

Annual Report

2020-21



**Sri Karan Narendra Agriculture
University, Jobner**



ANNUAL REPORT **SKNAU**

2020-2021



Established in 2013

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JOBNER, District- Jaipur (Rajasthan) Pin-303329**



Dr. J.S. Sandhu


Vice-Chancellor

FOREWORD

The Annual Report is the reflection of activities undertaken and outcomes of an organization. The highlights of important academic, research, extension and governance are presented in this report. The committed efforts of scientists, faculties, staff and students have steered the University to achieve several successes in the academic excellence, generation of technologies and appropriate transfer of technologies. The 3rd convocation was organized on 25 November, 2020. On this occasion 1549 Bachelors, 132 Masters, 43 Doctoral degrees awarded to the students and 11 students were awarded Gold medals. Research publication in NAAS rated journal is one of the important indicators of kind of research work being undertaken and during reporting year more than 213 research papers, 10 books, 42 book chapters, 22 technical bulletins, 15 practical manuals and about 110 technical articles are published. The renovation of laboratories, research farms, playgrounds, student hostels and many other activities taken forward to create the academic atmosphere. The faculty has enthusiasm for attending different seminars/ workshops/ trainings which reflects their keen interest in education, research and human resource development.

Our efforts of technology development to deal with emerging situation has led to technology for climate resilient cropping systems, water use efficiency, nutri-rich varieties and artificial intelligence in agriculture. The teachers of University made efforts to have research projects and get sanctioned 06 projects worth Rs.708.85 lakhs under RKVY and other funding agencies like DBT, IFFCO etc. during financial year 2020-21. Pearl millet Hybrid RHB-228 has been identified for state release by 33rd meeting of state seed sub-committee of Rajasthan. Moreover, proposal for release of variety notification of two fennel genotypes (RF-157 & RF-290) and one fenugreek genotype (RMt-354) have been submitted to Central Sub-Committee. Eight MoU have been signed between University and other national and international institutions to establish linkages and collaboration and would be helpful to accelerate the academic, research and extension activities. Quality seed production is one of the important activities and at university farms 4840 Qt breeder and TFL seed of different crops like Moong, Cluster bean, Groundnut, Pearl millet, Cowpea etc. were produced. Bee keeping, fish cultivation, vegetable seed production, seed sale counter, milk parley like new activities were initiated. The university had organized 05 Days Farmer's Fair during 22-26 February 2021 at SKNAU, Jobner. More than 62 webinars on diverse subjects organized and these webinars helped to have linkage with scientists of national and international institutes.

It gives me immense pleasure to congratulate University officers, faculty, staff and students for creating a vibrant environment in the university through a number of activities. I hope that this marvel of success would continue for all epoch to come.


(J. S. Sandhu)



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EXECUTIVE SUMMARY

The annual report of the year 2020-21 presents the activities undertaken by the different Colleges /Research Stations/units of the university. The state government announced four new colleges, three of agriculture and one of Dairy Science & Technology at Jobner. These colleges will be operationalized in the Academic Calendar Year 2021-22. In order to make these colleges functional, 128 new positions of staff that includes 50 posts of teaching cadre and rest of office & technical positions have been sanctioned by Govt of Rajasthan. Beside this, 30 new positions of teaching, non-teaching, ministerial staff and miscellaneous posts has also been sanctioned for Vice Chancellor Secretariat of the University. In financial year 2020-21, a total of Rs.113.97 crore was provided to strengthen the academic activities, research and extension programmes in the University and funds received mainly from state government, ICAR, university resources and others. The internal revenue generated by the university is Rs. 731.83 lakhs which is the 6.42% of total budget.

In spite of Covid 19 pandemic, efforts are made to run all activities smoothly of the university. In order to create the academic environment a number of decisions are taken like to provide the financial assistance to students those opt for dual degree programme, provision of mentoring advisor for advisory committee of students, renovation of laboratories, sports facilities, smart class-rooms, internet connectivity, SC study room, hostel renovation, one transit hostel added, three e-rickshaws purchased, CeRA facilities and two new hostels are being constructed. The university's third convocation was organized on November 25th, 2020. In total 1549 undergraduate, 132 post-graduate and 43 Ph.D. students were awarded degrees and various medals given to meritorious students. Dr R S Paroda was awarded Doctorate of Science (*honoris causa*) on occasion of convocation for his outstanding services towards agriculture. A total number of students enrolled in B.Sc. (Ag), M.Sc. (Ag) and Ph.D. programmes were 1951, 151 and 50, respectively. In undergraduate programme 45.57 per cent of total enrolled students are receiving fellowships, mostly from Govt of Rajasthan. Out of 151 students enrolled during 2020-21 in M.Sc. (Ag.), 84 (55.63%) are getting fellowships. In case of Ph.D., 36 (72%) out of 50 students are receiving fellowship. In reporting year, 15 students got ICAR sponsored PG scholarship, one student got Inspire Fellowship and one student got scholarship from private organization. This year 36 students of the University cracked different national level exams like SRF/JRF/NET and national fellowships. A total of 64 students are placed in different organizations. A model Career Development Centre (CDC) has been started in the University, with the support of ICAR-NAARM, Hyderabad to help the students in personality development, exposure, interaction with renowned personality and better job placements. Sixteen workshops/webinars were organized to enhance the skill and personality development of students. Besides classroom teaching, emphasis is given on hands on training of students and experiential learning through REDDY, ELP and in-plant training programmes.

In the year 2020, two bio-fortified hybrids (RHB 233 and RHB 234) of pearl millet were notified & released at national level. Notification proposal of another pearl millet Hybrid RHB-228 identified by 33rd meeting of state seed sub-committee of Rajasthan, two fennel genotypes (RF-157 & RF-290) and one fenugreek genotype (RMT-354) has been submitted to Central Sub-Committee for variety release notification. In total, 25 improved production technologies have been developed and submitted for inclusion in the state Package of Practices. A



total of 29 projects at present running at various units of SKNAU, Jobner funded by state government under the scheme RKVY. Beside these projects, 12 ad-hoc research projects have also been running at different units. In 2020-21, six new projects were sanctioned from Govt. of Rajasthan under RKVY, DBT, IFFCO and others. Total cost of these projects is 708.85 lacs. The University has produced 4839.85 quintal of seed of various crops during the year, which includes 2705.92 qt. breeder seed and 2133.93 qt truthfully labeled seed. During 2020-21 different units of university generated nearly 9.30 crore revenue through the sale of seed, planting material etc. Further, 22 projects on private testing were conducted by various scientists at different stations generated a revenue of Rs. 57.42 lakh for university.

The KVK's have conducted 3416 demonstrations on farmer's field covering 1688.07 ha area as well as 152 FLD on animal units. The DEE and KVK's have imparted training to 8799 farmers, farm women, rural youth and extension functionaries through conduction of 238 on-campus and 406 off-campus trainings. The KVK's have conducted 66 On Farm Testing's (OFT) during academic year 2020-21. At University level has organized 5 days Kishan Mela from 22-26 Feb., 2021 at SKNAU, Jobner first time in the history of Rajasthan in which more than 5000 farmers have participated. 44 farmers were awarded with progressive farmers award by the University during farmers' fair. The Village Pachar and Sunderpura adopted by the university, under "Developing Smart Village Model to achieve Objectives of Mission Antyodaya" in compliance to Governor of Rajasthan. Under social awareness programmes masks and sanitizers were distributed. Detailed advisories for farmers clean agricultural operations were issued keeping in view covid-19. One year Diploma course for Input Dealers titled "Diploma in Agricultural Extension Services for Input Dealers (DAESI)" is completed in DEE, SKNAU, Jobner. A number of new initiatives have been taken particularly to made available Krishi literature like University Diary, Calendar, News & Views, and redesigning of Jobner Krishi, launching of the Mobile Apps developed by all the Krishi Vigyan Kendras, purchase of new soil testing Van and organized three webinars on Application of ICT in Agriculture Extension, Diversifying Dairy Farming towards entrepreneurship: Ways to boost the dairy sector and its sustainability and Camel milk: A boon to mankind at SKNAU, Jobner. Two farmers namely Shri Surendra Avana and Shri Ganga Ram Sepat have been honored with IARI Innovative Farmer Award 2021 of the region.

Directorate of PME prepares the University documents for submission to various platforms. The Annual Report 2019-20 and Varshik Prativedan 2020 have been published during the reporting year. This directorate has submitted the Self Study Report of University and its constituent colleges i.e. SKN College of Agriculture, Jobner, COA, Lalsot, COA, Bharatpur and COA, Fatehpur by this unit during reporting year and approved by ICAR. The DPM&E also prepared DPR for the establishment of New Agriculture Colleges and Dairy Science and Technology College under SKNAU, Jobner. ICAR university Ranking, Chancellor Award report and compilation of three years publication of university were also prepared and submitted. Apart from all the activities mentioned above various correspondences to the Raj Bhawan and CMO for which Director PM&E is Nodal Officer is also integral part of the activities of this unit. Directorate of Education is responsible for post graduate teaching and student research in the university. This directorate facilitated to conduct online classes, comprehensive and viva voce examination due to covid-19 pandemic. 11 private agriculture colleges are also affiliated with this university and Director Education with his team inspected these colleges to continue their affiliation. The meetings of Academic Councils are conducted by this Directorate and in reporting year 06 Academic Councils Meetings were conducted and decisions were taken to enhance PG research and teaching



quality in the University.

Directorate of Human Resource Development (HRD) is involved in enhancing experiential learning of agriculture students, promote excellence and capacity building of faculty in cutting edge areas. In 2020-21, three trainings for teaching and one training for farmers have been organized in the university. Beside this one workshop on effective use of CeRA and four workshops on Gender Budgeting and Engendering Agriculture Development have also been organized.

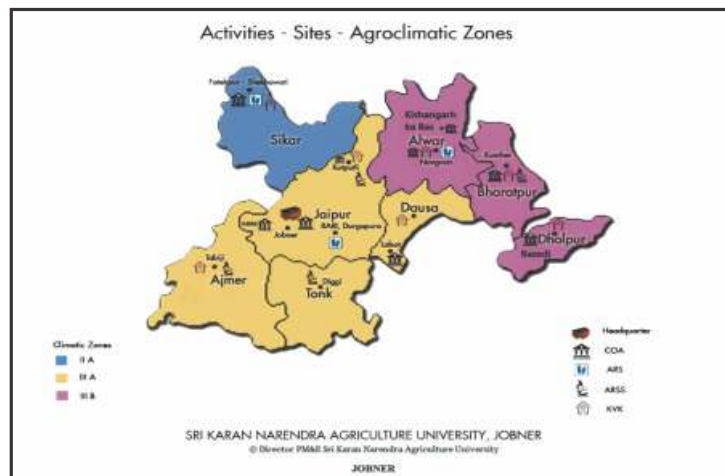
In 2020-21, a total of 213 research articles are published in scientific journals, besides ten books, 42 book chapters, 22 technical bulletin, 15 practical manuals and 110 technical articles have been published by university teachers and students.

A number of New Academic Initiatives under taken that includes; Rain Water Harvesting Structures having capacity to store rain water more than 20 crore liters, the Saraswati Bhawan, a multipurpose hall is being renovated, establishment of lawn in about one acre land, more than 16,000 plants of different species were planted in the University premises and its constituent centers. A 364 KW Rooftop Solar PV plant has been installed at SKNCOA, Jobner. A sewage treatment plant employing IARI Technology is in offing to treat grey water of two hostels. Its initial capacity shall be one lakh litre per day. Automatic milk parlor has been established at Dairy Farm, Fish Production cultivation, bee keeping, bio-gas plant unit, Bio-Diversity Park, a sale point rejuvenated for selling different products of the university such as seeds of latest varieties of Kharif and Rabi crops, packed milk, eggs, Trichoderma, vermi compost, aonla candy, aonla juice, literature etc. at university sale point.



1. INTRODUCTION

Sri Karan Narendra Agriculture University (SKNAU), Jobner was established on 13th September 2013 by Govt. of Rajasthan. The University head quarter is situated at Jobner. The territorial jurisdiction and responsibility of this University extends to three agro-climatic zones of the state which covers an area of 64 lakhs ha. This area is 1/6 land of the total area of the state, thus covering eight districts of Rajasthan i.e. Sikar (Zone II A), Jaipur, Ajmer, Dausa, Tonk (Zone III A), Alwar, Bharatpur and Dholpur (Zone III B). The average rainfall of these districts is 500-700 mm.



The organizational setup of the University includes, Deans of Agriculture and Allied Sciences, Directorate of Research, Directorate of Extension Education, Directorate of Prioritization, Monitoring & Evaluation, Directorate of Human Resource Development, Directorate of Students Welfare, Directorate of Education and Controller of Examination. The Registrar for administrative matters and the Comptroller for financial matters, posted by the State Govt. are also integral components of the University organization.

The University imparts quality education for the development of well-trained and specialized human resources in agriculture & allied sectors. It has 13 constituent colleges out of which SKN College of Agriculture and SKN College of Agribusiness Management are located in the University campus at Jobner. SKN College of Agriculture, Jobner is the main teaching campus which offers four years B.Sc.(Hons.) Ag. with intake of 131 students; two years M.Sc. (Ag.) in 11 disciplines with intake of 84 students and Ph.D. in 8 disciplines with intake of 21 students. The other agriculture colleges are situated at Lalsot (Dausa, 2007), Kumher (Bharatpur 2013), Fatehpur Shekhwati (Sikar, 2013), Navgaon (Alwar, 2018), Gonera-Kotputli (Jaipur 2019), Baseri (Dholpur, 2019) and Kishangarhbas (Alwar, 2020). From the academic session 2021-22, four new Agriculture and Allied Colleges namely, College of Dairy Science & Technology, at Jobner College of Agriculture at Bhusawar-weir, Jhilai, Niwai-Tonk and Peethampuri, Neem Ka Thana, Sikar started under the umbrella of SKNAU, Jobner. The intake capacity of students in these colleges is 60. Two govt. and nine private colleges are also affiliated with the University. The total registered students in academic session 2020-21 were 4890. The Rajasthan Agriculture Research Institute, Durgapura (Jaipur) which is the major research centre of the University contributes in M.Sc. and Ph.D. research. The admission to various agriculture and allied degree programmes occurs through (JET)/Pre-PG/Ph.D state level exam organized by one of the State Agriculture Universities on rotation basis. This year Sri Karan Narendra Agriculture University, Jobner has been given the responsibility to conduct this state level exam. Dr. A.R.K. Pathan, Professor, Ag. Chemistry & Soil Science has been given the responsibility of Co-ordinator and Dr. K.C. Kumawat, Professor Entomology, Co- Coordinator for conducting these examinations.



Directorate of Research was established in November 2013. There are seven research stations encompassing three agro-climatic zones under the administrative control of Directorate of Research, SKNAU, Jobner. These include Rajasthan Agricultural Research Institute (RARI) at Durgapura, Jaipur, two Agricultural Research Stations located at Navgaon (Alwar) and Fatehpur-Sekhawati (Sikar) and four Agricultural Research Sub-Stations at Tabiji (Ajmer), Kumher (Bharatpur), Gonera - Kotputli (Jaipur) and Diggi (Tonk). Rajasthan Agricultural Research Institute, Durgapura is the main Agriculture research station of the University.



There are 17 short and long term AICRP and AINP projects operating in Directorate of Research. The research grant mainly comes from ICAR & matching grant from the state govt. in proportion of 75:25. Out of these 17 projects, twelve are operating at Rajasthan Agricultural Research Institute, four at SKN College of Agriculture, Jobner and one at ARS Fatehpur-Shekhawati. The research is being conducted on most of the crops, fruits, vegetables and other crops suitable for this region. Apart from this 29 RKVY, 12 adhoc and 22 testing projects from private companies are in operation under the University during the reporting year. About 879.43 ha land is available in different units of the University to conduct research and for seed production.

The Directorate of Extension Education promotes agricultural development through transfer of agro-techniques by imparting training, advisory and farm information to extension personnel, line departments, farmers and other stakeholders through seven KVKs located at Tabiji (Ajmer), Dausa, Gonera (Kotputli), Navgaon (Alwar), Kumher (Bharatpur), Dholpur and Fatehpur (Sikar). All the KVKs are engaged in on and off campus training programmes being conducted on farm testing research, assessment and refinement of agricultural technologies, conducting front line demonstrations to demonstrate the production potential of latest crop varieties. Farm advisory/ information services are also provided by the KVKs through various literature, farmers' fair, field days, TV and Radio broadcast and other such activities. The main funding agency for Directorate of Extension Education is ICAR. However, some fund is also received from the State Govt. One monthly magazine Jobner-Kheti is regularly published by directorate for farmers.

Registrar and Comptroller are posted by State Govt for looking after the administrative and financial work of the University. The civil work of the University is performed by the Estate Office.

Mission and Goals

The mandate of the university is to focus on quality teaching, research and extension education in the field of Agriculture and Allied Sciences. To achieve this mandate, the university offers:

- (I) Bachelor's, Master's and Doctoral degree programmes and short-term diploma/certificate courses in the disciplines of Agriculture including Basic and Applied Sciences, Agriculture Engineering and Technology, Dairy Science and Technology.
- (ii) Development of climate resilient, bio-fortified varieties/hybrids of important cereals, pulses, millets, seed spices and horticultural crops suitable particularly for agro-climatic zones in the jurisdiction of this University.
- (iii) Development of package and practices for various crops grown in region.
- (iv) Efficient transfer of technology mechanism with the use of ICT for farmers and extension functionaries.

2. UNIVERSITY ADMINISTRATION

The Governor of the State is the Ex-Officio Chancellor of the University. The Board of Management (BOM) is the apex constitutional body of the University responsible for framing the new policy or amend the existing policy of the University. Other constitutional bodies of the University are Academic Council, Research Council and Extension Council. The academic bodies include Board of Studies and Committees of Courses at college and departmental level. The University has adopted the recommendations of Vth Dean's Committee of ICAR to impart undergraduate programme.

2.1 Administrative officers : During reporting period following officers beared administrative positions in the University :

Designation	Name	Contact No	Email
Vice-Chancellor	Prof. J. S. Sandhu	01425-254039	vc@sknau.ac.in
Registrar	Smt. Alka Vishnoi	01425-254980	registrar@sknau.ac.in
Comptroller	Sh. Babu Lal Banjara	01425-254988	comptroller@sknau.ac.in
Director Research	Dr. M.L. Jakhar	01425-254966	director.research@sknau.ac.in
Director Extension Education	Dr. Sudesh Kumar	01425-254035	director.ext@sknau.ac.in
Director Prioritization, Monitoring & Evaluation	Dr. (Mrs) Sunita Gupta	01425-254987	director.pme@sknau.ac.in
Director Education	Dr. N.K. Gupta	01425-254983	director.education@sknau.ac.in
Director Students' Welfare	Dr. I. M. Khan	01425-254982	dsw@sknau.ac.in
Director HRD	Dr. B.L.Kakraliya	01425-254914	director.hrd@sknau.ac.in
University Librarian	Dr. B. L. Jat	7357105495	librarian@sknau.ac.in
Dean, SKNCOA, Jobner	Dr. A. K. Gupta	01425-254022	dean.skncoa@sknau.ac.in
Dean, College of Agriculture, Lalsot	Dr. S. S. Yadav	9414820579	dean.coalalsot@sknau.ac.in
Dean, College of Agriculture, Kumher-Bharatpur	Dr. U.B.Singh	9414714234	dean.coabharatpur@sknau.ac.in
Dean, College of Agriculture, Fatehpur-Shekhawati	Dr. S.R. Dhaka	9414042027	dean.coafatehpur@sknau.ac.in
Dean, College of Agriculture, Navgaon	Dr. Shailesh Godika	9461038993	dean.coanavgaon@sknau.ac.in
Dean, College of Agriculture, Kotputli	Dr. S.S. Manohar	9414349440	dean.coakotputli@sknau.ac.in
Dean, College of Agriculture, Baseri	Dr. J.P. Yadav	9414819414	dean.coabaseri@sknau.ac.in



Dean, College of Agriculture, Kishangarhbas	Dr. R. K. Sammuaria	9829611123	dean.coakishangarhbas@sknau.ac.in
Dean, SKN College of ABM, Jobner	Dr. A.R.K. Pathan	01425-254796	dean.sknabm@sknau.ac.in
Dean, COA, Jhilai, Niwai	Dr. R.P. Jat	9413119804	dean.coajhilai@sknau.ac.in
Dean, COA, Peethampuri	Dr. D. K. Gothwal	9928845911	dean.coapeethampuri@sknau.ac.in
Dean. COA, Bhusawar	Dr. R.S. Meena	9414543695	dean.coabhusawar@sknau.ac.in
Controller of Examination	Dr. K.C. Kumawat	9829636935	coe@sknau.ac.in
Estate Officer	Sh. L.B. Singh	01425-254982	estateofficer@sknau.ac.in

2.2 Head of Departments

The following senior faculty members are heading different departments

S. No.	Name of Department	Head	Contact No	Email
1	Agronomy	Dr. L.R. Yadav	9414518051	hod.agro@sknau.ac.in
2	Soil Science & Ag. Chemistry	Dr. Sunil Dadheech	9414385915	hod.soils@sknau.ac.in
3	Entomology	Dr. B. L. Jat	7357105495	hod.ento@sknau.ac.in
4	Plant Pathology	Dr. Mahabeer Singh	8619459647	hod.ppath@sknau.ac.in
5	Extension Education	Dr. K.C. Sharma	7976584932	hod.ext@sknau.ac.in
6	Horticulture	Dr. L. N. Bairwa	9414932548	hod.hort@sknau.ac.in
7	Plant Breeding & Genetics	Dr. S.S. Punia	8005937536	hod.pbg@sknau.ac.in
8	Plant Physiology	Dr. Sunita Gupta	9414639561	hod.pphy@sknau.ac.in
9	Biochemistry	Dr. A. K. Gupta	9414820563	hod.pphy@sknau.ac.in
10	L.P.M.	Dr. Mahesh Dutt	9928402564	maheshdutt.lpm@sknau.ac.in
11	Ag. Economics	Dr. A. K. Gupta	9414003248	dean.skncoa@sknau.ac.in
12	Statistics	Dr. Kiran Gaur	8209292155	hod.statssknau.ac.in

2.3. Board of Management

Board of Management is the apex body responsible for the policy decisions of the University. BoM meetings are conducted at regular intervals. In last one year, four BoM meetings were conducted as per the following details.

S. No.	Number of BoM meeting	Date	Mode
1.	15th	23.09.2020	Online
2.	16th	05.11.2020	Online
3.	17th	27.02.2021	Online
4.	18th	13.07.2021	Online

**Following major decisions were taken during these meetings.**

- » **Land Allotment for Establishing Kendriya Vidhyalay (Central School) in the University Campus :** In order to provide quality education to the children of University employees and local people, the University has agreed to provide 5 acre land to establish a Kendriya Vidhyalay (Central School) in the University Campus (15th meeting of BoM held on 23.09.2020).
- » **Technology licencing :** In order to enhance the income of the University, provision has been passed to sign MoU with other organizations to get royalty from agriculture technology developed by the University (15th meeting of BoM held on 23.09.2020).
- » **Honorary D. Sc. Degree to Dr. R.S. Paroda :** Outstanding contribution made by Padam Bhushan Dr. R. S. Paroda, Former Secretary DARE & DG, ICAR, New Delhi & President of TAAS in agriculture as an academician, expert and policy maker. He was conferred with Honorary Degree of D. Sc (Doctorate in Science) in the 3rd Convocation held on 25th Nov, 2020 (16th meeting of BoM held on 05.11.2020).
- » **Guest Faculty for English Subject :** Looking to the difficulty faced by the students in English subject, provision has been made to arrange the guest faculty for entire semester. Further, proposals have been submitted to Govt for hiring the English teacher on the post of Assistant Professor temporarily till the recruitments are done (16th meeting of BoM held on 05.11.2020).
- » **Fellowship to enhance PG Research Quality :** In order to enhance the quality of PG research, provision has been made to provide financial support upto Rs 50,000/- per student to undertake research in a premier institute under MoU with this University (17th meeting of BoM held on 27.02.2021).
- » **Reimbursement of Publication Charges :** To enhance the quality of research papers, provision has been made to reimburse 50% publication charges (Maximum 10000.00/-) of a paper published in a journal with NAAS rating 6.0 or more (17th meeting of BoM held on 27.02.2021).
- » **Enhancing Quality of Publications :** Quality research publications in the journals with NAAS rating 6.0 or more, hiring of expert services to improve the overall quality including language, are allowed (17th meeting of BoM held on 27.02.2021).
- » **Strengthening the CeRA and internet facilities in constituent colleges of the University :** To strengthen on line education, 100 mbps internet leased line and CeRA access are being provided in four new agriculture colleges (17th meeting of BoM held on 27.02.2021).
- » **To conduct State Level JET/Pre-PG/Pre-Ph.D Exams by the University :** The State Level JET/Pre-PG/Pre-Ph.D exam for academic session 2021-22 and 2022-23 will be conducted by SKN Agriculture University, Jobner for year 2021-22 and 2022-23 (17th meeting of BoM held on 27.02.2021).
- » **Teaching Assistanship :** In order to alien with the NEP-2020 and utilization of qualified human resources, the Ph.D. students have been allowed to involve in teaching of undergraduate courses as well as assigned special classes of JRF/SRF/NET/Pre-PG. The remuneration will be paid from ICAR funded National Agriculture Higher Education Project (17th meeting of BoM held on 27.02.2021).
- » **Vocational Courses :** In order to introduce the identified set of skills and values at each stage of learning, five vocational courses have been approved. In future, more vocational courses will be added in the list (17th meeting of BoM held on 27.02.2021).
- » **Undergraduate programme in Agri-business Management :** B.Sc. (Hons) Agri-business Management Programme is proposed to start in the University as per the guidelines suggested by ICAR, New Delhi. Later, it will be upgraded to PG programme in the field of Agri-Business



Management (17th meeting of BoM held on 27.02.2021).

- » **Establishment of Community Health Centre at Jobner :** In order to provide better health facilities to staff and students, the University has agreed to provide 1.2645 ha land to establish Community Health Centre in Municipal area of Jobner (18th meeting of BoM held on 13.07.2021).
- » **Payment of Gratuity :** The University has paid gratuity to the employee retired upto 31.12.2017. Arrangements have been made to pay gratuity to employees retired between Jan-Dec, 2018 on seniority basis (18th meeting of BoM held on 13.07.2021).
- » **Appointment of Games and Cultural Instructor in Constituent Colleges of the University :** To improve the quality of sports & games, provision of instructor and cultural instructor in each constituent college of the University has been approved. (18th meeting of BoM held on 13.07.2021).
- » **Recruitment of Teaching and Non-Teachings Posts :** In order to recruit the teaching and non teaching posts in the University, the roster, score card and panel of experts have been approved (18th meeting of BoM held on 13.07.2021).

2.4 Academic Council

The academic council is the highest academic body of the University, the meeting of which is conducted at regular intervals. During reporting year, 6 academic council meetings were conducted as per the following details:

S. No.	Number of AC meeting	Date	Mode
1.	12th	17.09.2020	Online
2.	13th	21.10.2020	Online
3.	14th	03.11.2021	Online
4.	15th	17.02.2021	Online
5.	16th	26.06.2021	Online
6.	17th	13.07.2021	Online

The following important decisions were taken.

- » **Mentoring Advisor :** Initiatives have been taken for appointment of a scientist as mentoring advisor from other institute in the committee of a PG student if his/her research programme needs special expertise. It will facilitate research collaboration and student exchange with other institutions as also laid down in the NEP-2020 (12th AC meeting held on 17.09.2021).
- » **Approval of Score Card :** The score card for direct selection/CAS of various teaching/technical staff is approved (12th AC meeting held on 17.09.2020).
- » **Tutorial Classes of Maths & English :** The extra tutorial classes of Maths and English, will be arranged, as most of the students failed to clear these courses. It was also decided that the course of English will be offered in both the semesters and will be allowed to all the students as non-credit course (12th AC meeting held on 17.09.2020).
- » **Best Scientist Award :** Padam Bhushan Dr. R. S. Paroda, Best Scientist Award has been instituted to encourage scientists to bring excellence among agricultural scientists working in SAUs of



Rajasthan. The award will consist of a plaque and a felicitation Certificate (13th AC meeting held on 21.10.2020).

- » **University Convocation and Approval of Degrees & Gold Medals :** The students who have completed all the requirement of their programme by Oct. 31, 2020 were approved to confer the degree in forthcoming 3rd Convocation on 25th November, 2020. In total, 1549 undergraduate, 132 post graduate and 43 Ph.D students were awarded the degree on virtual mode. 2 B. Sc. (Ag) and 6 M. Sc. (Ag) students were awarded Gold Medals. For Ph.D students, the Chancellor's Gold Medal, Vice Chancellor's Gold Medal and University Gold Medal were awarded for the first time in the University (14th AC meeting held on 03.11.2020).
- » **Signing of MoU with Foreign Organizations :** As per the DARE's O.M. No. 6-7/2020-IC-II dated 19.6.2020, resolution has been passed in Academic Council to make necessary amendments in Acts & Statutes of the University for seeking academic collaboration with foreign institutes to implement NEP-2020 more effectively (15th AC meeting held on 17.02.2021).
- » **Expert Lectures in Frontier Areas of Agriculture :** In order to enhance the PG teaching in University, provision has been made to organise 2-3 expert lectures on particular topic in advance courses for which expert faculty is not available in the University (16th AC meeting held on 26.06.2021).
- » **Part time Job to UG Students :** In order to become self sustained and to enhance skill and attitude, the needy and willing students are allowed for part time job at college/ farms/ Departments (17th AC meeting held on 13.07.2021).
- » **Approval of Qualification for Newly Sanctioned Posts :** The qualifications of newly sanctioned posts of Associate Professor and Assistant Professor (Dairy Science and Technology), Assistant Professor (Physical Education), Deputy Director Research (Seed/ Agri Farm) and non-teaching post have been approved (17th AC meeting held on 13.07.2021).

2.5 Staff Strength

The sanctioned post of teaching is 443, out of which 203 posts are filled and 240 posts are vacant. During the reporting year 128 new positions including 50 posts of teaching cadre under the state plan for three new agriculture colleges at Bhusawar (Bharatpur), Peethampuri (Sikar), Jhilai (Tonk) and one Dairy Science & Technology college, Jobner have been sanctioned by the Govt of Rajasthan. Similarly, the sanctioned post of non-teaching staff is 763, out of which 307 posts are filled and 456 posts are vacant.

Sanctioned and filled post of teaching staff (As on 30.06.2021)

Head	Professor		Associate Professor		Assistant Professor+ SMS		Total	
	Sanctd	Filled	Sanctd	Filled	Sanctd	Filled	Sanctd	Filled
Non-Plan	9	2	43	3	162	102	214	107
State Plan	-	-	23	3	105	29	128	32
ICAR	2	-	20	9	79	55	101	64
Total	11	2	86	15	346	186	443	203

**Sanctioned and filled post of non-teaching staff (As on 30.06.2021)**

Head	Officer		Ministerial		Technical		Supporting		Total	
	Sanctd	Filled	Sanctd	Filled	Sanctd	Filled	Sanctd	Filled	Sanctd	Filled
Non-Plan	7	2	77	41	105	65	173	90	362	198
State Plan	39	5	91	38	90	12	67	16	287	71
ICAR	0	0	14	2	82	29	18	07	114	38
Total	46	07	182	81	277	106	258	113	763	307

- **New Posts in Non-Teaching Cadre in the University** : Efforts are being made to get sanction for 30 new positions of teaching, non teaching, ministerial staff and miscellaneous posts for the University including security officer, legal officer, Deputy Director Research, Civil Engineer, Office Assistant etc.

The University has employed teaching and non-teaching staffs from all the categories. A breakup of these positions is given below.

S.No.	Category	Teaching staff		Total	Non-Teaching staff		Total
		Male	Female		Male	Female	
1.	General	94	21	115	130	16	146
2.	SC	29	03	32	26	07	33
3.	ST	21	0	21	17	02	19
4.	OBC	33	02	35	104	5	109
Total		177	26	203	277	30	307

- **Assistant Professor and SMS appointed** : 13 Assistant Professors (Entomology) and 4 SMS (Subject Matter Specialists) were appointed during the reporting year.
- **Promotion of Non-teaching staff through DPC** : The DPC of non teaching staff has been done during the reporting period and in total 44 non-teaching staff are promoted on various positions in non-teaching cadre.

2.6 University Budget :

The University receives budget from various sources like State Govt., ICAR, own income, research projects, sponsored projects etc. to support education, research and extension activities. A total fund of Rs.11397.23 lakhs was received during the year 2020-21. This budget comprised of 60.10% from state government, 30.26% from ICAR and 6.42 percent from own resources. The percentage of budget utilization was 40.02%, 41.55% and 9.90 percent for teaching, research and extension activities, respectively. Remaining 8.53 percent of total budget was utilized for library, student activities, civil works etc. during the reporting year.


Head wise budget allocation in 2020-21 (Rs. in lakhs)

Head	Salary	TA	Recurring	Non-Rec	Civil	Total
Non Plan	4479.33	20.00	432.00	0.50	-	4931.83
State Plan	1928.75	19.00	448.00	78.00	175.21	2648.96
Total (NP-SP)	6408.08	39.00	880.00	78.50	175.21	7580.79
ICAR						
DS grant	-	-	182.00	0.10	180.16	362.26
AICRP/AINP	1400.00	15.87	108.00	1.95	-	1525.82
100% ICAR adhoc project	22.00	1.04	402.58	0.90	100.00	526.52
KVKs	822.75	8.25	170.87	31.92	-	1033.79
Total (ICAR)	2244.75	25.16	863.45	34.87	280.16	3448.39
Others						
OCS	6.04	-	67.45	-	64.50	137.99
(RKVY)	-	-	149.96	-	-	149.96
PVTs	-	-	80.10	-	-	80.10
Total (others)	6.04	-	297.51	-	64.50	368.05
Total	8658.87	64.16	2040.96	113.37	519.87	11397.23

Head wise Expenditure on different activities (Rs. in lakhs)

Source	Non Plan	State Plan	ICAR	Others	Total
Governance/Adm.	-	-	-	-	-
Education	2761.61	1800.50	-	-	4562.11
Research	2079.48	613.75	2042.92	-	4736.15
Extension	90.74	4.00	1033.79	-	1128.53
Library	-	5.00	-	-	5.00
Student activity		50.50	91.52	-	142.02
OCS	-	-	-	153.59	153.59
Civil work	-	175.21	280.16	64.50	519.87
Others (RKVY)	-	-	-	149.96	149.96
Total	4931.83	2648.96	3448.39	368.05	11397.23



3. EDUCATION

3.1 Academic Strength

3.1.1 Admission and out-turn of students

Three new Agriculture Colleges and one Dairy Science and Technology College were announced in budget session of Vidhan Sabha in February, 2021. A total of 11 Agriculture colleges, one college of Agri-business Management and one new College of Dairy Science and Technology will be in operation in the academic calendar year 2021-22. The admission to various agriculture and allied degree programmes will be through Joint Entrance Test (JET)/Pre-PG/Ph.D state level examination. This year JET is being organized by SKN Agriculture University, Jobner. The total intake under undergraduate programme in the University is 571 including 18 ICAR and 100 payment seats. In 2020-21 a total of 1951 undergraduate students of all the years were on-rolls in different constituent colleges of the University (Table 1). The SKN College of Agriculture, Jobner is the only college that offers Post Graduate courses in 11 disciplines with 84 seats including 18 seats of ICAR, New Delhi. The Ph.D. Programme is being offered in 8 disciplines at SKN College of Agriculture, Jobner with 21 seats. In post graduate programme a total of 151 students were enrolled in M.Sc. (Ag) and 50 students registered in Ph. D programme. A total of 2152 students were enrolled in different degree programmes in constituent colleges. Besides, 9 private undergraduate Agriculture colleges and 2 Govt. colleges are also affiliated with the University which admits 960 students every year through JET. In 2020-21, total 2738 students were enrolled in all the classes in these affiliated colleges (Table 2). Thus, in reporting year total 4890 students were enrolled in the constituent as well as affiliated colleges.

Table 1. Student's strength in undergraduate programme in constituent colleges of University

S. No.	Name of the College	establishment	Year of Number of students in each year				Total
			I	II	III	IV	
1	Sri Karan Narendra College of Agriculture, Jobner (Jaipur)	1947	127	128	112	118	485
2	College of Agriculture, Lalsot (Dausa)	2007	60	60	52	56	228
3	College of Agriculture, Fatehpur-Shekhawati (Sikar)	2013	64	62	54	55	235
4	College of Agriculture, Kumher (Bharatpur)	2013	64	62	58	61	245
5	College of Agriculture, Navgaon	2018	64	60	56	-	180
6	College of Agriculture, Gonera, Kotputli	2019	64	60	-	-	124
7	College of Agriculture, Basedi	2019	64	59	-	-	123
8.	College of Agriculture, Kishangarhbas, Alwar	2020	64	-	-	-	64
9.	SKN College of Agri-Business Management, Jobner	2016	-	56	108	103	267
		Total A	571	547	440	393	1951



Table 2. Student's strength in undergraduate programme in affiliated colleges.

S. No.	Name of the College	Year of	Number of students in each year establishment				Total
			I	II	III	IV	
1	B.B.D. Govt. P.G. College, Chimanpura-Shahpura (Jaipur)	1984	60	56	51	52	219
2	Government College, Uniara (Tonk)	2013	60	54	57	56	227
3	Dayanand College, Ajmer	1959	60	60	57	56	233
4	M.B. Agriculture College, Tonk	2013	120	54	53	49	276
5	Late Mool Chand Meena Agriculture College, Lalsot (Dausa)	2013	120	56	57	57	290
6	Pt. Deen Dayal Upadhyay Agriculture College, Deoli, (Tonk)	2015	120	110	105	99	434
7	Maharaja Surajmal Agriculture College, Rahimpur, (Bharatpur)	2015	60	54	54	44	212
8	O.P. Agriculture College, Budhwal, Behror (Alwar)	2015	60	50	51	47	208
9	G.L. Memorial Agriculture College, Kishangarh Bas, Alwar	2016	120	51	51	48	270
10	Rukmani Devi Memorial Ag. College Mandawar (Mahua), Dausa	2018	60	50	41	-	151
11	Shekhawati Institute, Sikar	2019	120	98	-	-	218
Total B			960	693	577	508	2738
Total (A+B)			1531	1240	1017	901	4689

3.1.2 Gender wise and other different reservation categories wise distribution

The enrolled students of the University represent almost all the cast categories of the society i.e. General, SC, ST, OBC, handicapped and others. There is decent number of girl students in UG as well as PG programmes. The boys:girls ratio is 1:0.56, 1:1.04 and 1:0.67 in UG, PG and Ph.D., respectively.



Table 3. Category wise students enrolled in different degree programmes in constituent colleges of the University.

Class	UG			PG			Ph.D.			Grand Total
Category	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	
General	283	212	495	38	35	73	18	13	31	599
S.C.	175	72	247	05	05	10	04	-	04	261
ST	109	44	153	05	03	08	01	02	03	164
OBC	621	336	957	23	20	43	07	03	10	1010
MBC	9	7	16	02	04	06	-	-	-	22
PH	11	4	15	-	-	-	-	-	-	15
DP	12	13	25	-	06	06	-	01	01	32
EWS	22	14	36	01	04	05	-	01	01	42
SBC	6	1	07	-	-	-	-	-	-	07
Total	1248	703	1951	74	77	151	30	20	50	2152

3.1.3 Staff strength in different constituent colleges of the University

There are 112 teaching staff in constituent colleges of University out of which 100 are males and 12 females. The total strength of non-teaching staff is 133 representing 121 male and 12 female. The guest faculty are also arranged as per need and teachers of constituent colleges also take courses of other colleges.

3.1.4 Hostel facilities

Sri Karan Narendra College of Agriculture, Jobner has 4-boys' and 2-girls' hostels with total 414 spacious rooms to accommodate 319 boys and 221 girls totaling 589 students. The hostels are provided with common room with LeD TV & Tata Sky dish connection, spacious mess, furnished dining hall, geysers, water coolers, RO, internet and Wi-Fi connectivity. A new girls hostel with the capacity of 125 girls is under construction. Besides this, a transit hostel is also available for short-term stay.

College of Agriculture, Lalsot is having two boys' hostels with an accommodation capacity of 92 students. The hostels are equipped with all high- tech facilities like RO for drinking water, Led TV with dish connectivity, common room fitted with 30 chairs, two dining halls and mess facility, indoor and outdoor games facilities. One girls' hostel with an accommodation capacity of 36 girls is under construction.

College of Agriculture, Fatehpur-Shekhawati having one girl's hostel with the capacity of 44 students. The hostels are equipped with all high- tech facilities like RO for drinking water, Led TV with dish connectivity, coolers, geysers, three-seater chairs, common room, dining hall and mess facility, table tennis and badminton game facilities. Three quarters of ARS, Fatehpur are also used as hostel to accomdate 18 girl students.

College of Agriculture, Bharatpur having one girls' hostel with an accommodation capacity of 24 students.

3.2 Academic Achievements

3.2.1 Examination and declaration of Results

The I Semester's examinations of B. Sc. (Ag) Hons. Pt. II to IV of academic session 2020-21 were conducted in the month of January, 2020-21 and for B. Sc. (Ag) Hons. Pt. I in the month of April, 2021. Due to COVID 19, the second semester examinations of session 2020-21 could not be conducted. The backlog examination of final year students of UG programme were conducted from 18- 30th Sept, 2020 and results of the same were declared on 13th October, 2020. Provisional Degree Certificates (PDCs) were issued to the students who cleared the examinations. Online Mid-term examinations of PG & Ph.D students were conducted in last week of November, 2020. The number of passed out students in M.Sc. (Ag.) and Ph.D. in academic session 2020-21 are 44 and 17, respectively.

3.2.2 University Convocation

The 3rd Convocation of SKN Agriculture University was held virtually on 25 Nov, 2020 under the chairmanship of Shri Kalraj Mishra, Hon'ble Governor and Chancellor, Rajasthan. In total 1724 degree were awarded to B. Sc., M. Sc. and Ph. D students of the year 2018-19 and 2019-20. Out of these 1724 students 1549 Bachelor, 132 Masters and 43 Doctoral degrees were conferred to the students by Governor of Rajasthan Sh. Kalraj Mishraji. Besides, 11 students were awarded Gold Medal for securing highest marks in their class/ subjects. To encourage high level research for the first time in the University Chancellor, Vice- Chancellor and University medal were instituted for Ph. D students. Padam Bhusan Dr. R. S. Paroda, Chairman, TAAS & former DG, ICAR & Secretary DARE also graced this occasion with his benevolent presence. Hon'ble Governor facilitated Dr. Paroda with honorary degree *Doctorate of Science* on this occasion.



3rd Convocation of SKNAU, Jobner

3.2.3 Student Placement

In 2020-21, 64 students of the University got placement in different organizations viz. 06 students got job in Banks, 01 student selected as Junior Scientific Officer, 04 students selected in Govt of Rajasthan as Assistant Agriculture Officer (AAO) & 32 on the post of Agriculture Supervisor, 1 in Govt. of Haryana, one in railway and 12 in private organizations. Two students were selected as Assistant Professor in private colleges. Three students were selected as SRF in research projects at various organizations. One student has become an entrepreneur and established a Mushroom unit in Sikar. Campus interview could not be arranged by private companies due to COVID-19 Pandemic.

3.2.4 Scholarship/Fellowship availed by the constituent colleges of the University

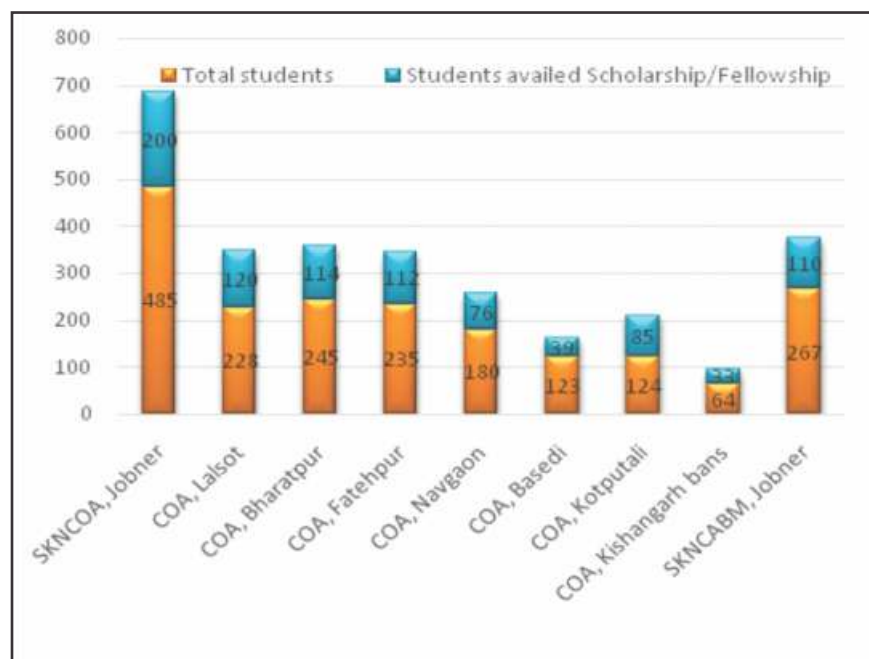
The students are awarded scholarships offered by ICAR, Govt. of Rajasthan, University and private organizations. In UG out of 1951 students 889 students(45.57%) were awarded the scholarship, where as in



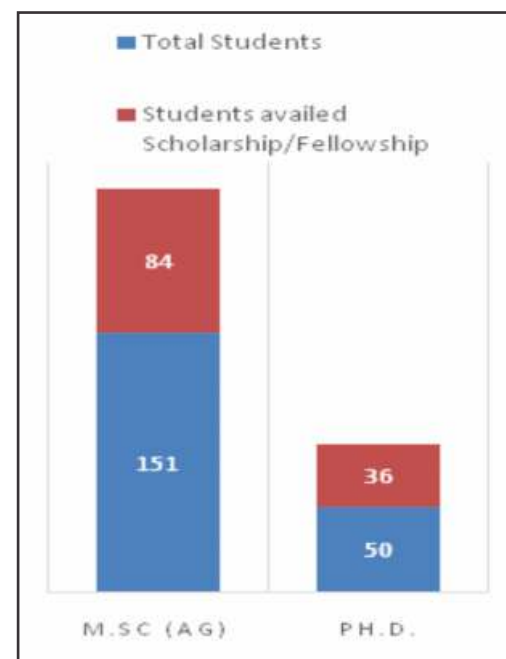
M.Sc. out of 151 students enrolled 84 (55.63%) are received fellowship. In case of Ph.D, 36 (72%) out of 50 students are received fellowship.

Students availed scholarship/Fellowship during 2020-21

UG



M.Sc. (Ag) & Ph.D.



Details of scholarship : The details of scholarship/ fellowship given to students during 2020-21 is here under.

Table 4. Details of scholarship/ fellowship during academic session 2020-21

S.No	Name of Scholarship	No. of Students Awarded	Amount in Rs. / Year
1.	State Scholarship (SC, ST, OBC) Sponsored by GOR	297	2954000
2.	ICAR- SRF	05	1910000
3.	ICAR -JRF	10	600000
4.	ICAR -AIEEA	03	108000
5.	Fellowship from National Private Bodies	01	264000
6.	Incentives for Girls Students (UG)	616	7392000
7.	Incentive for Girls Students (M.Sc. & Ph.D.)	72	864000
8.	CM Higher Education Scholarship	11	55000
9.	Merit scholarship Ph.D.	09	162000
10.	Merit scholarship M.Sc.	21	252000
11.	Indo African scholarship (PBG)	01	220000
12.	Inspire scholarship Ph.D.	01	392000
	Total		15173000

Table 5. Comparison of Scholarship / Fellowship during last three years

Year	U.G. Students		P.G. Students		Ph.D. Students	
	Total Students	Fellowship Awarded	Total Students	Fellowship Awarded	Total Students	Fellowship Awarded
2018-19	1195	320	155	14	50	13
2019-20	1725	681	145	129	59	27
2020-21	1951	889	151	84	50	36

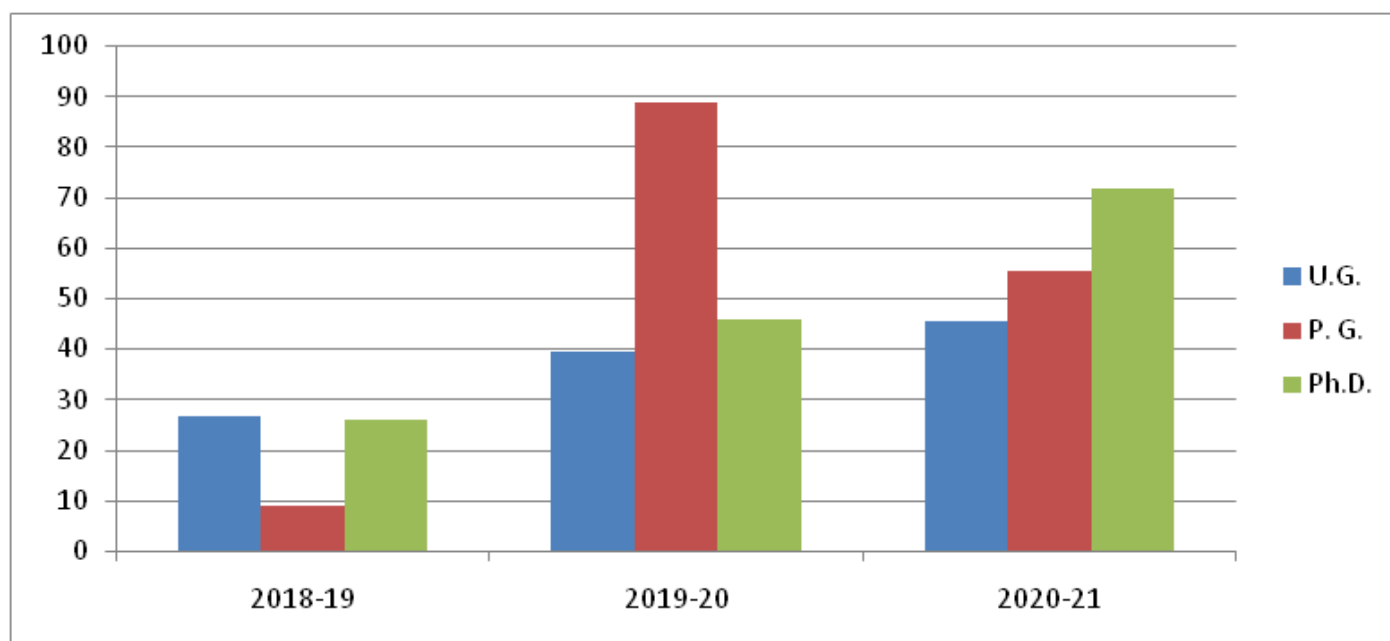


Chart based on percentage of students honored with scholarships/Fellowships

3.2.5 Academic Excellence

Eight students secured JRF (Junior Research Fellow) and 19 Non-JRF seats and joined post graduation programme at various State Agricultural Universities. Nine students qualified NET examination conducted by ASRB (ICAR), New Delhi during 2020. A total of 21 students of SKNCOA, Jobner got admission in the Ph.D programme and 87 students of constituent colleges of the university got admission in PG programme in various State Agriculture Universities. Two students of SKNCABM also got admission in PGDM course at IIM Ahmedabad and IRMA, Hyderabad during reporting year.

3.2.6 Awards and Recognition to Students

- » Ms. Kanta Kumawat, M.Sc. (Ag) student in the SKNCOA, Jobner awarded with GNRSA-Best Research Thesis Award-2020. The sponsoring organization was Agricultural Technology Development Society (ATDS).
- » Dr. Pushpa Ujjaniya, Ph.D student in the SKNCOA, Jobner honoured with Chancellor Award for Ph.D thesis. The award was sponsored by SKNAgriculture University, Jobner.



- Mr. Neeraj Sharma, SKNCOA, Jobner READY student received appreciation certificate and prize money from Network for Certification and Conservation of Forest (NCCF), New Delhi for completion of on-ground survey of farmers for inputs to the ICFRE Agroforestry Policy Review Research Project.

3.3 Other Co-curricular Activities

3.3.1 Orientation Programme

The orientation of newly admitted students of all the constituent colleges was conducted in the month of July-August at their respective colleges. The newly admitted students of B Sc (Ag), M. Sc. and Ph. D. students were made aware about different college activities regarding academic, cultural, NCC, NSS, games and sports, library, hostel facilities etc, different rules, regulations and other facilities available.

3.3.2 Rural Entrepreneurship Awareness Development Yojana (READY) Programme

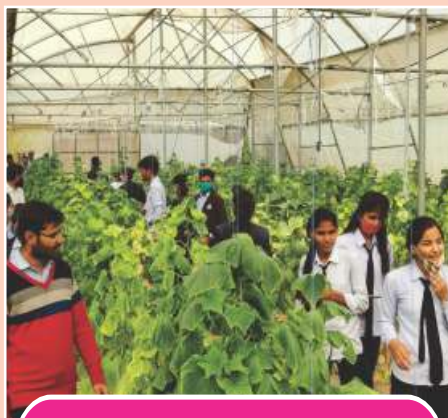
Rural Entrepreneurship Awareness Development Yojana (READY), a new initiative to reorient the agriculture graduates for entrepreneurship development, is underway at all the constituent colleges of SKNAU for final year students. This programme includes Rural Awareness Work Experience and Agro Industrial Attachment (RAW & AIA). In the first week of August, 2020 on-campus training was given to the READY students by faculties. Subsequently, students were placed in rural areas for 56 days, where each student was attached to one host farmer for practical learning with regard to crop production, plant protection, rural economics and also the dynamics of rural societies. After that, students were attached with KVKs, research stations and colleges for 21 days. From the third week of Nov, 2020, students were attached to different Agro-Industries, where they could gain practical industrial experience. A total of 472 students of B. Sc (Ag) Pt. IV of all constituent colleges have successfully completed the REDDY programme as a part of their curriculum.

3.3.3 Agricultural Experiential Learning Programme (AELP)

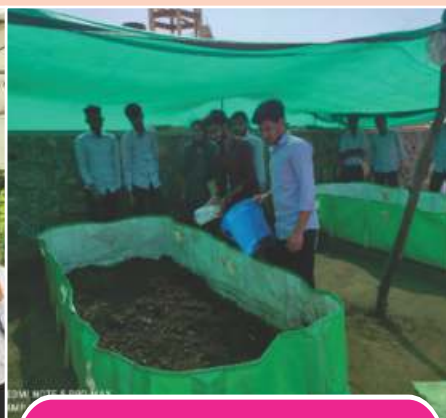
After the completion of READY, the final year students were placed in different areas of entrepreneurship for one semester wherein each student was attached to any one of the experiential learning units for regressive entrepreneurial training. The number of AELP units, which became operational were 10, 03, 06 and 02 at agriculture colleges, Jobner, Lalsot, Fatehpur and Bharatpur, respectively. A total of 472 students of the constituent colleges have successfully completed their AELP during the year.



EL Unit at Department of Entomology, SKNCOA, Jobner



Protected Cultivation EL Unit at Horticulture, SKNCOA, Jobner



Vermicompost EL Unit at COA, Lalsot

3.3.4 National Cadet Core (NCC)

- » NCC unit is running in the SKN College of Agriculture, Jobner. In 2020-21, 92 students of the college were registered in NCC, comprising 42 boys and 50 girls. The enrollment of 1st year cadets in NCC was carried out through written and physical Efficiency Test (PET), which was held in the month of December, 2020. While the registration of old cadets for B & C certificate was held in July, 2020.
- » 31 cadets participated in Combined Annual Training Camp (CATC) from February 18-21, 2021 at Shri Bhawani Niketan PG College, Sikar Road, Jaipur.
- » 30 cadets participated in Annual Training Camp (ATC) from 26 February to 3 March, 2021 at Shri Bhawani Niketan PG College, Sikar Road, Jaipur.
- » NCC cadets actively participated in online awareness campaigns about COVID-19 pandemic. All the cadets participated in online birth anniversary celebration programme of Mahatma Gandhi. 2nd and 3rd year cadets participated in online celebration of Kargil Vijay Diwas and Constitution Day.
- » Second and third year senior division NCC cadets took part in ceremonial parade of 26th January 2021.



Ceremonial Parade of 26th January 2021

- » 19 cadets performed their duties in farmers fair of SKNAU from 22 to 26 February, 2021.
- » 31 cadets appeared in 'B' Certificate examination on 3 April 2021.
- » As per directives of commanding officer, 17 cadets (10 girls + 7 boys) trained through online training to serve the nation in corona pandemic.
- » 23 NCC cadets participated in online webinar on 'International Yoga Day' on 21 June, 2021
- » As per directives of Commanding Officer all the cadets registered on digital form of DGNCC.
- » Online classes have been conducted on different topics including Contribution of Youth in Nation Building, Sociability, Social Skills, Counter Terrorism, Stress Management skills etc.



Kisan Mela, 2021



Volunteer services in Kisan Mela

3.3.5 National Social Services (NSS)

Every undergraduate college has one NSS unit. The SKN College of Agriculture, Jobner has two NSS units. Thus, there are 10 NSS units in the University. In 2020-21, total 903 students were registered in NSS in different colleges, out of which 624 were boys and 279 girls. The NSS units organized many activities throughout the year. Some of them are listed below:



Agriculture Education Day Celebration

World Environment Day, 5th June 2021, was celebrated online through webinars due to Lockdown. The NSS volunteer students conducted plantation at their home.



COA, Fathepur

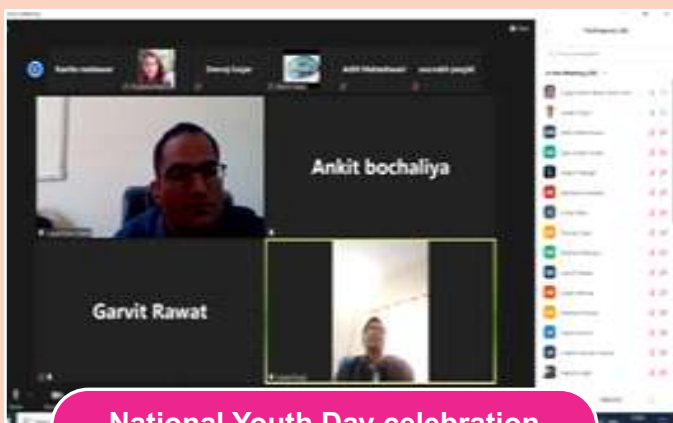
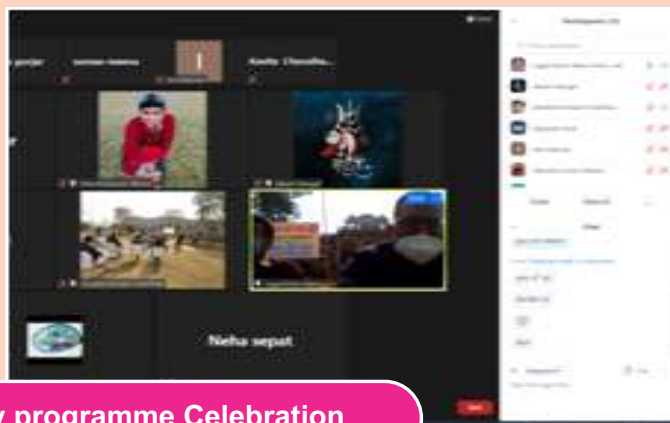


COA, Kotputli

World Environment Day



National Constitution Day programme Celebration

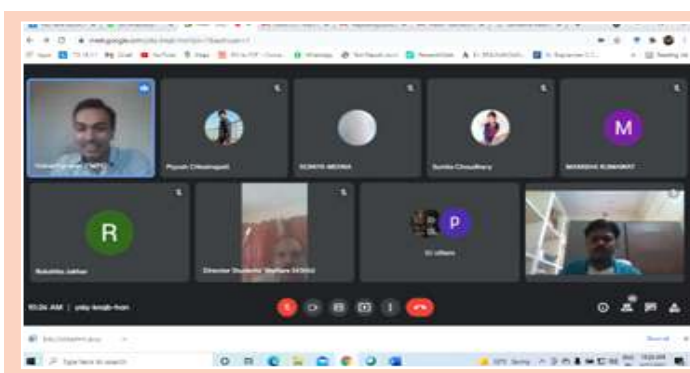


National Youth Day celebration



International Women Day Celebrations

Workshops in different constituent colleges on “Guidance for Psycho-social Counselling and Covid Helper Skills” through Online Platform - Google Meet. These workshops focused on providing support for Covid-19 affected areas. It will not only empower NSS volunteers to help distressed people in these pandemic times but also make trainers to impart these skills and train others.



Volunteer Services during Covid 19 : NSS volunteers of all constituent colleges, disseminated information about Arogya Setu App, Diksha/ iGOT, COVID 19 among the NSS volunteers through online platform during April, 2020.

**Volunteer Services during Covid 19**

“Swachh Bharat Abhiyan” Celebration

Swachh Bharat Mission (SBM) or Swachh Bharat Abhiyan (SBA) or Clean India Mission was a country-wide campaign from 2014 to 2019, to eliminate open defecation and improve solid waste management (SWM) in urban and rural areas in India. The objectives of the mission also included eradication of manual scavenging, generating awareness and bringing about a behavioral change regarding sanitation practices and augmentation of capacity at the local level. Initiated by the Government of India, the mission aimed to achieve an "open-defecation free" (ODF) India by 2 October 2020, the 150th anniversary of the birth of Mahatma Gandhi.

**“Swachh Bharat Abhiyan” Celebration**



Swachh Bharat Abhiyan Celebration

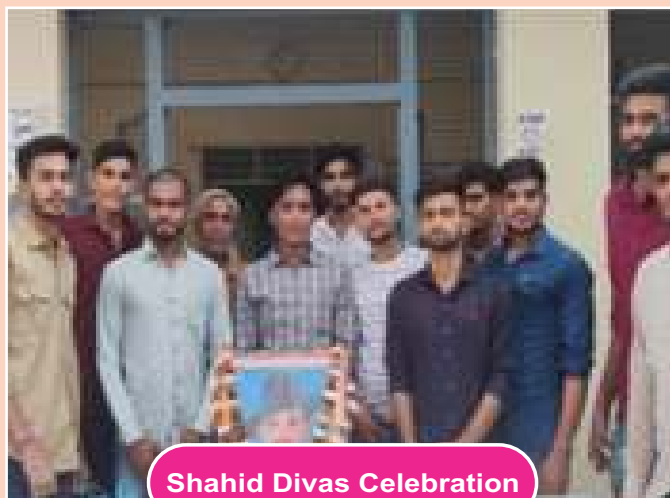


National Road Safety Month Celebration





Amrit Mahotsav



Shahid Divas Celebration



Shramdhan by NSS volunteers at Different Centres



Plantation drive by NSS volunteers in their respective villages



Glimpses of NSS Activities

3.3.6 Games and Sports

1. In all the constituent colleges regular physical education classes and regular games practice sessions were held.



Sports activities at SKNCOA, Jobner

2. In order to improve games facilities, the Basket Ball Court and Badminton Court was renovated at SKNCOA, Jobner.



Basket Ball Court at SKNCOA, Jobner



Badminton Court at SKNCOA, Jobner

3.4 New Academic Initiatives

3.4.1 New Colleges

Four new agriculture and allied colleges namely; College of Dairy Science and Technology, Jobner, College of Agriculture, Bhusawar-Weir, College of Agriculture, Jhilai, Niwai-Tonk and College of Agriculture, Peethampuri, Neem ka Thana, have been started in the reporting year 2020-21 after budget announcement by Govt of Rajasthan. The student intake capacity of each college is 60.

3.4.2 Online classes

Due to COVID pandemic the online classes of all UG, PG and Ph.D students were commenced through different online platforms like Google meet, Zoom, WebEx etc. Conscientious efforts have been made to create effective teaching-learning environment in the University. Study material in the form of e- notes are being continuously circulated through Whatsapp, Google classrooms to all UG, PG and Ph.D students in all constituent colleges of the University.

3.4.3 Smart Classrooms

The class rooms are equipped with latest technologies *i.e.*, interactive panel, audio visual aids, internet connectivity etc. to make education more effective and understandable. A total of 19 class rooms are upgraded as smart class rooms which are being utilized by the faculties for teaching and other interactive discussion sessions with students.



Smart Class rooms at SKNCOA, Jobner

3.4.4 Career Development Centre (CDC)

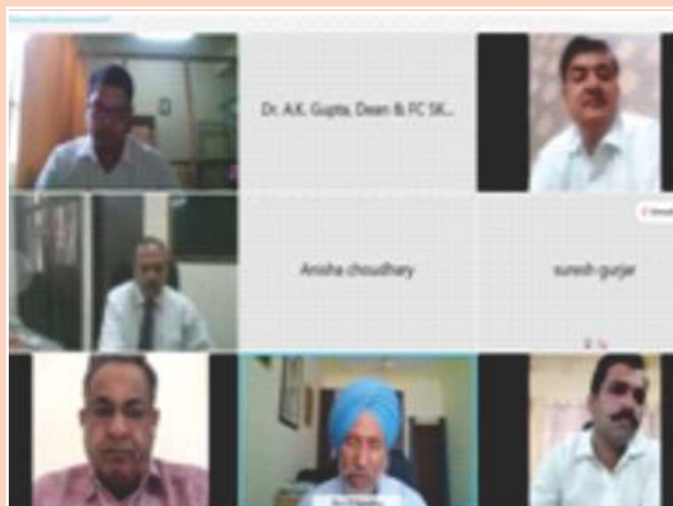
A Model Career Development Centre (CDC) has been started in the University in the year 2019-20, with the support of ICAR-NAARM, Hyderabad to help the students in personality development, exposure, interaction with renowned personality and better job placements. During this year a number of workshops, webinars were organized to enhance the skill and personality development of students which has been mentioned here under:

- ▶▶ Webinar on “Exploring Possibilities and Trends for a Robust Career” on 5th January 2021 by CDC, SKNAU, Jobner. The Lead speaker was Dr. Pragya Kumar Mathur, Trainer, Psychologist, Faculty and Founder of Arunima Ankuran, an initiative for Positive Social Change through Self Development, New Delhi.
- ▶▶ Hands-on Training cum Workshop on “Developing Presentation Skills among PG students using Powerpoint” on 7.2.2021 at SKN College of Agriculture, Jobner by CDC, SKNAU, Jobner. The lead speaker was Dr. Rakesh Singhal, Professor (Computer) HCM RIPA, Jaipur.
- ▶▶ Three days Training Cum Workshop on “Phonetics and Phonology of English” at College of Agriculture, Bharatpur from 1-3 March, 2021 by CDC, SKNAU, Jobner in coordination with COA, Bharatpur. The Lead speaker was Sh. Ram Singh Verma, Retired Lecturer in English, DIET, Bharatpur.





- » One day Training cum workshop on “Building Team Spirit Among Students for Career Development” at SKN College of Agriculture, Jobner on 12.3.2021 by CDC, SKNAU Jobner. The Lead speaker was Dr. Alok Kumar, Principal Scientist NAARM.
- » One day Training cum Workshop on “Soft Skills for Professional Growth” at COA, Lalsot on 23.3.2021 by CDC, SKNAU Jobner in coordination with COA, Lalsot. The Lead speakers were Dr. M. K. Sharma, Professor, COA, Lalsot and Dr. Udal Singh, Assoc. Professor, COA, Lalsot.
- » Career Orientation Workshop “EMPEZZAR-2021” for the Fresher students at COA Fatehpur on 25.3.2021 by CDC, SKNAU, Jobner in coordination with COA, Fatehpur Shekhawati (Sikar). Sh. Mushtaq Najmi, Chairman, Municipal Corporation, Fatehpur and Dr. I.M. Khan, DSW and Chairman of CDC were lead speakers.
- » Workshop on “Career development of Girl students through Women Health Awareness” at COA Fatehpur on 26.3.2021 by CDC, SKNAU Jobner in coordination with COA, Fatehpur Shekhawati (Sikar). Dr. Nirmal Khichad, Gynaecologist, Govt Hospital, Fatehpur-Shekhawati was lead speaker.
- » Career Opportunities for Girls students in Police Services for girl students at SKN College of Agriculture, Jobner on 31.3.2021 by CDC in coordination with Rajasthan Patrika, Jaipur. Sh. Shankar Dutt Sharma, SP Rural, Police Commissionate Jaipur, and Kirti Singh, Deputy SP and CO Sambhar Lake (Jaipur) were lead speakers.
- » One day online Career Orientation training on “Career Development in Police Services” on 1.4.2021 by CDC in coordination with Rajasthan Patrika, Jaipur. Lead speaker-Sh. Jogender Singh, SHO, Police Station, Jobner
- » One day online Career Orientation Webinar on “A Talk on Employability Skills for 21st Century” on 16.4.2021 by CDC in coordination with Medha Foundation. Lead speakers were Sh. Piyush Gupta, Miss Urooj Wasim Khan, Miss Pragya Dubey, Miss Varsha Mehrotra and Sh. Ashok Pandey of Medha Foundation.
- » Online CDC workshop “A Workshop on Time management & Procrastination” on 26.4.21 by CDC in coordination with Medha Foundation. Lead Speaker was Miss Shilpi Singh, Medha Foundation.
- » CDC Webinar on "Mahamari Ka Samay: Kya Sikhien Kya Bhoolein" on 13.5.2021 by CDC, SKNAU, Jobner. Lead speaker was K. Siddhartha, Chief Mentor, ENSEMBLE IAS Academy.
- » Webinar on “Career opportunities in the field of processing and food product development of medicinal plants” on 14.6.2021 by CDC, SKNAU, Jobner. Lead speakers were Dr. Seema Sonkar, Associate Professor, CSAUT, Kanpur and Dr. S. K. Goyal, Assistant Professor, BHU, Varanasi.
- » Online Worksop on “Managing stress in all spheres of life” on 24.6.2021 by CDC, SKNAU, Jobner. Lead speaker was Shri Anil Sharma, Ex-General Manager, SAIL- Bhilai Steel Plant & Renowned HR Expert and Life, Skill Trainer.
- » Online training on “Data Handling Skills: A Key of Success in Career” 30.6.2021 by CDC, SKNAU, Jobner. Lead speaker was Dr. Jitendra Kumar, Associate Professor & Head, Department of Statistics, School of Mathematics, Statistics and Computational Sciences, Central University of Rajasthan.



Glimpses of Career Development Center activities

- » Guest Lecture on Secrets of Happiness: COA Bharatpur organized an online special guest lecture on “Secrets of Happiness” on 05 December, 2020. The lecture was delivered by expert speaker and preacher Shri Pitambar Das (M.A. Sanskrit) a saint from International Society for Krishna Consciousness (ISKCON), Vrindavan. He emphasized on simple living and high thinking and different spiritual ways of happiness among students.



Glimpses of Career Development Center activities

3.5 Infrastructure Strengthening

3.5.1 Rain Water Harvesting Structures

To conserve rain water, elaborated efforts are being made to catch each & every drop of rain. The University has developed 9 water harvesting structures with total capacity of more than 20 litre crore litres water. One of the largest rain water harvesting structure of 11 crore liters capacity was inaugurated by the Hon'ble Governor and Hon'ble Chief Minister, Government of Rajasthan. The conserved rain water shall be used for agricultural research and seed production. There is also a need to create a Center of Excellence to increase water productivity, so that farmers and students can be trained by using the stored water properly and efficiently.



3.5.2 Renovation of Saraswati Hall

The SKN College of Agriculture, an oldest campus did not have an auditorium which is one of the essential infrastructure for any educational institute. Keeping that in view, the 40 years old Saraswati Bhawan has been renovated to have a multipurpose hall. This hall shall be used in conducting conferences, seminars, workshops, examinations, cultural events etc.

3.5.3 Beautification of University Campus

The front area of the University administrative block is being beautified with the establishment of lawn in about one acre land. Ornamental tree, shrubs and annuals have also been planted in the borders and median.

3.5.4 Strengthening of Instructional Farm

The infrastructure facilities of instructional Farms at almost all the units have been strengthened.

- » Installation of drip irrigation systems into the field, construction of Cow Shed in dairy at SKNCOA, Jobner
- » Construction of boundary wall and retaining wall in 2 kilometer running distance, construction of ceremonial platform, seed grading machine, drip irrigation in one ha. area, shade net house in 24 X 20 meters, agro-meteorological observatory in an area of 55 X 36 meters, digging of one farm pond for rain water harvesting and construction of farm store, overhead water tank and construction of 13 residential quarters at COA, Lalsot.
- » Instructional farm strengthened with tractor, tractor trolley, water tanker, harrow, cultivator at COA, Bharatpur.

3.5.5 Renovation and strengthening of class rooms & Laboratory

- » Renovation of laboratory in the Departments of Biochemistry, Statistics and Plant



KARAN SAGAR
Capacity – 2.00 crore liters



JWALA SAGAR
Capacity – 11 crore liters



HURDIA POND
Capacity – 6 crore liters

Rain Water Harvesting Structures

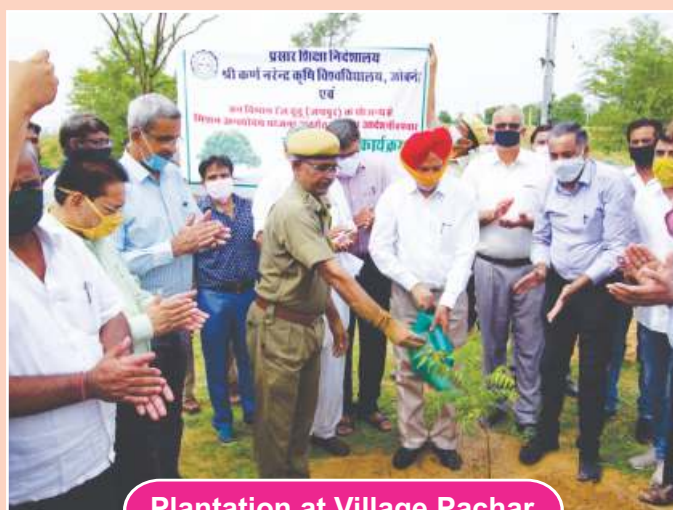
Pathology and renovation of UG class room, seminar Hall, HOD office in the Department of Plant Pathology at SKNCOA, Jobner.

- » Strengthening Laboratory with Micro-kjeldahl unit and fibre analysis in Department of biochemistry, Insect Bio diversity Laboratory, Entomology Storage Laboratory, EL Unit in department of Entomology, extension of number of nodes to accommodate more number of students in computer lab in the Departments of Statistics at SKNCOA, Jobner.
- » Campus is equipped with 100 mbps fibre internet connectivity, digital signage, renovation and modernization of the seminar hall and Dean's chamber, construction of staff quarters, solar light, CCTV cameras, procurement of multipurpose vacuum cleaner, labs have been equipped with digital weighing machine, fully automatic nitrogen analyzer etc. at COA, Lalsot.
- » Establishment of Post harvest technology Laboratory, Soil Science & Plant Health Clinic laboratory, student furniture, conference room at COA, Bharatpur.
- » Development of conference room with mike 20+01, Conference room table and chair, CCTV & sign board at COA, Fatehpur.
- » Development of library facility at COA, Kotputali.
- » Computer room and meeting hall developed at SKNCABM, Jobner.

3.6 Green Campus - Clean Campus

3.6.1 Van Mahotasav-A mega Tree Plantation Programme

Tree Plantation drives combat many environmental issues like deforestation, erosion of soil, desertification in semi-arid areas, global warming and thus enhance the beauty and balance of the environment. "Van Mahotasav- A mega Tree Plantation Programme" was organized for three days from 14-16 August, 2020 to mark 74th Independence Day in all the units of the University. More than 16,000 plants of different species were planted in the University premises and its constituent centers. In addition, saplings were distributed in the adopted villages of individual KVKs as a part of "Doubling Farmers Income" drive. Efforts are made the University Campus become a No Smoking Zone, No Tobacco Zone and Plastic free campus.



Plantation at Village Pachar



ARS, Fatehpur

A mega Tree Plantation Programme

3.6.2 Cost Cutting through Green Energy (Solar system)

A 364 KW Rooftop Solar PV plant has been installed at SKNCOA, Jobner. This system is expected to help reduce dependence on grid power supply, generate green power and mitigate GHG emissions. The solar grid PV is equipped to handle the complete power load of central library.



3.6.3 E-Rikshaw

Efforts are being made to make the university a green-clean campus. In this direction e-rikshaws has been purchased, which are being used in the campus for transportation of students, milk distribution, staff and other employees engaged in the official work. To abate pollution in the campus, a gradual ban is being imposed on motorcycles and motor vehicles.



3.6.4 Sewage Treatment plant

A sewage treatment plant employing IARI Technology is in offing to treat grey water of two hostels. Its initial capacity shall be one lakh litre per day. The treated water shall be used judiciously to raise fodder crops for dairy cattle and/or watering plantation.

3.7 New Initiatives

3.7.1 Bio-Diversity Park

Padam Bhusan Dr. R. S. Paroda Chairman, TAAS & former DG, ICAR & Secretary DARE, inaugurated Bio- Diversity Park at Vice-Chancellor's residence, SKNAU on 13 Sep, 2020. In this park, the plant species have been planted in different blocks like spiritual and religious, scientific, human health and aesthetic value section. The Park has a collection of more than 130 rare plant species like Kair, Kachari, Phalsa, Lasoda, Shisham, Rohida, Karonda etc. and some medicinal herbs. Hon'ble Vice-Chancellor Dr. J.S. Sandhu and his wife Mrs. Surendra Pal Kaur had



the keen interest in developing this Bio-Diversity Park. Mrs. Sandhu stressed that protection and conservation of the biodiversity is not only a matter of emotion or aesthetics but is very important for making entire ecosystem.

3.7.2 Milk Parlour

Gir cow herd has been brought and being conserved under RKVY at department of LPM. Automatic milk parlor has been established at Dairy Farm under Gir cow project which has become operational. Gir cow milk has been packed for the first time under brand name “Karan Narendra Milk” which is becoming popular among staff, students and villagers.



Milk Parlour at SKNCOA, Jobner

3.7.3 Fish Production Unit

The Fish production has been started in water harvesting structure of SKNCOA/University ponds namely: Maru Sagar & Karan Sagar. The fingerlings of about 55 mm were released in these ponds of four spp. of fishes i.e. Rohu, Katla, Common Carp and Grass Carp. Before stocking the fish seed the ponds were fertilized by cow dung, urea & SSP for producing natural food i.e. zooplankters & phytoplankters. Supplementary fish seed @ 3% of their body weight is being giving daily. The fish attains marketable size within 8-9 months. A training was also organized on fish production by Directorate of Extension Education to create awareness among farmers.



Fish Production Unit SKNCOA, Jobner



3.7.4 Honeybee Rearing Unit

Keeping in view the entrepreneurial potential of small-scale beekeeping in rural Rajasthan to enhance the rural economy Honey bee rearing (demonstration) unit has been started in the Department of Entomology, SKN College of Agriculture, Jobner. The unit is helpful in learning of basics of apiculture for undergraduate and post graduate students as well as farmers. Honey production has also started in the unit. *Apis mellifera* is domesticated species which is being reared. In India beekeeping is mostly practised as a full-time occupation. Honeybees are special gift to human beings because bee-keeping for their pollination services and their products such as honey, beeswax, propolis, royal jelly and bee venom etc. with low start-up costs.

Celebration of 'World Bee Day' was done on 20th May, 2021 by organizing a webinar on 'Entrepreneurial potential of small-scale beekeeping in rural India'. Dr. Kiran Rana, Principal Scientist, AICRP-Honeybees and Pollinators and Dr. Y. S. Parmar from University of Horticulture & Forestry, Nauni, Solan (HP) delivered lectures on the occasion.



Honeybee Rearing Unit

3.7.5 Biogas plant

A Biogas production plant having the capacity of 4 m³ (Fixed dome type) was established at SKNAU, Jobner. This plant will help in demonstration of its functioning and methane gas production procedure to the students and farmers.



Biogas plant

3.7.6 SC Study Room

A air conditioned study room for scheduled caste students under scheduled caste scheme, ICAR was developed in the Department of Horticulture, SKNCOA, Jobner. The facilities are being used for various type of free trainings like post-harvest management of fruits and vegetables, goat rearing, computer knowledge, mushroom cultivation, bee keeping etc. for unemployed youth and girls of scheduled castes of Rajasthan.



SC Study Room

3.7.7 Sale Point at SKNAU, Jobner

A sale point has been established at SKNAU, Jobner. This sale point is used for selling different products of the university such as seeds of latest varieties of Kharif and Rabi crops, packed milk, eggs, Trichoderma, vermi compost, aonla candy, aonla juice, literature etc.



Sale Point at SKNAU, Jobner

3.7.8 Vegetable Seed Production

In order to provide quality seeds of local vegetables to the farmers, the university has started seed production of Kachri, Gourd, Onion and Spinach on its farms. It is hoped that the local farmers will be benefited by getting these quality seeds at a fair price.

3.8 Inauguration and Celebrations

3.8.1 Inauguration of University Administrative Bhawan, Jobner and COA, Kumher, Bharatpur

Hon'ble Chief Minister Sh. Ashok Gehlot and Sh. Lal Chand Kataria, Hon'ble Minister of Agriculture, Animal Husbandry and Fisheries, GOR inaugurated the University Administrative Bhawan, Jobner and building of College of Agriculture, Kumher, Bharatpur virtually on 18 December, 2020.

3.8.2 Inauguration of Agriculture Technology Knowledge Centre :

Agriculture Technology Knowledge Centre has been established at Rajasthan Agricultural Research Institute, Durgapura, Jaipur under RKVY scheme with the budget of Rs. 464.00 Lakhs. In this museum latest technologies and innovations in the field of Agriculture and allied sector are demonstrated in very precise manner. Agriculture Technology Knowledge Centre was inaugurated on 23.12.21 by Sh. Lalchand Kataria, Hon'ble Minister of Agriculture, Animal Husbandry and Fisheries, GOR and Prof. J.S. Sandhu, Hon'ble Vice Chancellor, SKNAU, Jobner.




Inauguration of Agriculture Technology Knowledge Centre

Dr. R.S. Paroda, University Foundation Day

3.8.3 8th University Foundation Day

8th Foundation Day of the University was celebrated on 13 Sept, 2020. Padma Bhushan Dr. R.S. Paroda Chairman, TAAS & former DG, ICAR & Secretary DARE graced the occasion and delivered a lecture on "Bio-resources led climate smart agriculture for food and nutritional security in Rajasthan". At the outset all the dignitaries unveiled publications developed by university scientists namely: Rural Entrepreneurship Awareness Development Yojana (READY) practical manual, Hands on training module for entrepreneurship orientation programme and Karan Narendra Trichoderma (KNT). All the constituent colleges and other units of the University participated in the programme through online mode.

3.8.4 150th Birth Anniversary of Mahatma Gandhi

Swachh Bharat Mission (SBM) or Swachh Bharat Abhiyan (SBA) or Clean India Mission was a country-wide campaign from 2014 to 2019, to eliminate open defecation and improve solid waste management (SWM) in urban and rural areas in India. Initiated by the Government of India, the mission aimed to achieve an "open-defecation free" (ODF) India by 2nd October 2020, the 150th birth anniversary of Mahatma Gandhi and Sh. Lal bahadur Shastri. On this occasion all the units of SKNAU organized different cleanliness activities under "Swachhta Hi Sewa Movement" from 26th September - 02nd October 2020. The major activities under this were; cleaning of premises, conducting awareness campaign for farm waste decomposition, adoption of better sanitation practices and personal hygiene at respective unit. At the University headquarter, Hon'ble Vice-Chancellor Dr. J. S. Sandhu and other officers of the University gathered to mark the 150th birth anniversary of



Mask and Sanitizers Distribution



Mahatma Gandhi with patriotic fervour. Later to mark this occasion Dr. Sandhu and other staff members distributed the mask and sanitizes to the people of the Jobner village to create awareness among them about do's and dont's in the ongoing Covid-19 situation.

3.8.6 Independence Day Celebration

74th Independence Day was celebrated on 15 Aug, 2020 at all the units of the University. The head of respective unit hoisted the national flag and commemorated the freedom struggles of the freedom fighters. Hon'ble Vice Chancellor Dr. J.S. Sandhu addressed the staff on this occasion and also gave an appreciation certificate to sincere staff towards the assigned work.

3.8.7 Republic Day Celebration

72nd Republic day was celebratd on 26 January, 2021 at all the units of SKNAU, Jobner with great zeal and enthusiasm. The heads of each respective centre hoisted the national flag. Hon'ble Vice Chancellor Prof. J. S. Sandhu addressed the staff on this occasion and outlined progress made by the university in last one year. A spectacular parade by NCC cadets of SKNCOA, Jobner at university parade ground added beauty to the event. Best Cadet Award was also presented to cadet Abhimanyu Doot and Miss Kajal Yadav by Hon'ble Vice Chancellor.



72nd Republic Day

3.8.8 Teacher's Day

Teacher's Day is celebrated on 5th September every year to commemorate the birth anniversary of Dr. Sarvepalli Radhakrishnan - First Vice President of India and the Second President of India and an educationist at heart. This Day was celebrated on Sept, 5 2020 in all units of University virtually. Hon'ble Vice-Chancellor Dr. J. S. Sandhu and all the unit incharges delivered messages on this occasion. Hon'ble appreciated the sincere efforts of teachers during this difficult time of COVID-19 pandemic. He acknowledged the role of teaching faculty and their guidance towards the holistic development of students.

3.8.9 COA, Fatehpur Foundation Day

College of Agriculture, Fatehpur celebrated its foundation day virtually on 25 Sep, 2020. On this occasion, Hon'ble Vice- Chancellor Dr. J. S. Sandhu along with the learned scientists of the university virtually released the annual report "At a Glance" of College of Agriculture, Fatehpur. Dr. Sandhu motivated all the faculty members and students to continue their dedicated efforts towards the upliftment of agricultural community of the state.



COA, Fatehpur Foundation Day



3.8.10 World Water Day Celebration at Constituent Colleges

World Water Day "Valuing water" on 22 March 2021 at College of Agriculture, Kotputli was celebrated. The Chief Guest was Dr. Sangram Singh (Ex. Director Extension, SKNAU, Jobner) & member of founder family, SKNAU, Co-guest Dr. I.M. Khan (DSW, SKNAU, Jobner) Organizer Dr. Surendra Singh (Dean, COA, Kotputli) and Organizing Secretary Dr. Ajeet Singh (ADSW, COA, Kotputli). All other constituent colleges also celebrated the World water Day in their respective campuses.



World Water Day at COA, Kotputli

3.8.11 International Yoga Day Celebration

The International yoga day was celebrated on 21st June at head quarter as well as constituent colleges of the University.



International Yoga Day Celebration, 2021



3.9 MoUs Signed

In order to improve the quality of research for students and to collaborate in academic and extension area that is mutually beneficial to both the organization, the SKNAU, Jobner inked MoUs with the following organizations during reporting period

- » **Amity University, Rajasthan:** The MoU has been signed between SKNAU, Jobner and Amity University, Rajasthan on 02/07/2020. The mutual collaboration includes research development in

emerging areas such as plant biotechnology, nanotechnology, natural resource management, microbiology, food processing training etc.

- » **Agriculture University, Kota:** The MoU has been signed on 14.07.2020. The Universities will work in association to bring out the best academic and research facilities by exchanging the technical knowledge and skills.
- » **Maharana Pratap University of Agriculture & Technology, Udaipur:** The MoU has been signed on 14.07.2020. The Universities will work in association to bring out the best academic and research facilities by exchanging the technical knowledge and skills. Also, both institutes have submitted a project in collaborative mode for phytotrone facility.
- » **National Research Centre on Seed Spices, Ajmer :** The MoU was signed on 25.08.2020 to facilitate collaborative research work, training and exchange of technology, use of software etc.
- » **Petroleum Conservation Research Association:** The MoU was signed on 14.10.2020. with the objectives are to create awareness among farmers for the efficient use of fuel and energy to protect environment and improvement quality of life.
- » **Suresh Gyan Vihar University, Jagatpura:** The MoU has been signed on 25.02.2021, in the area of mutual interest for the exchange of faculty and students.
- » **Dr. B.Lal Institute of Biotechnology, Jaipur:** The MoU has been signed on 17.03.2021 to develop cooperation and collaboration in research particularly in biotechnology, nanotechnology, medical microbiology, environmental technology, molecular biotechnology and bioinformatics.
- » **Vivekanand Global University, Jaipur:** The MoU has been signed on 17.03.2021 to develop cooperation and collaboration in research particularly in biotechnology, nanotechnology, medical microbiology, environmental technology, molecular biotechnology and bioinformatics.

3.10 National Agriculture Higher Education Project (NAHEP) :

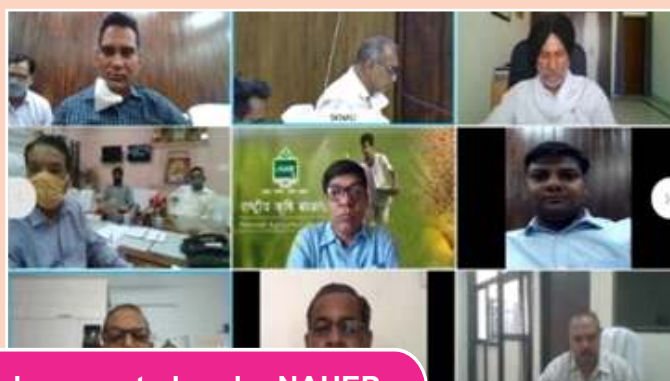
National Agriculture Higher Education Project (NAHEP) on “Strengthening Academic Ambience for Quality and Skill Oriented Undergraduate Education” worth Rs 23.89 Cr is running in the University from 2020. Different entrepreneurship and skill development programmes, webinars, visits, lectures organized under the project for inculcating practical aptitude among undergraduate students. A total 62 Webinars, 10 entrepreneurship short course training, and 03 workshops have been organized under NAHEP during the reporting period.



Inauguration of NAHEP Building



Occasion of Webinar



Inauguration of Computer Lab renovated under NAHEP

Webinars Conducted under NAHEP : In lieu of COVID pandemic digital learning environments are gaining popularity in higher education and professional trainings. The college is actively engaged in organizing online lectures/ webinars in different areas to strengthen the knowledge of the students. More than 62 webinars have been organized on recent topics under the aegis of NAHEP. These webinars shall definitely help in making international linkages to exploit quality research and education in agriculture.

Table 6. List of Webinars conducted during academic session 2020-21

S. No.	Date	Title
1	July 16, 2020	Hackathon: Resources Conservation in Agriculture
2	July 22, 2020	Online launching of "IDP on Ambience for Quality and Skill Oriented Undergraduate Education" by Shri Kalraj Mishra, Hon'ble Chancellor and Governor of Rajasthan.
3.	July 29, 2020	The COA, Fatehpur organized an International webinar entitled "Strengthening the immune system against COVID-19 through Agricultural Innovations" in which 4104 participants registered from 20 countries.
4	August 10, 2020	National webinar on "Combating Salt Stress: Opportunity to Enhance Livelihood Security of Affected Farmers"
5	August 13, 2020	Online Guest Lecture on "Climate Change Adaptation in Dry Land Agriculture and a Brief About University of Western Australia"
6	August 20, 2020	Online Quiz Series for U.G. Students to Enhance Excellence in Competitive Examinations
7	August 22, 2020	Online Guest Lecture on Breeding for Disease Resistance-Using Wheat-Rusts System as Model
8	August 27, 2020	Online Guest Lecture on Molecular Breeding: Wheat Breeding as a Model System
9	August 27, 2020	Online Essay Writing Competition for U.G. Students on "Impact of COVID-19 on Farmers Economy"
10	September 03, 2020	Online Quiz Series "KRISHI GURUKUL" for U.G. Students.



11	September 25, 2020	Online Lecture on "Career and Opportunities in Agriculture "
12	October 05, 2020	Online Guest Lecture on "Plant Genetic Resources in India: Management and Utilization in Genomics Era"
13	6 October, 2020	National Web Conference on "Utilization of Organic Waste for Soil Health Management and Energy Production under Changing Climate Scenario"
14	October 14, 2020	National Webinar on "Nanotechnological Interventions in Agriculture"
15	October 15, 2020	Essay Writing Competition on the occasion of Mahila Kisan Diwas
16	October 16, 2020	Online Celebration of World Food Day
17	November 06, 2020	Online Application of ICT in Agriculture
18	December 03, 2020	Online Celebration of Agriculture Education Day
19	December 05, 2020	Online World Soil Day Celebration
20	December 17, 2020	Agri-Business Online Series #1 "Scope of Poultry Farming & Future Prospects"
21	December 23, 2020	Agri-Business Online Series #2 "New Dimensions and Entrepreneurship in Dairy Sector"
22	December 30, 2020	Agri-Business Online Series #3 "Entrepreneurship Through Forestry Sector"
23	December 31, 2020	Social Safeguard Online Webinar Series #1 "Managing Stress During Covid Times"
24	January 16, 2021	National Workshop on "Diversifying Dairy Farming towards Entrepreneurship: Ways to Boost the Dairy Sector and its Sustainability"
25	January 12, 2021	Application of ICT in Agriculture Extension
26	January 13, 2021	Online Webinar Series #4 "Towards Organic: A Sustainable Approach"
27	January 21, 2021	National Webinar on "Tackling Termites in Agriculture: The Fusion of Traditional and Frontier Technologies"
28	January 29, 2021	Agri-Business Online Series #5 "Entrepreneurship in High-tech Horticulture with Protected Cultivation"
29	March 05, 2021	Silage: Enriched Diet for Nutritional Security
30	March 8 to 9, 2021	Two days online workshop on "Blended Learning Workshop on Personal Effectiveness and Group Dynamics"
31	March 10, 2021	Online Webinar on "Storage and Supply Chain for Agricultural Produce"
32	March 16, 2021	Online Webinar on "Modified Atmosphere Packaging"
33	March 18, 2021	Online Webinar on "Farm Academy, be an Informed Farmer"
34	March 20, 2021	Online Webinar on "Conversion of Argi Waste into Wealth"



35	March 22, 2021	Online Webinar on "The Occasion of World Water Day"
36	March 25, 2021	Webinar on Global to Local Water Crisis: Too Much, Too Little or Lack of a Solution
37	March 26 to 27, 2021	Two days Online Workshop on "Environment and Social Safeguard"
38	22 April, 2021	International Webinar on World Earth Day, 2021 Restore Our Earth
39	April 29, 2021	Online Workshop on Entrepreneurship Through Value Added Dairy Products
40	May 04, 2021	International Webinar on "Food Security Through Innovative Postharvest Technologies in Horticulture"
41	May 10, 2021	Online Webinar on Agro-Forestry for Entrepreneurship
	May 04, 2021 to May 31, 2021	Online Quiz Series for U.G. Students to Enhance Excellence in competitive Examinations
42	11 May, 2021	Essay Writing Competition "Agri-Business Potential of India"
43	13 May, 2021	National Webinar on "Challenges & Opportunities in Arid Horticultural Crops"
44	19 May, 2021	National Webinar on "Response and Resilience of Asian Agri-Food Systems to COVID-19: Insights from Principal Farming and Food Systems"
45	20 May, 2021	Webinar on "Entrepreneurial Potential of Small-Scale Beekeeping in Rural India"
46	24 May, 2021	National Webinar on "Prospects of Under-utilized Fruits in India for Nutritional Security and Entrepreneurship"
47	25 May, 2021	Webinar on NCDEX IPF Trust & Sri Karan Narendra Agriculture University, Jobner Presents Investor Awareness Program on Commodity Derivative Market
48	27 May, 2021	Webinar on "NCDEX IPF Trust & Sri Karan Narendra Agriculture University, Jobner Presents Investor Awareness Program on Commodity Derivative Market"
49	28 May, 2021	National Webinar on "NEP 2020 and Higher Agriculture Education"
50	31 May, 2021	National Webinar on "Role and Future of Renewable Energy for Sustainable Agriculture under COVID-19"
51	01 June, 2021	National Webinar on "Camel Milk: A Boon to Mankind"
52	05 June, 2021	National Webinar on "Role of e-NAM and FPOs in Improving Farmers' Income"
53	05 June, 2021	National Webinar on "Restore Ecosystem for Healthy Environment"
54	08 June, 2021	National Webinar on "Entrepreneurial Potential of Sheep and Goat Farming in Rajasthan"



55	June 16, 2021	Online Webinar on "Frontier Areas in Livestock Production Management and Value-Added Dairy Products"
56	June 17, 2021	National Webinar on "Secondary Agriculture-A New Era of Agriculture Under COVID-19"
57	June 18, 2021	Online Webinar on "Button Mushroom Cultivation: Scope, Opportunities and Challenges"
58	June 18, 2021	Webinar on Industry Linkage
59	June 22, 2021	Online Brainstorming Session on "Insect Pests and Diseases Problem in Protected cultivation"
60	June 24, 2021	National Webinar on "Entrepreneurial Skills to Manage Dryland Areas Through Integrated Farming Systems"
61	June 25, 2021	National Webinar on "Trichoderma: A Potential Bioagent for Entrepreneurship under Organic Farming"
62	June 28, 2021	National Webinar on "Emerging Trends in Plant Physiology"

3.11 Organization of Trainings/ short courses

The University organized several trainings and short-term courses in specialized areas at different units for the benefit of professionals, students, farmers and extension workers.

SKNCOA, Jobner

- » A five days training entitled 'Entrepreneurship in Production of Tricho-cards for Insect Pest Management' was organized from March 15-20, 2021, in which 70 students participated.
- » A short course on 'Poultry Farming: Source of Regular Income' was conducted, in which 30 beneficiaries participated.
- » A two days training entitled 'Post-harvest Technology and Preservation of Fruits (Fig and Dragon fruits)' was organized from Feb., 02-03, 2021. This training was attended by 28 participants.
- » Two one day trainings on 'Improved Production Technology of Arid Fruits' organized on 22.01.2021 & 06.03.2021.
- » A six days short course was organized on 'Preservation & Value Addition of Fruits and Vegetables' from 03 to 09 March, 2021 for READY students.
- » A three days training on 'Poultry for Better Livelihood' was conducted from 23-25 March, 2021 and 20 participants attended.
- » A 25 days training on 'Dairy Farmers-Entrepreneur' was organized from 03-27.03.2021 and 20 farmers attended the training. This training was sponsored by ASCI, New Delhi.
- » A one-day farmers training entitled 'Micro Irrigation for Higher Water Productivity' was held on 05.02.2021, in which 59 farmers participated.
- » A one-day farmers training entitled 'Micro Irrigation Technique for Water Saving under Dry Land Farming' was conducted on 06.02.2021, in which 58 farmers participated.



- » A one-day farmers training entitled 'Commercial Cultivation of Medicinal and Aromatic Plants and Post-harvest Management' was organized on 10.02.2021, in which 91 farmers participated.
- » A one-day farmers training entitled 'Rain Water Harvesting and its Effective Utilization through Drip Irrigation' was organized on 11.02.2021, in which 80 farmers participated.
- » A one-day farmers training entitled 'Doubling Farmers Income through Micro Irrigation' was conducted on 12.02.2021, in which 77 farmers participated.
- » A six-days training entitled 'Trichoderma for Plant Diseases Management' was conducted from 01-06.02.2021, in which 25 participants participated.
- » A three-days training entitled 'Entrepreneurship Development Programmes for SC Beneficiaries' was organized from 08-10 March, 2021, in which 21 participants participated.
- » A three-days training entitled 'Entrepreneurship Short Course Training Series: Skill Development Training on Spawn Production' was conducted from 20-22 March, 2021, in which 25 participants participated.
- » A Three-days training entitled 'Oyster Mushroom Cultivation' was held from 23-25 March, 2021, in which 25 participants participated.
- » An online training entitled Digital Classroom for Effective Teaching" was organized on 19.08.2020, in which 100 participants participated.
- » An online training entitled 'Digital Classroom Management' was organized on 30.04.2021, in which 104 participants participated.
- » A one-week short term training on 'Foudation Course on Basics of Computer Applications and Internet' was organized from 05- 09, April, 2021. In this course 25 trainees participated.



'Foudation Course on Basics of Computer Applications and Internet'



Training on Digital Classroom Managment

COA, Lalsot :

- » One day farmers training on 'Crop Diversification' was organized on 05.10.2020 under ECF Scheme, AICRP-IFS and 31 farmers attended the training.
- » Under ECF Scheme, AICRP-IFS, one day training on 'Scientific Cultivation of Musatrd Crop' was conducted on 18.01.2021. Twenty-six farmers attended the training programme.

- ▶▶ One day farmers training on 'Integrated Farming System' was organized on 12.02.2020 under ECF Scheme, AICRP-IFS. 27 farmers participated in this training.

COA, Kumher- Bharatpur

- ▶▶ One 12 weeks training programme on 'Pesticide Management certificate course for pesticide dealers' was organized from 16th October, 2020 to 18th December 2020. In this training 40 participants participated. This training was sponsored by State Institute of Agriculture Management (SIAM), Durgapura, Jaipur and National Institute of Plant Health Management (NIPHM), Hyderabad.

3.12 Awards & Recognition to staff

- ▶▶ Dr. N. K. Gupta, Professor (Plant Physiology) and Director, Education, SKN Agriculture University, Jobner has been awarded with first 'Padam Bhushan Dr R.S. Paroda Best Scientist Award' for his outstanding contribution in research among State Agriculture Universities of Rajasthan. The award was conferred during 3rd Convocation of the University held on 25th Nov, 2020.
- ▶▶ Dr. Basant Kumar Bhinchur, SMS (LPM) of KVK, Bharatpur bestowed with 'Certified Assesor Award' on 17th August, 2020 for assessing skill trainings from Agriculture Skill Council of India and National Skill Development Cooperation, New Delhi under 'Pradhan Mantri Kaushal Vikas Yojana'.
- ▶▶ Dr. S. S. Sharma, Assistant Professor (Soil Science), SKNCOA, Jobner received Oral Paper Presentation Award 2021 in 2nd Asian Web Conference organized by ISCS (12-13 Feb 2021).
- ▶▶ Dr. G. S. Rathore, Professor (Plant Pathology) received National Award of Excellence 2020, Global Management Council Adarsh Vidya Saraswati Bashtriya Puraskar, Ahmedabad for scientific contribution in the field of Plant Pathology.
- ▶▶ Dr. S. K. Khichi, Asistant Professor (Entomology), SKNCOA, Jobner awarded Certificate of Fellowship on dated 03 Mar, 2021 by Society for Biocontrol Advancement, C/o, ICAR- National Bureau of Agricultural Insect Resources, Bengaluru, Karnataka in appreciation and recognition of outstanding contribution in the field of biological control crop pests.
- ▶▶ Dr. Manoj Kumar Sharma, Assistant Professor (Plant Physiology), SKNCOA, Jobner received GNRSA Fellow Award – 2020 by Agricultural Technology Development Society (ATDS) Ghaziabad, UP for the outstanding contribution in the field of Plant Physiology.
- ▶▶ Dr. M. K. Sharma, Assistant Professor (Statistics), SKNCOA, Jobner received Emerging Scientist Award - 2020 for the outstanding contribution in Agricultural Statistics.





- » Dr. K.K. Meena, Associate Professor (Horticulture), SKNCOA, Jobner received Best Article Award-2020 for his article entitled “Nanotechnology: A solution of current Agriculture challenges”.
- » Dr. R. N. Sharma, Assistant Professor (Plant Pathology), COA, Kumher, Bharatpur received FISMPP -2020 for his Contribution in the field of research.
- » Dr. Devendra Kumar Meena, Assistant Professor (Extension Education), COA, Kumher, Bharatpur received Best Extension worker Award 2020 for his Contribution in the field of extension.
- » Dr. Vishnu Shankar Meena, Assistant Professor (Agril. Economics), COA, Kumher, Bharatpur received Young Scientist Award 2020 for his Contribution in the field of Agril. Economics.
- » Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur got Certificate of Gratitude by IUCN: International Union for Conservation of Nature-Gland, Switzerland (<https://www.iucn.org/>) World Conservation Congress during Global Youth Summit.
- » Dr. Dhan Raj Sharma, Senior Scientist & Head, KVK, Bharatpur was awarded with Appreciation Certificate by Lupin Human Welfare & Research, Bharatpur on 10 September, 2020 in agriculture field for economic upliftment of farmers

3.13 SKN Agri-Business Incubation Centre, Jobner

SKN Agri-Business Incubator is an Agri-Innovation Hub and Agri-Business Incubation Centre of Sri Karan Narendra Agriculture University (SKNAU), Jobner, Jaipur. It is supported by the Department of Agriculture and Farmers Welfare, Govt. of India, New Delhi under the RKVY-RAFTAAR scheme. It offers well equipped incubation space, technical and business mentoring, networking with agribusiness industries, scientific and information resources, conducive and supportive environment for agristartups and opportunities for availing grant-in-aid through seed stage and pre seed stage funding. There are two programmes under the scheme.

3.13.1 Agripreneurship Orientation Programme

This is the pre-seed stage funding programme with a grant-in-aid upto Rs. 5 lakhs. It aims at providing an opportunity to any one with innovative ideas by imparting a two months training cum hands on internship with other cohorts. Objective of the program is to mentor and nurture potential agripreneurs by providing them the requisite practical, technical and business insights related training cum internship to make pursuing entrepreneurship related to innovative ideas an attractive career option among other available career choices.

3.13.2 Startup Agri-Business Incubation Programme

This is a seed stage funding programme with a provision of grant-in-aid upto Rs. 25 lakhs. It aims at providing financial assistance to potential startups having a Minimum Viable Product (MVP) in agriculture and allied sectors. This support will help them to scale up their operations and attain business viability at a faster pace. It will also help them to attract investments from other financial institutions for further scaling up their business operations.

Ultimately the main aim of the programme is to increase the income of farmers and stop their migration towards other options by encouraging innovation and entrepreneurship and making agriculture a more attractive career option which could be achieved by these Agri-Business Incubators.

SKN Agri-business Incubator has mentored and trained 66 candidates in 3 Cohorts of which 46 candidates have been evaluated for funding by the Government of India and 22 have been awarded grant-in-

aid amounting to 2 Crore 46 Lakhs. The remaining 20 candidates of Cohort-3 are in the process of being evaluated shortly for grant recommendation.

3.13.3 Workshops conducted under SKN Agri-Business Incubation centre:



SABI-grant-in-aid of Cohorts



**Visit of Hon'ble Agriculture Minister
Shri Lalchand Katariya**

- » One day workshop on 'Awareness programme on Agri-India Hackathon' was organized on 16.01.2021.
- » A workshop entitled 'Mushroom Cultivation as an Enterprise' was conducted on 19.02.2021.
- » A one-day workshop on 'Awareness Workshop on Innovation & Incubation' was organized on 10.06.2021.

3.14 Distinguished Guest:

1. Hon'ble Agriculture Minister of state Sh. Lalchand Katariya visited the University on 29 Aug, 2020. He took a round of the farms in the campus and reviewed the ongoing field experiments. He appreciated the newly developed water harvesting structure situated at Keria farm of the University.
2. Sh. Hakam Ali Khan, MLA Fatehpur visited ARS, Fatehpur on 31 Aug., 2020. He appreciated the seed production programme and other research activities being carried out at the center.
3. Dr. Om Prakash, Agriculture Commissioner and Sh. S. P. Singh, Joint Director, GOR visited University on 26 Sep, 2020. They appreciated the research activities and newly created water harvesting structure.
4. Dr. R. S. Paroda, Chairman, TAAS & former DG, ICAR & Secretary DARE inaugurated NAHEP building, water harvesting structure and Biodiversity Park in the University on the occasion of 8th Foundation Day of the University on 13th Sep, 2020. Dr. Paroda also visited Krishi Vigyan Kendra, Ajmer in Poshan Day programme on 17th Sep, 2020 and stressed to rely on local crops to meet up nutritional requirements.
5. Dr. M. L. Jat, Principal Scientist, CIMMYT visited the University on 08 Sep, 2020. He urged to target sustainable intensification technologies, knowledge and training, which will be critical to cope with emerging risks of climate change.
6. Dr. Monika Balara, Dy. Director, Women & Child Development, Bharatpur visited KVK, Bharatpur during Poshan Day programme on 17th Sep 2020 and addressed the Anganwadi worker and promoted to establish Nutri-garden.



7. Mrs. Shobha Rani, MLA, Dholpur visited KVK Dholpur on 17 Sep, 2020 as a chief guest in Poshan Day programme and distributed seed kit to farm women.
8. Dr. Kuldeep Singh, Director, ICAR-NBPGR, New Delhi visited the University on 05 Oct, 2020 & delivered an online guest lecture on "Plant Genetic Resources in India, Management and Utilization in Genomics Era". The faculty of the constituent units of the University attended this lecture online.
9. Sh. Rakesh Kumar Jaiswal, Dist. Collector & Magistrate, Dholpur visited KVK Dholpur on 08 Oct, 2020 and reviewed the KVK activities. He also felicitated selected progressive farmers and distributed certificates.
10. Dr. H.S. Dhaliwal, Ex-VC, Eternal University Baru Sahib, Himachal Pradesh visited SKNAU on 15 Oct, 2020. He appreciated the efforts of the SKN University for its water harvesting structures, Bio-Diversity Park and ensured to work in collaboration in the best interest of the institute.
11. Sh. Jasmit Sandhu (IAS), CEO, Alwar visited KVK, Navgaon, Alwar as a chief guest on women's farmer day on 15 Oct, 2020. He acknowledged that women are the backbone of Indian agriculture and their contribution has been praise worthy since long.
12. Divisional Commissioner Mr. Somnath Mishra, IAS, visited SKN Agricultural University on 21.11.2020. During the visit he critically assessed the type of work done at various units like animal farm, poultry farm and newly commissioned water harvesting structure etc at the university. In his interaction with the officers he stressed that the good governance can be brought in only through educating farmers and by narrowing down the knowledge gap from lab to land.
13. Sh. Hari Prasad Sharma, Ex IG visited the University on 24 Jan, 2021. He visited the farms in the campus and reviewed the running field experiments. He lauded the University's commendable efforts in agricultural research and extension.
14. Mr. Harsh Vardhan Agarwalla, IPS, ADC to HE Governor of Rajasthan & Chancellor SKNAU, Jobner visited S-ABI on 29 Jan, 2021 and appreciated the ongoing research work, field experiments and University's overall efforts.
15. Dr. Shahidur Rashid, Director- South Asia, IFPRI, New Delhi visited at SKNAU, Jobner on 16 Mar 2021. Interactive session with faculty was held under the chairmanship of Hon'ble Vice Chancellor Prof. J. S. Sandhu, to identify the technology for promotion of sustainable agricultural growth and preparation of climate smart profile of Agriculture of Rajasthan.
16. Sh. Swami Sumedanand, Hon'ble MP, Sikar visited COA and ARS, Fatehpur on 20 December, 2020. He reviewed the facilities available at these centres and assured for future assistance.
17. Dr. G. Lal, Director, National Research Centre of Seed Spices, Tabiji, Ajmer visited SKNCOA, Jobner for Monitoring of AICRP on Spices trails.
18. Dr. S. S. Meena, Principal Scientist and Dr. Y. K. Sharma, Principal Scientist, National Research Centre Seed Spices, Tabiji, Ajmer visited SKNCOA, Jobner for Monitoring of AICRP on Spices trails.
19. Dr. P. K. Rai, Director, ICAR-DRMR, Bharatpur visited SKNCOA jobner.
20. Dr. P. L. Saroj, Director, ICAR-CIAH, Bikaner visited SKNCOA, Jobner during farmers fair visit.



Dr. R.S. Paroda at SKNCOA, Jobner



**Dr. Omprakash, Ag. Commissioner
& Shri S.P. Singh, Joint Secretary at SKNCOA, Jobner**



Dr. Kuldeep Singh at SKNCOA, Jobner



Dr. H.S. Dhaliwal at SKNCOA, Jobner



Sh. Jasmit Sandhu, IAS at KVK, Navgaon



Sh. Hakam Ali Khan, MLA at ARS, Fatehpur



Smt. Shobha Rani MLA at KVK, Dholpur



**Sh. Swani Sumedanand, MP at
COA and ARS, Fatehpur**

Visit of Distinguished Guest at Different Centers

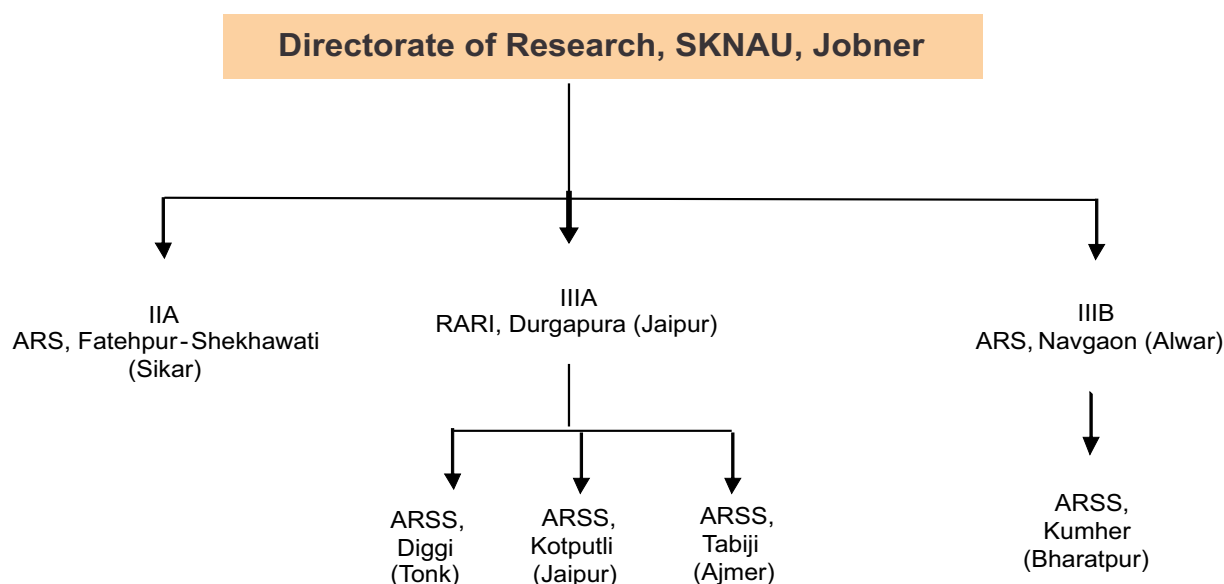


4. RESEARCH ACTIVITIES

Directorate of Research was established in November, 2013. There are seven research stations encompassing three agro-climatic zones under the administrative control of Directorate of Research, SKNAU, Jobner. These include Rajasthan Agricultural Research Institute (RARI) at Durgapura, Jaipur, two Agricultural Research Stations located at Navgaon (Alwar) and Fatehpur-Shekhawati (Sikar) and four Agricultural Research Sub-Stations at Tabiji (Ajmer), Kumher (Bharatpur), Gonera - Kotputli (Jaipur) and Diggi (Tonk).

The major crops of the state, viz, Wheat, Barley, Pearl Millet, Chickpea, Mungbean, Moth bean, Cowpea, Groundnut, Cluster bean, Mustard, Taramira, Seed Spices and majority of vegetable crops are grown in the regions under jurisdiction of the University. Thus, three agro-climatic zones under the jurisdiction of the university have potential to address the needs of the state with respect to food crops, vegetables and seed spices.

Directorate of Research is the nodal set up of the University for executing the research schemes financially supported by ICAR/ DAC/ State Govt. and other external agencies. The focus of the Directorate is on developing research strategies to develop economically viable and ecologically sustainable crop production technologies and varieties which can be conveniently adopted by the farmers. Our priority is to develop climate resilient varieties of various crops so as to cope up with the climate change. The long-term research goals and objectives of the University are to develop cost effective technology, high yielding varieties along with addressing the conservation of natural resources of soil, water and vegetation by researches conducted at different locations under different agro-climatic conditions. The SKNAU research system also undertakes seed production programmes for facilitating availability of improved seeds to the farmers in the state. Maintaining effective linkage with line departments of GOR and providing relevant knowledge and technical information for policy issues related to agriculture development is important objectives of the University research system. Development of improved varieties and technologies by the University has opportunity of crossing the state boundaries and serving the farmers of other states as well. Units of Directorate of Research (DOR) which fall under three agro-climatic zones covering eight districts are shown in the following flow chart:





Lead and verification functions of the three research stations for their respective agro-climatic zone are as follow:

- I. **RARI, Jaipur (Zone IIIA):** Rajasthan Agricultural Research Institute (RARI) at Jaipur is a major research station of the University, equipped with sophisticated instruments and other research facilities.
 - i. **Lead functions:** Development of varieties and technologies for yield maximization in irrigated wheat, barley and irrigated/rainfed chickpea, lentil, pea, green gram, cowpea, pearl millet, groundnut, cluster bean and vegetables etc.
 - ii. **Verification functions:** Besides the above enumerated lead functions, the institute is actively engaged in the verification functions of irrigated mustard, pigeon pea, management of salt affected soils and water, in-situ moisture conservation, testing and modification of farm implements, water management, forage crops and integrated pest management.
- II. **ARS, Navgaon (Alwar) Zone IIIB**
 - i. **Lead functions:** Development of varieties and technologies for rapeseed-mustard (irrigated and rainfed), reclamation and management of problematic soils, crop cultivation with mineralized water.
 - ii. **Verification functions:** Pearl millet, pigeonpea, barley, wheat, clusterbean, chickpea, field pea, in-situ moisture conservation, testing and modification of farm implements.
- III. **ARS, Fatehpur-Shekhawati (Sikar) Zone IIA**
 - i. **Lead functions:** Development and management of Agro-forestry and other farming systems and in-situ moisture conservation.
 - ii. **Verification functions:** Chickpea, mustard, pearl millet, fenugreek, fennel, mungbean, cowpea, sesame, sprinkler irrigation, forage crops, management of salt affected soils and water conservation.

4.2 Farm/Instructional area

The University has sufficient farm area for research as well as for seed production. During the reporting period most of the research farms are in the process of strengthening infrastructure facilities and increased mechanization of farm. Details of research farms are given in the following table:

Table 7. Area under research farm of different research stations.

Farm/units	Total area (ha)	Under cultivation (ha)	Under research (ha)
RARI, Durgapura	85.54	59.00	35.00
ARS, Fatehpur	150.00	90.00	10.00
ARS, Navgaon	47.00	35.00	06.00
ARSS Diggi	50.00	44.00	01.00
ARSS, Kotputali	35.00	28.00	02.00
ARSS Tabiji	18.50	14.00	01.50
ARSS, Kumher	60.00	53.35	02.00

4.3 Research projects

A total of 17 AICRP/AINP projects are running at various research stations of the University. The salient achievements during 2020-21 under these projects has been mentioned here under:



1. AICRP on Vegetables Research, RARI, Durgapura, Jaipur

- » Under this project 67 experimental trials were conducted during 2020-21.
- » Conducted 3 training programmes for farmers under TSP.
- » About 200 farmers visited to the vegetable farm for different problems and their problems were solved.
- » Generated revenue is about Rs. 4 lakhs through sale of vegetables.

2. AICRP on Wheat and Barley, RARI, Durgapura, Jaipur

- » Wheat genotype Raj-4548 was promoted in AVT-1 in NWPZ.
- » This genotype showed resistency against blast and found best for chapati making.
- » Three genotype of barley RD-3012, 3013 & 3016 were also promoted in AVT-1 in NWPZ, NEPZ and found suitable for feed purpose.

3. AICRP on Pearl Millet, RARI, Durgapura, Jaipur

- » Under this project eight coordinated trials, three station trials, four harvest plus trials and six ICAR-ICRISAT cooperative trials were conducted during 2020-21.
- » One hundred crosses were made in Line x Tester design (A x R).
- » Maintained 18 restorers of released hybrids and 84 established restorers.
- » Produced Basic Seed of Restorer Lines: RIB 15176, RIB 192, RIB 494, RIB 57, RIB 3135-18, RIB 335/74, 20K86.
- » Produced breeder seed of parental lines of released hybrid: RHB-173, RHB-177, RHB-223 and RHB-233.
- » Conducted 28 FLD's on Pearl millet at farmer's field.
- » Under socio-economic upliftment a total of 70 tribal farmers assisted through providing improved pearl millet production technology and input under component of tribal sub plan (TSP).
- » Notification proposal of Hybrid RHB-228 identified by 33rd meeting of state seed sub-committee of Rajasthan has been submitted to Central Sub-Committee for variety release notification.
- » **Variety released:** Two bio-fortified varieties (RHB 233 and RHB 234) of pearl millet were released at national level These varieties are rich in Zn and Fe content over other commercial hybrids. The important characters of these varieties are given here under:

Pearl Millet : RHB 233

Year of release	2019
Notification No.	S.O.3220(E) 06-09-2019
Developed by	RARI, Durgapura

Morphological features & yield

Plant height (cm)	55
Days to maturity (days)	80
Grain Yield (Kg/ha)	3157
Fodder Yield (q)	73.7

Special features: High iron (83 ppm) and Zinc (50ppm) higher degree of resistance to downy mildew and blast diseases



Pearl millet : RHB-233

Pearl Millet : RHB 234

Year of release	2019
Notification No.	S.O.3220(E) 06-09-2019
Developed by	RARI, Durgapura

Morphological features & yield

Days to maturity (days)	81
1000 Seed weight (g)	9.3
Average yield (Kg/h)	3169
Fodder yield (q/h)	79

Special features: High iron (84 ppm) and Zinc (41ppm) higher degree of resistance to downy mildew and other diseases.



Pearl millet : RHB-234

4. AICRP on Seed Spices, SKN College of Agriculture, Jobner

- Proposal for release of variety notification of two fennel genotypes (RF-157 & RF-290) and one fenugreek genotype (RMT-354) have been submitted to Central Sub-Committee.

Fennel : RF-157

Year of identification 26th National Group Meeting (Workshop) of AICRP on Spices held at Calicut (Kerala) from 4-7 Oct. 2015

Zone Rajasthan, Gujarat and Haryana

Production condition This variety is most suitable for loamy and black cotton soils having proper drainage. Dry, frost free and moderately cool weather, particularly during the months from January to March favours both the yield as well as the quality of the produce.

Morphological features 1. Erect and medium tall plants
2. Long and attractive seeds

Yield 21.67 q/ha

Special features 1. High yield potential
2. Erect and medium tall plant
3. Medium maturity type
4. More branches and umbels per plant
5. More umbellets and seeds per umbel
6. Long & Bold Seeds
7. Volatile oil yield is high.



Fennel : RF-157



Fennel : RF-157

Fennel : RF-290 (UF-290)

Year of identification 30th Annual workshop meeting All India Coordinated Research



Zone	Project on Spices, Tamil Nadu Agricultural University, Coimbatore held during November 14-16, 2019 Rajasthan, Gujarat, Bihar, Haryana and Uttar Pradesh
Production condition	This variety is most suitable under irrigated conditions for loamy and black cotton soils having proper drainage.
Parentage	The variety has been developed through recurrent selection based on individual plant progeny (half-sib) from a local collection of Todaraisingh, Tonk (Rajasthan)
Morphological features	1. Erect and medium tall plants 2. Long and attractive seeds
Yield	20.65 q/ha.
Special features	High yield potential, erect and tall plants, medium maturity type, more branches and umbels per plant, more umbellets and seeds per umbel and long & bold seeds.



Fenugreek : RMT-354

Year of identification	26 th National Group Meeting (Workshop) of AICRP on Spices held at Calicut (Kerala) from 4-7 Oct. 2015
Zone	National level all fenugreek growing areas
Production condition	The variety is specially adapted for all the fenugreek growing areas of the country from sandy loam to heavy soil.
Parentage	The variety has been developed through pure line selection in a local collection from Kalar Nagar, Bhawani Mandi (Rajasthan).
Morphological features	1. Erect plant type. 2. Bold and attractive yellow coloured seed.
Yield	15.37 q/ha
Special features	1. Medium tall 2. More branches & pods per plant 3. More seeds per pod 4. Bolder seed 5. Lesser incidence of downey mildew & powdery mildew 6. Higher yield potential



- » 132 germplasms in fennel (inbreds) and 351 genotypes in coriander have been evaluated, characterized and screening against diseases.



- ▶▶ Recommended technology: “Foliar spray of Hexaconazole 5% SC (1.0 ml/litre of water) at the time of initial appearance of disease and second spray should be made after 15 days interval for economical and effective management of cumin powdery mildew.”

5. AICRP on Groundnut, RARI, Durgapura, Jaipur

- ▶▶ Groundnut genotype RG 638 was promoted for third year (AVT) for yield evaluation in Zone-I.
- ▶▶ Application of Pendimethalin 30% + Imazathapyr 2% (Ready-mix) @ 1 kg a.i./ha as pre-emergence (PE) followed by 1 hand weeding at 30-35 DAS or Pendimethalin 30 EC @ 1 kg a.i./ha as PE followed by 1 hand weeding at 30-35 DAS or application of Pendimethalin 30 EC @ 1 kg a.i./ha as PE followed by Imazathapyr 10% SL @ 75 g a.i./ha as post-emergence at 15-20 DAS recommended for effective control of weeds in groundnut.
- ▶▶ 30 FLDs were conducted to disseminate new varieties and latest technologies to farmers during 2020-21.

6. AICRP on Seed Technology Research, RARI, Durgapura, Jaipur

- ▶▶ Seed coating on hydro primed (4h @ 20°C) seed with Drought Alleviating Bacteria + Biogrow enhanced planting value of seed under optimal and sub optimal conditions in Kabuli chickpea.

7. AINRP on Pesticide Residue, RARI, Durgapura, Jaipur

- ▶▶ Residue and persistence of Tetraniliprole 200 g/l in immature pea pod was recorded as 2.038 mgkg⁻¹ and 2.435 mgkg⁻¹ at lower and higher dose, respectively. The residue of the Tetraniliprole 480 g/l FS and its metabolite was found at below limit of quantification (<0.01 mg/kg) in maize leaves, immature cob and stover and soil samples.
- ▶▶ Dissipation of Imidacloprid (17.8 SL) in pea pods was 1.122 mg kg⁻¹ and persisted upto 5th day of treatment in pea pod. The Carbendazim persisted upto 5th day of treatment and initial deposit in pea pods was 1.407mg/ kg. The maximum decontamination was recorded with hot water to extent of 0.17 mg kg⁻¹ (70.17%) followed by Nimwash solution.
- ▶▶ Desk-top surveillance of the AINP on Pesticide Residue Laboratory was conducted in Jan. 2021 in accordance with ISO-IEC 17025: 2017 and NABL accreditation is continued up to 22.02.2022 vide certificate No. T-2110.

8. AICRP on Agro-forestry, ARS, Fatehpur

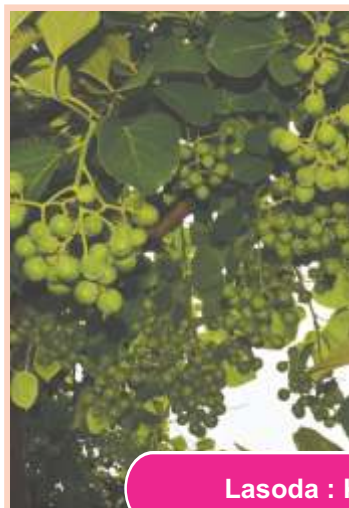
- ▶▶ In this project 14 research experiments were conducted and maintained on different multipurpose tree species (*Prosopis cineraria*, *Hardwickia*, *Ailanthus excelsa*, Neem, Mopane, Rohida, Ker etc.) for evaluation of growth performance, carbon sequestration potential and potential agroforestry system in rainfed condition.
- ▶▶ Research on conservation of underutilized fruit tree Kair in arid regions of Rajasthan and standardization of propagation techniques by seed and vegetative propagation has been started.
- ▶▶ The nursery experiments are going on multipurpose tree species of the regions such as Ardu, Khejri, Kair and Rohida.

9. AICRP on Arid Zone Fruits, SKNCOA, Jobner

- ▶▶ Proposal for notification of lasoda genotype JL-07 (Karan Lasoda) was sent for variety release.

Karan Lasoda (JL-07):

The genotype JL-07 is perennial in nature and vigorous in growth habit. Flowering starts in last week of March to end of April and fruiting from first week of May to first fortnight of June. The most peculiar character is dual time fruiting i.e. April-May and off season fruiting in winters. The fruits are bigger in size, good cluster with pulp content with pulp stone ratio of 16.48 and fruit quality is good for making pickle. After drying the fruit pulp recovery percent is 17.32. The average bunch weight is 180-220 g, 20-27 fruit number in a bunch and average fruit yield is 80-90 kg per plant.



Lasoda : Karan Lasoda

- ▶▶ Two technologies were developed under this project, one on management of powdery mildew of ber through two sprays of myclobutanil 10% WP (@ 0.04%) at an interval of 15 days from disease initiation as cost effective and alternative to already recommended dinocap (Karathane) & sulphur fungicides and other on comparative incidence of bark eating caterpillar, *Inderbella tetraonis* on different cultivars of ber and among these least susceptible were Pusa Prolific and Ashapuri-II.

10. AINRP on Soil Arthropod Pests, RARI, Durgapura, Jaipur

Two technologies were developed in this project during 2020-21

- (i) Use of imidacloprid 600 FS as seed treatment at 6.5 ml/kg seed of groundnut before sowing for the management of white grub, *Holotrichia consanguinea* has been included in Package of Practices.
- (ii) Management of white grub beetles through slow release nanogel of pheromone methoxy benzene (anisole) is effective up to 25 days of installation.



Preparation of Pheromone nanoformulations



Installation of Pheromone nanoformulations in field



Attraction of beetles towards Pheromone nanoformulations



Collected beetles in Pheromone trap

Demonstration of pheromone nano formulations of methoxy benzene at white grub endemic areas of Rajasthan



Management of *H. consanguinea* " Slow release nanogel of pheromone methoxy benzene" technology published in ICAR news letter



Demonstration at farmers field in white grub endemic areas of Rajasthan

- (iii) Management of termite in Groundnut crop through treating the seeds with Imidacloprid 600 FS @ 6.5 ml or Fipronil 5 SC @ 10 ml per kg seed.

11. AICRP on Arid Legumes, RARI, Durgapura, Jaipur

- ▶ Under this project one guar entry RGr 18-1 was promoted in AVT II year and three entries viz., RGr 20-3, RGr 20-7 and RGr 20-15 promoted in AVT first year.
- ▶ Two entries of cowpea (CPD 331 & CPD 340) and three entries of Guar (GD 571, GD 567 & GD 580) were promoted in IVT from station trials.
- ▶ During 2020-21 in this project, 18 new crosses in Guar and 10 new crosses in cowpea were made by using different donors.



- Under generation advancement 458 progenies of Guar and 516 progenies of cowpea were evaluated under different generations (F_1 to F_7 and Bulk). 58 germplasm of guar and 62 germplasm of cowpea were also maintained.

12. AICRP on Taramira, SKNCOA, Jobner

- Taramira genotype RTM-1624 gave 16 per cent higher yield in comparison to checks in AVT-2. It is resistance to white rust and moderately resistant to Staghead & Downy mildew diseases. Thus, varietal identification proposal has been submitted in 28th Annual Group Meet of Rapeseed & Mustard.



Taramira : RTM-1624

- A technology on soil application of hydrogel @ 2.5 kg/ha along with two foliar sprays of salicylic acid @ 200 ppm at flower initiation and siliquae formation stage is recommended for obtaining sustainable higher yield of rapeseed-mustard under rainfed conditions.

13. AICRP on Integrated Farming System, RARI, Durgapura, Jaipur

- Under this project the feasibility of IFS model for small farmers has been tested, revalidated and popularised among farmers of the state. Based on one year (2020-21) result, the net profit of IFS model was about 2.80 lakhs and contribution from different components is about 36 per cent from crop production followed by dairy (26 per cent), goatery (21 per cent) & poultry (6 per cent).

14. AICRP on MULLaRP, RARI Durgapura, Jaipur

- In this project two genotypes were promoted in AVT on the basis of yield performance, one genotype of lentil RLG-270 in AVT-1 in NEPZ and other is mungbean genotype RMG-1139 in central zone.

15. AICRP on Chickpea, RARI Durgapura, Jaipur

- Kabuli chickpea entry CSJK 174 has given consistently higher seed yield during last three years (IVT, AVT I and AVT II) in South Zone and the varietal identification proposal have been submitted for evaluation in coming group meeting of chickpea.
- Chickpea entry RSGD-1057, RSGD-1071 and RSGD-926 contributed in AVT I and eight entries viz. RSGD-1116, RSGD-1117, RSGD-1139, CSJ-824, RSGD-1094, RSGD-1079, RSGD-834, RSGD-1174, CSJK-166 and CSJK-138 contributed in IVT level.
- Under station multilocation trial two entries viz., RSGD -966 and RSGD-1057 performed better at all the locations during 2020-21.
- Total 40 fresh crosses developed by the centre by using different donors for yield, biotic and abiotic factors.



- » Total 1160 progenies of different crosses were evaluated under different generations (F1 to F6 and Bulk) for development of new entries in chickpea.
- » Under germplasm evaluation some lines viz., IC117651, IC272399, IC305487, IC328058, IC327349 and IC 305613 performed better for drought and DRR.

16. AINRP on Onion and Garlic, SKNCOA, Jobner

- » Conducted all the allotted trials, produced 120 Kg onion seed and 7.55 qtl bulb, maintained 10 germplasms of onion.

17. AICRP on Weed Management (Voluntary Centre), RARI Durgapura, Jaipur

- » This project was started from January, 2021 and initiated two experiments on weed management in groundnut and cluster bean.

4.4 RKVY projects

A total of 29 RKVY projects at present running at various units of SKNAU, Jobner funded by state government under the scheme Rashtriya Krishi Vikash Yojana. The salient achievements of these projects are given below:

1. Establishment/strengthening of seed processing and storage unit in different research stations of SKNAU, Jobner.

This project was sanctioned in the year 2014-15 with total project cost of Rs. 272.25 lakhs. Under this project, eight seed processing units were established at ARS Fatehpur, ARS Navgaon, SKNCOA Jobner, RARI Durgapura (02), COA Lalsot, ARSS Kumher and ARSS Gonera. Five godowns were constructed at SKNCOA Jobner, ARS Navgaon, ARSS Diggi, ARSS Kumher, ARSS Gonera with the capacity of 200 qtls each.

2. Development of infrastructural facilities and mechanization/ modernization of farms at SKN College of Agriculture, SKNAU, Jobner

This project was sanctioned in the year 2014-15 with total project cost of Rs. 160.00 lakhs. Under this project water harvesting structures were constructed at Asalpur Farm & Agronomy Farm, SKNCOA, Jobner. Gravel road around 4 km was constructed at Agronomy Farm, SKNCOA, Jobner. Micro irrigation system, drip irrigation system and sprinkler system established at Agronomy Farm, SKNCOA, Jobner

3. Establishment of ICT enable Agriculture Technology Knowledge Centre (ATKC)

This project was sanctioned in the year 2014-15 with total project cost of Rs. 464.00 lakhs. Through this project ATKC building was constructed at RARI, Durgapura, Jaipur. The ATKC will provide agricultural information and advice to the farmers, growers, entrepreneurs, researchers and personnels of agricultural industries.

4. Back yard poultry production for raising farm income of small, marginal and landless labours under semi arid conditions of Rajasthan.

This project was sanctioned in the year 2014-15 with total project cost of Rs. 126.25 lakhs. Under this project backyard poultry unit was established at poultry farm, SKNCOA, Jobner with zero input. 15 one day trainings were organized in which 489 small, marginal farmers and landless labours participated and about 52538 chicks were distributed to farmers.



5. To establish demonstration unit of Sirohi goat for raising farm income of small, marginal and landless labours under semi arid conditions of Rajasthan.

This project was sanctioned in the year 2014-15 with total project cost of Rs. 142.41 lakhs. A demonstration unit of sirohi goat was established at Department of LPM, SKNCOA, Jobner. Total of 98 bukcs of amounting Rs. 7.36 lakhs have been distributed to small, marginal farmers and landless labours under semi-arid conditions of Rajasthan. 11 one day training progammes on Sirohi goat production has been organized in which 501 small, marginal farmers and landless labours participated.

6. Agriculture Technology and Management Quality Improvement Centre (ATMQIC).

This project was sanctioned in the year 2014-15 with worth of Rs. 407.24 lakhs. Under this project ATMQIC building with educational museum, training hall, shoppy, ICT hub station, office for managers and trainees were established. Water harvesting structures with the capacity of 10.10 lakhs liter were constructed. SMART class-room, Kisan Call Centre with ICT enabled educational kit, E- Kiosk, ICT Lab with video conference facility were also established and maintained. Installation of automatic weather station, micro irrigation, solar water lifting system with generator were procured and installed. Soil & water testing mobile van was also purchased during 2020-21. Total 42 trainings programmes to develop awareness in the farmers, youths and others. No. of participants in these tranings were 1401.

7. Establishment of Tissue culture set up for capacity building development of regeneration protocol and micro propagation of arid zone crops.

This project was sanctioned in the year 2014-15 with worth of Rs. 137.85 lakhs. Established tissue culture laboratory and standardized the regeneration protocol of aloe, pomegranate, glyricidia, guggal, seed spices etc. Imparted training on tissue culture techniques to the graduate and post gradute students of the university.

8. Evaluation of indigenous seed treating material for managing disease of seed spices.

This project was sanctioned in the year 2014-15 with worth of Rs. 137.85 lakhs. Under this project seed samples of coriander, cumin, fennel and fenugreek were collected from Kota, Baran, Bundi, Jhalawar, Sirohi, Jalore, Nagour, Ajmer, Alwar, Bharatpur, Jaipur and Sikar districts. Seven species of five fungal genera were Identified and confirmed from the ITCC, IARI, New Delhi.

9. Validation and Post Harvest Technology for Dragon Fruit and Fig under semi arid conditions of Rajasthan.

This project was sanctioned in the year 2016-17 with worth of Rs. 90.15 lakhs. In this project orchard of dragon fruit & fig equipped with drip irrigation system were established at Horticulture Farm, SKNCOA, Jobner. One training was organized at Deptt. of Horticulture, SKNCOA, Jobner in which 28 women from rural areas were participated.

10. Management of Specific Weeds in Resilience with Climate Change in Major Crops of Semi Arid Ecosystem.

This project was sanctioned in the year 2016-17 with worth of Rs. 65.34 lakhs. Under this project a weed museum established at RARI, Durgapura, Jaipur and more than 1000 visitors including farmers, government officials, students, scientists, etc have visited this museum. Seven research trials to manage most problematic specific weed in a particular crop were conducted at the identified hot spots in zone IIIa. Residual Effect of Pendimethalin 30% + Imazethapyr 2% (Ready-mix) on wheat, residual effect of Tembotrione 42% SC on Gram were also evaluated.



11. Micro irrigation management for conserving vulnerable water resource with higher crop water productivity.

This project was sanctioned in the year 2016-17 with worth of Rs. 78.68 lakhs. Work done under this project includes installation of sprinkler irrigation system, fully automated drip irrigation system & weather station at Agronomy Farm, SKNCOA, Jobner. More than 400 farmers of nearby villages got training to popularise micro-irrigation systems for realizing more crops per drop.

12. Micro irrigation management for conserving vulnerable water resource with higher crop water productivity.

This project was sanctioned in the year 2016-17 with worth of Rs. 260.89 lakhs. Under this project experimentation on kharif and rabi crops viz. groundnut, mungbean, sesame, pearl millet, wheat, gram, mustard etc. on agronomical and plant protection aspects have been started from Kharif season of 2017 and continued every year to develop different recommendations for organic cultivation of different crops. Organic block of 1.0-hectare area has been registered in Rajasthan State Seed & Organic Production Certification Agency, (RSSOPCA), Pant Krishi Bhawan, Jaipur and organic crops has been cultivated every year on this block. A total of 115 demonstrations were conducted on farmer's fields.

13. Augmentation of entrepreneurship for rural people through processing.

This project was sanctioned in the year 2016-17 with worth of Rs. 56.01 lakhs. The major achievements of this project include development of post harvest technology laboratory at SKNCOA, Jobner. Every year four trainings, each of three days were organized in which about 100 farmers were participated.

14. Conservation, improvement & production performance of Indigenous Milch Breeds of cows under semi-arid conditions of Rajasthan.

This project was sanctioned in the year 2016-17 with worth of Rs. 414.10 lakhs. Under this project pure breed animals of gir cows were brought from Gujarat and herd of Gir was established. Large number of small, marginal farmers and landless labours have been demonstrated gir cow dairy to make them aware about Gir cow production. Semi automatic machine for milk packing and storage was installed at dairy farm, SKNCOA, Jobner.

15. Mother plant nurseries for high pedigree planting material for fruit crops.

This project was sanctioned in the year 2016-17 with worth of Rs. 72.80 lakhs. The major work done under this project includes production of true to type of fruits and ornamentals plants, production of insect, pest and disease-free fruits (budded plants of ber and lasoda). Approximately 15000 plants were sold and distributed under this project.

16. Eco-friendly management of pulse beetle, *Callosobruchus chinensis* on different pulse in Rajasthan.

This project was sanctioned in the year 2016-17 with worth of Rs. 64.74 lakhs. The salient achievements of this project include, establishment of experimental and culture lab in the Deptt. of Entomology, SKNCOA, Jobner, development of a laboratory/ culture room for research work in the storage entomology, thus the students will be benefitted in conducting their research work for dissertation. Trainings were imparted to 188 farmers for 'Anaj Ke Surakshit Bhandaran par ek divasiye krishak avam krishak mahila prashikshan'.

17. To establish demonstration unit of Sirohi goat for raising income of small, marginal and landless labour under different KVKs of SKNAU, Jobner.



This project was sanctioned in the year 2016-17 with worth of Rs. 143.43 lakhs. Under this project sirohi goat units have been established at five KVKs of SKNAU, Jobner. Training and demonstration on Sirohi goat production have been imparted to small, marginal farmers and landless labours at all KVKs.

18. To establish demonstration unit of back yard poultry unit for raising farm income of small, marginal and landless labours under different KVKs of SKNAU, Jobner.

This project was sanctioned in the year 2016-17 with worth of Rs. 70.70 lakhs. Under this project backyard poultry units have been established at five KVKs of SKNAU, Jobner. Birds of Kuroiler breed have been maintained at five KVKs under backyard poultry. Training and demonstration on backyard poultry were conducted at all five KVKs

19. Creation of training facilities for capacity building of scientists, students and rural youth.

This project was sanctioned in the year 2016-17 with worth of Rs. 154.50 lakhs. Under this project capacity building of the different stakeholders including faculty, students and rural youth under progress. Six trainings were organized during 2020-21 for human resource development. A seminar entitled “Convergence of Agriculture Research, Education & Entrepreneurship” was organized at Maharana Pratap Auditorium, Rajasthan Agricultural Research Institute, Durgapura, Jaipur.

20. Genetic Improvement and development of climate resilient Water melon and Musk melon for Rajasthan.

This project was sanctioned in the year 2016-17 with worth of Rs. 35.92 lakhs. In this project some indigenous genotypes were collected and sown in the field to maintain its purity and crossed to develop F1s. High yielding 256 inbred lines of musk melon selected from different region of Rajasthan

21. Modernization/ Mechanization of Agriculture Research Sub-Station, Diggi (Tonk) through creation of Infrastructural facilities.

This project was sanctioned in the year 2016-17 with worth of Rs. 70.70 lakhs. The major work done in this project includes, construction of 1405 mt stone boundary wall with chain linked fencing, deepening of existing two farm ponds and installation of micro irrigation system in about 14 ha at ARSS, Diggi.

22. Farm development of Agriculture Research Sub-Station, Gonera (Kotputli).

This project was sanctioned in the year 2016-17 with worth of Rs. 121.72 lakhs. The achievements of this project include, construction of 1317 mt. boundary wall, adding of organic matter and clay in 21 ha. area, 4.5 ha area covered under micro irrigation system & one ha. area under drip irrigation system, construction of small shed net house and construction of pucca pond to harvest roof water at ARSS, Gonera under this project.

23. Establishment of water harvesting system to maximize use of runoff water for strengthening of research and seed production programme at SKNCOA, Jobner.

This project was sanctioned in the year 2016-17 with worth of Rs. 86.00 lakhs. Under this project a pond has been prepared with size of 13154 sqm as top area and 7784 sqm bottom area with a depth of 30 meter. It will store around 11 crores of run off water which will be available for seed production and experimental purpose.

24. Development of infrastructure facilities for breeder seed production at different ARS & ARSS farms of the SKNAU, Jobner.



This project was sanctioned in the year 2016-17 with worth of Rs. 359.10 lakhs. Under this project fencing wall on the farm land of different units of the university i.e. at ARS Fatehpur (5000 meter), Keriya farm, SKNAU, Jobner (3000 meter), ARSS, Kumher (2400 meter), ARS, Navgaon (1000 meter) and ARSS, Tabiji (450 meter) were constructed.

25. Studies on insect pests and natural enemies diversity in major semi-arid agro ecosystems of Rajasthan.

This project was sanctioned in the year 2017-18 with worth of Rs. 50.76 lakhs. Insect pests of field crops, were collected and displayed in insect biodiversity lab, constructed rain water harvest tank and established insectary for insect rearing and collection at SKNCOA, Jobner.

26. Estimation of area and production of existing cropping systems and optimization of water use through Remote Sensing and GIS.

This project was sanctioned in the year 2017-18 with worth of Rs. 190.30 lakhs. under this project remote sensing and GIS labs were established. Training were conducted for the scientists, researchers and farmers to make them familiar to remote sensing and GIS.

27. Establishment of Herbal Park and Post Harvest Processing in Medicinal and Aromatic Plants.

This project was sanctioned in the year 2018-19 with worth of Rs. 20.26 lakhs. Work done in this project includes, establishment of herbal park (0.20 ha), maintenance of 50 species of medicinal & aromatic plants, multiplication of quality planting material of important medicinal & aromatic plants to distribute farmer at SKNCOA, Jobner.

28. Quality seed production of important vegetables under semi-arid conditions.

This project was sanctioned in the year 2020-21 with worth of Rs. 121.72 lakhs. Quality seed of different vegetable crops specially suited to the agro-climatic zone IIIa will be produced under this project.

29. Standardization and characterization of Liquid Organic Formulations.

This project was sanctioned in the year 2020-21 with worth of Rs. 56.56 lakhs. The major aim of this project is to develop standard protocol for liquid organic formulations.

4.5 Other on going ad-hoc research projects:

- » ICRISAT Funded Project: Genetically enhanced micro-nutrient–dense pearl millet grains for improved human nutrition in the Western Africa region and India” – Harvest-Plus Programme.
- » ICAR Funded Project: New Research initiatives entitled, “Thrust area-1: Development of disease resistant, early maturing hybrids for North-Western Region of India and Thrust area-2: collection, evaluation, characterization and conservation of pearl millet landraces and farmer’s varieties”.
- » ICAR Funded Project: Consortia for Research Platform (CRP) in ‘Biofortification in selected crops for nutritional security’.
- » Creation of seed hubs for increasing indigenous production of pulses in India by NFSM Govt. of India.
- » Evaluation of chickpea germplasm for drought and DRR under CRP Agro biodiversity by NBPGR New Delhi
- » DUS Project (AICRP on Wheat and Barley) Total Cost: Rs.1944394.00
- » Monitoring of pesticide residues at national level, Dept. of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture and Farmers welfare, Govt. of India



- » Forecasting Agricultural output using Space, Agro-Meteorology and Land based observations (FASAL)
- » Effect of Nano Fertilizers on Soil Health and Crop Growth under Semi-Arid Conditions of Rajasthan funded by IFFCO, New Delhi
- » Establishment of Mother Plant Nursery for high pedigree planting material of fruit crops (Pomegranate, /Jamun & Bael).
- » Multilocation testing trial on wheat and barley from AICRP on wheat and barley-Karnal
- » Evaluation of bio-efficacy of spinetoram 12% SC against Desert Locust (*S. gregaria*): The project was sanctioned during 2020-21 but work not initiated due to non appearance of pest. The work would be initiated after emergence of pest.

4.6 New Projects: The following new projects sanctioned to the University

- » Centre of Excellence on Applications of Artificial Intelligence in Agriculture funded by RKVY with the worth of Rs. 153.23 lakhs
- » Modernization and Mechanization of College of Agriculture, Lalsot Farm funded by RKVY with the worth of Rs. 184.83 lakhs
- » Genetic improvement and production performance of Murrah buffalo under semi-arid conditions of Rajasthan with the worth of Rs 220.64 Lakhs
- » Characterization of chickpea germplasm resource to accelerate genomics assisted crop improvement (sub component dry root rot) funded by DBT with the worth of Rs. 125.39 lakhs.
- » Effect of nano fertilizer on crop growth, yield and soil health under Semi Arid conditions of Rajasthan funded by IFFCO with the worth of Rs. 5.10 lakhs.
- » Studies on Response of Dihydrate Polyhalite Fertilizer on crop growth, yield and soil health under semi arid conditions of Rajasthan worth of Rs. 19.66 lakhs.

4.7 TECHNOLOGIES DEVELOPED

4.7.1 Zone III A:

- » Under rainfed condition for enhancing productivity of pearl millet, application of crop residue mulch @ 5 t/ha along with the furrow application of hydrogel @ 2.5 Kg/ha at the time of sowing is recommended.
- » Application of 100 % RDN through FYM +Biomix (Azo. + PSB+ Myco) significantly increased pearl millet productivity under rainfed condition with maximum net returns and B: C ratio.
- » Reduced tillage (one harrowing +planking) along with two supplementary irrigations at branching and at pod filling stages through sprinkler is recommended.
- » Intercropping of chickpea and linseed in 6:2 row ratio significantly improved chickpea equivalent yield and land equivalent ratio which fetches higher net returns and B:C ratio.
- » For effective control of broad-leaved weeds in Barley, foliar spray of Halaxifen Methyl+Florasulam 40.85% WG (Ready mix) @ 12.76 g a.i. in 500 l water should be done at 30-35 days after sowing of crop in NWPZ
- » Application of Pusa hydrogel (2.5 kg ha⁻¹) in barley resulted in yield gain of 3 to 5% along with water use efficiency in NWPZ.
- » Seed treatment with NPK liquid formulation (250 ml ha⁻¹)+Zn solubilizing bacteria (125 ml ha⁻¹)/Bio-grow (250 ml ha⁻¹)+75% RDF resulted in 25% saving of chemical fertilizers and produced statistically similar pod yield of groundnut with 100% RDF.
- » Application of Pendimethalin 30% + Imazathapyr 2% (Ready-mix) @ 1kg a.i./ha as pre-emergence (PE) followed by 1 hand weeding at 30-35 DAS or Pendimethalin 30 EC @1 kg a.i./ha as PE followed



by 1hand weeding at 30-35 DAS or application of Pendimethlin 30 EC @ 1kg a.i./ha as PE followed by Imazethapyr 10% SL @ 75 g a.i./ha as post-emergence at 15-20 DAS recommended for effective control of weeds in groundnut.

- » Highest net returns and B:C ratio in clusterbean, after sowing with zero tillage machine, spray of pendimethalin 30% + imazethapyr 2% (Redimix) @ 1000 g/ha as PE for weed control is recommended.
- » Application of 100 % recommended dose of fertilizer along with FYM 5 t/ha and seed inoculation with either Rhizobium or combination of Rhizobium + LMn 16 was found better for higher grain yield of mungbean.
- » Highest net returns and B:C ratio in clusterbean, after sowing with zero tillage machine, spray of pendimethalin 30% + imazethapyr 2% (Redimix) @ 1000 g/ha as PE for weed control is recommended.
- » Management of termite in Groundnut crop treat the seeds with Imidacloprid 600 FS @ 6.5 ml or Fipronil 5 Sc @ 10 ml per kg seed.

4.7.2 Zone III B:

- » Foliar spray of N: P₂O₅:K₂O fertilizers grade, 19:19:19 @ 2% in bajra and moong bean included in package of practices of zone IIIb.
- » Bajra+Moong bean intercropping in 4:2 included in package of practices of zone IIIb.
- » Latest release bajra varieties viz., Pusa Composit-701, Dhanshakti, MPMH-21 and RHB-233 included in package of practices of zone IIIb.
- » Sorghum varieties viz., CSV- 27, CSV-31 and Raj Vijay- 1862 included in package of practices of zone IIIb.
- » Cluster bean variety viz., HG- 884 also included in package of practices.
- » Sesame variety viz., HT-2 included in package of practices.
- » Green gram varieties viz., MJS-118 and RMG-975 included in package of practices.
- » Black gram varieties viz., Pratap Urd-1, Pratap Urd-2 and Mash-479 also included in package of practices.

4.7.3 Zone II A:

- » Soil application of 20 Kg/ha FeSO₄.7H₂O before sowing in Iron deficit soils or when Iron deficiency symptoms are visually seen in the standing crop apply foliar spray of FeSO₄.7H₂O (19%) @ 0.5%.
- » Foliar spray of Imazethapyr (10% SL) @ 80 g a.i. per hectare in 500-600 liter of water applied 25 days after sowing of cowpea crop or uproot the weeds by hand weeding after 25 day of sowing and repeat the same practice after 15 days interval if needed.
- » Disc ploughing & application of Paraquat @ 1.25 Kg a.i./ ha during summer month (May) for continuously three years effectively control Jawasa weed in fellow land.
- » Maximum mean grain yield in barley (41.32 q./ha) was obtained with foliar spray of 500 ppm thiourea at tillering stage + ear emergence stage closely followed by foliar spray of 100 ppm ascorbic acid at tillering stage + ear emergence stage.

4.8 Revenue generation

4.8.1 Testing trials

The University also undertakes testing of the chemical/ varieties/ other new molecules of private companies for the welfare of farmers. It provides opportunity to the scientist for using his skill/ specialization along with a source of revenue generation in the university. During the reporting period 22 projects on private testing were conducted by various scientists at different stations and generated a revenue of Rs. 57.42 lakh for the University.



4.8.2 Breeder & TFL seed:

During 2020-21 different units of university generated nearly 9.3 crore revenue through the sale of seed, planting material etc.

4.9 SEED PRODUCTION

Additional Director Research (Seeds) unit function as Coordinator and facilitator for quality seed production at colleges, ARS, ARSS and KVKs of SKNAU, Jobner. ADR (Seeds) monitored the production and supply of required quantity of breeder seeds with high purity and supply to Central Govt., State Govt, PSUs and private seed company. The high yielding varieties of certified and truthful label seeds produced at SKNAU are kept under sales at Colleges, ARS, ARSS, and KVKs for generation of revenue to the University. Seed production in the university during 2020-21 been mentioned below.

Table 8. Breeder Seed production during 2020-21

Kharif 2020			Rabi 2020-21		
Crop	Area (ha)	Production (q)	Crop	Area (ha)	Production (q)
Cluster bean	15.20	112.50	Wheat	70.70	1622.41
Mungbean	24.90	125.90	Barley	17.30	417.39
Cowpea	3.00	9.30	Gram	22.40	252.95
Black Gram	4.00	14.30	Lentil	0.5	7.00
Groundnut	8.50	118.30	Coriander	1.0	4.4
Pearl millet	1.95	5.05	Taramira	1.5	7.91
			Fenugreek	1.0	8.41
Total	57.55	385.35	Total	114.4	2320.47

Table 9. TFL Seed production during 2020-21

Kharif 2020		Rabi 2020-21	
Crop	Production (q)	Crop	Production (q)
Clusterbean	284.09	Wheat	450.61
Mungbean	72.64	Barley	799.03
Cowpea	15.72	Gram	23.69
Pearlmillet	4.75	Mustard	450.76
Sesame	5.20	Taramira	4.46
		Methi	22.98
Total	382.40	Total	1751.53

4.10 Meetings

- (i) **Breeder seed production meeting of Rabi 2020-21:** Breeder seed meeting was held for allotment of DAC indent to various units of the University including KVKs, ARSs, ARSSs and different stations/farms. The Incharges of these units and plant breeders & ADR (Seed) were entrusted with the

responsibility to monitor the Breeder seed production programme along with the team from State government. During the reporting period, the meeting was held on May 26, 2021 in online mode and about 30 scientists and officers participated.

- (ii) **Pre – ZREAC meetings :** The purpose of these meeting is to review the progress of research work conducted by scientists in Kharif/ rabi seasons at different stations. The meetings were held zone wise at the respective Agricultural Research Station. The scientists working in research presented their results and worked out the research programmes for next season as per the local needs. Pre – ZREAC meetings for Kharif 2020 & Rabi 2020-21 were held as per schedule given below.

ZONE	Name of the Research Station	Rabi	Kharif
II A	ARS, Fatehpur – Shekhawat (Sikar)	Sept 3-4, 2020	Feb19, 2021
III A	RARI- Durgapura (Jaipur)	Sept 3-4, 2020	March 1-2, 2021
III B	ARS, Navgaon (Alwar)	Sept 02, 2020	March 10, 2021



ZREAC Meeting at RARI, Durgapura



ZREAC Meeting at ARS, Fatehpur

(iii) ZERAC meetings:

ZONE	Name of the Research Station	Rabi	Kharif
II A	ARS, Fatehpur– Shekhawat (Sikar)	Sept. 22, 2020	April 08-09, 2021
III A	RARI- Durgapura (Jaipur)	Sept. 17-18, 2020	June 08, 2021
III B	ARS, Navgaon (Alwar)	Sept. 08, 2020	March 22, 2021

4.11 New Initiatives:

- » Started research work on use of nanofertilizers in crop production with the aim to economize the fertilizer consumption, maintaining soil health and sustainability of agro-ecosystem at RARI, Durgapura.
- » Vermi-compost and Compost unit established at ARS, Fatehpur
- » Establishment of one hectare kinnow orchard at ARS, Navgaon
- » Research on Kharif onion and its seed production at ARS, Navgaon
- » Introduction of summer moong cultivation at ARS, Navgaon



- » Cleaning of bushes of Juliflora, Lantana from the field boundaries of field no 1, 2, 4, 12 and 15 to prevent yield losses at ARSS, Tabiji.
- » Establishment of Waste management units. (Compost pit and waste decomposer) at ARSS, Tabiji.
- » Repair and re-strengthening of earthen bund (approx. 200 mt length) in F. No. 10 to check over flow of nalla water in other fields at ARSS, Tabiji.
- » Establishment of Guava orchard in 0.5 ha. at ARSS, Diggi.
- » Graveling of farm paths at ARSS, Diggi.
- » 2.0 ha unutilized land brought under cultivation by making earthen bund in field no. 10 at ARSS, Tabiji.
- » Development of elevated path in between field no. 1 & 15 (approx. 150 mt length) at ARSS, Tabiji.
- » Development of Biodiversity Park at ARS, Fatehpur-Shekhawati- More than 40 tree species/shrubs/grasses planted and conserved.
- » 950 fruit plant trees were planted at RARI, Durgapura campus.
- » Agriculture Technology Knowledge Centre was inaugurated to impart the knowledge of agricultural technology to visitors through models at RARI, Durgapura.
- » Upgraded laboratories facilities under AINP on White Grub and developed slow releasing nano gel based formulation of pheromone methoxy benzene for management of White Grub and the same was distributed among farmers through white grub scientists, KVKs and Government Agriculture Officers at RARI, Durgapura, Jaipur.
- » A fruit orchard of 1.0 ha comprising ber and citrus have been established for imparting training to the farmers at RARI, Durgapura, Jaipur.
- » Weed museum comprising predominant weeds, their seeds along with their control measures have been developed in the Division of Agronomy, RARI, Durgapura to create awareness about weed identification and management for farmer's benefit.

4.12 Facilities updated during the Year

RARI, Durgapura

1. Boundary wall (400 meter) was constructed at Khairwari farm.
2. New tube well was constructed at Khairwari farm to assure productivity of seed crops.
3. A water harvesting structure of 5400 m³ capacity was constructed to collect runoff water from the campus.

ARS Navgaon

1. Construction of farmers hostel, guest house and campus road under Shyama Prasad Mukherjee Rashtriya Mission.
2. Establishment of new seed grading unit
3. Construction of New Tubewell at farm and farm boundary (400 meter).



ARS Fatehpur

1. Two seed cum fertilizer drill and one water motor pump for tubewell, two sprinkler sets, two micro sprinkler sets and one multi crop thresher.
2. Construction of Shed and store in the east farm.

ARSS, Tabiji

1. Purchase of one cultivator for better field preparation.
2. Purchase of stacks for safe grain storage.
3. Construction of retaining wall at ARSS Farm (90-meter length) and repairing of already existing wall.
4. Purchase one cultivator for better field preparation and 20 stacks for safe seed storage.

ARSS, Kumher

1. Constructed boundary wall of 3 KM.

ARSS, Gonera

1. Construction of pucca pond to harvest roof water of office for establishment of nursery.
2. Construction of implements shed to protect farm implements.
3. Installation of New tubewell bore at ARSS, Gonera Farm.
4. Installed new transformer by upgrading load.
5. Constructed boundary wall construction works i.e. 400 M
6. Installation of core cable for new tube well bore.
7. Kuchha path (about 2-2.5 Km) near boundary wall approach in field.

ARSS, Diggi (Tonk)

1. Micro irrigation system installed in 14 ha. area.
2. Deepening of farm pond.
3. Installed seed spices grader.
4. Purchasing of tractor of 45 HP.



5. EXTENSION EDUCATION ACTIVITIES

5.1 Introduction:

The Directorate of Extension Education was set up on 13th November 2013 as the nodal Directorate in Sri Karan Narendra Agriculture University, Jobner with component of ATIC & Extension wing, keeping in view the major objectives of Extension Education in State Agriculture University. Its purpose is to promote agricultural development in the state through quick & efficiently transfer of technology by providing training, advisory & farm information to the farmers & professional extension personnel of line department. The Mission of the Directorate of Extension is 'Reaching the Unreached' for livelihood security, improved quality life, sustainability of agriculture complex, diversified & risk prone farmers for social equality & inclusive growth.

Objectives

- » To formulate & impart in-service trainings to the different categories of the officers & field functionaries from line department of govt. of Rajasthan & non-government organizations.
- » To conduct short & long duration vocational trainings for front line farmers, farm women, rural youth & school drop outs of the state.
- » To provide farm information services through various extension activities including literature for quick dissemination of the technologies.
- » To monitor the KVKs & provide technical backstopping to ensure effective functioning.

5.2 Operational area: The Directorate of Extension Education operates in KVKs of eight districts namely Ajmer, Alwar, Jaipur, Dausa, Bharatpur, Dholpur, Tonk & Sikar.

5.3 Agro-climatic zone wise location of KVKs

Agro climatic zone	District	Location of the KVK	Year of establishment	Farm area in ha
Ila Transitional Plain of Inland Drainage	Sikar	Fatehpur-Shekhawati	1976	15.24
IIla Semi arid Eastern Plain	Jaipur	Kotputli	2012	41.05
	Ajmer	Tabiji	1992	10.77
	Dausa	Khedla Khurd	1994	17.30
IIIb Flood prone Eastern Plains	Alwar	Navgaon	1982	20.00
	Bharatpur	Kumher	1988	21.35
	Dholpur	Masudpur	1992	21.04

Details of Farm/Instructional area/ Inventory

- » All the 7 KVKs has 146.68 ha land
- » 77.22 ha land under cultivation for seed production in all the KVKs.
- » 15.47 ha land under orchard and live units in all the KVKs
- » 27.34 ha land under developing stage at KVK Kotputli and Dholpur.
- » 26.65 ha land under road and buildings in all KVKs.
- » Recently 25.50 ha land has also been allotted to DEE/ATIC for seed production.

5.4 Research/ Infrastructure development projects:

Table 10. Research/ Infrastructure development projects at Different KVKs

Name of KVK	Name of projects	Funding source	Budget (Rs. in Lakhs)	Duration /period	Year of start
KVK, Bharatpur	NICRA	ICAR-CRIDA, Hyderabad	12.35	2021-25	2011& 2021
KVK, Alwar	Construction of training hall at KVK Navgaon	Shyama Prasad Mukherjee Rurban Mission, Zila Parisad Alwar	80.00	3 years	2019-20
	Establishment of Agriculture Machinery bank at KVK Navgaon	Shyama Prasad Mukherjee Rurban Mission, Zila Parisad Alwar	50.00	3 years	2019-20
	Establishment of Agriculture technology gallery at KVK Navgaon	Shyama Prasad Mukherjee Rurban Mission, Zila Parisad Alwar	7.00	3 years	2019-20
	Water conservation technology at KVK Navgaon	Shyama Prasad Mukherjee Rurban Mission, Zila Parisad Alwar	3.00	3 years	2019-20
	Mission on Integrated Development of Horticulture (MIDH) on Seed Spices	Directorate of Extension Education, SKNAU, Jobner, Jaipur (Raj.)	0.76	One year	2020-21
KVK, Dholpur	Farmers' prosperity through Bio-tech KISAN Hub	ICAR-IARI, Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi	6.50	2 years	2019-20
	Establishment of District Agro Met Units at KVKs	ICAR, IMD, Ministry of Earth Science, GOI, New Delhi	12.03	Year to year extend basis	2018-19
	Organization of seven days within state training on Scientific Beekeeping by ICAR through KVKs 2020 -21	National Bee Board, Department o Agriulture, Cooperation and Farmers Welfare, Government of India through ICAR -ATARI Zone-II, Jodhpur.	9.21	One Year	2020-21
ATIC	RKVY 06	RKVY	407.24	2014-2021	2014



5.5 Linkages and Networking

- » All KVKs and ATIC has linkage with different govt. agencies i.e NIAM, Govt. of India, Jaipur, SIAM, GoR, Jaipur, NRC on Seed Spices, Ajmer, CSWRI, Avikanagar, Tonk, DRMR Bharatpur, Department of Agriculture, Animal Husbandry, Horticulture, ATMA (Govt. of Rajasthan), MANAGE, Hyderabad, NIPHM, Hyderabad, EEI Anand, IFFCO, KRIBHCO, Rajasthan State Marketing Board, Rajasthan Mission on Livelihood, NABARD, FCI, Rajasthan State Warehouse Corporation for trainings of officers, youth, women and farmers.
- » All KVKs and ATIC has linkage with RSSC for foundation seed production programme at different KVKs to provide quality seed to the farmers.
- » All KVKs and ATIC has linkage with different Agricultural Universities, affiliated colleges for training of RAW/READY students.
- » All KVKs and ATIC has linkage with govt. departments for diagnostic survey time to time.
- » All KVKs has developed mobile app, what's app groups, Kisan Portal and SMS groups to disseminate recent information to the farmers and govt officials immediately.

5.6 Revenue generation

The Directorate of Extension Education is getting fund from ICAR & from the University as well. Apart from this, some income is also generated from revolving fund.

- » A total of Rs.85.80 lakhs has been generated as resource through different sources by KVKs and ATIC, Jobner during the reporting year.
- » An amount of Rs 48.09 lakhs has been generated from supply quality breeder seed to the govt. and TFL seed to the farmers
- » An amount of Rs 3.77 lakhs has been generated from supply of quality planting material to the farmers.
- » An amount of Rs1.40 lakhs has been generated from auction of fruit orchards.
- » An amount of 9.23 lakhs has been generated from goatry, poultry and other animal units.
- » An amount of 3.32 lakhs has been generated from sale of vermicompost/ earthworms/ azolla.
- » An amount of 14.82 lakhs has been generated from the paid training and rent of training hall.
- » An amount of 5.17 lakhs has been generated by ATIC, Jobner by Sale of TFL seed, vegetable seedlings, University diary, calendar and advertisement in diary.

5.7 Animal Units established/ working

- » Five Backyard Poultry units are running at Ajmer, Fatehpur, Bharatpur, Dholpur and Alwar KVKs and having 730 birds.
- » One Sheep unit (10 sheep) is running at KVK Ajmer
- » 5 goatry units (135 goats) are running at Ajmer, Fatehpur, Dausa, Alwer and Kotputli KVKs.
- » One Rabbit unit (30 rabbits) is running at KVK Ajmer
- » Two Gir cow unit (4 cow) has been established at Ajmer and Kotputli.
- » One Quail unit with 50 birds is running at KVK Ajmer

5.8 Farmers Recognition:

SKNAU, Jobner is providing technologies to farmers of state and among them two progressive farmers are awarded for their outstanding work with IARI Innovative Farmer Award 2021: Progressive farmers

namely Sh. Surendra Avana and Sh. Ganga Ram Sepat have been honoured.



Sh. Surendra Avana
IARI Innovative Farmer Award 2021



Sh. Ganga Ram Sepat
IARI Innovative Farmer Award 2021

Contribution of farmers-

1. All the farmers leading in the successful establishment of Ber orchards and a source of motivation to other farmers of the nearby areas resulting in horizontal spread of horticulture and provided socio economical reflection among the rural farmers.
2. Pioneer to propagate package of practices with effective management strategies and latest technologies adopted for cultivation of crops, vegetables, fodder etc. the use of improved varieties seed treatment (with emphasis to proper use of bio pesticides)
3. They have also developed Integrated Farming System at his farm including goatry unit, poultry, fisheries, livestock, azolla, vermicompost, orchards, vegetables, crop production
4. They brought about a radical change in management practices /in contributing record production from land/water or animals-noticeable changes in orchard management crop management, milk and crop production in the area.

Many other farmers got recognition through KVKs wise given below:

Krishi Vigyan Kendra, Tabiji-Ajmer

1. Sh. Nathu Lal Kumhar village Madhopura received Best Progressive Farmer award in agricultural activities conferred by district level selection committee, ATMA, Ajmer.
2. Sh. Harkaran Paroda village Saradhana received Best Progressive Farmer award in organic farming conferred by district level selection committee, ATMA, Ajmer.
3. Sh. Nathu Lal Kumhar village Madhopura received ASP Innovative Farmer Award 2021 for innovation in agriculture conferred by ASP Rajasthan Student Association, Jaipur.
4. Smt Sunita Mali received Krishak Award conferred by Honda for excellence in Farm Entrepreneurship

Krishi Vigyan Kendra, Fatehpur

1. Sh. Sunda Ram Verma received Padma Shri Award-2020

Krishi Vigyan Kendra, Dausa

1. First prize received by Sh. Shyam Sundar Sharma for organic farming in Kisan Mela at SKNAU, Jobner



Krishi Vigyan Kendra, Kumher, Bharatpur

1. Sh. Hukam Singh, Sh. Govind Ram and Sh. Laxman Village-Sitara got appreciation in SKNAU Kisan Mela on 22.02.2021
2. Gopal Singh Village- Baben, Progressive farmer awarded by Agri. Deptt

Krishi Vigyan Kendra, Dholpur

Following Framers Received Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner:

1. Mr. Laxmi kant Tiwari, Village – Gadi Tadawali, Teh. - Rajakhera, Distt. - Dholpur
2. Mr. Ikbai Khan Village-Barai, Teh. - Baseri, Disst.-Dholpur
3. Mr. Surendra Singh Chauhan, Village-Pathaina, Teh.-Saipau
4. Mr. Dheer Singh, Village-Chaurakhera, Teh- Saipau, Distt.- Dholpur
5. Mr. Bheem Sen, Village-Kripapura, The. -Dholpur, Distt-Dholpur
6. Mr. Chandra Sen Jatav Village-Panjipura, Teh. -Bari, Distt-Dholpur
7. Mr. Vinod Sharma, Village-Mamodhan, Teh. - Baseri, Distt.-Dholpur
8. Mr. Kaptan, Village- Chittora, Teh- Saipau, Distt. - Dholpur

Krishi Vigyan Kendra, Navgaon, Alwar

1. Sh. Hardayal, Shekhambas Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021
2. Sh. Babulal Saini, Ramgarh Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021
3. Sh. Siyaram Meena, Kanor Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021
4. Sh. Deep Chand Meena, Kanor Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021
5. Sh. Manoj Kumar, Malakheda Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021
6. Sh. Raghuveer Singh, Milakpur Alwar-Appreciation in SKNAU Kisan Mela on 24.02.2021

Krishi Vigyan Kendra, Gonera, Kotputli

1. Mr. Sardarmal, Village-Bagawas Chaurasi, Teh-viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
2. Mr. Ashok, Village-Paniyala, Teh-Kotputli Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
3. Mr. Lekhraj, Village- Bagawas Chaurasi, Teh-Viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
4. Mr. Sher Singh, Village- Paota, Teh-Paota, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
5. Mr. Omprakash, Village-Bakhrana, Teh-Kotputli, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
6. Mr. Sushil Kumar, Village- Paota, Teh-Paota, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
7. Mr. Harsahay Meena, Village-Bagawas Chaurasi, Teh-Viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner

8. Mr. Ashish Meena, Village-Bagawas Chaurasi, Teh-Viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
9. Mr. Babu Lal Meena, Village-Bagawas Chaurasi, Teh-Viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
10. Mr. Ramswaroop Meena, Village-Bagawas Chaurasi, Teh-Viratnagar, Distt.-Jaipur- Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner
11. Mr. Atul Yadav, Village-Devipura, Teh- Virathnagar, Distt. Jaipur. ATMA Progressive farmers award.

ATIC/Directorate of Extension Education

Progressive Farmer Award in Kisan Mela-2021 organized by SKNAU, Jobner

1. Shri Ramkisor Meena
2. Shri Kajod
3. Shri Babulal Serawat
4. Shri Beruram Jat
5. Shri Sitaram Yadav
6. Shri Chiranjivi Lal
7. Shri Aravind Choudhary
8. Shri Omprakash
9. Shri Atul Kumar Yadav

5.9 ATIC (Agriculture Technology Information Centre)

ATIC has been developed at Directorate of Extension Education, SKN Agriculture University Jobner during the year 2014 under the RKVY project. The funds for the ATMVIC Project are received by the State Department of Agriculture under RKVY Project.

Clientele of ATMVIC

Clientele of the project mainly consists of farmers, growers, rural youth, entrepreneurs agro-industrial units, farm women, extension functionaries, college students, various research institutions, organizations viz. state department of Animal Husbandry, ATMA, NGO's, IFFCO, NFL, KRIBHCO, pharmaceuticals companies, milk cooperative societies, All India Radio and Doordarshan. The interaction is mainly in the form of trainings, exposure visits, Kisan gothies, exhibitions, participatory workshop, radio talks, Kisan call centers, help



ATIC, Jobner

line, publication of farm literature, film shows, demonstrations, consultancies, visits, group meetings and by distribution of research products from ATMVIC.

**The basic objectives of the center are:**

1. To establish ICT enabled Agriculture Technology and Management Quality Improvement Center for the region of Rajasthan.
2. To facilitate efficiently the farmer's access to the institutional resources available in terms of technology, advice, technology products, devices, tools etc. for effective communication and reducing technology dissemination losses.
3. To provide mechanism for feedback from the end users to the institute for further perfection of technology and practices.
4. To train farmers with recent trends in precision, conservation, specialty and secondary agriculture.
5. To deliver location and need based agro-information/ technologies to the farmers.

Services being offered by the ATIC

1. Video Conference Room (capacity 50 persons)
2. Farmers Hostel (capacity 30 persons)
3. Smart Class Room (capacity 50 persons)
4. Agricultural Education Museum
5. Shed net for nursery
6. Solar system
7. Micro irrigation system (Drip & Sprinkler)
8. Water harvesting Structure
9. Agriculture Resource Centre
10. Graphic table for data presentation
11. Fish pond
12. Agriculture Kiosk

The information kiosk is bi-lingual and has a touch screen facility with simple buttons for navigation. i-Kiosk was especially made for farmers and it is designed with full of pictorial images, pictures and graphs. The Kiosk can be used by farmers directly without assistance of any facilitator. It serves the facility of online net to farmers. Information Kiosk makes it possible to disseminate field data as well as information to farmers in an inexpensive way. The Kiosk has been optimized for empowering the community with knowledge on issues related to water availability, cropping systems matching with the available water, water saving techniques, organic agriculture practices etc.

5.10 SMART Village:**ATIC, DEE, SKNAU, Jobner**

Directorate of Extension Education, SKNAU has been adopted two villages namely Pachar and Sunderpura under mission Antyodya. Several activities were performed at both the villages during the reporting year: Planation Programmes, Computer Literacy in Schools, Animal vaccination, establishment of azolla and vermicompost units, Swachha Bharat Mission, Camps for Senior Citizens, Bull Distribution in Goshala, Health Camps, Adult Literacy Programme, Cleanliness drive, De- addiction camps, Awareness for Covid-19 through the poster, Mask distribution & Yoga Day etc.



Table 11. Smart Village Adopted by KVKs

S.No.		Name of the village	Name of the block /Taluka	Major crops & enterprises	Major problem identified
1	KVK, Ajmer	Picholia	Pisangan, Ajmer	Groundnut, pearl millet, wheat, barley, tomato, chilly, animal husbandry	Low yield of crops due to use of local seed, imbalanced use of fertilizer, lack of knowledge
2	KVK, Fatehpur	Kaswali	Laxmangarh	Wheat, Gram, Barley, Cluster bean, Moong, Groundnut	Not much aware about the POP, recommended varieties of crops, PP measures.
		Bhukharonka bas	Dhod	Gram, Mustard, Groundnut	
3	KVK, Bharatpur	Sitara	Kumher	Bajra, Wheat, Mustard, Cluster bean, Dairy-Buffalo	Poor quality of underground water
4	KVK, Dholpur	Dharmapura	Dholpur	Bajra, Mustard, Wheat	Lack of awareness about innovative technology, dependency on local input dealers
5	KVK, Alwar	Kanor	Ramgarh	Vegetables, Mustard, Wheat, Dairy farming	Low yield, unawareness about IPM, IDM and agricultural production technology
6	KVK, Kotputli	Ladaka bans			

Table 12. Distinguished Guest Visited KVKs

Units	Name	Designation	Purpose of visit
KVK Ajmer	Dr. R.S. Paroda	Ex-DG, ICAR, New Delhi	Visited KVK Ajmer and acted as Chief Guest in Poshan Maah Programme
	Dr. J.S. Sandhu	Hon'ble VC, SKNAU, Jobner	Visited KVK Ajmer and acted as Chief Guest in Poshan Maah Programme
	Smt. Anita Bhadel	Hon'ble MLA, Ajmer (South)	Visited KVK Ajmer during celebration of Balanced Fertilizer Awareness Day
	Dr. S.K. Singh	Director, ATARI, Jodhpur	Visited KVK Ajmer
	Dr. Sudesh Kumar	DEE, SKNAU, Jobner	Visited KVK Ajmer
	Dr. M.L. Jhakar	Director Research, SKNAU, Jobner	Visited KVK Ajmer
	Dr. Gopal Lal	Director NRCSS, Ajmer	Visited KVK Ajmer and acted as Chief Guest on Input Dealer Training



	Sh. Gajendra Singh Rathore	ADM (City), Ajmer	Visited KVK activities
KVK, Fatehpur	Dr. Sudesh Kumar	Director, DEE , SKNAU, Jobner	Monitoring of KVK Activities
	Dr. S. K. Khandelwal	ZDR, ARS Fatehpur	Attended SAC Meeting
	Dr. S.R. Dhaka	Dean, COA, Fatehpur	Attended SAC Meeting
KVK, Dausa	Dr. Sudesh Kumar	Director, DEE, SKNAU, Jobner	Visited CFLD Oilseed groundnut fields
	Sh. Peeyush Samariya	Dist. Collector, Dausa	Attended SAC meeting
	Sh. L. K. Balot	CEO, Dausa	Attended SAC meeting
	Dr. S. S. Yadav	DEAN, COA, lalsot	As an expert in 15 days fertilizer retailers certificate course.
	Smt. Jaskor Meena	Honorable MP, Dausa	Participate in fertilizer awareness programme on dated 18.6.20 and in kisan gosthi on dated 24.6.21
KVK, Bharatpur	Prof. J. S. Sandhu	Hon'ble Vice Chancellor, SKNAU, Jobner	Review of KVK activities and visit of NICRA village
	Dr. S. K. Singh	Director, ATARI, Jodhpur	Review of KVK activities
	Dr. Sudesh Kumar	Director, DEE (SKNAU, Jobner)	To chair SAC meeting and also visited KVK Demo units and farm
KVK, Alwar	Dr. Harphool Singh	ZDR, ARS Navgaon	Visited KVK seed farm
	Sh. J. S. Sandhu (IAS)	CEO, Zila Parishad	Visited on 15.10.2020 on the occasion of Mahila Kisan Diwas organized at KVK Navgaon, Alwar
	Prof. J. S. Sandhu	Hon'able Vice Chancellor, SKNAU, Jobner	Monitoring of KVK activities on 29.01.2021
KVK, Dholpur	Dr. J .S. Sandhu	Hon'ble Vice Chancellor, SKNAU, Jobner	Monitoring of KVK activities, different demo Units etc.
	Dr. V. P. Chahal	ADG (Agril. Extn.), ICAR, New Delhi	Visited different activities and demo units of KVK
	Dr. B. L. Kakralya	Director, DEE, SKNAU, Jobner	Visited KVK activities, different demo Units, and KVK activities at farmers field
	Dr. Sudesh Kumar	Director, DEE, SKNAU, Jobner	To chair SAC meeting and also visited KVK Demo units and KVK activities at farmers field
	Sh. Rakesh Kumar Jaiswal	DM, Dholpur	Visited different activities and demo units of KVK
	Smt. Shobha Rani	MLA, Dholpur	Chief guest of Poshan Maah programme
KVK, Kotputali	Dr. J.S. Sandhu	Hon'ble VC, SKNAU, Jobner	Visited KVK Kotputali and acted as Chief Guest over Seed Spices Training Inauguration of Mobile app and Diary Vimochan, farmer's field visit



	Dr. Sudesh Kumar	Director, DEE, SKNAU, Jobner	Seed Spices Training Inauguration, Mobile app and Diary Vimochan , Celebration of International Women's Day and also visited KVK Demo units and KVK activities at farmer's field
	Dr. A.S, Baloda	Director, RARI Durgapura	To chair SAC meeting and also visited KVK Demo units and KVK activities at farmer's field
	Dr. S. K. Singh	Director, ATARI, Jodhpur	Review of KVK activities and farmer's field visit
	Shri B. R. Karwa	Deputy Director	To chair SAC meeting
	Dr. R. P. Jat	Dean COA, Navgaon	Guest in Seed Spices Training
	Dr. O. P. Garwal	Nodal Officer, SKNAU, Jobner	Guest in Seed Spices Training
	Dr. Surendra Singh	Dean, COA, Kotputli	To chair SAC meeting and Guest in Seed Spices Training
ATIC, Jobner	Shri. Lalchand Kataria	Minister of Agriculture, Horticulture, Animal husbandary	Kisan Mela and University visit
	Dr. Subash Garg	Minister of technical education	Kisan Mela and University visit
	Dr. R. S. Paroda	Ex-DG, ICAR, New Delhi	Kisan Mela and University visit
	Dr. L. S. Rathore	Former Director General , IMD, New Delhi	Kisan Mela and University visit
	Dr. Sanjeev Sharma	V. C. & Director National Institute of Ayurveda, Jaipur	Kisan Mela and University visit
	Dr. P. L. Saroj	Director Central Arid Horticulture Institute, Bikaner	Kisan Mela and University visit
	Dr. Kuldeep Singh	Director NBPGR, New Delhi	Kisan Mela and University visit
	Sh. B. L. Soni	Director General Rajasthan, ACB	Kisan Mela and University visit
	Sh. Kunji Lal Meena	Principal Secretary, Agriculture, GOR	Kisan Mela and University visit
	Sh. R. L. Godara	V. C. Mahveer Open University, Kota	Kisan Mela and University visit
	Dr. S. K. Singh	Director, ATARI, Jodhpur	Kisan Mela and University visit

5.11 Staff strength in Directorate of Extension Education and KVKs (Present Status)

- » One post of Director Extension has been sanctioned for the DEE, one Dy. Director, 1 technical and 2 ministerial and one supporting staff are working at Directorate of Extension Education.
- » 112 posts have sanctioned for 7 KVKs out of these 48 posts are filled and 64 are still vacant.
- » Each KVK have 16 sanctioned posts out of these 7-8 posts are filled remaining are vacant.



5.12 Publications:

- » 33 research papers have been published by the KVKs Scientists having NAAS rating <6.0 and 4 paper having NAAS rating >6.
- » 17 technical bulletins have been published by the KVKs scientists.
- » 42 Articles have been published during this period.
- » 05 book chapters have been published.
- » 19 success stories have been published.
- » 15 folders have been published.

5.13 Strengthening of infrastructure at KVKs:

KVK, Ajmer : Establishment of Solar dryer unit, Hydroponic unit and Sheep (Avishan) Unit, Mobile APP, Cow unit

KVK, Fatehpur : Crop & vegetable cafeteria, vermicompost unit, fodder unit, Poultry Unit, Nursery Unit, Fish Unit, Mobile App.

KVK, Dausa : Cross wire fencing in 500 running metre, mobile App

KVK, Alwar : Construction of Pakka Boundary wall of 559.95 running meter, Tractor 60 HP, Construction of implement shed, Establishment of exhibition gallery, display board, Establishment of micro irrigation system, Mobile APP

KVK, Dholpur : Chain link fencing of KVK farm (400 meter), Mobile APP

KVK, Kotputli : Horticulture Nursery, Construction of Water storage pond, Fencing, Farm development, Administration cum lab building, Cow unit, Mobile APP

ATIC, Jobner : Soil Testing Mobile van, Establishment of micro irrigation system, Food cafeteria, Documentary film, Boat for fish culture pond and Initiate B/S & TFL seed production programme,

5.14 Meetings Organized:

Name of KVK	Meeting	Date	Level of participation	No. of participants
KVK, Ajmer	SAC Meeting	26.11.2020	District level officials	35
KVK, Fatehpur	Scientific Advisory Committee (SAC) meeting	22.10.2020	Agriculture & Line department officers	24
KVK, Dausa	SAC, Meeting	08.12.2020	ATARI, Director DEE, Director RARI, District Collector and other DLOs	28
KVK, Bharatpur	Scientific Advisory Committee (SAC) meeting	29.12.2020	DEE, Dean COA - Kumher, Joint Dir (Ext) & DLO's	32
	"Virtual State Level Work Plan (2021) Workshop for KVKs of Rajasthan"	27-28 Jan, 2021	ICAR ATARI-II, Jodhpur	
	Virtual Concluding Review Meeting of NICRA-TDC	25 May, 2021	ICAR ATARI-II, Jodhpur	



KVK, Alwar	Scientific Advisory Committee	15.12.2020	DEE, Dean COA Navgaon, ZDR, ARS Navgaon and DLO's of Alwar district	32
KVK, Dholpur	Scientific Advisory Committee	30.12.2020	Agriculture & Line department officers	42
KVK, Kotputali	Scientific Advisory Committee	01.12.2020	RARI, Director, Dean COA, Kotputli, Agriculture & Line department officers	34
ATIC, Jobner	Monthly review Meeting	Every month	All KVK Incharge & DEE staff	

5.15 Recognition:

- » 2 farmers technically supported by our University have received IARI Innovative Farmer Award, 2021.
- » 44 farmers technically supported by our KVKs have received various district level awards.
- » University has organized 5 days Kishan Mela first time in the history of Rajasthan. It has given recognition of university work among the farmers in eight districts.
- » Initiate training on fish culture.

5.16 Accomplishments and Achievements of DEE:

- » organized 5 days Kishan Mela at SKNAU, Jobner in which more than 5000 farmers have participated.
- » Initiate B/S & TFL seed production programme of Kharif crops in 24 ha land at Keria farm.
- » Organized more than 27 trainings at ATIC, DEE, SKNAU, Jobner
- » Organized two 21 days skill-oriented training for youth under ASCI programme.
- » Organized one year training for input dealers under DAESI programme.
- » Publication of University diary.
- » Publication of University News and Views quarterly.
- » Publication of coloured Jobner Krishi monthly magazine.
- » Publication of University calendar.
- » Print the Cap and Gamache with University logo.
- » Developed Mobile App of all the 10 KVKs under the Jurisdiction area.
- » Construction of canteen for the farmers.
- » Establishment of drip irrigation system at Keria farm
- » Establishment of micro sprinkler system at Keria farm
- » Purchase the soil testing van for analyzing soil sample at door step of farmers.
- » Purchase of paddle boat for fish pond.
- » Initiate the construction of water harvesting structure at Kotputli, Navgaon, Bharatpur and Dholpur.
- » Initiate the repairing of water harvesting structure at KVK Ajmer and Fatehpur
- » Developed What's app groups of farmers in each KVKs
- » Publication of souvenir for Kisan mela.



5.17 Accomplishments and Achievements of KVKs

5.17.1 Training Programme:

Creation of job opportunity and sowing skills: To improve upon farmers' knowledge, attitude and skill the efforts are made that their existing levels are improved by way of conducting lectures, group discussions, question answer session and training evaluations. Likewise to improve their skills they are given opportunity to practice new techniques to be used in farming.

Since during the year, KVK has trained rural youth in horticulture. Among these, many trainees have established their own nurseries and trainees are employed as a gardener in different NGO's and factories etc. Some trainees are earning good amount through artificial insemination, making mineral mixture, dairy farming etc.

- ▶ The Krishi Vigyan Kendras have organized 238 on campus trainings for farmers/farm women/rural youth and extension functionaries.
- ▶ The Krishi Vigyan Kendras have also organized 406 off campus trainings for farmers/farm women and rural youth.



KVK, Navgaon



KVK, Dholpur



KVK, Dausa

5.17.2 Front Line Demonstration:

To show the worth of new technology the demonstrations are conducted on the farmers' field with the help of scientists so that the potential of newly developed technologies could be shown to the farmers. The operations are carried out in their presence so that they could also participate in various steps of operations because the principles of learning are at work- seeing is believing and doing is learning. Maximum experience is gained by farmers' when they are allowed to carry out the activities themselves and they see the things happening, which develops confidence and self-reliance.

- ▶ The Krishi Vigyan Kendras have conducted FLD/CFLD on oilseed, pulses, cereals, vegetables and spices in 1688.07 ha. area at 3416 farmers field.
- ▶ The Krishi Vigyan Kendras have also conducted 152 Front Line Demonstrations on animal units during the year.



KVK, Dholpur



KVK, Dausa



KVK, Fatehpur

5.17.3 On Farm Trials/Field Day:

OFTs and Field days are organized to show the worth of new technology through result demonstration of improved varieties and other technologies carried out on the selected farmers' field where other farmers' of the nearby villages could come and witness the results of new technologies. This induces confidence in farmers to adopt new technologies.

- ▶▶ The Krishi Vigyan Kendras have conducted 66 on farm testing trials on oilseed, pulses, cereals, vegetables and spices on feed back problems identified by the farmers and govt officials in jurisdiction area of KVK.
- ▶▶ The Krishi Vigyan Kendras have also conducted 116 OFT on livestock on feed back problems identified by the farmers and govt officials in jurisdiction area of KVK.

Recharge of Tube well (Natural Resource Management) KVK, Kumher (Bharatpur)

- ▶▶ KVK Bharatpur has established 64 units of recharge tube well under NICRA project through which custom hiring of Agricultural Implements and Quality Seed Production is taken up.



KVK Bhartpur - Recharge of tube well

5.18 Other activities of the Directorate of Extension Education

5.18.1 DAESI Training: The main objective of this diploma course is to promote organic farming and to be motivated to minimum use of pesticides in agriculture. By getting training from this diploma course, input dealers can run their shops well and in the future, training programme can be organized by the Govt. with the help of these participants in the licenses given by the government for the sale of seed fertilizer, pesticides.

One year Diploma course for Input Dealers titled "Diploma in Agricultural Extension Services for Input Dealers (DAESI)" Batch- II was inaugurated by Prof. J.S. Sandhu, Hon'ble Vice-Chancellor, SKNAU, Jobner on 03.11.2020. This course was sponsored by MANAGE Hyderabad in collaboration with SIAM, Durgapura, Jaipur. Total participants are 40 input dealers (Fertilizers and pesticides etc.) from nearby area of Phulera, Jobner, Renwal, Jhotwara and Bagaru of district Jaipur.



DAESI Training - DEE Jobner



DAESI Training - KVK Bhartpur

5.18.2 Farmer's Fair: These are the extension methods to bring/create mass awareness among the farmers about any new practice or innovations/technologies through which they happen to know initially major activities about which their attention is focused for gathering further useful technical details of new technologies. By participating in such activities the enthusiasm of the farmers' is at peak so they are more inclined to know about new things with greater interest and devotion.

- ▶▶ Directorate of Extension Education organized 05 Days Farmer's Fair during 22-26 February 2021 at SKNAU, Jobner. Which will remain an example in itself because not only in Rajasthan but in India this is the first Farmer's fair to run smoothly for five days.
- ▶▶ In which 62 Agricultural exhibition stalls from various institutions, entrepreneurs and cooperative organizations of Rajasthan showcased a range of modern technologies and innovation in agriculture. Farmer's fair inaugurated by the Hon'ble Agriculture Minister Sh. Lalchand Kataria and Dr. Subhash Garg, Hon'ble Minister of Technical Education, Govt. of Rajasthan. PadamBhusan Dr. R.S. Paroda, Dr. Laxman Singh Rathore, former DDG, IMD, New Delhi, Dr. P.L. Saroj, Director Central Arid Horticulture Institute, Bikaner, Sh. B.L. Soni, Director General Rajasthan Anti corruption Bureau (ACB), Sh. Alok Beniwal, MLA Shahpura, Sh. Kunji Lal Meena, Principal Secretary Agriculture Govt. of Rajasthan etc. attended as Chief guest/Guest/ Special Guest on all days of the Farmers fair.



Five days Farmers' Fair from 22-26 February 2021 at
SKNAU, Jobner



Participants on the occasion of Farmers' Fair

5.18.3 Soil Mobile Testing Laboratory Van: Soil Mobile Testing Laboratory Van purchased in the Directorate of Extension Education. It will help for testing of soil sample of farmers field during the field days on FLD site at different villages of all the eight districts under the jurisdiction area of SKNAU, Jobner. The main purpose of this van is that farmers will not have to go out to check the soil of their land. After testing the soil, the farmer will be able to get a soil health card, which he will be able to balance use of fertilizer and get more yield.



Soil Mobile Testing Laboratory Van

5.18.4 Organization of webinars: Directorate of Extension Education, SKNAU, Jobner has organized three webinar on Application of ICT in Agriculture Extension (12.01.202), Diversifying Dairy Farming towards entrepreneurship: Ways to boost the dairy sector (16.01.2021) and its sustainability and Camel milk: A boon to mankind (06.06.2021) at SKNAU, Jobner in which 550, 900 and 995 Scientist and farmers were participated, respectively.

5.18.5 Paddle Boat: Two seater paddle boat has been purchased for the fish pond of Keria farm by the Directorate of Extension Education.



5.18.6 A Memorandum of Understanding (MOU) with the PCRA (Petroleum Conservation Research Association) has been signed on 14.10.2020 for creating awareness among the farmers regarding efficient use of Fuel.

5.18.7 SKNAU News and Views: The Directorate of Extension Education, SKNAU, Jobner has initiate to publish quarterly English New letter "SKNAU News and Views" from oct., 2020. The innovations of University and the activities, views and ideas of university scientists are also being published in this magazine.

5.18.8 University Calendar 2021: The Directorate of Extension Education, SKNAU, Jobner releases University Calendar 2021. This calendar contain all the agricultural operations that has to be done by the farmers in different crops in every month for higher production.

5.18.9 Jobner Krishi: Directorate of Extension Education, SKNAU, Jobner published monthly Hindi magazine "Jobner Krishi" in new modified form. "Jobner Krishi" is being published regularly covering all research based articles useful for the farming community of the state. It is being circulated to all Agricultural Universities, ICAR institutes and Agricultural Departments in the State along with the ICAR head quarter, New Delhi.

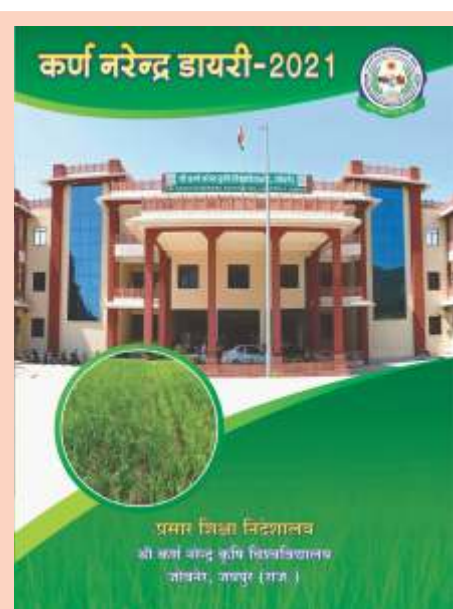
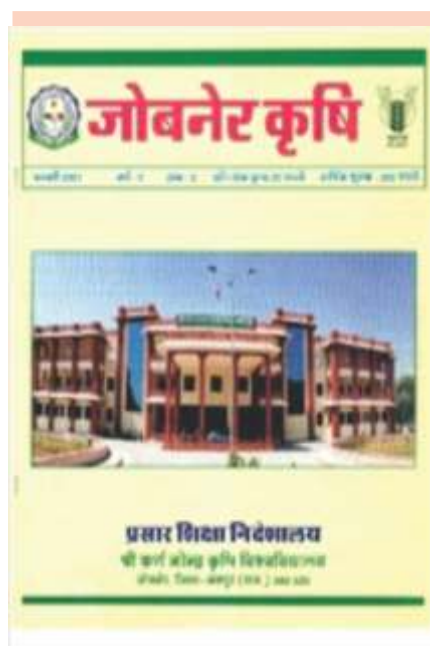
5.18.10 A souvenir (Krishi Smarika 2021): A souvenir specially prepared for farmers' fair was published, released and distributed among the participating farmers at the time of fairs during 22-26 February 2021.



MOU with Petroleum Conservation Research Association



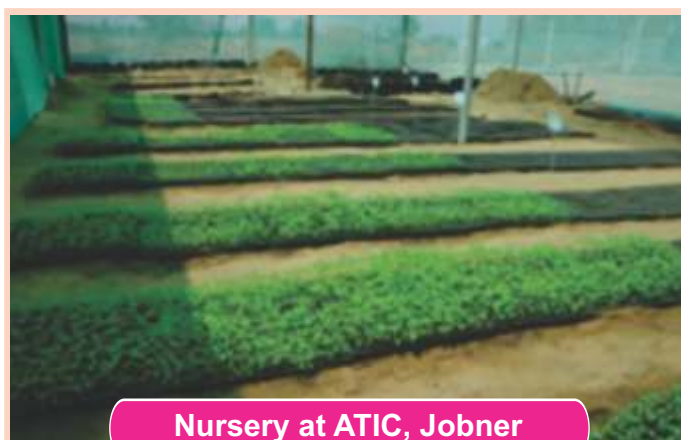
Release of SKNAU News and Views



SKNAU, Jobner releases University Diary 2021. This diary is very useful for the scientists, students and farmers because it contains all the information regarding package and practices of all the cereals, oilseed, pulses, vegetables and fruits crop of state.

5.18.12 Mobile Apps: The Directorate of Extension Education, SKNAU, Jobner launches Mobile Apps developed by all the Krishi Vigyan Kendras under the jurisdiction area of SKNAU, Jobner to provide technical information to the farming community.

5.18.13 Nursery: The ATIC center of Directorate of Extension Education, SKNAU, Jobner is providing good quality seedling and planting material of vegetable and fruit plants, respectively to the farmers.



5.19 Activities at KVKs :

The KVKs are performing several activities as mentioned below for the upliftment of socio-economic status of the farmers.

Table 13. Extension activities conducted by KVKs

Activities	No. of programmes	No. of farmers (A)	No. of Extension Personnel (B)	TOTAL (A+B)
Advisory services	308	11359	55	11414
Diagnostic visits	15	175	20	195
Field day and Kishan mela	44	6836	72	6908
Exhibition	05	6999	15	7014
Kisan Ghosthi	16	558	40	598
Film Show	58	2197	106	2303
Scientists' visit to farmers field	327	4880	37	4917
Method Demonstrations	08	193	07	200
Celebration of important days	73	3726	204	3930
Group discussions	37	764	32	796
Exposure visits	14	432	09	441
Self -help groups	4	42	-	42
Plant/animal health camps	1	52	4	56
Foot fall of farmers at KVK	336	6616	241	6857
Total	1246	44829	842	45671



Popularization of Azolla cultivation among farmers by KVK Ajmer

Azolla is a supplementary feed for milch animals. KVK Ajmer is pioneer in azolla production technology and actively engaged in propagating the use and production of azolla.

Activities of Farmer Producer Organization (FPO)

Krishi Vigyan Kendra, Ajmer has undergone with a Memorandum of Understanding (MoU) with a Farmer Producer Organization (FPO) namely Pushkar Rural Agricultural Youth & Employment Producer Company Ltd., Ajmer with the objective to make farmers self-determining in processing their products of fruit, flowers and vegetable and sale through KVK, Ajmer. This FPO was registered in November, 2015 with financial assistance from NABARD. The total members in this FPO are 867 and out of these, 510 members are registered members. The main focussed area of this FPO is processing, preservation and value addition of Rose and Aonla. KVK, Tabiji, Ajmer is an expert member of its monitoring committee and engaged in providing training programmes on processing, preservation and value addition as and when required. This KVK also supports in processing work and value addition of various fruits, flowers and vegetables and providing retail outlet at KVK premises.



Azola unit at KVK, Ajmer



FPO : Pushkar Rural Agricultural Youth & Employment Producer Company Ltd., Ajmer

6. HUMAN RESOURCE DEVELOPMENT

The major activities of the Directorate are enhancing experiential learning of agriculture students, promote excellence and capacity building of faculty in cutting edge areas, up-gradation of skill and emerging disciplines to bring systemic reform and institutional development in higher agricultural education with a view to increase the scope and effectiveness of the University. These activities are enlisted as:

- » Organizing and conducting induction training program for newly appointed teachers in the University and refresher courses for in-service teachers/ scientists.
- » Empowering rural youth with knowledge and skill for improving quality and efficiency of human resources for entrepreneurship.
- » Organizing advance training courses in frontier areas of agriculture, research management, educational technology, curriculum development etc. for capacity building of the faculty and staff.
- » Commercialization of innovation and technologies through organized Intellectual Property Right and knowledge sharing system.
- » Organizing group discussions, seminars and workshops on areas of topical interest in agricultural research and education system.
- » Improving faculty competence through participation of faculty in National/ International conferences/ Symposia/ Seminars/ Workshops/ Trainings and Fellowships.
- » Assessment studies in areas pertaining to productivity of faculty, their training needs etc. and develop data bank of human resources in the University.
- » Introduction of best teacher/ researcher/ student/ scholar awards.

Activities of the Year

In order to improve the competency of employees, Directorate of Human Resource Development, SKNAU, Jobner organized trainings in collaboration with prestigious organizations. Total 185 scientists from SKNAU, Jobner were nominated during reporting year to participate in the 42 training programmes/ workshop organized online as well as in offline mode.

6.1 Trainings:

6.1.1 Training on “RTTP Act-2012, Rules 2013 & GeM

A one-day online training programme on “RTTP Act-2012, Rules 2013 & GeM” was organized by Directorate of HRD on 27 October, 2020. The DDO's, Sub DDO's and accounts staff of all the units of our university was participated in the programme and benefitted with the lectures arranged on the theme.



Training on RTTP Act-2012, Rules 2013 & GeM

6.1.2 Training on Mushroom Production

A two days entrepreneurial training programme on Mushroom spawn production and cultivation was organized from 18 -19 Nov., 2020 at RARI Durgapura. In the inauguration session Dr. J. S. Sandhu, Hon'ble Vice-Chancellor, SKNAU, expressed his views on the wide scope of mushroom farming in income generation. In addition to this, the successful entrepreneurs who had previously obtained the similar training from the institute were felicitated with certificates by Hon'ble Vice-Chancellor. Dr. P. S. Shekhawat informed that total 30 trainees participated in this training from different districts across state. The group was given advance end to end hands on training on various aspects of Mushroom spawn production, mushroom cultivation, mushroom processing and value addition etc. Dr. M. L. Jakhar, Director Research, Dr. B. L. Kakraliya, Director HRD and Dr. Sudesh Kumar, Director DEE urged the trainees to facilitate the acquired knowledge and skills of mushroom production activity on commercial scale. Dr. Arjun Baloda, Director RARI took the feedback from the participants and distributed training certificates to them.



Training on Mushroom Production

6.1.3 Basics of Computer and Internet

To enhance the work efficiency of non-teaching staff, a one-week training programme on “Basics of Computer and Internet” was organized by Department of Statistics, Maths & Computer Science and Directorate of HRD, SKNAU, Jobner from 05-09 April, 2021 at University head quarter. The Hon'ble Vice Chancellor Prof. J.S. Sandu was the chief guest on the inaugural function of training. Twenty three non-teaching staff at University headquarter were participated in the training programme.

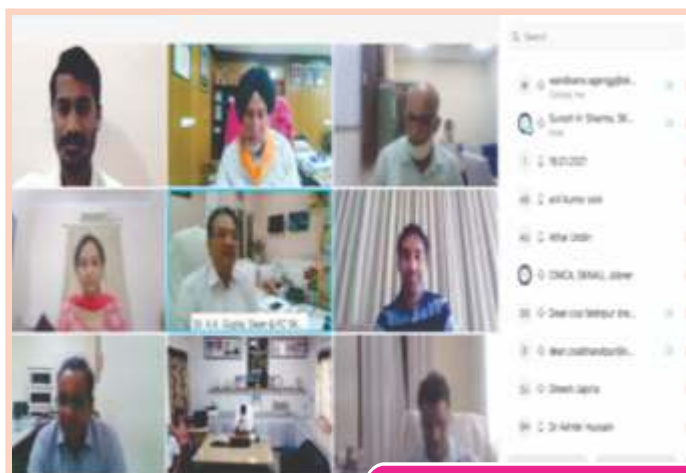




Orientation Programme

6.1.4 Training on Digital Classroom Management

One-day Online Training on “Digital Classroom Management” was organized by Department of Statistics, Maths & Computer Science and Directorate of HRD, SKNAU, Jobner on 30 April, 2021 under the Chairmanship of Hon'ble Vice Chancellor Prof. J. S. Sandhu. He emphasized that in COVID-19 pandemic situation it is important to make teaching on online mode so that students not suffer. The training programme was attended by 102 faculty members. The expert speaker Dr. S.K. Sharma, Assistant Professor gave the information of various online teaching tools such as Zoom, google meet, Cisco Webex etc. Dr. Kiran Gaur, Head, Department of Statistics, Maths & Computer Science appraised that the online lectures should be recorded and uploaded to the site for students use.



Training on Digital Classroom Management

6.2 Organization of Workshops

6.2.1 Effective Utilization of CeRA

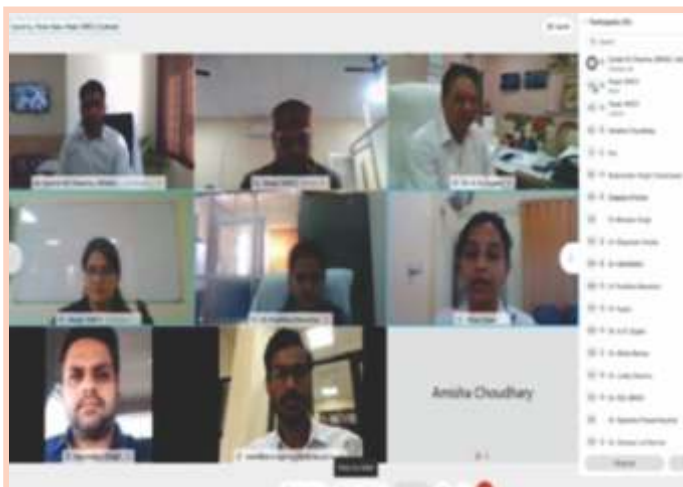
One-day online workshop on “Effective Utilization of CeRA” was organized by the Department of Statistics, Mathematics and Computer Science, SKNCOA, Jobner on 03 Feb, 2021 under the Chairmanship of Hon'ble Vice Chancellor Prof. J. S. Sandhu. The workshop included two technical sessions, in which two key speakers Dr. Murli K Krishna, Dy Librarian and Mr. Suresh Kr. Sharma, Assistant Professor dealt with different features of CeRA viz., CeRA resources, effective use of CeRA for improving University ranking, CeRA access,



online journals and central library portal etc. A total of 350 Faculty members and students of SKNAU participated in the workshop.

6.2.2 Gender Budgeting and Engendering Agriculture Development

In the month of Feb, 2021 four state level online workshops on “Gender Budgeting and Engendering Agriculture Development” were organized by Statistics, Mathematics and Computer Science, SKNCOA, Jobner under the chairmanship of Hon’ble Vice Chancellor. The workshop was sponsored by Ministry of Woman and Child Development, Govt. of India. Officers of various departments, academicians, researchers, NGO representatives and administrative officers of Rajasthan participated in these workshops. The programme aimed at orienting the participants about gender budget initiatives that have the potential of contributing to gender equality. These workshops conducted from 04 to 06 Feb, 2021, 08 to 10 Feb, 2021, 17 to 19 Feb, 2021 and 24 to 26 Feb, 2021.



Workshop on Gender Budgeting and Engendering Agriculture Development



7. LIBRARY AND E-LEARNING RESOURCES

Library is the heart of University and plays a vital role in supporting teaching, learning, research activities and provides the primary source of agriculture information. The main moto of libraries is to accomplish its task of reaching to wider user community which comprises of teachers, scientists extension specialists and students.

The vision of SKNAU university library is to make Digital Resource Learning Center for all constituent's colleges, Institutes and other units of the university. The objectives behind university library is to create a digital learning environment adhering with teaching, research and extension programs of the university along with comprehensive collections of conventional documents and digital learning environment which includes, modern ICT infrastructure facilities well equipped with RFID system, CCTV, UPS, AC, Xerox Machine, Dehumidifiers, Printers and Computers providing Internet Surfing with 24x7 hours high speed Wi-Fi Internet, Laptop zone facility in the library, campus & hostels. Online Public Access Catalog (Webopac, CeRa online Journals and, online theses, lifetime e- books access and Digital database services.

7.1 Available Books, Periodicals etc.

University library has highly specialized collections of 78257 books in agriculture and allied sciences which includes books, theses, bound Journals, government Publications, Book Bank, Text books, and CD-ROMs. etc. Library subscribes 34 Indian print journals, 10 News papers and 16 Magazines also. In addition to this, 24x7 hours online access facility of eBooks (51 life time access), e-journals (CeRA access) and ICAR e-journals are also available in campus.

7.2 Computerized Book Bank facility

A Computerized Book Bank facility is open to all students and staff of this college for their selection, issue along with consultations of reading materials. An open access system has been adopted for consultation and selection of books. The books are issued to all SC/ST students free of charge and all other general category of students are given on rental basis (Rs 10 per books). The books are issued for one semester through single window system i.e. RFID KIOSK system. More than 15000 UG/PG textbooks are available to all students. The books are issued per student 10 books from book bank and four books from library.

7.3 Online Public Access

The SKNAU Library is registered with Krishi kosh (ICAR) with online access facilities of university theses and other digitized materials.

The link is <http://krishikosh.egranth.ac.in/handle/1/84614>. The facilities of RFID and Koha online catalogue are available in SKNCOALibrary. More than 50000 catalogue records of university library have been digitized and uploaded on kohaWebopac (<http://14.139.51.40/>).

More than 2400 digitized materials (including Theses, Reports/ Question Paper / Manual/ Research Papers etc.) have been uploaded on ICAR- Krishi kosh Portal (under Institutional Repositories) (<https://krishikosh.egranth.ac.in/handle/1/84614>). Free / Open Access e- Journals (ICAR) is also available to all constituent colleges of SKNAU, Jobner through web link (<http://epubs.icar.org.in/ejournal/>). Modernization of college library, SKNCOA is under work and progress.

7.4 Use of CeRa Access :

The SKNAU library has subscribed e-resources /online resources to provide the latest information to the teachers, scientists, extension specialists, students etc. Online access (IP based) CeRA access facilities which includes j- gate, CAB abstract and Indian journals databases are available to all students and staff at 24x7 hours in the campus. A high-speed Wi-Fi Internet zone facility has also been developed in main reading hall of library.



7.6 RFID Technology

Radio frequency identification has been implemented in university library. RFID technology is useful in inventory of items, stock verification, hassle free check-out and check in of item etc. More than 78257 books have been tagged with Radio Chips for computerized checkout / check in services on RFID KIOSK. KOHA

7.5 ON LINE e- RESOURCES/ CeRa ACCESS FACILITIES

S.N.	Online E Resources Services /CeRa Access	Web link/IP address / Library resource links
1	J Gate Journals (ICAR)	http://www.sknau.ac.in/en/student/resources/central-library
2	SKNAU - Krishikosh (ICAR)	http://jgateplus.com/search/ http://krishikosh.egranth.ac.in/handle/1/84614
3	Koha Opac online Library (SKNAU)	http://14.139.51.40/
4	Life time eBooks access (51 eBooks)	https://www.asapglobe.com/Search.aspx?q=PurchasedBooks&type=keyword
5	India agristat database	http://www.indiastatagri.com/
6	ICAR open access e journals	http://epubs.icar.org.in/ejournal/
7	MOPAC	Download KOHA Access MOPAC Android App

(library software) online catalogue (webopac) facilities have also been provided to all users. It includes an about 50000 books consisting books, theses, journals and other textbooks etc.

7.7 Facilities updated during the year

Separate Reading room (VACHNALAY) has been provided in the library to enhance better reading facility to students with provision of Internet surfing with 24x7 hours high speed Wi-Fi internet laptop zone facilities.

Additional required number of furniture's / fixtures have been provided to constituent's colleges of university which includes - SKNCOA, Jobner, COA, Bharatpur, COA, Fatehpur and surplus number of purchased textbooks and other desired books have been provided through inter library loan services (on loan basis) to constituent colleges of SKNAU, Jobner

8. DIRECTORATE OF PRIORITIZATION, MONITORING AND EVALUATION

The Directorate of Prioritization, Monitoring and Evaluation was established in the year 2013 at administrative office, SKNAU, Jobner. One of the important roles of DPM&E is to prioritization, monitoring and evaluation of various developmental programmes and activities of the University.

The Directorate also attends the preparation of annual report of the University, Varshik Prativedan of the university required during budget session of the government, collection, compilation and submission of data and information in various format to different agencies within country and abroad, submission of monthly reports of University to the Hon'ble Governor and the Chancellor of the University and Chief Minister, Government of Rajasthan. Apart from all the activities mentioned above various correspondences to the Raj Bhawan for which Director PM&E is Nodal Officer is also integral part of the activities of this unit. Various correspondences to the CMO, national and international organizations are being carried out by this unit. Besides, the directorate is sharing responsibilities for furnishing University information, pertaining to progress and achievements to various government and non-government agencies. DPM & E also maintains linkages with the State government departments, Indian Council of Agricultural Research, State Agricultural Universities, various departments of Govt. of India and other organizations in the best interests of the University. This directorate plays a major role in arranging for accreditation of the university and constituent colleges of the university. The Self Study Report of University and its constituent colleges i.e. SKN College of Agriculture, Jobner, COA, Lalsot, COA, Bharatpur and COA, Fatehpur has been submitted by this unit during reporting year and approved by ICAR.

Activities taken up during the year

- » Annual Report of the University (2019-20)
- » Varshik Prativedan 2020
- » University Monthly Reports to the Hon'ble Governor of Rajasthan
- » DPR for the establishment of New Agriculture Colleges and Dairy Science and Technology College under SKNAU, Jobner
- » Submission of document of ICAR ranking of Agriculture University 2019
- » Compilation of three-year publications of university
- » Self -Study Report of SKNAU, Jobner and its four constituent colleges.



9. CENTER FOR INFORMATION MANAGEMENT AND COMPUTER APPLICATIONS (CIMCA)

Center for Information Management and Computer Applications (CIMCA) has been established under Sri Karan Narendra Agriculture University at Jobner (Jaipur) on 07.02.2014. The setup of Payroll Management System is done successfully for developing salary statements, schedules and salary slips for entire employees of the university. The University website is also hosted under CIMCA. Web-Server for website with 24x7 power backup is installed at the center. 1 Gbps Internet Connectivity through National Knowledge Network (NKN) is also an initiative taken by the center and the University got connected to NKN. The objective of the center is to provide the IT enabled services to all the units of SKNAU Jobner, to impart ITES trainings to teaching and non-teaching staff of the University, to setup, extend and maintain IT infrastructure such as ILL, LAN, Wi-Fi access, etc.

Meeting on IUMS with ITI, New Delhi officials and Comptroller office



Hosting and Maintenance of University Website

Information of AMS

Academic Management System automates various academic processes of the university and will enhance the efficiency of the system by saving time and efforts involved in manual processes. The data generated by the system is used for generating the reports at the national agriculture portal by aggregating the data from various State Agriculture Universities. The system has following sub modules:

- » Courses Management
- » Student Management
- » Faculty Management
- » Administration Management
- » E-Learning
- » Online fee collection

9 constituents and 11 private affiliated colleges along with 2842 students and 187 faculties have been registered under AMS for SKNAU Jobner.



10. CAPACITY BUILDING

10.1 Participation of scientists in Orientation programmes /Conferences/ Symposiums/ Seminars/ Workshops:

1. Dr. S. K. Jain, Dr. M. K. Meena, Dr. Varsha Kumari participated in Advances in Plant Tissue Culture Techniques from 23rd Feb to 15th March 2021 organized by BTC Centre, OUAT, Bhubaneswar, Odisha.
2. Dr. Vipin Kumar participated in Laboratory Quality System Management and Internal Audit as per ISO 17025:2017 from 15th to 19th march 2021 conducted by NIPHM Hyderabad.
3. Dr. Vipin Kumar Participated in Workshop on “Blended Learning Workshop on Personal Effectiveness and Group Dynamics from 08th to 09th March, 2021 held at SKN Agriculture University, Jobner (Raj.).
4. Dr. B. L. Jakhar participated in National conference on Agricultural Resource Management for Atmanirbhar Bharat from 17th to 19th July, 2020 organized by College of Agriculture, Central Agricultural University Imphal, Manipur.
5. Dr. Pratibha Singh participated in National Seminar on Recent Advances in Soil Microbiological Research with a Special Thrust to Biofertilizer Technology and presented oral research paper on Study on effect of foliar feeding of Nano Nutrients on Groundnut Crop Performance and Soil Properties under semi-arid conditions of Rajasthan on 25th Aug., 2020 held at BAU, Sabour.
6. Dr. B.L. Kumhar participated in one day online National Workshop entitled Diversifying Dairy Farming towards Entrepreneurship: Ways to Boost the Dairy Sector and its Sustainability on 16, Jan 2021 held at Directorate of Extension Education, SKNAU Jobner.
7. Dr. B.L. Kumhar participated in online National Conference on Inspiring Experiences from Innovative Farmers of India, on 15 June, 2021 held at Department of Extension Education, SKNCOA & SKN Agri-Business Incubator, Sri Karan Narendra Agriculture University, Jobner.
8. Dr. B.L. Kumhar participated in the International E-Conference on ‘Advances and Future Outlook in Biotechnology and Crop Improvement for Sustainable Productivity’ from 24 to 27 November, 2020 organized by Department of Biotechnology and Crop Improvement, College of Horticulture, Bengaluru.
9. Dr. B.L. Kumhar participated in Web conference for "Soil Health Management and Energy Production under Changing Climate Scenario" on 06th October, 2020 held at SKNAU, Jobner.
10. Dr. D. Tripathi & Ramu Meena participated in online Annual Group Meeting of AICRP on Agroforestry.
11. Dr. C. L. Khatik participated in online All India Wheat & Barley Research Workers Meeting.
12. Dr. C. L. Khatik participated in online Annual Group Meet of pearl millet.
13. Dr. Jhumar Lal participated in two days online workshop on Environment and Soial Safeguard from 26th to 27th, March 2021. held at SKNAU, Jobner.
14. Dr. Harphool Singh delivered guest lecture in two days virtual seminar on “Biotic and abiotc stress management” from 09 to 10 April 2021 held at Mahatma Gandhi P.G. College Shrimadhopur (Sikar) Raj.
15. Dr. Suresh Kumar delivered guest lecture in two days virtual seminar on “Importance of plant diseases causes, symptoms, control measure and future aspects “from 09 to 10 April 2021 held at Mahatma Gandhi P.G. College Shrimadhopur (Sikar) Raj.
16. Dr. B.L. Naga participated State level online workshop on Gender Budgeting and Engendering Agriculture Online Mode from 4 to 6 June, 2021 held at SKNAU, Jobner.



17. Mr. S.K. Sharma participated in Multidisciplinary Research Innovation in Engineering, Science and Technology for Sustainable Development from 26 October to 7 Nov, 2020 held at Bipin Tripathi Kumaon Institute of Technology Dwarahat Almora-263653, India.
18. Dr. D.K. Gothwal, Dr A C Shivran, Sh G.L. Kumawat and Dr. D. L. Bagdi attended a regional workshop from 3 to 4 September, 2020 organized by RARI, Durgapura, Jaipur, Rajasthan.
19. Dr. S.S. Punia attended a national workshop from 12 to 28 September, 2020 organized by NAHEP and IP & TM unit, ICAR, Pusa New Delhi.
20. Dr. D.K. Gothwal, Dr. A.C. Shivran, and Bagdi D.L. attended a regional workshop from 17 to 18 September, 2020 organized by RARI, Durgapur, Jaipur, Rajasthan.
21. Dr. D.K. Gothwal, Dr. A.C. Shivran and Sh. G.L. Kumawat attended a national workshop from 28 to 30 September, 2020 organized by IISR, Kozhikode, Kerala.
22. Dr. R.P. Ghasolia attended a national workshop from 26 to 28 February 2021 organized by CIAH, Bikaner.
23. Dr. S.K. Goyal attended an online workshop 16 to 18 December, 2020 organized by jointly organized by ICRISAT, Patancheru and R.A.K. College of Agriculture, RVSKVV, Sehore under the ICAR-AICRP on Chickpea.
24. Dr. S.K. Goyal attended an online workshop held on 17 to 19 February, 2021 sponsored by Ministry of Women and Child development, GOI and organized by SKNAU, Jobner.
25. Dr. S.K. Goyal attended an online workshop conducted on 06 September, 2020 organized by Methodssimply.com
26. Dr. D.L. Bagdi attended a national workshop from 26 to 28 February, 2021 organized by CIAH, Bikaner.
27. Dr. M.K. Sharma attended a national workshop held on 01 July, 2020 organized by JVA Edutech.
28. Mr. S.K. Sharma attended a national workshop from 21 to 25 September, 2020 organized by RTU Kota & Poornima College of Engg. Jaipur.
29. Mr. S.K. Sharma attended a national workshop from Aug 29 to 02 Sep, 2020 organized by VIT, Jaipur.
30. Mr. S.K. Sharma has attended a national workshop from 07 to 08 August, 2020 organized by IIT Guwahati.
31. Mr. S.K. Sharma attended a national workshop from 25 to 27 July, 2020 organized by VIT Jaipur.
32. Mr. S.K. Sharma attended a national workshop from July 27 to Aug 01, 2020 organized by Sagar Institute of Research and Technology.
33. Mr. S.K. Sharma attended a international workshop from 13 to 17 July, 2020 organized by RKGIT, Ghazibad.
34. Dr. Pratibha Manohar attended a national workshop from 11 to 13 June, 2020 organized by Department of Computer Science & Engineering, Geetanjali Institute of Technical Studies, Udaipur, Rajasthan.
35. Dr. Pratibha Manohar attended a international workshop from 29 August to 2 September, 2020 organized by RTU, Kota and Vivekanad Institute of Technology, Jaipur.
36. Dr. Pratibha Manohar attended a national workshop from 1-5 September 2020 organized by RKDF University, Bhopal.
37. Dr. Pratibha Manohar attended a national workshop from organized by Computer Science and



Engineering Department, Bipin Tripathi Kumaon Institute of Technology Dwarahat Almora and TEQIP III, AICTE.

38. Dr. Pratibha Manohar attended a international workshop from 26 October to 07 November, 2020 organized by Computer Science and Engineering Department, Bipin Tripathi Kumaon Institute of Technology Dwarahat Almora and TEQIP III, AICTE.
39. Dr. Pratibha Manohar has attended a national workshop from 23 to 27 November, 2020 organized by Department of Mathematics, Malla Reddy Engineering College, Secunderabad.
40. Dr. Pratibha Manohar attended an international workshop from 07 to 12 June, 2021 organized by Department of Mathematics, Mohamed Sathak AJ College of Engineering, Chennai.
41. Dr. Pratibha Manohar attended international conference (online) on Recent Trends in Mathematics and Its Applications to Graphs, Networks and Peri Nets (ICRTM-GPN-2020) from 20-24 July 2020 organized by School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi -110067, India.
42. Mr. S.K. Sharma attended conference on Emerging Trends in Vedic Mathematics & Applications in Science, Technology and Social Sciences Research from 16-17 August, 2020 organized by JNU, New Delhi.
43. Dr. Pratibha Manohar attended International Conference on recent trends in Mathematics (ICRTM-2020) from 25-26 August, 2020 organized by Vellore Institute of Technology, Chennai, India.
44. Dr. Rajhans Verma attended National webinar on climate change & its impact on society on 12 September, 2020 organized by BBAM, Jajpur, Odisha.
45. Sh. G.L. Kumawat attended two days international symposium on Food Security and the stand of civilization: Agri-Horti- Livestock dynamics in changing global ecology in support of united nations SDG goal 2: Zero Hunger from 20-21 September, 2020 organized by BCKV, India, Lincoln university college, Malaysia & University of Bengkulu, Indonesia.
46. Mr. S.K. Sharma and Dr. Pratibha Manohar attended Conference on Utilization of Organic Waste for Soil Health Management and Energy Production Under Changing Climate Scenario held on 06 October 2020 at SKNAU, Jobner.
47. Dr. Pratibha Manohar attended Essence of Mathematics and Engineering Applications from 2-3 December 2020 organized by Department of mathematics, Koneru Lakshmaiah Education Foundation.
48. Dr. Pratibha Manohar attended 26th International Conference of International Academy of Physical Sciences on Advances in Mechanics from 18-20 December 2020 organized by Manipal University, Jaipur (CONIAPS XXVI).
49. Dr. Pratibha Manohar attended International Conference on Special Functions and Applications on December 23, 2020 organized by Babu Banarasi Das University, Lucknow.
50. Dr. Manoj Kumar Sharma attended 4th International conference on Global Approaches in Natural Resource Management for Climate Smart Agriculture (GNRSA- 2020 during Pandemic Era of COVID-19 from 26 – 28 February 2021 organized by Agriculture Technology Development Society (ATDS) Ghaziabad, UP, Shobit Deemed University, Meerut (UP).
51. Mr. S.K. Sharma, Dr Pratibha Manohar attended Multidisciplinary International Conference on New Normal In India: Development And Dimensions from 19-20 March 2021 organized by SS Jain Subodh Girls P.G. College Sanganeer, Jaipur.



52. Dr. Mukesh Nitharwal attended one Day International Online Work Shop on Mainstreaming Biodiversity in Decade of Action held on 13-24 March, 2021 Organized by Sustainability Institute, The Pennsylvania State University, USA.
53. Dr. S. K. Dadhich attended National Webinar on world Water Day held on March 22, 2021 organized by SKNAU, Jobner.
54. Mr. C. Kumawat attended Global Symposium on Soil Biodiversity – GSOBI21 from 19-22 April, 2021 organized by Food and Agriculture Organization of the United Nations, Rome, Italy.
55. Dr. Mukesh Nitharwal attended two days International Work Shop on 1st Nobel Prize Summit on Our World, Our Future held on 26th – 28th April; 2021 Organized by The Nobel Foundation, Stockholm, Sweden and National Academy of Sciences, USA.
56. Dr. Mukesh Nitharwal attended one day International Work Shop on Insect conservation on Farmland held on 12th May, 2021 Organized by Sustainable Agriculture Special Interest Group of Royal Entomological Society, UK.
57. Dr. Mukesh Nitharwal attended one day International Work Shop on Global Agriculture Innovation Forum on Genetic Innovations in Crops held on 11th May, 2021. USDA's Foreign Agricultural Service and Purdue University's Office of International Programs in Agriculture, USA.
58. Dr. Mukesh Nitharwal attended one day International Work Shop on World Summit on the Information Society Forum 2021 (WSIS 2021) Action Line C7: E-commerce for Agriculture and Rural Development held on 7th May; 2021 FAO, the International Telecommunication Union (ITU), and Zhejiang University, China, USA.

10.2 Participation of scientists in Trainings/ Refresher courses/Short Courses:

1. Dr. M. K. Sharma, Assistant Professor, Department of Statistics attended one week training on "Matlab-Statistics and Data Science" from 27 July to 01 August, 2020 conducted by Department of Applied Science, Sagar Institute of Research and Technology, Bhopal.
2. Dr. Kiran Gaur, Associate Professor & Head and Dr. M. K. Sharma, Assistant Professor, Department of Statistics attended 7 days online training on "Analysis of Experimental Data Using R" from 05-11 August, 2020 organized by ICAR-National Academy of Agriculture Research Management (NAARM), Hyderabad.
3. Dr. Kiran Gaur, Associate Professor & Head and Dr. M. K. Sharma, Assistant Professor, Department of Statistics participated in Refresher Course on "Statistical Tools and Techniques for Analysis of Agricultural Data" from 08th to 28th July 2020 held at Academy of Agricultural Research and Educational Management, Directorate of HRM, CCS Haryana Agriculture University, Hisar (Haryana).
4. Dr. M. K. Sharma, Assistant Professor, Department of Statistics participated in one day training on "Data Analysis using STATCRAFT" on 17.01.2021 at DEI Deemed University, Agra (U.P).
5. Mr. C. Kumawat, Assistant Professor, Department of Soil Science participated in three days online training on "Developing presentation skills using power point" from 12-14 October, 2020 organized by HCM, Rajasthan State Institute of Public Administration, Jaipur.
6. Dr. B. S. Chandrawat, Assistant Professor, Department of Nematology attended five days training on "Role and Use of Bio-Inputs for Plant Health Management" from 14-18 December, 2020 organized by National Institute of Plant Health Management, Hyderabad.



7. Dr. B.S. Chandrawat, Assistant Professor, Department of Nematology attended five days training on “Plant Quarantine Procedures for Imports and Exports” from 08-12 February, 2021 organized by National Institute of Plant Health Management, Hyderabad.
8. Dr. B.S. Chandrawat, Assistant Professor, Department of Nematology attended five days training on “Pest Surveillance” from 31 May to 04 June, 2021 organized by National Institute of Plant Health Management, Hyderabad.
9. Dr. S.S. Punia, Associate Professor, Department of PBG attended seven days training on “Capacity Building to Improve efficiency of AICRP on wheat and Barley” from 03-09 March, 2021 organized by ICAR-Indian Institute of Wheat and Barley Research, Karnal.
10. Dr. Deepak Gupta, Assistant Professor and Dr. M. K. Meena, Assistant Professor, Department of PBG attended two days training on “Seed production in vegetable seed production” from 10-11 December, 2020 organized by National Seed Research and Training Centre, Varanasi.
11. Sh. G.L. Kumawat, Assistant Professor (Plant Pathology) attended one day training on “Organizing online training courses” on 22 July, 2020 organized by HCM, RIPA, Jaipur, Rajasthan, Jaipur.
12. Dr. S.S. Sharma, Assistant Professor, Department of Soil Science attended “2nd Asian Web Conference” from 12-13 February, 2021 organized by Soil Conservation Society of India.
13. Mr. C. Kumawat, Assistant Professor, Department of Soil Science attended International Web-Conference from 11-12 September, 2020 organized by Academy of Natural Resource Conservation and Management (ANRCM), Lucknow, India.
14. Dr. Jitendra Singh, Assistant Professor (Plant Pathology) attended a five days training on “Role and use of Bio inputs for health management” from 14-18 December, 2021 organized by National Institute of Plant Health Management (NIPHM), Hyderabad.
15. Dr. Jitendra Singh, Assistant Professor (Plant Pathology) attended a three days training on “Quarantine Pests: Detection and Identification” from 01-03 February 2021 organized by National Institute of Plant Health Management (NIPHM), Hyderabad.
16. Dr. S.K. Goyal, Assistant Professor (Plant Pathology) attended a five days training on “Production Protocol for Biofertilizers” from 17-21 August, 2020 organized by NIPHM, Hyderabad.
17. Dr. S.K. Goyal, Assistant Professor (Plant Pathology) attended a three days training on “Value Chain and Marketing of horticultural Products for Entrepreneurial Development” from 04-06 February, 2021 organized by College of Horticulture and Forestry, CAU, Imphal, Pasighat, A.P.
18. Dr. S.K. Goyal, Assistant Professor (Plant Pathology) attended a five days training on “On –farm Production of Biocontrol agents and Microbial Biopesticides” from 15-19 March, 2021 conducted by NIPHM, Hyderabad.
19. Dr. G. K. Mittal, Assistant Professor (BioChemistry) attended a two days online workshop on “Blended Learning Workshop on Personal Effectiveness and Group Dynamics” from 08 -09, 2021 World Bank-ICAR Funded National Agricultural Higher Education Project (NAHEP) organized by Sri Karan Narendra Agriculture University, Jobner (Raj.).
20. Dr. S.K. Bairwa, Assistant Professor (Horticulture) attended a two days training on “Motivational Skills for Better Performance in Organization” from 14-15 July, 2020 organized by Extension Education Institute (Western Region), AAU Campus, Anand (Gujarat).



21. Dr. S.K. Bairwa, Assistant Professor (Horticulture) attended a two days training on “Presentation Skills for Professional Excellence” from 21-22 July, 2020 organized by Extension Education Institute (Western Region), AAU Campus, Anand (Gujarat).
22. Dr. K.K. Meena, Associate Professor (Horticulture) attended three days “National e-workshop and current scenario of post graduation research in Agricultural Sector” from 09-11 September, 2020.
23. Dr. Kailash Chandra, Assistant Professor (PBG), COA, Fatehpur attended 21 days Offline Faculty training on program “Plant Tissue culture Techniques” held from 23rd February to 15th March, 2021 at OUAT, Bhubaneswar, Odisha.
24. Dr. Kailash Chandra, Assistant Professor (PBG), COA, Fatehpur attended National Online refresher course on “Prequels to Plant Breeding by Design and Prediction” held from 28 January to 18 February, 2021 organized by UAS Bangalore.
25. Dr. Kailash Chandra, Assistant Professor (PBG), COA, Fatehpur attended National Online training program on "Emerging Trends in Seed Production Technology and Quality Control Framework for Effective Seed Supply Chain of Horticulture Crops" held from 28 December 2020 to 06 January, 2021 Organized by UHS, Bagalkot.
26. Dr. Subhita Kumawat, Assistant Professor (Ag. Economics), COA, Fatehpur attended National Online Training held from 03-23 February, 2021 organized by Human Resource Management, CCS HAU, Hisar.
27. Dr. Mukesh Nitharwal, Assistant Professor (Entomology), COA, Fatehpur attended National Online Training held from 07th to 11th December, 2020 Organized by NIPHM, Hyderabad.
28. Dr. Mukesh Nitharwal, Assistant Professor (Entomology), COA, Fatehpur attended National Online training on “Introduction to Plant Biosecurity and Plant Quarantine” held from 04th to 08th January, 2021 organized by NIPHM, Hyderabad.
29. Dr. M. A. Khan, Assistant Professor (Plant Pathology) and Dr. Kailash Chandra, Assistant Professor (PBG), COA, Fatehpur attended National Online training on “Introduction to Plant Biosecurity and Plant Quarantin” held from 14th to 18th December 2020 organized by NIPHM, Hyderabad.
30. Dr. Mukesh Nitharwal, Assistant Professor (Entomology), COA, Fatehpur attended Regional (State Level) Online training on “Personality Development” held from 11th to 13th January, 2021 organized by HCM Rajasthan Institute of Public Administration, Jaipur.
31. Dr. Mukesh Nitharwal, Assistant Professor (Entomology), COA, Fatehpur attended National Online Training on “Project Information Management System (PIMS)” held on 13 May, 2021 organized by National Agricultural Higher Education Project’s (NAHEP) Component 2 by ICAR – Indian Agricultural Statistics Research Institute (IASRI).
32. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Global Symposium on Soil Biodiversity from 19 to 22 April, 2021 Organized by Food and Agriculture Organization of United Nations.
33. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Soil Water Cycling held on 22 July, 2020 Organized by Soil Science Society of America.
34. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Measures of Soil Carbon Cycling and Storage 14 August, 2020 Organized by Soil Science Society of America.



35. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended “International Measures of Soil Nitrogen Cycling and Storage” 03 October, 2020 Organized by Soil Science Society of America.
36. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Practical Measures of the Soil Microbiome: How do Crop Advisors Use the Data” held on 17 December, 2020 Organized by American Society of Agronomy.
37. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Towards More Holistic IPM held on 17 December, 2020 Organized by American Society of Agronomy.
38. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended “Sulfur: The Other Essential Soil Nutrient” held on 12 January, 2021 Organized by Soil Science Society of America.
39. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Assessing Soil Health: On-farm Economics held on 20 January, 2021 Organized by Soil Science Society of America.
40. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Achieving Cover Crop Success through Practical Goals, Field Trials, and Simple Measurements held on 04 April, 2021 organized by American Society of Agronomy.
41. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International the Role of Certified Crop Advisers in Ecosystem Services Markets: What is the Opportunity held on 10 April, 2021 Organized by American Society of Agronomy.
42. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended International Manganese: Cycling in Soils, Acquisition by Plants, and Deficiency Corrections in Sensitive Crops 06 April, 2021 Organized by American Society of Agronomy Soil Science Society of America.
43. Dr. Hanuman Singh Jatav, Assistant Professor (Soil Science), COA, Fatehpur attended National Agriculture Residue and Waste Utilization for Energy Generation 16th-17th March, 2021 organized by Junagadh Agricultural University, Junagadh.
44. Dr. S.K. Jain, Associate Professor and Dr. Vipin Kumar, Assistant Professor, RARI, Durgapura participated in training Programme on “Sustaining Pulses Production for Self Sufficiency and Nutritional Security (Pulse WebCon-2021)” from 09th to 11th Feb., 2021 held at ICAR-IIPR, Kanpur.
45. Dr. Vipin Kumar, Assistant Professor, RARI, Durgapura participated in training Programme “Statistical tools for scientific and engineering experiments” from 28th December 2020 to 10th January, 2021 held at Assam University Silchar.
46. Dr. Vipin Kumar, Assistant Professor, RARI, Durgapura participated in training Programme “Career opportunity in Agriculture professionals in india and abroad” from 28th to 30th Sep. 2020 organized by College of Agriculture, Iroisemba, Imphal, Manipur.
47. Dr. B.L. Jakhar, Assistant Professor, RARI, Durgapura participated in training Programme “Entrepreneurship Development in Pest Management for Youth” from 29th June to 3rd July, 2020 held at Collage of Agriculture, Central Agricultural University Imphal, Manipur.
48. Dr. B.L. Jakhar, Assistant Professor, RARI, Durgapura participated in training Programme “Pest surveillance” from 07th to 11th December, 2020 held at National Institute of Plant Health Management, Hyderabad.



49. Dr. B. L. Jakhar, Assistant Professor, RARI, Durgapura participated in “Laboratory Quality System Management and Internal Audit” as per ISO 17025:2017 from 04th to 8th January, 2021 held at NIPHM Hyderabad.
50. Mr. Jogendra Singh, Assistant Professor, RARI, Durgapura participated in National Online training on “Seed Certification” from 03rd to 04th Dec., 2020 held at NSRTC, Varanasi.
51. Mr. Jogendra Singh, Assistant Professor, RARI, Durgapura participated in National Online training on “Seed Testing” from 17th to 18th December, 2020 held at NSRTC, Varanasi.
52. Mr. Jogendra Singh, Dr. Birbal Bairwa, Mr. T.K. Jatwa, Assistant Professor, RARI, Durgapura participated in Theoretical training course on “OCED capacity building for the OECD seed scheme” from 08th to 12th Feb, 2021 held at OECD (Online).
53. Mr. Jogendra Singh, Assistant Professor, RARI, Durgapura participated in National Online training on “Seed Packaging and Labeling” from 18th to 19th Feb., 2021 held at NSRTC, Varanasi.
54. Dr. Birbal Bairwa, Assistant Professor, RARI, Durgapura participated in Training on “Fruit fly surveillance and management” from 22nd to 26th Feb., 2021 held at NIPHM, Hyderabad.
55. Dr. Rani Saxena, Assistant Professor, RARI, Durgapura participated in “Statistical Tools and Techniques for analysis of Agricultural Data” from 8th to 28th July, 2020 held at DHRM, CCS Haryana Agriculture University, Hisar.
56. Dr. Seema Sharma, Associate Professor, RARI, Durgapura participated in “Micro irrigation management” from 15th to 23rd May, 2020 held at PAU, Ludhiana.
57. Dr. R.S. Meena, Professor, RARI, Durgapura participated in Quarantine pests: Detection and Identification from 1st to 3rd Feb., 2021 held at NIPHM, Hyderabad.
58. Dr. B.L. Kumhar, Assistant Professor, RARI, Durgapura participated in five days online training on “Introduction to Plant Biosecurity and Plant Quarantine” from 04th to 08th January, 2021 held at National Institute of Plant Health Management, Hyderabad.
59. Dr. B.L. Kumhar, Assistant Professor, RARI, Durgapura Participated in one day Online Training Courses on 22 July, 2020 held at HCM Rajasthan State Institute of Public Administration, Jaipur.
60. Dr. C.L. Khatik, Assistant Professor, ARS, Fatehpur participated in the 15 days Entrepreneurship Orientation Programme on “Medicinal and Aromatic Plants-II” held online from 4th to 18th January 2021 held at Medi-Hub, Technology Business Incubator, ICAR-DMAPR, Anand, Gujarat.
61. Dr. Jhumar Lal, Assistant Professor, ARS, Fatehpur participated in five days online training program on “Fruit fly: Surveillance and Management” from 22nd to 26th Feb, 2021 held at NIPHM, Hyderabad.
62. Dr. D.R. Bajiya, Assistant Professor, ARS, Fatehpur participated in online five days training program on “plant quarantine procedures on inputs output” from 08th to 12th Feb, 2021.
63. Dr. Anil Meena, Assistant Professor participated in five days online training on “Fruit Fly surveillance and management” from 22nd to 26th Feb. 2021 held at National Institute of Plant Health Management, Rajendranagar, Hyderabad-500 030.
64. Dr. B.L. Naga, Assistant Professor participated in five-day online training on “Farm Production of Biocontrol agents and Microbial Bio-pesticides” from 15th to 19th March 2021 held at NIPHM, Hyderabad.

11. PUBLICATIONS

During the period under report, the teaching, research and extension activities carried out by the faculties and students were published in national and international journals, accounting 213 research papers and authoring 10 books as well as 42 chapters in books. The faculties also published 22 technical bulletin/booklets, 05 folders, 15 manuals and 110 technical articles. The number of research papers during last four years is presented here under:

Table 14. Number of research papers (NAAS Rating) published during last four years

Year	NAAS Rating				Total
	>6	5.1-6.0	4.1-5.0	0.0-4.0	
2018	29	26	16	10	81
2019	28	38	18	08	92
2020	39	86	31	04	160
2021	41	99	39	34	213

11.1 Research Papers:

1. Bagdi D.L., Bairwa D.K., Sharma S.L., Verma R., Meena K.K., Yadav D.K., Mallik A. and Sharma B.D., (2021). Alleviation of adverse effects of salinity in Ber by foliar treatment with antioxidant. The Pharma Innovation. 10(4): 1110-1111(**NAAS Rating: 5.23**)
2. Bagdi D.L., Bairwa D. K., Sharma S.L., Verma R., Meena K.K., Yadav D.K., Mallik A. and Sharma B.D., (2020). Nutritional survey of Ber orchards in Rajasthan. The Pharma Innovation Journal, 10(4): 1110-1111 (**NAAS Rating: 5.23**)
3. Bagdi D.L., Gupta S, Kakralya B.L., Gupta N.K., Yadav N., Sharma M.K., Saroj P.L., Sharma B.D. and Singh U., (2021). Alleviation of adverse effects of salinity in Ber by Foliar treatment with antioxidant. The Pharma Innovation. 10(4): 227-229 (**NAAS Rating: 5.23**)
4. Bagri R.K., Goyal S.K., Singh J., Chawla P. N. and Kumari M., (2021). Integrated pest management of clusterbean (Cyamopsistetragonoloba L.). The Pharma Innovation Journal, 10(3): 679-682 (**NAAS Rating: 5.23**)
5. Bana R.C., Yadav S.S. Shivra, A.C Singh P. and Kudi V. K., (2020). Site-specific nutrient management for enhancing crop productivity. International Research Journal of Pure & Applied Chemistry, 21(15): 17-25.
6. Bharathi V.D., Jat B.L., Khinchi S.K. and Priyanka, (2021). Screening of chilli varieties for resistance against thrips, Scirtothrips dorsalis Hood. Journal of Experimental Zoology, India. (**NAAS Rating: 5.25**)
7. Chandel R.S., Verma K.S., Rana A., Sanjta S., Badiyala A., Vashisth S., Kumar R. and Baloda A.S., (2021). The ecology and management cutworms in India. Oriental Insects, <https://doi.org/10.1080/00305316.1936256>.
8. Chandra K., Prasad R., Prasad L.C., Madhukar K., Reddy R. and Thakur P., (2020). Degree of association and cause-effect analysis for spot blotch disease resistance and ancillary characters of yield in barley (Hordeum vulgare L.). Plant Archives, 20(1): 1-8. (**NAAS Rating: 4.41**)
9. Chandrawat B.S., Siddiqui A.U., Bhati S.S. and Saharan V., (2020). Response of Defence Related



- Enzymes in Tomato Treated with Oil-Cakes against Root-knot Nematode, *Meloidogyne incognita*. International Journal of Current Microbiology and Applied Sciences, 9(11): 1100-1111. **(NAAS Rating: 5.38)**
10. Chandrawat B.S., Siddiqui A.U., Bhati S.S. and Saharan V., (2020). Bio-agents: A source for initiation of defence enzymes in chilli infected with root-knot nematode, *Meloidogyne incognita*. Journal of Entomology and Zoology Studies, 8(6): 1684-1688. **(NAAS Rating: 5.53)**
 11. Chedwal S.K., Gupta A. K. and Kumawat P., (2021). Effect of irrigation schedules and balanced fertilization on growth and productivity of Taramira. Journal of Plant Development Sciences 13(6): 357-362. **(NAAS Rating: 4.13)**
 12. Chedwal S.K., Gupta A. K. and Kumawat P., (2021). Effect of irrigation schedules and balanced fertilization on growth and productivity of Taramira. Journal of Plant Development Sciences 13(6): 357-362. **(NAAS Rating: 4.13)**
 13. Chopra R., Sharma M., Singh A. and Mali H., (2020). Enzymatic Activity and Microflora Population Influenced by Integrated Nutrient Management in Haplustepts. Journal of the Indian Society of Soil Science, 68(3): 351-355.
 14. Choudhary G., Garhwal O. P., Yadav S., Chanwala P. and Yadav M., (2020). Interaction effect of Potassium and Micronutrients on yield and Economics of Carrot (*Daucus carota* L.). International Journal of Chemical studies. 8(1): 2871-73. **(NAAS Rating: 5.31)**
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