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From the Desk of the Vice-Chancellor



Guru Angad Dev Veterinary and Animal Sciences University actively disseminates its research and development outcomes to enhance the economic prosperity of farmers and various stakeholders. Illustrating this commitment, the University successfully organized the *Pashu Palan Mela* from September 14-15, 2023, with a resounding success. The inauguration of *Mela* by S. Gurmeet Singh Khuddian, Hon'ble Cabinet Minister of Agriculture, Animal Husbandry, and Food Processing, Punjab, set the tone emphasizing the promotion of scientific farming and entrepreneurial initiatives amongst farming community. The *Mela* served as a crucial platform

for the exchange of knowledge amongst stakeholders, featuring the exhibition of activities, products, services, and elite animals to inspire the participants. In recognition of excellence in livestock farming, the University conferred the prestigious 'Chief Minister Awards' to four farmers in the Cattle, Poultry, and Value-Added Products categories, further encouraging a scientific approach amongst livestock farmers.

In another significant initiative - the G20 University Connect program, jointly organized with Punjab Agricultural University, Ludhiana under the auspices of Ministry of External Affairs, Government of India and Research and Information System for Developing Countries (RIS), the University convened the think tanks, policymakers and academicians to deliberate up on 'Climate-Smart Agriculture, Food Systems, and One Health'. The proactive participation by 557 students from over 10 institutions in the pre-event competitions attests the earnest commitment of emerging professionals towards environmental stewardship.

Owing to its esteemed standing, the University got the honour of hosting the XXI Annual Convocation-cum-Scientific Convention of the National Academy of Veterinary Sciences (NAVS). This event brought together a distinguished gathering of experts, industry professionals, and enthusiasts, uniting their efforts to devise strategies geared towards enhancing the dairy animal productivity and propelling advancements in dairy sector through the adoption of cutting-edge technologies.

In a transformative move, the University has initiated the Bachelor of Vocation (B.Voc.) programme in the Integrated Farming and Entrepreneurship, aimed at reshaping the livestock farming and agricultural education by merging sustainable farming practices with entrepreneurial skills. Further, the commitment of the University towards international exposure of students was evident in the international training of students at Universiti Sains Malaysia (USM), Malaysia and the University of West Indies, Jamaica, funded under the IDP-NAHEP project. Advancing its commitment to research collaboration, the University has formalized Memorandum of Understanding (MoUs) with various agencies, geared towards fostering the development and transfer of technologies.

In a nutshell, the recent activities of the University reflect our unwavering commitment towards excellence, sustainability, and societal welfare. We shall continue to endeavour for the holistic education, impactful research, and collaborative initiatives for the betterment of farmers, and the world at large.

Jai Hind!

(Inderjeet Singh)
Vice-Chancellor

Pashu Palan Mela

Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana organized *Pashu Palan Mela* from 14-15 September 2023. S. Gurmeet Singh Khuddian, Hon'ble Cabinet Minister, Agriculture, Animal Husbandry and Food Processing, Punjab inaugurated the *Mela*. The minister motivated farmers to do farming in scientific manner and develop their own entrepreneurial ventures to augment their income. Dr. S.S. Gosal, Vice-Chancellor, Punjab Agricultural University, Ludhiana, Dr. Ashok Kumar Mohanty, Director, Central Institute of Research on Cattle, Meerut and Sh. Raghunath B, Chief General Manager, NABARD, Chandigarh also graced the occasion. Dr. Inderjeet Singh, Vice-Chancellor, Guru Angad Dev Veterinary and Animal Sciences University said that integrated farming is the key factor to improve the income of farmers. In this pursuit, the theme slogan of *Mela* was kept as '**Dairy, Bakrian Soor te Machhi, Ikko Farm, Aamdhan Achhi**'.



To encourage scientific farming in the state, the University bestowed the 'Chief Minister Awards' to four best farmers in Cattle, Poultry and Value added products categories. The *Mela* provided a platform to farmers, scientists, extension workers and other stakeholders for sharing their knowledge and experiences about the latest trends, technologies and schemes in the livestock sector. The elite animals of the University were exhibited to motivate farmers to breed quality livestock by getting the superior germplasm from the University. The University literature related to dairy, poultry, pig and goat farming and package of practices for animal husbandry, and the magazine '*Vigiyanak Pashu Palan*' were also made available to the participants. Urea treatment of wheat straw/paddy straw, preparation of uromin lick, bypass fat, teat dip practice and acaricide drug were demonstrated. More than 100 companies related to livestock rearing viz. pharmaceutical, cattle feed, semen, equipment, machinery, fodder seed, feed supplements etc. put their stall(s) in the *Mela*. The farmers' organizations established/operational under the aegis of the University also exhibited their activities and products. A mobile application on 'Stem Cells' and literature on different aspects of livestock farming were released by the dignitaries. The value added products of pears prepared by Krishi Vigyan Kendra, Booh (Tarn Taran) were also launched.



G20 Summit

In a landmark development for engaging young minds for sustainable development, the week-long G20 University Connect program jointly organized by Guru Angad Dev Veterinary and Animal Sciences University and Punjab Agricultural University (PAU), Ludhiana under the aegis of Ministry of External Affairs, Government of India and Research and Information System for Developing Countries (RIS) concluded on 23rd August 2023. The mega-event brought together think tanks, policymakers, administrators, academicians, and other stakeholders to deliberate under the theme '**Climate-Smart Agriculture, Food Systems and One Health**' for sustainable progression of the G20 nations. Dr. Inderjeet Singh, Vice-Chancellor of the University highlighted the vivacious role of livestock sector in food and nutritional basket, and in augmenting the household income of farmers for better livelihood. Dr. Singh underpinned the need for updating the course curriculum of veterinary science to match it with the global standards. Dr. S. S. Gosal, Vice-Chancellor of PAU gave his insights on G20 from an agricultural perspective. He highlighted the impact of climate change on diverse fields, especially in agriculture and livestock sectors.

Prof. Manish, Dean, School of International Studies, Central University of Gujarat sensitized the participants about the G20 Presidency and its opportunities for India. Dr. Smita Sirohi, Joint Secretary (G20), Ministry of Agriculture and Farmers Welfare, Government of India, delivered a special lecture on 'Advancing Sustainable Agriculture Transformation: G20 Commitments and Future Research Frontiers'. Sh. Sandeep Rajoriya, ITS, ADG, Directorate General of Foreign Trade (DGFT), Ministry of Commerce and Industry, India delivered a talk on 'Seeding Agricultural Leadership: From Graduates to Innovators'. Dr. Ashok Kumar, Assistant Director General (Animal Health), ICAR, New Delhi gave special remarks on 'One Health: Challenges and Way Forward'. Dr. P. Srinivasa Rao, Fellow, RIS, New Delhi conducted the question-answer session and addressed the knowledge quest of the participants. During the pre-program activities, a total of 22 events were organized wherein a total of 557 students from more than 10 institutions participated. Winners of different competitions viz. elocution, e-poster, e-essay, Ideathon, e-quizzes, rangoli competition etc. were felicitated in the award ceremony.



S. Gurmeet Singh Khuddian, Hon'ble Cabinet Minister interacts with students

The University organized an interaction session of S. Gurmeet Singh Khuddian, Hon'ble Cabinet Minister, Agriculture and Farmers Welfare, Animal Husbandry, Fisheries and Dairy Development, and Food Processing, Punjab with its students. During the interaction, students highlighted their current needs and raised queries regarding employment opportunities, fees, stipends and scholarships. They also highlighted problems during field work, improving veterinary dispensaries and providing better facilities for animal husbandry and livestock farmers. S. Khuddian assured the students that their demands and issues will be considered on priority basis. The minister also launched the plantation drive by planting saplings of traditional trees at the 'Mini Jungle' in the University campus.



XXI Annual Convocation-cum-Scientific Convention of NAVS

Guru Angad Dev Veterinary and Animal Sciences University and the National Academy of Veterinary Sciences (India) (NAVS) jointly organized the XXI Annual Convocation-cum-Scientific Convention under the theme '**Strategies for Enhancing Productivity of Dairy Animals**' on July 1-2, 2023. Shri Parshottam Rupala, Hon'ble Minister for Fisheries, Animal Husbandry and Dairying, Government of India was the Chief Guest of the occasion and S. Gurmeet Singh Khuddian, Hon'ble Minister for Agriculture, Animal Husbandry, Fisheries, Dairy Development and Food Processing, Government of Punjab was the Guest of Honour. Sh. Rupala lauded the contribution of the University in upliftment of dairy and fishery farmers through generation and outreach of novel technologies. S. Khudian underpinned the contribution of agriculture and animal husbandry wealth of Punjab in the national economy. He urged the central government for policy interventions to prohibit milk adulteration causing harm to human health. Dr. Inderjeet Singh, Vice-Chancellor of the University welcomed the esteemed guests and delegates, and highlighted the role of animal husbandry in Indian economy, emphasizing the contribution of Punjab state and the University. Dr. DVR Prakash Rao, President, NAVS (I) presided over the function and briefed about the role of academy in the growth and development of animal husbandry sector. He emphasized the need for entrepreneurship development and policy intervention for creation of a separate research council for veterinary and fishery sciences. Dr. Umesh Chandra Sharma, President, Veterinary Council of India was the special guest. He stressed upon the need of one health concept and creation of a separate Indian Council for Veterinary science for proper funding and growth of the sector.



The event brought together prominent experts, industry professionals, and enthusiasts from around the country to discuss and exchange ideas on strategies for enhancing productivity of dairy animals. The experts discussed different aspects in six broader components i.e. Breeding, Health, Reproduction, Nutrition, Management and Extension, encompassing all important issues of dairy animals.



Dr. O P Chaudhary, Joint Secretary (AW), Ministry of Fisheries, Animal Husbandry & Dairying, Govt. of India graced the valedictory function of the convention as the Chief Guest. The governing council of NAVS (I) conducted the award ceremony where 4 academy awards, 35 fellowships, 8 associate fellowship and 26 memberships were bestowed.

Plantation of *Trivaini* at the University



Plantation of *Triveni*

Atam Pargas Social Welfare Council planted *Trivainis* (group of three trees - *Pipal*, *Neem* and *Banyan*) at Guru Angad Dev Veterinary and Animal Sciences University in presence of the University fraternity. Dr. Varinderpal Singh, Chairman, Atam Pargas said that the *Trivainis* will contribute to the cleanliness of the environment. He thanked the students and faculty of the University for their support in this noble work. Dr. Inderjeet Singh, Vice-Chancellor congratulated the *Atam Pargas* team for carrying out the noble work and also encouraged the students and teachers for generous support in this cause.

The University flagged-off Truckloads of silage for flood relief

The University flagged-off two truckloads of flood relief in form of silage (fodder) to the flood affected areas. Dr. Inderjeet Singh, Vice-Chancellor stated that apart from providing quality education, the University is also actively involved in social causes. While appreciating the efforts of staff and students, he stated that such an endeavor will be of immense help to the livestock farmers of the affected region. Dr. H.S. Banga, Registrar of the University flagged-off the trucks containing livestock fodder in presence of the officers of the University, staff and students. Dr. J.S. Hundal, Principal Scientist and President of Guru Gobind Singh Study Circle (University Unit) stated that 200 quintals of silage in form of 240 bales along with some medicines were distributed amongst the livestock farmers in District Patiala.



Silage for flood relief being flagged-off

Festivities of 77th Independence Day

The University celebrated the 77th Independence Day of India with great enthusiasm and fervor. Dr. Inderjeet Singh, Vice-Chancellor, hoisted the National Flag and paid tributes to those who made sacrifices for the country's freedom. Dr. Singh mentioned the achievements of the University and emphasized on the development of technologies for suitable use of stubble as one of the top priority areas of the institution.

Dr. Singh applauded and motivated scientists, employees and students of the University for putting up their best for strengthening the institution. The Vice-Chancellor along with officers of the University honored non-teaching members for their administrative contributions, achievements and exemplary work for the ascendancy of the institution. The students presented patriotic programme. The officers of the University, faculty, staff and students attended the festivities.



Academic Activities

New Degree Programme to Educate Professional Skills

The University unveiled an innovative and transformative educational initiative, set to reshape the landscape of agricultural education and entrepreneurship by introducing the Bachelor of Vocation (B.Voc.) programme in Integrated Farming and Entrepreneurship. The programme comprises of a ground breaking curriculum that merges sustainable farming practices with entrepreneurial skills aimed to equip prospective students with the knowledge, skills, and mindset needed to thrive in a dynamic and ever-evolving agricultural sector. By integrating animal husbandry and agricultural farming systems, the curriculum addresses critical aspects such as sustainable production, processing, value addition, food safety, animal welfare, and marketing.



Veterinary Building Block Dedicated to Former Dean on Teachers' Day

On the occasion of Teacher's Day, the University named one of the buildings housing the Department of Veterinary Parasitology in the College of Veterinary Science, Ludhiana as 'Dr. B.S. Gill Block' as a gesture of respect and recognition of the outstanding academic contributions made by Dr. Bakhshish Singh Gill to the institution. Dr. Gill was a renowned veterinary parasitologist who served the college for more than 14 Years. 'Dr. B.S. Gill Block' was inaugurated by the family of Dr. Gill in presence of officers of the University. Dr. Inderjeet Singh, Vice-Chancellor shared that Dr. Gill was a visionary academician with great passion for his students and institution, which brought great reforms to uplift the education standards in the University.



International On-Campus Recruitment Drive

The Placement Cell of the University in collaboration with Department of Teaching Veterinary Clinical Complex successfully organized an 'International On-Campus Recruitment Drive' for veterinary students who have cleared their BCSE/NAVLE examination and aspire to seek career opportunities abroad. It was first of its kind initiative by placement cell easing the placement process for students who want to settle/work abroad.

Keeping in view the hurdles being faced by students in securing employment abroad even after clearing their BCSE/NAVLE, many potential recruiters abroad especially from Canada and USA were invited to participate in the event. The drive witnessed an overwhelming response from students.





Activities under Institutional Development Project (IDP)



Shrimp Farming Success Story Goes International



Dr. Prabjeet Singh delivering the talk

Dr. Prabjeet Singh, Assistant Professor, College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University presented an invited lead talk on **‘Shrimp Farming: A Ray of Hope for Destitute Farmers of Waterlogged Salt Affected Areas of North Western India’** in the 2nd Conference on Agricultural Innovation and Natural Resources-2023 organised by Aquatic Science and Innovative Management Division, Faculty of Natural Resources at Prince of Songkla University (PSU), Thailand. Dr. Singh underwent 3-months International Faculty Training on **‘Post-harvest quality changes in cultured shrimps during iced and refrigerated storage’** at the International Centre of Excellence in Seafood Science and Innovation, PSU, Thailand.

University flags off undergraduate students to Malaysia for training



Student going to Malaysia during meeting with the Vice-Chancellor

The University flagged off 9 B.Tech. Dairy Technology (Batch 2019) students for an international training on **‘Bioactive Peptide Extraction and Identification’** at Universiti Sains Malaysia (USM), Malaysia from 13th July, 2023. Dr. Inderjeet Singh, Vice-Chancellor motivated the students to work hard to acquire new skills and for further sharing of knowledge gained during the training with fellow students after coming back to India.

Students on One-Month Training at the University of West Indies



Students going to West Indies, with the Vice-Chancellor

A contingent of five outstanding undergraduate students from College of Veterinary Science, Ludhiana underwent one-month exposure training at the University of West Indies. The training will allow them to delve into various aspects of veterinary medicine, gaining valuable insights and exposure to disease diagnosis and treatment. The Vice-Chancellor emphasized the importance of international exposure in shaping future veterinary professionals and motivated students to keep the University's flag high on the international platform.

National Fish Farmers Day



Farmer-student meet-cum-exposure visit

The University celebrated the National Fish Farmers Day to commentate contribution of induced breeding in the Blue Revolution. The breakthrough achieved in induced breeding of fish in captivity by Dr. Hira Lal Chaudhury on 10th July, 1957, crowned with the title of **‘Father of Induced Breeding’**, served as a much-needed catalyst to synergise growth of the aquaculture sector. To showcase solidarity with the fisher folks on this occasion, the fraternity of College of Fisheries visited the progressive fish farmers S. Buta Singh, S. Sukhjot Singh and S. Rajdeep Singh of village Karodian (Ludhiana) for interaction, appreciation and felicitation.

Research

Memorandum of Understanding (MoU) with Agrinnovate India Limited



The University inked a Memorandum of Understanding (MoU) with Agrinnovate India Limited, New Delhi for technology transfer and commercialization of the University's technologies. The MoU was signed by Dr. JPS Gill, Director of Research and Dr. Praveen Malik, CEO of Agrinnovate India Limited in presence of Dr. Inderjeet Singh, Vice-chancellor and other officers of the University. The Vice-chancellor emphasized the need of driving innovation from the laboratory to practical applications with tangible benefits.

University collaborates with Agricultural Skill Council of India for skill-based courses



The University Administration under the leadership of Dr. Inderjeet Singh, Vice-Chancellor had a meeting with Dr. Satender Singh Arya, Chief Executive Officer of Agricultural Skill Council of India (ASCI), regarding the development of livestock, poultry and fisheries-based skill ecosystem in the University. The collaboration of ASCI and the University for development of vocational and skill-based courses will help students, farmers and other stakeholders in the farming sector for gaining contemporary skills and enhancing their employability.

University, Milkfed and NDDB to study the impact of feeding Paddy Stubble Silage



Meeting of the University experts with Milkfed and NDDB officials

Guru Angad Dev Veterinary and Animal Sciences University with Milkfed Punjab and National Dairy Development Board (NDDB), Anand is going to conduct a collaborative study on the utilization of paddy straw silage in ration of dairy animals to overcome the problem of paddy straw burning in the state. In this regard, a meeting of the officers of said institutions was held under the chairmanship of Dr. Inderjeet Singh, Vice-Chancellor. The house deliberated on use of paddy straw in livestock production to overcome the problem of stubble burning and to cut the scarcity and high cost of wheat straw.

Fisheries Scientist Earns Research Project of Science for Equity Empowerment and Development (SEED)

The University bagged a research project of Science for Equity Empowerment and Development (SEED) Division of Department of Science and Technology, Ministry of Science and Technology, Government of India under title 'Improvement of livelihood status of the Scheduled-Caste (SC) population of Punjab State through Biofloc fish farming and value addition of produced fish' worth Rs. 52.36 lakhs. The principal investigator of the project, Dr. Vijay Kumar Reddy S., Scientist shared that under the present environmental challenges, it become imperative to adapt climate smart, water saving and cost-effective aquaculture technologies like Biofloc based fish farming (BFF) to benefit different stakeholders, especially the scheduled caste population of the state. Value addition of fish will further enhance farmers' income, besides extending shelf life of fisheries products.



Vice-Chancellor visits Thai University

Dr. Inderjeet Singh, Vice-Chancellor of Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana visited the Prince of Songkla University (PSU), Hatyai, Thailand, as a visiting Professor. The President of PSU, Dr. Niwat Keawpradub warmly welcomed Dr. Singh and reiterated the need for strong academic and research collaborations between the two institutes. Prof. Soottawat Benjakul, Director, International Centre of Excellence in Seafood Science and Innovation (ICE-SSI) and Dr. Inderjeet Singh discussed the possibilities of sandwich Master's degree in Fish Processing Technology under the joint seal of the two universities. Dr. Singh held meetings, brainstorming sessions and extensive deliberations with the officers of the host university to understand their administrative setup, educational pattern and research programmes so that the best practices may be implemented back in India.



Award(s)/ Honour(s)/Recognition(s)

Students Won 'Awards' at National Fisheries Conference

Postgraduate students of College of Fisheries, namely Prapti Sudan, Simran Kaur and Parmeet Kaur received accolades at the National Conference on **'Transforming Rural Poverty to Prosperity Through Sustainable Fisheries'** held at College of Fisheries, Kishanganj, Bihar Animal Sciences University (BASU). Ms. Prapti Sudan, a Ph.D. student was felicitated as **Young Woman Scientist**. Ms. Simaran Kaur received **'Best Oral Presentation Award'** for her research work on 'Isolation and Identification of *Citrobacter freundii* from Suspected Food Fish during Disease Outbreak'. Ms. Parmeet Kaur, student of M.F.Sc. was adjudged as one of the Best Poster Presentation Award winners for her work on 'Nutritional Value and Acceptability of Carp Meat Incorporated Nutritional Bar'.



Ms. Prapti Sudan receiving her award

National Academy of Veterinary Sciences (India) (NAVS) Awards

The University scientists brought laurels at the XXI Annual Convocation-cum-Scientific Convention of the National Academy of Veterinary Sciences (India) (NAVS) held at Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana under the theme **'Strategies for Enhancing Productivity of Dairy Animals'**.



Dr. JPS Gill, Director of Research, Dr. Yashpal Singh Malik, Dean, College of Animal Biotechnology, Dr. Varinder Pal Uppal, Professor, Veterinary Anatomy, Dr. Swaran Singh Randhawa, Director of Clinics, and Dr. Deepti Narang, Professor-cum-Head, Department of Veterinary Microbiology were honoured with Fellowship of the Academy in the recognition of their significant contribution for the advancement of veterinary sciences. Dr. Ashwani Kumar and Dr. Jaspal Singh Hundal bagged Associate Fellowship. Dr. Nitin Mehta got the 'Young Scientist Award'. Dr(s) Ratan Kumar Choudhary, Om Prakash Malav, S Sivakumar and Niraj Kumar Singh got membership of NAVS.

Webinar(s)/Seminar(s)/Workshop(s)/Training(s)

International Speaker Enlightens the University Students on Parasite Resource Banks



Directorate of Human Resource Management Centre hosted a guest lecture of Dr. Tilak Chandra Nath, Director of External Affairs at Sylhet Agricultural University, Bangladesh under title **‘Paranomics: Discovering and Developing Parasite Resource Bank’**. Dr. Nath, an expert in the field of parasitology, provided a comprehensive overview of the emerging discipline of ‘Paranomics’ and elucidated the concept of parasite resource banks, emphasizing their importance in research, drug development, and disease control strategies. He emphasized the significance of collaborative efforts and knowledge sharing amongst institutions and researchers to foster advancements in this specialized field. Dr. Nath also held a meeting with Dr. Inderjeet Singh, Vice-Chancellor of the University and discussed potential areas of collaboration and strengthening of the ties between the two esteemed institutions.

Awareness camp on milk adulteration



College of Dairy Science and Technology organized **‘Milk Adulteration Evaluation and Awareness Camp’** from 10th July to 15th August 2023. The event aimed at educating the consumers about importance of consuming pure and unadulterated milk while providing them with an opportunity to get their milk samples tested for adulteration, free of charge.

Workshop on Blended Learning Platform



Workshop in progress

The University organized a workshop on National Agricultural Research and Education System, Blended Learning Platform (NARES-BLP) at the College of Animal Biotechnology. A total of 57 participants attended the training wherein expert(s) from ICAR imparted training on Blended Learning Platform to the faculty and students. The NARES-BLP system has been developed by the Indian Council for Agricultural Research to develop and deploy a ‘Next – Generation Learning Management System’ allowing all stakeholders in Agricultural higher education to engage in effective teaching, learning and monitoring. The workshop instilled awareness on various virtual platforms that could be exploited by the teachers and administrators to improve and simplify the learning process.

Orientation Programme on Anti Ragging



Anti ragging orientation programme

Directorate of Students’ Welfare-cum-Estate Organization of the University conducted an orientation programme on anti ragging. Dr. Ashish Virk, Professor, University Institute of Law, Panjab University Regional Centre, Ludhiana, sensitized the students and members of anti ragging committees and anti ragging squads of various colleges of the University about the menace of ragging and its repercussions. She urged the students and faculty to join hands in putting an end to ragging.

Workshop on Precision Livestock Farming



Workshop on Precision Livestock Farming

The University in collaboration with ICAR-Agricultural Technology Application Research Institute (ATARI) Zone I organized a research-extension interface meet on precision livestock farming, tailored exclusively for animal scientists of Krishi Vigyan Kendras (KVKs). A total of 45 scientists took part in the event. The interface delved into the usage of latest technologies for climate resilient precision livestock farming through artificial intelligence, machine learning, biosecurity, one health etc. The workshop featured presentations and discussions on climate-resilient livestock farming, smart use of crop residues, reproductive management and recent developments in animal breeding promoting eco-friendly practices. An on-farm exposure-cum-demonstration visit to sensitize the participants about precision livestock farming practices at Directorate of Livestock farms of the University was also conducted.

Meeting with Progressive Livestock Farmers Association

The University conducted monthly meeting with the Progressive Livestock Farmers Association. A total of 53 farmers attended the meeting and got sensitized about protection of dairy animals from houseflies and mosquitoes by adopting integrated parasite management by taking care of cleanliness, bio controls, fly replants, dusting etc.



Some common homemade practices like using jiggery, ropes, milk and insecticides were discussed. The expert(s) also delivered lecture on the modification of diets during hot and humid season to get maximum milk solids and suggested farmers to take care of Thermal Humidity Index (THI). The participants were advised to look for quality feed ingredients, make feed for lesser duration and use certain feed additives especially anti-fungal, liver tonics, electrolytes, yeast etc. to boost dry matter intake.

Meeting of Innovative Fish Farmers' Association



Fish farmers from different districts of the State attended monthly meeting of the Innovative Fish Farmers Association (IFFA) at College of Fisheries of the University. The farmers were sensitized about management of fish ponds with special reference to environmental fluctuations during monsoon season including free board to accommodate rain water, maximum level sieved outlet to prevent stock escape/loss due to overflow, liming for pH control, dyke height to avert entry of flood water (along with unwanted polluting materials) from catchment area, dyke strength to prevent dyke breach and stock loss, and entry of predatory/weed fish in the pond with canal water, etc.



Expert(s) acquainted the farmers about importance of water quality management in fish growth and health management, different methods for sustainable development and maintenance of optimal population of natural food in aquaculture ponds for higher productivity. Additionally, farmers' queries to control snails in fish ponds during monsoon were also addressed with suitable preventive solutions and control measures.

Orientation Workshop on Intensive Aquaculture



Workshop on Intensive Aquaculture

College of Fisheries organized an orientation workshop on intensive aquaculture technologies i.e., Recirculatory Aquaculture System (RAS) and Bio-floc Based Aquaculture (BFA) for capacity building of officials of Department of Fisheries (DOF), Punjab and farmers. A total of 42 participants attended the workshop. Dr. Inderjeet Singh, Vice-Chancellor inaugurated the workshop and said that indoor climate smart high yielding aquaculture technologies like RAS and BFA are essentially required to address environmental, food security and food safety concerns. The capacity building resource center established in the University is an asset for the region, which is open for entrepreneurially aspirant youth, farmers and fisheries off-professionals from any part of the country, he added. Technical sessions with practical demonstration on RAS and BFA were conducted.

Parthenium Awareness Programme



The University organized a Parthenium awareness programme to spread awareness about the menace of *Parthenium hysterophorus* - a weed, known to cause a variety of diseases in humans and animals, which also reduces agricultural productivity. Expert(s) sensitized the participants about various ill effects of *Parthenium* on human health and the environment and encouraged students to keep their surroundings free from harmful weeds and spread awareness about the issue to their friends and families. A *Parthenium* eradication drive was conducted to remove and destroy the weeds from various parts of the University campus.

Collaborative training on Artificial Intelligence in livestock sector



Online training in progress

The University in collaboration with National Institute of Agricultural Extension Management (MANAGE), Hyderabad organized an online training on '**Prospects and Applications of Artificial Intelligence in the Livestock Sector**'. A total of 889 stakeholders registered for training. The experts sensitized the participants regarding the concepts of big data, neural networks, internet of things, blockchain technology, precision livestock farming, smart collars, cloud computing, natural language processing, etc. A hands-on session was also organized on the programming languages used in machine learning.

Training on Utilization of paddy straw for animal production



The University scientist delivering talk to the participants

The Directorate of Extension Education in collaboration with the Directorate of Livestock Farms and Department of Animal Nutrition of the University organized a workshop for officials of Dairy Development Department on '**Use of Paddy Straw in Animal Production**'. The expert(s) advocated the strategic use of paddy straw in accordance with the production level of dairy animals and imparted tips for enrichment of paddy straw with urea and molasses to improve its nutritional value. They emphasized paddy straw usage in Total Mixed Ration at commercial farms and discussed the alternate uses of paddy straw in animal production and poultry.

Skill Development Training to Promote Pangas Catfish Farming



Participants of training with the University expert(s)

College of Fisheries in collaboration with the Department of Fisheries (DOF), Punjab, conducted the skill development training to promote Pangas catfish farming-cum-processing model for doubling farmers income. The training was organized at the Government Fish Seed Farm of DOF at village Mohie (Ludhiana), where the University has established a pangas catfish farming demonstration unit for capacity building of entrepreneurial stakeholders under Rashtriya Krishi Vikas Yojana (RKVY) Scheme. A total of 48 stakeholders attended the training focused on rearing Pangas catfish during summer season and its processing for preparation of value-added products.

Training Programme on Scientific Mushroom Cultivation

Krishi Vigyan Kendra, Booh (Tarn Taran) organized a vocational training on 'Scientific Mushroom Cultivation'. A total of 22 farmers participated in training and gained scientific knowledge on production techniques of different types of mushroom and its value addition aspects. The identification of various pest and diseases, their management options, marketing of the mushroom and economics of mushroom cultivation were also discussed. The cultivation of different types of mushroom was telecasted through YouTube. S. Sahib Singh, a progressive mushroom grower shared his experience on mushroom farming and provided tips on successful growing of mushrooms and their marketing.



Activities of under Farmer FIRST Project

Training on Value Addition of Milk and Clean Milk production



Training on value addition of milk in progress

The University trained women farmers for clean milk production and value addition of milk at village Dhaner (Barnala). Expert(s) motivated farmers to adopt scientific methods of value addition to milk, and an entrepreneurial approach by packing the products with modern equipment for selling these in market. Expert(s) stressed on the good animal husbandry practices along with cleanliness of farmer, animals and surroundings to procure clean milk and ensure good health of animal(s), which will not only save the animals from disease(s) like mastitis but will also prevent the unnecessary use of drugs and expenditure in treating animal(s). Similarly, a training on clean milk production was also conducted at village Mehal Kalan (Barnala).

New Village Adopted

The University adopted village, Pamal under the Farmer FIRST project. The expert(s) interacted with panchayat members and farmers, and familiarized them with the technical interventions and upcoming events in the operational area like infertility camps, animal health camps, exposure visits etc. The village will be developed as a goat farming village and an integrated farming system will also be promoted.



The University expert(s) visit livestock farm at village Pamal

Demonstration of Packaging Machinery



Expert(s) delivering demonstration and training

The University organized ‘**Method demonstration and training camp**’ on value addition of milk at village Hamidi (Barnala). Expert(s) imparted knowledge to the participants on importance of packaging of value added products and conducted hands-on training for cup-sealer machine and hand-sealer machine. The participants were encouraged to form Self-Help Groups and boost their earning by making value added products and packing them with the demonstrated machinery.

Seminar on prevention of tick-borne diseases in livestock

The University organized a seminar regarding prevention of tick-borne diseases in livestock at village Kalala (Barnala) with objective to make the village ‘Tick-free’. A total of 35 farmers participated in the seminar. Expert(s) provided insights on tick multiplication, tick-borne diseases, their prevention and control. Literature on control of ecto and endoparasites was also distributed amongst the participants. Fecal samples from 25 animals were also collected to analyse the prevalence of endoparasites in the operational area for requisite interventions.



Farmers attending the seminar

An exposure visit of Farmers to Pashu Palan Mela



The University arranged an exposure visit of farmers from various adopted villages under the Farmer FIRST project to *Pashu Palan Mela* held at the University campus on 14-15 September 2023. A total of 120 farmers took part in the event and gained scientific knowledge about livestock farming. The participants had direct interface with the scientists of the University and got familiar with the new animal husbandry practices regarding scientific livestock management.

Infertility and Goat Welfare camp

The University organized infertility camp and goat welfare camp at village Kalala (Barnala). This was the third camp under the series of infertility camps, where expert(s) examined 24 dairy animals and treated them with third dose under the protocol. Expert(s) acquainted farmers to pay special attention towards the reproductive health of animals to attain high economic benefits in return. Goat welfare camp was also organized in the village where expert(s) did deworming of goats and created awareness amongst the goat rearers about importance of deworming their flock at regular intervals.

Training-cum-demonstration on Silage making



The University conducted training-cum-demonstration on Silage making in village Kalala (Barnala). The University expert(s) visited various sites and demonstrated the process of silage making to the farmers, making them aware about the whole process of controlled fermentation, under anaerobic conditions of chopped crop residues or forages with high moisture content.