basic and societal research components in the research programmes like women empowerment and sustainable livestock farming is palpable and appreciable.
- Animal welfare is an important aspect and scientists must consider it while implementing and formulating research programmes.
- Efforts must be carried out to minimize animal suffering through technological interventions and outreach activities.

(Action: Dean, FVSc& AH)

Concluding Remarks of the Chairman:

- Research must be prioritised on the basis of one district-one product identified by the Government of India.
- Scientists to uptake research on minimizing post-harvest losses, developing better fodder and flower plants varieties and impact of high-density cropping on quality parameters of the harvest.
- Formulate research projects in school mode with multi-disciplinary convergence.
- Advised the scientists to prioritize their research programmes based on the needs, interests and constraints of the farmers.
- Animal Husbandry will be the viable alternative to agriculture in the near future and it will definitely enhance the income of the farmers which otherwise is decreasing due to shrinking of land holdings.
- Focus beyond production through development of strategies, value addition and market linkages for increasing the share of farmer in consumers' rupee.

The Hon'ble Vice Chancellor congratulated Director Research for successfully conducting the 20th RCM and expressed satisfaction over conduct of meeting in the august presence of eminent experts and officers of line departments. Dr. Anil Kumar, Professor, Agronomy conducted the proceeding of the meeting and Dr. Pradeep Wali, Associate Director Research, Directorate of Research, SKUAST-Jammu, Chatha presented vote of thanks.

Rapporteurs:

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