G. B. Pant University of Agriculture and Technology Pantnagar 263145, Uttarakhand

College of Agriculture **LEVSECTE**

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Semester 2020-21 begins online

A new start with a new spirit

 \mathbf{T} he time is moving ahead, and the functioning of the society is gradually getting adaptive to the changes the pandemic brought in. Amidst severe struggles and barriers, the educational institutes around the world are seeking out ways to ensure the reach of knowledge to the students. With series of initiatives regarding digital modes of teaching-learning in College of Agriculture and in the University as well, one more in the series was beginning of the new academic semester 2020-21 online. After successful completion of final examinations for all students of the college and distribution of provisional degree certificates to final year students, it was time to begin the new semester. Through proper planning and structuring of the online system by the college Dean, faculty members, and other staff members, the new semester initiated with the registration process on October 1, 2020 followed by regular classes from October 3, 2020 onwards. The time table for the new session was released for all the students with classes to be conducted on Microsoft Teams platform. Looking into the scope of online classes and the course outlines, the theoretical portion of the courses will be completed first, while the practical classes will be taken when students would return to the campus.

The College of Agriculture is trying every possible way to help students to continue with their academic activities with the least effect of lockdown. It was for the first time that the entire process was to be completed through online mode. Though there were many challenges ahead, however through consistent efforts and proper coordination everything went smoothly and it gave a new learning experience to the faculty members and the students. The students are happy to see the efforts which the college and University administration is putting in for the development of students, right from successfully conducting the online examinations to smoothly running the new semester without many complications. Many students have reflected that "We are happy to see the functioning of our University for our development and we all are ready to co-ordinate with college administration to work efficiently under any circumstances."



Hon'ble Vice-Chancellor Dr. Tej Partap, Dean Agriculture Dr. S.K. Kashyap and other faculty members taking feedback of online classes in one of the digital classrooms of the college.



Online class in progress in Dr. N.K. Anant Rao Lecture Complex.



Contributed by: Neeraj Tewari, B.Sc Agriculture, IIIrdYear

"Agriculture is the foundation of manufacturers, since the production of nature are the materials of art." - Edward Gibbon

RAWE 2020 gets a new look, begins online for final year UG students

he digital mode of education has undoubtedly taken over the academic realm. Different technologies are being explored such as animations, augmented reality, virtual reality, etc. to provide students an experience of laboratory working or field working. Each academic institute is making efforts as per its requirement, without keeping much classes and lab works on hold. For College of Agriculture it was a challenging decision to make that how would the RAWE programme be conducted. RAWE is Rural Agriculture Work Experience and comprises three components namely Plant Clinic, Industrial Training, and Village Attachment. Through these different components, students are exposed to real life agricultural settings and it aims to develop a sense of awareness among the students about the problems of farmers and practitioners and inculcate a professional attitude in facing real life situations. Now these components require students to go out and work in the laboratories, industries, and villages, however given the current pandemic situation it was not possible to do so. Thus, the RAWE faculty coordinators after having a brainstorming session decided to give RAWE 2020 a new structure.

To begin with, a 17 days orientation programme was conducted wherein the students were told about the significance of RAWE programme and a fundamental recapitulation of all basic agriculture subjects was done. Apart from these comprehensive recapitulation sessions, several expert lectures were organized. The experts included academia scientists and industry practitioners who could give some actual field advice to the students. Shri V.K. Gaur (Chairman-cum-Managing Director, National Seeds Corporation Ltd.), Shri Harendra Singh (Managing Director, Rijk Zwaan India Seeds Pvt. Ltd.), Dr. Raka Saxena (Senior Scientist, National Institute of Agricultural Economics and Policy Research), Shri N.K. Sirohi (State



Marketing Manager, IFFCO), Shri Sanjay Naithani (Chief Agronomist, Israel Chemicals Limited), Dr. Devina Vaidya (Principal Scientist, AICRP on Post Harvest Technology, YSPUHF, Solan), Dr. Sudhakar Dwivedi (Professor, Agricultural Economics, SKUAST, Jammu), Dr. Vivek Pandey (Vegetable Breeder, Punjab Agricultural University, Ludhiana), and Dr. Taufiq Ahmed (Assistant Professor, Extension Education, College of Forestry, Ranichauri) were the RAWE expert speakers in initial 25 days of the beginning of the programme.

For better coordination and to ensure better learning outcomes, the entire batch of final year students has been divided into groups and each group is monitored by a faculty mentor. Moreover, regular quiz sessions are being conducted on every Thursday which ensure better understanding of the concepts among the students. In totality, immense effort is being put in by the students and the faculty members to ensure that this new structure of RAWE turns out to be an enriching learning experience for all.



All the way from Pantnagar to Europe

Three final year UG students get admission into renowned foreign universities

he nation's first agricultural university Govind Ballabh Pant University of Agriculture and Technology, Pantnagar has an engrossing history of 60 years. It was established on the Land Grant Pattern of Agricultural Universities of the United States. The University initiated with the establishment of College of Agriculture in 1960 and till time this college is the most prime part of the University. The college has given various progressionists for the contemporary world with college alumni spread all across the globe. When a student gets admission into the most primeval college of nation's first agricultural university, he/she already has an unsaid assurance of brighter endeavours happening ahead. The ambience of the college pushes the students in every possible way to outperform their counterparts, nationally as well as globally. Three of our meritorious students who were in final year of their undergraduation programme have been recently granted admission into foreign universities for higher studies. Mr. Mudit Joshi has been admitted to Christian-Albrechts-Universität zu







Ms. Kritika Chouhan Deepak Kumar Humboldt University zu Berlin IAM Zaragoza, Spain Germany

Kiel, Germany into Masters of Science in Environment Management, Ms. Kritika Chouhan has joined Humboldt University zu Berlin, Germany for Masters in International Horticulture, and Mr. Deepak Kumar is pursuing Masters in Plant Breeding from IAM Zaragoza, Spain. They have left no stones unturned to bring pride to the name of Alma mater. We wish them good luck for their future ventures and hope that more and more students will come up with such flying colours.



National Workshop held on the occasion of World Food Day

he World Food Day is an important occasion and it commemorates the founding of United Nations Food and Agriculture Organization which is October 16, 1945. The Department of Food Science and Technology of College of Agriculture, Pantnagar also celebrated this important occasion by organizing a two days National Workshop on Emerging Issues in Food Processing and Food Science Education post COVID. The workshop was held on October 16-17, 2020 with a series of events and participation of more than 100 food science undergraduates from all across the country. The entire workshop was held online on the Microsoft Teams platform.

The workshop began with an inaugural session on October 16, 2020 in the presence of Dr. S.K. Kashyap (Dean, College of Agriculture, Pantnagar), Dr. Brijesh Singh (Dean Student Welfare, GBPUAT, Pantnagar) and Dr. S.K. Sharma (Head of Department, Food Science and Technology). The chief guest of the inaugural session Dr. S.K. Kashyap talked about the significance of food not merely in terms of filling human needs, rather its broader role in building up of civilizations. He also emphasized that how food is a critical combination of five elements of the nature which ultimately nurtures all living beings. The inaugural session of the workshop was followed by a webinar on Prime Minister Formalization of Micro Food Processing Enterprises Scheme and a Debate Competition for the registered participants on the topic *Is* online teaching an effective solution for education in the present situation. In the series of intriguing events, the two other events for the day were the virtual poster making competition and the quiz competition.

The day two of the national workshop on October 17, 2020 began with an interactive session with experts from the industry.



The experts included Mr. Narendra Kumar Sharma (Trainee Assessor, British Standards Institute Station), Mr. Beer Maninder Saggo (Zonal Head, VKL Seasonings Pvt. Ltd.), and Mr. Shubham Sati (Assistant Key Accountant, VKL Seasonings Pvt. Ltd.). The interactive session was indeed insightful for the participants as it provided an interface to learn from the expertise and experience of those facing real life challenges of the food industry. After the interactive session, a panel discussion was held including the alumni and faculty members of the department. Post the interesting panel discussion, the last event of the day – the Innovative Idea Contest was held, which was followed by the valedictory session. The two days exuberant workshop was full of learning and exciting experiences for all the participants. It was a chance for intellectual churning and celebrating the enormous perspective of food in our lives.

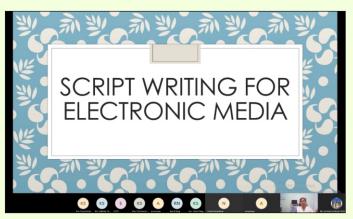


Contributed by: Gautam Harbola, B.Sc Agriculture, IIIrd Year

11 departments organizing 22 online trainings in two months

The College of Agriculture, Pantnagar has been taking several initiatives to nurture the students of the college especially with skill based interventions. To further hone these initiatives, an opportunity came knocking in the form of Indian Council of Agricultural Research (ICAR) and Govt. of India sponsored Scheduled Caste Sub Plan under which financial support is being provided to organize various skill development trainings, workshops, internships, etc. for the student community. Looking into this opportunity, and with the consultation and consent of all head of departments of the college, it has been decided that from October 25, 2020 – December 31, 2020, each department of the college would be organizing two online skill based training or workshop for the students. These could be organized for undergraduate, masters or/and doctoral students.

In this series of skill based programmes to be organized, the Department of Agricultural Communication was the first to initiate. An online training programme on Script Writing for Electronic Media was scheduled for October 27-29, 2020. The training was led by Dr. V.L.V. Kameshwari (Professor, Agricultural Communication) and Dr. Amardeep Chauhan (Associate Professor, Agricultural Communication). The concept



of script preparation, different elements of a script, writing styles, types of electronic media, and requirements of script for electronic media were some of the aspects which were deliberated upon in the training. The different formats of scripts for radio and television programmes were also discussed in detail. The three days training programme witnessed huge participation of undergraduate students of the college.



The series of online certificate courses gets enriched with 4 new courses

ver since the lockdown, the College of Agriculture, Pantnagar has been making concerted efforts to keep up the pace of learning. There have been several online events, webinars, trainings, workshops, etc. along with regular online classes. A recent addition into all these activities included the launch of online certificate courses which could be joined by any learner from across the world. Five courses namely, Mass Production of Important Biocontrol Agents, Sericulture, Nursery Management and Production, Beekeeping and Protected Cultivation of Horticultural Crops were launched in the month of September. Adding to the count four new online certificate courses were launched on October 25, 2020. These are Mushroom Cultivation, Processing of Fruits, Vegetables and Spices, Indian Monsoon, Weather Forecasting and Agromet Advisory Services, and Seed Production Technology by Department of Plant Pathology, Food Science and Technology, Agrometeorology, and Genetics and Plant Breeding respectively. In each of the course, the learners will get an opportunity to gain insights about mushroom types, importance and market potential, process of mushroom cultivation, spawn and substrate preparation, management of mushroom in culture rooms, pests and disease management in mushroom; status and scope of food processing, technical and legal perspective of food processing plant, manufacture and preservation of fruits and vegetables, freezing and frozen storage of fruits and vegetables and processing and handling of spices and miscellaneous foods; status and scope of seed industry, seed/hybrid seed production, seed testing and storage, seed marketing and seed act and policy; and Indian



monsoon and its prediction, earth atmosphere, solar radiation, wind circulation, air temperature, classification of clouds and forms of precipitation.

The online certificate courses are for a duration of three months. The course pedagogy includes a self-learning approach through weekly video lecture, weekly study material, additional reading material, weekend live webinars for discussions and also weekly assessment quiz. In a nutshell, the online courses provide a window to the learners who can grab the opportunity to enhance their knowledge or for an interested tyro to verily learn the courses and comprehend them.



Contributed by: Geetika Joshi, B.Sc Agriculture, IIInd Year

Four UG students emerge as winners in the National IILM Marketing Premier League

he moments of laurels, achievements, discovery of talents, and struggle to victory are memorable and actually strengthen any institute upto its core. The College of Agriculture feels the pride and pleasure in celebrating the victory of its students and faculty members at all worthy fronts. Recently, four undergraduate second year students of College of Agriculture, Pantnagar participated in and won an online event hosted by IILM Academy of Higher Learning, Jaipur. The IILM Marketing Premier League was organized by the Institute of Integrated Learning in Management University (IILM). The team -Amigos, consisting of Ms. Aishna Srivastav, Mr. Paritosh Kumar, Mr. Prabhat Kumar Singh and Ms. Palak Chaturvedi, emerged as winners in the competition, where teams from all over the country participated. There were four rounds to the competition, the eliminations, the qualifiers, the semi-finals and the finals. The Competition was based on marketing strategies and product launch. The teams were to come up with a unique product and market the product accordingly. This entailed the design, product description and promotion of their product. The different rounds were judged by experienced personalities from the business and academia. From making the initial proposal, to the tagline and advertising video, the team



went through some stressful and memorable times. When asked what prompted them to take part in the competition, Mr. Prabhat Kumar Singh replied that they had thought of the idea before the competition, for their entrepreneurship development classes, and this competition provided them with a better opportunity to present that idea. Competing with participants from the top business schools of the country, gave them greater exposure, and their continual advancement to subsequent rounds was based on their perseverance and out of box thinking. The team members also stated that they complimented each other and it was indeed a unique chance to show some impactful team work. With a total of more than 20 teams from India, it is of great pride that students from our college emerged victorious.



Contributed by: Aishna Srivastav, B.Sc Agriculture, IInd Year

Gearing up for competitive exams: The remedial classes begin Alumni join hands with the college to nurture the students

A norganization which not only cares for the present but also for the future, is the one which sustains the predicaments and lasts forever. Keeping this spirit and culture alive, Pantnagar has always nurtured its students for a bright future and has always nourished the senior-junior relationships which actually grows even beyond the formal boundaries of degree programmes. The College of Agriculture, Pantnagar in collaboration with Institutional Development Plan of National Agricultural Higher Education Project has started with Remedial Classes for helping undergraduate students with their preparations of competitive examinations. These classes will be supporting the students achieve basic clarity on the fundamental concepts of different subjects and excellence in



junior research fellowship examination and other competitive examinations. As of now, classes will be provided for subjects of genetics and plant breeding, plant pathology, entomology, horticulture, vegetable science, agronomy, soil science, agricultural communication, and agricultural economics. An added feature of these remedial classes is that these will be taken up by the alumni of the college who have excelled in their respective domain and were top rankers of one or the other competitive examination. Altogether 15 such alumni have accepted the responsibility to guide the undergraduate students of the college.

Speaking about these classes, Dr. Amit Kesarwani, Assistant Professor, Agronomy and College Coordinator, Remedial Classes highlighted, that it is a rare opportunity provided to nurture college students through intervention of those alumni who have already qualified the highly coveted JRF, SRF and ARS examinations and are thus competent enough to guide the UG students. These students are recent passouts and thus they can connect and align with the students in a better way, Dr. Kesarwani added. Almost 190 students have registered for the remedial classes including undergraduate students of second, third, and final year. The classes commenced on October 26, 2020 and are being held in different time slots as per different subjects on the Microsoft Teams Platform. A list of alumni who will be supporting this cause is as follows:



List of Alumni Supporting Remedial Classes

Module I (Agronomy and Soil Science)

- Dr. Gangadhar Nanda, Assistant Professor, RPCAU, Bihar
- Dr. Sirazuddin, Assistant Professor, Doon (PG) College, College of Agricultural Science and Technology
- Ms. Nidhi Luthra, Ph.D. Scholar, ICAR-IARI, New Delhi

Module II (Entomology)

- Dr. Sai Reddy, Assistant Professor, RPCAU, Bihar
- Dr. Ravi Biradar, Analyst, Pesticide Residue and Food Quality Analysis Laboratory, UAS, Raichur

Module III (Extension and Economics)

- Mr. Ankit Mahapatra, PG Scholar, ICAR-IARI, New Delhi
- Ms. Aiswarya S., Ph.D. Scholar, ICAR-IARI, New Delhi
- Dr. Saikat Chatterjee, PG Scholar, GBPUAT, Pantnagar

Module IV (Genetics and Plant Breeding)

- ⊙ Ms. Rimi Shampa Ph.D. Scholar, BCKV, Kalyani
- ◎ Ms. Shikha Dubey Ph.D. Scholar, UAS, Dharwad

Module V (Horticulture and Vegetable Science)

- Dr. Mallesh Sanganamoni, Assistant Professor, SKLTSHU, Telangana
- Dr. Ankit Panchbhaiyya Sectional Officer (Horticulture), Delhi Development Authority

Module VI (Plant Pathology)

- Mr. Aravind T, Ph.D. Scholar, GBPUAT, Pantnagar
- Dr. Anshul Arya, Assistant Professor, SGT University, Gurgaon
- Dr. Yogita Bohra, Assistant Professor, PAU, Ludhiana



Screening of Nettle based Herbal Kunapa Jala technology

The College of Agriculture, Pantnagar is highly committed to validate the time tested and time honoured, age old legacy of agricultural technologies, mentioned in Vrikshayurveda, Krishi Parashara, and other books written by great pioneers of agriculture. These technologies work on natural laws and are completely organic. With the states



heading towards organic farming, a project on Herbal Kunapa Jala based on 'nettle' grass was submitted by Dr. Sunita T. Pandey, Professor, Department of Agronomy for funding to the Ministry of Environment, Forest and Climate Change, Govt. of India. It has been sanctioned by the government and is assigned to the University for its R&D (research and development) and validation activities. The project is multi-institutional and multi speciality in nature.

The stinging nettle (Genus: Urtica) is an obnoxious weed, growing widely in the hills of Uttarakhand. The project aims to test the Vrikshayurveda based concoction entitled Nettle Grass Herbal Kunapa Jala on various crops and to popularize it among farmers of Uttarakhand particularly in Almora. Kunapa Jala is considered as the first fermented liquid organic manure and an ethnic technique, gifted by our ancestors to the world. Its references are found in the manuscript of Vrikshayurveda, a text systematically compiled by eminent sage Surapala approximately 1000 years back.

The performance of Vrikshayurveda based Herbal Kunapa Jala technology will be monitored on various crops and crop

 ● It is a matter of pride that eight undergraduate students of College of Agriculture have been selected for the two months paid internship programme of Institutional Development Plan of National Agricultural Higher Education Project. Out of hundreds of University students who appeared for the online internship examination, 15 were selected out of which eight are from the college. These are Chetan Joshi, Prerna Pandey, Prachi Nagarkoti, Samiksha Yadav and Tanuja Palariya from third year B.Sc. Agriculture and Rajat Nautiyal, Sarthak Kothiyal and Shreshtha Chandra from final year B.Sc. Agriculture. The internship helps to explore new dimensions, and eventually contribute towards University's progress. For this internship, the students would be specifically supporting in content editing of online certificate courses. rotations. The screening will be performed at N.E.B. Crop Research Centre, Horticulture Research Centre, Floriculture Research Centre and Vegetable Research Centre at GBPUAT, Pantnagar. The effect of its application at various concentrations and doses will be recorded for various crops like chickpea, mustard, potato, and gladuolus. Apart from recording the



performance of Nettle based Herbal Kunapa Jala on various crops, its effect on soil biology, soil chemistry, soil physical characters, and soil microbiology will also be tested.

Awareness campaigns are being conducted, in all the blocks of Almora district and slowly to be followed in the rest of the Uttarakhand state also. The fully decomposed nutrients of Kunapa Jala are instantly available to the soil for uptake and helps in plant nutrition, and plant protection. The farmers are being made aware of its benefits with the help of KVKs scientists by conducting trainings and demonstrations. The feedback from the farmers will be taken for its further improvement. It is very easy to prepare in minimum cost, with locally available ingredients. It provides nutrition, protects plants from diseases, pests and helps in mitigating the various kinds of stresses. Therefore, being effective, feasible, profit making, organic and easy to prepare, Kunapa Jala technology has all the qualities to revitalize the hill farming of Uttarakhand.



College Updates

Since the COVID-19 lockdown happened, the University was closed for the students and all academic activities were taking place online. However, in a recent decision by the University administration, the college has been reopened for all masters and doctoral students. This pertinent decision was taken so that research work could be resumed. Looking into the loss of research work, field trials, laboratory experiments, this decision was taken in favour of the students. Those willing can get back to the college, stay into hostels and resume their research work. All necessary precautions are being taken and safety measures have been put in place.



Moving a step closer to excellence: Decision and initiatives of Dean Office

he College of Agriculture, the first college of the University, needed to get towards excellence and engage into several developmental endeavours. However, the present situation of pandemic created a lot of hurdles in the way. In the wake of the pandemic, a series of pragmatic decisions were taken to overcome the challenges and facilitate the best possible ambience for the teaching-learning process, and the students.

Some of these spectacular and exemplary decisions and initiatives are as follows:

- It was observed that the students might not come back to the campus this semester, and online teaching is the only imperative left in hand. In the last semester, faculty members opted for various platforms with which classes were somehow conducted. To improve this system, the Dean Office took initiatives to equip all the classrooms with interactive panels, internet facility, etc. to create interactive and regular classes for the UG, PG, and PhD students. This proposition emerged to be very fruitful in conducting the classes.
- Looking into the changing situation and the new context of using interactive whiteboards etc, the office of the Dean decided to hold a series of training for the faculty members, to equip them with the proper equipment and acquaint them with new equipment and technology. This helped in ensuring a smooth transition towards online teaching through interactive boards.
- It was decided to enhance the showcasing of the college in front of the world. Thus, a college newsletter, a college YouTube channel, dedicated alumni portal, have been put in place while a college placement portal is underway. The newsletter is being published monthly with the help of college students and is being circulated all across gaining lots of accolades from alumni and other stakeholders.



- A dedicated team of faculty members was formed headed by Dr. V.C. Dhyani and comprising Dr. Ruchi Gangwar, Dr. Manju, Dr. Shweta Arora, Dr. Shweta Uniyal for facilitating other faculty members in conducting online classes. They help the faculty members during the classes in slide sharing, use of touch screens, and other advanced equipment.
- It was decided to furnish and equip two rooms in the college, one for college placement and counselling, and the other for Agriculture Society's activities. Measures were taken to promote different companies and firms for student recruitment, so that the students who wish to go for a job after UG, PG, or Ph.D., could get placements from the college

periphery. Similarly, a separate room for Agriculture Society would promote the activities of student mentoring in college. A campaign has been taken up to document the profile of illustrious alumni by creating small video films on their life. A team of college students is working on distinguished projects with the alumni and collecting information to generate scripts for the intended films.

- Focused efforts are being made to align with the corporate houses for the collaborations, student projects, fellowship, and other purposes. Three such collaborative meetings were held under the chairmanship of the Dean and in the presence of other faculty members with the Crystal Crop Protection Pvt. Ltd., Shri Ram Group, and Bajaj Group. The College Core Action Group, under the chairmanship of Dr. J.P. Jaiswal, has been instrumental in generating these tie-ups.
- Special discussion meeting was held between the Dean and Dr. Achintya N. Bezbaruah, Associate Professor, Civil and Environmental Engineering, and Director, NAE Grand Challenges Scholars Program at North Dakota State University, USA. The discussion was focused on new developments in agricultural research, especially in the areas of molecular level plant pathogen work, crop modelling, artificial intelligence in agriculture, nano agriculture, vertical agriculture, plant genomics, etc.



 A multi-institutional interaction was organized wherein the Dean and members of the College Core Action Group participated and the international academia contemporaries included Dr. Achintya N. Bezbaruah, Associate Professor, Civil and Environmental Engineering, and Director, NAE Grand Challenges Scholars Program at North Dakota State University, USA; Dr. Robert Brueggeman, Associate Professor, Crop and Soil Sciences and Robert A. Nilan Endowed Chair in Barley Research and Education at Washington State University, USA; and Dr. Chrysafis Vogiatizis, Teaching Assistant Professor, Industrial and Enterprise Systems Engineering at University of Illinois, Urbana-Champaign, USA.



Contributed by: Saurabh Chandra Tamta, B.Sc Agriculture, IIIrd Year





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Official Youtube Channel of the College https://www.youtube.com/channel/UCPMw8k8_iO5zeor_LQx6VFg