



e-Newsletter

Guru Angad Dev Veterinary & Animal Sciences

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From the Desk of the Vice-Chancellor



The overall development of the students depend not only on their intellectual abilities but also on their participation in sports and extracurricular activities. Getting engaged in some extracurricular activity makes mind free from all types of routine activities that alleviates stress. These activities energizes brain and rejuvenates the learning skills and ultimately makes the brain more powerful to concentrate on intellectual work. The participation in sports also inculcates the sense of sportsmanship i.e. discipline, co-operation, social harmony and integrity amongst the players fostering the comprehensive growth of the young minds.

Guru Angad Veterinary and Animal Sciences University has always been instrumental in providing state-of-the-art sports facilities to its students. The primary aim of the University has been the overall development of budding veterinarians and animal scientists by providing them excellent academic and research environment vis-à-vis sports opportunities for facilitating them to make earnest efforts to achieve the highest distinction in sports at national and international levels. The University has always been pro-active in awakening the hidden sportsperson in youngsters by encouraging the students to participate in various inter-colleges, inter-universities, zonal and national level sports events. The University has well-trained and competent coaches/instructors and well established sports infrastructure viz. equipment, kits, playgrounds, etc. giving opportunities to professional students to excel in the field of sports too. Excellent facilities are available for various indoor and outdoor games. The Athletic Meet of the University is held every year where students showcase their talent in different individual and group games.

The importance of health fitness is being realized more than ever during the prevailing COVID-19 pandemic. As both physical and mental health are influenced during Corona crises, maintaining some routine of physical fitness can help people in a long way to safeguard both of these following stringent safety measures.

I wish all to STAY HOME AND STAY SAFE. To fight this COVID-19 crises.

(A. S. Nanda)
(Vice-Chancellor)

Athletic Meet

The 14th Annual Athletic meet of GADVASU was held on 20th February, 2020. Students of all the constituent colleges of the University namely College of Veterinary Science, College of Dairy Science and Technology, College of Fisheries, College of Animal Biotechnology, Veterinary Polytechnic, Kaljharani (Bathinda) and of affiliated colleges viz. Khalsa College of Veterinary and Animal Sciences, Amritsar and Baba Hira Dass Ji College of Veterinary Pharmacy actively participated in the athletic meet under different activities. Dr. Amarjit Singh Nanda, Vice-Chancellor of the University inaugurated the meet and unfurling the flag. Dr. Nanda said that GADVASU always promote the spirit of games amongst their students to keep them healthy and in high spirit. He appreciated the various committee members' efforts in conducting the successful meet and cherished the participants. Senior retirees and alumni of the varsity also attended the meet with the great charm and happiness.



March-past by students



Girls participating in race

Senior athletes of the University lighted the sports torch and the meet started with oath taking ceremony by Alamjit Singh, senior athlete of the university. About 200 students participated in various events. The faculty members, non-teaching staff and students

of the University were there to buck up the athletes. The faculty and employees of Punjab Agricultural University, Ludhiana also attended the event to encourage the students. A spectacular horse show was also an add on attraction of the function.



Hammer throw event



Boys heading towards target

Dr. Baljit Singh Gill, Dean, Faculty of Veterinary Medicine, University of Calgary (Canada) was the Chief Guest at the prize distribution function. He said that sports improve the health and confidence of students. It promotes good habits and inculcates better values in a person. He distributed prizes to the winners and motivated them to do more hard work to excel in their respective fields. Alamjit Singh (boys) and Amninder Kaur (girls) were declared the Best Athletes. Overall Trophy was won by College of Veterinary Science. Khalsa College of Veterinary and Animal Sciences, Amritsar bagged the Runners Up Trophy. The University Colour was awarded to Gurjot Singh and Bhatri Raj for being the best students of different fields.



Alumni-Students interaction on Entrepreneurship development

To boost the entrepreneurial attitude amongst young professionals, an Alumni-student interaction was organized by the College of Veterinary Science. The event was attended by more than 80 undergraduate students of the college. Two eminent Alumni of the college viz. Dr. S K Tiwari and Dr. Rajinder Singh Kishtwaria discussed the scope for various ventures and insisted the students to become job providers rather than job seekers. Dr. S K Tiwari an alumnus of 1973 batch shared his experience as an entrepreneur with students and emphasized that one should strive for excellence in life.

His journey from a cattle feed manufacturer to establishment of Veterinary Medicine Unit was very inspiring for students. Dr. Rajinder Singh Kishtwaria, also an alumnus of 1973 batch shared his journey with audience about dealing with wild

animals and challenges encountered therein. He emphasized that young veterinarians can choose diverse careers which would help them to realize their potentials. He further stressed on role of veterinary service in promoting environmental health. Both speakers provided new insights to young veterinary students and they were very keen to provide guidance in future too. Students were really enthralled with their life experiences.

Dr. Parkash Singh Brar, Dean, College of Veterinary Science expressed his gratitude to both senior alumni for their interactive and motivational talk with students.



Honouring of Dr. S K Tiwari



Honouring of Dr. R S Kishatwaria

Agri-Education fair to entice students to in Animal Sciences courses

To attract talented youth in Agriculture and Veterinary Sciences, University conducted an Agri-Education fair. The fair was sponsored by the Institutional Development Plan, which is a collaborative project of the Indian Council of Agricultural Research (ICAR) and the World Bank. The event was attended by students of nearby schools of Ludhiana. University scientists informed students about admission procedures in various programmes in the University and the All India entrance tests to be conducted by ICAR at national level for admission to agricultural programmes. Students were also briefed about the various types of clinical cases being handled at GADVASU. To have a firsthand experience, a tour was arranged in state-of-art Animal Hospital of the University, College of Fisheries, Poultry and Dairy Farm and NCC Unit. The students were very keen and had many queries ranging from treatment of animals to welfare aspects. They were very jubilant after looking at all the facilities, farm animals, poultry breeds, dairy farm equipment etc. Many of them showed interest to appear in exam for entry to the university. Dr Parkash Singh Brar, Dean, College of Veterinary Science emphasized the need of bright minds in Agricultural Sciences to realize the target of farmers' welfare and increase in their family income.



Students having practical exposure at poultry farm



Students with faculty of the University

Awards/Recognitions/Fellowships

University Scientists win prestigious Fellowships at International Conference

Dr. Vinod Kumar Dumka, Prof-cum-Head and Dr. Rajdeep Kaur, Toxicologist, Department of Veterinary Pharmacology and Toxicology, GADVASU had been conferred with the 'Fellow Society of Toxicology (FST)' Award for their outstanding contributions in the field of Toxicology at the International Conference on Breakthrough in Toxicology and Human Health and 39th Annual Conference of Society of Toxicology held at Jiwaji University, Gwalior. The fellows elected are privileged to use "FST" as STOX- approved academic title of distinction in Toxicology. Dr Rajdeep Kaur is the youngest recipient of this honour since the inception of the Society in 1979. Dr. A S Nanda, Vice Chancellor, Dr. J P S Gill, Director of Research, and Dr. Parkash Singh Brar, Dean, College of Veterinary Science congratulated the fellows for this great achievement.



Dr. Rajdeep Kaur receiving the award

Young Scientist Award at Symposium

Dr. Anuj Tyagi, Assistant Professor from Department of Aquatic Environment, COF bagged the 'Best Young Scientist Award' for significant scientific contributions in the field of 'Genomics in Aquaculture' in 3rd International Symposium on Genomics in Aquaculture (ISGA III) jointly organized by ICAR-Central Institute of Freshwater Aquaculture (CIFA) and Association of Aqua-Culturists, Bhubaneswar (Odisha). Dr. Anuj Tyagi presented his work on 'Isolation, characterization and complete genome sequencing of pathogenic bacteria, *Aeromonas veronii* from Indian major carp, *Labeo rohita*', including the first complete genome assem-

-bly, virulence factors and metabolic pathways of the pathogen isolated from fish in India.



Dr. Anuj Tyagi bestowed with Young Scientist Award

Research Excellence Award(s)

Dr. Prabjeet Singh was conferred with Research Excellence award on the basis of his research on 'Isolation and characterization of collagen extracted from the skin of striped catfish (*Pangasius hypophthalmus*)' published in Journal of Food Chemistry. Based on the number of global citations of above research paper the 'Institute of scholars, Bengaluru' conferred Research Excellence award to Dr. Prabjeet Singh.

Another scientist of the College of Fisheries Dr. Sachin O. Khairnar was conferred with Research Excellence award 2020 by 'Institute of scholars, Bengaluru' for his work on 'Effect of amplitude and frequency of salinity fluctuations on antioxidant response in juvenile Tongue sole, *Cynoglossus semilaevis* published in Spanish Journal of Agricultural Research.

Dr. Amit Mandal of College of Fisheries received 'Young Achiever award 2020' by 'Institute of scholars, Bengaluru' in March 2020.

University scientist honoured at All India Congress of Zoology

Dr. S. S. Hassan received 'Congress of Zoology Medal'-2019 in 32nd All India Congress of Zoology (AICZ) and International Conference on 'Life Security on earth' organized by Zoological Society of India, held at Chaturbhuj shri Ram Mandir Parisar, Mandu Distt. Dhar (Madhya Pradesh) from Feb 22-24, 2020.



Best Oral Presentation award(s)

Dr. S.N. Datta received Best Oral Presentation award under the session 'Ecosystem Assessment, Monitoring, Tools and Techniques' in the conference on 'Ecosystem Health and Fisheries of Indian Inland waters: Multiple Stressors, Management & Conservation' conducted at College of Fisheries, GBPUA&T, Pantnagar. He presented his work on 'Efficacy of Ginger on growth, survival and hematological parameters of Asian striped catfish, *Pangasianodon hypophthalmus* reared in cage system'.



Dr. S N Datta receiving award

Poster presentation award(s)

Dr. S. S. Hassan received 2nd Best Poster Presentation award on his work on 'Catch Composition of sisorid catfishes in Ludhiana fish market, Punjab' in 32nd All India Congress of Zoology (AICZ) and International Conference on 'Life Security on earth' organized by Zoological Society of India held at Chaturbhuj shri Ram Mandir Parisar, Mandu Distt. Dhar (Madhya Pradesh) from Feb 22-24, 2020.



Dr. Rajinder Kaur bagged 'Best Poster presentation' award under the session 'Impacts of Multiple stressors' in the conference on 'Ecosystem Health and Fisheries of Indian Inland waters: Multiple Stressors, Management & Conservation' conducted at College of Fisheries, GBPUA&T, Pantnagar, Uttarakhand from Feb 17-19, 2020. She presented her work on 'Effect of vitamin C supplementation on hematological changes in sodium fluoride exposed Amur carp (*Cyprinus carpio haematopterus*)'.



71st Republic Day Celebrations

GADVASU celebrated the Republic day with patriotic fervor and enthusiasm. Dr. Amarjit Singh Nanda, Vice-Chancellor of the University was the Chief Guest of the function. Dr. Nanda unfurled the National Flag at the parade ground and highlighted the importance and spirit of the Indian Constitution for the development and prosperity of people. R&V Sqn. NCC cadets of the University presented the guard of Honour. Dr. Nanda said that GADVASU as a premier Institution of veterinary education is playing a significant role by excellent teaching, problem solving research with exhaustive and rigorous extension activities. University achieved first position among all the veterinary universities in India within very short period of its coming into existence. He highlighted that Sh. Narendra Modi, Hon'ble Prime Minister of India acknowledged the farmers associated with GADVASU to check stubble burning. Dr. Nanda congratulated students for winning All India Agri-Unifest Trophy at Gujarat and 13 medals in equestrian events by NCC Cadets. Students were honored for their achievements in different extracurricular activities. Students and staff members filled colors, emotions and rhythm with their performances in the function. Officers, Teachers, Employees and students of the University attended the function enthusiastically.



Dr. A S Nanda, Vice-Chancellor addressing the University fraternity



Cultural performance by students

Trainings/ Workshops

Awareness programme on management in shrimp farming

College of Fisheries organized an on-site mass awareness programme on 'EHP (*Enterocyto zoonhepatopenaei*) prevention and management in shrimp farming' in inland saline waters, at village Shamkhera (Shri Mukstar Sahiab) under all India coordinated project 'National Surveillance Programme for Aquatic Animal Diseases (NSPAAD)' funded by the ICAR-National Fisheries Development Board (ICAR-NFDB). Forty farmers participated in the programme. Scientists informed participants about feeding management in shrimp culture and the shrimp diseases with especial emphasis on EHP infection, including its causative factors and protocols for its prevention and control. Farmers were advised to procure EHP free seed, follow strict biosecurity guidelines and abide to best management practices in shrimp farming to prevent disease outbreaks. Success story of an EHP infection survivor in Mansa district, through GADVASU handholding under NSPAAD Program was also shared with the farmers to showcase strength of scientific management in safeguarding the farmers from economic setbacks owing to disease outbreak. Farmers were also given practical demonstration on methods for collecting and packing water, soil and shrimp samples for transportation to the laboratory for disease diagnosis, various biosecurity measures like hand dips, foot dips, net hygiene, personal hygiene, pond fencing, bird nets etc. to produce export quality shrimp, doing well in international food security standards.



Participants of awareness programme

Innovative Fish Farmers' Association meet

Monthly meeting of 'Innovative Fish Farmers' Association (IFFA)', Punjab was held at College of

Fisheries, GADVASU. Thirty farmers, including members of IFFA and new farmers interested in fish farming attended the meeting. University scientists advised farmers about water quality, disease management and changes in feeding schedule with increasing temperature during transition phase from winter to summer, hence an insight regarding its utilization for optimizing production was discussed. Participants were also informed about use different kinds of probiotics in aquaculture, pond bottom management practices with special reference to muddy pond bottom and its remedial measures and care of fishes in spring season.



Discussion(s) during Fish Farmers' Association Meet

Dr. Kulbir Singh Sandhu, Dean, College of Fisheries advised the farmers to remain connected with the university experts for appropriate treatment/remedial measures, in case of any disease outbreak. Dr. H K Verma, Director Extension Education, GADVASU emphasized that such kind of meets are required for updating technical knowledge of the farmers at a common platform, besides addressing critical issues through consultation and collective action plan.

International workshop on 'Presenting research to scientific audience'

School of Public Health and Zoonosis, GADVASU in collaboration with the University of Saskatchewan, Canada conducted a two-days international workshop under the theme 'Presenting your research to a scientific audience'. The workshop was inaugurated by Dr. J P S Gill, Director of Research, GADVASU. Dr. Gill shared that such type of programmes are helpful for the post graduate students to boost their research skills from planning their participation and presentations in conferences, symposia and workshops. The overseas speakers from the University of Saskatchewan, Canada,

University of Calgary, Canada, University of Sydney, Australia, US Department of Agriculture, USA and Statens Serum Institute, Denmark delivered talks online. A hands on practice on preparation of poster and oral presentations as well as presenting research findings to scientific audience made the workshop more interesting. More than 60 postgraduate students from various departments of the University participated in the workshop and enriched their knowledge.



Dr. J P S Gill, Director of Research addressing the participants

Sensitization Programme for School Students

Thirty five students of class 11th and 12th from Government Senior Secondary School Ghubaya (Fazilka) along with their teachers visited the University on educational tour. The faculty of the University informed students about the education opportunity in the field of Livestock and importance of livestock as an entrepreneur. Dr. H K Verma, Director Extension Education interacted with the students and made them aware about the University structure, facilities available, its importance to the livestock farmers and significant contribution to the state and country. Students were informed about admission procedure and encouraged them to join university for their bright future. Students visited 'Farmer information' centre where they learnt its contribution for dissipating the knowledge to the farmer and showed their interest in university literature. They also visited Goat, Pig and Cattle/ Buffalo farm where they learnt about housing and important livestock treasure of Punjab. It is pertinent to mention here that a total 300 students of higher and secondary schools visited the University in 2 months to learn about the activities and services and admission process of the University.

Teaching Workshop for Mid -Career Teachers

To upgrade the teaching standards of the University to the international level, College of Veterinary

Science, GADVASU in collaboration with the University of Calgary, Canada organized a Teaching Workshop. Dr. Baljit Singh, Dean Faculty of Veterinary Medicine, Dr. Amy Warren, Assistant Dean, Teaching and Learning, University of Calgary were the resource persons for the workshop. A total of 25 teachers from College of Veterinary Science, College of Dairy Science and Technology and College of Fisheries and College of Animal Biotechnology participated in the workshop and interacted with the experts to hone their professional teaching skills. Effective teaching techniques, ways to assess performance of students and teachers, setting of question papers, management of time were the sessions of main attraction to participants. The participants were excited to inculcate practices discussed in workshop to adopt in their day to day teaching.



Participants with Officers of the University and Experts

Training on goat farming

Department of Livestock Production Management organized two days training programme on 'Rural upliftment through scientific goat farming' for goat farmers at Bhundri village of Ludhiana, financially supported under Rashtriya Krishi Vikas Yojana for special components. Training was attended by 25 participants engaged in goat farming on traditional lines. The problems faced by all the goat farmers were identified and analyzed at the outset of the training programme and deliberated by the scientists of the University. The scientists advised farmers for the plantation of fast growing tree fodders such as moringa, subabul, mulberry, dek etc in community land and were suggested for forming self-help groups and creation of fodder banks for lean period. Participants were also sensitized about common and feasible biosecurity measures to reduce disease incidences and neonatal kid mortality, resistance in pathogens, economical housing modifications and prevention from zoonotic diseases.

National Training on Anaesthesia

Department of Veterinary Surgery and Radiology organized an Indian Council of Agricultural Research (ICAR) sponsored training programme entitled '*Hands on Practice in Small Animal Anaesthesia*' for the skill enhancement veterinary practitioners/surgeons. Experts delivered lectures and practical demonstrations on recent concepts of patient evaluation, pre-anaesthetic considerations, patient preparation for anaesthesia, induction and maintenance of general anaesthesia including monitoring, management of anaesthetic emergencies and pain management. Special emphasis was laid on monitoring and recording of vital parameters to avoid untoward complications. It is pertinent to mention here that the department has been recognized as Centre of Advanced Faculty Training since 1994 and has established excellent facilities and expertise for clinical activities, teaching, training and research.



Practical demonstration on anaesthesia

Training programme on 'Optimal Production and Disease Management of Dairy Animals'

The University organized a training programme on 'Optimal Production and Disease Management of Dairy Animals' under RKVY-11 scheme for SC farmers with the motive to create awareness among the farmers at Dhaipai village (Ludhiana). Scientific lectures about the common management practices, shelter management, importance of record keeping, feed management, reproductive problems and other disease management in dairy animals were delivered. The farmers were made aware about timely deworming, vaccination of animals and clean milk production. They were also motivated to become entrepreneur in dairy sector through value addition of milk into milk products. Total 40 farmers attended the field training programme. Hands on training for assessment of healthy

animals, basic physiological parameters of animals and management tips was also provided. Further, the farmers were provided with training certificate, literature and monthly magazine Vigyanak Pashu Palan.

Training Programme on Hygienic Meat Production and Processing

Department of Livestock Products Technology organized three days training programme on 'Hygienic Meat Production and Processing for Value Added Meat Products' for the floor level workers of meat industry, butchers and small vendors with an intention to educate them about clean meat production practices, processing, packaging, value addition and quality assurance. The training programme was financially supported under RKVY-12-DR scheme 'Enhancement of production and productivity potential of livestock, poultry and fisheries sector for socio-economic upliftment of the farmers of Punjab'. The training was attended by 17 participants. The trainees were provided hands-on-training basics of meat hygiene, preparation of chicken pickle, preparation of value added emulsion based meat products (meat ball, patties, nuggets, sausage) and meat snacks (meat samosa). The trainees visited GADVASU Instructional Poultry Processing Plant and got acquaintance with all the machinery and equipment, live slaughtering and dressing operation of poultry. The experts also shared the information related with FSSAI, legislations for setting up a butcher's shop, labeling requirements etc.

Training on Value Addition of Milk

College of Dairy Science and Technology (CODST) conducted a five-days training course on 'Value addition of milk. Dr. S K Uppal, Dean, CODST was the Chief Guest of the occasion. Dr. Uppal emphasized that dairy processing with value addition could help to enhance the economic well-being of the large number of farmers in Punjab. He motivated the participants to maintain contacts with the University experts and try to excel in the dairy processing and value addition through hard work and innovation. The training encompassed various beneficial aspects for farmers viz. manufacturing of seven milk products viz. Milk Cake, Paneer, Whey Drink, Flavoured Dahi, Lassi, Mozzarella Cheese and Sterilized Flavoured Milk. To give them hands on exposure for dairy product manufacture, demon-

-strations were given in Experimental Dairy Plant of the college. The training also covered the microbiological, chemical and economical aspects for proper handling of milk and milk products.



Participants of training with the Officers of the University and Experts

Training on Veterinary Radiology

Department of Veterinary Surgery and Radiology organized a training programme on '*Systematic Interpretation of Radiographs for Veterinary Practitioners*' for 15 veterinary practitioners / surgeons. This training programme, funded by Indian Council of Agricultural Research was conducted under the Human Resource Development component of All India Network Project on 'Diagnostic Imaging and Management of Surgical Conditions in Animals'. Lectures and hands on practice on the various aspects of veterinary radiology such as radiographic positioning, radiographic view and selection of radiographic exposure factors for obtaining good quality radiograph were delivered by the faculty of the department. Interpretation of important radiographic lesions of various body systems such as skull and spine, bone and joints, lungs, mediastinum, heart, abdominal organs and contrast radiographic techniques were discussed in details in the training programme.



Trainees with University Experts

Training on Soft tissue Surgery

Department of Veterinary Surgery and Radiology conducted national level training programme on 'Small animal soft tissue surgery'. The training was the 3rd in the series of human resource development initiative under the All India Network Program on 'Diagnostic Imaging and management of surgical conditions in Animals'. Fifteen veterinarians were imparted training on treatment of all major and minor soft tissue diseases and orthopaedics procedures using latest instrumentation. The curriculum of the training programme was fabricated to impart practical know how, hands on training and lectures on the soft tissue procedures like gastrointestinal obstruction, urinary tract diseases, spay procedures for animal birth control and endoscopic procedures.



University Experts imparting practical training to Veterinary Practitioners

Workshop for extension workers

Directorate of Extension Education of the University organized a one day Workshop-cum-Training Programme on 'Latest Advances in Livestock, Poultry and Fisheries'. The training was attended by 31 scientists of Krishi Vigyan Kendras (KVKs), Regional Research and Training centers (RRTCs) as well as of University, regularly engaged in various extension activities. On this occasion Dr. H K Verma, Director Extension Education-cum-Course Director presided over function and interacted with the scientists and appraised them about the work done by all the KVKs in the welfare of livestock farming community of Punjab. Experts from the University delivered presentations on various important topics viz. Nutritional interventions, Pig farming, Goat farming, Backyard poultry and scope of Fish farming in Punjab, etc.

Training on Value addition to livestock products

Department of Livestock Products Technology of the University organized three days training programme on 'Hygienic meat production and processing for value added meat products' for the floor level workers of meat industry, butchers and small vendors with an intention to educate them about clean meat production practices, processing, packaging, value addition and quality assurance. This training programme was financially supported under Rashtriya Krishi Vikas Yojana programme. The training was attended by 21 participants. University scientists inculcated the feeling of hygiene and cleanliness amongst the meat shops owners and provided them hands-on-training about the preparation of meat pickles, meat ball, patties, nuggets, sausage and meat samosas. The experts also shared the information related with FSSAI, legislations for setting up a butcher's shop, labeling requirements etc. The trainees were provided the basic hygiene kit viz. apron, gloves, SS knife, head and mouth gear etc.



Livestock products value addition demonstration

Workshop on 'Skill Development in Processing and Value Addition of Fish

College of Fisheries organized two days workshop on 'Skill Development in Processing and Value Addition of Fish for enhanced livelihood prospects' under the component 'Strengthening and Development of Higher Agricultural Education in India (SC-SP plan)' sponsored by the Indian ICAR for scheduled caste students. A total of 25 students attended the workshop. Experts practically demonstrated the preparation of varieties of value added fish products viz. cutlets, sausages, fish fingers and fish pickles using high value Pangas fish (*Pangasius* spp.) and highlighted the importance of value added products and the profit that could be obtained by preparing the products for enhancement of livelihood prospects.



Student participants of skill development programme

Awareness camp on Shrimp farming

College of Fisheries organized awareness camp on Shrimp farming at village Akanwali (Mansa) to make new farmers aware about the bio-security protocols and the best management practices to be adopted in shrimp farming. Farmers were also sensitized with right stocking methodology for better seed survival and precise feeding strategies to avoid size variation during the shrimp culture.



Awareness camp on shrimp farming

Participation in the National Livestock Championship

College of Fisheries participated in the National Livestock Championship and Agri EXPO -2020 held at Batala, Gurdaspur from February 27 to March 02, 2020 and imparted information to farmers on various aquaculture technologies. Farmers were also updated about various training programmes organized by the University along with various extension services available for the farmers and entrepreneurs.

TV Talks

- Dr. Meera D. Ansal delivered TV talk (on 'Azolla Culture' on Feb 12, 2020.
- Dr. Meera D. Ansal delivered TV talk for DD Jalandhar on 'Pangas Culture: Status & Scope in Punjab' on Feb 14, 2020.

Establishment of automated aquaponics system

An automated Aquaponics system for vertical farming was established in College of Fisheries, GADVASU for research and demonstration purpose, under collaborative project of Centre for Development of Advanced Computing (C-DAC), Mohali, Ministry of Electronics and Information Technology (MeitY), Government of India.



Automated Aquaponic System

Transfer of technology

- Students of B.Sc. (Medical) of Sri Guru Teg Bhardur Khalsa College, Sri Anandpur Sahib visited the College of Fisheries on February 11, 2020 and got acquainted about the fish culture and management practices along with recent technologies related to aquaculture.
- Students from the Department of Zoology, Punjab Agricultural University, Ludhiana visited fish farm of the College of Fisheries, GADVASU on February 27, 2020, to learn about various fisheries activity.
- Dr. Abhed Pandey delivered an expert lecture on 'Freshwater Pearl Culture' in the workshop organized by the Department of Zoology, MCM DAV College for Women on February 8, 2020.
- Dr. Prabjeet Singh delivered expert lecture on 'Shrimp Farming' at the Government Fish Farm, Raike-Kalan (Bathinda) on February 13, 2020 during NFDB sponsored Skill Development Training Programme. Dr. Vijay Kumar Reddy also delivered expert lecture on 'Processing and value addition in aquaculture' during the programme.
- Dr. Prabjeet Singh delivered expert lecture on 'Aquatic Diversity and its role in Agro-Biodiversity' at PAMETI, Ludhaina on February 7, 2020.
- Dr. Abhishek Srivastava delivered expert lecture on 'Integrated fish farming' in the Skill Development Programme on 'Small Poultry farmer' organized by the Agriculture Skill Council of India

Trainings conferences attended by faculty

- Dr. Vijay Reddy, Assistant Scientist (Fisheries) attended the ICAR-sponsored winter school on 'Recent advances in fish processing, value addition and fish waste management' at College of Fisheries, Central Agricultural University (CAU), Agartala from January 7-27, 2020.
- Dr. Sachin Onkar Khairnar and Dr. Amit Mandal from College of Fisheries attended 21 days CAFT training on 'Enhancement of Aquaculture and water productivity through engineering interventions in Biofloc Technology, Aquaponics and RAS' at Central Institute of Fisheries Education (CIFE), Mumbai from January 16 to February 5, 2020.
- Dr. Ajeet Singh from College of Fisheries attended ICAR sponsored 10 days short training programme on 'Innovations in Functional foods and Nutraceuticals for Management of Chronic Diseases' organized by Centre of Food Science and Technology, Institute of Agricultural Sciences, Banaras Hindu University (BHU), Varanasi from January 21-30, 2020.
- Faculty of College of Fisheries attended workshop on 'Awareness for Environment Protection' organized by Punjab Pollution Control Board (PPCB), Department of Science, Technology and Environment, Government of Punjab at Punjab Agricultural University, Ludhiana on February 7, 2020.
- Dr. S. N. Datta, Dr. Grishma Tewari and Dr. Rajinder Kaur from College of Fisheries attended International conference on 'Ecosystem Health and Fisheries of Indian Inland waters: Multiple stressors, Management and Conservation' organized by ICAR-CIFRI, Barackpore; AEHMS, Canada; PFGF, Mumbai and College of Fisheries, Pantnagar at G. B. Pant University of Agriculture and Technology, Pantnagar from February 17-19, 2020.

Book on 'Fish farming' in Punjabi language

The book on 'Fish farming' in Punjabi language authored by Dr. Meera D. Ansal and Dr. Vanee Inder Kaur, College of Fisheries was published by the Directorate of Extension Education, GADVASU with ISBN 978-03-87403-27-7.



Activities of Krishi Vigyan Kendra(s)

KVK, Barnala organised Kisan Mela

Krishi Vigyan Kendra, Barnala of GADVASU organized a Kisan Mela under the theme 'Resource Conservation Technologies' under Jal Shakti Abhiyan. Ms. Ruhee Dugg, Additional Deputy Commissioner (General), Barnala was the Chief Guest of the occasion. Dr. P. S. Tanwar, Associate Director, KVK welcomed the Chief Guest and participants of the programme. He highlighted the activities of KVK and emphasised on the judicious use and proper management of natural resources. Ms. Ruhee Dugg, appreciated the work of KVK and motivated the farmers to say no to stubble burning and incorporate the same in soil for better production and clean environment. Animal Husbandry and line Departments and Self Help Groups showcased their technologies and products in exhibition. A Kisan Goshti was organized and problems of farmers related to agriculture and livestock farming were discussed. Expert talks were delivered on value addition of milk and control of mastitis and brucellosis and farmers were advised for timely vaccination and deworming in animals to get higher productivity. Progressive farmers, farm women, innovative farmer in different fields, and member of Gram Panchayat who did not burn the stubble were awarded at the Kisan Mela.



Inauguration of Kisan Mela

Training on Value addition to farm produce

KVK, S.A.S. Nagar (Mohali) organised one week off-campus vocational training on 'value addition to farm produce and entrepreneurship development at village Khizarabad (Mohali). The training was sponsored under RKVY-11 scheme 'Inclusive Growth in Livestock, Dairy and Fishery Farming through Technological interventions in Punjab'. Twenty women farmers belonging to scheduled caste community attended the training and got benefited. Expert talks

were delivered on diverse topics encompassing kitchen gardening, importance of fruits and vegetables for human health, processing and value addition of fish and value addition of farm produce. Practical demonstration on preparation of different types of value added products were also given.



Trainees of value addition training

Vocational training on Beekeeping

KVK, S.A.S. Nagar (Mohali) conducted 5 days vocational training on Beekeeping at village Mote Majra to provide start-up knowledge to the farmers. Thirty farmers participated in the training programme and learnt about importance of honey bees and honey in human life, history of honey bees, their life cycle, management of harmful insects, diseases of honey bees, food of honey bees and pollination services provided by KVK. Value addition of honey and the ways of making value added products from honey were also discussed. An exposure visit of the participant at Shergill farm, village Sohali was held where owner of the farm and a progressive farmer S. Harjinder Singh Shergill shared his practical knowledge of 40 years on beekeeping.

Training and awareness programme on Energy Efficiency

KVK Mohali conducted training-cum-awareness programme on energy efficiency aimed at providing scientific knowledge on efficient use and conservation of energy to the farming community. Expert lectures were delivered on efficient utilization of energy in horticulture, use of micro irrigation to conserve water and energy, soil conservation and its adoption and challenges. Various schemes of PEDDA, techniques of energy conservation, installation and management of pumps and saving energy at household level were also discussed. Chief Guest of programme, Sh. Sanjeev Verma, Additional Director, PCRA, Chandigarh urged farm-

farmers for energy conservation. KVK and private companies displayed their products and services in the exhibition organised during the programme.



Awareness programme on energy efficiency

Workshop on water conservation

KVK, Booh (Tarn Taran) organised a one day workshop under the theme 'Water conservation in horticultural and field crops'. The officials of various departments including Agriculture Development Officer(s), Project Director(s) ATMA, Block Technology Manager(s) and Soil Conservation Officer(s) participated in the workshop aimed to discuss about the judicious use of poor and marginal quality water in horticultural crops. The topics of bad impact of poor quality water in horticultural crops, different techniques of water management, sprinkler and drip irrigation, fertigation techniques, water recharge technologies, etc. were discussed in the workshop. An exposure visit of the participants to the farm of Mr. Gurwinder Singh (a progressive farmer) was conducted to have practical experience of use of rain gun to irrigate vegetable crops. Participants appreciated the initiatives of KVK and assured of extending full co-operation in delivering demonstration to farmers on micro-irrigation.



Demonstration during training

Training on Energy Efficiency in Agriculture

KVK, Booh (Tarn Taran) also organised a training-cum-awareness programme entitled 'Energy efficiency and conservation in agriculture' sponsored by Bureau of Energy Efficiency, Government of India and Punjab Energy Development Authority. A total of 175 farmers participated in the training programme. The Chief Agriculture Officer, Department of Agriculture and Farmers' welfare, Tarn Taran was the Chief Guest of the programme and Er Rohit Kumar, Project Engineer, PEDDA, Chandigarh was the Special Guest of the occasion. Experts delivered lectures on different types of energy and its conservation through efficient utilization, techniques of energy saving, purchasing of electronic items with star rating, use of solar panels, subsidy schemes of Government, solar dryer, solar cooker functioning, etc. Practical demonstration for preparing various edible items at home was also given. An exhibition of energy saving technologies was organized and literature developed by KVK Tarn Taran and GADVASU was distributed to the farmers.



Farmers having practical exposure of solar cooking

International Women's Day Celebration

KVK, S.A.S. Nagar (Mohali) celebrated International Women's day at village Khizrabad on 8th of March, 2020. Topics of empowerment of women and her role in the present scenario, health status of women in Punjab, importance of bio-fortification and bio-fortified crops, importance of balanced diet and food pyramid in women's health, and nutri-garden and nutrients present in locally grown fruits and vegetables were discussed during the programme.

Vocational training on Kitchen Gardening

KVK, S.A.S Nagar (Mohali) organized a week long vocational training programme on Kitchen Gardening at village Chanalon. Participants were disseminated knowledge on design and layout of kitchen garden, suitable crops, nursery production, cultivation practices and management of kitchen garden, nutritional security and crop diversification, techniques of post-harvest management, storage, processing and value addition of fruits and vegetables, etc. An exposure visit of farmers to the farms of a progressive farmer of district Mohali was also arranged. Vegetable seed kits, certificates and literature were distributed to the participant farmers.



Participants of vocational training

Vocational training on Integrated Farming

KVK, S.A.S. Nagar (Mohali) organised one week off-campus vocational training on 'Integrated Farming' at village Khizarabad. Thirty farmers to scheduled caste community attended this training programme sponsored under RKVY-11 scheme 'Inclusive Growth in Livestock, Dairy and Fishery Farming Through Technological interventions in Punjab'. Experts delivered lectures on advantages and scope of integrated farming system with special emphasis on integration of agriculture and animal husbandry, fish farming, piggery, poultry and goatry, value addition of farm produce to achieve higher profit, care and management of dairy animals to prevent the chances of disease occurrences, cultivation of vegetables and fruits under IFS system, protected cultivation etc. Women participants were encouraged form the Self-Help Group to attain self-dependence. Dr. J P S Gill, Director Research, GADVASU interacted with trainees and motivated them to adopt integrated farming practices to enhance farm income. Participants were also informed about the various financial subsidy schemes offered by Punjab State Animal

Husbandry Department. Certificates, literature, mineral mixture and teat dip kits were distributed to the participants on concluding day.



Participants of training on Integrated Farming

Skill Development Course on 'Small Poultry Farmer'

KVK, S.A.S. Nagar (Mohali) organized a One month (240 hours) skill development training course entitled 'Small Poultry Farmer' under the aegis of Ministry of Skill Development and Entrepreneurship, Government of India. Twenty farmers took part in the training programme from various parts of Punjab for honing up their poultry farming skills. The participants were imparted knowledge on comfortable housing management of different farming system of poultry, breeding programme, diseases of poultry, treatment and its control, integration of poultry farming with aquaculture for better economic benefits, nutritional value of egg and poultry meat, value addition of poultry products, utilization of vegetable leftover in poultry farming to cut down cost of feeding, horti-poultry model of backyard poultry farming, etc. Practical exposures was given to the participant on various aspect of breeds of poultry, feeding management, record keeping, reproductive management and economics of poultry farm, etc. Exposure visits of participants to the University Poultry Farm, Swastik Commercial Hatchery, Sirsma, Kurukshetra and Broiler Poultry Farm, Fatehgarh were also organized.



Students' activities

Prize in Debate at National Integration Camp at Kangra

Krishiv Vasudeva, a student of College of Veterinary Science, GADVASU won third prize in Debate competition at National Integration Camp (NIC) held at M.C.M DAV College, Kangra (H.P). Two NSS volunteers from the University participated in this national NSS camp of seven days duration from 24-02-2020 to 01-03-2020 at Himachal Pradesh. The Theme of the camp was 'Ek Bharat Shreshtha Bharat' where more than 190 participants from all over India participated and showcased their religion and culture and the power of one nation in the camp.



Krishiv Vasudeva receiving award at NSS Camp, Kangra

NSS Winter camp

More than 120 volunteers of the National Service Scheme (NSS) of the University participated a week-long NSS Special Winter camp themed on the concept of 'Paryavaran Aur swachhta Ko samarpit Yuva' (Youth for Environment and Cleanliness) and resolved to put in their best effort to preserve the environment besides ensuring the cleanliness in the University campus. The camp was inaugurated by Dr. Satyavan Rampal, Director Students' Welfare-cum-Estate Officer, GADVASU. NSS volunteers from all constituent on-campus colleges, viz. College of Fisheries, College of Veterinary Science, College of Dairy Science and Technology and College of Animal Biotechnology were given hands-on exposure in execution of various processes and methods that could help them in addressing environmental concerns. The NSS volunteers participated in a cycle rally Cyclothon 2020 flagged off from Rakh Bagh under the Fit Indian Movement.

Rose saplings planted in memory of Meenu Sharma

The NSS team in association with Landscaping wing of the University planted 250 rose saplings in the Scientist Home in the memory of Meenu Sharma, a second year NRI student of College of Veterinary Science who passed away on February 13, 2020 in a road accident. Condolence meeting in this regard was also held at the NRI Girls Hostel to pay respects to the departed soul which was attended by Dr. Arun Sharma, father of late Meenu Sharma.



Students preparing soil for Mini-Rose Garden

Advisory on Coronavirus

GADVASU has been disseminating accurate information among livestock and poultry farmers, consumers and the general public regularly about COVID-19 pandemic. In persistence of this, the University Scientists informed that as of now there is no evidence for the food borne transmission of Corona virus. Experts further advised that the frozen food items must be consumed only after cooking them properly and good hygienic practices must be followed before consuming raw fruits and vegetables. In accordance with advice offered by the World Health Organization, the scientists from School of Public Health and Zoonoses, GADVASU also released a list of general precautions for farmers, consumers or those handling animals and their products.



Hygienic meat processing