Proceedings of the Third Meeting of Research Council of Agriculture University, Kota

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The Third meeting of Research Council of Agriculture University, Kota was held on 15th January, 2020 at Agricultural Research Station, Ummedganj, Kota.

The following members & invitees were present;

S. No.	Name	Designation
lu	Prof. D.C. Joshi	Hon'ble Vice-Chancellor, AU, Kota and Chairman
2.	Prof. A.R. Pathak	Expert Invitee; Former Hon'ble Vice-Chancellor, NAU, Navsari & JAU, Junagarh, Gujarat
3.	Prof. Z.S. Solanki	Expert Invitee; Founder Hon'ble Vice-Chancellor, AU, Kota
4.	Dr. Pratap Singh	Director Research, AU, Kota & member secretary
5.	Dr. K. M. Gautam	Director Extension Education, AU, Kota
6.	Dr. (Mrs.) Mamta Tiwari	Director, PME, AU, Kota
7.	Dr. S.K.Jain	Director HRD, AU, Kota /Prof. & Head, Dept. of Postharvest Technology, CH&F, Jhalawar
8.	Dr. M. C. Jain	Dean /Prof. & Head, Dept. of Horticulture, COA, Kota
9.	Dr. I.B. Maurya	Dean/Prof.& Head, Dept. of Vegetable Science, CH&F, Jhalawar
10.	Dr. J. M. Dhakar	Director Education, AU, Kota/Addl. Director (seed & farms), AU, Kota/ Prof. & Head, Dept. of Gen. & Pl. Breeding, COA, Kota
11,	Dr. N. L. Meena	Zonal Director Research, ARS, Kota/O/I MAF, Kota
12.	Dr .L. K. Dashora	Emirates Prof.
13.	Dr. H. R. Chaudhary	Prof. & Head, Dept. of Entomology, COA, Kota
14.	Dr. Baldev Ram	Assoc. Prof. & Head, Dept. of Agronomy, COA, Kota/ Dy. Dir. Res., AU, Kota
15.	Dr. S. B. S. Pandey	Assoc. Prof. & Head, Dept. of Silviculture & Agroforestry, CH&F, Jhalawar
16.	Dr. Mahendra Singh	Sr. Scientist & Head, KVK, Kota (Coopted member)
17.	Dr. B. L. Meena	Nodal Officer Zone IIIB and Sr. Scientist & Head, KVK, Sawai Madhopur) (Special invitee)
18.	Dr. J. P. Tetarwal	Assoc. Prof. (Agronomy), ARS, Kota (Special invitee)
19.	Sh. Pradeep Kumar	Asstt. Prof. (Agronomy), ARSS, Aklera, (Special invitee)
20.	Dr. S. L. Yadav	Asstt. Prof. (Agronomy), ARSS, Khanpur, (Special invitee)
21.	Dr. H. P. Meena	Farm Incharge, Sultanpur Farm, Kota (Special invitee)
22.	Dr. C. B. Meena	Asstt. Prof. (Plant Pathology), ARS, Kota (Coopted member)
23.	Dr. Chaman Jadon	Asstt. Dir. Res., AU, Kota (Special invitee)
24.	Dr. D.L. Yadav	Asstt. Prof., DOR, AU, Kota (Special invitee)

At the outset of the meeting, Dr. Pratap Singh, Director Research, AU, Kota and Member Secretary of Research Council welcomed the Chairman of the meeting & Hon'ble Vice-Chancellor, AU, Kota Prof. D.C. Joshi, invited eminent experts Dr. A. R. Pathak, former Vice-Chancellor, NAU, Navsari & JAU, Junagarh, Gujarat and Prof. Z.S. Solanki, founder Vice-Chancellor, AU, Kota. He also welcomed all the members of the Research Council.

In the opening remarks Hon'ble Vice Chancellor Prof. D.C. Joshi mentioned that the Agriculture University Kota is a small university having only two constituent colleges, three research farms and two seed production farms. He mentioned that this is agriculturally prosperous zone of the state. The much of the crop area comes under command area so water management is very important aspect. In *kharif* season, there is very high rainfall with few rainy days and causes waterlogged situation. Very high temperature in summer and very low temp in winter thus, extreme weather/climate conditions sometimes create problems. Hence, planning of research intervention should be done for maintaining the productivity of the crops under changing scenarios. Soybean is the main crop of this region facing lot of constraints, thus efforts should be done for its sustainable yield. Due to limited state funding, focus should be on the university revenue generations Hon'ble Vice Chancellor stressed for more externally funded projects from DBT, DST, CSIR, ICAR, NGOs, private etc.

Dr. Pratap Singh, Director Research, presented the following agenda items one by one before the house.

- Agenda item No. AUK/RC-3/2020/1: Confirmation of the proceeding of the 2ndResearch Council meeting held on 7th August, 2018
 The proceedings of 2nd meeting of the Research Council was confirmed.
- Agenda item No.AUK/RC-3/2020/2: Action Taken Report on the recommendations /suggestions of the 2nd Research Council meeting

Dr. Pratap Singh, Director Research, presented the action taken report of 2nd meeting of the Research Council. All the eight agenda items were resolved and notified.

The actionable points which were suggested during the 2nd meeting have been implemented.

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Actionable Points	Action Taken Report
Proposal for licensing of seed production at different units of university: (Action taken by AD(Seed& Farms)/O/Is)	ARS, Kota, MAF, Kota and KVK-Kota, Bundi Jhalawar have taken the seed license.
Perspective plan of the university seed production programme at all the units by proper monitoring: (Action taken by AD(Seed& Farms)	Prior to each season, a production plan is prepared, finalized and circulated among all the centres. Accordingly, the seed production is undertaken in the university units. Every season, a monitoring committee is constituted for monitoring of the university seed production programme and visits regularly at all the

	centres. The respective center Incharges are maintaining seed quality, tagging, testing & selling etc.
Enhancement in revenue of the university through seed: (Action taken by AD(Seed& Farms)	Efforts are being done to enhance the seed
Development of Agro-forestry model to perpetuate for revenue generation: (Action Taken by ZDR/Unit O/Is	ARS, Kota under AICRP on IFS 12
At ARSS, Khanpur, Breeder seed production to be hasten and inclusion of KVKs farms for quality as well as breeder seed production: (Action taken by AD(seed& Farms)	Breeder seed of various crops are being produced at ARSS, Khanpur as well as KVKs.
Production of disease free potato involving private agency for value addition: (Action Taken by ZDR/ P.I. Potato project)	(10 q) have been distributed to the 32 farmers under AICRP on Potato
Breeders to take more indent from DAC for the breeder seed production of various field crops: (Action taken by AD(Seed & Farms)	All the breeders have been directed to bring
Emphasis should be given to promotion of floriculture by producing seed: (Action taken by ZDR)	A total of 70.0 kg seed of marigold var. Pusa Narangi Genda has been produced at ARS, Kota.
Preparation of research reports, documentation: (Action taken by DR/ZDR/O/Is/PIs)	Research Highlights 2015-17, AU, Kota; Research: An overview; AU Kota-Varieties: at a glance have been published. Annual reports of all the AICRPs, research centers have also been prepared but the Annual report of ARS, Kota did not submitted by the ZDR, ARS, Kota.
Publications for perpetuating to the farming community: (Action taken by ZDR)	Various folders and technical bulletins have been prepared and distributed to the farmers. A monthly hindi magazine "Abhinav Krishi" has been started by the DEE, AU, Kota.
Allow scientists for getting new knowledge in the specialized field in agriculture science at national and international platforms:	Fifteen scientists participated in conferences and seminars at National level and one at an International level.

(Action taken by DR/ZDR)	
Breeding work for developing varieties according to the need of this area: (Action taken by DR/ZDR)	Varieties viz, Kota Masoor 3; Kota Urd 4 have been released by CVRC and two varieties of Chickpea and one variety each of Linseed Urdbean and Field pea have been identified by SVRC.
Efforts should be done for doubling farmers income in 2022: (Action taken by DR/DEE/DPME)	Various technologies have been developed and transferred to the farmers through KVKs, Agriculture Departments and other extension functionaries. A document has been also submitted to the State Govt and ICAR for zone V of Rajasthan. A Brain storming session has also been organized on 21-22 October, 2019 by DOR at ARS, Kota to discuss on various issues and making a work plan.
work should be done: (Action taken by DR/ZDR/Project I/Cs)	A total of 42 production, protection and horticulture technologies have been recommended to the farmers. Work on organic farming is going on under <i>Mahrishi Parashar Krishi Shodh Peeth</i> at ARS, Kota. Work on viable IFS models is also under progress under
the state in which separate meetings and discussions should be in the specialized groups ite for over all issues: All Vice chancellors; for Research – All Director Research; for Extension: All Director Extension Education and for Education: All Deans, of the all agricultural universities to discuss the problems and their solutions and to suggest a concrete recommendations to the stack holders, armers and to the govt. on common issues: Action taken by PS to IVCs/DRs/DEEs/Deans)	AICRP on IFS and RKVY projects. A meeting of all Vice chancellors has been organized at RARI, Durgapura, Jaipur. Directors/ZDRs/ADRs meeting have been conducted on 10.01.2020 at MPUAT, Udaipur. Other officers meeting likely to be held.
(Action taken by DR/DEE/ AD(Seed&Farms)/ZDR)	seed of various crops are produced by all search units as well as KVK's farms.
npact assessment studies of developed Ty	vo impact assessment studies on performance

technologies: (Action taken by DR/DEE/ZDR)	of Sugarcane variety Pratap ganna 1 and Urdbean variety Pratap urd 1 have been done. The adoption of water management technologies have also been done in the AICRP on IWM project. The work for impact assessment on others technologies has been assigned to economist Dr. Lokesh Kumar Meena, COA, Kota as per the directives of HVC.
Nodal officer of the III b zone to take initiatives for research and development in the III b zone in consultation with the Director Research and ZDR: (Action taken by DR/DEE/Nodal Officer, III b)	Experiments on Chandrasur crop and BBF technology (Cluster bean and chickpea) have been started by SS&H/Nodal Officer, III b at KVK, Sawai madhopur.

The house discussed on the action taken report on various recommendations/suggestions made during the 2^{nd} meeting of Research Council, which were resolved and approved by the house.

Agenda item No.AUK/RC-3/2020/3: Review of research work of the year 2018-19

Dr. Pratap Singh, Director Research, presented the salient research progress & achievements from July 2018 to Dec. 2019. He informed the house that during the reporting period, sincere efforts were made to bring new research projects from different funding agencies. The regular AICRPs (14) and voluntary AICRPs centres (06), Enhancing breeder seed production of pulses-NFSM (01), Mission of Integrated Development of Horticulture (01), Neonicotinoid & honeybee (01), BRNS (BARC) (01), RKVY (19), ATMA (01), Oilseed (Soybean) seed hub (01), Seed project on soybean (01) and different product testing projects (42) were conducted at different centres/units under Directorate of Research, Agriculture University, Kota. He informed the house that Kota Masoor 3 variety of Lentil has been developed and notified by CVRC. Another six varieties of different crops developed and identified by CVRC/SVRC viz., Kota Desi Chana 1 & Kota Kabuli Chana 1 of Chickpea, Kota Urd 3 & Kota Urd 4 of Urdbean, Kota Barani Alsi 5 of Linseed and Kota Matar 1 of field pea have been recommended for the state and different parts of India. Similarly, 10 developed varieties of different crops were also tested at ARS, ATCs, KVKs and recommended for the zone V through ZREAC.

Similarly, progress on new innovations in the Agriculture University, Kota viz., grafting techniques for mass queen production of honeybee, standardization & development of production technologies of Makhan grass (Rye grass), production technologies of Quinoa & Chia, studies on new crops Drumstick, Chandrasoor, orchard intensification, works on IFS model, water management technologies, etc. He also presented the progress of various viable units of AU, Kota like honeybee processing unit, phytosanitory lab., soil and water testing lab.

He also presented the progress of land development works at various Research stations, total revenue generation by seed and other means, *Mahrishi Parasher Krishi Shodh Peeth*, AZF and Chironji & Strawberry project of RKVY. First time the Agriculture University, Kota has successfully organized a National level ICAR- Annual Group Meet cum Workshop on Pigeonpea. He also mentioned the awards, publications, future thrust area, etc. During the last one and half years (July 2018 to Dec. 2019), various research units & seed production farms have produced 14430 q seeds of various categories (breeder seed production, TL & other) of different *kharif* and *rabi* crops.

Dr. N.L. Meena, Zonal Director Research, Agricultural Research Station, Kota presented the salient research achievements of agro-climatic Zone-V. Dr. Meena informed about the filled & vacant staff position of teaching & non-teaching up to Dec. 2019. He also appraised on the research facilities available at the station (Phytosanitary lab, Honeybee processing lab, Soil & Water testing Lab and Plant Health Clinic), 49 technologies generated either varietal development; crop production & crop protection including horticultural technologies which were incorporated in the package of practices, newly generated technologies transferred to ATC for further verification of field testing, seed production, extension activities and research priorities. He also informed the house detailed features of 07 developed varieties &10 different crop varieties with salient features; 21 crop productions, 14 crop protections including horticultural technologies generated, commercialized and included in the package of practices for the south-eastern humid plain zone of Rajasthan (Zone V). The ZDR presented the research work of Honey bee project and highlighted the yield enhancement in Radish crop by bee pollination. The Chairman asked to ZDR whether any research work was done on role of Honey bee & pollinators in yield enhancement of other crop of this area, the ZDR replied that we have already done research work on fennel, mustard, coriander, etc. and recommended for the zone. During the year 2018-19 & 2019-20 (Kharif 2019), this station produced quality seed 2412.7 q & 303.0 q, respectively and total seed production was 2715.7 q, out of which, breeder seed (518.75 q), certified seed (884.75 q) and truthful labelled seed (1312.20 q). This station demonstrated 326 front line demonstrations to the farmers' field in a cluster mode approach to show the worthy impact of new variety with full package technology for enhancing the field crops productivity in comparison to farmers' practices. ARS, Kota organized 36 field days and training programmes on various aspects viz., water management under TSP, beekeepers training under RKVY & TSP, RKVY-IFS, soybean, mustard, linseed trainer's training etc. in which 1217 farmers and extension workers were benefited. Various human resource management and academic activities were done by ARS scientists. A total of 47 scientists participated in conference, seminar, symposium, workshop, trainings on short courses, summer & winter school etc. and strengthened the university research & extension in a form of publications (77) in various referred journals, technical bulletins, folders, training manuals and popular articles for the dissemination on latest developed production technologies to the stakeholders. He also presented the financial progress of the station and infrastructure development works viz., land development (7.00 ha), seed godown, threshing floor & implement shed etc under various projects. He also presented the

future plan of the station viz., focus on climate resilience research activities, organic farming especially for cereals and pulses and quality seed production.

Dr. N.L. Meena, O/I MAF. Kota presented the scenario of land utilization pattern, out of 485 ha area 305 ha is being under cultivation. The seed production scenario during last one and half years are as in kharif season (615.58 q), in rabi season (4199.3q) and total production (4814.88 q). He also stressed out the breeder seed statistics viz., Soybean (343.9 q), Urdbean (5.7 q), Mungbean (0.08 q), Wheat (2419.26 q), Chickpea (735.87 q), Field pea (39.11 q), Coriander (8.35 q), Fenugreek (6.0 q), Lentil (48.0 q) & Linseed (28.0 q). He also informed the house about creation of new cultivated land in the various fields for the production of additional breeder seed. He insured the house that our target is to increase the cultivated area and enhance breeder seed production as well as income in next three years. He also presented the infrastructure and development works like boundary wall, watch man hut, anicuts, combine harvester, land development, etc. under RKVY project. He also presented financial progress and future plan viz., establishment of centre of excellence for seed technology.

Dr. Pradeep Kumar, O/I ARSS, Aklera presented the land utilization pattern of ARSS, Aklera where quality seed production programmes being carried out in the *kharif, rabi* and *zaid* seasons. The quality seed production scenario of one & half years of ARSS, Aklera are summarized as *kharif* season (180 q), *rabi* season (681 q), *zaid* season (15 q) and total production (876 q) and informed about current position of seed & expected production for *rabi* 2019-20. He also elaborated the experiments being carried out under volunteer centre of AICRP on Dryland Agriculture and results are summarized as; nutrient management in soybean based double cropping system under residual moisture revealed that Soybean –chickpea gave the highest system productivity & application of nutrient 50 % RDF (inorganic) + 50 % through FYM + sulphur @ 10 kg/ha gave the maximum soybean seed yield; BBF method of soybean sowing gave the maximum system productivity over different moisture conservation practices. He also acquainted the house for the creation of infrastructure facilities at the station under RKVY & MIDH projects. He informed the house about other developmental activities like farmers' trainings under MIDH. He showed progress of guava (1.0 ha) and mandarin (0.5 ha) production and also presented the future plan to extend the area under guava (1.0 ha) and orange (1.5 ha) orchard. He also informed the house that about planning of farm development works viz., land levelling, gravel road and storage godown.

Dr. S.L. Yadav, O/I ARSS, Khanpur presented the land utilization pattern of station where quality seed production programmes being carried out during the *kharif* and *rabi* season. The quality seed production scenarios of last 3 years of ARSS, Khanpur was in *kharif* season (942.93 q), *rabi* season (2141.51q) and total seed production (3084.44 q). He also informed the house for the creation of infrastructure facilities developed under RKVY for enhancing quality seed production. He also highlighted financial progress (revolving fund position) of centre. He also informed future plan for infrastructure development & renovation of farm buildings and levelling of fields etc.

Dr. Harphool Meena, I/c Sultanpur Farm, Kota informed the house that AU, Kota got the Sultanpur farm from GOR only for five years (on lease) for breeder seed production. During the lease duration, this farm cannot develop any new infrastructure facilities. Dr. Meena presented the progress of land utilization pattern of the farm; out of 21.5 ha area, 18.0 ha is being under cultivation. The seed production scenario during last 3 seasons are as in *kharif* 2018 & 2019 (335 q), in *rabi* 2018-19 (920 q) and generated net income about 21.0 lakhs. He also thanked to Director Research, ZDR and other O/Is for proving farm implements and other support for seed production programme. He also informed that efforts will be done to undertake this farm from GOR to AU, Kota permanently. The HVC emphasized for taking breeder seed production programmes and do sincere efforts to receive the farm from Govt.

Dr. J. M. Dhakar, Addl Director (Seed & Farms), AU, Kota presented the over view of seed production scenario of the university. He also drew attention of the house that during 2016-17 to 2019-20 (up to Dec. 2019), total seed production (breeder, TL & other) was 45291 q., including seed production in rabi (35168 q), kharif (9705 q) & zaid (418 q) were produced by the university research & KVK farms. He also requested to the house to provide facilities viz., separate vehicle for effective monitoring of seed production programmes, additional technical staff and contingency budget. Dr Dhakad also stressed out on future plan for enhancing breeder as well as quality seed production of the university farms up to 15000 q/year, enhancement of soybean breeder seed, and priorities for foundation & certified seed rather than the TL seed production. HVC suggested to Addl. Director (Seed & Farms) that concentrate more to enhance the nucleus and breeder seed production rather than other category of seeds. HVC instructed AD (Seed & Farms) to resolve the major constraints of kharif seed production especially for soybean and try to bring more indent of breeder seed of all crops. The HVC and house asked AD (Seed & Farms) to complete the seed policy up to March, 2020.

Research accomplishment & progress of DOR, ARS Kota, MAF Kota, ARSS Aklera & Khanpur, Sultanpur farm and seed production progress was presented by respective incharge for information of the Research Council. After the discussion, all presentations were accepted and approved.

Agenda item No. AUK/RC-3/2020/4: Formation of subject wise sub committees for review of research activities

The matter was discussed at length and it was felt need that to evaluate the research work and to finalize the technical programmes for future research. Preparation of research projects and to review the progress of recommendations, transfer of technologies and to tackle other research related issues etc. the research areas of different subjects have been sub grouped in the following research sub committees (RSC) under the three tier system as follows;

RSC 1- (Crop improvement and Seed Production, Crop production, Crop Protection, Horticulture & Forestry, Ag Engg. & Ag. Information Technology, Food processing technology, Basic Science, Animal Production, Social Sciences)

Functions: To discuss, preparation and finalization of the research programmes and submit to RSC2. Convenor, Co-convenor, members- all relevant subject scientists of the AU, Kota (Research, teaching & extension) and Chairman (DR).

RSC 2- Director Research (Chairman), DEE, DPME, Deans, ZDR/DDR & All RSC1 Convenor /Co-convenor, Additional members (Jt. Dir. Ag./Hort/DDR ATCs) or others as per need.

Functions: To discuss and finalization of the research programmes and submit to RSC3.

RSC 3-Vice Chancellor (Chairman), Director Research (Co-Chairman), Members (DEE, DPME, Deans, Addl. Dir, (Seed & Farms).

Functions: To finalize and approval as proposed by RSC2.

These research sub committees may be recast as per the need. The meeting of research groups should be held at least twice in a year.

Finally it was resolved and approved with the following Sub committees.

Research Sub committee

Crop Improvement	Genetics & Plant breeding Plant bio technology & Biochemistry, Nanotechnology Plant physiology
2. Crop Production	Seed production, processing and marketing Agronomy Soil Science Ag. Meteorology Organic Farming
3. Plant Protection	Micro-biology Entomology Plant Pathology Nematology
4. Horticulture & Forestry	Horticulture Protected Cultivation Hydroponic Forestry
 Agril. Engineering & Agri. Information Technology 	Soil & Water Conservation Farm Power Machinery Agril. Product Processing and Renewable Energy
6.Animal Husbandry	Agril. Information Technology Livestock Production and animal Management Animal Nutrition Poultry Science
7.Social Science,	 Agril. Economics Agril. Statistics Agri. Business Management Extension Education
B. Food Technology	Community Science Post Harvest Technology Food Processing Technology &Value addition

(Action: DR)

Agenda item No. AUK/RC-3/2020/5: Testing fees of the chemical analysis of soil, water, food crops in the University laboratories

Proposed rate list for the approval by the house was discussed. Chairman and Experts suggested to ZDR and Bio-chemist to do some more exercise on testing fee of the other universities. The HVC instructed that there should be no charge for student research works. The proposed fees was approved by the house. The HVC suggested that testing fees should be published in news paper and uploaded on the university portal/website.

Proposed rates of bio chemical parameters analysis

S. No.	Biochemical parameter	Testing amount per sample (Rs.)	
		For AU, Kota units	For others
1.	Protein by lowery method	600/-	
2.	Total Chlorophyll content	600/-	800/-
3.	Total Phenol		800/-
4.	Total Carbohydrate	600/-	800/-
DATE:	1:50	750/-	1000/-
5.	Proline content	750/-	1000/-
6.	Total Amino acid	750/-	- Systeman
7.	Starch content	7/1/00/04 - 2 - 3	1000/-
0.700	TOTAL TENEDONE	750/-	1000/-

Agenda item No. AUK/RC-3/2020/6: Proposal for brand name & trade mark for seed and other products of AU, Kota

It is necessary to have the brand name of the university seed and other products. It is proposed that the brand name of Agriculture University, Kota seeds will be "कोटा बीज" in hindi and if written in English will be "Kota Seed". For other products prefix will be 'कोटा' in hindi and "Kota" in English i.e. 'कोटा शहद'and "Kota Honey", respectively. The word Kota will be prefix for all followed by the product name. The brand name & trade mark will be registered by the respective persons/officers. The Agriculture University, Kota monogram will be printed mandatory on the university products. The proposed matter was discussed and the chairman instructed AD (Seed and Farms) to take an early initiatives for registration of brand name and trade name for the university seed and other products and complete up to April, 2020. This matter approved by the house. (Action: AD(Seed and Farms))

Agenda item No. AUK/RC-3/2020/7: Proposal for nomenclature of the varieties developed by the AU, Kota

It was proposed that nomenclature of the varieties developed by the AU, Kota may be starts with prefix कोटा' i.e. कोटा अलसी s and कोटा सोया 4" in hindi and if written in English will be "Kota Linseed 5" or "Kota Soya 4". The sequence of nomenclature will be as first prefix "Kota" followed by the name of crop and no./name of variety as given by the concern breeder. Dr. Z.S. Solanki, eminent expert suggested that we should follow the prefix like "Raj" for centrally released varieties and "Kota" for state released varieties.

Dr. A.R. Pathak suggested that for early, mid and late group of the varieties may be assign some code number accordingly. The Chairman instructed to AD (Seed and Farms) for finalization of the Nomenclature. This matter approved by the house.

(Action: AD(Seed and Farms))

Agenda item No. AUK/RC-3/2020/8: Conductance of rainfed/other related need based trials at ARSS Aklera/Khanpur/Sultanpur

It was proposed and approved by the house that rainfed/other related need based trials of AICRPs or other projects should also be conducted at ARSS Aklera / Khanpur / Sultanpur farm or other university centres as per the need. The expenditure of these will be met out from the related project budget or by the unit or fund from the university.

(Action: DR/ZDR/All PIs)

Agenda item No.AUK/RC-3/2020/9: New Projects under RKVY

The proposed item and matter was discussed and it was resolved and ex-post facto approval given by the house that to cater the research needs and creating infrastructure in the university, various RKVY projects have been approved and sanctioned by the State level Screening Committee for years 2014 – 2019. And 6 new projects were also submitted under RKVY to the Jt. Secretary, RKVY, Govt. of Rajasthan for the year 2020-21.

(Action: DR)

Agenda item No. AUK/RC-3/2020/10: Approved of Private projects for the year 2018-19

The proposed agenda was discussed and it was resolved and ex-post facto approval of old projects and new projects for 2019-20 given by the house for various sponsored private projects are taken up by the DOR. DR requested the house not to change the bifurcation of financial structure of the private funded projects. Resolved and approved.

(Action:DR)

Agenda item No. AUK/RC-3/2020/11: Reporting of the ZREAC meetings and proceedings for the information of Research Council

The ZREAC meetings were held timely and their proceedings, recommendations given for inclusion in the package of practices and solutions of the feed back problems (*Kharif-*2018 and 2019 & *Rabi* 2018-19) were submitted for information of the Research Council. This proposal was discussed and finally resolved and approved.

(Action: ZDR)

Agenda item No.AUK/RC-3/2020/12:Proposal of link officers for the outside research stations

It was proposed that provision of the link officers should be made for the outside research stations, as only one scientist is working at each station, so that in case of long leave, out of head quarter of incharges, the works of various units should not suffer and continue smoothly. After the discussion the Chairman authorized to DR for resolving this issue for taking an appropriate action.

(Action: DR)

Agenda item No. AUK/RC-3/2020/13: Approval for organizing monthly research meetings at different research units

The proposed matter was discussed by the house that for reviewing & monitoring of the research progress, monthly meetings of different research / seed production units (on rotation basis) to be organised under the chairmanship of the Director Research. All the research unit Incharge / O/Is, farm Incharge /manager / Dy. Director Research / Asstt. Dir. Res; Add. Dir. (Seed & Farms) and ZDR will participate in the meeting. This will also facilitate the effective monitoring and planning. The expenditure of meeting including tea, breakfast, lunch etc. may be incurred from the budget available at the unit and arrangements will be made by the respective unit Incharge. Resolved and approved.

(Action: DR/ZDR/Unit O/Is)

Agenda item No. AUK/RC-3/2020/14: Approval of research topics for post-graduate students (M.Sc.& Ph.D.)

Research topics for post-graduate students (M.Sc. & Ph.D.) were enclosed for information of the Research Council. Proposed matter was discussed at length and the HVC gave following suggestions:-

- All the teaching faculty/guide will submit list of probable topics for research work as well as plan
 the research programme in advance.
- Plan out research programme as per mandate of the university.
- Prioritize the work based on available facilities and expertise.
- All Deans/Director Education will submit research programme before the Research Council to Director Research.

Agenda item No.AUK/RC-3/2020/15:Proposal for the purchase of vehicles for ZDR, ARS, Kota; O/I, MAF, Kota and AD(Seed & Farms)

Provision of vehicles are very much necessary for timely, efficiently performance of various tasks promptly. The vehicles (Jeep) at ARS, Kota is 23 years old and the registration is cannot be done and No vehicle is available for AD (Seed & Farms) & O/I,MAF and Hence, new vehicles (Bolero Jeeps-3) should be purchased by the university. Director research suggested that vehicles can be purchased from the fund of institutional charges of the private projects /university fund. The chairman principally agreed and assured for purchasing of vehicle and remarked that if sufficient budget is available then will be purchased as per rules and suggested to submit the demand note with proper justification through proper channel.

(Action: The HVC/Comptroller/AD(Seed&Farms)/ZDR/O/I, MAF)

The eminent expert Dr. Z. S. Solanki and emphasized research works on major crops viz., soybean, rice, urdbean in *kharif* and coriander, wheat, mustard, gram, garlic in *rabi* along with horticultural crops like mandarin & guava and cropping pattern under the AU Kota service areas should be focussed. Further he stressed that agriculture university, Kota doing very good research works and appropriate initiatives have been taken by the HVC, DR and research team and suggested to focus on the following points;

- For doubling farmer's income more work should be done on Integrated farming system and agro-processing activities.
- Prioritize the work plan for enhancing breeder seed production programme and quality planting materials should be prepared at research farms as well as KVKs farms for revenue generation of university. Emphasis should also be given on Summer/Zaid crops seed production programme to compensate the kharif losses (urdbean/mungbean). Prioritise to take maximum breeder seed indent and rest area under TL seed, avoid commercial production.
- Work on present research issues particularly for climate change and develop climate resilient crop varieties and production technologies.
- Submit pilot project on fruit crops production technologies & demonstrations particularly Mandarin and Guava.
- Organic farming especially on vegetables, seed spices and pulses for income enhancement.
- Focus on Integrated approach like IFS, IPM, IDM and production of bio-pesticides, biofertilizers for sustainable agriculture.
- Strengthening of post-harvest management technologies.
- Some diploma & certificate courses (six months or one year) may be started at university level for capacity building and revenue generations.
- Scientists should aware about global activities and try to get external funding projects.
- Due to lack of faculty in the colleges and to strengthen, enrich the knowledge of the students specialized senior faculty (Deans/Directors) should be allotted some classes preferably PG courses fully or partially according to their specialization M.Sc. and Ph.D. student should also be allotted to them and be guided.
- Prioritize the work plan for water saving especially pressurized irrigation system /automization and mechanization should be increased at MAF.
- Dr. Z.S. Solanki suggested that due to lack of faculty in the colleges and to enrich the knowledge of the students, senior faculties (Deans/Directors) should be allotted some classes preferably PG courses fully or partially according to their field of specialization likewise Dr. Pratap Singh, Director Research has specialization of weed and water management. M.Sc. and Ph.D. students should also be allotted to them and be guided.

(Action: Directors/Deans/AD (Seed & Farms)/ ZDR/Unit I/c)

The eminent plant breeder Dr. A.R. Pathak congratulate the HVC, DR, ZDR and research scientists who have contributed a lot for the progress of the university (varieties development, best centres awards, contribution in doubling the farmer's income and university ranking, etc). He highlighted some issues and areas where more attention can be strengthened in the newly established university.

- Research work on organic farming of fruits, vegetables and spices. One block at a farm should be developed as organic, it should be registered and certified from the competent authority.
- Submit project on waste management and solar system at research stations and food processing projects on soybean, mandarin, guava and vegetables to MOFP, DST, DBT, etc.
- Enhance productivity of all the university farms.
- Study the ridge and furrow planting system in garlic for higher yield and quality.
- Develop a block on precision/micro irrigation system with solar system.
- Establish bio-pesticides (Trichoderma, NPV, Beauveria) units for mass production and made available to farmers through KVKs.
- Produce good quality planting materials of mandarin (exotic material for processing purpose) and guava (soft & flashy).
- Popularize the best practices (varieties and technologies) and assess the impact analysis of developed technologies for quantum analysis and policy support.
- More trainings to be organised on protected cultivation
- More research projects on new aspects especially on new breeding techniques like haploid in hybrid seed production (collaborative research projects with international / national institutes like ICRISAT, etc) can be undertaken.
- All Deans should start experience learning programme (ELP) of students for their capacity development and revenue generations.
 (Action: Deans/DR/ZDR/Unit I/c)

The Chairman of the Research Council, Prof. D.C. Joshi, Hon'ble Vice Chancellor, AU, Kota suggested following actionable points;

- Prepare a plan for strengthening of infrastructure at all the research stations (on short and long term basis).
 (Action: DR/ZDR/Unit I/c)
- Each scientist (Research, teaching and extension) should prepare and submit externally funded project as PI and submit up to 31stMay 2020. (Action: DR/DEE/Deans/ZDR/all scientists)
- Dean COA, Kota/CH&F, Jhalawar will submit the proposals to DEE for certificate courses on organic farming and protected cultivation, respectively.
 (Action: Deans/DEE)
- ZDR will prepare a proposal for mass production of selected bio-pesticides and bio fertilizers.

(Action: ZDR)

- Prepare a plan for cultivation of summer crops on identified farms for enhancing seed production and to compensate kharif losses. (Action: AD(Seed&Farms)/ZDR/O/Is)
- A high level expert committee should be constituted for preparing a proposal of holistic development of whole MAF. (Action: DR)
- Develop model organic block along with certification and solar/micro irrigation systems at ARS, Kota. (Action: DR/ZDR)
- Impact analysis of developed varieties/technologies during last 5-10 years in the jurisdiction area of AU, Kota be done. (Action: DR)
- All the seed production farms including KVKs and Colleges should focus on production of more breeder/ F/S or certified seed. Efforts should be done to get more indent of breeder seed.

(Action: AD(Seed&Farms)/ZDR/O/Is/crop breeders)

- The Agriculture University, Kota Seed policy should be finalized at earliest before 31st March, 2020. (Action: AD(Seed&Farms))
- All the unit incharges should prepare and submit development plan of the farms.

(Action: O/Is)

The meeting ended with vote of thanks to the chair, proposed by Dr. N.L. Meena, ZDR, ARS, Kota.

Director Research & Member Secretary

Submitted to the Chairman for the kind perusal and approval

Approved about

Director Research & Member Secretary