



ANNUAL REPORT

2023-24





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2023-2024

**GURU ANGAD DEV VETERINARY AND ANIMAL SCIENCES UNIVERSITY
LUDHIANA-141 004**



PREFACE

It gives me immense pleasure to present to you the Annual Report of Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, for the period 2023-24. This report embodies the broad spectrum of the university's academic, research, extension, and co-curricular activities, as well as those of its affiliated colleges. Since its inception in 2005, the university has consistently demonstrated excellence in education, research, and service to the farming communities of Punjab and beyond. I am proud to highlight that, in 2024, our institution was ranked second among the State Veterinary Universities in the prestigious NIRF Ranking.



In terms of student intake, the university admitted a total of 1,954 students—comprising 773 females and 1,181 males—across a range of undergraduate, postgraduate, doctoral, and diploma programs. Our state-of-the-art lecture halls, equipped with cutting-edge facilities, foster an environment conducive to effective teaching and learning, ensuring that our students receive the highest standard of education.

On the research front, the university successfully operated 47 research and development schemes, funded by various prestigious national and international agencies, including the Indian Council for Agricultural Research, Department of Science and Technology, Department of Biotechnology, and the Ministry of Animal Husbandry, Dairying & Fisheries under the National Livestock Mission. These projects span a wide range of veterinary and animal sciences and are pivotal in advancing our academic mission.

In the realm of animal welfare and clinical services, the university boasts one of the most advanced veterinary hospitals in the region, fully equipped with modern diagnostic tools and cutting-edge technologies. During the year, the hospital handled 34,836 clinical cases of livestock and pet animals, while also testing 27,052 clinical samples. Our dedicated faculty and staff continue to make significant strides in disease prevention, diagnostic techniques, and surgical innovations, contributing to groundbreaking research in the field of livestock health and production.

In 2023-24, GADVASU also forged new international collaborations, transferring cutting-edge technologies to industry and entrepreneurs, thus contributing to the global advancement of veterinary science.

As far as co-curricular activities are concerned, our students actively participated in a variety of events, including Inter-University Sports Tournaments, the Annual Athletic Meet, cultural activities, youth festivals, and programs under NCC and NSS, both at the university and national levels. These endeavors resulted in numerous accolades and brought great pride to our institution.

At GADVASU, we have always emphasized a student-ready entrepreneurship approach, one that equips our students with job-oriented skills through quality education, need-based research projects, and strengthened linkages with industry. We are committed to boosting productivity, adding value, and ensuring the quality and safety of animal-based foods, while simultaneously promoting environmentally sustainable production systems.

None of these achievements would have been possible without the unwavering commitment, expertise, and passion of our dedicated staff. Their professionalism and tireless efforts form the backbone of the university's success. I hope that the Annual Report 2023-24 will serve as a comprehensive and valuable resource for professionals in the fields of livestock, dairy, and fishery development, as well as for other institutions of higher learning across the country.

Vice-Chancellor



CONTENTS

TOPIC	PAGE NO.
ABOUT THE UNIVERSITY	5
ORGANIZATIONAL AND FUNCTIONAL SETUP	6-8
ADMINISTRATION	9
ACADEMIC COUNCIL AND OFFICERS OF THE UNIVERSITY	10-11
FACULTY PROFILE	12
STUDENTS' PROFILE	13-14
FINANCIAL REPORT	15
ACADEMIC UNITS	16-33
TEACHING	34-46
RESEARCH	47-86
EXTENSION	87-149
LIBRARY AND NETWORKING	150-151
DIRECTORATE OF STUDENT WELFARE AND ESTATE OFFICE	152-168
AWARDS/HONORS/FELLOWSHIP BY FACULTY	169-185
PARTICIPATION BY FACULTY IN CONFERENCES/SYMPOSIA/ WORKSHOPS/ TRAININGS, ETC.	186-197
CONFERENCES/SYMPOSIA/WORKSHOP/TRAININGS, ETC. ORGANISED	198-207
INVITED LECTURES DELIVERED BY FACULTY	208-218
DISTINGUISHED VISITORS AT KRISHI VIGYAN KENDRAS	219-220
DISTINGUISHED VISITORS AT GADVASU, LUDHIANA	221-228
VISIT ABROAD	229-231
NATIONAL AND INTERNATIONAL LINKAGES	231-233
RESEARCH PUBLICATIONS (INTERNATIONAL AND NATIONAL) AND REVIEW ARTICLES	234-249



ABOUT THE UNIVERSITY

Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) was established on 9th August 2005 through Punjab Act No. 16 of 2005 at Ludhiana, with its operations commencing on 21st April 2006. Initially, it began with the College of Veterinary Science, which had been established in 1969 and was transferred from Punjab Agricultural University to GADVASU. Since its inception, the university has made remarkable strides and is now recognized as one of the top-ranked Veterinary and Agricultural Universities in India.

The university was established with a clear objective: to produce highly skilled, trained, and efficient human resources to accelerate the growth of Punjab's livestock, dairy, and fishery sectors. To achieve this, GADVASU established several key institutions, including the College of Dairy & Food Science Technology, the College of Fisheries, the College of Animal Biotechnology, and the Veterinary Polytechnic, all aimed at providing exceptional teaching, research, and extension services in their respective fields.

In addition, recognizing the growing demand for professionally qualified veterinary graduates, the university inaugurated a constituent veterinary college in Rampura Phul, Bathinda, which became operational in the academic session 2019-20. This college aims to meet the increasing demand for veterinary professionals across the state. The university has also established Regional Livestock Research and Training Centres at Kaljharani (Bathinda), Talwara (Hoshiarpur), Booh (Tarn Taran), and Sappanwali (Fazilka) to address region-specific needs in the dairy sector. Moreover, three Krishi Vigyan Kendras have been set up in Tarn Taran, Barnala, and Mohali districts for the assessment, dissemination, refinement, and demonstration of agricultural technologies.

GADVASU's reputation has been bolstered through multiple recognitions. The university is listed under Section 12(B) of the UGC Act, 1956, which allows it to receive central assistance from the University Grants Commission (UGC). The university has also received accreditation from the UGC and the Indian Council for Agricultural Research (ICAR), and is a regular member of the Association of Indian Agricultural Universities (AIAU) and the Association of Indian Universities (AIU). Furthermore, the ICAR has accredited the university and its four constituent colleges (College of Veterinary Science, College of Dairy Science and Technology, College of Fisheries, and College of Animal Biotechnology) with a Grade A for five years (until 31st March 2023).

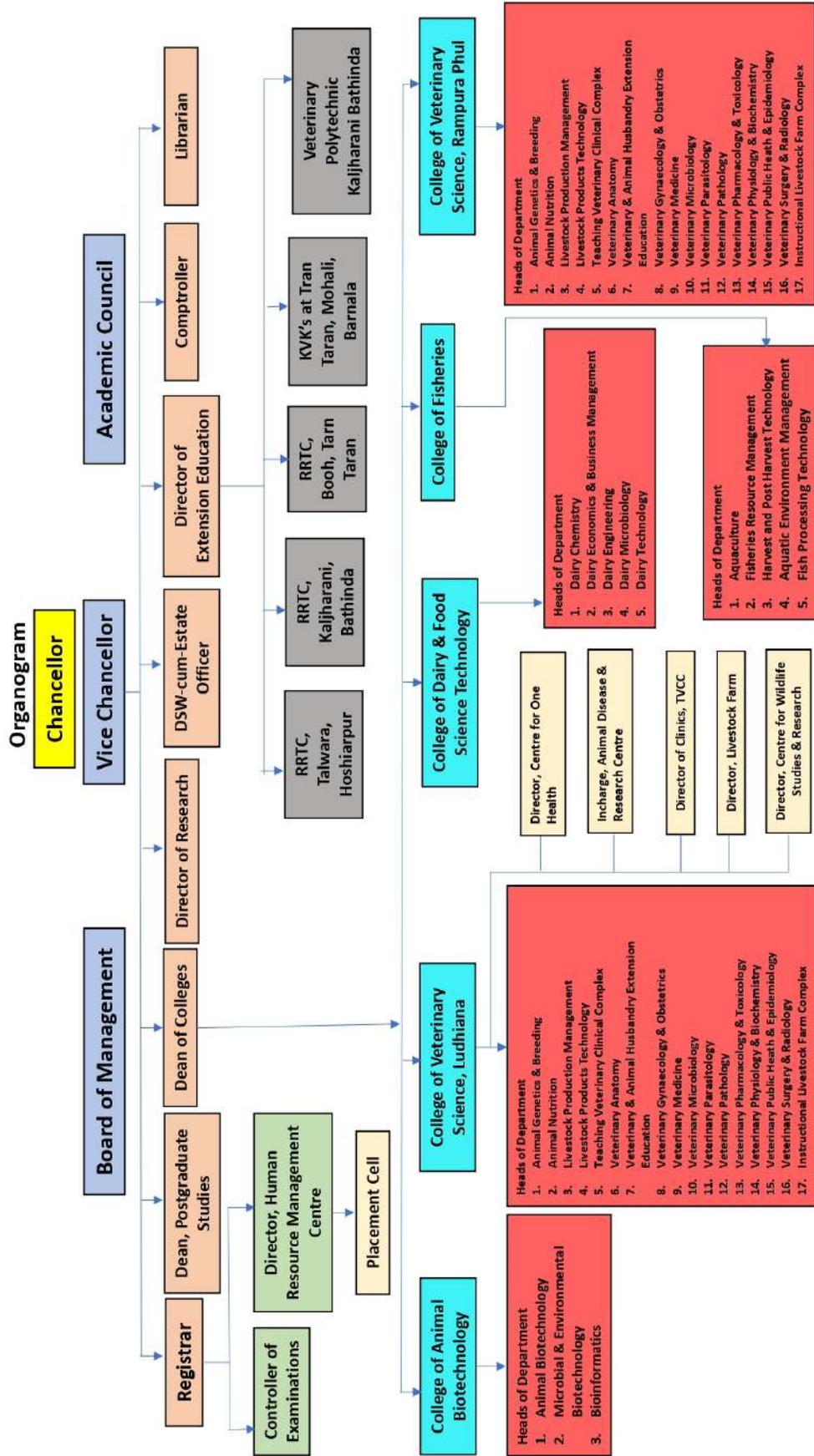
In recent years, the university has further advanced its academic landscape. The School of Animal Biotechnology was upgraded to the College of Animal Biotechnology in 2019, while the School of Public Health and Zoonoses was transformed into the Centre for One Health in 2021. Additionally, the establishment of the Directorate of Human Resource Management in 2021 marked a significant step toward accelerating the growth and development of the university's human resources through enhanced training, operational activities, and managerial development.

In 2024, GADVASU was proudly ranked 2nd among State Veterinary Universities in the NIRF Rankings, reaffirming its position as a leader in veterinary education, research, and service.

The University's Key Goals and Objectives:

- ✓ To produce highly trained, universally competent veterinary, animal husbandry, dairy, and fishery professionals, including Master's and Doctoral level specialists, to address the pressing needs of the state in animal health and production.
- ✓ To undertake cutting-edge, multi-disciplinary research in priority areas, aiming to resolve challenges in veterinary, animal husbandry, dairy, and fishery sectors.
- ✓ To foster faculty development through opportunities for participation in training programs, workshops, seminars, and international exchange programs, enhancing their capabilities in teaching and research.
- ✓ To provide continuous professional education in the fields of veterinary, animal, dairy, and fishery sciences, ensuring that professionals stay abreast of new developments in their fields.
- ✓ To offer expert consultancy and services to livestock owners, government agencies, and other stakeholders, aiding in livestock policy formation and the overall advancement of the sector.
- ✓ To run a state-of-the-art multi-specialty veterinary hospital, which not only provides high-quality animal treatment but also offers clinical training opportunities for students.
- ✓ To encourage cooperation and collaboration with national and international institutions, universities, industries, and governmental agencies, strengthening the university's research and educational capacities.
- ✓ To conduct extension education activities, effectively disseminating knowledge and technologies to end-users, including farmers, the industry, government agencies, and the marketing sector.
- ✓ The unwavering commitment to these goals ensures that GADVASU continues to serve as a beacon of excellence in the veterinary and animal sciences sector, driving progress and development across Punjab and beyond.

ORGANIZATIONAL SETUP





FUNCTIONAL SETUP

The functioning of Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) is guided and regulated by a set of key bodies that focus on the university's core areas of education, research, and extension activities. These bodies ensure that the university operates efficiently and meets its mission to serve the academic, professional, and societal needs. The primary governing bodies include:

- Board of Management
- Academic Council
- Committee on Students' Welfare
- Research Advisory Committee
- Extension Education Advisory Committee
- Resident Instruction Committee
- Postgraduate Committee
- Board of Studies

Board of Management

The Board of Management is the supreme administrative body of the university, overseeing its financial operations and assets. It plays a critical role in the appointment of officers, faculty, and in setting the strategic direction for the university's overall functioning. The Board provides essential guidance for the smooth and effective running of all university affairs.

Academic Council

The Academic Council is responsible for managing the academic functions of the university, ensuring the maintenance of educational standards, and regulating the curriculum, teaching methodologies, and examinations. It ensures that the university maintains the highest academic integrity and excellence in its educational offerings.

Committee on Students' Welfare

The Committee on Students' Welfare is dedicated to overseeing and regulating all aspects of student life and welfare. This body is committed to ensuring that students' academic, personal, and professional needs are addressed, thereby fostering a conducive environment for learning and growth.

Research Advisory Committee

The Research Advisory Committee oversees the university's research programs, including the allocation of research funds, the conditions under which research grants are accepted, and the strategic direction of research initiatives. It plays an essential role in shaping the research agenda and ensuring that the university's research activities align with its mission to address the needs of the veterinary, animal sciences, and agricultural sectors.

Extension Education Advisory Committee

The Extension Education Advisory Committee is charged with coordinating and guiding the university's extension programs, ensuring alignment with both state and national priorities. This committee devises strategies to implement the university's outreach programs and fosters stronger connections with rural communities and industry stakeholders.

Resident Instruction Committee

The Resident Instruction Committee serves as the key body responsible for recommending changes in the university's curricula, including the introduction of new courses or the modification and removal of



existing ones. It ensures that the curriculum remains relevant, rigorous, and responsive to the needs of the profession and the evolving demands of the industry.

Postgraduate Committee

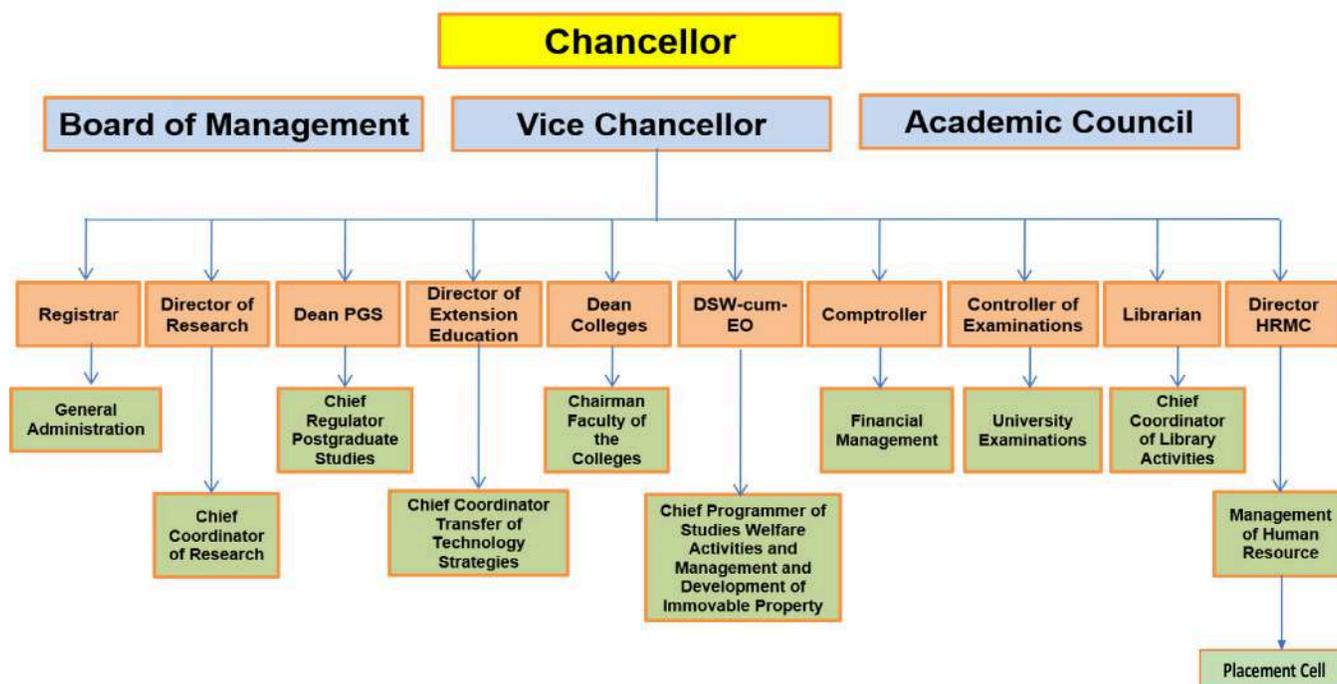
The Postgraduate Committee reviews and evaluates the curricula and courses for postgraduate students, which are recommended by the Board of Studies. This body ensures that the postgraduate programs maintain a high standard of education and align with the university's academic goals. The committee plays an instrumental role in shaping the university's postgraduate offerings before they are presented to the Academic Council for final approval.

Board of Studies

The Board of Studies is responsible for proposing new courses and curricula for the university's various academic programs, and for reviewing the teaching standards and evaluation procedures. It ensures that the courses offered are academically rigorous, current, and relevant to the needs of the profession and society at large. Through its recommendations, the Board plays a key role in shaping the university's academic framework and enhancing the quality of education.

Together, these bodies ensure that GADVASU operates with the highest standards of academic excellence, research integrity, and extension impact, fulfilling its mission to serve the veterinary, animal sciences, and fisheries sectors both regionally and nationally.

Functional Setup





ADMINISTRATION

BOARD OF MANAGEMENT

S. No.	Member of the Board of Management	Designation
1.	Dr. Inderjeet Singh Vice-Chancellor, Guru Angad Dev Veterinary & Animal Sciences University Ludhiana	Working Chairman
2.	Shri. Anurag Verma IAS, Chief Secretary to Government of Punjab, Room No. 26, 6 th Floor, Punjab Civil Secretariat, Sector-1, Chandigarh	Ex-officio Member
3.	Shri K.A.P Sinha IAS, Additional Chief Secretary, Department of Agriculture and Farmers Welfare, Punjab, Chandigarh.	Ex-officio Member
4.	Shri. Vikas Pratap IAS, Additional Chief Secretary, Department of Animal Husbandry, Dairy Development & Fisheries, Punjab, Room No. 327, 3 rd Floor, Punjab Civil Secretariat-2, Sector-9, Chandigarh	Ex-officio Member
5.	Shri. Ajoy Kumar Sinha IAS, Principal Secretary, Department of Finance Punjab, Room no. 10, 8 th Floor, Punjab Civil Secretariat-1, Sector-1, Chandigarh	Ex-officio Member
6.	Dr. Raghavendra Bhatta Deputy Director General (Animal Sciences), Division of Animal Science, Krishi Bhawan, ICAR, New Delhi	Ex-officio Member
7.	Dr S.K. Uppal Dean Postgraduate Studies, Guru Angad Dev Veterinary & Animal sciences University, Ludhiana	Ex-officio Member
8.	Dr. Gursharanjit Singh Bedi Director of Animal Husbandry, Punjab, Livestock Complex, 2 nd Floor, Sector-68, Near Army Law College, SAS Nagar, Mohali	Ex-officio Member
9.	Shri. Kuldeep Singh Director, Dairy Development, Punjab, Livestock Complex, 4 th Floor, Sector-68, Near Army Law College, SAS Nagar, Mohali	Ex-officio Member
10.	Dr. Jasvir Singh Director and Warden of Fisheries, Punjab, Livestock Complex, 4 th Floor, Sector-68, Near Army Law College, SAS Nagar, Mohali	Ex-officio Member
12.	Dr. Harmanjit Singh Banga Registrar, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	Secretary



ACADEMIC COUNCIL

S. No.	Member of Academic Council	Designation
1.	Dr. Inderjeet Singh Vice-Chancellor	Chairman
2.	Dr. J.P.S. Gill Director of Research	Member
3.	Dr. Sanjeev Kumar Uppal Dean Postgraduate Studies	Member
4.	Dr. Parkash Singh Brar Director of Extension Education	Member
5.	Dr. Sarvpreet Singh Ghuman Dean, College of Veterinary Science, Ludhiana	Member
6.	Dr. R.S. Sethi Dean, College of Dairy & Food Science Technology	Member
7.	Dr. Meera D. Ansal Dean, College of Fisheries	Member
8.	Dr. Yashpal Singh Malik Dean, College of Animal Biotechnology	Member
9.	Dr. Baljinder Kumar Bansal Dean, College of Veterinary Science, Rampura Phul, Bathinda	Member
10.	Dr. Vaneet Inder Kaur Principal Scientist (Fisheries), Department of Aquaculture	Member
11.	Dr. Digvijay Singh Head, Department of Veterinary Physiology & Biochemistry	Member
12.	Dr. Swaran Singh Randhawa Director of Clinics (TVCC)	Member
13.	Dr. Navdeep Singh Head, Department of Veterinary Surgery & Radiology	Member
14.	Dr J.S. Bedi Director, Centre for One Health	Member

Secretary: Dr. Harmanjit Singh Banga, Registrar



OFFICERS OF THE UNIVERSITY

S. No.	Name	Designation
1.	Dr. Inderjeet Singh	Vice-Chancellor
2.	Dr. Harmanjit Singh Banga	Registrar
3.	Dr. Jatinder Paul Singh Gill	Director of Research
4.	Dr. Sanjeev Kumar Uppal	Dean Postgraduate Studies
5.	Dr. Parkash Singh Brar	Director of Extension Education
6.	Dr. Satyavan Rampal	Director Students' Welfare-cum-Estate Officer
7.	Dr. Sarvpreet Singh Ghuman	Dean, College of Veterinary Science, Ludhiana
8.	Dr. Baljinder Kumar Bansal	Dean, College of Veterinary Science, Rampura Phul
9.	Dr. Meera D. Ansal	Dean, College of Fisheries
10.	Dr. Ram Saran Sethi	Dean, College of Dairy & Food Science Technology
11.	Dr. Yashpal Singh Malik	Dean, College of Animal Biotechnology
12.	Dr. Nirmal Singh	University Librarian
13.	Dr. Vinod Kumar Dumka	Comptroller
14.	Dr. Opinder Singh	Controller of Examinations
15.	Dr. Lachhman Das Singla	Director, Human Resource Management Centre

FACULTY PROFILE

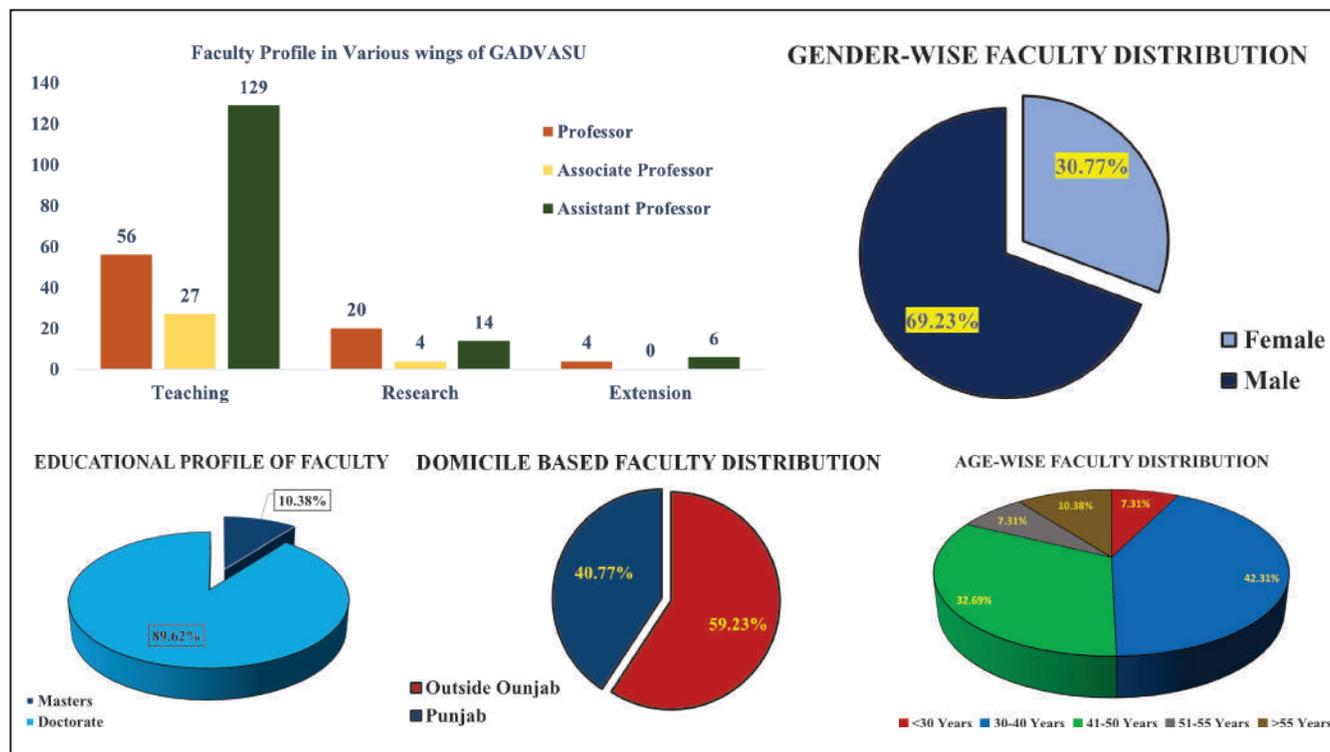
A total of 260 faculty members are currently on the rolls of Guru Angad Dev Veterinary and Animal Sciences University (GADVASU). This distinguished team is composed of 80 Professors, 31 Associate Professors (or equivalent), and 149 Assistant Professors (or equivalent). Of these, 212 faculty members are engaged in teaching roles, 38 in research, and 13 in extension activities, contributing significantly to the university's core mission in education, research, and outreach.

Notably, 30.77% of the faculty are women, reflecting the university's commitment to gender diversity. Furthermore, 40.77% of the faculty hail from Punjab, ensuring that the university remains closely connected to the local community and the region's specific needs. An impressive 89.62% of the faculty members hold a doctoral degree, underscoring the university's high academic standards and its focus on research excellence.

The university also boasts a youthful and dynamic workforce, with 49.62% of the faculty members being under the age of 40, bringing fresh perspectives and innovative approaches to teaching, research, and service. This vibrant demographic plays a pivotal role in driving the university's growth and success.

FACULTY STRENGTH

Scheme	Teaching	Research	Extension	Total
Professor	56	20	4	80
Associate Professor	27	4	0	31
Assistant Professor	129	14	6	149
Total	212	38	10	260



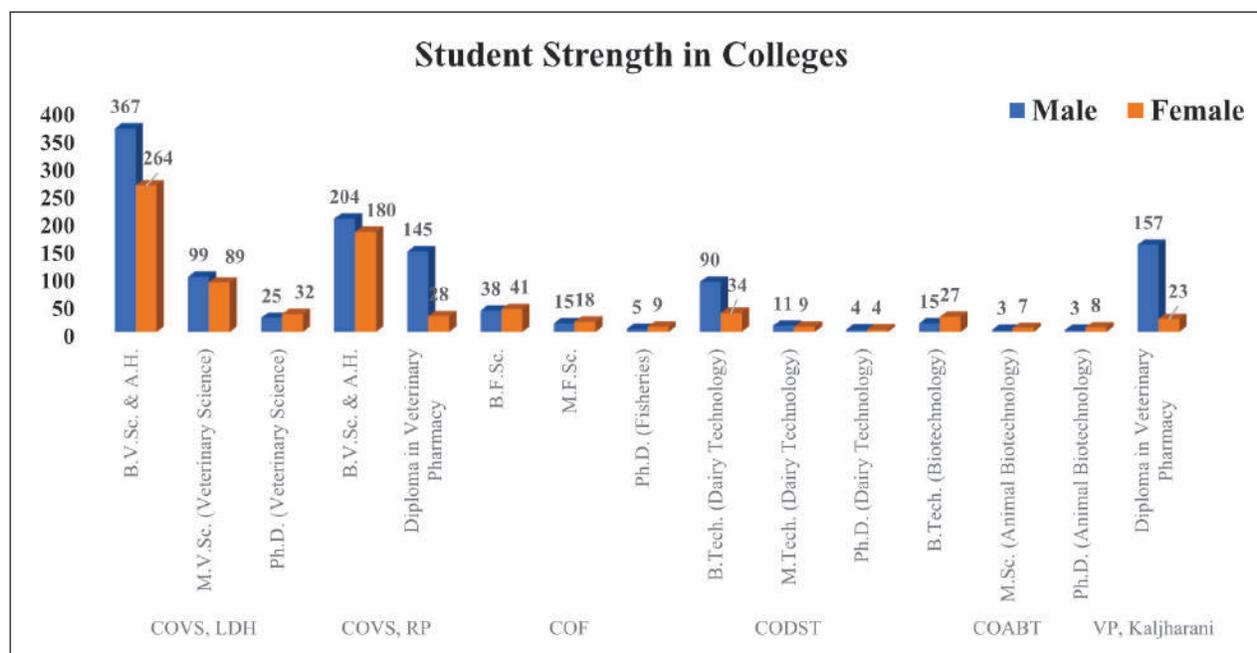


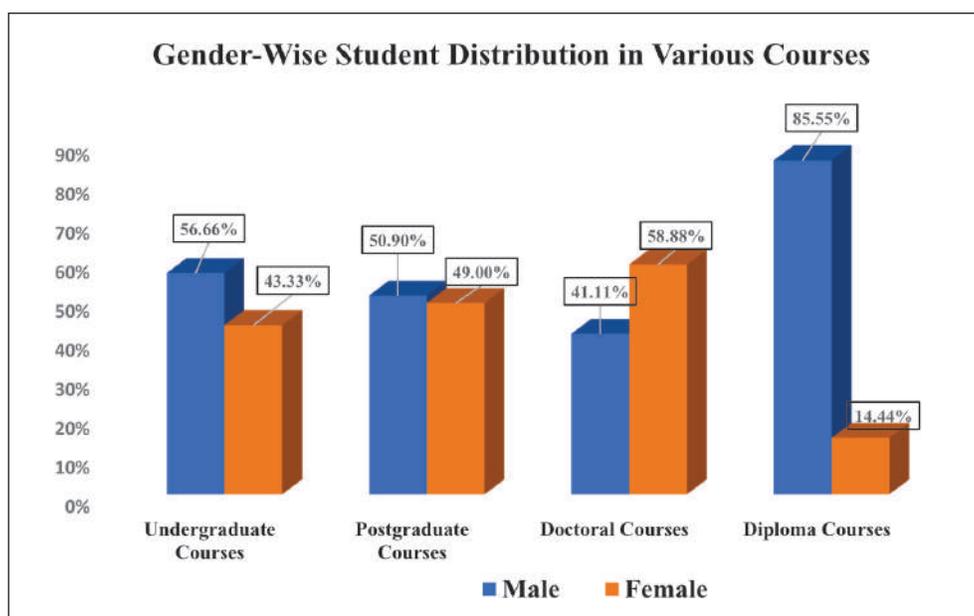
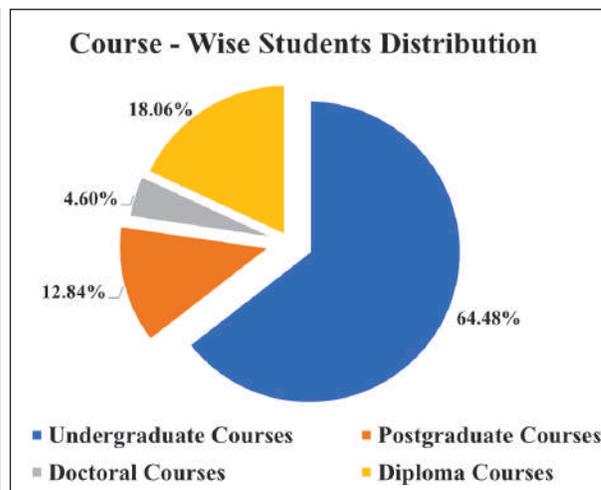
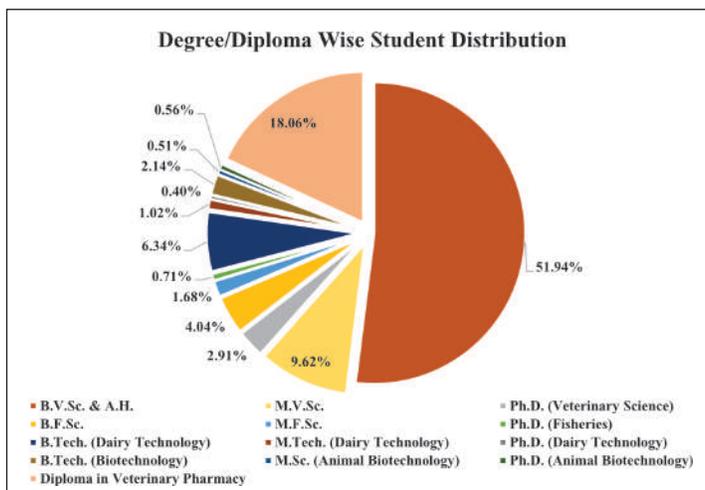
STUDENTS' PROFILE

The total strength of students for the year 2023-24 and their gender-wise distribution in various degree/diploma programs offered by various colleges of the university is as under:

College	Degree/Diploma Programs	Male	Female	Total
COVS, Ludhiana	B.V.Sc. & A.H.	367	264	631
	M.V.Sc. (Veterinary Science)	99	89	188
	Ph.D. (Veterinary Science)	25	32	57
COVS, Rampura Phul	B.V.Sc. & A.H.	204	180	384
	Diploma in Veterinary Pharmacy	145	28	173
COF	B.F.Sc.	38	41	79
	M.F.Sc.	15	18	33
	Ph.D. (Fisheries)	05	09	14
CODST	B.Tech. (Dairy Technology)	90	34	124
	M.Tech. (Dairy Technology)	11	09	20
	Ph.D. (Dairy Technology)	04	04	08
COABT	B.Tech. (Biotechnology)	15	27	42
	M.Sc. (Animal Biotechnology)	03	07	10
	Ph.D. (Animal Biotechnology)	03	08	11
VP, Kaljharani	Diploma in Veterinary Pharmacy	157	23	180
TOTAL		1181	773	1954

Apart from these students, a total of 405 students were also admitted at Khalsa College of Veterinary & Animal Sciences, Amritsar in the B.V.Sc. & A.H. degree program and 173 students in the Diploma in Veterinary Pharmacy at Veterinary Polytechnic, Baba Hira Das Ji College of Veterinary Pharmacy, Badal, Sri Muktsar Sahib, affiliated with the university.







FINANCIAL REPORT

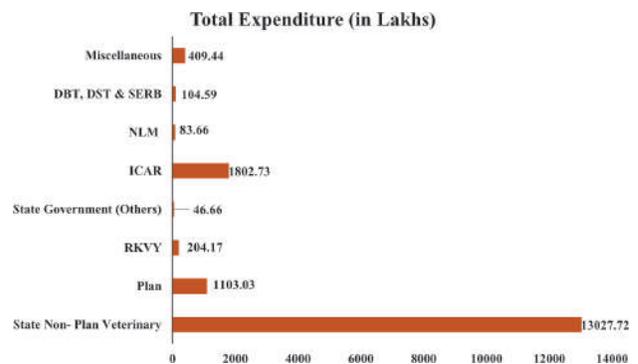
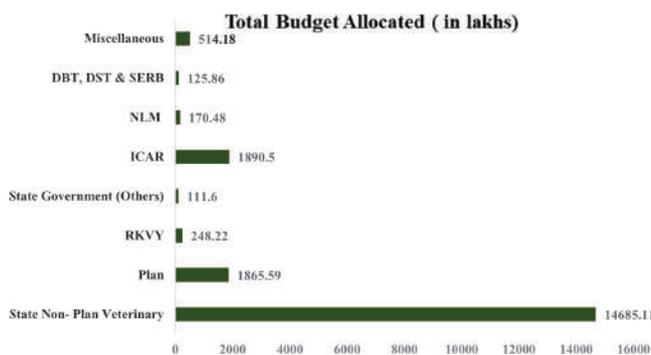
In the financial year 2023-24, the University was allocated a total grant of Rs. 19611.54 lakhs comprising Rs. 14685.11 lakhs under State Non-Plan Veterinary Schemes, Rs. 1865.59 lakhs under Plan Schemes, Rs. 248.22 lakhs under RKVY Schemes and Rs. 111.60 lakhs under Other State Government Schemes. In addition, the University also received Rs. 1890.50 lakhs under ICAR Schemes/ Projects, Rs. 170.48 lakhs from NLM Schemes, Rs. 125.86 lakhs from DBT, DST & SERB Schemes and Rs. 514.18 lakhs from Miscellaneous funding agencies.

The total expenditure of the University for the year 2023-24 was Rs. 16782.01 lakhs, which included Rs. 13027.72 lakhs under State Non-Plan Veterinary Schemes, Rs. 1103.03 lakhs under Plan Schemes, Rs. 204.17 lakhs under RKVY schemes, Rs. 46.66 lakhs under Other State Government Schemes, Rs. 1802.73 lakhs under ICAR Schemes/Projects, Rs. 83.66 lakhs under NLM Schemes, Rs. 104.59 lakhs under DBT, DST & SERB schemes and Rs. 409.44 lakhs under Miscellaneous schemes.

A financial statement indicating budget allocated and amount spent (rupees in lakhs) under various schemes/projects during the financial year 2023-24

S. No.	Scheme	Total Budget Allocated*	Expenditure
1.	State Non- Plan Veterinary	14685.11	13027.72
2.	Plan	1865.59	1103.03
3.	RKVY	248.22	204.17
4.	State Government (Others)	111.60	46.66
5.	ICAR	1890.50	1802.73
6.	NLM	170.48	83.66
7.	DBT, DST & SERB	125.86	104.59
8.	Miscellaneous	514.18	409.44
TOTAL		19611.54	16782.01

*Allocated budget includes the budget revalidated, grant received, and income generated





ACADEMIC UNITS

Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) was established on 9th August 2005 in Ludhiana through Punjab Act No. 16 of 2005. The university's journey began with the College of Veterinary Science, which had been established in 1969 and was subsequently transferred from Punjab Agricultural University to GADVASU. After formally commencing operations on 21st April 2006, GADVASU has rapidly emerged as a leader in both academics and research & development (R&D), consistently ranking among the top Veterinary and Agricultural Universities in India since 2017, and earning a significant international reputation.

With a robust organizational structure, GADVASU plays a pivotal role in the holistic development of Punjab's animal husbandry, dairy, and fisheries sectors. This is achieved through a comprehensive 3-tier approach that includes human resource development, cutting-edge research, and technology transfer, which together contribute to the sustainable growth of these vital sectors in the state.

The university has received accreditation and recognition from the University Grants Commission (UGC) under Section 12(B) of the UGC Act, 1956, enabling it to receive central assistance. It has also been accredited by the Indian Council of Agricultural Research (ICAR) and is a proud member of the Association of Indian Agricultural Universities (AIAU) and the Association of Indian Universities (AIU). GADVASU and its four constituent colleges – College of Veterinary Science, College of Dairy Science & Food Science Technology, College of Fisheries, and College of Animal Biotechnology – have been awarded an 'A' grade by ICAR, a testament to the university's unwavering commitment to academic and research excellence.

GADVASU's mission is to produce world-class professionals in veterinary, dairy, and fisheries sciences, who are well-equipped to serve the livestock and fisheries sectors both nationally and internationally. Its alumni have established themselves as leaders in academics, research, administration, and policy-making across India and abroad. Furthermore, to foster self-reliance and entrepreneurship among its graduates, the university has implemented a range of innovative capacity development programs, aimed at instilling entrepreneurial skills that meet regional, national, and international needs.

GADVASU encompasses six constituent colleges, each contributing to the university's broad educational and research mission:

- College of Veterinary Science, Ludhiana
- College of Dairy & Food Science Technology
- College of Fisheries
- College of Animal Biotechnology
- College of Veterinary Science, Rampura Phul
- Veterinary Polytechnic College, Kaljharani (Bathinda)

Additionally, the university has established the Centre for One Health, a cutting-edge institution for multi-disciplinary research on a national and international scale. To further enhance its outreach, GADVASU operates four Regional Research & Training Centres located in Kaljharani (Bathinda), Talwara (Hoshiarpur), Booh (Tarn Taran), and Sappanwali (Fazilka). These centres are focused on meeting the region-specific needs of livestock owners, providing vital research and training to improve animal husbandry practices.

The university also manages three Krishi Vigyan Kendras in Booh (Tarn Taran), Handiya (Barnala), and Majri (SAS Nagar, Mohali), which are dedicated to the dissemination of agricultural technologies and the training of farmers to enhance productivity and sustainability.



In addition to its constituent colleges, GADVASU is affiliated with two esteemed institutions:

- Khalsa College of Veterinary & Animal Sciences, Amritsar
- Baba Hira Das Ji College of Veterinary Pharmacy, Badal, Sri Muktsar Sahib

Through these collaborations and initiatives, GADVASU continues to play an indispensable role in shaping the future of veterinary science, animal husbandry, dairy, and fisheries, both within Punjab and globally.

College of Veterinary Science, Ludhiana

The College of Veterinary Science was established in 1969 as a constituent college of Punjab Agricultural University, Ludhiana. Following the formation of a new university in 2006, it became part of Guru Angad Dev Veterinary and Animal Sciences University. The college is home to 17 departments, offering excellent laboratory facilities and infrastructure for undergraduate (UG) and postgraduate (PG) teaching and research. Additionally, it is equipped with a well-equipped Veterinary Teaching Hospital that meets the healthcare needs of both large and small animals.

The college owns a fully functional Livestock Farm Complex, which includes an elite dairy herd, a poultry farm, a goat farm, and a piggery unit. The Multi-Speciality Veterinary Hospital serves the healthcare needs of both large and small animals. The college also boasts three Indian Council of Agricultural Research (ICAR) Centers for Advanced Faculty Training, which specialize in Veterinary Surgery and Radiology, Veterinary Gynaecology and Obstetrics, and Veterinary Pathology. Furthermore, departments such as the Teaching Veterinary Clinical Complex, Veterinary Medicine, Livestock Products Technology, and Livestock Production Management offer experiential learning projects.

The Bachelor of Veterinary Science (B.V.Sc. & A.H.) degree is designed to equip graduates with the knowledge and skills necessary for careers in veterinary science and animal husbandry, in accordance with the norms set by the Veterinary Council of India (VCI). The program is divided into three phases:

Pre-clinical phase: Provides foundational education in subjects such as Veterinary Anatomy, Physiology, Biochemistry, Genetics, Breeding, and Extension.

Para-clinical phase: Covers bridging subjects between the pre-clinical and clinical phases, including Veterinary Pathology, Microbiology, Public Health, Epidemiology, Parasitology, Pharmacology, Toxicology, Nutrition, Livestock Farm Practices, and Livestock Products Technology.

Clinical phase: Focuses on Veterinary Surgery & Radiology, Medicine, Gynaecology, and Obstetrics.

Upon completion of coursework, students are required to undergo a compulsory rotational internship program. Successful completion of the B.V.Sc. & A.H. program allows graduates to register as a Veterinary Practitioner with the Punjab State Veterinary Council or the Veterinary Council of India. The college is recognized by the VCI, and all ongoing UG and PG programs are accredited by ICAR with an 'A' grade.

The college's mission is to produce high-quality veterinary graduates, scientists, and extension workers dedicated to promoting livestock health, preventing diseases, and enhancing production and reproduction to improve the quality of rural life in Punjab. As part of this mission, the college engages in undergraduate and postgraduate teaching, research, and extension education in various disciplines related to livestock production and health. It is recognized by the VCI and has received an overall score of five from ICAR for its academic programs. The college stands as a regional, national, and international hub for research and learning in animal health and production, serving the needs of not just Punjab but also its neighbouring states. The college has played a pivotal role in the state's 'White Revolution.'



The college also houses the Animal Disease Research Centre, which provides quick and reliable disease diagnosis and treatment advice to livestock owners. Additionally, the Directorate of Livestock Farms operates an elite dairy herd and poultry farm, supporting teaching and research activities. In 2017, the college established India's first Collaborative Research Centre for Veterinary Ayurveda, supported by the Central Council of Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Government of India. In 2018, the college was awarded an intramural research project worth Rs. 40 lakhs by the Ministry of AYUSH to establish a Medicinal Plant Garden at GADVASU to demonstrate the use of medicinal plants. The same year, the DBT-GADVASU Canine Research Centre and Networks project was granted in collaboration with TANUVAS, with a budget of approximately Rs. 1.38 crore.

The university has also received a prestigious Institutional Development Plan (IDP) project, entitled "Institutional Development Plan for Improved Learning Outcome, Skill and Entrepreneurship at GADVASU," valued at Rs. 2447.48 lakh. This ICAR and World Bank-sponsored project, which began in August 2019, is part of the National Agricultural Higher Education Project (NAHEP) with a total budget of Rs. 1100 crore for five years, starting from 2017-18. The project is funded on a 50:50 cost-sharing basis between the World Bank and the Government of India.

The college offers the following academic programs in veterinary science:

- B.V.Sc. & A.H. (5½ years)
- M.V.Sc. (2 years) in 15 disciplines
- Ph.D. (3 years) in 15 disciplines

Student intake capacity

Program of Study	Number of Seats
B.V. Sc & A.H (5½ years)	<ul style="list-style-type: none"> • 75 – For residents of Punjab State and Union Territory of Chandigarh through merit of NEET (UG) • 15 - Candidates nominated by the VCI • 10 - Self financed seats • Additional NRI seats • 01 – Kashmiri migrants • 05 – additional seats for Rural Area • 02- additional seats for Border Areas • 01 additional seat for the wards of permanent employee
M.V.Sc. (2 years)	<ul style="list-style-type: none"> • 46 - For residents of Punjab State and Union Territory of Chandigarh • 29- ICAR nominee • Additional NRI seats • 02 - Self-financed seats in each discipline • 01 - Kashmiri migrants
Ph.D. (3 years)	<ul style="list-style-type: none"> • 24 - For residents of Punjab State and Union Territory of Chandigarh. • 17 - ICAR nominee • Additional NRI seats • 01 - Self-financed seats in each discipline



Further, the College of Veterinary Science, Ludhiana also offers Post Graduate Diploma and Short & Certificate Courses, as per the details below:

Name of Postgraduate Diploma (PGD)	No. of seats	Eligibility Qualifications*	Course Duration
PGD in Large Animal Reproduction	5+1#	B.V.Sc. & A.H	01 year (02 Semesters)
PGD in Small Animal Clinical Practice	5+1#	B.V.Sc. & A.H	01 year (02 Semesters)
PGD in Bovine Clinical Practices	5+1#	B.V.Sc. & A.H	01 year (02 Semesters)
PGD in Equine Clinical Practices	5+1#	B.V.Sc. & A.H	01 year (02 Semesters)
PGD in One Health (Distance Learning Program).	20	Graduate/ Post Graduate in any science, preferably health sciences (Veterinary, Medicine, Dentistry, Alternative Medicine, Nursing, Pharmacy) and Forestry and Environmental Science	01 year (02 Semesters)

Name of course	No. of seats	Eligibility Qualifications*	Course Duration
Online short course in Extension and Entrepreneurship Management	10	B.V. Sc& A.H./B.F.Sc./B. Sc (Agric/Med./Zool/Fisheries/Home Science)/B.Tech. (Biotechnology/ Dairy Technology/ Food Technology)	6 weeks (5 days on-campus training)
Online short course in Feed and Fodder Technology	10	Any Graduate	6 weeks (5 days on-campus training)
Online short course in Poultry Science	10	Any Graduate	6 weeks (5 days on-campus training)
Online short course in Ethno-veterinary practices	10	Veterinary graduates/ Veterinary Diploma Holder or Farmer with minimum matriculation qualification	2 week (1-2 day on-campus visit)
Short Course in Veterinary Diagnostic Imaging	3+1#	B.V.Sc. & A.H	6 Weeks
Short Course in Small Animal Anaesthesia	3+1#	B.V.Sc. & A.H	6 Weeks
CC in Veterinary Diagnostic imaging	3+1#	B.V.Sc. & A.H	6 months (1 week/month on campus)
CC in small Animal Anaesthesia	3+1#	B.V.Sc. & A.H	6 months (1 week/month on campus)



CC in Embryo transfer technology in farm animal	3+1#	B.V.Sc. & A.H	6 months (3 month on campus)
CC in Veterinary Forensic Science	10	B.V.Sc. & A.H	6 months (1 week/month on campus)
CC ion Semen Handling and Artificial insemination	3+1#	B.V.Sc. & A.H	6 months (3 month on campus)
CC in Laboratory Diagnostic	10	Graduate	6 months

Foreign students, in case it remains vacant, it will be filled from national candidates as per merit.

College of Veterinary Science, Rampura Phul, Bathinda

The College of Veterinary Science, Rampura Phul, is a prominent constituent college of the Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana. The foundation stone of this esteemed institution was laid on 30th October 2014, marking the beginning of a transformative journey. The college became fully operational on 1st October 2019, following the formal approval of the Veterinary Council of India.

The primary mission of the college is to produce highly skilled veterinary graduates, para-professionals, and trained personnel to meet the growing demands of the animal husbandry sector in Punjab. Furthermore, the college is dedicated to advancing research initiatives and extension education programs that enhance livestock health and productivity, with a particular focus on the South Western Zone of Punjab.

Spread across an expansive 67 acres, the college campus is equipped with state-of-the-art infrastructure, including academic buildings, a teaching veterinary hospital, animal farms, and fodder production facilities. The residential complex on campus consists of hostels, a guest house, and staff quarters, ensuring a comfortable environment for students and faculty alike.

The Teaching Veterinary Hospital is fully equipped to provide comprehensive healthcare for both large and small animals. It boasts the latest diagnostic technologies, including X-ray machines, ultrasound systems, and more. The college also features a well-established diagnostic laboratory for the examination of blood, urine, faeces, tissues, and other essential tests.

This institution stands as a beacon of excellence, dedicated to fostering the future of veterinary science while contributing significantly to the health and well-being of livestock in the region.

The college offers the following academic programs:

Program of Study	Duration	Number of seats
B.V. Sc & A.H	5½ years	68- for residents of Punjab State and Union Territory of Chandigarh through merit of NEET 12- Self-financed seats 01- an additional seat for Kashmiri migrants 03 -additional seats for Rural area 01- an additional seat for Border Area 01 an additional seat for the wards of permanent employees
Diploma in Veterinary Science and Animal Health Technology	2 years	56 Seats for residents of Punjab state and Chandigarh 49 Self-financed



Further, the College of Veterinary Science, Rampura Phul also offers certificates and short courses, as per the details given below:

Name of Certificate Course (CC)/Short Course (SC)	Duration	Number of seats	Eligibility Qualification
CC in Artificial Insemination Technician	3 months	20	Minimum 10th Standard
SC in Scientific Dairy Farming	2 weeks	20	Minimum 10th Standard
SC in Backyard Poultry Farming	6 weeks	20	
SC in Veterinary Laboratory Techniques	6 weeks	20	Diploma in Veterinary Science & Animal Health Technology
SC in Health Care and Management of Dogs	6 weeks	20	
SC in Feed Processing Technology	6 weeks	20	

Centre for One Health

The Center for One Health was established with a singular and critical mandate: to lead groundbreaking efforts in teaching, research, and extension activities focused on zoonoses, milk and meat hygiene, food safety, environmental hygiene, and epidemiology. At the heart of its mission, the Center seeks to address some of the most pressing global health challenges at the interface of human, animal, and environmental health.

The Center is actively engaged in collaborative research with several prestigious national and international agencies, including DBT, UGC, the Gates Foundation, ICAR, and ICMR, on high-impact projects related to zoonoses, food safety, and environmental health. This extensive network of partnerships highlights the Center’s commitment to advancing scientific knowledge and finding solutions to complex health issues.

Furthermore, the Center maintains strong ongoing collaborations with renowned international institutions, such as the Royal Veterinary College, London, University of Sydney, Australia, and University of Saskatchewan, Canada. These partnerships are instrumental in fostering global dialogue, sharing expertise, and conducting cutting-edge research.

In addition to these international alliances, the Center works closely with medical colleges and hospitals, collaborating on evidence-based research to tackle endemic zoonoses and food safety challenges. It is deeply involved in epidemiological studies and public awareness initiatives on critical zoonotic diseases, including brucellosis, tuberculosis, rabies, cysticercosis, hydatidosis, as well as foodborne pathogens and environmental contaminants.

To further its mission of capacity building, the Center for One Health offers a specialized one-year Post-Graduate Diploma in One Health, designed to empower professionals across various health sectors with the knowledge and skills needed to address today’s complex health challenges.

With its unwavering commitment to improving public health through interdisciplinary approaches, the Center for One Health stands as a vital institution at the forefront of advancing global health and environmental sustainability.

College of Dairy and Food Science Technology, Ludhiana

The College of Dairy & Food Science Technology, Ludhiana stands as one of the premier institutions for dairy education and research at the national level, dedicated to meeting the growing demand for skilled professionals in the dairy and food processing industries. Established in 2008 as a constituent college of the university, its core mission is to equip students with the expertise required by dairy and food industries, government departments, and R&D organizations.



With a commitment to excellence, the college boasts state-of-the-art infrastructure, including cutting-edge classrooms and well-equipped laboratories featuring advanced analytical instruments, ensuring that students receive the highest quality of education and hands-on training.

One of the key features of the college is its Experimental Dairy Plant, which operates year-round, offering students invaluable practical experience in milk processing and dairy product development. The plant also serves as a platform for the development of innovative technologies in milk processing and product formulation, with a focus on transferring these breakthroughs to end-users.

The college prides itself not only on its world-class facilities but also on its dynamic and young faculty, many of whom have experience working at internationally renowned institutions. This combination of cutting-edge resources and expert guidance ensures that students are at the forefront of industry-relevant knowledge. The accreditation of the college’s academic programs by the Indian Council of Agricultural Research (ICAR), New Delhi, with an ‘A’ grade, stands as a testament to the exceptional quality of education and training offered.

The flagship program of the college is the B.Tech. (Dairy Technology), a four-year undergraduate program highly sought after by students. This job-oriented course is designed to equip students with the skills necessary for both technical and managerial roles in the dairy and food industries. In addition to undergraduate studies, the college offers Master’s and PhD programs in five specialized disciplines: Dairy Technology, Dairy Engineering, Dairy Chemistry, Dairy Microbiology, and Dairy Economics & Business Management. These programs provide students with the opportunity to engage in cutting-edge research, culminating in theses, research papers, and even patents, fostering innovation in the dairy sector.

The college also benefits from strong collaborations with both industry and academic institutions, both nationally and internationally. These partnerships provide students with the opportunity to work in dynamic, real-world research environments. Many of our graduates find employment not only in India but also across the globe, with alumni pursuing careers in countries such as the USA, New Zealand, Canada, and Australia.

The college’s courses ensure that students emerge as highly skilled professionals, equipped with the knowledge, research experience, and practical skills to excel in the dairy and food science fields. Furthermore, the college provides campus placement opportunities, and many students secure employment through these placements. Prestigious companies such as Verka, Amul, Nestlé, and Bani have previously visited the campus to recruit talented graduates.

In essence, the College of Dairy & Food Science Technology is not just an academic institution; it is a launchpad for the next generation of leaders in the dairy and food industries, committed to advancing the future of dairy science and technology on both national and global stages.

Student intake capacity

Program	Available seats
B. Tech. (Dairy Technology) (4 years)	40- for residents of Punjab State and Union Territory of Chandigarh 07- seats for candidates nominated by the ICAR 03- self-financed seats Additional seats: for NRI/OCI/Nominees from Foreign Countries/ Kashmiri Migrants (01), ward of GADVASU employees (01), candidates from other states (05), Candidates from J& K and Ladakh (PMSSS Scheme) (03), Rural Candidates (02), Border Area Candidates (01)



M. Tech. (Dairy Technology, Dairy Engineering, Dairy Microbiology and Dairy Chemistry)	08- for residents of Punjab State and Chandigarh 04- for nominees of the ICAR
M.Sc. Agricultural Economics (Animal Husbandry)	01- for residents of Punjab State and Chandigarh 01- seat for nominee of the ICAR
Ph.D. (Dairy Technology, Dairy Engineering, Dairy Microbiology)	03- for residents of Punjab State and Chandigarh 03- for nominees of the ICAR
Ph.D. Agricultural Economics (Animal Husbandry)	01- for residents of Punjab State and Chandigarh 01- for nominee of the ICAR

To meet the requirements of skilled floor-level workers in dairy and food industries from the current academic session the college has started two new short courses of 8 weeks duration with intake capacity of 15 candidates per batch.

Name of Short Course (SC)	Duration	Number of seats	Eligibility Qualification
Dairy Entrepreneurship Development	(8 weeks)	15	Minimum Matriculation
Dairy Services and Maintenance	(8 weeks)	15	Minimum Matriculation

College of Fisheries, Ludhiana

The College of Fisheries, GADVASU, established in April 2008, stands as a cornerstone for the development and advancement of the fisheries sector in Punjab. Situated over an expansive 6-hectare campus, the college was founded with the vision to cultivate highly skilled human resources and provide technical support to enhance the productivity and sustainability of the state's fisheries industry. With a focus on both expansion and innovation, the college aims to drive significant growth in fisheries through cutting-edge research, advanced training, and technology dissemination to farmers and entrepreneurs.

The college operates with a multi-disciplinary approach and houses five specialized departments:

- Aquaculture
- Fisheries Resource Management
- Aquatic Environment
- Fish Processing Technology
- Fish Engineering

Each department is staffed with competent, experienced faculty, ensuring that students receive world-class education and guidance. The college's infrastructure is robust and well-equipped, featuring state-of-the-art laboratories and farm facilities. Notably, the college is home to an instructional cum research farm, which serves as a hub for experiential learning, training programs, and demonstrations, empowering students with hands-on experience in fisheries practices.

The primary objective of the college is to foster higher fish productivity and sustainable practices through basic, applied, and adaptive research. Additionally, it plays a pivotal role in transferring innovative technologies directly to farmers and entrepreneurs, ensuring these advancements are practically applied to improve the commercial viability of the fisheries sector.

Through its academic programs and outreach initiatives, the College of Fisheries is committed to empowering the next generation of fisheries professionals, driving forward the development of the industry, and contributing significantly to the economic growth and sustainability of the fisheries sector in Punjab and beyond.



The college offers the following academic programs:

Program	Available seats
Bachelor of Fisheries science (B.F. Sc) – 4 yrs	22- for residents of Punjab State and Union Territory of Chandigarh 06- seats for candidates nominated by the ICAR 02- self-financed seats 10- candidates from other states 01- ward of GADVASU employees Additional seats: for NRI/OCI/Nominees from Foreign Countries/ Kashmiri Migrants (01) Candidates from J& K and Ladakh (PMSSS Scheme) (03), Rural Candidates (02), Border Area Candidates (01)
M.F.Sc.	
Aquaculture	04- for residents of Punjab State and Chandigarh 01- for nominees of the ICAR
Fisheries Resource Management	02- for residents of Punjab State and Chandigarh 01- seat for nominee of the ICAR
Aquatic Environment Management	02- for residents of Punjab State and Chandigarh 01- for nominees of the ICAR
Fish Processing Technology	01- for residents of Punjab State and Chandigarh 01- for nominee of the ICAR
Ph. D	
Aquaculture	01- for residents of Punjab State and Chandigarh 01- seat for nominee of the ICAR
Fisheries Resource Management	01- for residents of Punjab State and Chandigarh 01- for nominees of the ICAR
Aquatic Environment Management	01- for residents of Punjab State and Chandigarh 01- for nominee of the ICAR

Short courses (w.e.f. 2023-24)

Name of Short Course	Duration	Number of seats	Eligibility Qualification
Ornamental Fisheries & Aquarium Science	4 Weeks 2 Weeks Online	05	10+2 (Any Stream)
Fish Hatchery Management	2 Weeks Offline	05	10+2 (Any Stream)
Aqua-Clinics		05	10+2 (Medical)
Fish Processing Technology		05	10+2 (Any Stream)
Aquarium Fabrication & Maintenance		05	10+2 (Any Stream)
Fish Feed Formulation and Manufacturing		05	10+2 (Any Stream)

In just 15 years since its establishment in 2008, the College of Fisheries has achieved remarkable academic growth and made a profound impact on the development of the fisheries sector in Punjab.



Through its commitment to producing highly skilled graduates and postgraduates, generating innovative, need-based technologies, and delivering impactful 'Lab to Land' extension programs, the college has been instrumental in the vertical and horizontal expansion of the aquaculture sector.

The college's four-year undergraduate degree program (B.F.Sc.) has been meticulously designed in accordance with the recommendations of the 5th Deans' Committee of the Indian Council of Agricultural Research (ICAR), starting from the academic session of 2016-17. The program, divided into eight semesters, offers a comprehensive curriculum that covers a wide range of subjects. In the first six semesters, students engage in both theory and practical courses in areas such as taxonomy, anatomy, physiology, biochemistry, culture techniques, nutrition, breeding, disease management, aquatic ecology, genetics, biotechnology, culture and capture fisheries, fish processing, marketing, economics, statistics, and extension education.

In alignment with the college's Student Ready Program, students participate in a crucial 'In-Plant Training Program' during the 7th semester. This hands-on training spans diverse areas such as aqua-farms, hatcheries, feed industries, fish markets, and processing/value addition units. During the 8th semester, students engage in on-campus experiential learning, skill development, and project development programs, ensuring they gain practical exposure and industry-relevant competencies.

The M.F.Sc. programs, specializing in Aquaculture, Fisheries Resource Management, Aquatic Environment Management, and Fish Processing Technology, as well as the Ph.D. programs in Aquaculture, Fisheries Resource Management, and Aquatic Environment Management, are designed based on ICAR's rigorous guidelines, combining both theoretical learning and advanced research.

The college also offers a One-Year Diploma in Inland Fisheries, specifically designed for sponsored in-service candidates from the State Fisheries Department, aiming to strengthen the professional expertise within the department.

In an effort to meet the growing demand for industry-ready professionals, the college launched tailor-made six-month certificate courses in industry-oriented fields in 2020-21. These programs are designed to instill entrepreneurial skills among graduates, youth, and stakeholders, promoting fisheries as a viable career option and entrepreneurial venture at regional, national, and international levels.

Career Opportunities and Entrepreneurial Potential

Graduates (B.F.Sc.), postgraduates (M.F.Sc. and Ph.D.), and certificate holders from the college are highly sought after and well-equipped to pursue promising career opportunities in both the public and private sectors. Potential employers include the State Fisheries Department, Fish Farmers Development Agencies (FFDAs), agricultural and veterinary universities, Krishi Vigyan Kendras (KVKs), fisheries institutes/agencies, banks, hatcheries, aquaculture farms, feed mills, pharmaceutical companies, processing plants, trading firms, and export companies. Additionally, fisheries professionals have significant opportunities for higher studies and placements overseas.

Moreover, the fisheries sector offers vast potential for self-employment and entrepreneurship development. With the increasing demand for sustainable fisheries management, innovative fish farming techniques, and value-added fish products, the opportunities for entrepreneurial ventures in the sector are boundless.

In essence, the College of Fisheries has emerged as a pioneering institution, not only advancing academic excellence but also empowering the fisheries sector with a skilled workforce, innovative research, and practical solutions. The college remains steadfast in its mission to foster career advancement, entrepreneurship, and sustainability in the fisheries industry, both locally and globally.



College of Animal Biotechnology, Ludhiana

Over the past three decades, molecular biology and biotechnology have revolutionized numerous fields, from animal husbandry and medicine to industry and environmental sciences. Recognizing the transformative potential of biotechnology in the animal sector, Guru Angad Dev Veterinary and Animal Sciences University established the Department of Animal Biotechnology in 2008. This visionary step led to its designation as the School of Animal Biotechnology in 2010 and its elevation to the College of Animal Biotechnology in 2019, reflecting its growing prominence and impact.

The primary mandate of the College of Animal Biotechnology is to foster scientific expertise and develop a highly skilled human resource in various facets of animal biotechnology. The college is committed to advancing cutting-edge research and creating specialized facilities that address the emerging needs in biotechnology, particularly in animal sciences. Through its pioneering research, the college is engaged in both basic and applied research in areas such as genomics, molecular diagnostics, vaccinology, stem cell biology, cancer biology, proteomics, and bioinformatics.

To meet the demands of both undergraduate and postgraduate education in these dynamic fields, the college has established three specialized departments:

- Department of Animal Biotechnology
- Department of Microbial & Environmental Biotechnology
- Department of Bioinformatics

Each department is equipped with state-of-the-art infrastructure and cutting-edge laboratory facilities, ensuring that students and researchers have access to the best resources to conduct innovative work. The college follows the course curricula recommended by the Indian Council of Agricultural Research (ICAR), ensuring that its educational offerings meet national standards of excellence. The college's academic programs have earned the prestigious ICAR accreditation with an 'A' grade, underscoring its commitment to quality and excellence.

Currently, the college offers the following degree programs:

- B.Tech. (Biotechnology)
- M.V.Sc./M.Sc. (Animal Biotechnology)
- Ph.D. (Animal Biotechnology)

The M.V.Sc./M.Sc. and Ph.D. programs in Animal Biotechnology adhere to the rigorous course curriculum prescribed by ICAR, equipping students with the expertise necessary to thrive in this rapidly evolving field.

In May 2021, the college achieved a significant milestone by earning ISO 9001 certification, affirming its adherence to international standards for quality management systems in delivering consistent products and services. Additionally, the college received ISO 45001 certification, recognizing its commitment to occupational health and safety, ensuring a safe and secure environment for its faculty, staff, and visitors. These prestigious certifications reflect the college's global recognition and its continuous pursuit of excellence in both education and research.

Through its comprehensive academic programs, cutting-edge research, and commitment to industry standards, the College of Animal Biotechnology is at the forefront of advancing animal biotechnology. It continues to shape the future of the animal husbandry sector by nurturing skilled professionals and producing breakthrough technologies that benefit both the industry and society at large.



The College of Animal Biotechnology offers the following programs:

Program	Available seats
B. Tech. (Biotechnology) (4 Years)	25- for residents of Punjab State and Union Territory of Chandigarh 05- for Candidates from other states 01- Kashmiri Migrants 01- ward of GADVASU employees Additional seats: for NRI/OCI/Nominees from Foreign Countries Candidates from J& K and Ladakh (PMSSS Scheme) (03), Rural Area Candidates (01), Border Area Candidates (-).
M.V.Sc. (Veterinary Biotechnology)	2 seats for veterinary graduates
M.Sc. (Molecular Biology and Biotechnology)	2 seats for Nominee of the ICAR
(2 Year Programs)	4 seats for non-veterinary graduates
M.Sc. (Molecular Biology and Biotechnology) with specialization in Animal Biotechnology	10 seats under DBT-Postgraduate teaching Program through GAT-B
(DBT sponsored 2 Year Programs)	
Ph.D. (Veterinary Biotechnology)	2 - Preference to candidates with Master's in Veterinary/
Ph.D. (Molecular Biology and Biotechnology)	Animal Biotechnology
(3-year Programs)	2 seats for Nominee of the ICAR

Veterinary Polytechnic, Kaljharani (Bathinda)

In 2010, the Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) established the Veterinary Polytechnic at Kaljharani, Bathinda, with the aim of providing specialized education in Veterinary Science and Animal Health Technology. As a constituent institute of GADVASU, the polytechnic plays a pivotal role in supporting veterinary services by producing highly trained para-veterinary staff, who are essential for the efficient functioning of animal healthcare systems.

The polytechnic boasts state-of-the-art teaching infrastructure and is equipped with comprehensive facilities for practical training. This includes a well-maintained Sahiwal cattle dairy farm and a Beetal goat farm, providing students with hands-on experience in animal care and management. These farms serve as vital resources for students, allowing them to apply theoretical knowledge in real-world settings, making them highly capable of contributing to the veterinary profession.

The polytechnic also provides modern hostel facilities, equipped with the latest amenities, including a gymnasium and a playground, ensuring that students have a comfortable and holistic living experience while pursuing their education.

Upon completing the Diploma in Veterinary Science and Animal Health Technology, graduates enjoy excellent career opportunities across a variety of sectors. These include positions in Veterinary Hospitals, Veterinary Colleges, Research and Training Institutes, the Cooperative Sector, and Non-Governmental Organizations (NGOs). Many alumni of the polytechnic have been successfully appointed to positions



within the Department of Animal Husbandry, the Cooperative Sector, and GADVASU, while others have secured roles in leading NGOs. Furthermore, in recent years, there has been a growing demand for diploma holders abroad, creating exciting job opportunities on a global scale.

In essence, the Veterinary Polytechnic at Kaljharani is at the forefront of developing a skilled workforce for the veterinary sector, ensuring that students receive high-quality education and practical experience to excel in the rapidly evolving field of animal healthcare.

The Polytechnic offers the following academic program:

Program	Available seats
Diploma in Veterinary Science & Animal Health Technology (2 years)	72 seats for residents of Punjab State and Union Territory of Chandigarh 10 self-financed seats for residents of Punjab State and Union Territory of Chandigarh/ Other states 10 seats reserved for candidates from other states 2 seats for residents of Kaljharani, Bathinda 4 seats reserved for rural area 2 seats for border area

Placement Cell

University Placement Cell: Bridging Students to Career Success

Established on 5th December 2006, the Placement Cell at Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana serves as a dynamic, centralized facility dedicated to helping students from all colleges and institutes within the university secure rewarding career opportunities. The Placement Cell plays a crucial role in acting as a liaison between the university's graduates and recruiting agencies, ensuring a seamless transition from education to employment.

The Placement Cell's role begins well before the recruitment process. It works closely with students to organize their resumes, offering tailored career counseling based on individual interests, talents, and career aspirations. This personalized guidance helps students align their skills with appropriate career paths and opportunities.

Mode and Mechanism of Placement and Counseling:

- **Recruitment Partnerships:** The Placement Cell proactively reaches out to a wide array of prospective employers, including veterinary pharmaceuticals, banks, insurance firms, and feed, dairy, and meat industries, fostering valuable partnerships for on-campus and off-campus recruitments. This process is supported through emails, phone calls, and social media platforms.
- **Job Notifications:** Students are regularly updated about vacancies and placement opportunities through multiple communication channels, including the university website, WhatsApp groups, emails, and notice boards across colleges, libraries, and hostels, ensuring they never miss an opportunity.
- **Personality Development and Career Seminars:** The university conducts periodic seminars focused on personality development, exploring career opportunities in higher education both in India and abroad. In addition, adjunct faculty from relevant industries are invited to share insights on current trends, industrial scenarios, and emerging career opportunities, empowering students with the knowledge needed to excel in their respective fields.
- **Industry Linkages for Placement:** The Placement Cell works diligently to establish and nurture industry linkages, creating a robust network of recruitment avenues across various sectors. It actively



facilitates the recruitment process by organizing group discussions and personal interviews for on-campus placements, while off-campus placements typically involve employers requesting student biodata and inviting shortlisted candidates for interviews at their headquarters.

Placement Cell: 2023-24 Updates

The Placement and Counseling Cells at both the College and University levels are strategically aligned to provide comprehensive training in personality development and competitive exams. They also guide students through opportunities for higher education and offer invaluable support in securing job placements. The Placement Cell's efforts span across key sectors, including the government sector, private industry, self-employment, higher education, and international career opportunities.

During the 2023-24 academic year, the Placement Cell successfully organized both offline and online campus placements for undergraduate and postgraduate students from the College of Veterinary Science, College of Fisheries, and College of Dairy Science and Technology. Leading recruiting agencies that participated included prominent names such as: Milked, Verka, Nestlé, Amul, Bani Milk, IDBI Bank, and more.

In addition, the Placement Cell ensured that job openings from various recruiting agencies were promptly circulated among eligible students through the university website and social media platforms, further enhancing job prospects. To ensure widespread outreach, the placement committee organized placement awareness camps during the university's Pashu Palan Melas, bringing attention to the latest opportunities and career advice.

Placement Success (2023-24)

The success of the Placement Cell during the 2023-24 year is evident in the number of students placed across diverse sectors. Graduates have found employment in prestigious public and private organizations, while others have pursued further studies or self-employment ventures, contributing to a diverse and thriving workforce.

In conclusion, the Placement Cell at GADVASU is not just an employment facilitator—it is an integral partner in shaping the future of its students. Through its proactive initiatives, extensive industry partnerships, and commitment to holistic student development, the Placement Cell continues to bridge the gap between education and employment, empowering students to pursue successful careers and make meaningful contributions to their respective fields.



Placement of Undergraduate and Postgraduate Students

S No	Name of the University/ College/ Faculty	Courses	passed out students	Student Placed	CAU/ SAU	Central Govt.	State Govt./ Corporate	PDF/ Foreign	Pvt/ Others*	Higher Studies
1	College of Veterinary Science, Ludhiana	UG	103	53	-	01	01	14	36	39
		PG	23	20	03	01	07	01	08	03
2	College of Fisheries, Ludhiana	UG	18	02	01	-	-	-	01	11
		PG	08	03	02	-	-	-	01	04
3	College of Dairy & Food Science technology, Ludhiana	UG	32	17	--	--	17*	--	--	07
		PG	05	03	01	--	--	--	02	02
4	College of Animal Biotechnology, Ludhiana	UG	14	02	--	--	--	--	02	03
		PG	12	02	--	--	--	--	02	04
5	Veterinary Polytechnic Kajjharani, Bathinda	Diploma	87	26	--	--	04	--	22	09
Total			302	128						

* Co-operative dairy plants



IPR cell

Intellectual Property Rights (IPR) Cell at GADVASU: Empowering Innovation and Protecting Intellectual Capital

The IPR Cell at the university plays a pivotal role in the management and protection of the university's intellectual property (IP). It is the central hub responsible for the day-to-day operations related to invention disclosures, patent filings, and technology transfer, ensuring that GADVASU's intellectual assets are properly safeguarded and commercialized. The IPR Cell is instrumental in fostering an environment where innovation is encouraged, protected, and leveraged for research, development, and industry collaboration.

The core responsibilities of the IPR Cell include, but are not limited to:

- **Receiving and managing invention disclosures:** The IPR Cell meticulously handles the documentation of inventions, ensuring that they are accurately filed and maintained for further development.
- **Engaging with external agencies:** The cell works closely with patent authorities and external agencies to facilitate the patent application process, ensuring that GADVASU's inventions are legally protected on a national and international level.
- **Encouraging faculty and researchers:** The IPR Cell actively encourages faculty, students, and research groups to file disclosures of inventions, fostering a culture of innovation and IP creation across the university.
- **Technology Transfer:** The IPR Cell plays a crucial role in negotiating license agreements with potential commercialization partners, ensuring that innovations are transferred effectively to industry, where they can be applied to real-world challenges.

Objectives of the IPR Cell:

1. **Facilitating the Creation of Intellectual Property:** The IPR Cell provides comprehensive support for researchers and faculty to identify and protect their innovative works. By nurturing a conducive environment, it helps in the creation of valuable intellectual property across various domains.
2. **Raising Awareness about Intellectual Property:** One of the key objectives of the IPR Cell is to educate and raise awareness among faculty, students, and research groups about the importance and value of their ideas, innovations, IPR, and genetic resources. This awareness fosters a deeper understanding of the economic and social value of intellectual property.
3. **Supporting IP Creation and Protection:** The IPR Cell actively guides researchers and creators through the process of submitting proposals for the creation and protection of their intellectual property. It provides essential support for obtaining patents, copyrights, trademarks, and other forms of protection to safeguard their work.

By focusing on these key objectives, the IPR Cell ensures that GADVASU not only generates valuable intellectual property but also maximizes its potential for innovation, commercialization, and industry collaboration. The cell is dedicated to supporting the university's mission of fostering cutting-edge research while ensuring that the intellectual contributions of its faculty and students are protected and valued on both national and international platforms.

In essence, the IPR Cell serves as a vital catalyst for technology transfer, knowledge protection, and the commercialization of innovations, empowering GADVASU to contribute meaningfully to scientific, industrial, and economic advancements.



Nodal Cell, ICAR

The university has established a dedicated ICAR Nodal Cell to seamlessly coordinate the various initiatives of the Indian Council of Agricultural Research (ICAR) and the university under the prestigious “Strengthening and Development of Higher Education in India” scheme. This Nodal Cell plays a pivotal role in ensuring efficient communication, collaboration, and the smooth implementation of key projects aimed at enhancing agricultural education in India.

Operating as a Single Window System, the ICAR Nodal Cell serves as the primary point of contact for providing all essential information, updates, and documentation to the Agricultural Education Division of ICAR. This centralized coordination ensures that GADVASU aligns with the broader national objectives of improving higher education standards and fostering research excellence in the agricultural and veterinary sciences.

The Dean of Postgraduate Studies, Dr. Sanjeev Kumar Uppal, has been appointed as the Nodal Officer, bringing his expertise and leadership to oversee the functioning of the cell. Under his stewardship, the Nodal Cell is committed to driving forward the university’s initiatives under the ICAR scheme, ensuring that both faculty and students benefit from cutting-edge developments in agricultural education, research, and innovation.

In summary, the ICAR Nodal Cell at GADVASU is a key driver of the university’s ongoing commitment to excellence in agricultural education. It ensures that the university remains at the forefront of national efforts to strengthen and modernize higher education in India, with a particular focus on the agricultural and veterinary sectors.

Human Resource Management Centre

The Human Resource Management Centre (HRMC) at the university was established in 2021, following the approval of recommendations by the Academic Council in its 61st meeting and the Board of Management in its 49th meeting, held on 19th February 2021. The primary objective of setting up the HRMC was to create a robust framework for accelerating professional development across the university, with a dual focus on both managerial and operational activities. The HRMC is dedicated to fostering a culture of excellence by providing targeted training, workshops, and resources that equip university members with the skills required to thrive in today’s dynamic academic and administrative environment.

Key Activities and Programs Organized by HRMC (2023-24)

In the year 2023-24, the HRMC organized a diverse range of training sessions, workshops, and lectures aimed at enhancing the capabilities of faculty, officers, students, and non-teaching staff at GADVASU. The Centre’s activities were designed to address both professional and personal development, contributing significantly to the university’s growth as a center of excellence in education and research.

- **Special Talk on ‘Ethics & Integrity for Professionals’ (02.06.2023):** This session was organized for final-year undergraduate students, underscoring the critical importance of ethical conduct and integrity in the professional world.
- **Talk on ‘Paranomics: Discovering & Developing Parasite Resource Bank’ (12.06.2023):** A specialized talk aimed at enhancing understanding of parasitology and the development of a parasite resource bank, offering valuable insights for future research in the field.
- **University’s First Induction Training Program (16-20 October 2023):** The inaugural induction program aimed to orient new employees and faculty with the university’s values, processes, and expectations, fostering a strong foundation for their career development at GADVASU.



- **Workshop on the Right to Information Act, 2005 (19.10.2023):** A comprehensive workshop to familiarize participants with the Right to Information (RTI) Act, ensuring that the GADVASU community is equipped to uphold transparency and accountability in all dealings.
- **Interaction-Cum-Guest Lecture on ‘NIRF Rankings’:** Organized in collaboration with the University Library, this session provided key insights into how universities can improve their rankings in the National Institutional Ranking Framework (NIRF) and enhance their global standing.
- **One-Day Workshop on Soft Skills:** This workshop, aimed at students and faculty, focused on academic leadership, managing workplace relationships and conflicts, emotional intelligence, and stress management, addressing crucial aspects of professional and personal growth.
- **Lecture on ‘The Role of Trade in the Spread of Transboundary Aquatic Animal Disease’:** Organized in association with the Department of Veterinary Pathology, College of Veterinary Sciences, and College of Fisheries, this lecture focused on the complex issues surrounding transboundary aquatic animal diseases and their impact on global trade.
- **Faculty Induction Training Program (19 February - 01 March 2024):** This comprehensive training session was organized to induct and orient new faculty members, providing them with the necessary tools and resources to excel in their teaching and research roles.

HRMC’s Vision and Impact

The HRMC has proven to be a cornerstone of professional development at GADVASU, driving a continuous process of learning, growth, and leadership. By offering specialized programs and fostering a culture of excellence, the HRMC ensures that faculty, staff, and students are well-equipped to meet the challenges of a rapidly changing academic and professional landscape.

In summary, the Human Resource Management Centre is committed to empowering the GADVASU community through continuous professional development, skill enhancement, and leadership training, ensuring that every individual is well-prepared to contribute meaningfully to the university’s mission of academic excellence and research innovation.



TEACHING

Admissions in undergraduate and postgraduate Programs in academic session 2023-24

Program	Male	Female	Total
B.V.Sc. & A.H. (COVS, Ludhiana)	78	48	126
B.V.Sc. & A.H. (COVS, Rampura Phul)	42	42	84
B.V. Sc & A.H. (KCVAS, Amritsar) *	51	49	100
B.F.Sc.	08	11	19
B.Tech.(Dairy Tech)	28	11	39
B. Tech. (Biotechnology)	02	06	08
M.V.Sc./M.F.Sc./M.Sc./M. Tech.	49	52	101
Ph.D.	12	14	26
Diploma in Veterinary Science & Animal Health Technology (Veterinary Polytechnic, Kaljharani)	86	15	101
Diploma in Veterinary Science & Animal Health Technology, (Rampura Phul)	88	16	104
Diploma in Veterinary Science & Animal Health Technology (Baba Hira Ji Das, College of Veterinary Polytechnic, Badal) *	88	12	100
Any other Degree/Diploma	30	08	38
Total	562	284	846

* Affiliated private colleges of the university

Passed out students in academic session 2023-24

Program	Boys	Girls	Total
B.V.Sc. & A.H. (COVS, Ludhiana)	57	34	91
B.V.Sc. & A.H. (COVS, Rampura Phul)	-	-	-
B.V. Sc & A.H. (KCVAS, Amritsar) *	39	21	60
B.F.Sc.	06	12	18
B.Tech.(Dairy Tech)	35	27	62
B. Tech. (Biotechnology)	08	12	20
M.V.Sc./M.F.Sc./M.Sc./M.Tech.	19	22	41
Ph.D.	19	30	49
Diploma in Veterinary Science & Animal Health Technology, (Rampura Phul)	42	14	56
Diploma in Veterinary Science & Animal Health Technology (Veterinary Polytechnic, Kaljharani)	78	04	82
Diploma in Veterinary Science & Animal Health Technology (Baba Hira Ji Das, College of Veterinary Polytechnic, Badal) *	33	04	37
Total	336	180	516

* Affiliated private colleges of the university



College of Veterinary Science, Ludhiana

Academics and Teaching:

The total number of students admitted in the College of Veterinary Science for the session 2023-24 was 205 which included 126 in B.V.Sc. and A.H., 67 in M.V.Sc., 12 in Ph. D and 27 in short and certificate courses. During the period under report, 144 students passed out from the college which included 91 B.V. Sc, 14 M.V.Sc. students 39 Ph. D and 27 in short/certificate courses.

Courses taught

The students graduating for B.V.Sc. & A.H. Program were offered courses as per Minimum Standards of Veterinary Education Degree Course (B.V. Sc & A.H.) Regulations 2016 of Veterinary Council of India. Postgraduate students were offered courses in their respective major, minor and supporting fields as approved by the Dean, Post Graduate Studies.

Scholarships / Fellowships

Scholarship	Undergraduate Students	Postgraduate Students	Doctorate Students
University Merit Scholarship	40	-	-
University Merit Fellowship	-	28	8
Post Matric scholarship for UG & PG	20	-	-
National Talent Scholarship	29	24	-
Dr G S Khush Foundation Scholarship	8	-	-
ICAR- PG Scholarship (JRF)	-	11	-
ICAR-Senior Research Fellowship	-	-	3
ICMR-JRF	-	-	2
India- Africa Fellowship	-	-	-

Internship Program

A total of 91 students (comprising 59 males and 32 females) from the B.V.Sc. & A.H. (2018 Batch) successfully completed their intensive one-year internship Program, marking a significant milestone in their academic journey. Throughout the internship, students were posted across various departments of the university, gaining invaluable practical exposure in specialized areas such as Veterinary Medicine, Veterinary Surgery and Radiology, Veterinary Gynaecology and Obstetrics, and Animal Disease Research Centre. Interns also received direct training and practical experience at the Directorate of Livestock Farms and the Teaching Veterinary Clinical Complex, where they participated in a range of clinical activities, honing their diagnostic and treatment skills.

In addition to these core areas, students were provided with broad-based training in Dairy Technology, Fisheries, Poultry, National Cadet Corps (NCC), and the Punjab Veterinary Vaccination Institute, allowing them to diversify their expertise across multiple facets of animal husbandry and veterinary care. To further enrich their learning experience, students were also posted at veterinary colleges in other states and Government Veterinary Hospitals across Punjab, offering them a broader understanding of the veterinary landscape and practices in different regions.

The internship Program also included exposure visits to renowned institutions such as the Punjab Home Guard Canine Training & Breeding Institute in Dera Bassi and the Punjab Police Academy (Equestrian Wing) in Phillaur. These visits provided students with a unique opportunity to witness the



integration of veterinary care in specialized fields such as canine training and equestrian management.

In conclusion, the internship Program provided these future veterinarians with unparalleled practical exposure, ensuring that they are equipped with the necessary skills, knowledge, and real-world experience to excel in their careers and contribute meaningfully to the field of veterinary sciences.

All India Study Tour

A total of 99 internship students of batch 2019 and repeaters underwent compulsory education tour for two weeks from 28 Feb -17 March, 2024 to colleges and institutes located at Mumbai, Goa, Bengaluru, Hyderabad, and Bhubaneswar

Teaching Veterinary Clinical Complex

The College of Veterinary Science boasts a well-established Teaching Veterinary Hospital Complex, which is a cornerstone of the college’s clinical training and animal healthcare services. The hospital is thoughtfully designed with two key units: a Primary Unit and a Specialized Unit, ensuring comprehensive care for a wide range of animal conditions.

A significant milestone in the college’s commitment to excellence is the establishment of a new Multispecialty Veterinary Hospital dedicated to small animal care. This modern facility is equipped with state-of-the-art medical technology, offering the highest standards of treatment and care for companion animals.

The hospital features indoor wards for both small and large animals, ensuring that all animals receive appropriate care in a comfortable and controlled environment. To enhance the experience for animal attendants, there are also dedicated rooms for their use during hospital visits, fostering a supportive and welcoming atmosphere.

The hospital is further strengthened by its clinical diagnostic laboratory and radiographic unit, enabling timely and accurate diagnoses, critical for effective treatment planning.

In addition to routine care, the hospital provides advanced diagnostic and treatment facilities, including endoscopy, echocardiography, a dermatology unit, a dialysis unit and Blood Bank to facilitate emergency transfusions.

The number of clinical cases registered for treatment and the clinical samples examined at the hospital continue to rise, underscoring the growing trust in the hospital’s capabilities and the increasing demand for specialized veterinary care.

The number of clinical cases registered for treatment and clinical samples examined in the Hospital as follows

Number of Clinical Cases Presented from April 2023 to March 2024	
Small Animals	27355
Large Animals	7481
Total	34836

Clinical Samples Examined from April 2023 to March 2024	
Pathology	15531
Biochemistry	8381
Parasitology	3140
Total	27052



Thesis/Dissertation awarded to Postgraduate students (2023-24)

Degree	College of Veterinary Science		College of Fisheries		College of Dairy & Food Science Technology		College of Animal Biotechnology	
	Ph. D	M.V. Sc	Ph. D	M.F. Sc	Ph. D	M.Tech	Ph. D	M.Sc/M.Tech
No.	39	14	02	08	01	07	07	12
Total	53		10		08		19	

Department (Year)	Name of the student (Major Advisor)	Thesis /Dissertation Title
Ph.D Program		
Animal Genetics & Breeding (2023)	Palpreet Singh (Dr. Simerjeet Kaur)	Studies on genetic basis for differential fertility of bovine breeding bulls. Studies on genetic basis for differential fertility of bovine breeding bulls.
Livestock Products Technology (2023)	Tanuj Kumar Tanwar (Dr. O. P. Malav)	Development and storage stability of muffins incorporated with chicken meat and natural antioxidants.
	Sandeep Singh (Dr. O. P. Malav)	Development of extended shelf-life functional chicken nuggets using encapsulated protective cultures and antimicrobial compounds.
	Kantale Rushikesh Ambadas (Dr. Nitin Mehta)	Extraction and encapsulation of phytochemicals from pomegranate and orange peel for shelf stability of functional meat bread.
	Vivek Sahu (Dr. O. P. Malav)	Development of shelf stable extruded chicken meat crackers and sticks incorporated with slaughter house byproducts.
Veterinary Anatomy (2023)	Sagarika Dehury (Dr. Varinder Uppal)	Seasonal histomorphochemical study on buffalo uterus.
Veterinary Microbiology (2023)	Lavina (Dr. Mudit Chandra)	Prevalence of antibiotic-resistant <i>Escherichia coli</i> in mastitis milk and their possible association with environmental coliphages.
	Asiya Mushtaq (Dr. T. S. Rai)	Characterization of extended-spectrum beta-lactamase producing <i>E. coli</i> and <i>Klebsiella Pneumoniae</i> in sheep, goats and pigs.
	Shalini Pandey (Dr. A. K. Arora)	Studies on fecal shedding of antibiotic resistant Enterobacteriaceae and diversity of antibiotic-resistant genes in fecal microbiome of bovines and their environment.
	Sundus Gazal (Dr. Paviter Kaur)	Antibiotic resistance studies on methicillin resistant <i>Staphylococcus aureus</i> (MRSA) and <i>Streptococcus</i> spp. in goats, sheep and pigs.
	Karman Kour (Dr. Gurpreet Kaur)	Development and validation of an ELISA for detection of canine parvovirus infection in dogs.



	Sanmeet Kour (Dr. Deepti Narang)	Studies on molecular detection of non-tuberculous mycobacteria including <i>Mycobacterium avium</i> subspecies <i>paratuberculosis</i> in feces of cattle and buffaloes.
Veterinary Pathology (2023)	Priyanka (Dr. Nitin Dev Singh)	Clinical and experimental studies on the role of epithelial mesenchymal transition in canine mammary tumor.
	Rupali Masand (Dr. Kuldip Gupta)	Clinico-pathological studies on leukocytosis in dogs including hematological malignancies.
	Jadhao Abhilash Dattatraya (Dr. A.P.S Brar)	Studies on the seroprevalence and pathology of bovine leukemia virus along with associated diseases.
Veterinary Pathology (2024)	Mohanapriya T (Dr. Vishal Mahajan)	Immunophenotyping and microRNA expression as biomarker in canine lymphoma.
Veterinary Parasitology (2023)	Supriya Sachan (Dr. M. S. Bal)	Epidemiology of canine gastrointestinal parasitic infections in central plan zone of Punjab with emphasis on molecular diagnosis of canine cestodes.
Veterinary Pharmacology & Toxicology (2023)	Harpreet Kour (Dr. S. K. Sharma)	Preparation, characterization and safety profiling of ceftiofur loaded nanoparticles.
	Sivaraman Ramanarayanan (Dr. M. K. Lonare)	Exploring the potential effects of bio-antioxidants against arsenic induced toxicity on buffalo adipose-derived mesenchymal stem cells.
Vety. Public Health & Epidemiology (2023)	Shumaila Taskeen (Dr. Randhir Singh)	Molecular characterization and genetic relatedness of antimicrobial resistant organisms from farmed poultry eggs, environment and farm handlers of Punjab, India.
	Vijay Sharma (Dr. B. B. Singh)	Brucellosis: Exploring lesser-known transmission risks in Punjab, India.
	Gourab Basak (Dr. Simranpreet Kaur)	Application of microbial and chemical source tracking tools for assessment of water quality.
	Neha Parmar (Dr. Randhir Singh)	Whole genome sequence comparison of <i>Klebsiella pneumoniae</i> and <i>Enterococcus</i> spp. isolates from cattle and poultry for antimicrobial gene abundance.
	Anamika Sahu (Dr. J. S. Bedi)	Development of lateral flow assay for aflatoxin M1 detection in milk and its comparative evaluation with ELISA and HPLC techniques.
	Shubham Koundal (Dr. Simranpreet Kaur)	Detection and prioritization of foodborne pathogens in Punjab.
Vety. Public Health & Epidemiology (2024)	Kriti Singh (Dr. R. S. Aulakh)	Hygiene assessment, microbial and chemical contamination in wet markets of Punjab.



Veterinary Medicine (2023)	Surbhi Gupta (Dr. Sushma Chhabra)	Diagnostic and therapeutic studies on chronic non-responsive dermatopathies in dogs.
	Biswa Ranjan Jena (Dr. Ashwani Kumar Sharma)	Epidemiology and clinico-haematological study on bovine leukosis.
	Gurpreet Singh Preet (Dr. Raj Sukhbir Singh)	Characterization and therapeutic management of canine gastroenteropathies.
Veterinary Medicine (2024)	Gurwinder Singh (Dr. Sikh Tejinder Singh)	Diagnostic and therapeutic studies on canine renal failure.
Veterinary Surgery & Radiology (2023)	Tarundeep Singh (Dr. Pallavi Verma)	Contrast enhanced ultrasound and doppler studies on affections of solid abdominal viscera in canine.
	Abhishek Verma (Dr. Vandana Sangwan)	Clinical studies on visible congenital deformities and their association with heart defects in bovine calves.
	Biswadeep Jena (Dr. J. Mohindroo)	B-Mode ultrasound and shear wave elastography studies on canine renal affections.
Veterinary Gynaecology & Obstetrics (2023)	Paramveer Singh Sangha (Dr. M. Honparkhe)	Studies on cytological diagnosis, cytokines concentration and different intrauterine therapies in mares suffering from uterine infection.
Veterinary & Animal Husbandry Extension Education (2023)	Akshita Chadda (Dr. Jaswinder Singh)	Value chain analysis of small ruminants and backyard poultry farming in Punjab.
	Niharika Thakur (Dr. Rajesh Kashrija)	A study on management and feeding practices of calves being adopted by dairy farmers of Punjab.
Livestock Production Management (2023)	Sarishti Katwal (Dr. Yash Pal Singh)	Evaluation of airborne pollutants and microbial concentration in conventional and modern livestock sheds.
Livestock Production Management (2024)	Gurpreet Kaur (Dr. Daljeet Kaur)	Comparative study of alternative composting methods for redressal of poultry waste.
	Vanlalmangaih Sanga (Dr. D.S. Malik)	Effect of different managerial practices for the enrichment of welfare and productive performance in weaned pigs.
M.V.Sc. Program		
Veterinary Anatomy (2024)	Susarapu Aditya Viswanadha Manikanta Sharma (Dr. Devindra Pathak)	Anatomical characterization and decellularization of caprine heart valves.
Veterinary Microbiology (2023)	Tanisha Mahajan (Dr. Gursimran Falia)	Studies on bacterial and mycotic infections of skin and hair of dogs along with molecular detection of <i>Staphylococcus aureus</i> and <i>Staphylococcus pseudintermedius</i> .
Veterinary Microbiology (2024)	Anitta Thomas (Dr. Deepti Narang)	Studies on molecular detection of <i>Mycobacterium tuberculosis</i> complex and rifampicin resistance in cattle and buffaloes.



	Jagnoor Singh Sandhu (Dr. Mudit Chandra)	To evaluate role of phages for the control of staphylococcal biofilm.
Veterinary Parasitology (2024)	Lalnunpari Vangchhia (Dr. N. K. Singh)	Molecular characterization of deltamethrin resistance in <i>Rhipicephalus microplus</i> ticks and prospectus of essential oils for its mitigation.
Veterinary Public Health & Epidemiology (2023)	Supriya Sharma (Dr. Simranpreet Kaur)	Evaluation of clean milk production practices along the milk value chain in Ludhiana district.
Veterinary Public Health & Epidemiology (2024)	Akshara Babu (Dr. R. S. Aulakh)	Prevalence and associated risk factors of <i>Coxiella burnetii</i> infection among livestock holdings and their handlers in Punjab, India.
Veterinary Medicine (2023)	Mohneet Kaur (Dr. Sikh Tejinder Singh)	Study on effects of topical polyherbal preparation on udder health in dairy cattle.
	Ravinder Singh (Dr. Sikh Tejinder Singh)	Impact of heat stress on health and performance in dairy cattle and evaluation of its mitigation strategies.
Veterinary Surgery & Radiology (2024)	Joban Jot Singh (Dr. Jasmeet Khosha)	Clinical studies on diagnostic indicators and surgical management of equine colic.
Veterinary Gynaecology & Obstetrics (2023)	Heavenjot Singh (Dr. Ajeet Kumar)	Evaluation of cryosurvival of beetal buck sperm by modulating freezing rate in critical temperature range.
	Karanveer Singh (Dr. Ajeet Kumar)	Factors associated with lameness in relation to libido semen quality and freezability in crossbred bulls.
	Jatandeep Singh Sangha (Dr. M. Honparkhe)	Comparative efficacy of post insemination administration of human chorionic gonadotropin and progesterone on conception rate in sub-fertile buffaloes.
	Sweta Panwar (Dr. Ashwani Kumar Singh)	Effect of cysteine supplementation in semen extender on post-thaw semen quality and fertility of buffalo bulls.

College of Dairy and Food Science Technology

In the academic session 2023-24, a total of 53 students were admitted to various programs, with a distinguished cohort across undergraduate, postgraduate, and doctoral levels. Specifically, 39 students enrolled in B. Tech. (Dairy Technology), 12 in M. Tech. (Dairy Technology), and 2 in Ph.D. programs.

The gender-wise distribution of students was notable, with 37 male and 16 female students, reflecting a strong and diverse student body. Throughout this period, 62 students successfully completed their undergraduate degrees, while 8 students earned their postgraduate degrees.

Courses Taught

In line with the 5th Deans' Committee recommendations from the Indian Council of Agricultural Research (ICAR), the undergraduate B. Tech. (Dairy Technology) students were offered a robust curriculum that encompassed 137 credits of core academic courses, complemented by 35 credits of practical training and fieldwork.



For postgraduate students, the curriculum was structured around their specialized fields, incorporating major, minor, and supporting courses as approved by the Dean of Post Graduate Studies

Scholarships/Fellowships

Scholarship	Undergraduate Students	Postgraduate Students	Doctorate Students
University merit scholarship	13	03	-
National Talent Scholarship	30	07	-
Dr. G. S. Khush scholarship	03	-	-
Student READY (RAWE) batch 2019 & 2020	112	-	-

All India Study Tour:

The compulsory educational tour was organized for the final-year 35 students of B.Tech. Dairy Technology (2020 batch) from 22-28 February 2024 to Jaipur, Udaipur, Anand, and Delhi.

Theses / Dissertations Details

Department (Year)	Name of the student (Major Advisor)	Thesis /Dissertation Title
Ph.D. Program		
Dairy Microbiology (2023)	Anamika Singh Dr. Harsh Panwar	Exploring natural multivalent and dynamic antimicrobial peptides for combating antimicrobial resistance in milk chain.
M. Tech Program		
Dairy Microbiology (2023)	Jamunkar Shivani Rajuji (Dr. S. K. Mishra)	Effect of lemon grass essential oil and micro nano bubbles on biofilm forming pathogens.
Dairy Technology (2023)	Jasper Shekin J (Dr. P. K. Singh)	A study on effects of microfluidization on the physical, structural and textural properties of ice-cream mix and ice-cream.
	Manjot Singh (Dr. P. K. Singh)	Preparation and characterization of dairy based nano bubbles.
	Sapna Tomar (Dr. Nitika Goel)	Effect of adjunct culture on goat milk white brined cheese and its ripening attributes.
	Shefali Sirame (Dr. P. K. Singh)	Application of micro-nano-bubble technology in production of fermented dairy drink.
	Athokshaya V. (Dr. Rekha Chawala)	Study on assessment of antimicrobial efficacy of nano-biocomposite film prepared using hemp seed oil.
	Satya Prakash Choudhary (Dr. Narinder Kumar)	Design and development of bio-thermal fluid-based chocolate conche-prototype.

College of Fisheries

Academics and Teaching:

The 2023-24 academic session witnessed remarkable academic engagement with 40 students enrolled across various degree programs. Specifically, 19 students joined the B.F.Sc., 14 students were admitted to the M.F.Sc., and 7 students embarked on their Ph.D. journey. During this period, a total of 28 students—



comprising 18 undergraduate, 8 postgraduate, and 2 doctoral candidates—successfully completed their respective degree programs.

Courses Taught

In line with the esteemed guidelines of the 5th Deans’ Committee constituted by ICAR, the undergraduate B.F.Sc. students were offered a well-rounded and rigorous curriculum. A total of 70 courses were taught, covering all critical aspects of fisheries science to equip students with the comprehensive knowledge and practical skills needed to thrive in the field.

For postgraduate students, the curriculum was designed to meet the highest academic standards, offering specialized courses in their respective major, minor, and supporting fields, as approved by the Dean of Post Graduate Studies. Bottom of Form

New/Revised Courses, if any

PG Courses revised as per ICAR BSMA - Fisheries Sciences (2021)

Scholarships / Fellowships

Scholarship	Undergraduate Students	Postgraduate Students	Doctorate Students
University merit scholarship	16	05	02
National Talent Scholarship	09	03	-
Dr G S Khush Foundation Scholarship	02	-	-
Mata Ind Kaur Award	03	-	-

All India Study Tour:

As part of the ‘Student Ready Program’, the final-year B.F.Sc. students (Batch 2020) of the College of Fisheries (COF) embarked on an enriching All-India Study Tour from January 2-12, 2024. This tour provided students with invaluable exposure to some of the most renowned fisheries institutions in India, expanding their practical knowledge and understanding of the fisheries sector.

The students visited key institutions in Tamil Nadu and Kerala, including:

- Dr. MGR Fisheries College and Research Institute (Ponneri)
- TNJ Fisheries University
- Muttu Kadu Experimental Station of ICAR-Central Institute of Brackish Water Aquaculture (CIBA)
- ICAR-Central Institute of Fisheries Technology (CIFT)
- ICAR-Central Marine Fisheries Research Institute (CMFRI)
- Central Institute of Fisheries Nautical and Engineering Training (CIFNET)
- Marine Products Export Development Authority (MPEDA)
- Kerala University of Fisheries and Ocean Studies (KUFOS)
- Various fish landing harbours in Kochi, Kerala

In addition to these visits, the students also explored the field of sport fisheries and visited cold-water lakes in Uttarakhand. They had the unique opportunity to experience hands-on learning at the ICAR-Directorate of Coldwater Fisheries Research (DCFR) in Bhimtal, from November 27 to December 3, 2023.

This comprehensive study tour enabled the students to gain first-hand insights into advanced fisheries research, management practices, and the diverse aquatic ecosystems across India, significantly enhancing



their academic and practical understanding of the field.

Theses / Dissertations Details:

Department (Year)	Name of the student (Major Advisor)	Thesis /Dissertation Title
Ph.D. Program		
Aquatic Environment (2023)	Sumeet Rai (Dr. Anuj Tyagi)	Bacteriophage based approaches for control of <i>Aeromonas hydrophila</i> infection in fish and fishery products
Fisheries Resource Management (2024)	Pargi Narendrakumar Arjunsinh (Dr. Surjya Narayan Datta)	Fish market survey to assess nutritional profile and quality of some commercially important fish species marketed in Punjab.
M.F. Sc Program		
Aquaculture (2023)	Aazam Ali (Dr. Abhishek Srivastava)	Assessment of growth and production performance of amur carp (<i>Cyprinus carpio haematopterus</i>) under semi-intensive carp polyculture system
	Anju Vijayan (Dr. Abhed Pandey)	Efficacy of formulated fish specific mineral mixture on survival, growth and health status of indian major carps
	Jaspreet Singh (Dr. Sachin O. Khairnar)	Socio-techno-economic performance of ornamental fish traders in Punjab
	Simranjit Kaur (Dr. Sachin O. Khairnar)	Prevalence of ornamental fish diseases in selected districts of Punjab
	Vaishali (Dr. Amit Mandal)	Influence of different stocking densities on water quality and production performance of striped catfish (<i>Pangasianodon hypophthalmus</i>) under biofloc based aquaculture system
Aquatic Environment (2023)	Tanuj (Dr. Naveen Kumar B.T.)	Evaluation of protective role of maternally transferred immunity in vaccinated broodfish offspring resistance against the <i>Aeromonas hydrophila</i> infection
Fisheries Resource Management (2024)	Hargobind Singh (Dr. S.S. Hassan)	Ecology and fish diversity of community reserve (Keshopur Chhumb wetland) and conservation reserve (Ranjit Sgar dam) in Punjab, india
Fish Processing Technology (2023)	Parmeet Kaur (Dr. Ajeet Singh)	Development of nutrition bar supplemented with fish protein powder extracted from carps

College of Animal Biotechnology

Academics and Teaching:

In the academic session 2023-24, a total of eight students were enrolled in the B. Tech (Biotechnology) program. During this period, 20 students successfully graduated with in B. Tech degrees, while 12 students completed their Master's programs, and 7 students earned their Ph.D. degrees.

A comprehensive curriculum was offered throughout the year, with a total of 62 courses across various



disciplines. Of these, 50 courses were designed for undergraduate students, 8 for postgraduate students, and 4 for doctoral candidates, ensuring a well-rounded and rigorous academic experience tailored to the needs and aspirations of each student cohort.

New/Revised Courses, if any

The new PG students were offered the courses as per adapted syllabus in accordance to BSMA 2021

Scholarships / Fellowships

Scholarship	Undergraduate Students	Postgraduate Students	Doctorate Students
University merit scholarship	10	01	01
DST inspire fellowship	-	-	01
DBT-Postgraduate teaching Program scholarship	-	09	-
Post matric scholarship	04	-	-

All India Study Tour:

A group of 15 students from the College of Animal Biotechnology (Batch 2020) undertook an enlightening educational tour from January 17 to January 27, 2024. During this tour, they visited several prestigious institutions across Hyderabad, Bangalore, and Chennai, gaining valuable insights into advanced research and industry practices.

In Hyderabad, the students visited the National Institute of Animal Biotechnology (NIAB), where they explored cutting-edge research in animal biotechnology.

In Bangalore, they visited the Indian Veterinary Research Institute (IVRI), a leading institution in veterinary science, and the ICAR-NIVEDI (National Institute of Veterinary Epidemiology and Disease Informatics), gaining a deeper understanding of veterinary epidemiology and disease informatics.

In Chennai, the group visited TANUVAS (Tamil Nadu Veterinary and Animal Sciences University), including the Madras Veterinary College, where they were introduced to advancements in veterinary education and research. Additionally, they explored the ICAR-CIBA (Central Institute of Brackishwater Aquaculture), learning about the latest developments in aquaculture and marine biology.

This tour provided students with invaluable exposure to the latest research, technologies, and practices in the field of animal biotechnology, strengthening their academic foundation and broadening their professional horizons.

Thesis / Dissertations

Department (Year)	Name of the student (Major Advisor)	Thesis /Dissertation Title
Ph.D. Program		
Animal Biotechnology (2023)	Sheza Farooq (Dr. R. S. Sethi)	Evaluation of <i>Pasteurellamultocida</i> induced apoptosis and neutrophil extracellular trap in buffalo neutrophils.
Animal Biotechnology (2024)	Shikha Chaudhary (Dr. R. S. Sethi)	Development of an immunochromatographic strip assay as a point-of-care test for diagnosis of classical swine fever.



Animal Biotechnology (Biotechnology) (2023)	Ramandeep Kaur (Dr. B. V. Sunil Kumar)	Evaluation of osteopontin as a diagnostic biomarker of canine mammary tumor.
	Bhawanpreet Kaur (Dr. C. S. Mukhopadhyay)	Identification of genomic-wide tag-SNPs of gaddi dogs.
	Shilpa Tewari (Dr. C. S. Mukhopadhyay)	Differential repertoire of protein-coding and non-coding RNA (ncRNA) specific genes in exotic vis-à-vis indigenous (gaddi) dog.
Animal Biotechnology (Biotechnology) (2024)	Manpreet Kaur (Dr. C. S. Mukhopadhyay)	Parentage determination in cattle and buffalo using simple sequence repeats marker.
	Shikha Sharma (Dr. B. V. Sunil Kumar)	Development of a multiplex immunoassay for detection of serum mammaglobins in dogs with mammary tumors.
M.V.Sc/ M.Sc Program		
Animal Biotechnology (Biotechnology) (2023)	Sachin Pal (Dr. Satparkash Singh)	Studies on recombinant MPL17 of <i>Leptospira interrogans serovar canicola</i> for the detection of leptospiral antibodies.
	Lovepreet Kaur (Dr. Niraj Kumar Singh)	Development and standardization of polymerase spiral reaction for marek's disease diagnosis.
	Kulvir Pal Singh (Dr. B. V. Sunil Kumar)	Association of heat shock protein B1 and nadph oxidase 4 expression with thermal stress in two different varieties of Turkey.
	NavdeepKaurDhiman (Dr. Y.P.S Malik)	Designing and evaluation of synthetic p72 peptide-based immunoassay for its diagnostic potential against African swine fever.
	Bhavna (Dr. C. S. Mukhopadhyay)	Evaluation and validation of antimicrobial peptides polybia-mastoparan-1 and RI 12 (K3W) against <i>Listeria monocytogenes</i> .
	PartikshaTiwari (Dr. Satparkash Singh)	Efficacy of phage-antibiotic synergy against <i>Staphylococcus aureus</i> .
	Dapinder Singh (Dr. C.S. Mukhopadhyay)	Population structure and genome-wide haplotype analysis among divergent breeds of dog.
	Phelgye Soni (Dr. C. S. Mukhopadhyay)	Identification of novel SNPs in <i>Myf6</i> gene associated with myogenesis in large white Yorkshire vis-à-vis non-descript pigs of Punjab.
Animal Biotechnology (Biotechnology) (2024)	HarsimranKaur (Dr. Neeraj Kashyap)	Study on evolution of <i>GDF9</i> gene and its association with fecundity and growth in Beetal goat.
	Priya Sharma (Dr. C. S. Mukhopadhyay)	Exploring the polymorphism vis-à-vis evolutionary perspectives of the <i>MTNRIA</i> gene in Beetal goats.



	Samridhi Singh (Dr. Rattan Kumar Chaudhary)	Exploration of novel conceptus-stimulated biomarkers for early pregnancy diagnosis in buffaloes.
	Hitesh Rana (Dr. Rattan Kumar Chaudhary)	Evaluation of immunomodulatory effect of adipose-tissue derived stromal vascular fractions (SVFs) on canine peripheral blood mononuclear cells.

College of Veterinary Science, Rampura Phul

The College of Veterinary Science, Rampura Phul, is a newly established constituent college of Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana. It began operations on October 1, 2019.

Academics and Teaching

For the academic session 2023-24, a total of 188 students were admitted to the College of Veterinary Science, Rampura Phul. This includes 84 students in the B.V.Sc. & A.H. program and 104 students in the Diploma in Veterinary Science & Animal Health Technology (D.V.Sc. & A.H.T) program. Of these, 130 were male and 58 were female students.

During this session, 56 students from the D.V.Sc. & A.H.T program successfully passed out.

Courses Taught

In the B.V.Sc. & A.H. program, students are offered courses in compliance with the *Minimum Standards of Veterinary Education Degree Course (B.V.Sc. & A.H.) Regulations, 2016* of the Veterinary Council of India. The program includes 20 courses, totaling 82 credit hours.

For the two-year D.V.Sc. & A.H.T. diploma course, students were offered 19 courses, totaling 47 credit hours along with 15 non-credit hours.

Veterinary Polytechnic Kaljharani, Bathinda

The Veterinary Polytechnic and Regional Research and Training Centre (VP & RRTC) was established by the university in 2010 at Village Kaljharani, District Bathinda. The Polytechnic was created to offer a Diploma in Veterinary Science and Animal Health Technology, aimed at supporting veterinary services through the training of para-veterinary staff.

Upon completing the diploma program, graduates are qualified to coordinate and work under the supervision of registered veterinary practitioners, providing essential healthcare to animals in veterinary hospitals, veterinary colleges, research and training institutes, as well as in the cooperative sector and non-governmental organizations. The majority of graduates have been employed by the Department of Animal Husbandry, while others have found positions in the cooperative sector, Veterinary University Ludhiana, private industry, and various non-governmental organizations.

Academics and Teaching

For the academic session 2023-24, a total of 101 students were admitted to the Diploma in Veterinary Science and Animal Health Technology program, including 86 male and 15 female students. In the same session, 82 students (78 male and 4 female) successfully graduated.

Courses Taught

The diploma program includes a total of 19 courses, comprising 47 credit hours of theoretical instruction and 15 non-credit hours of practical training.

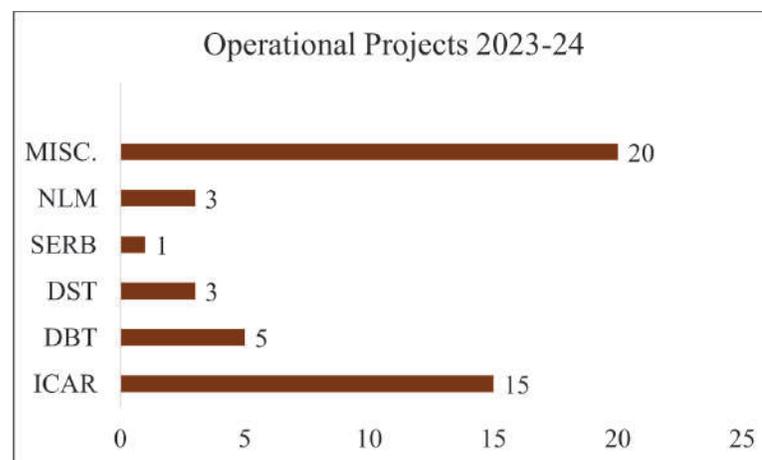
Scholarships / Fellowships:

Scholarship	Diploma students
Post Matric Scholarship	31: SC

RESEARCH

The institute prioritizes research in the fields of health and production across a wide range of species, including livestock, poultry, companion animals, and fisheries, in alignment with its research mandate. During the 2023-24 academic year, a total of 81 research project proposals were submitted to various funding agencies. These included the Department of Biotechnology (such as the Indo-Australian Biotechnology Fund), the Department of Science and Technology (including SERB), the National Horticulture Board, the National Fisheries Development Board, the Indian Institute of Science, the Central Council for Research in Ayurvedic Sciences, the National Bank for Agriculture and Rural Development, the Ministry of Animal Husbandry, Dairying & Fisheries (under the National Livestock Mission), the University Grants Commission, as well as several other state, national, and international agencies.

Furthermore, in the 2023-24 period, 47 research schemes were actively underway at the university, as outlined below:



Research Highlights

A. College of Veterinary Science

1. Animal Disease Research Center (ADRC)

- **Enhanced Diagnostic Capabilities:** Introduced PCR-based diagnostics for clinical cases through the establishment of a molecular diagnostic laboratory at ADRC, MSVH.
- **Facility Upgrades:** Improved the Clinical Diagnostic Laboratory by incorporating new diagnostic tests to expand capabilities.



- **AI-Based App Development:** Contributed to the development of the AI-powered mobile application (NIBLD app) for livestock disease diagnosis, as part of the NAHEP project (ICAR-108).



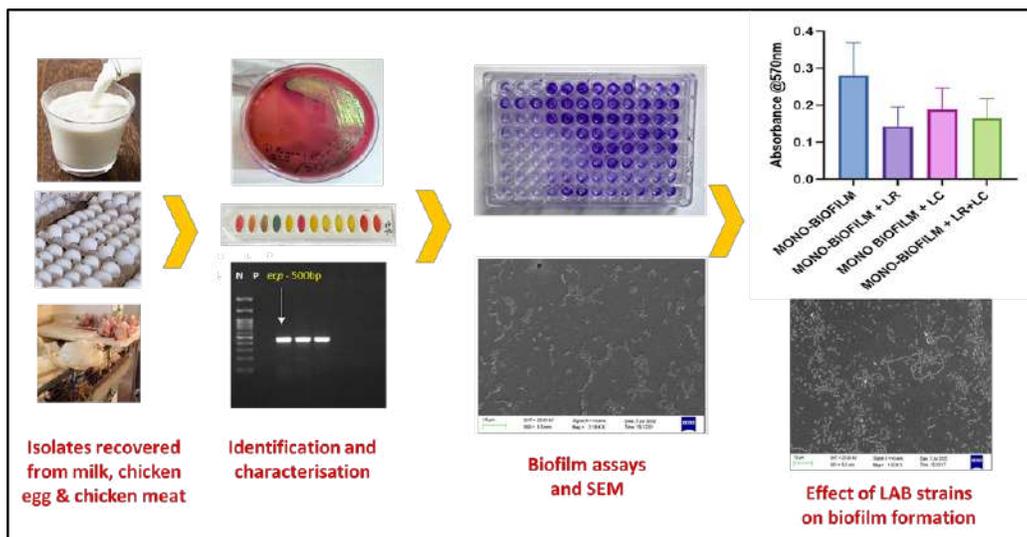
- **Outbreak Investigation:** Effectively investigated animal disease outbreaks using both conventional and advanced diagnostic techniques, and provided preventive measures to livestock owners.

2. Veterinary Anatomy

Histomorphological Study of the Uterus in Buffaloes During Summer and Winter Seasons

The study was conducted on the uteruses of 12 adult buffaloes collected from a slaughterhouse during both the summer and winter seasons. Histological, histochemical, histoenzymic, and immunohistochemical analyses were performed. The findings indicated that the epithelial height of both the superficial and deep endometrial glands, as well as the luminal epithelium, was significantly higher ($p \leq 0.05$) during the winter season compared to the summer season, in both phases of the estrous cycle. Endometrial stroma was composed of dense areolar connective tissue with abundance collagen fibres and richly supplied with blood vessels. The endometrial thickness was significantly more ($p \leq 0.05$) during winter season as compared to summer both in caruncular and intercaruncular region. Decreased endometrial thickness during summer may be one of reasons of implantation failure leading to less fertility during summer seasons. The endometrial glands were simple branched coiled tubular glands lined by simple columnar epithelium were embedded in the endometrial stroma. Endometrial gland count per mm^2 was significantly more ($p \leq 0.05$) during winter as compared to summer in luteal phase. Neutral mucopolysahharides, acid mucopolysaccharide, basic protein distribution in uterine tissue was more in winter as compared to summer. PAS reactivity was more intense in winter samples as compared to summer indicating more uterine carbohydrate content during winter. In winter we observed greater staining intensity of bromophenol blue reaction indicate better implantation ability of uterus during winter. Strong activity of alkaline phosphatase, SDH, G6PD, NADH-d, NADPH-d during winter season suggests better endometrial and epithelial differentiation of uterus during winter season. NADPH-d histochemistry indicate angiogenic activity which was found to be more during winter Immunohistochemical expression of hormones estrogen and progesterone, cell proliferation marker PCNA, angiogenetic markers VEGF and vWF and intermediate filament vimentin, was significantly higher ($p \leq 0.05$) in term of staining intensity (OD) value and percentage of immunopositive cell during winter as compared to summer indicating better physiological status and functionality of uterus during winter season that may contribute towards better intrauterine environment for implantation and growth of embryo.

auto-aggregation, and 41.57% co-aggregation with *E. coli*. Similarly, *L. casei* demonstrated a 21.55 mm inhibition zone, a 36.74% reduction in biofilm growth, 45.23% auto-aggregation, and 38.74% co-aggregation with *E. coli* isolates. The ability of these probiotic strains to auto-aggregate and co-aggregate with pathogenic strains serves as an initial screening method for identifying suitable probiotic bacteria. Overall, the results highlight the efficacy of specific LAB strains in combating *E. coli* biofilm formation.



- **Development of Lateral Flow Assay for Aflatoxin M1 detection in Milk:** Aflatoxin M1 (AFM1) is a major contaminant in milk and poses significant concerns for human health. To address this issue, a study was conducted to develop an on-site AFM1 detection kit based on the Lateral Flow Assay (LFA). The optimized LFA kit has a limit of detection (LOD) ranging from 0.5 to 0.7 µg/L, aligning with the permissible limit of 0.5 µg/L set by the Food Safety and Standards Authority of India (FSSAI) for milk. The developed LFA test demonstrated promising diagnostic performance, with a sensitivity of 84% and a specificity of 100% compared to the reference method, High-Performance Liquid Chromatography with Fluorescent Light Detector (HPLC-FLD). Furthermore, intra-laboratory validation showed good reproducibility and repeatability across three different laboratories, making it a reliable tool for detecting AFM1 contamination.

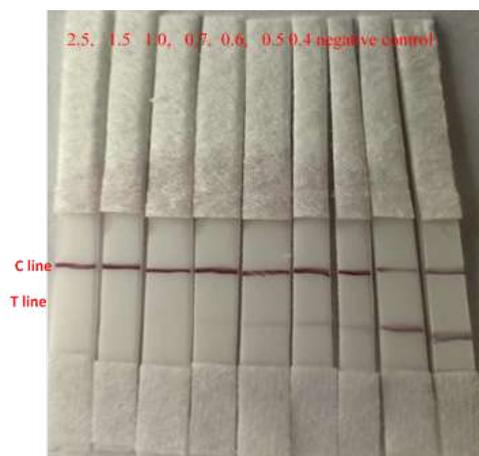
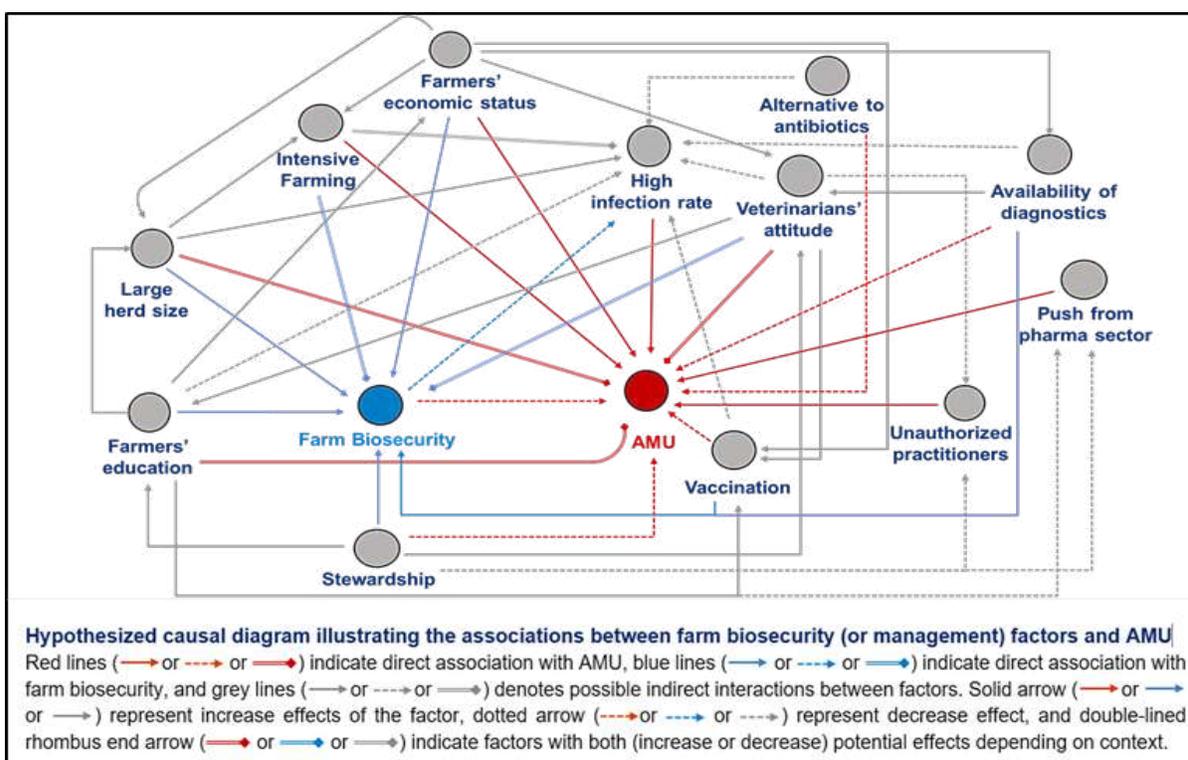


Fig. Analysis of spiked milk samples using Dipstick method (Premixed conjugate with sample); Visual detection limit of AFM1 spiked milk at the concentrations of 2.5 1.5, 1.0, 0.7, 0.6, 0.5, 0.4 ng/mL, negative control (milk) and negative control (MiliQ water), respectively.



- **Characterization of chicken eggs associated *Escherichia coli* and *Staphylococcus aureus* for biofilm production and antimicrobial resistance traits:** The present study assessed the prevalence, virulence characteristics, antimicrobial resistance, and biofilm-forming ability of *E. coli* and *S. aureus* recovered from egg samples in Ludhiana, Punjab. A total of 393 samples were collected from hatcheries (n=238), retail shops (n=94), and households (n=61). The prevalence of *E. coli* was 11.70%, while *S. aureus* was observed at 9.16%. Among the *E. coli* isolates, 41.30% were positive for the *aggR* gene, and 52.17% for the *fimA* gene; for *S. aureus*, 36.11% of the isolates were positive for the *coa* gene. A high proportion of *E. coli* (76.10%) and *S. aureus* (69.44%) isolates showed resistance to three or more antibiotic classes. Furthermore, 39.13% of *E. coli* isolates were moderate biofilm formers, whereas the majority of *S. aureus* isolates (41.67%) were weak biofilm formers. Biofilm genes *fimC* and *crl* were found in 43.47% and 80.43% of *E. coli* isolates, respectively, while *icaA* and *icaD* genes were detected in 58.34% and 47.22% of *S. aureus* isolates. Strong metabolic activity was observed in 52.17% of *E. coli* and 41.66% of *S. aureus* isolates using the XTT assay. This study highlights the importance of implementing effective food safety measures across the egg production chain in the region to prevent the emergence of multidrug-resistant (MDR) strains and biofilms.
- **Can Improved Farm Biosecurity Reduce the Need for Antimicrobials in Food Animals? A Scoping Review:** This scoping review aimed to analyze the impact of farm biosecurity on antimicrobial use (AMU) in livestock systems and provide recommendations. A total of 27 peer-reviewed studies published between 2001 and 2022 were selected using the PRISMA framework from databases like PubMed, Scopus, and Science Direct. These studies assessed the effect of biosecurity practices on AMU at the herd or farm level. Conducted across 16 countries, 74.1% of studies were from 11 European nations. The majority focused on pig farms (51.8%), followed by poultry (25.9%) and cattle farms (11.1%). Most studies were cross-sectional (70.4%), with others being longitudinal or case-control studies. The review found complex interactions between





biosecurity, farm characteristics, farmer attitudes, and animal health services influencing AMU. In 51.8% of studies, improved farm biosecurity was associated with reduced AMU. Additionally, 18.5% indicated that better management practices correlated with decreased AMU, and two studies suggested that farmer education could further reduce AMU. One economic assessment also found biosecurity practices to be cost-effective. However, five studies showed an uncertain or unclear relationship between biosecurity and AMU.

➤ **Hygiene Assessment and Contamination in Wet Markets of Punjab**

A quantitative scoring system was developed to assess hygiene, sanitation, and biosecurity practices in 60 wet market stalls across Punjab. Results showed that 21.67% of stalls had poor hygiene practices, 65% were moderate, and 13.33% followed good standards, with none achieving excellent ratings. Microbiological testing of 120 meat samples revealed that 59.16% exceeded the FSSAI limit for total viable count (TVC > 5 X 10⁶ CFU/g). *E. coli* was detected in 58.84% of samples, and *S. aureus* in 26.52%. Among these, 61.97% of *E. coli* and 72.77% of *S. aureus* isolates were multidrug-resistant (MDR). Pesticide residues, such as malathion (2.5%) and chlorpyrifos (0.83%), were found in poultry meat, indicating contamination from feed. Heavy metal analysis of water and fish samples revealed elevated levels of lead (Pb), nickel (Ni), and arsenic (As), posing potential health risks.

➤ **Detection and Prioritization of Foodborne Pathogens in Punjab:** A total of 417 animal-based food samples from local markets in Ludhiana were analyzed for viral and bacterial pathogens, along with antimicrobial resistance profiling. The highest prevalence of bacterial pathogens was found in *E. coli* (45.32%), followed by *S. aureus* (19.42%), *Salmonella* spp. (5.99%), and *L. monocytogenes* (0.71%). Multidrug-resistant (MDR) strains were most common in *Salmonella* (58.33%), followed by *S. aureus* (47.5%) and *E. coli* (26.98%). Virulence gene profiling revealed *E. coli* carried *fimA* (47.08%), *stx* (3.70%), and *aggR* (3.17%). In *S. aureus*, 38.27% had the *coa* gene, while 83.33% of *Salmonella* isolates tested positive for *invA*. *Listeria* isolates contained the *hlyA* gene. Serotyping identified major *E. coli* serogroups (ETEC, EHEC, EAEC) and emerging *Salmonella* serotypes (*S. Infantis*, *S. Typhimurium*, *S. Choleraesuis*). A prioritization framework identified zoonotic pathogens—*Mycobacterium*, *Brucella*, and *Cysticercus cellulosae*—as top foodborne threats in Punjab.

➤ **Application of Microbial and Chemical Source Tracking for Water Quality Assessment:** Seventy-two water samples were collected, including 36 from sewage treatment plants (STPs) in Ludhiana and Jalandhar, and 36 from the Sutlej River and Buddha Nullah at three locations. The physicochemical properties of wastewater were compared with surface water. Cluster analysis revealed contamination of both rivers by raw and treated sewage. Bacteriological source tracking (BST) using thermotolerant *E. coli* was the most effective method for identifying fecal pollution sources. Additionally, human adenoviruses, including serotype 41, were detected in 36% of the samples, suggesting that virological source tracking may offer a more host-specific approach to tracking fecal contamination in both wastewater and surface water.

4. Directorate of Livestock Farms (DLF)

➤ AICRP Poultry (ICAR-7)

- The Ludhiana center evaluated PB-1, PB-2 lines, and native chicken (Punjab Brown).
- The body weight at five weeks of age was 1,225 g and 1,118 g in PB-1 and PB-2, respectively. The average egg production up to 40 weeks of age was 62 eggs in PB-1 and 71 eggs in PB-2.

- For Punjab Brown, the body weight at 4, 8, 16, 20, and 40 weeks of age was 340 g, 658 g, 1,452 g, 2,110 g, and 2,765 g, respectively. The average egg production up to 36 weeks of age was 58 eggs.
- The center supplied Punjab Brown hatching eggs to ICAR-DPR for conservation purposes.
- A total of 69,917 germplasm units were supplied to 419 farmers during the reporting period.



PB2 Male



PB2 Female



Punjab brown



Desi cross (Punjab Gold)



Kadaknath

- **Cattle Breeding:** The average 305-day milk yield and average peak yield of HF crossbred cows were recorded at 5,559.9 kg and 29.85 kg, respectively, while the average total lactation yield was 6,473.83 kg. The maximum 305-day milk yield for an individual cow was 7,791.5 kg. The average age at first calving (AFC) in the crossbred cattle herd was 28.81 months. During the year, 15 bulls/bull calves and 37,479 doses of crossbred cattle semen (frozen and liquid) were supplied to Gaushalas, farmers, and other dairy development agencies within the state for breeding purposes.



Progeny of elite crossbred animals produced from nominating mating



FC1430 with Peak Yield:43.7kg, 305-day milk yield:6407.5kg

- **Nili Ravi Buffalo Breeding:** The Nili-Ravi breed of buffalo evolved in Punjab and is considered one of the major milch breeds of buffalo. Under the ongoing conservation plan adopted by the Ministry of Animal Husbandry and Dairying, Government of India, a Network Project on the Nili-Ravi buffalo was allotted to the university in 2017 by the Indian Council of Agricultural Research. The institute has been consistently working to improve herd performance, produce high-quality germplasm, and distribute quality germplasm to farmers in Punjab. The herd's average 305-day milk yield, total milk yield, and peak yield were recorded at 2,659.41 kg, 2,745.67 kg, and 14.62 kg, respectively, with the highest 305-day milk production recorded at 3,535.9 kg. The herd's average age at first calving is 40.39 months. Disseminating superior germplasm remains one of the project's top priorities. During the year, 15 Nili-Ravi bulls/bull calves and 11,726 doses of Nili-Ravi semen were provided to dairy farmers.



Bull no.:507 with Dam's best lactation yield:4268 kg and Peak yield:21.5 kg



NR2835 with peak Yield:18.8 kg, 305 day milk yield:3530.6 kg

- **Murrah Buffalo Breeding:** The genetic improvement of buffaloes is conducted through progeny testing of bulls. The AICRP/Network Project on buffalo breeding has been operational at the dairy farm since 1971. The top buffalo bulls are selected based on the performance of daughters produced at GADVASU Ludhiana, NDRI Karnal, CIRB Hisar, LUVAS Hisar, IVRI Izatnagar, and in villages around Hisar, Ludhiana, and Karnal. The average 305-day lactation milk yield and average peak yield for the university herd were recorded at 2,718.17 kg, 2,774.26 kg, and 14.49 kg, respectively. The average age at first calving for the herd is 39.79 months. To date, the project has supplied 1,062 bulls/male calves and 1.102 million doses of high genetic merit semen to farmers and other dairy development agencies. Semen doses from 24 progeny-tested Murrah buffalo bulls, as well



Test Murrah bull of XIIIth set of Network Project



Buffalo no.:2897 produce record milk



as 24 bulls in various stages of progeny testing, are available for distribution to farmers and dairy development agencies. Over the past year, 64 Murrah bulls/bull calves and 55,660 frozen semen doses were provided to farmers for breeding purposes.

➤ **Cattle- Field Progeny Testing:**

- During the reporting period, frozen semen from the 17th and 18th sets of bulls (48 in total) belonging to the FPT Project, executed by ICAR-CIRC, Meerut, was used to perform 4,021 artificial inseminations, achieving a conception rate of 52.8%.
- During the year, 445 daughters (23 from the 14th set, 367 from the 15th set, and 55 from the 16th set) completed their first lactation 305-day records, with an average milk production of 3,860.5±23.7 kg.
- Five male calves were supplied to ICAR-CIRC for future test matings under the FPT cattle program.

DAIRY FARM

1. The gross income of DLF was Rs. 3,57,97,347, Rs. 3,41,03,922, and Rs. 4,19,33,898 during the years 2021-22, 2022-23, and 2023-24, respectively. Income from milk was Rs. 99,30,000 in 2022-23, which increased to Rs. 2,02,60,000 in 2023-24. This increase occurred despite milk used for making milk products being provided free of cost to the College of Dairy Science and Technology.
2. Annual milk production was 638,075 kg in 2022-23 and 700,435 kg in 2023-24.
3. The daily average milk yield of the cattle herd was 17.56 kg/day in 2022-23 and 17.50 kg/day in 2023-24.
4. The daily average milk yield of Murrah buffaloes was 8.45 kg/day in 2022-23 and 8.69 kg/day in 2023-24.
5. The daily average milk yield of Nili-Ravi buffaloes was 8.28 kg/day in 2022-23 and 8.40 kg/day in 2023-24.
6. Fodder harvesting has been largely mechanized using a harvester-cum-chopper and a 90 HP tractor.
7. Fodder production increased from 58,132 quintals in 2022-23 to 65,832 quintals in 2023-24.
8. Approximately Rs. 30 lakh was saved by collecting 6,000 quintals of paddy straw from farmers' fields.
9. For the first time, an attempt was made to prepare wheat hay.
10. Approximately 11,000 quintals of maize grain silage were prepared by purchasing 8,000 quintals of maize from the market and using 3,000 quintals from the farm's own fields.

GOAT FARM

1. To improve genetic variability, the existing nucleus stock of Beetal goats at the University Goat Farm has been strengthened.
2. The opening and closing flock strength of the Beetal Goat Nucleus was 168 and 140, respectively, during FY 2023-24.
3. During 2023-24, 67 animals were added to the University's Beetal goat stock through births, and 1 female and 1 male goat were purchased. Of this stock, 78 Beetal goats were distributed as germplasm to farmers.
4. The percentage of multiple births increased from 64% to 81% over the last four years (2020-21 to 2023-24), while the percentage of single births decreased during the same period.

5. The fecundity rate also improved, rising from 1.5 to nearly 2.0 over the years 2019-20 to 2023-24.
6. The average daily weight gain during the first year of life improved to 94.7 g/day, up from 48 g/day in 2019-20. Male kids showed better growth than females. The average live body weight of kids at 12 months was 38.0 kg, compared to 21 kg in 2019-20.
7. The total milk yield (TMY) of Beetal goats over a 90-day lactation period also increased, reaching 138.2 kg, up from 83 kg in 2020-21, with an average daily milk yield of 1781 g and a peak yield of 2497 g.
8. Two goats, identified by numbers B1168F and B1192, recorded peak yields of over 5 kg, specifically 5.150 kg and 5.100 kg, respectively.
9. The construction of a goat shed with housing facilities for 100 breedable does is also underway.
10. A small unit of Avishaan and Dumba sheep has also been introduced at the university.



5. Veterinary Gynaecology & Obstetrics

- **Effect of Glutathione Supplementation on Freezability of Buffalo Bull Semen:** Glutathione, a key component of the cell membrane, protects buffalo spermatozoa during freeze-thawing. This study assessed the effects of glutathione concentrations (0, 0.5, 1, 1.5, and 2.0 mM/ml) on the freezability and fertility of buffalo semen. Semen samples (n=24) were collected from four Murrah buffalo bulls, and ejaculates with >70% motility were diluted with a Tris-citric acid extender containing various glutathione concentrations. The semen was cryopreserved and evaluated for sperm motion, viability, membrane integrity, acrosome integrity, mitochondrial potential, and lipid peroxidation. Sperm motility, viability, membrane integrity, and mitochondrial potential were significantly higher (P<0.05) in the extender with 0.5 mM/ml glutathione compared to other concentrations and the control. No significant differences (P>0.05) were observed in acrosome integrity. Malondialdehyde (MDA) production was lower (P<0.05) in extenders with 0.5 and 1.0 mM/ml glutathione. Inseminations (n=60) using the 0.5 mM/ml glutathione extender resulted in a higher conception rate (46.7%) compared to the control (33.3%), although the difference was not significant (P>0.05). In conclusion, supplementing 0.5 mM/ml glutathione in the extender improves the quality and fertility of cryopreserved buffalo semen.
- **Effect of Egg Yolk and Glycerol on Quality of Frozen Dog Semen:** Egg yolk and glycerol are key cryoprotectants used in canine semen freezing. This study aimed to evaluate the impact of different egg yolk and glycerol concentrations on the quality of frozen dog semen and optimize the cryopreservation protocol. Semen was collected from eight dogs (Pug, Beagle, Labrador), and the second ejaculate fraction was used for the experiment. The semen was diluted with extenders containing 15%, 20%, or 25% egg yolk, with 7% glycerol. After cooling and freezing in liquid nitrogen vapor, semen was stored at -196°C. Key parameters—motility (via CASA), viability (Hoechst 33342/PI stain), acrosome integrity (Hoechst 33342/FITC-PNA stain), and mitochondrial membrane potential (Hoechst 33342/Rhodamine 123)—were assessed at 37°C. The results showed that 15% egg yolk with 7% glycerol provided the best sperm quality, outperforming the 20% and 25% concentrations. In conclusion, the combination of 15% egg yolk and 7% glycerol offers optimal protection for canine sperm during cryopreservation, significantly improving motility and overall



semen quality.

- **Serum Anti-Müllerian Hormone and Cytokine Profiling in Murrah Buffalo Calves for Puberty Prediction:** This study investigated the cytokine and anti-Müllerian hormone (AMH) profiles of buffalo calves (0–6 months, 35 kg) and heifers (12 months, 200 kg) to predict puberty. Blood samples were collected from calves on days 0, 15, 30, 60, 90, 120, 150, and 180, and from heifers at 1 year of age. Cytokines (IFN- γ , IL-6, IL-1, IL-13, TNF- α , TGF- β) and AMH levels were measured using ELISA kits. At birth, cytokine levels varied: IFN- γ , IL-6, and IL-13 were lower, while IL-1, TNF- α , and TGF- β were higher. Over time, IFN- γ , IL-13, and TGF- β levels remained stable, while IL-1, IL-6, and TNF- α increased significantly by day 180. AMH levels remained steady from birth to day 180, rising at day 15 (33.49 ± 12.63 ng/L) and dropping to 4.60 ± 1.55 ng/L by day 365. Pearson correlation analysis revealed a negative correlation between AMH and both IFN- γ and TNF- α , and a positive correlation between AMH and IL-13 and TGF- β . This suggests that IFN- γ and TNF- α are potential markers for predicting the onset of puberty in buffalo heifers.
- **Efficacy of Therapeutic Protocols on Blood Count and Serum Biochemistry in Female Dogs with Pyometra:** This study evaluated the efficacy of different therapeutic protocols in 75 female dogs with pyometra, divided into five treatment groups: Group I (cabergoline), Group II (mifepristone), Group III (cloprostenol sodium), Group IV (cabergoline + cloprostenol sodium), and Group V (mifepristone + cloprostenol sodium). Treatments were administered over 7 days, and blood samples were collected on days 0, 3, and 7 to assess hematological and biochemical parameters. Hematological results showed that total leukocyte count (TLC) and neutrophil count were initially elevated but normalized ($P < 0.05$) by day 7 in all groups, with the most significant improvement ($P < 0.05$) in Group IV. Hemoglobin, lymphocyte count, and packed cell volume (PCV) were below reference range on day 0, but by day 7, lymphocyte levels showed a notable improvement ($P < 0.05$) in Group IV. Biochemical analysis revealed normal levels for AST, ALT, total protein, BUN, and creatinine throughout the study. However, alkaline phosphatase (ALKP) was elevated ($P < 0.05$) on day 0 and returned to normal by day 7, except in Group II. In conclusion, the combination of cabergoline and cloprostenol sodium was the most effective treatment for canine pyometra.
- **Hemodynamic Changes in Cytokines and Acute Phase Proteins in Mares with Uterine Infection:** Uterine infections in mares threaten reproduction and cause economic losses to horse owners. Timely diagnosis is crucial for minimizing risks. This study involved 30 broodmares with uterine infections, where serum samples were collected to assess cytokines (IL-1 β , IL-8, TNF- α , and IL-10) and acute phase proteins (Serum Amyloid A [SAA] and Haptoglobin) using ELISA kits. Results showed elevated pro-inflammatory cytokines (IL-1 β , IL-8, TNF- α) and decreased anti-inflammatory IL-10 on Day 1 of infection. By the subsequent estrus, pro-inflammatory cytokine levels decreased, while IL-10 increased, indicating resolution of inflammation. SAA levels were elevated on Day 1 of estrus but returned to normal by the subsequent estrus. Haptoglobin levels remained within the normal range throughout, suggesting that Haptoglobin is not a reliable marker for reproductive issues in mares. In conclusion, monitoring cytokine and SAA levels is more effective for diagnosing and tracking uterine infections, while Haptoglobin is not a useful indicator in this context.

6. Livestock Production and Management

- **Comparative analysis of whole milk and milk replacer feeding on growth, performance, and health status of Murrah buffalo calves:** The study found that buffalo calves fed whole milk (WM) had a significantly higher ($P < 0.01$) overall body weight compared to those fed calf milk replacer (CMR) and fermented milk replacer (FMR), with no significant difference between the



- **Effect of Management Practices on Welfare and Performance of Weaned Pigs:** Split-weaned pigs supplemented with whole milk powder showed a 7.28% increase in final body weight compared to the conventional weaning group ($p < 0.05$), along with a reduced weaning-to-estrus interval and a 1.9% increase in economic profit. No significant differences were found in body weight gain (ABWG), daily weight gain (ADWG), or feed conversion ratio (AFCR) among treatment groups, except for average daily feed intake (ADFI), which was lowest in pigs on concrete floors. Pigs given 0.3 m²/pig and 0.27 m²/pig space allowances showed similar final body weights, outperforming those in lower space groups (0.24 and 0.21 m²/pig). Negative behaviors were more common in the lower space allowance groups. Supplementing creep feed with additional protein and energy during the pre-weaning and split-weaning stages improved growth, while enriched flooring materials enhanced welfare, activity, and growth. Reducing floor space by 10% to 0.27 m²/pig had minimal impact on growth, though higher stocking densities increased negative social behaviors.

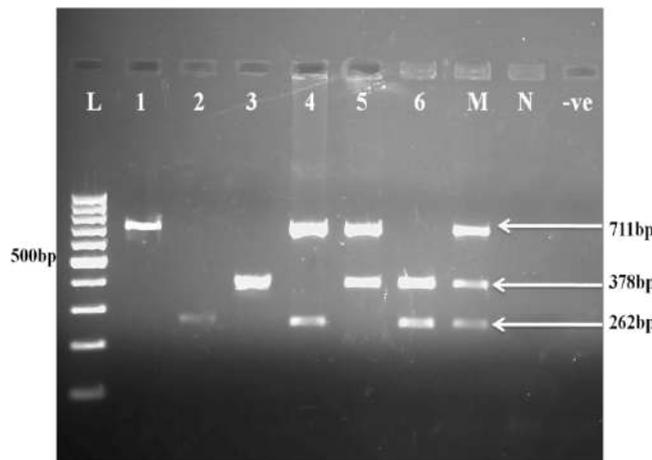
7. Animal Nutrition:

1. Adding PROSODIUM (feed-grade sodium sulphate) at 0.3% in total mixed ration (TMR) or 0.75% in concentrate mixture for milking cows enhances fat-corrected milk (FCM) yield and fat percentage without any adverse effect on cow health.
2. Methane mitigation strategies show that incorporating herbal wastes, such as amla pomace and aloe vera waste at 20 g/kg of dry matter intake in dairy cow diets, increases milk production while reducing methane emissions.
3. The inclusion of urea, biological inoculants, fiber-degrading enzymes, and molasses in paddy straw silage improves its chemical composition, utilization, and degradability. Using 1% urea, a cocktail of enzymes, 6% molasses, and bacterial culture in animal feeding shows no negative impact on animal health and results in higher digestibility and milk production.
4. Growing buffalo heifers achieve growth rates exceeding 800 g/day with a basal ration of urea-molasses-treated paddy straw, compared to approximately 700 g/day on untreated paddy straw.
5. Supplementing transition buffaloes with 15 g/day of rumen-protected methionine increases crude protein (CP) digestibility, fat percentage, milk yield, milk per kilogram of dry matter intake (DMI), milk per kilogram of CP intake, CP efficiency, and leads to earlier uterine involution in the supplemented group.
6. Supplementing broiler diets with 5% hatchery-discarded whole infertile egg meal (HDWIEM), replacing 14% of soybean meal (SBM), improves growth performance, nutrient utilization (in terms of CP, EE, and Ca), and immune status.
7. Distiller's dried grains with solubles (DDGS) can be used as an alternative protein source in dog diets.
8. Various dog foods, including puppy and adult formulas, both vegetarian and non-vegetarian, have been developed.
9. Hatchery-discarded infertile egg meal with shell has been utilized as an alternative protein source in dog diets.
10. The effect of including urea, biological inoculants, fiber-degrading enzymes, and molasses on the chemical composition, in vitro utilization, and degradability of paddy straw silage was studied. Urea was used at 0%, 1%, and 2%; molasses at 0%, 3%, and 6%; *Lactobacillus plantarum* (LAB) at 2.4×10^6 CFU/g; and enzymes (either xylanase or enzyme cocktail) at

50 g/100 kg paddy straw. Results indicate that using 1% urea, a cocktail of enzymes, and 6% molasses with bacterial culture is effective for animal feeding, enhancing digestibility and milk production without any adverse effects on animal health.

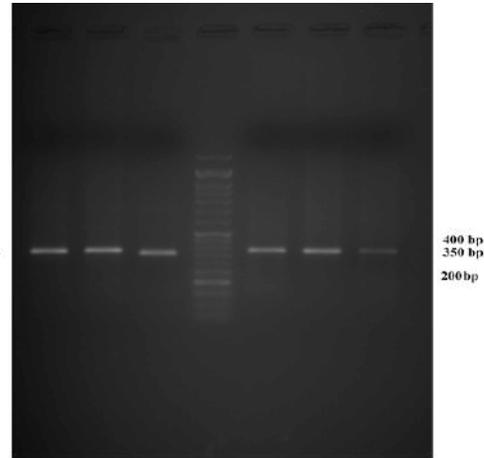
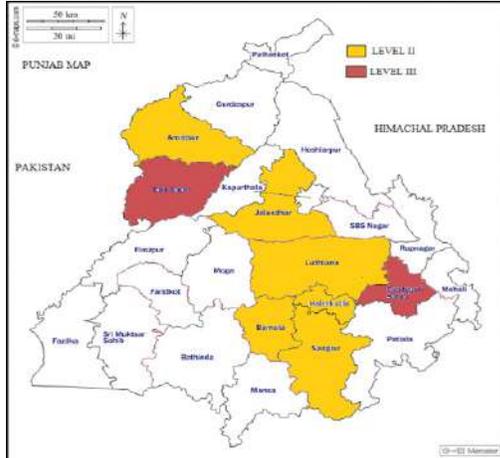
8. Veterinary Parasitology

- **Epidemiology, risk factors of GIT parasites in canine gastrointestinal of central plain zone of Punjab:** In the Central Plain Zone of Punjab, the overall prevalence of gastrointestinal parasites (GIP) in canines was 60.2%, with the highest in Amritsar (70.97%) and lowest in Patiala (45.31%). Hookworms were the most common single infection (31.24%). Risk factors such as breed, domestication type, deworming status, and urbanization were significantly associated with GIP prevalence.
- **Optimization of Multiplex PCR for diagnosis of canine cestodes:** The multiplex PCR assay was optimized using in-house designed primers targeting the mitochondrial (mt) gene and the cytochrome oxidase (cox) gene of *Dipylidium* (711 bp), *Taenia* (378 bp), and *Echinococcus* (262 bp), respectively. The study zone exhibited a noteworthy occurrence of enteric parasites in canines, specifically hookworms (detected by conventional microscopy) and *Echinococcus* (detected by the multiplex PCR assay), indicating a potential risk of zoonotic infections.



Optimization of Multiplex PCR for canine cestodes parasites

- **Molecular characterization of deltamethrin resistance in *Rhipicephalus microplus* ticks and prospects of essential oils for its mitigation:** A larval packet test-based deltamethrin resistance map of the Central Plain Zone of Punjab has been developed, revealing the presence of a non-synonymous C190A mutation in the S4-5 linker region of the Na-channel gene, along with the absence of a restriction site for EcoRI in the partial carboxylesterase gene of *Rhipicephalus microplus*, both linked to SP resistance and recorded in all field isolates. Additionally, garlic oil demonstrated the highest efficacy, exhibiting the lowest LC95 (95% CI) values of 4.74% (4.01-6.23%), and its combination with peppermint oil showed moderate synergism.
- **Development of surveillance and mitigation tools for the management of anthelmintic resistance in small-ruminants:** The overall prevalence of gastrointestinal (GI) helminths recorded in the sheep and goat populations was 93.33% and 91.77%, respectively, with strongyles being the predominant GI helminth in both hosts, followed by *Moniezia* sp., *Trichuris* sp., and *Strongyloides* sp. In vitro assays, including the egg hatch test (EHT) and larval development assay (LDA), were standardized and utilized to estimate resistance to benzimidazoles, levamisole, and ivermectin. Additionally, a fecal egg count reduction test (FECRT) was conducted on naturally infected goats to evaluate



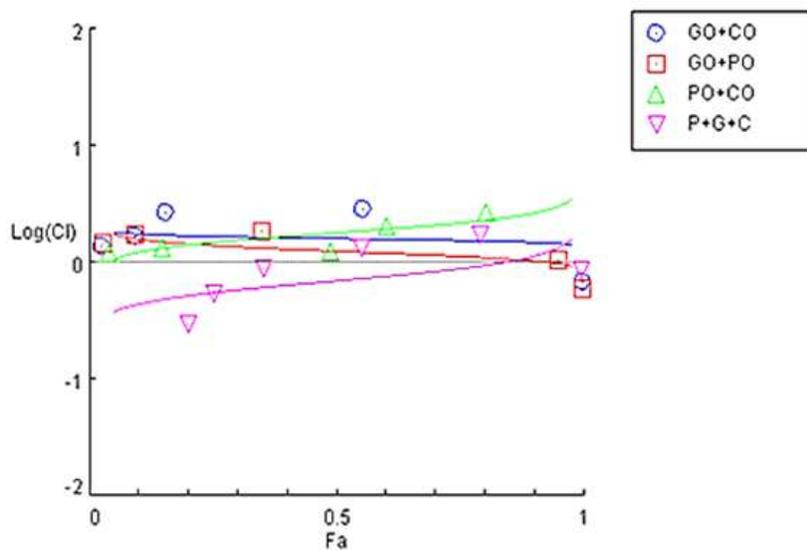
Deltamethrin resistance status of *R. microplus* in Central Plain Zone of Punjab

PCR-RFLP of partial carboxyl esterase gene of *R. microplus*

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AF134216.2 Boophilus microplus putative sodium channel gene [1] R V F K L A K S W P T L N L L I S I M G K T I G A L G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
HM579820.1 R. microplus isolate Izatnagar Susceptible India [1] R V F K L A K S W P T L N L L I S I M G K T I G A L G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991229.1 R. microplus isolate Amritsar 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E K S [55]
OR991230.1 R. microplus isolate Barnala 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991231.1 R. microplus isolate Fatehgarh Sahib 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991232.1 R. microplus isolate Jalandhar 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991233.1 R. microplus isolate Ludhiana 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991234.1 R. microplus isolate Malerkotla 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
OR991235.1 R. microplus isolate Sangrur 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F F F A V M G M Q L F G K N Y E E S [55]
OR991236.1 R. microplus isolate Tarn Taran 1 [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
KY873597.1 R. microplus isolate Jaipur India [1] R V F K L A K S W P T L N L L I S I M G K T I G A L G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
KY873595.1 R. microplus isolate Muktsar India [1] R V F K L A K S W P T L N L L I S I M G K T I G A L G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
HM579821.1 R. microplus isolate Sultanpur India [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
KY873594.1 R. microplus isolate Moga India [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
MT328784.1 R. microplus isolate Mannuthy 1 India [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
MN176129.1 R. microplus isolate Kurukshetra India [1] R V F K P S K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
JQ693154.1 R. microplus strain IVRI-IV Resistant India [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
KM073929.1 R. microplus USA: Zapata County Texas [1] R V F K L A K S W P T L N L L I S I M G K T I G A T G N L T F V L G I I I F I F A V M G M Q L F G K N Y E E S [55]
    
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C190A mutation in *R. microplus* of Punjab

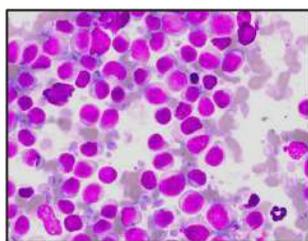


CI plots of all essential oil combinations against *R. microplus*

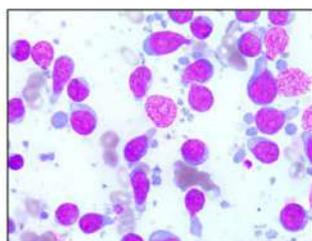
the efficacy of fenbendazole, levamisole, and ivermectin against GI parasites in Fatehgarh Sahib and SAS Nagar of Punjab. **Preliminary evaluation of atypical-Human trypanosomiasis (a-HT) due to *Trypanosoma evansi* in Punjab:** Out of 436 human samples collected from five districts in Punjab (Ludhiana, Bathinda, SAS Nagar, Amritsar, and Gurdaspur), comprising 209 males and 247 females, 106 tested positive, resulting in an overall seropositivity rate of 24.31%. Among the 106 positive samples, the agglutination titre levels were graded as +++ (27), ++ (31), + (41), and +/- (7) in patients. Risk factor analysis revealed a gender-wise seropositivity of 30.39% in females and 17.70% in males, with age-related findings showing higher positivity in teenage and elderly patients (>60 years). In terms of health status, seropositivity was observed in 24.7% of clinical patients (48 out of 194) and 23.9% of non-clinical patients (58 out of 242). Furthermore, hematobiochemical parameters indicated a significant increase in lymphocyte and basophil counts, glucose, blood urea nitrogen, gamma glutamyl transferase, and total bilirubin levels, alongside a significant decrease in haemoglobin, platelet count, neutrophils, monocytes, and creatinine levels in seropositive patients compared to the healthy control group.

9. Veterinary Pathology

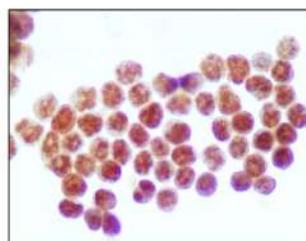
- **Immunophenotyping and miRNA detection in canine lymphoma:** Immunohistochemical staining was employed to classify lymphomas in dogs into B-cell and T-cell types using anti-Pax 5, CD 79a, and CD 3 antibodies. Additionally, the detection of miRNA in serum can serve as a supplementary tool for early diagnosis and assessing prognosis in cases of lymphoma in dogs.



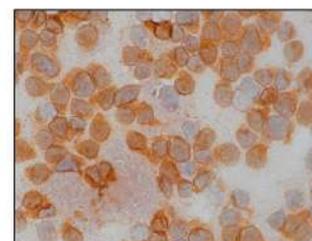
B-cell variant of lymphoma



T-cell variant of lymphoma



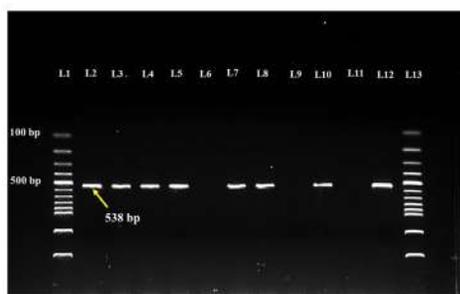
ICC: Pax 5 – Nuclear immunostaining for B cell



ICC: CD3 – Cytoplasmic immunostaining for T cell

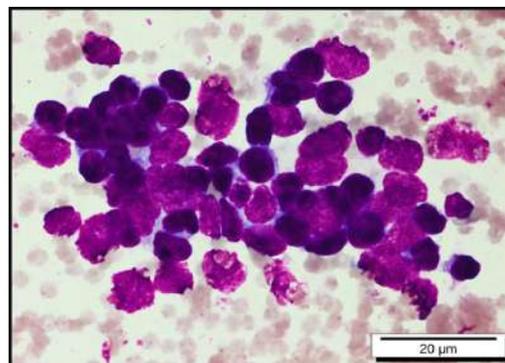
- **Prevalence of bovine leukaemia virus and associated diseases:** Bovine leukaemia virus had a prevalence of 28.78%. In animals infected with BLV, the prevalence of associated diseases was found to be 65.90% for BPI-3V, 46.60% for BRSV, 29.50% for BHV-1, 46.60% for BVDV, and 15.90% for *Mycobacterium bovis*.

Molecular Detection of BLV virus by PCR

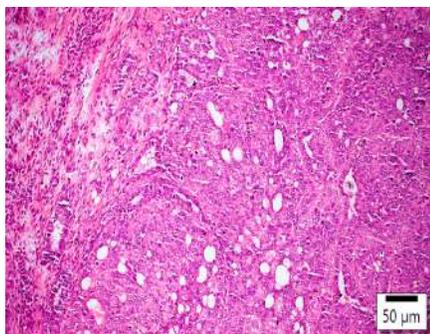


L1 and L13: Ladder
L2, L3, L4, L5, L7, L8, L10: Positive samples
L6 & L9: negative sample

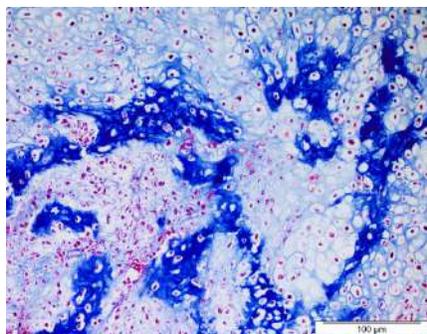
L11: Negative control
L12: Positive control



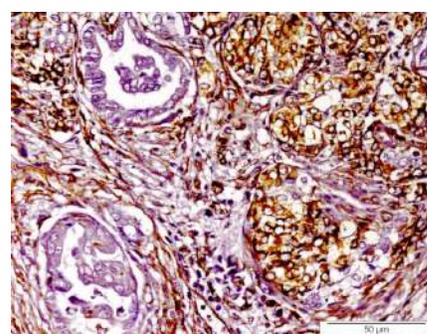
- **Epithelial mesenchymal transition in canine mammary Tumor:** In clinical cases of CMT, EMT was directly proportional to the grade of tumors, and studies have shown that curcumin and baicalein exhibit anti-Tumor activities in experimentally induced mammary Tumor models in rats.



Histopathology of mammary gland showing features of carcinoma. (H&E, bar= 50um)

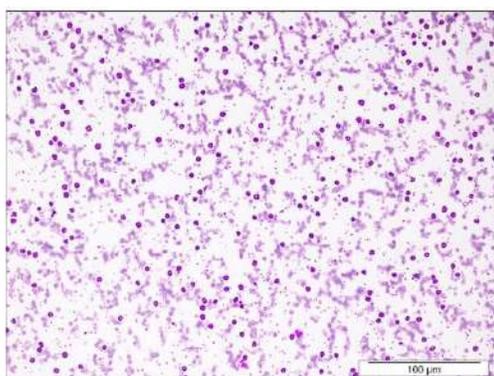


Histopathology of mammary gland showing features of bony tissue (Alcian blue, bar= 50um)

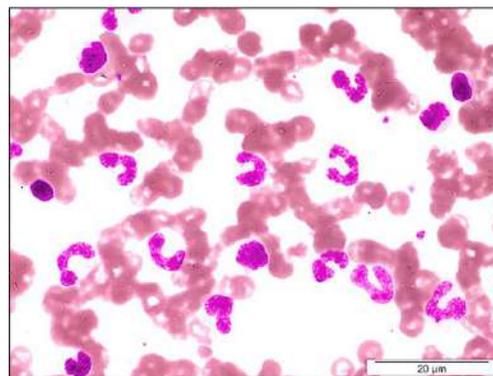


Immunohistochemical detection of E-cadherin in a case of mammary carcinoma. (H&E, bar= 50um)

- **Causes of Leukocytosis in dogs including hematological malignancies:** Leukocytosis, characterized by an elevated white blood cell count, can occur in dogs due to various factors, including inflammation, stress, excitement, paraneoplastic syndromes, and hematological malignancies. Of these, chronic lymphocytic leukemia is the most commonly diagnosed hematological malignancy in dogs.



Blood smear showing massive neutrophilic leucocytosis with TLC=164200/ul suggestive of leukemoid response (Leishman stain, 20X, Bar=100 μm)



Blood smear showing leukemoid response (Leishman stain, 20X, Bar=100 μm)

13. Veterinary Pharmacology & Toxicology

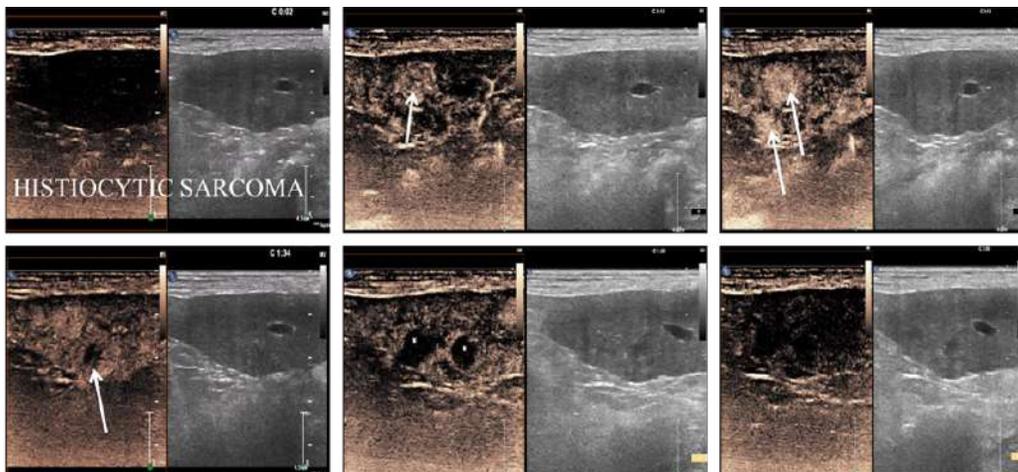
- **Protective Effects of Bio-Antioxidants Against Arsenic-Induced Toxicity in Mesenchymal Stem Cells from Buffalo Adipose Tissue:** The study isolated and characterized mesenchymal stem cells (MSCs) from buffalo adipose tissue to investigate the protective effects of bio-antioxidants against arsenic-induced cytotoxicity, genotoxicity, oxidative stress, and apoptosis. MSCs were isolated via enzymatic digestion and cultured in vitro, displaying typical stem cell markers such as CD73, CD105, CD90, and CD44, while lacking CD34 and CD45. The cells, measuring 17–20 μm in diameter, exhibited a population doubling time of 37.06 ± 1.36 hours and were capable of differentiating into adipogenic, osteogenic, and chondrogenic lineages. Exposure to sodium arsenite resulted in significant ($p < 0.05$) cytotoxicity and DNA damage, evidenced by increased enzyme markers, DNA strand breaks, and comet assay parameters (tail DNA percentage, tail length, and tail moment). Arsenic also elevated oxidative stress markers, reactive oxygen species, altered mitochondrial membrane

potential, cell senescence, and apoptosis. Treatment with resveratrol and catechin mitigated these effects, demonstrating their protective potential against arsenic-induced toxicity in MSCs.

- **Preparation, Characterization, and Safety Evaluation of Ceftiofur-Loaded Chitosan and Zinc Oxide Nanoparticles:** Ceftiofur-loaded nanoparticles were prepared using chitosan (ionic gelation) and zinc oxide (sol-gel method), followed by characterization and safety assessment. Ceftiofur-loaded chitosan (CEF-CHI NPs) and zinc oxide (CEF-ZnO NPs) nanoparticles had average sizes of 188.63 ± 0.66 nm (PDI: 0.478 ± 0.01 , zeta potential: 26.53 ± 0.38 mV) and 288.13 ± 4.94 nm (PDI: 0.609 ± 0.006 , zeta potential: 27.16 ± 0.120 mV), respectively. Encapsulation efficiencies were $64.37 \pm 0.85\%$ for CEF-CHI NPs and $40.99 \pm 1.32\%$ for CEF-ZnO NPs, with drug release rates of 39.69% and 62.9%, respectively. Both formulations followed the Korsmeyer-Peppas model and Fick's law of diffusion. TEM analysis showed smooth spherical CEF-CHI NPs and nearly spherical CEF-ZnO NPs. The IC₅₀ for both nanoparticle formulations, determined by the MTT assay, was >10 mg/ml, with 2 mg/ml and 10 mg/ml doses selected for further safety testing. Genotoxicity assessment via the COMET assay indicated slight genotoxicity for zinc oxide nanoparticles. Cytotoxicity studies revealed that CEF-CHI NPs were non-cytotoxic, while CEF-ZnO NPs exhibited significant cytotoxicity in MDBK cell lines. For in vivo safety evaluation, CEF-CHI NPs at a dose of 2 mg/kg were administered to animals, with no toxicity or mortality observed in any treatment group over a 10-day period. These results suggest that CEF-CHI NPs are safe for further development.

15. Veterinary Surgery and Radiology

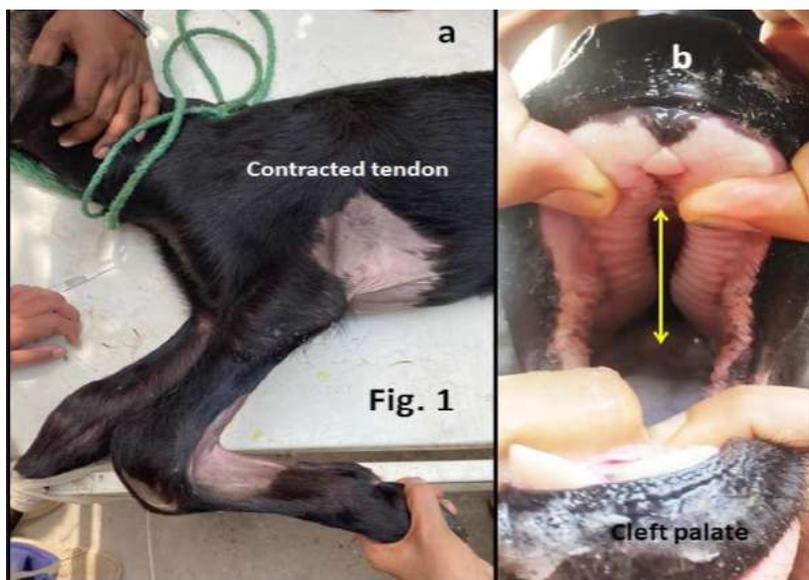
- A patent (number 202211010074) was granted on May 25, 2022, to the inventors Rupinder Singh (NITTTR, Chandigarh), Arun Anand (Veterinary Surgery and Radiology, GADVASU, Ludhiana), BS Pabla (NITTTR, Chandigarh), and Anish Das (NITTTR, Chandigarh). The patent was officially issued on February 24, 2022.
- **Contrast enhanced ultrasound and doppler studies on affections of solid abdominal viscera in canine:** The study aimed to standardize the technique for contrast-enhanced ultrasonography (CEUS) of major solid abdominal organs—the liver, spleen, and kidneys—in dogs and to compare B-mode, Doppler, and CEUS for diagnosing afflictions in these organs. Pulsatile waveform above the baseline with distinct systolic and diastolic peaks identified the splenic and hepatic arteries, while an antegrade waveform with prominent pulsatile peaks and a flat or slightly phasic waveform identified the hepatic artery and portal vein, respectively. The hepatic vein showed a triphasic (tetra-inflectional) waveform with four components (A, S, V, and D), while the inter-lobar artery exhibited a double systolic peak. CEUS of the liver and spleen revealed three phases—arterial, portal, and late—whereas the kidneys showed two phases: cortical and medullary. Doppler and CEUS reliably detected hepatic malignancy, and CEUS differentiated splenic torsion from splenic infarction, showing twisted mesenteric vessels in concentric rings. Additionally, the resistive index (RI) and pulsatility index (PI) of the inter-lobar artery were significantly lower in healthy dogs than those with chronic kidney disease (CKD) or obstructive nephropathies. In dogs with CKD, CEUS perfusion parameters showed significant differences in medullary phase decline time and washout time, with delayed washout of the contrast agent in the medulla.
- **Congenital deformities and their association with heart defects in bovine calves:** The study aimed to identify the hospital occurrence of visible congenital deformities in bovine calves, establish echocardiographic reference data for apparently healthy bovine calves, and evaluate echocardiographic findings in calves with visible congenital deformities for heart defects. Results indicated that cow calves had twice as many congenital defects as buffalo calves, often associated



CEUS examination of histiocytic sarcoma showing hyperenhancement of the lesion in the arterial phase (B & C) and hypoenhancement of the lesion in the venous (D) and late phase (E & F)



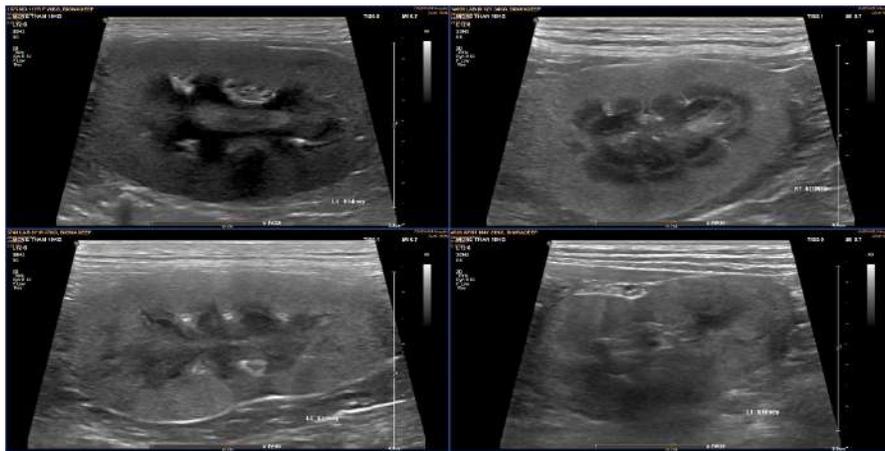
B-mode ultrasound images (A-D) and diagrammatic representation (E) of the appearance of hepatocellular carcinomas.



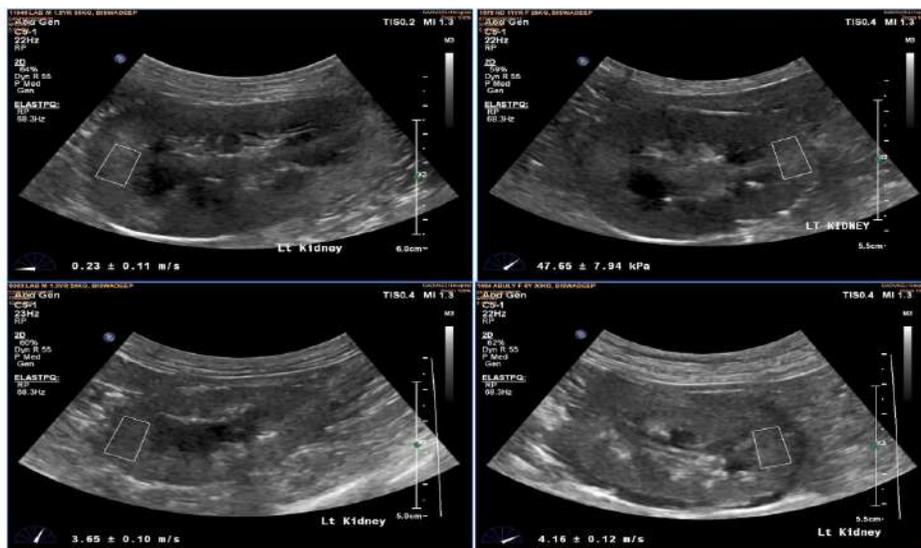
Photographs showing the congenital affections of contracted tendon (a) and cleft palate (b) in buffalo calves

with multiple anomalies. A radiographic morphometric database of the thorax was created for buffalo and cow calves up to one month old, revealing significant anatomical differences. Similarly, a baseline echocardiographic database was established for calves up to 15 days old, showing that cow calves have thicker left ventricular walls, while buffalo calves have larger atria. Although statistical variations in thoracic radiography and echocardiography were observed in calves with congenital deformities, most were not life-threatening. The study recommends stringent breeding monitoring to reduce congenital defects, which impact farmers' economic returns.

- **B-mode ultrasound and shear wave elastography studies on canine renal affections:** A total of 198 dogs suspected of renal diseases and exhibiting clinical signs such as anorexia, emesis, lethargy, progressive weight loss, polyuria, polydipsia, and melena were included in the study, which was divided into two parts. Part 1 focused on examining B-mode ultrasound parameters in canine patients with renal affections, while Part 2 aimed to evaluate and compare shear wave elastography (SWE)-based stiffness values of kidneys in dogs with various renal diseases. The study concluded that combining quantitative and qualitative assessments, along with Shear Wave Elastography, serves as complementary diagnostic tools and shows promise in diagnosing various renal conditions in dogs.



Showing changes of kidneys during different stage of chronic kidney disease in dogs under B-Mode ultrasound



Showing of Shear Wave Elastography values of kidneys in health and disease

Evaluation of conservative and minimally invasive surgical techniques for the management of teat and udder affections in dairy animals: The study aimed to evaluate the efficacy of conservative and minimally invasive surgical techniques for managing teat and udder affections in dairy animals. The findings revealed that buffaloes exhibit a higher prevalence of milk flow disorders compared to cattle, with hind quarters being more susceptible to affections than forequarters. Utilizing ultrasonography via the water bath technique with a 6-12 MHz linear transducer for the teat and a 5 MHz transducer for the udder at a depth of 4 cm in standing animals was reliable for diagnosing the location and extent of lesions associated with teat obstruction. Theloscopy effectively visualized internal lesions related to teat canal obstructions, although its utility was limited in cases of complete obstruction at the teat tip or extensive teat fibrosis. Theloresectoscopy emerged as a minimally invasive treatment option for covered teat affections, successfully restoring both functional capacity and anatomical structure of the teat with milk flow obstruction. This method proved to be a safer alternative to conservative treatments, presenting fewer inconveniences and a reduced risk of mastitis for the animal. Additionally, despite the initial surgical costs, the economic outcome for theloresectoscopy was superior to conservative treatments due to shorter antibiotic courses, quicker return to milking, reduced milk withholding periods, improved milk yields, and fewer post-operative complications.

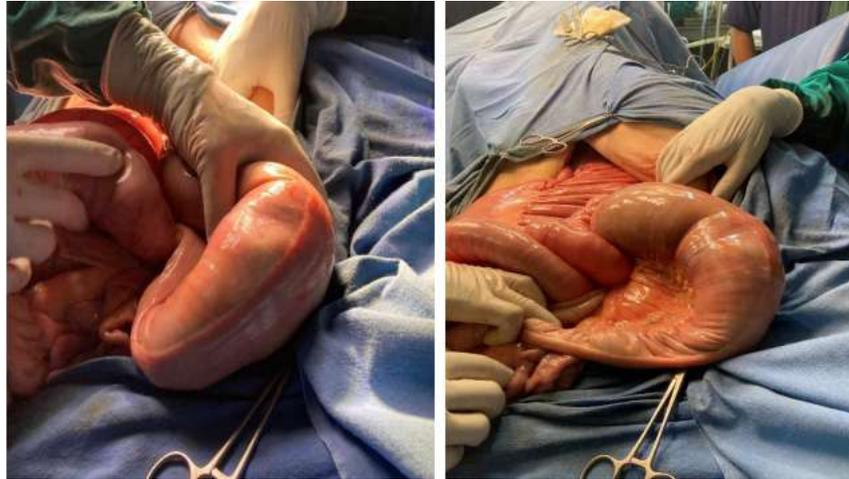


Figure showing parts of Theloscopy unit



Insertion of assembled theloscope into the teat canal via the Cannula

- **Clinical studies on diagnostic indicators and surgical management of equine colic:** The primary objective of this study was to evaluate the diagnostic indicators, surgical findings, and postoperative outcomes of equine colic. The findings indicated that diagnostic features such as markedly elevated lactate values, severe abdominal pain, abdominal distension, increased capillary refill time (CRT), and mucous membrane perfusion, along with peritoneal fluid cytology and abdominal ultrasonography, are valuable diagnostic indicators for colic patients. Additionally, the study found that pelvic flexure impaction and small colon fecolith affections demonstrate favourable surgical outcomes of 100% and 75%, respectively, while small intestine strangulation and right dorsal displacement of the large colon are associated with a poor prognosis. Furthermore, surgical interventions were able to save the lives of 50% of patients, with normal functionality observed in long-term follow-up over six months.
- **Morphometric studies on canine stifle joint following surgical fixation of distal femoral fractures:** The study aimed to compare the pin screw combination with pin fixation for the repair of distal femoral fractures in dogs and to investigate the morphometry of normal and diseased canine stifle. The findings concluded that the pin screw combination resulted in earlier weight bearing and improved range of motion compared to pin fixation. Additionally, standardization of morphometric



Intra-operative photograph showing fecalith obstruction of small colon, observe distended small colon cranial to fecalith and collapsed small colon caudal to fecalith



Cross pinning for fixation of distal femoral fractures



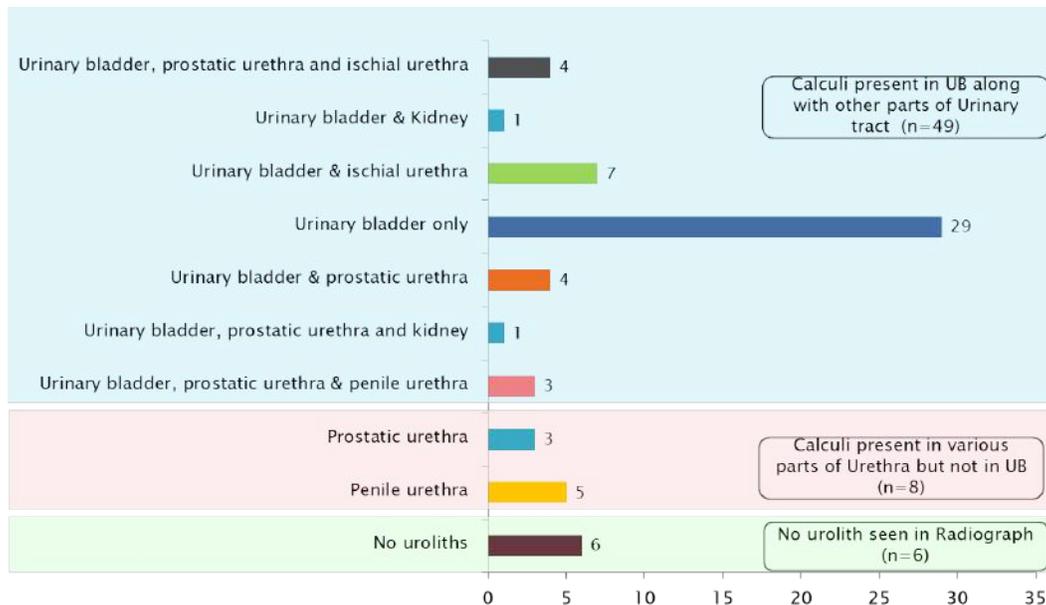
Pin screw combination for fixation of distal femoral

measurements in dogs was achieved, which can aid in assessing the outcomes of orthopedic procedures and identifying any abnormalities based on morphometric analysis.

- **Clinical studies on prevalence, diagnosis and management of surgical affections of lower urinary tract in dogs:** The primary aim of this study was to conduct a retrospective analysis of surgical affections of the lower urinary tract in dogs over a two-year period, from October 2021 to September 2023. The study evaluated the efficacy of various diagnostic approaches and surgical interventions, along with their outcomes. Findings indicated that the incidence of surgical affections in the lower urinary tract among dogs in Punjab was 0.86%, with urolithiasis identified as the most prevalent condition. It was noted that Pugs, middle-aged male dogs, particularly in the Malwa region, were more susceptible, and male American Bullies under one year old exhibited a higher risk of urethral prolapse during the rainy season. A significant correlation was observed between the occurrence of urolithiasis and the pets' diets and water intake, suggesting a need for further research. The study also identified *E. coli* and *Staphylococcus* as the predominant isolates in dogs with urolithiasis, with Aminoglycosides and Enrofloxacin showing the highest sensitivity. Diagnostic tools such as radiography and ultrasonography were found to complement each other,

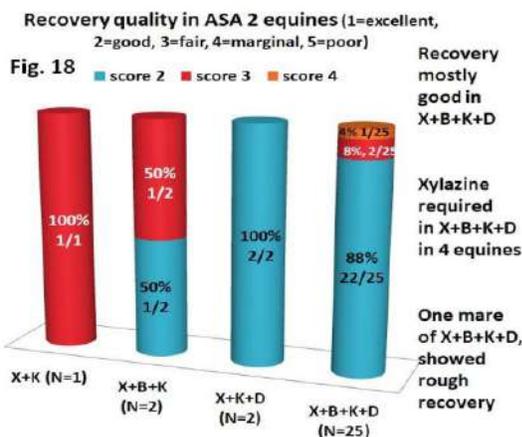


with ultrasonography proving superior for diagnosing calculi in the urinary bladder and prostatic urethra. Hydro-repulsion was an effective method for dislodging urethral calculi in male dogs, and cystotomy demonstrated excellent surgical outcomes for both genders. Additionally, urethrostomy was highlighted as a successful salvage procedure for cases of obstructive urolithiasis where hydro-repulsion was unsuccessful.



Distribution of uroliths based on radiograph in dogs with urolithiasis

- **Clinical study on the peri-operative monitoring of general anaesthesia using xylazine, ketamine and isoflurane with or without butorphanol and diazepam in equines:** The aim of the study was to evaluate the peri-operative monitoring of general anaesthesia using Xylazine, Ketamine, and Isoflurane with or without Butorphanol and/or Diazepam in equines. The findings concluded that systematic monitoring of general anaesthesia through physical parameters is essential for achieving better outcomes in all equines. It emphasized the need for careful selection and monitoring of anaesthetic protocols for foals up to three weeks old. Additionally, the conventional doses of Xylazine combined with Butorphanol and Ketamine with Diazepam used in the study may not be

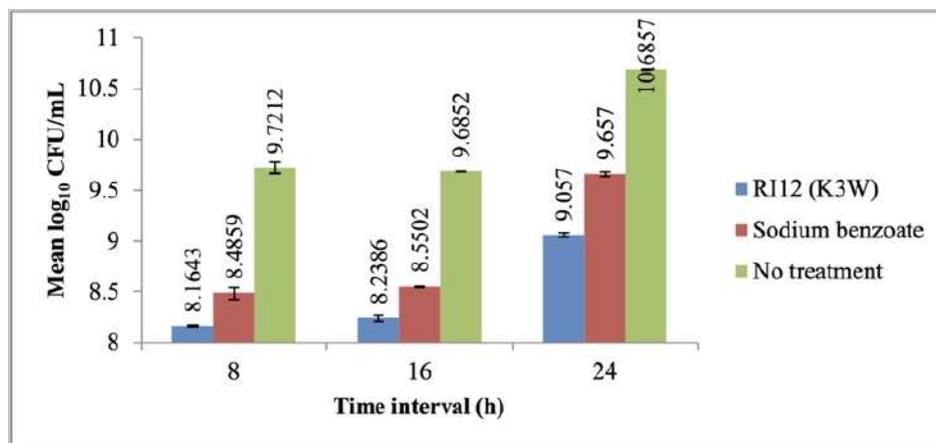


Bar Graph showing recovery quality in ASA 2 Equines

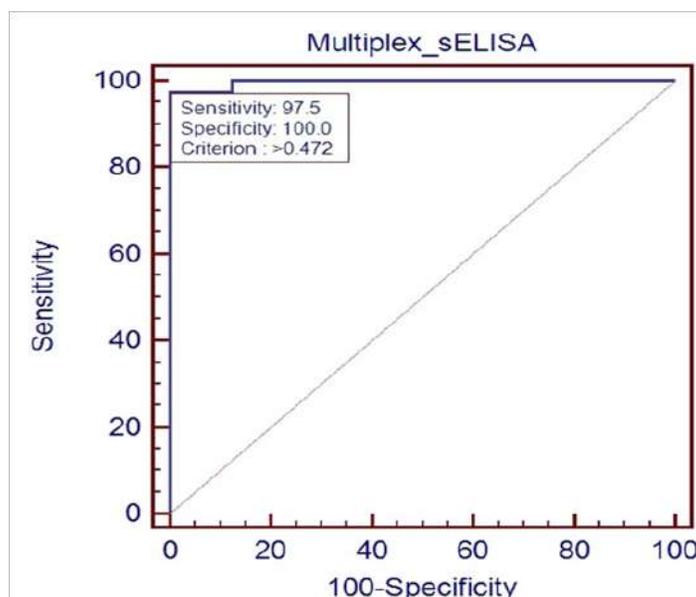
adequate for ASA 2 equines of the Marwari breed, warranting further research. It was recommended that Xylazine at 0.25 mg/kg intravenously be used during the recovery period for ASA 1, 2, and 3 equines, contingent on their pre-anaesthesia and recovery temperament. While the overall recovery was satisfactory, the study noted a high mortality rate among colic equines, along with significant morbidity, including rough recovery and radial paralysis, in ASA 2 and 3 equines.

B. College of Animal Biotechnology

Investigation into assessment of bactericidal efficacy of a synthetic antimicrobial peptide named RI12 (arginine Isoleucine 12): The study aimed at evaluating the effectiveness of the antimicrobial peptide RI12 against *Listeria monocytogenes*. It exhibited potent antimicrobial properties, with a minimum inhibitory concentration and minimum bactericidal concentration of 16 μM and 32 μM , respectively. The time-kill assay revealed a consistent reduction in bacterial viability at 8, 16, and 24 h of study.



ELISA for the serodetection of canine mammary tumors: Canine mammary tumors (CMT) are diagnosed and typically graded using histopathological approach. Using tumor biomarkers for serodiagnosis of CMT provides a less invasive alternative approach. In this context, a multiplex sandwich ELISA has been developed with a sensitivity of 97% and a specificity of 100% with respect to histopathology for the serodiagnosis of CMT. The assay aims at simultaneous detection of serum mammaglobins in dogs. This technology has been validated externally.



C. College of Dairy and Food Science Technology

1. Department of Dairy Engineering

- **Development of chocolate conche for cottage-scale processing to produce liquid chocolate:** The technology for chocolate conching has been developed for cottage and pilot-scale processing, incorporating a double-jacket rotating mechanism that allows for the containment of thermal fluids. This design facilitates extended heating during the conching process of chocolate production. The conche functions as a fluid-carrying rotational device, utilized to hold the thermal fluids while heating the chocolate slurry during manufacturing.

2. Department of Dairy Economics and Business Management

- **In-depth analysis of the region-specific impact of climate variables on milk production** has been conducted, providing valuable insights into how environmental factors influence productivity across different regions
- **Comprehensive water footprint analysis** has been carried out for various production systems, species, and breeds, with a focus on Fat-Protein Corrected Milk (FPCM), highlighting the sustainability challenges in the dairy sector.
- **A detailed water footprint assessment** has been completed for the milk-producing sector in Punjab, offering critical data on water usage efficiency and sustainability in one of India's key dairy regions.



3. Department of Dairy Chemistry

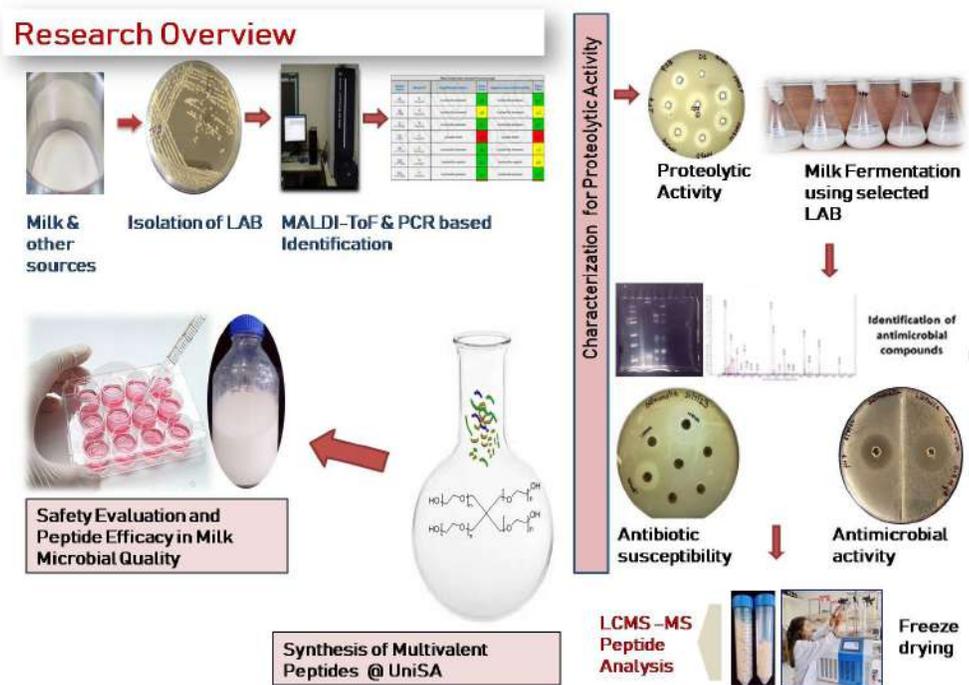
- **Developed Testing Kit for detection of Water Hardness:** Dr. Manvesh Kumar Sihag, Assistant Professor of Dairy Chemistry, developed a kit for determining the total hardness of water. The competent authority has approved the selling price for the kit (which contains 100 tests) at Rs. 224/- (including 12% GST). The kits are available for purchase at the College of Dairy and Food Science Technology, Guru Angad Dev Veterinary and Animal Sciences University.



Water hardness testing kit

4. Department of Dairy Microbiology

- **Exploring Natural Multivalent and Dynamic Antimicrobial Peptides to Combat Antimicrobial Resistance in the Milk Chain:** A study aimed at addressing Antimicrobial Resistance (AMR) was successfully conducted through the development of novel multivalent antimicrobial peptide conjugates. In this innovative research, Dynamic Antimicrobial Peptides (MAPs) were synthesized using naturally derived antimicrobial peptides (AMPs) from milk. Promising AMPs were sourced from Camel (2), Goat (1), and Sheep (1), each of which was synthesized and rigorously tested for antibacterial activity. These peptides were then used to create MAPs at the University of South Australia (UniSA) in Adelaide. The application of both AMPs and MAPs in raw and pasteurized milk demonstrated significant potential in reducing microbial counts (cfu/mL) under refrigerated conditions, marking an important step towards combating AMR in the dairy industry. Docking studies further revealed that these AMPs have the capacity to inhibit beta-lactamase enzymes, offering a promising approach to counteract antibiotic resistance mechanisms. While the AMPs were found to be safe in vitro using HT-29 cells, the MAPs showed mild toxicity at the tested concentrations, indicating a need for further refinement. This work represents a significant advance in the fight against AMR, offering potential solutions for improving the safety and sustainability of the milk chain.



D. College Of Fisheries

1. Diversification of Carp with High-Value Pangas Catfish – Validation and Dissemination of

- A six-month trial (April to October 2022) was conducted at Mohie Fish Farm, Ludhiana, in collaboration with the Department of Fisheries (DOF), Punjab, to validate and demonstrate Pangas (*Pangasianodon hypophthalmus*) catfish farming. Overwintered stunted fingerlings (average weight 30g) were stocked in April 2023 and reached an average final weight of 1000g (ranging 900-1500g) by the end of the six-month culture period—resulting in a 50-60% higher production compared to non-stunted fingerlings. The trial confirmed that Pangas culture can yield 3-4 times higher biomass and 2.5 times higher economic returns than traditional carp farming in the same water area. This technology was disseminated to stakeholders through a training program.

- Additional trials were conducted at the Regional Research and Training Centre (RRTC), Talwara, using a 500 m² low-density polyethylene (LDPE)-lined pond, adhering to biosecurity standards. These trials demonstrated the potential of Pangas culture in regions with low to moderate rainfall and in soils that are typically unsuitable for traditional aquaculture (e.g., sandy or stony soils). The technology was again shared with stakeholders via a training program.



Demonstration Trial of Pangas Culture at Mohi Fish Seed Farm, Department of Fisheries

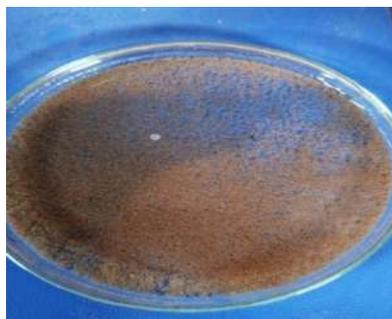


Demonstration Trial of Pangas Culture at RRTC, Talwara

II. Aquaculture Nutrition

i) Evaluation of Production Performance of Pangas Catfish (*Pangasianodon hypophthalmus*) with Biofloc Meal

A 4-month study replaced fish meal with biofloc meal at 10%, 20%, 30%, 40%, and 50% levels in feed for Pangas fingerlings. The results showed that replacing 40% of fish meal with biofloc meal significantly improved survival rate (85-94%), body weight gain (4.42-36.45% increase), specific growth rate (3.36-367.65% increase), and feed conversion ratio (2.24-24.52% decrease). Further, digestive enzyme activity increased (amylase: 1.9-20.20%, protease: 3.05-37.39%, lipase: 17.24-88.89%), while haematological parameters also improved (erythrocytes: 14.25-37.65%, leukocytes: 7.65-28.68%, haemoglobin: 3.65-25.45%). Immunological parameters, including serum protein (25.42-42.25%) and albumin (30.45-60.25%), were elevated, while oxidative stress indicators showed positive changes (superoxide dismutase: 25.25-35.46% increase, glucose: 14.26-45.54% decrease).



Wet Biofloc



Dry Biofloc Meal



Experimental Pelleted Feeds

ii) Formulation and Evaluation of Fish-Specific Mineral Mixture in Carp Culture

- A Fish-Specific Mineral Mixture (Ca, P, Mg, Cu, Fe, Zn, Mn, & I) was formulated according to ICAR recommendations.
- The mineral mixture was added to the basal carp feed at 1%, 1.5%, and 2% levels. Results showed significant improvements in feed conversion ratio, specific growth rate, protein efficiency ratio, haematological parameters, blood metabolic profile, and proximate composition for carps fed with 1.5% mineral mixture. Additionally, economic analysis indicated a 14.34% increase in net profit compared to conventional mineral mixes.

iii) Assessment of production performance of amur carp (*Cyprinus carpio haematopterus*) under semi-intensive carp polyculture system

- The production performance of Amur carp was assessed in carp polyculture system with different combinations of carps under outdoor conditions in the agro-climatic conditions of Punjab. As compared to common carp, amur carp registered 21.64-51.20% higher net weight gain, with encouraging results in the treatment in which 50% of mrigal was replaced with amur carp (Bottom Feeder: mrigal: amur carp-15:15). Further, no natural spawning was observed in amur carp during the experimental period. Results indicated that Amur carp can be a good alternative to common carp (prolific breeder) in a semi-intensive carp polyculture system in terms of growth and restricted breeding.



V. Efficacy of Duckweed (*Spirodela* and *Lemna*) Binder-Supplemented Feeds in Ornamental Koi Carp, *Cyprinus carpio* Linn.

- A six-month feeding trial was conducted to evaluate the efficacy of duckweeds (*Spirodela* and *Lemna*) as binders in feeds for ornamental Koi carp (*Cyprinus carpio*). Nine experimental feeds were formulated: control feed (CF), Cane molasses (5%) binder (M-5), Corn starch (5%) binder (CS-5), and duckweed paste binders at 5%, 10%, and 15% levels for both *Spirodela* (DWS) and *Lemna* (DWL). Water quality remained optimal, with no negative impacts from incorporating duckweed binders. Results showed that the DWL-15 feed (15% *Lemna* binder) significantly improved growth, with net weight gain and specific growth rate 50-88% and 35-51% higher, respectively, compared to the control. Feed conversion efficiency was also enhanced by 27-28%. Fish health, measured by total protein and albumin, improved significantly in the DWL-15 group. Additionally, coloration, a key determinant of ornamental fish value, was notably better in all duckweed-supplemented feeds. Among the duckweeds, 15% *Lemna* binder outperformed the

control in survival, growth, feed conversion, health, and coloration, offering long-term economic benefits to farmers.

III. Intensive Aquaculture Technologies

i) Optimization of Pangas culture in Re-circulatory Aquaculture System and Biofloc Aquaculture System (BFAS) and its dissemination

- Culture technology of high-value pangas catfish (*Pangasianodon hypophthalmus*) optimized with successful harvest of 6 monthly summer crop of pangas catfish from RAS and BFAS with average productivity of 15 kg/m³ and 11 kg/m³ in RAS and Biofloc Aquaculture Unit, respectively.
- A total of 167 stakeholders including 49 Officials of DOF Punjab (Fisheries Officers, Senior Fisheries Officers, and Assistant Director Fisheries) and 118 Farmers/Entrepreneurs/ graduating students were trained through orientation workshop (2), capacity building training (2), Skill development (1) and Experiential Learning Program (1).

ii) Production Performance of Pangas Catfish (*P. hypophthalmus*) in Biofloc Aquaculture System (BFAS) with Varying Stocking Densities

- Among the tested stocking densities (30, 40, 50, 60, 70 fish/m³), **50 fish/m³** showed optimal results, including improved survival rate (1.12-9.38%↑), body weight gain (18.17-47%↑), and specific growth rate (4.98-11.71%↑). Feed conversion ratio improved (3.81-11.01%↓), while digestive enzyme activity and flesh quality (protein: 2.18-4.48%↑, lipid: 2.22-15.21%↑) also enhanced. Haematological and immunological parameters, including erythrocytes (20.15-61.98%↑) and serum protein (2.66-6.66%↑), improved significantly, alongside better stress responses (superoxide dismutase: 13.50-30.78%↑, glucose: 10.20-17.54%↓).



Experimental Set-up



Biofloc Media



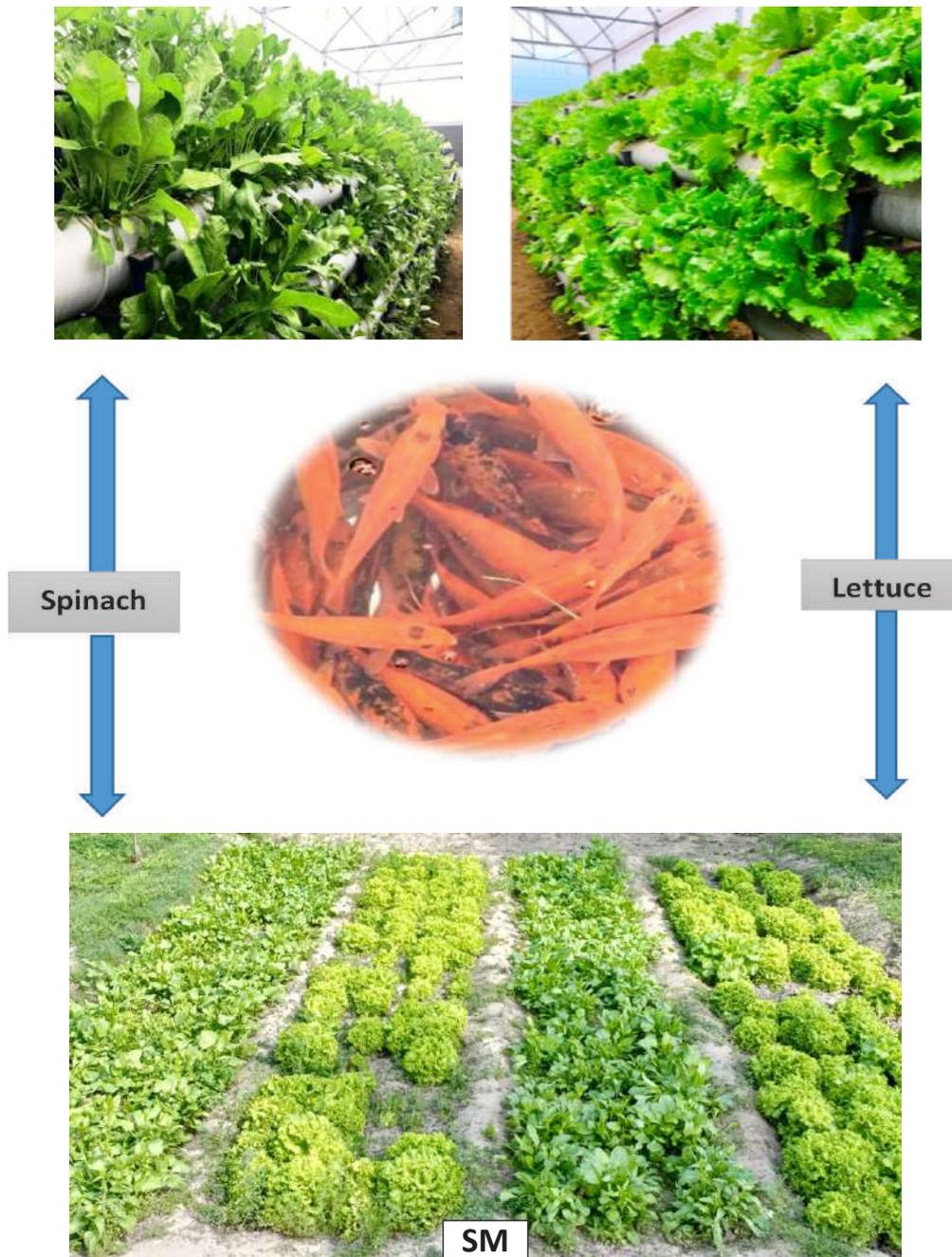
Biofloc



Striped Catfish

iii) Performance Evaluation of Koi Carp and Leafy Vegetables in Automated Aquaponics System under Punjab's Agro-Climatic Conditions

- The performance of Koi carp (stocked at 40 fish/m³) was studied in an Automated Aquaponics System, integrated with Lettuce and Spinach, over six months. Koi carp yield significantly increased (1.615 kg/m³), 16.48 times higher, with no adverse effects on fish metabolism, intestine or liver histology, or coloration. Lettuce and Spinach also showed higher yields (1.58x and 1.23x, respectively) compared to soil-based crops. Economic evaluation indicated favorable results for integrating Koi carp and leafy vegetables in the aquaponics system during winter under Punjab's agro-climatic conditions.



Koi carp and Vegetable crops (Lettuce & Spinach) produced in the Hydroponics unit of Aquaponics (HM) and Soil bed traditional system (SM)

IV. Aquatic Environment and Health Management

(i) Recombinant Cloning, Expression, and Characterization of Phage Endolysins

- In-silico analysis identified two novel phage endolysin genes in *Aeromonas hydrophila* phages D6 and CF7. These endolysins, termed D6lysin and CF7lysin, were successfully cloned and expressed in *E. coli*.
- Induced expression of CF7lysin in *E. coli* BL21 led to host cell lysis, preventing protein purification for antimicrobial testing. In contrast, D6lysin was purified via Ni-NTA chromatography and demonstrated antimicrobial activity against Gram-positive bacteria, though no activity was observed against Gram-negative bacteria.

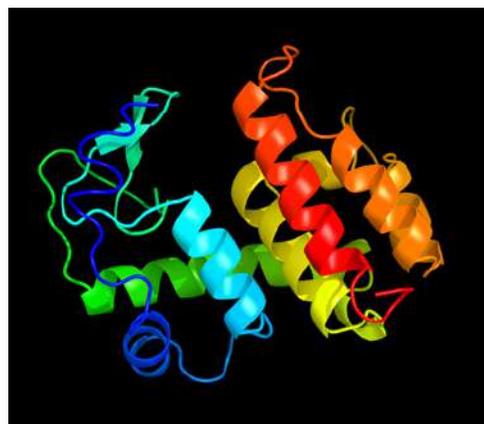
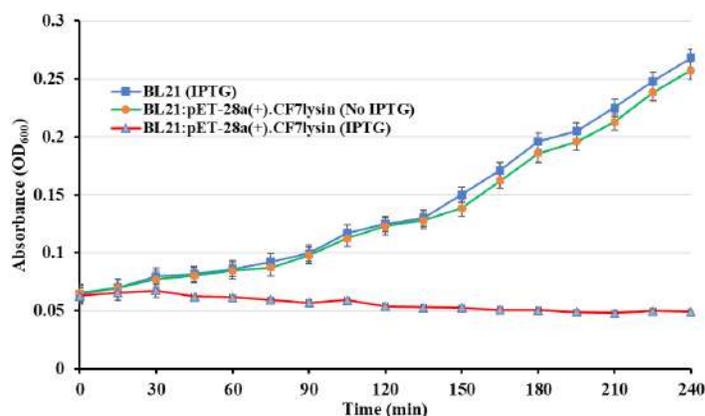


Fig. 1: Tertiary structure model of CF7lysin predicted by Phyre2 server (A). Endolytic activity of CF7lysin cloned and expressed in *E. coli* BL21 cells

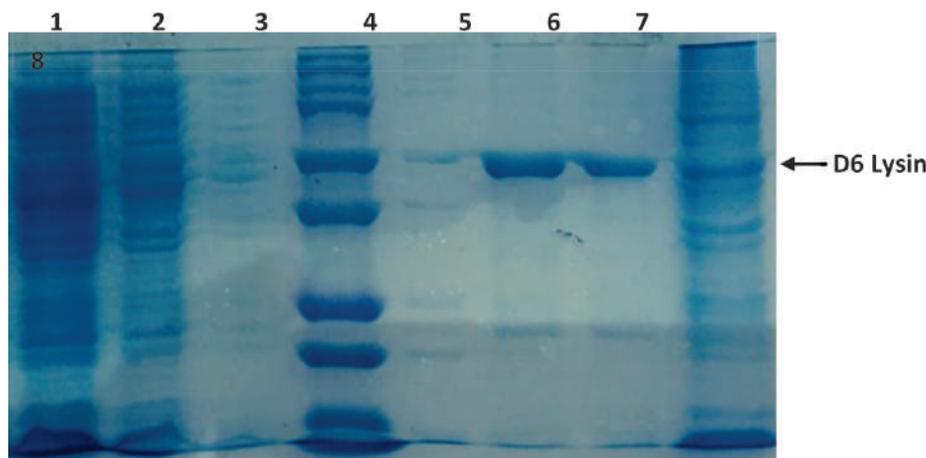


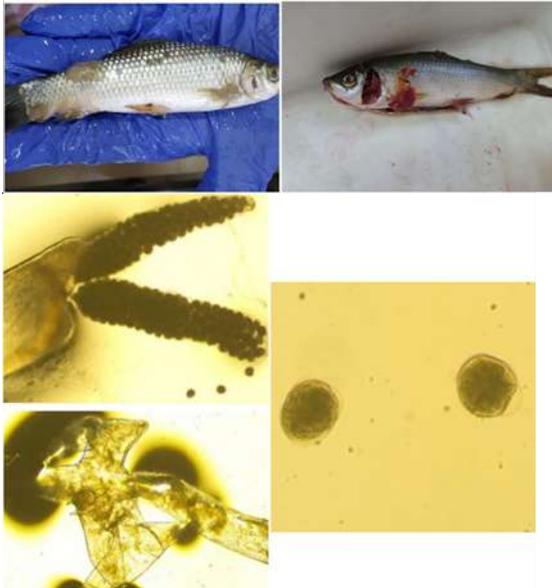
Fig. 2: SDS PAGE of recombinant D6lysin. Lane 1: Non-recombinant *E. coli* BL21 cells without IPTG; Lane 2: Recombinant D6lysin clone without IPTG; Lane 3: Ni-NTA column flow-through during protein purification; Lane 4: Precision Plus Protein™ Kaleidoscope™ prestained ladder; Lane 5: Ni-NTA column first wash during protein purification; Lane 6 & 7: Purified recombinant D6lysin; Lane 8: Recombinant D6lysin clone with IPTG.

(ii) National Surveillance Program for Aquatic Animal Diseases (NSPAAD) - Phase II

- Under the ICAR-PMMSY-funded NSPAAD Phase II, 44 shrimp farms in Punjab were screened using PCR for OIE-listed diseases. All samples tested negative for viral, bacterial, and parasitic pathogens, except for one EHP case in a soil sample from Shri Muktsar Sahib. Additionally, 17 shrimp farms in Haryana (9) and Rajasthan (8) revealed a single instance of EHP. In finfish surveillance, 25 cases

were analyzed, with 17 bacterial infections (e.g., *Citrobacter freundii*, *Aeromonas hydrophila*) and 5 parasitic infections (e.g., *Lerneae*, *Argulus*).

- Efforts to raise awareness about disease surveillance included promoting the “Report Fish Disease” app through various channels, significantly increasing its visibility and usage. Due to the successful implementation of NSPAAD, Punjab’s shrimp culture is now classified as disease-free, with no detection of major pathogens like WSSV, IHHNV, IMNV, and AHPND, except for isolated cases of EHP.



Clinical examination (Level-I and II diagnosis):
Date: 25/01/2024, Kshitiz Walia AquaHorizon,
Jahan Khelan, Hoshiarpur; 31°30'48.4"N
75°58'58.8"E

Parasitic infection in fish



Clinical examination (Level-I diagnosis):
hemorrhages, fin rot, inflamed anus. Date:
22/10/2023, College of Fisheries, Guru Angad
Dev Veterinary and Animal Sciences University,
Ludhiana; 30°54'16.3"N, 75°48'05.4"E

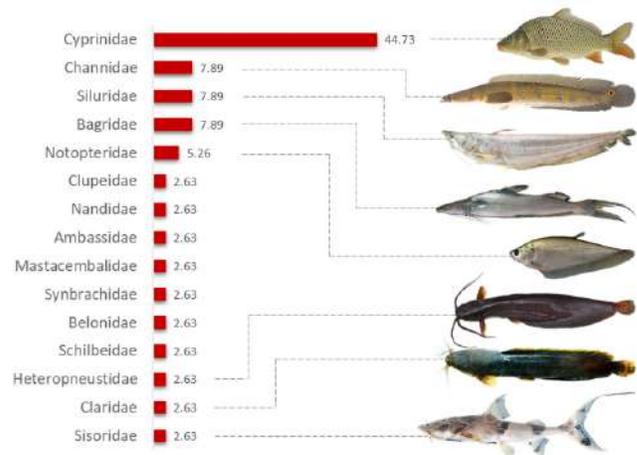
Bacterial infection in fish

Case Studies

V. Database Generation of Natural Fisheries Resources of Punjab and Fish Markets

a) Fish Catch Composition and Fisheries of Commercially Important Species from Harike Wetland

- A total of 30 fish species from 14 families were recorded in the fishing areas of Harike Wetland (river Beas & Sutlej). The catch composition showed a consistent trend with previous years, dominated by Cyprinidae (11 species), followed by Bagridae, Channidae, Notopteridae, Siluridae, and Sisoridae. Miscellaneous catches included species from Ambassidae, Clariidae, Heteropneustidae, and other families.
- Size and weight data of commercially important





species were collected, along with habitat suitability, growth patterns, and robustness analysis.

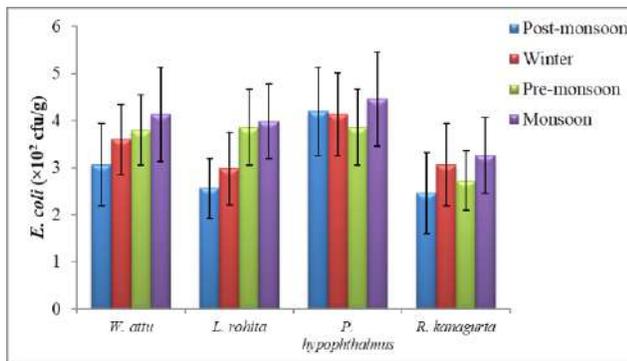
- Cyprinidae species (*Labeo rohita*, *Cyprinus carpio*) showed high habitat suitability and nearly isometric growth (condition factor, $K = 1.44\text{--}1.62$, regression coefficient $b \sim 3$). In contrast, higher trophic species like *Sperata seenghala* and *Channa striatus* had lower K values (0.55–0.76). The catch composition from Harike Wetland remains dominated by economically important species.
- b) Assessment of Ecology and Fish Diversity of Ranjit Sagar Reservoir and Keshopur Chhumb Wetland, Punjab**
- The water quality of both Ranjit Sagar Reservoir and Keshopur Chhumb Wetland supports healthy fish populations, with an alkaline pH and dissolved oxygen (DO) levels ranging from 8.3–10.4 mg/l in the reservoir and 5.2–9.3 mg/l in the wetland.
 - Ranjit Sagar Reservoir hosts 39 fish species across 26 genera, 9 families, and 6 orders. Cyprinidae is dominant, including 2 major carps, 4 exotic carps, 6 minor carps, 4 barbs, 2 mahseer, 2 barils, 2 minnows, and species like *Garra* and *Chela*. Other species include 3 murrels, 2 silurids, 2 loaches, and one each of featherback, garfish, *Nandus*, sisorid, stinging catfish, and spiny eel. The catch of key species was highest in winter (78.54%).
 - Keshopur Chhumb Wetland supports 9 species, including 3 indigenous and 3 exotic carps, 3 barb species, 2 murrels, and other species like *Aspidoparia* and *Mystus* sp. It also hosts 26 benthic macroinvertebrate species, representing Arthropoda, Mollusca, and Annelida, with dominant species like *Chironomus chironomus*, *Bellamyia*, and *Tubifex tubifex*.
- c) Assessment of Fish Quality in Major Fish Markets of Punjab**
- Fish markets across five major districts (Ludhiana, Amritsar, Mohali, Jalandhar, and Bathinda) in Punjab were surveyed to assess the quality of commercially important species—*Wallago attu*, *Labeo rohita*, *Pangasianodon hypophthalmus*, and *Rastrelliger kanagurta*—focusing on proximate composition, quality indices, microbial load, and the presence of antibiotic and formaldehyde residues.
 - Proximate composition showed moisture content of the species ranged from 72.42–81.68%, with protein (9.44–18.34%), lipid (0.56–10.84%), ash (1.28–4.29%), and carbohydrates (0.22–2.04%) varying by species and season. Key quality parameters, such as free fatty acids (0.59–0.95%), thiobarbituric acid (1.26–1.73 $\mu\text{mol/kg}$), peroxide value (2.34–4.44 mEq O₂/kg), and pH (6.37–6.85), remained within permissible limits. The cumulative freshness indicator score ranged from 2–12.
 - Microbial contamination was a significant concern, with *Escherichia coli* ($2.46\text{--}4.46 \times 10^2$ cfu/g) and *Staphylococcus aureus* ($2.33\text{--}4.73 \times 10^3$ cfu/g) levels exceeding safe limits, highlighting risks to public health.
 - Regarding residues, chloramphenicol (0.001–0.019 $\mu\text{g/kg}$), nitrofurantoin (0.001–0.026 $\mu\text{g/kg}$), and oxytetracycline (0.001–0.028 $\mu\text{g/kg}$) concentrations were below maximum permissible limits, indicating safety. No formaldehyde residues were detected in fish across markets.
 - Challenges in the markets include complex supply chains, lack of storage facilities, unregulated fish supply, and inadequate waste management. Addressing these issues is essential for improving the efficiency and sustainability of fish markets in Punjab.



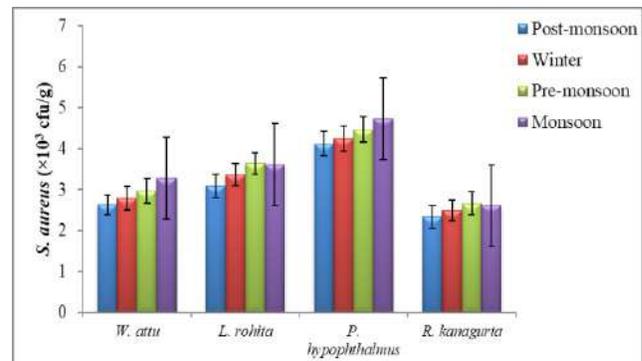
Fish market survey



Formaldehyde detection by kit



Cumulative seasonal variation of Escherichia coli count (Mean ± SE) (×10² cfu/g) in different fish species from selected markets



Cumulative seasonal variation Staphylococcus aureus count (Mean ± SE) (×10³ cfu/g) in different fish species from selected markets

d) Survey of Fish Marketing System in Modern Fish Market, Tajpur Road, Ludhiana

This study, conducted from January to December 2023, assessed the fish marketing system in Tajpur Fish Market, Ludhiana, focusing on the seasonal availability, price variations, and supply-demand dynamics of captured and farmed fish. Data was collected through direct observation, interviews, and questionnaires from 43 market shops (27 wholesale, 16 retail).

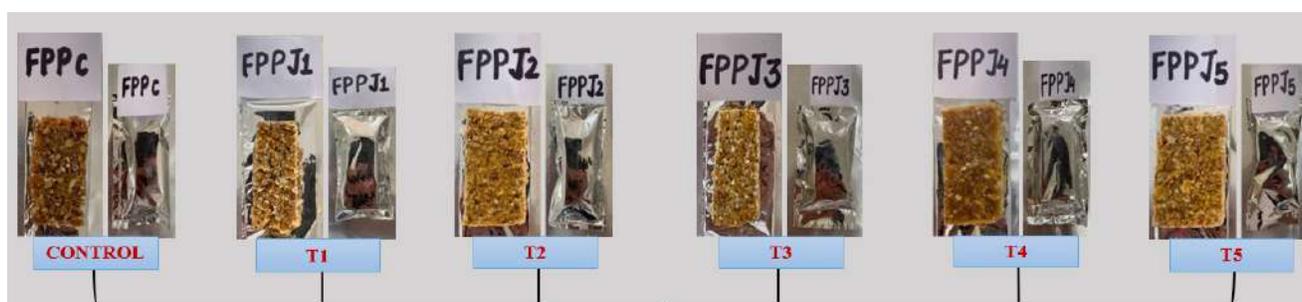
Key findings include:

- Fish come from various states like Andhra Pradesh, West Bengal, Rajasthan, and Uttar Pradesh.
- Common species include major & minor carps, catfish, murels, and miscellaneous species like Tilapia, Puntius, and Pangas, which is available year-round.
- Fish are mostly sold in iced form (captured fish) or live/fresh (farmed fish) and are available throughout the year, except during the monsoon breeding season.
- The market supplies fish to several states, including Jammu & Kashmir, Himachal Pradesh, and West Bengal.

The Tajpur market plays a crucial role in the regional fish trade. This survey provides valuable insights for policymakers to ensure its sustainable contribution to fish consumption and the local economy.

VI. Post-harvest Technology and value addition:

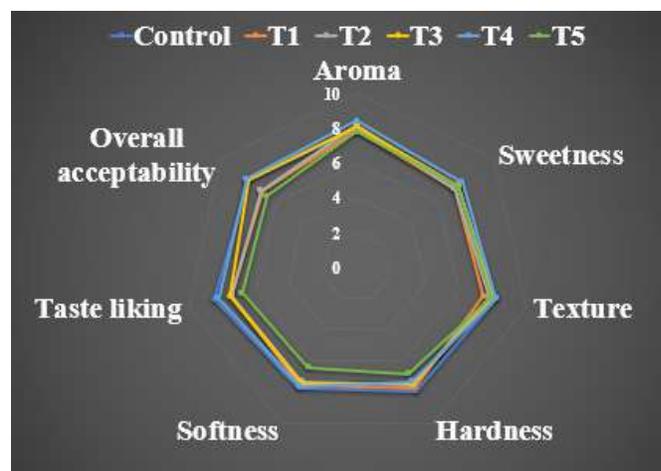
- a. Development of Nutrition Bar Supplemented with Fish Protein Powder (FPP) Extracted from Carps:** The study aimed to improve the protein content of nutrition bars by incorporating Fish Protein Powder (FPP) extracted from rohu (*Labeo rohita*). FPP was added at various levels (2.5% - T1, 5% - T2, 7.5% - T3, 10% - T4, and 12.5% - T5) and compared with a control (without FPP). The highest protein content was found in T5 (27.0%), but the optimal acceptable level was 7.5% (T3) due to the noticeable fishy aroma beyond this point. Nutritional values of T3 showed protein 27.0%, fat 11.06%, carbohydrates 59.21%, and minerals 2.73%. The pH and free fatty acid content were 6.4 and 0.078%, respectively. Color values for T3 were recorded as: L* (lightness) 39.30 to 45.79, a* (red-green) 5.89 to 7.40 (indicating a slight red hue), and b* (yellow-blue) 29.72 to 31.71 (indicating a yellow hue). The nutrition bar remained shelf-stable for up to 42 days at ambient temperature, with no growth of food-borne pathogens like Salmonella, E. coli, or Staphylococcus.



Nutrition bar (without FPP and with FPP)

b) Acceptability and Nutritional Evaluation of Rohu (*Labeo rohita*) Mince Meat in Nutrition Bar

- The study assessed the acceptability of rohu (*Labeo rohita*) minced meat in nutrition bars at varying concentrations (0%, 2.5%, 5%, 7.5%, 10%, and 12.5%). As minced meat increased, protein content rose (15.26% to 25.46%, highest in 12.5% addition), while fat content ranged from 14.60% to 15.90% (highest in 7.5%). Carbohydrates decreased with higher mince levels. Sensory evaluation using a 9-point hedonic scale revealed that the optimal acceptability was achieved at a 10% minced meat inclusion, based on flavor, texture, and overall preference.



c) Optimization of Technology to Produce Fish Powder (FISH-PRO-MAX) from Biofloc-Raised Pangas Catfish

- A process was optimized to produce fish protein powder (FISH-PRO-MAX) from Biofloc-raised Pangas Catfish (*P. hypophthalmus*). The harvested fish was chill-stored, minced, washed with moderate ionic strength water, and dried to obtain a stable powder with minimal fishy odor. Approximately 180-200g of powder was recovered from 1kg of fish meat (dry weight).

Nutritional Composition - ‘FISH-PRO-MAX’

Attributes	Composition for 5 g sachet (Dry weight basis)	 <p>FISH-PRO-MAX’</p>
Moisture	0.4 ± 0.1 g	
Protein	3.6 ± 0.5 g	
Fat	0.2± 0.05 g	
Minerals	0.2± 0.05 g	
Carbohydrates	0.6 ± 0.1 g	
Energy per serving (5g)	18.6 ± 0.7 K cal	
Shelf life	3 months at room temperature	
Recommended Use	As a condiment and taste enhancer in ready to eat snack food (Pizza, Fingers, Soups, etc.) or ready to cook traditional food (Atta, Dal, Curry, etc.)	

d) Development of Nutrition Bar Supplemented with Fish Powder from Biofloc-Raised Pangas Catfish

Fish powder, processed to minimize fishy odor, was prepared from Biofloc-raised Pangas catfish and mixed with millets (25g), puffed rice (25g), and jaggery (50g) at levels of 2.5g, 5g, 7.5g, and 10g to create a shelf-stable nutrition bar. The bars were analyzed for physico-chemical, sensory, and nutritional parameters and compared to a control (without fish powder). The bars contained an average protein content of 18.90% and fat content of 2.8%. Hardness was 11.22 kg force, and sensory acceptability scored an average of 8.2. The 20% fish powder level was found to be the most acceptable to consumers.

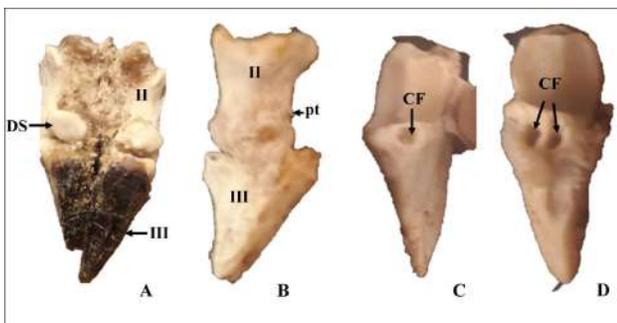


Protein bar prepared from powder of Pangas fish raised in Biofloc based culture

E. College of Veterinary Science, Rampura Phul

- Under the NLM-2 research project on “Technological Interventions for Development of Sustainable Kajali Sheep Production Model in the Intensive Paddy-Wheat Cropping System of Punjab,” an elite flock of 35 Kajali sheep (10 rams and 25 ewes) was procured from various farms across Punjab. One complete cycle of paddy-wheat and fodder crop cultivation has been completed, with data collected on soil health, nutrients, water, energy, and labor for the first year to estimate the economics of traditional wheat-paddy farming.
- Under the AICRP on Goat Improvement-Beetal field unit project, a training program and two field camps were organized at the Rampura Phul cluster. Inputs for goat farming were provided to Beetal goat farmers, and field data for nearly 300 Beetal goats was recorded as per project guidelines.

- In the AICRP on Cattle-Sahiwal Data Recording Unit, the total first lactation milk yield of the Sahiwal herd increased from 1229.24 ± 91.11 kg to 1663.86 ± 179.65 kg, and all lactation yield increased from 1163.94 ± 93.70 kg to 1830.94 ± 94.09 kg (2022-2023). The age at first calving reduced from 1856.67 ± 74.13 days to 1523.29 ± 72.2 days.
- Under the PREZODE-funded trypanosomiasis project (with 5.8 Lakhs from PREZODE, France), CATT (Card Agglutination Test) was conducted for serological surveillance of trypanosomiasis in humans, cattle, buffalo, and dogs. Initial human sero-screening showed positive results in samples from Adesh Institute Bathinda and DMC Ludhiana. Animal samples were tested at CoVS Rampura Phul and CoVS Ludhiana, with PCR amplification and genomic studies on seropositive samples ongoing.
- Specimens of goat heads, forelimbs, and hindlimbs were mounted in glycerine, and colored skeletons of domestic animals were prepared to promote veterinary anatomy education.



Intensive Kajali Sheep Unit established under NLM-2 Project



2. Research project Operational during 2023-24

Sr. No.	Funding Agency- Name of the Scheme [Grant Allotted (in Lakhs)]
1	ICAR-Network Project on Buffalo Improvement (Main Unit).[67.00]
2	ICAR- Network Project on buffalo Improvement (Field Unit). [26.00]
3	ICAR- Project Directorate on Cattle Field Progeny Testing Project [82.93]
4	ICAR- All India Coord. Research Project on Poultry Breeding. [93.67]
5	ICAR- AICRP on Cattle New Project Sahiwal (Data Recording Unit). [29.20]
6	ICAR- AICRP on Nutritional and Physiological Approaches for Enhancing Reproductive Performance in Animals (Enhancing Reproductive Performance) [11.80]
7	ICAR- All India Network Program on Diagnostic Imaging and Management of Surgical Condition in Animals [31.67]
8	ICAR- Integrated approaches for livestock development farmers context for implementation under Farmers First Program [12.67]
9	ICAR- Network Project on Buffalo improvement centre at GADVASU (Nili Ravi) [30.00]
10	ICAR- All India Coordinated Research Project (AICRP) on Pig [51.63]
11	ICAR- Institutional Development Plan (IDP) for improved Learning Outcome, Skill and Entrepreneurship at GADVASU [797.98]
12	ICAR- National Animal Disease Epidemiology Network (NADEN) [2.00]
13	ICAR- National surveillance Program for Aquatic Animal Diseases (NSPAAD)-Phase 2 [25.27]
14	ICAR-AICRP on Goat Improvement [23.33]
15	ICAR- Livestock and Poultry Product Safety [14.25]
16	The International Atomic Energy Agency, Vienna, Austria - Genome wide association studies for the improvement of productivity in dairy buffalo in cattle in India [5.33]
17	The Bill and Melinda Gates Foundation and the Department for International Development of the United Kingdom. - Modelling exposure to biological hazards in the dairy chain of Andhra Pardesh to inform food safety policy [1.15]
18	The Bill and Melinda Gates Foundation and the Department for International Development of the United Kingdom. - Modelling exposure to biological hazards in the dairy chain of Andhra Pardesh to inform food safety policy (SPHZ) [0.81]
19	Virbac Animal Health India Pvt. Ltd. - Effects of supplementing Chelated Agrimin Forte on the performance of dairy animals [3.33]
20	CCRAS - Clinical evaluation of efficacy of Padma Kanta Yoga, an Ayurveda Formulation in the management of Mastitis in Bovines [8.04]
21	Swaraj Engines Limited, SAS Nagar, Mohali. - Creation and strengthening of Self-Help Groups of District S.A.S. Nagar for Livelihood security [13.05]
22	Board of Research in Nuclear Sciences (BRNS) Deptt. Of Atomic Energy (DAE) - Development of phage-based strategies for biocontrol of antibiotic resistant Aeromonas species in fishery products [6.87]
23	The Aditya Birla Science and Technology Co. Pvt. Ltd - Study on the supplementary effects of Sodium Sulphate on Performance of lactating bovines [9.11]



Sr. No.	Funding Agency- Name of the Scheme [Grant Allotted (in Lakhs)]
24	S S Waste Link Sustainability Services Pvt. Ltd. India - Effect of Supplementary bakery waste to the total mixed ration on milk production, quality, and reproduction in dairy animals [7.93]
25	Trouw Nutrition India Pvt. Ltd. - Effects of organic acids on aerobic stability of maize silage [5.85]
26	Reliance Industries Limited, Mumbai - Exploring potential of RIL plant-based protein biomass (RPPB) as an alternate protein ingredient in pet food [17.30]
27	French National Research Institute for Sustainable Development (IRD)-Preliminary evaluation of atypical -Human Trypanosomiasis (a-HT) due to Trypanosoma evansi in Punjab [2.86]
28	National Fisheries Development Board (NFDB)- Demonstration of growth performance, health status and meat quality of Biofloc raised fish in Northern India [15.89]
29	National Dairy Development Board - Effect of feeding paddy straw silage on nutrient utilization and productive performance of lactating buffaloes [7.73]
30	DBT -Modelling of indigenous diagnostics and immuno potent vaccine candidates to combat African swine fever in India [12.62]
31	DBT - Establishment of a Consortium for One Health to address zoonotic and transboundary diseases in Indian including the North East Region [34.50]
32	DBT - Investigating the Role of Adipose Tissue-Derived Stromal Vascular Fractions (SVFs) Combined with Xanthosine in Veterinary Regenerative Medicine [24.31]
33	DBT- Elucidating Male and Female specific Factors Associated with T-regulatory Cells vis a vis Fertility in Buffalo [12.88]
34	DBT- National Network Project of Department of Biotechnology, Indian Institute of Technology, Roorkee [5.70]
35	DST- Engineering intervention for mechanization of mozzarella cheese manufacture at cottage scale [7.00]
36	DST- Improvement of livelihood status of the Scheduled-Caste (SC) population of Punjab State through Biofloc fish farming and value addition of produced fish [22.58]
37	SERB - Immunomodulation Potentials of Apoptotic Mesenchymal Stem Cells [14.28]
38	RDP - Establishment of Instructional Gaushala at Guru Angad Dev Veterinary and Animal Sciences University [9.22]
39	NABARD- Development of low-cost fruit fly traps for Cucurbit vegetables and its demonstration at farmers fields in border area of district Tarn Taran implementation by KVK Tarn Taran [2.15]
40	NABARD- Role of AI in Dairy Farms under KVK Tarn Taran [6.20]
41	NABARD -Development of VET MOOCs on Dairy and Goatry farming vis-a-vis Establishment of e-learning centre at GADVASU [9.20]
42	NABARD - Instigating solar based dairy processing plant at Gharyala dairy producer company limited (FPO) at district Tarn Taran by KVK, Tarn Taran [8.94]
43	PLDB - Creation of State of Art Institute for Sahiwal Breeding Farm at RRTC, Kaljharani, Bathinda [40.99]
44	NLM - Improvement of rural backyard poultry lines through genetic and managerial interventions under low input system [50.26]



Sr. No.	Funding Agency- Name of the Scheme [Grant Allotted (in Lakhs)]
45	NLM - Technological interventions for Development of Sustainable Kajali Sheep Production Model vis a vis Prevailing intensive Paddy-Wheat Cropping system of Punjab. [90.75]
46	NLM- Development of surveillance and mitigation tools for the management of anthelmintic resistance in small-ruminants [29.48]
47	DST - Establishment of inclusive technology business incubation (i-TBI) Centre [102.00]

2. New Research Projects allocated during 2023-24

Sr. No	Funding Agency -Name of the Scheme [Budget (in Lakhs)]
1	ICAR- Livestock and Poultry Product Safety [28.00]
2	DBT - Investigating the Role of Adipose Tissue-Derived Stromal Vascular Fractions (SVFs) Combined with Xanthosine in Veterinary Regenerative Medicine [24.31]
3	DBT - Elucidating Male and Female specific Factors Associated with T-regulatory Cells vis a vis Fertility in Buffalo [39.98]
4	DBT - National Network Project of Department of Biotechnology, Indian Institute of Technology, Roorkee [179.00]
5	DST - Improvement of livelihood status of the Scheduled-Caste (SC) population of Punjab State through Biofloc fish farming and value addition of produced fish [22.58]
6	NABARD - Instigating solar based dairy processing plant at Gharyala dairy producer company limited (FPO) at district Tarn Taran by KVK, Tarn Taran [8.94]
7	SERB - Immunomodulation Potentials of Apoptotic Mesenchymal Stem Cells [23.56]
8	Punjab State Corporative milk producers' federation limited - Effect of feeding paddy straw silage on nutrient utilization and productive performance of lactating buffaloes [7.73]
9	DST - Establishment of inclusive technology business incubation (i-TBI) Centre [102.00]

3. Research Projects completed during 2023-24

Sr No	Funding Agency-Name of the Scheme [Budget in Lakhs]
1	The Royal Veterinary College, London, United Kingdom - Modelling exposure to biological hazards in the dairy chains of Andhra Pradesh to inform food safety policy (SPHZ)) [US\$ 24656]
2	Aditya Birla Science & Technology Company Pvt. Ltd.- Study on the supplementary effects of Sodium Sulphate on Performance of lactating bovines [15.00]
3	NABARD - Instigating solar based dairy processing plant at Gharyala Dairy Producers Company Limited (FPO) district Tarn Taran [8.94]
4	French National Research Institute - Preliminary evaluation of Atypical -Human Trypanosomiasis (a-HT) due to <i>Trypanosoma evansi</i> in Punjab [5.98]
5	DST- FIST Program in Department of Veterinary Surgery & Radiology [69.80]
6	DST - Engineering intervention for mechanization of mozzarella cheese manufacture at cottage scale [35.91]



EXTENSION

Guru Angad Dev Veterinary and Animal Sciences University is unwavering in its commitment to empowering its stakeholders through professional education, cutting-edge technologies, and specialized practices tailored to specific livestock sectors. The University is relentlessly focused on transferring these advancements to the end users, ensuring practical applications that benefit society. Every faculty member is dedicated to a shared, selfless mission—enhancing the welfare of our community.

Over the past academic year, the University has undertaken a wide array of impactful extension initiatives across various departments. These efforts have directly reached livestock, poultry, and fish farmers, as well as field functionaries, subject matter specialists, industry professionals, and other key stakeholders. Through these targeted activities, the University continues to foster growth, knowledge-sharing, and sustainable development in the region's agricultural and animal husbandry sectors. These activities have been explained below:

A. Transfer of technologies to the livestock farmers and their feedback for reorienting the ongoing research Programs

Different departments of the university are actively engaged in research activities which result in the generation of area-specific technologies. These technologies are effectively transferred to the end users through the following activities:

1. Pashu Palan Mela, Regional Melas, and Competitions

The *Pashu Palan Mela* at Ludhiana, organized biannually by Guru Angad Dev Veterinary & Animal Sciences University, is a flagship event held every March and September. This vibrant gathering serves as a dynamic platform to highlight the latest advancements in livestock, poultry, and fisheries. It brings together cutting-edge innovations, elite livestock exhibits, detailed models, informative literature, live demonstrations, and expert-led lectures, offering a comprehensive overview of the industry's progress. The event fosters direct interactions between farmers, researchers, and industry professionals, empowering stakeholders with valuable knowledge and practical insights. Through these initiatives, the University plays a pivotal role in shaping the future of animal husbandry and aquaculture, ensuring sustained growth and development in these crucial sectors.

Pashu Palan Mela at Ludhiana (13-14 September 2023)

The *Pashu Palan Mela* held on September 13-14, 2023, featured the theme “Dairy, Bakrian, Soor Te Machhi; Ikko Farm, Aamdhan Achhi,” focusing on promoting the integration of various farming practices to reduce input costs and enhance profitability. The event was inaugurated by S. Gurmeet Singh Khuddian, Cabinet Minister of Punjab for Agriculture & Farmers Welfare, Animal Husbandry, Dairying & Fisheries, and Food Processing. In his address, he praised the university's efforts in advancing livestock farming, emphasizing its vital role in daily life and livelihoods. Dr. S.S. Gosal, Vice-Chancellor of PAU, also attended the event. As part of the mela, the university honoured three exemplary farmers with the *Chief Minister's Award* in the categories of cattle farming, poultry farming, and value addition. This two-day mela served as a powerful platform for knowledge sharing, innovation, and fostering growth within the farming community.



Pashu Palan Mela at Ludhiana (14-15 March 2024)

The *Pashu Palan Mela* held on March 14-15, 2024, revolved around the theme “Pashuan Vich Desi Upchaar, Ghat Laagat Vadh Paidavaar,” which translates to “Homemade Therapies for Animals with Fewer Inputs and Greater Profits.” The mela was inaugurated by S. Gurmeet Singh Khuddian, Cabinet Minister of Punjab for Agriculture & Farmers Welfare, Animal Husbandry, Dairying & Fisheries, and Food Processing. Dr. Jeetendra Verma, President of the World Veterinary Poultry Association, graced the event as the Guest of Honour.



Notable dignitaries including Dr. G.S. Bedi, Director of the State Animal Husbandry Department; Sh Jasvir Singh, Director & Warden of Fisheries, Punjab; S. Sukhbir Singh Jakhar; S. Dupinder Singh, Director of PDDDB; S. Mahinder Singh Sidhu, Chairman of PUNSEED; Sh. Parmveer Singh, Vice-Chairman of the MSME Board; Master Hari Singh, Member of the Animal Welfare Board, Punjab; along with Deans, Directors, and Officers, also attended the occasion.

During the event, the university honored outstanding farmers with the *Chief Minister’s Award* in categories such as Buffalo Farming, Fish Farming, Pig Farming, and Goat Farming.

Regional Melas:

Title of the Event	Date(s)	Venue	No. of Beneficiaries	No. of Animals Handled	Salient feature of the event
KVK, Tarn Taran					
Kisan Mela	14.10.2023	Sama Palace, Harike Pattan	800	-	-Awareness regarding CRM (crop residue management) - Felicitation of progressive farmers
Nilli Ravi Mela	09.12.2023	RRTC, Booh	450	13	-Milking competition for Nilli Ravi buffaloes of Punjab State
KVK, Barnala					
Goat Mela	06.12.2023	KVK Barnala	285	-	-Creating awareness among farmers regarding goat farming
Kisan Mela on Resource Conservation Technologies	30.04.2024	KVK Barnala	528	-	-Awareness regarding CRM -Felicitation of progressive farmers
KVK, Mohali					
Kisan Mela	17.10.2023	Gharaun	693	-	-Awareness regarding CRM -Felicitation of progressive farmers



RRTC, Talwara					
Beetal Goat Milking Competition	20.03.2024 to 22.03.2024	RRTC, Talwara	75	09	-Creating awareness among farmers about Beetal goat farming



Glimpses of Regional Melas

Nili Ravi Milking Competition at University Campus (4th-6th April 2023)

The Directorate organized the *Nili Ravi Milking Competition* from April 4 to 6, 2023, aimed at identifying high-yielding Nili Ravi buffaloes and encouraging farmers to focus on buffalo breeding in Punjab. Farmers with Nili Ravi buffaloes yielding more than 15 kg of milk daily participated in this event. Dr. J.P.S. Gill, Director of Research at GADVASU, graced the valedictory ceremony as the Chief Guest. The winner of the competition was the buffalo owned by S. Gurlal Singh of Village Jamalpur, District Tarn Taran, with an average milk yield of 23.94 kg. The runner-up, with an average yield of 21.45 kg, was S. Buta Singh's buffalo from Village Chuhar Chak, District Moga. The third prize went to the buffalo owned by S. Lahkbir Singh from Village Kohara, District Ludhiana, with an average yield of 20.91 kg.



Dog Show at University Campus (3rd December 2023)

A Dog Show and All-Breed Competition was held on December 3, 2023, at the university campus. The event was inaugurated by Sh. Gurpreet Singh Gogi, Member of the Legislative Assembly from Ludhiana West, who also served as the Chief Guest. A special demonstration by the Dog Squad of the Border Security Force was featured during the inaugural session.

The breed competition saw a diverse range of dogs competing across various categories, including Toy, Terrier, Utility, Hound, Gun Dog, Working, Pastoral, and Miscellaneous groups. Dr. Dhiraj Gupta, the Organizing Secretary, reported that over 100 dog owners participated in the event, proudly showcasing their dogs in the competition.

2. Special Awareness eks/Special Days

The university organized various awareness weeks and days to promote specific products and practices:

- **Milk Adulteration Evaluation and Awareness Camp:** Held by the College of Dairy & Food Science Technology from July 10 to August 15, 2023, this camp tested over 100 milk samples for adulteration, free of cost.
- **World Rabies Day (September 27-28, 2023):** The Centre for One Health marked the day with the theme “Rabies: All for 1, One Health for All” at GGN Public School, Ludhiana, and GSS School, Ayali Khurd. The event featured lectures, a quiz competition, and a drawing competition for students.
- **Animal Welfare Week (October 4-10, 2023):** The College of Veterinary Science, Rampura Phul, celebrated this week alongside World Veterinary Day (April 24-29, 2023) with activities such as collage making, quiz and extempore competitions for students, and campaigns for school children. A vaccination camp was also organized.
- **World Antimicrobial Awareness Week (November 21-22, 2023):** COVS, Rampura Phul, conducted a farmers' awareness campaign on antimicrobial resistance, stressing the need to prevent antimicrobial misuse.



World Antimicrobial Awareness Week celebration: online expert lecture



World Veterinary Day-2023 awareness for school students



Collage making competition on World Veterinary Day-2023



Multiple activities as a part of Weeklong celebration of World Veterinary Day 2023 (24/04/2023-29/04/2023)



KVKs of the University celebrated different days as follows:

KVK Mohali

Sr. No.	Name of Activity and Date	Picture
1.	Swachhta Campaign Apr 2023 to Mar 2024	
2.	World Bee Day 19.05. 2023	

<p>3.</p>	<p>Tree Plantation under Meri Life Campaign 25.05.2023</p>	
<p>4.</p>	<p>World Environment Day 05.06. 2023</p>	
<p>5.</p>	<p>ICAR Foundation Day 16.06.2023 to 18.06. 2023</p>	
<p>6.</p>	<p>International Yoga Day 21.06. 2023</p>	
<p>7.</p>	<p>PM Kisan Samman Nidhi Program 27.07. 2023</p>	

8.	Parthenium Awareness Week 16.08.2023 to 22.08. 2023	
9.	National Honey Bee Day at Khizrabad 18.08. 2023	
10.	National Nutrition Month Sept, 2023	
11.	Viksit Bharat Sankalp Yatra 22.11. 2023 to 13.01. 2024	
12.	World Soil Day 05.12. 2023	
13.	Kisan Diwas 23.12. 2023	



14.	PM Kisan Samman Nidhi Program at village Khizrabad 28.02. 2024	
15.	International Women Day at village Khizrabad 08.03. 2024	

KVK Barnala

S. No	Name of activities	Date	Participants
1	Partheinium Awareness week at KVK Barnala	16.08.2023 to 18.08.2023	53

KVK Tarn Taran

S. No	Name of activities	Date	Participants
1.	World Environment Day	05.06.2023	35
2.	Yoga Day	21.06.2023	28
3.	National Fish Farmers' Day	10.07.2023	18
4.	Ayurdeva Day	26.10.2023	42
5.	World Food India-2023	03.11.2023	45
6.	Interaction of Hon'ble Prime Minister with Farmers	08.11.2023	38
7.	World Soil Day	05.12.2023	102
8.	Kisan Diwas	23.12.2023	27
9.	International Women's Day	08.03.2024	26

VP & RRTC, Kaljharani

World Veterinary Day	29.04.2023	100
World Zoonosis Day	06.07.2023	150
National Milk Day	26.11.2023	50
FMD and HS Day	25.01.2024	35
LSD Day	29.02.2024	35

3. Animal Health Camps, Animal Welfare Camps etc.

Different departments of the university under the aegis of Directorate of Extension Education organize Animal Welfare/Health Camps/Awareness Camps regularly. These are usually a one-day affair. In these camps, animals are treated for gynecological, medicinal, and surgical problems. Poor and marginal farmers get benefitted through participation in these camps.

S. No	Particulars of Animal Welfare/Health Camps	Date	Animals Treated
Directorate of Extension Education			
1	Infertility Camps at Village Dhaner, District Barnala	13.06.2023; 20.06.2023; 22.06.2023	16 
2	Infertility Camps at Village Kalalan, District Barnala	09.08.2023; 16.08.2023; 18.08.2023	24 
3	Goat Treatment Camp at Village Kalalan, District Barnala	18.08.2023	419 Goats 
4	Goat Treatment Camp at Village Hamidi, District Barnala	22.08.2023	334 Goats 
Department of VAHEE			
5	Animal Welfare Camp at Regional Research Station, Ballawal Saunkhri	08.09.2023	56 Animals
6	Animal Welfare Camp-cum-Awareness Camp at village Gill (Mudki), District Ferozepur	11.09.2023	64 Animals
7	Animal Welfare Camp-cum-Awareness Camp at village Sekha Kalan, Block Bagha Purana, District Moga	30.09.2023	28 Animals
8	Animal Welfare Camp-cum-Awareness Camp at village Panje Ke Uttar, Tehsil Guru Har Sahai, District Ferozepur	06.10.2023	38 Animals
9	Animal Welfare Camp at Regional Research Station, Ballawal Saunkhri	07.03.2024	126 Animals



Department of Veterinary Gynaecology & Obstetrics			
10	Infertility Camp at Village Kalalan, Distt. Barnala	09.08.2023	20 Animals
11	Infertility Camp at Village Mudki, Dist. Ferozepur	11.09.2023	74 Animals
12	Animal Treatment Camp at Village Pamal, Distt. Ludhiana	28.09.2023	40 Animals
13	Animal Welfare Camp and Awareness Camp jointly organized by Directorate of Extension Education, Guru Angad Dev Veterinary and Animal Sciences University and Punjab Animal Husbandry Department, Punjab at Sekha Kalan, Moga	29.09.2023	41 Animals
RRTC, Kaljharani			
14	World Rabies Day (Free anti rabies vaccination to stray and pet dogs in the area)	28.09.2023	20 Animals
15	World Animal Welfare Day (Free treatment for cows at Gaushala)	04.10.2023	15 Animals

4. Awareness Camps, Training Camps, Field Days:

Another important extension activity of the university is organization of Awareness Camps and Field Days. These camps are helpful in disseminating information related to livestock, fishery and agriculture production. The subject matter specialists from different departments are invited to deliver their lectures on specific topics in these camps. The list of such camps has been given below:

Event	Date	Place	No. of Beneficiaries	Salient feature of the event
Directorate of Extension Education, Ludhiana				
Goat Farmers Awareness Camp under AICRP	17.04.23	Rampura Phul	10	Technical lectures and Distribution of inputs
Demonstration-cum-Training on Vermicomposting	03.05.23	Villages Moom, Dhaner, Channanwal, Kalala of District Barnala	75	On-Field demonstration and distribution of vermin-compost kits along with literature on waste management

Training camp on value addition of milk	12.05.23	Village Dhaner, District Barnala	21	<p>Training on Value addition of milk along with demonstration of machines like cup sealer and hand sealer to women beneficiary farmers</p> 
Goat Farmers' Field Day under AICRP	17.05.23	Village Jethuke	12	<p>Technical lectures and Distribution of inputs</p>
Tick-borne Disease Control Camp	28.06.23	Village Kalalan, District Barnala	35	<p>Awareness about tick-borne diseases and their control</p> 
Training-cum-Demonstration on silage making	10.07.23	Village Kalalan, District Barnala	10	<p>On-field trainings and demonstrations regarding silage making.</p> 
Demonstration of packaging machinery	14.07.23	Village Hamidi, District Barnala	12	<p>Demonstration of packaging machinery like cup sealer and hand sealer to beneficiary farmers</p> 

Clean Milk Production Camp	02.08.23	Village Mehal Kalan, District Barnala	24	<p>Importance of clean milk production</p> 
Ecto and Endo Parasite Control Camp	22.08.23	Village Hamidi, District Barnala	55 (382 animals)	<p>Farmers enlightened about importance of periodic deworming and tick contro.</p> 
Training Camp on Value Addition of Milk and Clean Milk Production	23.08.23	Village Dhaner, District Barnala	21	<p>Women beneficiary farmers trained for paneer making and made them aware of clean milk production</p> 
Exposure visit to Pashu Palan Mela at Ludhiana	14.09.23; 15.09.23	Village Dhaner, Moom, Hamidi, Kalala, Channanwal, Mehal Kalan of District Barnala	120	

Trace Minerals Feeding Camp	05.10.23	Village Hamidi, District Barnala	50	Farmers were made aware of the importance of trace minerals 
Integrated Framing System Camp	10.10.23	Village Pamal, District Ludhiana	12	Fodder kits distributed to the beneficiaries 
Goat Welfare Camp	10.10.23	Village Pamal, District Ludhiana	6 (150 Goats)	Goat flocks were observed for overall health and health kits were distributed to the goat farmers 
Trace Minerals Feeding Camp	17.10.23	Village Dhaner, District Barnala	50	Farmers were made aware about the importance of trace minerals and their proper incorporation in the balanced feed to the dairy animals to reduce the incidence of mastitis. 



Integrated Farming System Camp	23.10.23	Village Pamal, District Ludhiana and Village Mehal kalan, District Barnala	47	Kisan goshtis on IFS were conducted in Pamal and Mehal Kalan village where Gobhi saron and rabi fodder seed kits were distributed. 
Farmer Scientist Interface on Rabi crops	23.11.23	Village Pamal, District Ludhiana and Village Mehal kalan, District Barnala	50	The agronomic practices for the cultivation of rabi fodders were discussed and the farmers were motivated for soil testing before the sowing of rabi crops for minimum use of fertilisers in crops. 
Department of Veterinary Gynaecology & Obstetrics				
Field Days at Frontier Dairy Farmer	20.10.23 05.01.24 28.03.24	Halwara, Raikot, District Ludhiana	-	As expert, for the diagnosis and treatment of the infertility animals
National Sports Day	29.08.2023	COVS, Rampura Phul	120	Organized various sports viz., Chess, Table tennis, Badminton and Carrom
World's Rabies Day	28.09.2023	Department of Veterinary Pathology, COVS, Rampura Phul	135	Quiz Competition Poster Making Competition
National Cancer Awareness Day	7.11.2023	Online mode by Department of Veterinary Pathology, COVS, Rampura Phul	250	All India Quiz competition



World Pollution Prevention Day	2.12.2023	Department of Veterinary Pathology, COVS, Rampura Phul	100	Poster making competition Extempore competition
Brucellosis testing camp	06.07.2023	College of Veterinary Science, Rampura Phul	5 farmers (82 samples)	Tested 82 serum samples of different herds for brucellosis
Celebration of World Rabies Day	28.09.2023	Lala Kasturi Lal Sarvhitkari Senior Secondary Vidya Mandir, Rampura Phul and Civil Hospital, Rampura Phul	App. 1270	Awareness about rabies among school children, school staffs and human patients
Awareness Camp for Goat Farmers	17.04.2023	Village Phul, Rampura Phul	12 farmers Approx. 150 goats	Supply of farming inputs, Tagging of goats and recording of body measurements, Lecture delivery
Field Day Camp for Goat Farmers	17.05.2023	VPO Jethuke, Bathinda	15 farmers Approx.. 200 goats	Supply of farming inputs, Tagging of goats and recording of body measurements, Demonstrations
World Milk Day	01.06.2023	COVS, Rampura Phul	10 farmers Approx. 120 students	Free milk testing camp Quiz for students
Women's Equality Day-2023	26.08.2023	COVS, Rampura Phul	Approx. 100 students	Events- 1) Essay Writing 2) Elocution

KVK, Barnala				
Block Level CRM Awareness Camp	09.26.2023	Village Sekha	65	To create awareness for rice straw management among farming community.
Block Level CRM Awareness Program	10.17.2023	Kothe Niranjana Singh Wala	58	
Village Level Awareness Program on Crop Residue Management	10.19.2023	Chauhan Ke Khurd	34	
Village Level Awareness Program on Crop Residue Management	10.27.2023	NimmWala Maur	37	



Village Level Awareness Program on Crop Residue Management	10.26.2023	Uppali	38	
District Level CRM Awareness Camp	10.13.2023	KVK Campus	367	
Field day on wheat crop sown with super seeder under CRM Project	03.26.2024	Village Pakho Kalan	27	Popularization of conservation agriculture practices.
Field day on wheat crop sown with super seeder under CRM Project	03.27.2024	Village Roorkee Kalan	26	Popularization of conservation agriculture practices.
Field day on wheat crop sown with super seeder under CRM Project	03.28.2024	Village Aspal Kalan	27	Popularization of conservation agriculture practices.
KVK, Tarn Taran				
Importance of fruit fly traps in Pear	17.05.2023	Off Campus	14	
Identification of nutrient deficiency symptoms and their management in kharif crops	12.05.2023	On Campus	28	
Awareness camp on Milk Adulteration testing kits	06.09.2023	Off Campus	18	
Village level awareness Program	28.09.2023	Off Campus	62	
Village level awareness Program	10.10.2023	Off Campus	43	
Parali prabhadhan chetna yatra	05.10.2023	Off Campus	123	
Soil sampling technique	20.10.2023	Off Campus	11	
Awareness Program on crop residue management in college	02.11.2023	Off Campus	215	
Awareness Program on crop residue management in school	07.11.2023	Off Campus	131	
Awareness Program on crop residue management in school	09.11.2023	Off Campus	850	
Promotion of climate friendly livestock practices under Mission Life	13.11.2023	Off Campus	23	



Climate Smart	13.11.2023	Off Campus	57	
Vermicompost producers	22-23.03.2024	Off Campus	40	
Soil and water source of life	05.12.2023	Off Campus	83	
Demonstration on soil sampling technique	10.04.2023	Off Campus	17	
Organic farming	31.05.2023	Off Campus	27	
Dietary management during calcium deficiency	07.04.2023	Off Campus	10	
Balanced diet for adolescents	04.05.2023	Off Campus	25	
Nutri-garden and fruit garden models	08.06.2023	Off Campus	29	
Anemia rectification for school going children	19.06.2023	On Campus	28	
Value addition of milk	27.06.2023	Off Campus	24	
Underutilized greens to curtail hidden hunger	17.07.2023	On Campus	23	
Fabric embellishment techniques	04.08.2023	Off Campus	21	
Methods to enhance Iron bioavailability	06.09.2023	On Campus	15	
Post harvest management of pear	06.10.2023	On Campus	20	
Nutritious lunch for school going children	07.11.2023	On Campus	18	
Nutritional composition and processing of guava	22.12.2023	On Campus	28	
Recommended foods in zinc deficiency	02.01.2024	On Campus	15	
Zero waste technology for milk	05.02.2024	On Campus	38	
Post harvest management of millets	01.03.2024	On Campus	29	
Importance of backyard poultry for rural livelihood	12.03.2024	Off Campus	37	
Scientific Silage Making	12.03.2024	Off Campus	37	
Field day on Gobhi Sarson	21.03.2024	Off Campus	21	



Role and importance of minerals in feeding of dairy animals	22.03.2024	Off Campus	12	
Care and management of kids to prevent mortality	25.09.2023	Off Campus	21	
Scientific housing management of dairy cattle and buffalo	27.09.2023	Off Campus	25	
Conservation of green forage as silage/ hay for lean period	11.11.2023	On Campus	18	
Mastitis treatment in dairy animals	27.11.2023	Off Campus	19	
Paddy straw treatment intervention	23.01.2024	Off Campus	11	
Water quality management in Indian Major Carp culture	25.10.2023	Off Campus	32	
Fish farming practices during winter season	25.10.2023	Off Campus	40	
Disease management in Indian Major Carp culture	21.11.2023	Off Campus	22	
Integrated fish cum livestock farming system	15.12.2023	Off Campus	15	
Fish Farming Systems	01.03.2024	On Campus	35	
Feed management in Indian Major Carps	05.03.2024	Off Campus	10	
Backyard Poultry for Rural Livelihood	07.03.2024	On Campus	19	
Scientific Silage Making	12.03.2024	Off Campus	37	
Exposure Visit	ICAR-CIPHET, Abohar	22.09.2023	35	
Exposure Visit	ICAR-CIPHET, Ludhiana	03.10.2023	35	

Exposure Visit	Gill Livestock Farm, Amritsar	08.11.2023	40	
KVK, Mohali				
Scientific cultivation of brinjal	26.04.2023	Vill. Dusarna	10	
Pest management in <i>kharif</i> vegetables	28.04.2023	Vill. Kubaheri	21	
Natural Farming	28.04.2023	Vill. Dusarna	30	
Plant propagation techniques in fruits	05.05.2023	Vill. Akalgarh	21	
Scientific silage making and Direct seeding of rice	12.05.2023	Vill. Jhande Majra	26	
Techniques for efficient weed management in <i>kharif</i> crops	12.05.2023	Vill. Majra	22	
Care and management of chicks	22.05.2023	KVK	20	
Awareness Program on “Tree plantation under Meri life campaign”	25.05.2023	Village Majra	12	
Care and management of poultry birds under backyard rearing system	26.05.2023	KVK	20	

Scientific cultivation of Kharif crops	30.05.2023	Shahpur	17	
Pest management in kharif season vegetables	06.06.2023	vill. Kubaheri	29	
Advance baking techniques	07.06.2023	Prime City, Kharar	11	
Scientific cultivation of solanaceous vegetables	21.06.2023	Vill. Kansala	16	
Fish seed stocking and its maintenance	21.06.2023	Kurali	12	
Integrated pest management in paddy	28.06.2023	vill. Khizrabad	23	
Importance of bypass fat and mineral mixture for buffalo	28.6.2023	Vill. Khizrabad	30	
Terrace gardening and hydroponic farming of vegetables	05.07.2023	Vill. Neolkha	17	

Insect and disease management in sugarcane	12.07.2023	Vill. Khizrabad	19	
Importance of Summer fruits and vegetables	12.07.2023	Vill. khizrabad	17	
Pest management in maize crop	20.07.2023	On Campus	17	
Pest management in maize crop	20.07.2023	Vill. Bhoop Nagar	24	
Value addition of Millets	24.07.2023	Vill. bhupnagar	17	
Gardener's Training	04.08.2023 to 10.08.2023	Vill. Sohali	20	
Fish seed stocking and various practices	11.08.2023	Khizrabad	17	
Scientific cultivation of exotic vegetables	14.08.2023	Vill. Dusarna	15	
Safe use of insecticides	17.08.2023	Vill. Dulwa Khadri	29	
Field day on sugarcane	22.08.2023	Bhupnagar	31	
Polyhouse farming of horticultural crops	01.09.2023 to 07.09.2023	Vill. Bhajoli	20	

Formation of Self Help Groups	04.09.2023	vill. khizrabad	10	
Food Processing and Bakery Technology	05.09.2023	vill. nada	18	
Fish feed Formulation	05.09.2023	Vill. Fatehpur	20	
Direct seeded rice	12.09.2023	Shahpur	15	
Soil test based fertilizer application in field crops	19.09.2023	Vill. Sangatpura	25	
Post- stocking management of ponds in IMC culture	20.09.2023	Vill. Akalgarh	26	
Management of newly established orchards	20.09.2023	Vill. Akalgarh	44	
In situ Crop Residue Management	21.09.2023 to 27.09.2023	Vill. Sangatpura	25	
Use of Paddy Straw for Livestock	27.09.2023	Vill. Sangatpura	25	
Scientific cultivation of Bajra	05.10.2023	Majra	13	
Cultivation of rabi oilseeds	09.10.2023	Vill. Gunno Majra	21	

School level activity under CRM	11.10.2023	Sahed E Azam Sardar Bhagat Singh Govt. Girls Sen. Sec. School, Kurali	100	
Low tunnel technology on vegetables	13.10.2023	Vill. Sahauran	19	
Scientific management of paddy straw	20.10.2023	Vill. Sangatpura	44	
School level Camp under CRM	20.10.2023	Govt. Model Sen. Sec. School, Phase 3B1	100	
Awareness camp on CRM	26.10.2023	Vill. Khizrabad	100	
Paddy straw management Camp	03.11.2023	Chandigarh Group of Colleges	162	
College level Camp under CRM	03.11.2023	Shaed Bhagat Singh Khalsa College for Women, Padiala	103	
Block Level Awareness Camp under CRM	08.11.2023	Vill. Badanpur	25	
Fish farming in Winter	08.11.2023	Vill. Badanpur	22	
Management of animals during transition period	10.11.2023	Vill. Akalgarh	23	



Herbicide spraying techniques in wheat	14.11.2023	Vill. Kubaheri	24	
Plankton production in fish pond	23.11.2023	Nimbua	05	
Mushroom Cultivation	30.11.2023-06.12.2023	On Campus	25	
Techniques for cultivation of late sown wheat	07.12.2023	Vill. Shahpur	14	
Natural Farming	07.12.2023 to 08.12.2023	Vill. Shahpur	40	
Pest management in wheat crop	08.12.2023	Vill. Shahpur	17	
Food processing and bakery technology	14.12.2023 to 27.12.2023	Vill. Manakpur Shrif	29	
Natural Farming	21.12.2023 to 22.12.2023	Vill. Manakpur Shrif	40	
Natural Farming	08.01.2024 to 09.01.2024	Vill. Akalgarh	40	
Disease and pest management in Sarson crop	11.01.2024	DC, Office	30	
Value added Millet Products	12.01.2024	Vill. Manakpur Shrif	30	
Polyhouse farming of horticultural crops	15.01.2024 to 22.01.2024	Vill. Gunomajra	10	

Awareness Program on FMD & HS	24.01.2024	Vill. Tajpura	23	
Awareness Program on FMD & HS	25.01.2024	Vill. Kubaheri	19	
Vocational training on Poultry Farming	01.02.2024 to 07.02.2024	On Campus	14	
Field Day on Sarson Crop	13.02.2024	Channalon	25	
Cultivation of summer season vegetables	27.02.2024	Vill. Tajpura	18	
Insect and disease management in <i>rabi</i> season pulses	29.02.2024	Vill. Tajpura	21	
Field Day on Wheat Crop	01.03.2024	Majra	51	
Beekeeping	01.03.2024 to 07.03. 2024	On Campus	15	
Cultivation of summer season vegetables	04.03.2024	Vill. Badanpur	20	
Value addition to milk	04.03.2024	Vill. Kansala	40	
Grass root innovators	07.03.2024	Kalewal	60	
Nursery management of horticultural crops	07.03.2024 to 14.03.2024	Vill. Jhandemajra	25	

Goat Farming	07.03.2024 to 14.03.2024	Vill. Badanpur	30	
Insect and disease management in <i>rabi</i> Fodder Crops	11.03.2024	Vill. Gudana Majra	17	
Natural Farming	18 to 19.03.2024	Vill. Kansala	40	
Hands on training under CRM	21.03.2023 to 22.03.2024	Vill. Sangatpura	60	
Crop Residue Management	26.03.2024 to 27.03.2024	Vill. Gunno Majra	60	
Field Day on super seeder sown wheat	27.03.2024	Sangatpura	49	
Crop Residue Management	28.03.2024 29.03.2024	Gunno Majra and Shahpur Kuruli	50 + 40 40	
VP and RRTC Kaljharani				
Awareness on stubble burning	12.10.2023	Nandgarh	30	
RRTC Talwara				
Awareness camps on World veterinary Day	29-04-2023	Village Dalwali Kalan, District Hoshiarpur	19	Awareness regarding heat stress
Awareness camps	03/05/2023	Village Makkowal, District Hoshiarpur	14	Benefits of feeding mineral mixture to dairy animals
Awareness camps	01/06/2023	Village Nangal Behalan, District Hoshiarpur	16	Importance of Vaccination and deworming in dairy animals
Awareness camps	13-06-2023	Village Jhakrawal, District Hoshiarpur	11	Tips for preventing stress in dairy animals during summer season



Awareness camp cum farmer student interaction on women empowerment	06/07/2023	Village Ramgarh Sikri, District Hoshiarpur	16	Distribution of Poultry birds and feed to women
Awareness camps	07/07/2023	Village Chak Mirpur, District Hoshiarpur	11	Prevention of ticks and tick-borne diseases during rainy season
Awareness camps	27-07-2023	Village Handwal, District Hoshiarpur	18	Prevention of Lumpy Skin Disease
Awareness camps	28-07-2023	Village Waziran, District Hoshiarpur	19	Importance of Uromin Lick and mineral Mixture
Awareness camps	28-07-2023	Village Godhan, District Hoshiarpur	16	Prevention of ticks and tick-borne diseases during rainy season
Awareness camps	31-07-2023	Village Thane, District Hoshiarpur	17	Prevention of ticks and tick-borne diseases during rainy season
Awareness camps	07.08.2023	Village Halee, District Hoshiarpur	20	Management of ticks during rainy season
Awareness camps	30-01-2024	Village Roli, District Hoshiarpur	14	Improving quality of low quality rughages
Awareness camps on FMD	31-01-2024	Village Sathwan, District Hoshiarpur	19	
Awareness camps on Deworming of animals	01-02-2024	Village Tote, District Hoshiarpur	7	
Awareness camps	1-02-2024	Village Bhatoli, District Hoshiarpur	6	Improving Milk quality of animals
Awareness camps	02-02-2023	Village Rakri Har, District Hoshiarpur	17	
Awareness camps	06-02-2024	Village Baba Ishq, District Hoshiarpur	31	
Awareness camps	07-02-2024	Village Handwal, District Hoshiarpur	18	



B. Capacity Building of Livestock Farmers and other Related Personnel

1. Trainings Organized:

Training is a powerful tool for extension personnel to provide skill-oriented education, empowering human resources. The primary goal of these trainings is to bring about positive behavioural changes among participants. The university organized specialized training programs for farmers and army personnel in dairy, poultry, piggery, fish farming, and value addition of livestock products, focusing on transferring new technologies developed by the university. Additionally, training sessions were held in collaboration with various animal welfare agencies. Below is a list of these training programs.

S. No	Name of the Training Program	Dates	Duration (days)	No. of Trainings held	No. of Trainees	Summary about training*
College of Veterinary Sciences, Ludhiana						
1	Pig Farming Training (Deptt of VAHEE)	April & December 2023	05	02	25	Basic practices of pig farming
2	Dairy Farming Training (Deptt of VAHEE)	July & November 2023	10	02	34	Basic practices of dairy farming
3	Poultry Farming Training (Deptt of VAHEE)	June & October 2023	10	02	33	Basic practices of poultry farming
4	Goat Farming Training (Deptt of VAHEE)	April, May, July, September & December 2023	05	05	151	Basic practices of goat farming
5	Training on “One Health Approach for Protection of Animal Health”, for visiting PG students from MAFSU, Nagpur. (Centre for One Health)	31 July - 5 August, 2023	06	01	09	World Bank Funded NAHEP-CAAST MAFSU project entitled “Centre of Excellence for Advanced Research on Animal Food Safety” operational in MAFSU, Nagpur
6	Hands-on training on reproductive ultrasonography for better reproductive management in small and large ruminants (Department of VGO)	29.01.2024-02.02.2024	5	01	25	AHD, Punjab



7	Infertility diagnosis and management in dairy animals (Department of VGO)	26.02.2024 – 01.03.2024	5	01	25	AHD, Punjab
College of Veterinary Science, Rampura Phul, Bathinda						
8	Short Course on “Scientific Dairy Farming” at COVS, Rampura Phul (Bathinda)	15-28.09.2023	10	01	14	
9	Training program on “Goat Farming” at College of Veterinary Science, Rampura Phul	22-29.05.2023	05	01	44	
10	Training on ‘Prospectus of Beetal goat farming in Punjab’ at VPO-Rampura Phul (Bathinda)	21.09.2023	01	01	10	AICRP on Goat Improvement (ICAR)
College of Dairy & food Science Technology						
11	Value addition of milk	24.07.2023 to 28.07.2023	05	01	11	
2	Specialized Training on “Ghee Manufacturing” for Ms Neelam Luthra	02.08.2023	01	01	01	
13	Hands-on-training program on “Milk cake preparation and quality analysis” for Ms. Sonal Verma, 88A, Aggar Nagar, Ludhiana	03.10.2023	01	01	01	
14	Value addition of milk for Dairy Field assistants of PDDB, Punjab	03.10.2023 to 13.10.2023	10	01	05	
15	Value addition of milk	01.01.2024 to 05.01.2024	05	01	08	



16	Value addition of milk and importance of packaging in dairy business development” at Village Akaalgarh, Ludhiana	19.02.2024 to 23.02.2024	05	01	25	CODFST sponsored by National Commission of Women
College of Fisheries						
17	Orientation Workshop on “Re-circulatory Aquaculture System (RAS) and Biofloc Aquaculture System (BFAS)”	22.05.2023	1		48	PMMSY
18	Fish Farming	05.06.2023 to 09.06.2023	5	1	18	-
19	Orientation Workshop on “Re-circulatory Aquaculture System (RAS) and Biofloc Aquaculture System (BFAS)”	05.07.2023	1		42	PMMSY
20	Pangas Farming, Processing and value addition	01.08. 2023	1		48	Under RKVY
21	‘Fish Processing and Value Addition’	07.08.2023 to 11.08.2023	5	1		PAMETI, Ludhiana
22	Ornamental Fish Farming and Aquarium Fabrication	21.08.2023 to 23.08.2023	3		23	-
23	Skill Development in Intensive aquaculture systems-Recirculatory aquaculture wsystem and Biofloc Aquaculture System’	27.09.2023 to 29.09.2023	3		20	PMMSY
24	‘Intensive aquaculture systems- Re-circulatory aquaculture system and Biofloc aquaculture system’	09.10.2023 to 11.10. 2023	3		44	PMMSY

25	Skill Development on Fish Processing and Value Addition	10.10.2023 to 12.10.2023	3		25	Under ICAR SP-SC
26	Skill Development on Ornamental Fish Culture, Breeding and Aquarium Fabrication	18.10.2023 to 20.10.2023	3		25	Under ICAR SP-SC
27	“Pangas farming, processing and Value addition” – at RRTC Talwara	24.11. 2023	1		30	Under RKVY
28	Fish Farming	19.02.2024 to 24.02.2024	5	1	25	ICAR SC-SP sponsored in collaboration with Central Institute of Fisheries Education (CIFE), Mumbai
29	‘Fish Processing and Value Addition’	26.02.2024 to 01.03.2024	5	1	25	
30	Ornamental Fish Culture, Breeding & Seed Production & Aquarium Fabrication	26.02.2024 to 01.03.2024	5	1	25	
31	Integrated Fish Farming	04.03.2024 to 08.03.2024	5	1	25	
32	Capacity Building in Basic and Advanced Aqua-Clinic Techniques to Enhance the Employability and Entrepreneurship Skills of Fisheries Professionals	18.03.2024 to 22.03.2024	5		28	ICAR SC-SP

Glimpses of training Programs organized by College of Fisheries



Training on ‘Fish Farming’ (June 5-9, 2023) Training on ‘Ornamental Fish Farming & Aquarium Fabrication’ (June 21-23, 2023)



Training on 'Intensive Aquaculture Systems' (Sep 27-29, 2023)



ICAR SC-SP sponsored Training on 'Fish Farming' (Feb 19-23, 2024) and 'Integrated Fish Farming' (Mar 4-8, 2024) in collaboration with CIFE, Mumbai



ICAR SC-SP sponsored Training on 'Ornamental Fish culture, Breeding & seed production and Aquarium Fabrication' & Fish Processing and Value Addition (Feb 26-Mar 1, 2024) in collaboration with CIFE, Mumbai



Directorate of Extension Education, Ludhiana						
33	Online collaborative training on Practical Dairy Animal Nutrition- what every extension worker ought to know	24.05.2023 to 26.05.2023	3	1		MANAGE, Hyderabad
34	One Day workshop for officials of Dairy Development Department of Punjab	09-06-2023	1	1	30	
35	In-service training program for Dairy Field Assistants of Dairy Development Department of Punjab	24.06.2023 to 21.07.2023	1	1	5	
36	One day workshop on Use of paddy straw in animal production	14-08-2023	1	1	20	
37	Training on Bovine Diseases- Clinical examination, diagnosis and management	18.09.2023 to 22.09.2023	5	1	25	
38	Technical workshop on Prevention and management of common diseases in pigs	21-11-2023				
39	Reproductive ultrasonography for better reproductive management in small and large ruminants	29.01.2024 to 02.02.2024	5	1	25	
40	Quality fodder production, preservation and marketing of fodders	30-01-2024	1	1	15	
41	Refresher course on livestock healthcare and AI	05.02.2024 to 09.02.2024	5	1	25	
42	Training on analysis and reporting of milk and feed samples	22.02.2024 to 23.02.2024	2	1	15	PDDDB
43	Infertility Diagnosis and Management in Dairy Animals	26.02.2024 to 01.03.2024	5	1	25	
44	Eco friendly livestock farming	29-02-2024	1	1	30	
45	Post-mortem and Histopathological-based Diagnosis of Animal Diseases	11.03.2024 to 15.03.2024	5	1	25	
46	Animal Husbandry Officers' Workshop	26-03-2024	1	1	120	
KVK, Tarn Taran						
47	Value addition of milk	12.05.2023 to 18.05.2023	5	1	30	ICAR-14
48	Nursery and seed production of vegetable crops	18.05.2023 to 26.05.2023	5	1	12	ICAR-14
49	Organic vegetable production	06.07.2023	1	1	20	ICAR-14



50	Interaction with ATMA field functionaries and input dealers	19.09.2023	1	1	55	ICAR-14
51	Scientific mushroom cultivation	24.07.2023 to 28.07.2023	5	1	22	ICAR-14
52	Vermi-compost Production	09.08.2023 to 11.08.2023	3	1	45	ICAR-14
53	Scientific goat farming	24.07.2023 to 26.07.2023	3	1	35	ICAR-14
54	Organic vegetable production	14.08.2023 to 16.08.2023	3	1	20	ICAR-14
55	Scientific fish farming	25.09.2023 to 29.09.2023	5	1	40	ICAR-14 (SC-SP)
56	New techniques for <i>in-situ</i> management crop residue	29.09.2023 to 05.10.2023	5	1	25	ICAR-74
57	New techniques for <i>in-situ</i> management crop residue	16.10.2023 to 20.10.2023	5	1	25	ICAR-74
58	Scientific goat farming	07.11.2023 to 09.11.2023	3	1	40	ICAR-14
59	Vegetable kitchen gardening for nutritional security	28.11.2023 to 30.11.2023	3	1	50	ICAR-14
60	Scientific goat farming	26.02.2024 to 01.03.2024	5	1	35	ICAR-14
61	RPL Training for vermi-compost producers	22-23.3.2024	2	1	40	ASCI (Sponsored)
62	Organic Vegetable Production	06.07.2023	1	1	20	ICAR-14
63	Conservation agriculture and integrated nutrient management (input dealers DAESI)	29.11.2023	1	1	28	ICAR-14
64	Vegetable nursery production (Refresher Course)	05.02.2024	1	1	18	ICAR-14
65	Dairy processing and entrepreneurship opportunities in district Tarn Taran (Refresher Course)	13.02.2024	1	1	28	ICAR-14
66	Climate smart low-cost technologies to improve crop production (Refresher Course)	15.02.2024	1	1	57	ICAR-14
67	Composite dairy based value-added products	28.08.2023 to 30.08.2023	3	1	10	NABARD-10
68	Business plan and future development strategies for economic upliftment of FPO	28.08.2023 to 30.08.2023	3	1	01	NABARD-10



69	Value added frozen dairy products	11.03.2024 to 13.03.2024	3	1	10	NABARD-10
70	Training of CEO	11.03.2024 to 13.03.2024	3	1	01	NABARD-10
71	Sustainable management strategies for FPOs	20.03.2024	1	1	10	NABARD-10
KVK, Mohali						
72	In-service training on Cultivation of Kharif crops for staff of Agricultural Department (On Campus)	30.05.2023	01	01	25	ICAR-15
73	In service training on Natural Farming (On Campus)	31.05.2023	01	01	30	ICAR-15
Regional Research & Training Centre, Talwara						
74	Training Program on Goat farming at RRTC, Talwara	11.05.2023 to 17.05.2023 05.06.2023 to 09.06.2023 25.09.2023 to 29.09.2023 18.12.2023 to 22.12.2023 26.02.2024 to 01.03.2024	05	05	62	Self-sponsored
75	Training Program on Dairy farming at RRTC, Talwara	19.06.2023 to 23.06.2023	05	01	09	Self-sponsored
76	Training Program on Goat farming at RRTC, Talwara	04.10.2023 to 10.10.2023	05	01	35	Department of Soil and Water Conservation, Govt. of Pb.
77	Training Program on Fish farming	24.11.2023	01	01	30	In collaboration with College of Fisheries, GADVASU, Ludhiana
78	Training Program on Goat farming	17.11.2023	01	01	10	Under AICRP project on Goat Improvement.



Glimpses of Training Programs at KVK Tarn Taran



2. Webinars/ On-line Trainings Organized:

S No	Title of the Webinar	Date	Name of the Speakers	Participants (No)
Directorate of Extension Education				
	Panel discussion on ‘Lumpy skin disease’ (Dual mode)	30.05.2023	Drs Yashpal Singh Malik, Swarn Singh Randhawa, Deepti Narang, R K Sharma, Jasbir Singh Bedi, Vishal Mahajan and PS Brar	>80
	Panel Discussion on “Lumpy Skin Disease”	11.08.2023	Dr Jasbir Singh Bedi	200
	Panel discussion on “FMD in dairy animals” (Dual mode)	07.02. 2024	Dr Rabindra Prasad Singh, Director, ICAR-Directorate of FMD, Bhubaneshwar Dr Jajati K Mohapatra Principal scientist, ICAR-Directorate of FMD, Bhubaneshwar Dr Jasbir Singh Bedi, Dr AK Arora, Dr SS Randhawa, Dr MS Bal, Dr Vishal Mahajan Dr PS Brar from GADVASU	>50
College of Veterinary Science, RampuraPhul				
1	Epidemiology of Common Neoplastic conditions of Canine in India on National Cancer Awareness Day	7.11.2023	Dr. G.B. Manjunatha Reddy	220
2	Gross and Microscopic diagnostic features of common neoplasms of India on National Cancer Awareness Day	7.11.2023	Dr. N. Pazhanivel	230
3	Methane emissions-a Driving factor of climate change on World Pollution Prevention Day	02.12.2023	Dr. V. Sejian	110
4	Reduce, Reuse, Recycle” strategies for the control of environmental pollution on World Pollution Prevention Day	02.12.2023	Er. Sahil Goyal	110
5	“Zoonotic diseases: Prevention and Control”	06.07.2023	Dr. D.K. Singh; Ex-Principal Scientist, IVRI	App. 80



6	“Global status of One Health and its Application for the control of zoonotic diseases”	3.11.2023	Dr. Prejit; Technical Officer, One Health and Zoonoses, WHO country office India	App. 100
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3. Lectures delivered at off-campus trainings

Subject Matter Specialists of the University delivered expert lectures in trainings organized by outstations of GADVASU or various other agencies.

S No	Date	Topic	Organized by
College of Veterinary Science, Ludhiana			
1	19.03.2024	Selection of buffaloes for better production	ICAR-CIRB, Nabha
2	16.05.2023	Roaming in the Ruminant Digestive System: Understanding digestive anatomy and physiology	Directorate of extension Education with MANAGE Hyderabad
3	12.08.2023	Introduction to zoonotic diseases (online mode)	One Health Alliance, Jordan
4	22.10.2023	Mineral deficiency diseases in dairy animals: prevention and cure	Training to AI workers at Rampura phul, Bathinda
5	26.12.2023	Hygienic Milk Production Practices: A Way To Farmer’s Prosperity- Expert lecture by Dr Simranpreet Kaur	75 th year of IDA Establishment Celebrations at GADVASU, Ludhiana
6		“Hygienic Slaughter Practices for Production of Quality Meat” Expert lecture by Dr Simranpreet Kaur	Maharashtra Animal and Fishery Sciences University, Nagpur under ICAR-NAHEP-CAAST Project
7	15.02.2024	Selection of buffaloes for better production	ICAR-CIRB, Nabha
8	28.02.2024	Reproductive management of dairy animals	Commercial dairy farming organized by DLF, GADVASU @ ICAR4 at village Talwara, Ldh.
9	29.02.2024	Marketing of dairy produce	Roadmap to start and manage dairy business organized by DLF, GADVASU @ICAR4 at village Sekh Kutub, Ldh.
10	01.03.2024	Feed and fodder originated common toxicities and poisoning of dairy animals	Training on fodder production and conservation organized by DLF, GADVASU @ICAR4 at village Gidadhpindi, Ldh.
11	22.02.2024	Green fodder production throughout the year; Importance & formulation of balanced ration for different categories of dairy animals	Training organized by Department of VAHEE at Ichhewal, Nabha
12	23.02.2024	Importance of Clean milk production; Calf management	



College of Fisheries			
13.	11.04.2023	Fish Farming	Skill Development Centre, PAU, Ludhiana
14.	09.05.2023	Organic Fish Farming - A way for Sustainable Production'	Online course in Ethno-Veterinary Practices
15.	09.05.2023	'Modulatory effect of dietary herbal supplements on fish growth, health and reproductive potential'	
16.	09.05.2023	Control of Diseases in Shrimp Culture	FPO at Mansa
17.	09.05.2023	Best management practices for shrimp farming	
18.	25.11.2023	Modulatory effect of dietary herbal supplements on the growth, health and reproductive potential of fish	13th Annual Session of the Society of Life Sciences on 'Biodiversity Conservation and Restoration of Ecosystems', Satna, MP
19.	21.11.2023	Machi Palan Vich Vhibhinta Lye Yog Sambhavanawan	FFDA District Sangrur, Department of Fisheries
20.	21.11.2023	"Sustainable machi palan lyi yog uprale	FFDA District Sangrur, Department of Fisheries
21.	19.01.2024	'Fish Farming for Higher Profitability in Punjab'	India Agri Progress Expo-2024, Sanehwal
College of Dairy & Food Science Technology			
22.	02.01.2023	Significance of analysis of milk and milk products; Demonstration: Quality and safety assessment of milk	PAU, Ludhiana, Funded by National Commission for Women, New Delhi
23.	06.01.2023	FSSAI (Food Safety and Standard Authority of India) registration and license for dairy enterprise	
24.	09.01.2023	Significance of analysis of milk and milk products; Demonstration: Quality and safety assessment of milk	
25.	13.01.2023	FSSAI (Food Safety and Standard Authority of India) registration and license for dairy enterprise	
26.	30.01.2023	Significance of analysis of milk and milk products; Demonstration: Quality and safety assessment of milk	
27.	03.02.2023	FSSAI (Food Safety and Standard Authority of India) registration and license for dairy enterprise	



28.	20.02.2023	Food Safety and Standards Authority of India (FSSAI)	MSME – Development & Facilitation Office, Ministry of Micro, Small & Medium Enterprises (MSME)
29.	16.03.2023	Assessment of milk quality - (Theory on common adulterants); Laboratory tests for checking the quality of milk (Acidity, Fat & SNF)	PAU, Ludhiana, Funded by National Commission for Women, New Delhi
30.	17.03.2023	FSSAI (Food Safety and Standard Authority of India) registration and license for dairy enterprise	
31.	30.03.2024	Production of clean livestock products by (Dr Sandeep Singh Dhaliwal)	Krishi Vigyaan Kendra, Barnala
32.	30.03.2024	Fodder management during summer months (Dr Neeti Lakhani)	DEE, KVK, Handiaya, Barnal
33.	01.03.2024	Nutritional requirement in backyard poultry farming (Dr Neeti Lakhani)	DEE, KVK, Handiaya, Barnala
34.	24.03.2024	Scientific training on goat farming by (Dr. Sunil Punia)	KVK Barnala
35.	30.03.2024	Mastitis in dairy animals (Dr. Harneet Kour)	KVK Barnala
36.	04.01.2024	Disease Control and Methods of collection and dispatch of samples for disease diagnosis in animals (Dr. Chetna Mahajan)	Pashu Vigyan Kendra, Suratgarh, RAJUVAS, Bikaner
37.	09.11.2023	Shelter designs to alleviate climate induced stress on goats (Dr Sandeep Kaswan)	Training Program on ‘Prospectus of Beetal goat farming in Punjab’ at VP & RRTC, Kaljharani, Bathinda
38.	01.09.2023	<i>Bakrian layi aadhunik dhare.</i> (Dr Sandeep Kaswan)	Training program on Goat Farming at VP & RRTC, Kaljharani
KVKs and RRTCs			
39.	29/02/2024	Bakrian ch prajnan prabandhan	KVK, Tarn Taran
40.	12/04/2023	Scientific vegetable farming	KVK, SAS Nagar
41.	26/04/2023	Scientific cultivation of brinjal	KVK, SAS Nagar
42.	05/05/2023	Plant propagation techniques in fruits	KVK, SAS Nagar
43.	12/05/2023	Pest management in fodder crops	KVK, SAS Nagar
44.	22/05/2023	Feeding management of poultry	KVK, SAS Nagar
45.	26/05/2023	Nutrition management in poultry	KVK, SAS Nagar
46.	05/06/2023	Importance of world environment day	KVK, SAS Nagar
47.	21/06/2023	Production technology of solanaceous crops	KVK, SAS Nagar



48.	28/06/2023	Importance of Area Specific Mineral Mixture for dairy animals	KVK, SAS Nagar
49.	05/07/2023	Importance of vegetables in human diets	KVK, SAS Nagar
50.	05/07/2023	Terrace gardening and hydroponic farming of vegetable	KVK, SAS Nagar
51.	09/07/2023	Pest management in paddy and basmati	KVK, SAS Nagar
52.	18/07/2023	Recent developments in Agri allied sector	KVK, SAS Nagar
53.	25/07/2023	Management of insects in kharif fodder crops	KVK, SAS Nagar
54.	31/07/2023	Post flood strategies to manage field crops and dairy animals	KVK, SAS Nagar
55.	11/08/2023	IPM in fodder crops	KVK, SAS Nagar
56.	11/08/2023	Pesticide spray technology	KVK, SAS Nagar
57.	01/09/2023	Polyhouse farming of horticultural crops	KVK, SAS Nagar
58.	06/09/2023	Pest management in vegetables	KVK, SAS Nagar
59.	26/09/2023	Ex-situ management of Paddy straw	KVK, SAS Nagar
60.	26/09/2023	Use of paddy straw in animals	KVK, SAS Nagar
61.	29/09/2023	Utilization of paddy straw into utility articles	KVK, SAS Nagar
62.	05/10/2023	Use of bajra as green fodder for dairy animals	KVK, SAS Nagar
63.	11/10/2023	Ex-situ management of Paddy straw	KVK, SAS Nagar
64.	13/10/2023	Low tunnel technology in vegetables	KVK, SAS Nagar
65.	12/10/2023	Use of paddy straw in Poultry	KVK, SAS Nagar
66.	17/10/2023	Management of rice straw and its ex-situ uses	KVK, SAS Nagar
67.	20/10/2023	Use of paddy straw for livestock feeding and bedding	KVK, SAS Nagar
68.	20/10/2023	Management of Paddy straw	KVK, SAS Nagar
69.	26/10/2023	Use of crop residue for animal feeding and bedding	KVK, SAS Nagar
70.	26/10/2023	Paddy straw as a bedding material	KVK, SAS Nagar
71.	27/10/2023	Ex-situ management of Paddy straw	KVK, SAS Nagar
72.	03/11/2023	Urea and molasses treated paddy straw feeding to dairy animals	KVK, SAS Nagar
73.	08/11/2023	Use of crop residue for animal feeding	KVK, SAS Nagar
74.	08/11/2023	Urea molasses treated paddy straw feeding in dairy animals	KVK, SAS Nagar
75.	15/11/2023	Post harvest management of fruits and vegetables	KVK, SAS Nagar



76.	23/11/2023	Formation of Self-Help groups and skill-oriented courses organized by Krishi Vigyan Kendras.	District Administration, Mohali
77.	24/11/2023	Formation of Self-Help groups and skill-oriented courses organized by Krishi Vigyan Kendras.	District Administration, Mohali
78.	28/11/2023	Value addition of agri produce	District Administration, Mohali
79.	29/11/2023	Value addition of fruits and vegetables	District Administration, Mohali
80.	01/12/2023	Post-harvest management of agri-produce	District Administration, Mohali
81.	06/12/2023	Present status and future prospects of Mushroom Cultivation	District Administration, Mohali
82.	07/12/2023	Pest management under natural farming	KVK, SAS Nagar
83.	08/12/2023	Natural farming the way of healthy life	KVK, SAS Nagar
84.	14/12/2023	Importance and future prospects of value added products through Baking	KVK, SAS Nagar
85.	21/12/2023	Present status and future prospects of natural farming	KVK, SAS Nagar
86.	22/12/2023	Natural farming	KVK, SAS Nagar
87.	08/01/2024	Present status and future prospects of natural farming	KVK, SAS Nagar
88.	12/01/2024	Nutritional value and Health benefits of millets	KVK, SAS Nagar
89.	01/02/2024	Backyard poultry farming: Boom for rural youth	KVK, SAS Nagar
90.	06/02/2024	Rodents management in poultry house	KVK, SAS Nagar
91.	06/02/2024	Fly management in poultry house	KVK, SAS Nagar
92.	13/02/2024	Natural farming of Gobhi Sarson	KVK, SAS Nagar
93.	28/02/2024	Management of mastitis in dairy animals	KVK, SAS Nagar
94.	01/03/2024	Wheat production under Natural farming	KVK, SAS Nagar
95.	07/03/2024	Role of KVK for farming community	KVK, SAS Nagar
96.	07/02/2024	Economics of poultry farming	KVK, SAS Nagar
97.	14/03/2024	General management practices for scientific goat farming	KVK, SAS Nagar
98.	19/03/2024	Natural farming the way of healthy life	KVK, SAS Nagar
99.	22/03/2024	Urea and molasses treated paddy straw feeding to dairy animals	KVK, SAS Nagar



C. Meetings of Livestock and Fishery Farmers Associations

Name of the Association	Date of Meeting	Title of Lecture(s) and name of Speaker(s)	No. of Participants
Innovative Fish Farmer's Association (IFFA)	15.06.2023	Advances in Fish Nutrition and marketing strategies – Dr. Asim K. Pal, Former Technical Advisor, APC Nutrients Pvt. Ltd., Secunderabad, Telangana	11
		Biofloc Aquaculture System' – Dr. Amit Mandal	
	18.08.2023	Control of snail in aquaculture system – Dr. Amit Mandal	24
		Importance and culture of fish food organism in aquaculture – Dr. Amit Mandal	
		Water quality with special reference to pH and importance of Amur Carp – Dr. Abhishek Srivastava	
	18.01.2024	Amur Carp Farming – Dr. Abhishek Srivastava	10
Plankton Production in fish ponds – Dr. Amit Mandal			
15.02.2024	Fish pond management during seasonal transition period – Dr. Grishma Tewari	57	
	Species/culture system diversification, for higher productivity and profitability – Dr Amit Mandal		
Pig Farmers Welfare Association	28.04.2023	Methods of Pig slaughtering Value addition of pork Dr Nitin Mehta, Associate Professor, LPT	32
	28.06.2023	Classical and African swine fever by Dr Gurpreet Singh, TVCC AI in Pigs by Dr Ashwani Kumar Singh	24
	28 .02.2024	Diarrhea in Pigs by Dr Gurpreet Singh Classical Swine Fever by Dr Adarsh Mishra	16
Progressive Dairy Farmers Association	19.04.2023	Lameness in dairy animals by Dr Swarn Singh Randhawa	Number
	13.07.2023	Common diseases of dairy animals by Dr Ashwani Kumar	Number
Punjab Livestock Farmer Association	13.04.2023	Lumpy skin disease by Dr Gurpreet Singh Preet Ration formulation by Dr Parminder Singh	Number



	18.05.2023	Summer management by Dr Suresh Kumar Silage making by Dr J S Hundal	Number
	10.08.2023	Fly and Mosquito Menace by Dr Paramjit kaur Feeding during Moonsoon by Dr Parminder Singh	Number
	01.10.2023	Balanced ration for heifer by Dr Parminder Singh	-
	09.11.2023	Mastitis control by Dr CS Randhawa	-
	21.03.2024	Summer Management by Dr Parminder Singh	-
	28.03.2024	Silage quality and standards by Dr Parminder Singh	-
All Feed Manufacturing Association	17.05.2023	Repeat breeding and Anestrus by Dr Prahlad Singh Feed legislation by Dr Parminder Singh	-
	06.12.2023	Quality control in dairy feed by Dr Parminder Singh	-
Independent Poultry Association	12.06.2023	Poultry management during monsoon by Dr PP Dubey Role of millet in poultry by Dr Parminder Singh	-
Krishi Vigyan kendra, Tarn Taran			
FPO	12.06.2023; 13.06.2023; 11.08.2023; 17.11.2023; 12.01.2024; 26.03.2024	PMIC of Project entitled “Instigating solar based dairy processing plant at Gharyala Dairy Producers Company Limited (FPO) at district Tarn Taran Sahib”	10
Krishi Vigyan Kendra, S.A.S. Nagar (Mohali)			
FPO	18.08.2023	Capacity building of members of FPOs regarding marketing of agro based products. Dr. B. S. Khadda and Dr. Parul Gupta	32
Self Help Groups	11.08.2023	Formation of SHGs and their importance held at Kharar Dr. B. S. Khadda and Dr. Parul Gupta	12
	01.09.2023	Problem faced by Members of SHGs at Kasauli and Shivrinar Nada Dr. B. S. Khadda and Dr. Parul Gupta	27
	04.09.2023	Importance of SHGs and its formation at Gunno Majra Dr. B. S. Khadda and Dr. Parul Gupta	10



D. Extension Publications

Books/Booklets published

1. Mattu and Mano Bahne Do- Zoonoses ki Battein Karti Hai Jo. Rajnish Sharma, J Singh and BB Singh. Year. Published by Centre for One Health, Guru Angad Dev Veterinary and Animal Sciences University
2. A Pocket Guide to Foot and Mouth Disease in Bovines. J S Bedi and Pankaj Dhaka. 2024. Published by Centre for One Health, Guru Angad Dev Veterinary and Animal Sciences University [ISBN Number: 978-93-340-1730-4].
3. Biosecurity Guide for Aquaculture by M D Ansal and V I Kaur. 2020. Published by College of Fisheries
4. Training Program on Hoof Trimming. S S Randhawa and G S Preet. 2024. Guru Angad Dev Veterinary and Animal Sciences University Ludhiana.
5. Silage Making- An emerging enterprise for dairy sector. N S Brar, S Kaur, J S Hundal, M Kaur, P Bhadauria, P Sheoran and R Singh. 2023. ICAR-ATARI, Zone-I, Ludhiana, Punjab, India. PP. 1-112. ISBN: 978-81-958562-3-7.

Edited Books / e-Books

1. A Singh, J Singh and P S Brar (2023) Management of Goats (Punjabi). Directorate of Extension Education, GADVASU, Ludhiana.
2. J Singh, A Singh, S Das, P S Brar and S Phand (2023). Practical Dairy Animal Nutrition -What Every Extension Worker Ought to Know [E-book] Hyderabad: GADVASU, Ludhiana & National Institute of Agricultural Extension Management, Hyderabad, India.
3. P N Kalla, B S Khadda, Rajveer, Dinesh, S Singh, N Choudhary, S L Sharma, M C Bohra, Aparna, A K Verma, Ramnivash, J Singh, R Bajpai, R Bajia, V Kumar, Jaipal and D. Balu (2023). Millets: Magical crops for nutritional sustainability. Pp 1-99. Vivekanandh International Book Publisher, Polur, Tamil Nadu-606803, ISBN No: 978-81-962982-7-2.
4. Komal, K S Maan, P Kumar and Mamta. 2023. Poultry: Feeding, Breeding & Management. Scripown Publications, Delhi. ISBN: 978-93-94375-63-5.
5. P Kumar, Komal, K S Maan and Mamta. 2023. Technologies in Animal Husbandry. Scripown Publications, Delhi. ISBN: 978-93-94375-58-1.

Book Chapters

1. B S Khadda, N S Brar, H Kaur and P S Brar (2023). Health benefits of Millets. In: Millets: A Novel Approach. (Eds. K Parvin, R Awashthi and A Srivastava), ABS Books, Delhi- 110086.
2. B S Khadda, N S Brar and P S Brar (2023). Current National and International Scenario of Millets Production. In: Millets: A Novel Approach. (Eds. K Parvin, R Awashthi and A Srivastava), ABS Books, Delhi- 110086..
3. **Brar N S**, B S Khadda and S. Kaur (2023) Understanding green: Acquaintance with different green fodders and their cultivation practices. In: Practical Dairy Animal Nutrition- What Every Extension Worker Ought to Know (E-book). (Eds Singh et al). GADVASU, Ludhiana & National Institute of Agricultural and Extension Management, Hyderabad, India, pp 21-34.



4. **Brar N S, Kaur S and Khadda B S (2023)** Scientific cultivation of fodder crops for silage making. In: *Multidisciplinary Portrait of Agriculture: Concept & Practices*. (Eds. S Parvender, B Pragma, B S Singh and S R Ahmad. ICAR-ATARI, Zone-1, Ludhiana, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, National Agriculture Development Cooperative Ltd. Baramulla, INDIA. Pp 252-256.
5. Lakhani, N. 2023. Nanotoxicity evaluation methods. *Nanotechnology Theranostics in Livestock diseases and management*. Editor- Minakshi Prasad, Rajesh Kumar, Mayank Ghosh, Shafiq Syed and Soumendu Chakravarti, Publisher- Springer- Book chapter ISBN 978-981-16-1610-5
6. Kaswan, S., Panda, P. and Verma, H.K. 2023. Role of animals in the contemporary society. *In: A Textbook of Veterinary and Animal Husbandry Extension Education*. New Delhi Publishers, New Delhi (India) pp: 17-21. (ISBN: 9788119006236)
7. Sudan, V., Sumbria, D. and Kour, r. 2023. Protozoan Diseases in Goats. *Principles of Goat Disease and Prevention*, Wiley Blackwell.
8. Sudan, V., Sumbria, D. and Rana, T. 2023. Chapter 1-Introduction. *Organ-Specific Parasitic Diseases of Dogs and Cats*. Academic Press. Pages 1-31.
9. Yadav, J.P. and Singh, M. 2023. Emerging and re-emerging bacterial pathogens of public health importance. In *One Health and Zoonotic Diseases (Compendium of Critical Insights: A Collection of Review Articles)*, 42-59. (ISBN 13: 978-93-5680-551-4).

Pamphlets/Folders published

- i. Bedi, J S and Dhaka, P (2024) Let's prevent Foot and Mouth Diseases in Dairy Animals. Centre One Health, GADVASU, Ludhiana
- ii. Gupta, R K., Singla, M., Singh, D. & Malhotra, P. (2023). *Dairy farm vich record rakhn di mahatta*. Directorate of Livestock Farms, GADVASU, Ludhiana
- iii. Grewal, R. S., Singh, J, Kaur, R. & Singh, S. T. (2023). *Jhone di parali nu na jlau, pashu parbhandh da hisaa bnao*. Directorate of Livestock Farms, GADVASU, Ludhiana
- iv. Singh, S. T., Singh N., Chhabra, S. & Singh, B. (2023). *Dudaro pashuan da same sir tikakarn karvao, jaan leva bimariyan ton nijaat pao*. Directorate of Livestock Farms, GADVASU, Ludhiana
- v. Singla, M., Gupta, R. K., Singh, A. & Deshmukh, B. (2023). *Vaparak bakri palan lyi kuch sujha*. Directorate of Livestock Farms, GADVASU, Ludhiana
- vi. Singh A K, Sangha J S, Sandhu K S, Mahajan V, Singh D, Honparkhe H. 2023. Surian da kariye uttam parbandhan, tahi rahega suchaja parjajan. AICRP on Pig.
- vii. A K Singh, A K, Sangha, J S, Sandhu, K S, Kaur, S, Mahajan, V, Singh, D & Honparkhe, M. (2023). Surian vich kushaltapoorvak heha pareekhana. Department of Veterinary Gynaecology and Obstetrics, GADVASU, Ludhiana
- viii. Singh, B, Mahal, J S & Honparkhe, M. (2023). Bachedani da wal kadnapavehga sameh sir hal. Department of Veterinary Gynaecology and Obstetrics, GADVASU, Ludhiana. Pp 1-4.
- ix. Mahal, J S, Singh, B & Honparkhe, M. (2023). Aukhi Suwayi Ch rakho pashu da khayal hal niklu doctor di salah naal. Department of Veterinary Gynaecology and Obstetrics, GADVASU, Ludhiana. Pp 1-4.



- x. Honparkhe, M, Singh, B, Singh, A K, Ghuman, S S & Brar, P S. (2023). Heha Samkalikaran Apnao Dairy kitteh nuh Lahewand Banao. Department of Veterinary Gynaecology and Obstetrics, GADVASU, Ludhiana. Pp 1-4.
- xi. Brar, N. S., Singh, P., Kumar, A. & Maan, P. S. (2023). Dudhaaru pashuaan lyi makki da achaar bnauna. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xii. Dhillon, P. K., Singh, N., Kumar, A. & Malhotra, P. (2023). Nakhan ton tyaar mullvardhak pdarath. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xiii. Dhillon, P.K., Singh, P., Kumar, A. & Sahil. (2023). Jalbooti de mullvardhak utpaad. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xiv. Kumar, A., Brar, N.S., Dhillon, P.K. & Singh, P. (2023). Sauni de chareaan vich khadan da suchajja parbandh. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xv. Kumar, A., Sahil, Dhillon, P.K., Singh, G. & Malhotra, P. (2023). Machhi de mullvardhak pdarath. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xvi. Maan, P. S., Singh, P., Brar, N.S., & Sahil. (2023). Backyard Poultry Farming. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xvii. Sahil, Dhillon, P.K., Singh, G. & Malhotra, P. (2023). Machhi de mullvardhak pdarath. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xviii. Sahil, Singh, P. Dhillon, P.K., & Maan, P. S. (2023). Sanyukt Machhi Paalan. Directorate of Extension Education, GADVASU, Ludhiana, Punjab, India.
- xix. Sharma, A & Tanwar, P. S. (2023). Millets de Vayanjan. KVK Barnala.
- xx. Kaur, R & Tanwar, P. S. (2023). Machali palan layebandh Keeta, KVK Barnala.
- xxi. Khadda, B. S., Sharma, M., Singh, G & Gupta, P. (2023). Kudrati kheti da aadhar desi gaan. KVK Mohali
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E. TV/Radio Talks

University has liaison with electronic media for flashing various livestock related interventions and precautions for disease control and seasonal correct management practices. University experts deliver TV talks regularly on Door darshan/ Cable networks/ private channels on current & seasonal topics related to livestock and fish farming. On an average one talk is delivered/broadcast in a week. The comprehensive list of TV/Radio talks has been given below.

S.No.	Name of the Faculty Member	Date of the Talk	Title of the Talk
Directorate of Extension Education			
1	Daljeet Kaur	May, 2023	Backyard poultry farming; YouTube Channel-GADVASU Extension Services
2	Gopika Talwar	June, 2023	Packaging of milk products; YouTube Channel-GADVASU Extension Services
3	Jaspal Singh Hundal	July, 2023	Transition feeding of dairy animals; YouTube Channel-GADVASU Extension Services
4	Raj Sukhbir Singh	Aug, 2023	Machine milking of dairy animals; YouTube Channel-GADVASU Extension Services
5	Vaneet Inder Kaur	Sept, 2023	Scope of fish farming in Punjab; YouTube Channel-GADVASU Extension Services
6	Jaswinder Singh	Nov, 2023	Colostrum importance in calves; YouTube Channel-GADVASU Extension Services
7	N S Ratta	Dec, 2023	Reproductive management of dairy animals; YouTube Channel-GADVASU Extension Services
8	Parmjit Kaur	Feb, 2024	Parasitic diseases of goat; YouTube Channel-GADVASU Extension Services



Department of Animal Nutrition			
9	J S Hundal	27.08.2023	Pashuan di rehan-khund parbandhan ate carbon paida niyantran; AIR, Jalandhar
10	Amit Sharma	19.02.2024	Nutrition of goats under commercial stall-feeding conditions; Tehlaka TV, Punjab
Directorate of Livestock Farms			
11	Navdeep singh	18.05.2023	Garmian vich pashuan dian prajanan samasiavan ate aam sambhal; DD, Jalandhar.
12	R S Grewal	15.09.2023	Dairy farming; DD Jalandhar
13		15.09.2023	Pashu Palan Mela talk; Jagbani TV
14	Puneet Malhotra	26.10.2023	Sardian vich dairy farm utte agette prabandh; DD, Jalandhar
15		31.01.2024	Reproductive management of dairy animals; Broadcasting Agency
16	S T Singh and Puneet Malhotra	27.02.2024	Gavan ate majhan dee sambhal; Tehalka TV
Department of Livestock Production Management			
17	Daljeet Kaur	25.05.2023	Garmian vich murgian de sambh sambhal; AIR, Jalandhar
18		01.01.2024	Murgi farm ate sardian da parbandh; Fastway TV
Department of Livestock Product Technology			
19	Nitin Mehta	20.06.2023	Meat taun vakh vakh utpad; DD Jalandhar
Department of Veterinary & Animal Husbandry Extension			
20	R K Sharma	30.05.2023	Panel discussion on Lumpy Skin Disease; YouTube Channel-GADVASU Extension Services
21	R K Sharma	14.12.2023	Veterinary University da Door Sanchar Salah Kendra; AIR, Bathinda
22	Rajesh Kasrija	14.09.2023	Ludhiana vich Pashu Palan mele da dhoomdham nal hoea aagaj; Ludhiana Live https://fb.watch/n2SNVE1Q2S/mibextid=NifSo2
23		02. 11. 2023	Kissan Utpadak Sangthan de labh; AIR, Jalandhar
Department of Veterinary Microbiology			
24	Deepti Narang	25.08.2023	Chhoot waliyan bimarian; AIR, Bathinda
25	Paviter Kaur	21.01.2024	Pachuan vich muh khur di bimari; AIR, Patiala
26		08.02.2024	Pashuan vich vishanu rog; AIR, Jalandhar
Department of Veterinary Parasitology			
27	Harkirat Singh	05.04.2023	Bahri parjivian ton pashuan da bacha; DD Punjabi, Jalandhar
28	Paramjit Kaur	02.05.2023	Garmian tee barsat vich pashuan da Parjivian Ton Bachoo; AIR, Bathinda
Department of Veterinary Pharmacology and Toxicology			
29	S P S Saini	27.12. 2023	Dhund de mausam vich hone wale zeherbaad; DD Jalandhar



Department of Veterinary Gynecology and Obstetrics			
30	Bilawal Singh	15.11.2023	Sooriyan da sahi prajnan parband; AIR, Jalandhar
31	M Honparkhe	08.01.2024	Mera Pind Mere Khet; DD Jalandhar
Department of Veterinary Surgery and Radiology			
32	H S Sodhi	11.05.2023	Pashu bimarian da operation rahin ilaj; AIR, Jalandhar
33	Navdeep Singh	22.05.2023	Satt lagan te pashuan da ilaj; DD Jalandhar
34	J Mohindroo	20.12.2023	Ghorean de ilaj sabandi operation vidhiyan; DD Jalandhar
35	Arun Anand	29.01.2024	Pashuan 'ch jamandru vikaran da ilaz; AIR, Jalandhar
Department of Veterinary Medicine			
36	Neetu Saini	14.02.2023	Kuteein vich hon vallian dil dian bhimarian te onah di roktham; AIR, Bathinda
Department of Veterinary Pathology			
37	Kuldip Gupta	08.02.2024	Pashuan vich bimarian da nirakhan; DD Jalandhar
Teaching Veterinary Clinical Complex			
38	Raj Sukhbir Singh	August 16, 2023	Machine milking of dairy animals; YouTube Channel-GADVASU Extension Services
39	G S Preet	03.12.2023	Videshi kutiya nu bimari ton bachaun lai sujav; Rozana Spokesman
40		08.02.2024	Pashuan layee doctry shayita; AIR, Jalandhar
Centre For One Health			
41	Pankaj Dhaka	31.07.2023	Concept of farm biosecurity; AIR, Jalandhar
42	Simranpreet Kaur	07.09.2023	Saaf suthra dudh utpadan: nitiyaan and prabhandhan G 20 de sandharv wich; AIR, Jalandhar
43	Randhir Singh	01.09.2023	G-20 ate manukh, pashu ate vatavaran sambandh vich sukham jeev pratirodhita; AIR, Jalandhar
44		06.01.2024	Pashu ilaz vich dvaiyan dhukvin varton; AIR Patiala
45	J S Bedi	08.10.2023	Rabies: Prevention and control; All India Radio, Ludhiana
46		18.10.2023	Rabies: Prevention and control; DD Jalandhar
47		Date	Role of veterinary sector in One Health; AIR, Jalandhar
College of Dairy Food Science Technology			
48	Varinder Pal Singh	19.05.2023	Majhan palna lahwand kitta; AIR, Bathinda
49	Amandeep Sharma	24.05.2023	Garmiavichdudh di sambhal; AIR, Bathinda
50	Gopika Talwar	23.06. 2023	Dudh di gunvatta te packaging; AIR, Patiala
College of Fisheries			
51	Grishma Tewari	18.04.2023	Panchayati chapparani di machhi palan layi varton; AIR, Bathinda
52	Prabjeet Singh	02.05.2023	Fish farming; AIR, Jalandhar
53		04.05.2023	Shrimp farming; AIR, Ludhiana
54	Vaneet Inder Kaur	15.05.2023	Eco-friendly fish farming; AIR, Jalandhar
55		24.11.2023	Winter management in fish farming; DD Jalandhar



56	Grishma Tewari	16.11.2023	Winter management in fish farming; AIR, Bathinda
57	Sarbjeet Kaur	08.12.2023	Sardiyaan vich machi di samb sambhaal; AIR, Bathinda
COVS, Rampura Phul			
58	Dr. B.K. Bansal	11.01.2024	Awareness on Glanders Disease in Horses, Mules and Donkey (Delivered in Punjabi language); AIR Bathinda
59	Dr. B.K. Bansal	22.12.2023	Contributions of Animal Hospital, College of Veterinary Science, Rampura Phul; AIR Bathinda
60	Dr. B.K. Bansal	20.06.2023	ਲਾਹੇਵੰਦ ਪਸ਼ੂ ਪਾਲਣ ਲਈ ਤਕਨੀਕੀ ਸਿੱਖਿਆ (Useful skill development training in Livestock Production); AIR Bathinda
61	Dr. Shakti Kant Dash	16.05.2023	<i>Garmian vich murgian de sambh-sambhal</i> ; AIR Bathinda
62	Dr. Harneet Kour	22/9/2023	<i>'Kutteyan vich diabetes (sugar) di bimari, kaaran, bacha ate ilaj</i> ; AIR Bathinda
63	Dr Sandeep Kaswan	27.12.23 (recorded) 29.12.23 (broadcasted)	<i>Bakri Palan ate Aarthik Munafa</i> ; AIR Bathinda

F. Expert visits

University scientists have undertaken expert visits to various parts of the state on different occasions. These visits have been enumerated below:

S. No.	Date	Department of Visiting Experts	Venue of Visit	Purpose of Visit
1.	02.02.2024	Veterinary Surgery & Radiology	Zoological Park, Chhattbir, Punjab	-
2.	06.08.2023	Veterinary Gynaecology and Obstetrics	Frontier Dairy Farm, Raikot, Ludhiana	-
3.	06.08.2023	Veterinary Gynaecology and Obstetrics	Village Kotli, Tehsil Payal, Ludhiana	-
4.	11.07.2024 & 18.07.2024	Veterinary Gynaecology and Obstetrics	Frontier Dairy Farm, Raikot, Ludhiana	-
5.	22.12.2023, 15.01.2024 & 19.01.2024).	Veterinary Gynaecology and Obstetrics	Village Kotli, Tehsil Payal, Ludhiana	-
6.	26.04.2024	Veterinary Gynaecology and Obstetrics	MCZP Chhatbir Zoo, Chandigarh	-

G. Utility Services provided by university

Various departments and outstations of GADVASU offer a wide range of utility services to livestock, poultry, and fish farmers, as well as other stakeholders. These services include:

- i. Specialized diagnosis of diseases in livestock, pets, wild animals, and birds.



- ii. Advanced treatment for livestock, pets, wild animals, and birds.
- iii. Veterinary health services in surrounding villages via an ambulatory van.
- iv. Blood transfusion and hemodialysis for small animals.
- v. Sale of mastitis diagnostic reagents, BTB cards, and SLS paddles.
- vi. Sale of area-specific mineral mixtures, urea molasses multi-nutrient blocks (UMMB), bypass fat, eggs, semen straws, and live germplasm.
- vii. Sale of germplasm for Sahiwal and Crossbred cattle, Murrah and Nili Ravi buffalo, Layer and Broiler birds, Beetal goats, pigs, rabbits, etc.
- viii. Supply of male calves of cows and buffaloes for breeding purposes.
- ix. Sahiwal cattle embryo transfer services at farmers' doorsteps.
- x. Sale of university literature.
- xi. Sale of Azolla inoculum.
- xii. Sale of mastitis detection kits, rumen magnets, and milk adulteration testing kits.
- xiii. Sale of vegetable kits, vermicompost, mushrooms, fruits, seeds, honey, and fruit fly traps.
- xiv. Testing of fecal, blood, and semen samples.
- xv. Soil and water testing services.

These services contribute significantly to the welfare of farmers and stakeholders across the region.



UNIVERSITY LIBRARY & NETWORKING

The University Library is fully automated to support the academic and research activities of the University. Koha, an open-source Library Management Software, is used to automate various in-house operations and user services, including circulation, membership card creation, and database management for books, journals, theses, and other resources. The library also manages its own website, *Cyberary*, which provides user-friendly access to e-resources, services, and other important information. A regularly updated list of the latest arrivals of books and journals is uploaded to *Cyberary* to keep users informed of current developments. The library's Online Public Access Catalogue (OPAC) is accessible for searching books, journals, theses, and dissertations from personal devices.

In the academic year 2023-24, the University Library acquired 180 print books, including those purchased for various departments and constituent colleges, covering subjects such as veterinary science and animal husbandry, dairy science and technology, fisheries, and animal biotechnology. The University Library is also a member of the Consortium for e-Resources in Agriculture (CeRA), providing access to approximately 1,800 journals in agricultural sciences, including veterinary sciences, livestock management, poultry science, fisheries, aquaculture, dairy technology, biotechnology, animal nutrition, and related fields.

To enhance teaching and raise awareness among farmers, the University Library has developed various 3D models on demand, covering topics in veterinary and animal sciences, animal husbandry, dairy science, fisheries, biotechnology, and more. Additionally, the library has developed several Augmented Reality (AR) and Virtual Reality (VR) modules to provide practical exposure to both students and farmers. Special workshops and orientation programs are regularly organized to introduce users to these technological advancements, supporting enhanced learning in their respective fields.

The University Library also maintains a digital repository of faculty publications. Articles authored by faculty members are uploaded to this repository, which is customized to facilitate searches based on NAAS ratings and impact factors. The digital content available in the repository is accessible to the University community, enhancing the understanding of the institution's teaching and research activities.

In line with the University's Anti-Plagiarism policy, the library supports the use of DrillBit Plagiarism Detection Software. User accounts are created for faculty, and assistance is provided in uploading and managing manuscripts, as well as generating Similarity Index reports.

The University Library publishes a quarterly e-newsletter to keep the academic community informed about the latest arrivals. Additionally, the library contributes to the University's e-newsletter, which highlights the institution's teaching, research, and extension activities.

Networking

The University Library has developed a campus-wide network connecting over 800 nodes across the University. Internet services are provided throughout the campus via a Campus-Wide Area Network (CWAN) using fiber optic cables. Access to the internet is secured through user-based authentication. To ensure uninterrupted internet access across the campus, the library has renewed its subscription for an additional 200 Mbps leased line.

The library also hosts an Intranet web server, which enables access to library services through its website, *Cyberary*. Additionally, the wireless network coverage has been extended to include the new girls' hostel building. The Wi-Fi network is centrally managed and controlled using control-based technology from the library's centralized server room.



The University Library has developed an organizational structure for implementing e-Office within the University. The University's website has been redesigned to present a more user-friendly interface. The library has also created web-based counseling software to streamline the management of undergraduate course admissions.

The library provides email services to staff via the domain @gadvasu.in, which can be accessed globally through Google's mail server. The library's IT personnel manage and oversee various services, including the Apache web server, mail services, network management system, and antivirus server. Traffic and security on the local area network (LAN) are monitored using specialized software. Additionally, the library ensures the smooth operation of network switches to maintain uninterrupted internet service.

To facilitate remote access to its e-resources, the library offers Virtual Private Network (VPN) services. Each user is issued a unique VPN ID, which allows them to access digital resources on *Cyberary* from their personal devices, even when off-campus.



DIRECTORATE OF STUDENTS WELFARE AND ESTATE OFFICE

Sports

Inter-University Tournament Participation

1. The Guru Angad Dev Veterinary & Animal Sciences University (GADVASU) Men's Basketball team competed in the North Zone Inter-University Basketball Tournament at Amity University, Panchgaon, Manesar, Haryana, from November 3–8, 2023.
2. The Women's Badminton team participated in the North Zone Inter-University Badminton Tournament at Maharishi Markandeshwar University, Mullana, Ambala, Haryana, from November 23–27, 2023.
3. The Men's Badminton team competed in the North Zone Inter-University Badminton Tournament at Chitkara University, Rajpura, Punjab, from November 24–29, 2023.
4. The Men's Volleyball team participated in the North Zone Inter-University Volleyball Tournament at Kurukshetra University, Haryana, from December 12–16, 2023.
5. The Women's Basketball team competed in the North Zone Inter-University Basketball Tournament at Mahatma Jyotiba Phule Rohilkhand University, Bareilly, Uttar Pradesh, from December 14–17, 2023.
6. The Men's Football team participated in the North Zone Inter-University Football Tournament at GNA University, Phagwara, Punjab, from December 18–26, 2023.
7. The Women's Swimming team competed in the All India Inter-University Swimming Championship at Kalinga Institute of Social Sciences, Bhubaneswar, Odisha, from December 21–23, 2023.
8. The Women's Table Tennis team participated in the North Zone Inter-University Table Tennis Tournament at Netaji Subhas University of Technology, New Delhi, from December 23–26, 2023.
9. Both the Men's and Women's Shooting teams competed in the All India Inter-University Shooting Championship at Kurukshetra University, Haryana, from December 26, 2023–January 1, 2024.
10. The Men's Table Tennis team participated in the North Zone Inter-University Table Tennis Tournament at Mahatma Jyotiba Phule Rohilkhand University, Bareilly, Uttar Pradesh, from January 16–19, 2024.
11. The Men's Cricket team competed in the North Zone Inter-University Cricket Tournament at Himachal Pradesh University, Shimla, Himachal Pradesh, from January 29–February 6, 2024.
12. The Men's Chess team participated in the North Zone Inter-University Chess Tournament at Bundelkhand University, Jhansi, Uttar Pradesh, from February 6–8, 2024.
13. The Men's Handball team competed in the North Zone Inter-University Handball Tournament at Central University of Punjab, Bathinda, Punjab, from February 19–22, 2024.

16th Annual Athletic Meet of Guru Angad Dev Veterinary & Animal Sciences University conducted on 12th March 2024.

1. Jasmine Kaur was declared Best Athlete and Jasjeevan Kaur was declared 2nd Best Athlete in the Women section.
2. Umeed Singh Sekhon was declared Best Athlete and Avneet Singh Brar was declared 2nd Best Athlete in the Men section.



Cultural Activities and Achievements

Poetry Workshop

A workshop on the art of poetry writing, led by experts, was conducted on May 4, 2023, at the Student Home, PAU, Ludhiana. The session provided valuable insights into creative writing, helping students hone their poetic skills.

Online Quiz Competition

Students participated in the National Students Paryavaran Competition's online quiz from July 1 to August 21, 2023, engaging with environmental topics and showcasing their knowledge.

Inter-College Fine Arts and Literary Competition

Held on August 21, 2023, at 10:00 AM in the Seminar Hall, Multi-Speciality Hospital, Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana, this competition brought together participants to demonstrate their creative and literary talents.

Interactive Session with Mrs. Neeru Bajwa

On September 8, 2023, an engaging interactive session with renowned Punjabi film actress Mrs. Neeru Bajwa was held at the Auditorium, Silver Jubilee Block. Students involved in co-curricular activities had the opportunity to interact with Mrs. Bajwa and her team, gaining insights into the entertainment industry.

Fine Arts and Literary Camp

A two-day Fine Arts and Literary Camp was organized on October 28–29, 2023, to prepare students for the upcoming Youth Festival. The camp focused on off-stage events, including rangoli, cartoon making, on-the-spot painting, clay modeling, collage making, photography, elocution, debate, poetry recitation, and creative writing, nurturing students' artistic and literary talents.

Cleanliness Drive

In observance of Mahatma Gandhi Jayanti, a one-hour Cleanliness Drive was organized on October 1, 2023, under the theme "Ek Tareekh, Ek Ghanta, Ek Saath". This initiative encouraged students to contribute to maintaining cleanliness and environmental sustainability.

G20 Participation

On September 26, 2023, ten students and faculty members attended the G20 event at Bharat Mandapam, gaining exposure to global discussions on critical issues and showcasing the university's engagement with international platforms.

Poster Making Competition

A Poster Making Competition was held on December 18, 2023, at the College of Animal Biotechnology, with the theme "Viksit Bharat @ 2047". Students expressed their vision of a developed India through creative and impactful posters.

Essay Writing Competition

On December 20, 2023, an Essay Writing Competition was organized at KCVAS, Amritsar, on the theme "How I Can Contribute to the Vision of Viksit Bharat". Students demonstrated their writing skills and visionary thinking for India's future.

12th Inter-College Youth Festival 2023–24 -For off-stage events, November 6- 9, 2023, and for stage events, November 15-17, 2023.



The Punjab State Inter-University Youth Festival 2023 was held at Guru Nanak Dev University, Amritsar, from November 26-29, 2023.

The university team secured five positions across various categories: Debate, Elocution, Installation, Short Movie, and Giddha.

- First place in Elocution: College of Veterinary Science, Ludhiana
- Second place in Installation: College of Veterinary Science, Rampura Phul
- Second place in Debate: College of Veterinary Science, Ludhiana
- Second place in Giddha: College of Veterinary Science, Ludhiana

Sehajdeep Kaur, a student from the College of Veterinary Science, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab, who won first place in the Declamation/Elocution category at the Punjab State Inter-University Youth Festival 2023, also participated in the Elocution competition at the 27th National Youth Festival 2024 held in Nashik, Maharashtra, from January 12-16, 2024.

NSS Activities and Achievements

7-Day NSS Special Camps

1. **“Youth for Environment Conservation”**
March 30 - April 5, 2023 | College of Dairy Science and Technology
2. **“Youth for Pollution-Free Environment”**
June 5-11, 2023 | College of Animal Biotechnology
3. **“Enriching Budding Vets for a Better Society”**
June 6-12, 2023 | KCVAS, Amritsar | 95 Volunteers
4. **“Awareness on Drug Abuse and Illicit Trafficking”**
July 4-10, 2023 | College of Dairy Science and Technology
5. **“Clean Planet, Green Energy”**
July 27 - August 2, 2023 | College of Animal Biotechnology
6. **“Igniting Youth for National Integrity and Social Services”**
December 12-18, 2023 | KCVAS, Amritsar | 85 Volunteers
7. **“Vote Responsibly for a Developed Nation”**
March 19-25, 2024 | Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana

Key Observances and Events

- **Independence Day Celebration**
August 15, 2023 | Patriotic choreography, poetry recitation, group singing, and National Anthem performance to commemorate 75 years of India’s independence.



- **World No Tobacco Day**
May 31, 2023 | Dr. Sarika Chawla (Civil Hospital, Amritsar) presented on the harmful effects of tobacco consumption.
- **World Environment Day**
June 5, 2023 | Inter-class installation competition and establishment of a Herbal Garden at COVS, Rampura Phul.
- **Blood Donation Camp**
June 13, 2023 | In collaboration with Civil Hospital, Rampura Phul. 55 units of blood donated.
- **International Yoga Day**
June 21, 2023 | Celebrated at KCVAS, Amritsar with 100 volunteers. COVS, Rampura Phul had over 150 participants, and 70 volunteers attended the event at COABT.

Cleanliness Drives

1. **“No to Plastic Bags on Campus”**
July 6, 2023 | KCVAS, Amritsar – A one-day cleanliness drive focused on reducing plastic use.
2. **Joint Cleanliness Event**
October 1, 2023 | NSS units across Guru Angad Dev Veterinary & Animal Sciences University participated in a cleanliness drive near the library canteen. Geo-tagged photos were shared with the Ministry of Youth Affairs.
3. **“Swachhta Hi Seva” Campaign**
October 1-2, 2023 | Two-day cleanliness drive in college premises and residential complex at COVS, Rampura Phul.

Tree Plantation Initiatives

- **Tree Plantation Drive**
August 04, 2023 | Inaugurated by the Vice Chancellor at the Scientist Home. August 17, 2023 | NSS volunteers conducted tree plantation at Khalsa College campus and hostel.

Other Notable Events

- **Anti-Ragging Orientation**
August 16, 2023 | Dr. Ashish Virk (Director, Panjab University Regional Centre, Ludhiana) led a session on preventing ragging.
- **NSS Adventure Camp**
December 8-17, 2023 | Aditya Baaga (NSS volunteer, COVS Ludhiana) participated in the NSS Adventure Camp 2023-24 at the Atal Bihari Vajpayee Institute of Mountaineering and Allied Sports, Hatkoli, Shimla.
- **Road Safety Awareness Session**
February 7, 2024 | Mr. Charanjiv Lamba (ACP Traffic, Ludhiana) and Mr. Jasveer Singh (Incharge Traffic Education Cell) led the session, including road safety demonstrations.
- **Yuva Samvad-India@2047**
February 21, 2024 | Three winners were selected in the competition:
 - 1st Prize: Antriksh R. Gautam (2nd year, College of Dairy Science and Technology)
 - 2nd Prize: Aditya Bagga (3rd year, College of Veterinary Science)
 - 3rd Prize: Darshika Kumawat (1st year, College of Animal Biotechnology)

- Technology De-addiction Workshop**
 March 6, 2024 | Mrs. Gulneet Chahal (Functional Medicine & Health & Wellness Coach) conducted the workshop.
- Digital Wellness Workshop**
 March 13, 2024 | Mrs. Gulneet Chahal (Assistant Director, Publications, PAU) spoke on Digital Wellness as part of the Digital Literacy and Wellness program.
- Sessions on Digital Media & Misinformation**
 February 28, March 21 and March 27, 2024 | Sessions held on Digital Wellness, Digital Media, and Misinformation with Mrs. Gulneet Chahal as resource person.
- Campus Beautification Program**
 March 29, 2024 | Focused on beautifying the campus started at Administrative Block of the university.
- National Integration Camp**
 February 5-11, 2024 | At Chitkara University, Rajpura with two volunteers from the institute.



NCC Training Activities

The following NCC training activities were undertaken by the NCC cadets of 1 Punjab R&V Squadron, GADVASU, Ludhiana, between 01/04/2023 and 31/03/2024:

- Republic Day Camp Participation:** Three cadets participated in the Republic Day Camp held from 31/12/2023 to 04/02/2024 in New Delhi, where they competed in various equestrian events.
- Cadet Achievements:**
 - ◇ Cadet Manpreet won two Gold medals in the Dressage and Hacks competitions and was awarded the Best Rider Trophy (Girls).



Infrastructure developed / & renovated and strengthening of Labs:

S. No	Department	New Infrastructure / renovation of existing Infrastructure	New equipment/ Infrastructure purchased	Month and Year of Purchase
1.	Anatomy	Established Plastination lab		September 2023
		Established Antique Museum of Department		November 2023
			Refrigerator	November 2023
			Air conditioner	December 2023
2.	Surgery and Radiology		Hand Held Digital Tonometer Screw Driver Drill Machine -2 Drill Machine-2, Laryngoscope-3 Blades -5, Fiber Optic Cable Laryngoscope -2, Blades -4 Plaster Cutter Machine, Artery Forcep 01, Wire Cutter 02 Stethoscope 01, Wireless Keyboard & Mouse 05 General Surgical Instruments	March 2024
			2 Ton Split Air-Conditioner -3	January 2024
			Direct Ophthalmoscope with Chargeable Battery 01	February 2024
3.	Parasitology		PCR WorkStation	December 2023
4	Gynaecology and Obs.		Swine Reproduction Laboratory (Purchase of Tube Roller, Microplate mixer, and LED Digital Orbital Shaker) New battery-operated trinocular Microscope	March 2024
		Renovation of boar shed (Provision of university water supply and application of fence railing of pen walls)		August 2023 – March 2024
5.	Teaching Veterinary Clinical Complex		BPL – Alphinon X Cube- 70 Ultrasound Machine	February 2023
		Ready to refer to the online library at the Dialysis Unit		February 2023
			1. Slide Warmer Table -1 2. Centrifuge Machine -1 3. Oxygen Concentrator -2 4. S7 Cardiac Probe -1	March 2024

6.	Directorate of Livestock Farm	Established a Lab for the processing of biological samples at a poultry farm		November 2023
			E-rickshaw, Digital Egg Analyzer	March 2024
		Road of bull shed Central passage between shed no 2&3 Flooring of silo pits Renovation of shed no.7	Stationary TMR wagon Swinging grooming brushes in buffalo sheds Pipeline milking machines in buffalo shed extended from 8 units to 16 units	2023-24



PCR Work Station



New battery-operated trinocular Microscope



E-rickshaw



Tube Roller, Microplate mixer, and LED Digital Orbital Shaker



Digital Egg Analyzer



Stationary TMR wagon



Swinging grooming brushes in buffalo sheds



Pipeline milking machines in Buffalo shed

College of Animal Biotechnology

S. No	New Infrastructure/ renovation of existing infrastructure*	Name of New Instruments/equipment purchased	Month and Year of Purchase
1		2.0 Ton AC for the COABT, Auditorium	March 2023





College of Dairy & Food Science Technology

S. No	New Infrastructure/ renovation of existing infrastructure*	Name of New Instruments/equipment purchased	Month and Year of Purchase
1		Steam Coil	May 2023
2		Cooler-cum-Freezer,	June 2023
3		Kulfi Mould, Milk transport tank 500 litres	July 2023
4		Khoya Making Machine	September 2023
5		Hot air gun, Batch Printing Machine	December 2023
6		Steam Boiler	January 2024
7		ISUZU Vehicle, Kulfi making machine, Cole Parmar 100- series, Air receiver Tank 124 L with double cylinder, Cooler-cum-Freezer	February 2024
8	Renovation of New Computer Lab (Room No. 118) from Old Computer Lab (Room No. 117)	The existing Computer module was installed by the outside company expert person and a new electrical supply connection was given by the University electricians.	Feb -March 2024



Renovated Computer lab



Kulfi-making Machine at Experimental Dairy Plan

College of Fisheries

S. No	New Infrastructure/ renovation of existing infrastructure	Name of New Instruments/equipment purchased	Month and Year of Purchase
1		Drum Filter	October 2023
2		Lab. Refrigerator	November 2023
3		pH Meter, Heater (Steel body), Spectrophotometer, Tri Cycle Cart	December 2023
4		Bio-Rad LCD Display Interface PCR machine	January 2024
5		Water Activity Meter, Real Time PCR Machine	March 2024



Bio-Rad LCD Display Interface PCR



Real Time PCR



Spectrophotometer



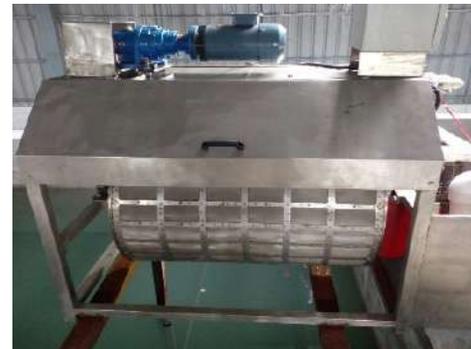
Water Activity Meter



Lab. Refrigerator



Heater (Steel body)



Drum Filter



Tri Cycle Cart



College of Veterinary Sciences, Rampura Phul

S. No.	Department	New Infrastructure / Renovation of existing infrastructure*	Name of the new instruments/ equipment purchased	Month & year of purchase
1	Residential complex of college	Development of Gym facility	New Gym equipment and AC units purchased and installed for use by students, faculty and staff	2023
2	College Library	-	Procured 108 new books	2023
		Provision of computers, printers and furniture to faculty and in library	50 new computers, 15 Printers, 01 colour printer, computer tables, teacher tables and chairs deployed in faculty rooms and college library	2023
		Creation of periodicals section in library	Subscribed 08 new magazines and 01 new journal. Periodical cabinet installed to display magazines/periodicals	2023
		Development of AC Reading Hall	Aluminium partitioning and installation of AC	2023
3	Department of Veterinary Clinical Complex	Small Animal OT complex	-	2023
4	Department of Surgery and Gynaecology	Small and Large Animal OPD and	-	2023
5	Hostel	Creation of AC wing in girls' and boys' hostels	45 A.C. installed on the top floor and common areas in girls' hostels	2023
		Establishment of dormitory in Girl's hostel on the first and second floor of girl's hostel	Extra accommodation was created	2023
6	Department of Veterinary Pathology		Leica Manual Microtome	2023
7	College Campus	Enhancement of the capacity of the examination hall	New table chairs of similar Godrej make purchase and added to accommodate increasing number of students/ classes.	2023
		Development of Students' Canteen		2023



		Kajali Sheep Production Unit	Unused under construction area renovated and developed as Sheep Unit	March 2024
		Development of a landscaping area horticulture garden and herbal garden in the college		2023
8	Microbiology Department	-	Gradient PCR (Semi-quantitative)	May, 2023
		-	Gel Documentation system	June 2023
9	Department of VAHEE	Development of Farmer Information Center	Procurement, and sale of farmer utility products and literature	May, 2023
10	Medicine Department	-	Biochemistry Analyzer	August 2023
		-	Tranquilizing Gun (dart Gun)	March 2024
11	Anatomy department	-	Histoembedder	October 2023
		Development of college labs	14 Refrigerators purchased for use in different labs of college	
12	LFC	Fodder chaffing area at		February 2024
		Installation of iron railing in the front of the feeding area in milch animal shed		February 2024
		Fabrication and installation of straw silo		March 2024
			8.0 KVA Silent Generator	March 2024
			Saddlery and grooming items	2023-24
13	LPT Department	-	Bowl cutter	February 2024
14	AGB department	Molecular Genetics Laboratory	PCR machine, Horizontal Electrophoresis, Minifuge, UV transilluminator	2023-24
15	Guest House	Air conditioning of guest house	A.C. installed in 6 rooms and 1 suite	2023-24
		Repair, and air conditioning of lecture halls and college examination hall	Purchase and installation of AC in lecture halls and examination hall in progress	2023-24



	-	Air conditioning of specific labs, offices and seminar/ committee rooms in the college	Twelve new AC purchased and installed as per urgent need in labs, offices, and seminar/ committee rooms	
16	Residential complex	Creation of CTPT room for increase in electric load	Installation of 300 kva transformer	2023-24
17	Clinical Complex	Development of separate Biochemistry and Hematology Labs in clinics	Air conditioning of labs, addition of new equipment like biochemistry analyzer, refrigerator, microscopes and creation of sample collection facility	2023-24
		Development of Internship Room	Space allotted and facility of study table, chairs and cabinets for students	2023-24
		Development of Large animal ultrasound facility	False roofing of room, AC installation and purchase of advance ultrasound machine	2023-24
18	College campus	Development of Amul Parlour Booth	Contract signed and space allotted	
		Development of athletic track/ sports ground	Large ground on college backside clear of debris, earth filling and levelling done, maps of athletic track prepared. Work in progress	2023-24
19	Hostels, Guest House and college	Development of sufficient clean drinking water facility in hostels, college and guest house	Installation of new RO, Water coolers and Water dispenser	
20	Diploma students' hostel	Development of Diploma students hostel facilities and mess	Installation of Invertor, Generator set 25 KVA. Start of student's mess and addition of furniture in mess area	



Landscape Development



Gradient PCR



Gel Documentation system



Small Animal OPD (Surgery and Gynaecology)



Intensive Kajali Sheep Unit



Small Animal Operation Theatre Complex



Iron railing at feeder in milch animal shed



Swine Farm Model at Livestock advisory unit



Dairy Farm Model at Livestock advisory unit



Farmer Information Center



Bowl Cutter



Large animal OPD (Surgery and Gynaecology)



Leica Manual Microtome



Partitioning of Reading Hall with A.C.



Procured new books (108) in Library



KVK, Tarn Taran

S. No.	New Infrastructure /Renovation of existing infrastructure	Name of the new instruments/ equipment's purchased	Month & year of purchase
1	Establishment & strengthening of Home Science Lab at KVK	Milk Adulteration Testing Kits	
2	Establishment & strengthening of Animal Science Lab at KVK	<ul style="list-style-type: none"> • Hot air oven • Micro Centrifuge machine, • Hematology Blood Cell Counter • Biochemistry analyzer Water bath • Water Distillation assembly • Binocular Microscope • Aqua guard 	Transferred from Director, Deptt. Of TVCC, GADVASU, Ludhiana

KVK, Mohali

S. No	New Infrastructure / Renovation of existing infrastructure	Name of the new instruments/equipments purchased	Month & year of purchase
1.	Constructed Store room at KVK farm Renovate/ Reconstruction of Fish Pond	PH METER (POCKET)	2023
2	Underground irrigation pipeline fitting has been done at KVK farm and Renovate Implement shed	HT dynamite Party Speaker	2024
3	Upgrade the transformer and sifting electricity connection	Solar Based Camera	2024
4	Cleaned and levelled of KVK farm land	Food dehydrator	2024
5	Fencing of KVK land by barbed wire	Proofing Chamber	2024
6		Refractometer, Atta Chakki Laptop, Printer Cannon Bee hives	2024

RRTC, Talwara

S. No	New Infrastructure / Renovation of existing infrastructure	Name of the new instruments/equipments purchased	Month & year of purchase
1.	Diagnostic Laboratory	Haematological analyser, Biochemical analyser, Milk sample analysis,	April 2023
2.	Hatchery Unit	Incubator with a capacity of 2400 eggs Setter -600 capacity	December 2023
3	Goat Unit	Goat shed prepared by using bamboo with a total area of 300 sq.ft. prepared, Total goats reared-12	June 2023
4	Vermicompost Unit	Vermicompost beds prepared for demonstrating the technology to the farmers of the area	July 2023
5.	Backyard Poultry Unit	Four bamboo poultry cages with a total capacity for around 300 birds	December 2023



Awards/Honors/Fellowships by Faculty

a. Awards/Honours/Recognitions

S. No	Name of the Faculty	Detail of the Award/Honour/other Recognitions	Date of the Award
College of Veterinary Science, Ludhiana			
Animal Nutrition			
1	Dr. J.S. Hundal	Associate Fellow of National Academy of Dairy Science	October 29, 2023
		Appreciation award for the project from Reliance Industries Limited, Mumbai, worth Rs 39.6 Lac 2022-24	
Animal Genetics & Breeding			
2.	Dr. Ramandeep Kaur	Best poster presentation award in 1st International Congress of Society of Extension Education held at RARI Durgapura, Jaipur	December 20, 2023
Livestock Product Technology			
3	Dr. Nitin Mehta	Young Scientist Award, National Academy of Veterinary Science, New Delhi	July 01, 2023
		Merit Certificate for outstanding performance in teaching 2022-23, College of Veterinary Science, Ludhiana	November 01, 2023
4	Dr. O. P. Malav	Membership Award, National Academy of Veterinary Science, New Delhi	July 01, 2023
Veterinary Anatomy			
5	Dr. Neelam Bansal	Member, Governing Council, National Academy of Veterinary Science, India	2023
6	Dr. Varinder Uppal	Member, Governing Council, National Academy of Veterinary Science, India	2023
		Fellow, National Academy of Veterinary Science, India	July 01, 2023
7	Dr. Kritima Kapoor	Best oral presentation award at 6th Jammu and Kashmir Agricultural Science congress organised by Shere-e-Kashmir University of Agricultural Sciences and Technology- Jammu	February 10, 2024
Department of Veterinary and Animal Husbandry Extension			
8	Dr. Rajesh Kasrija	Appreciation certificate for securing 3rd place as an outstanding exhibitor in the technology development exhibition, CIPHET-Industry interface on Agro-processing and Kissan Mela	October 05, 2023
		Extension scientist award in 5 th National Conference of Society for Veterinary and Animal Husbandry Extension organized by Khalsa College of Veterinary and Animal Sciences, Amritsar	October 14, 2023



9	Dr. Parteek Singh Dhaliwal	Young Scientist award and Best oral presentation award in 1 st International Extension Education Congress- 2023 held at RARI Durgapura, Jaipur	December 20, 2023
10	Dr. Akshita Chadda	Smt. Satyawati Verma oral presentation award (Extempore Gold Medal) in 5th National Conference of Society for Veterinary and Animal Husbandry Extension 2023, Amritsar	October 14, 2023
		Women Extension Scientist award in 5th National conference of Society for Veterinary and Animal Husbandry Extension 2023, Amritsar	
		Best oral presentation award at 5th National Conference of Society for Veterinary and Animal Husbandry Extension 2023, Amritsar	
Department of Teaching Veterinary Clinical Complex			
11	Dr. Swaran Singh Randhawa	Fellowship - National Academy of Veterinary Science	July 02, 2023
		Co-chair and Panelist at Research Extension Interface meet on Precision Livestock Farming for KVK Animal Scientists	September 01, 2023
12	Dr. Gurpreet Singh Preet	3 rd Best oral presentation award on Endoscopic diagnosis of Pyloric Stenosis in a dog, A Case Report Presented at ISVM 2024	February 24, 2024
		3 rd Best poster presentation award on Primarily nasal TVT in nondescript dog Presented at ISVM 2024	
		3 rd Best oral presentation award on Unravelling canine oesophageal complexities Presented at ISVM 2024	
Department of Veterinary Microbiology			
13	Dr. Paviter Kaur	Best oral presentation award in XXVII Annual Convention of ISVIB and National Conference organized by SKUAST- Kashmir	July 29, 2023
14	Dr. Deepti Narang	Fellow, National Academy of Veterinary Science, India	July 01, 2023
Department of Veterinary Parasitology			
15	Dr. L.D. Singla	Editor, National Academy of Veterinary Sciences (India)	2023
16	Dr. Alveena Ganai	Best PhD thesis award and best oral presentation award at an international conference on Current Advances in Agriculture, Animal Husbandry and Allied Sciences CAAAAS-2023 at Shri Mata Vaishno Devi University, Katra, Jammu	July 11, 2023



17	Dr. N. K. Singh	Certificate of merit for outstanding performance in teaching during Academic Year 2022-23 by College of Veterinary Science, Ludhiana	November 01, 2023
18	Dr. Harkirat Singh	Best oral presentation award in 32 nd National Congress of Veterinary Parasitology and National Symposium organized by Bihar Veterinary College, Patna	December 01, 2023
Department of Veterinary Pathology			
19	Drs. Nittin Dev Singh & L. Geeta Devi	1 st prize for Best Clinical Paper Presentation in 6th National Clinical Case Conference 2023 at PGIVAS, Akola, Maharashtra	April 26, 2023
		1 st prize for Best Clinical Case Presentation Award Veterinary Pathology Congress-2023 at ICAR-IVRI, Izatnagar	December 22, 2023
20	Dr. Kuldeep Gupta	Best poster presentation award during XXI NAVS Convocation –cum- Scientific Convention at GADVASU, Ludhiana	July 02, 2023
		ISVIB Young Scientist Award XXVII Annual Convention of ISVIB & National Conference organized at SKUAST–K.	July 29, 2023
		Certificate of appreciation for providing hands on training on microscopic description-slide Reading during the ICVP Workshop for registered Trainees for Certification Examination held at ICAR-IVRI, Izatnagar	December 23, 2023
21	Drs. Kuldeep Gupta, Nittin Dev Singh, L. Geeta Devi & Harmanjit Singh	2 nd Best Poster Presentation Award Veterinary Pathology Congress-2023 at ICAR-IVRI, Izatnagar, Bareilly, UP	December 22, 2023
Department of Veterinary Gynaecology and Obstetric			
22	Dr. Dipti	2 nd Best oral presentation award at 31 st annual conference of IAAVR at LUVAS, Hisar, Haryana	February 08, 2024
23	Dr. A K Singh	2 nd Best oral presentation award in National Conference of Indian Society for Buffalo Development organized by U.P. Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Vishwavidyalaya Evam Go-Anusandhan Sansthan, Mathura	October 28, 2023
24	Dr. Ajeet Kumar	Best oral presentation award in 38 th Annual Convention of ISSAR and International Symposium at College of Veterinary and Animal Sciences, Mannuthy	December 08, 2023



25	Dr. Bilawal Singh	Young scientist award at Society Scientific Development in Agriculture and Technology, held at Wybdham Bur Dubai, Khalid Bin AI Waleed rd- AI Raffa, Dubai, UAE	July 16, 2023
Department of Veterinary Surgery & Radiology			
26	Dr. Jitender Mohindroo	Elected Vice President (North Zone) of the Indian Society for Veterinary Surgery and Radiology	
		1 CPD point for participation in 'Make Radiology fun again webinar Live' organized by The University of Sydney, Center of Veterinary Education	February 02, 2024
27	Dr. Ashwani Kumar	Associate Fellow, National Academy of Veterinary Science	July 01, 2023
		Member, Editorial Board' Indian Journal of Animal Research	
28	Dr. Harmanpreet Singh Sodhi	The young professional award, on VIII th international conference in hybrid mode on GRISAAS-2023	December 12, 2023
Department of Veterinary Physiology & Biochemistry			
29	Dr. Manjinder Sharma	Best oral presentation award at 5 th National Conference of Society for Veterinary & Animal Husbandry Extension organized by KCVAS, Amritsar	October 14, 2023
30	Dr. Sasmita Barik	Best poster award at VII annual convention of SVBBI and International symposium organized at ICAR-IVRI, Izatnagar	December 15, 2023
Centre of One Health			
31	Dr. Jasbir Singh Bedi	Nominated as member of the Academic Council of GADVASU, Ludhiana for two years	April 18, 2023
		Awarded certificate of appreciation for presenting a lead lecture on One Health during the Annual IAVPHS conference held at LUVAS, Hisar	December 08, 2023
		Certificate of appreciation for an Invited lecture on World Veterinary Day event organized by KCVAS, Amritsar	April 28, 2023
32	Dr. Jasbir Singh Bedi and faculty of COH	Second Best Stall display during Pashu-Palan Mela held at Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	September 16, 2023
33	Dr. Randhir Singh	Fellow Indian Association of Veterinary Public Health and Specialist	December 07, 2023
34	Dr. Simranpreet Kaur	Best Teacher Award of College of Veterinary Science, Ludhiana, for the year 2023	January 26, 2024



35	Dr. Rajnish Sharma	Adjunct Professor, University of Saskatchewan, Canada	2023
36	Dr. Pankaj Dhaka	Grassroots Science Advice Promotion Awards by INGSA-Asia	2023
		Board member of One Health Alliance, Jordan	July 16, 2023
Department of Veterinary Medicine			
37	Dr. Ashwani Kumar Sharma	Cornell University, Ithaca, New York, United States of America, International Research Scholar (IDP, NAHEP)	September 13 – October 01, 2023
38	Dr. D.K. Gupta	Wayne State University, MI, USA International Research Scholar (IDP, NAHEP)	April 11- July 09, 2023
39	Dr. Asmita Narang	Second best poster and third best oral presentation award in 40 th Annual Convention of Indian Society for Veterinary Medicine & National Conference held at Manutthy, Kerala	February 24, 2024
40	Dr. Shabnam Sidhu	Second best oral and third best poster presentation award in 40 th Annual Convention of Indian Society for Veterinary Medicine & National Conference held at Manutthy, Kerala	February 24, 2024
Animal Disease Research Centre			
41	Dr. G. Filia	Best poster presentation award in the XXI NAVS convocation-cum-scientific convention on Strategies for enhancing productivity of dairy animals.	July 02, 2023
42	Dr. Jagmeet Kaur	Best Poster presentation award in the XXI NAVS convocation-cum-scientific convention on Strategies for enhancing productivity of dairy animals.	July 02, 2023
Directorate of Livestock Farms			
43	Dr. P P Dubey	Best oral presentation award by Society for Scientific Development in Agriculture and Technology, Meerut	July 16, 2023
44	Dr. Sushma Chhabra	Certificate of appreciation awarded in recognition of her expert role as Chairperson in a scientific session at the international conference of “Advances in Veterinary Dermatology and emerging skin health challenges of Animals” conducted by Association of Veterinary Dermatology at Kochi, Kerala	May 19-21, 2023
		Best Paper Presentation Award at 6 th National Online Clinical Case Conference at Akola, Maharashtra	April 25, 2023



		Second position in case conference presentation at International Conference on “Advances in veterinary dermatology and emerging skin health challenges of animals” conducted by Association of Veterinary Dermatology at Kochi, Kerala.	May 20, 2023
45	Dr. Ramandeep Kaur Dhaliwal	Best poster presentation award in 1 st International Congress of Society of Extension Education, India held at RARI, Durgapur, Jaipur	December 20, 2023
46	Dr. Navdeep Singh	3 rd Best Poster Presentation Award in National Conference of Indian Society for Buffalo Development Organized by DUVASU, Mathura	October 28, 2023
College of Dairy & Food Science Technology			
47	Dr. R S Sethi	Eminent Veterinarian Award-2023 by SAARC Regional Veterinary Association on World Veterinary Day.	April 29, 2023
		Southeast Asia One Health University Network sponsorship to attend the 11th One Health conference in Dhaka.	June 12-14, 2023
		Fellow of Society for Immunology and Immunopathology, 2024	February, 2024
48	Dr. Harsh Panwar	Best Researcher Award, Guru Angad Dev Veterinary and Animal Sciences University – 2023	March 19, 2024
		Best Teacher Award, College of Dairy Science Technology - 2023	March 19, 2024
49	Dr. Santosh Kumar Mishra	Best Poster Award, Indian Dairy Engineers Association (IDEA) in 13 th IDEA Convention and International Conference	October 13, 2023
		Best Oral Presentation Award, Indian dairy Engineers Association (IDEA) in 13 th IDEA Convention and International Conference	October 13, 2023
50	Dr. Sunil Kumar	Distinguished Scientist Award by Indian Society for Buffalo Development (ISBD)	October 27, 2023
51	Dr. P. K. Singh	Best paper presentation award at the 11 th International Conference on Fermented Foods, Health Status and Social Well-being, held at North Eastern Hill University (NEHU), Shillong (Meghalaya).	November 23, 2023
52	Dr. Amandeep Sharma	Best oral presentation award at 13 th IDEA Convention and International Conference Organized by the College of Dairy Science and Technology, Ludhiana	October 14, 2023
53	Dr. Inderpreet Kaur	Best Poster Presentation Award for Research at XXI NAVS Convocation –cum-Scientific Convention, Ludhiana	July 02, 2023



		Best paper award during 13 th IDEA Convention & International Conference organised at GADVASU, Ludhiana	October 14, 2023
54	Dr. Nitin S. Wakchaure	Best poster presentation award at the 5 th National Conference of the Society for Veterinary and Animal Husbandry Extension Education held at Khalsa College of Veterinary and Animal Sciences, Amritsar	October 13, 2023
		Best poster presentation award at the 13 th IDEA Convention and International Conference Organized by the College of Dairy Science and Technology, Ludhiana	October 14, 2023
55	Dr. Nitika Goel	Best oral presentation award in the International conference on Global Research Initiative for Sustainable Agricultures and Allied Science at Raichur, Karnataka.	December 20, 2023
College of Fisheries			
56	Dr. Grishma Tewari	Best Teacher Award by Society of Fisheries & Life Sciences, Mangalore (Karnataka) on the occasion of World Fisheries Day	November 21, 2023
57	Dr. Sarbjeet Kaur	Junior Scientist Award by Society of Fisheries & Life Sciences, Mangalore (Karnataka) on the occasion of World Fisheries Day	November 21, 2023
58	Dr. Prabjeet Singh	Society of Life Sciences Recognition Award 2023 at 13th Annual Session of the Society of Life Sciences on 'Biodiversity Conservation and Restoration of Ecosystems' at AKS University, Satna, M.P.	November 25, 2023
59	Dr. Abhishek Srivastava	Society of Life Sciences Recognition Award 2023 & 'Honorary Fellowship of the Society of Life Sciences (SLS)', Satna (M.P.)' at 13th Annual Session of the Society of Life Sciences on 'Biodiversity Conservation and Restoration of Ecosystems' at AKS University, Satna, M.P.	November 25, 2023
College of Animal Biotechnology			
60	Dr. Adarsh Mishra	Best Oral Presentation Award at XXXV Annual Convocation and National Conference of the Indian association of Veterinary Microbiologists, Immunologists and Specialists in Infectious Diseases (IAVMI)	April 08, 2023
		Best Poster Presentation Award (Research Category) at XXI NAVS Convocation- cum- Scientific Convention, Ludhiana	July 02, 2023



61	Dr. Ratan Kumar Choudhary	Certificate of Appreciation by the Vice Chancellor, of the university.	August 15, 2023
		Membership of the National Academy of Veterinary Science	July 02, 2023
		Best Researcher Award of the University, Ludhiana	January 26, 2024
		Best Teacher Award for the College of Animal Biotechnology, Ludhiana	January 26, 2024
62	Dr. Kalpana Singh	Best oral presentation award at International Conference on One Health Initiative: Harmonizing Human, Animal and Environmental Health (OHI-2023) held at GLA University, Mathura	January 20, 2024
		Best poster presentation award at International Conference VIROCON 2023 at ICAR -National Research Centre for Banana, Tiruchirappalli, Tamil Nadu	December 03, 2023
63	Dr. Vishal Sharma	Best poster award at an international workshop on “Genome Editing for Food Security and Environmental Sustainability. GEFSS 2023	March 03, 2023
College of Veterinary Science Rampura Phul			
64	Dr. Priyanka	IAVP-Poster presentation award at Veterinary Pathology Congress-2023 held at ICAR-IVRI, Izatnagar	December 20-22, 2023
65	Dr. O.P. Choudhary	Dignitary Fellow of the “International Organization for Academic and Scientific Development”	January 17, 2024
66	Dr. Neeti Lakhani	Krantijyoti Savitribai Phule Women Achiever Award 2024 – By Pashudhan praharee	January 26, 2024
67	Dr. Yashwant Singh	Best Lead Paper Award in FSATIHE-2024 at Abhilashi University, Mandi, Himachal Pradesh.	March 03, 2024
68	Dr. Jay Prakash Yadav	Best Article Award- Indian Veterinary Association, Kerala	October 06, 2023
		Best Poster Award (second prize)- IAVPHS annual conference LUVAS, Hisar	December 08, 2023
69	Dr. Harneet Kour	Best oral presentation award in 4th Annual Convention of Veterinary Internal and Preventive Medicine Society at SKUAST, Jammu.	December 19, 2023
70	Dr. Kapil Kumar Gupta	2 nd best oral presentation award in ‘National symposium and 4th annual convention of VIPM’ at SKUAST, Jammu.	December 19, 2023
		3 rd best oral presentation award in ‘National symposium and 4th annual convention of VIPM’ at SKUAST, Jammu	



71	Dr. M.K. Lonare	Fellow of the Society of Toxicology India (FST) at the 42 nd Annual Conference of the Society of Toxicology, India held at the University of Calicut, Kerala	November 23, 2023
		Best research poster award at XXIII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology at Rajasthan University of Veterinary and Animal Sciences, Bikaner	November 04, 2023
72	Dr. Amit Kumar	2 nd and 3 rd positions in the Technical Sessions during 24 th Indian Veterinary Congress, 31 st Annual Conference of IAAVR & National Symposium COVS, LUVAS, Hisar	February 08, 2024
		1 st prize in Wildlife Science Session and also in Clinical Science Session during 2 nd Veterinary and Animal Science Congress & 2 nd Annual Convention of Association of Animal Scientists & National Symposium, Apollo College of Veterinary Medicine, Jaipur	February 19, 2024
73	Dr. Gitesh Saini and others	Best poster presentation award (II nd position) during 24 th Indian Veterinary Congress, 31 st Annual Conference of IAAVR & National Symposium organized by COVS, LUVAS, Hisar	February 08, 2024
74	Dr. Gitesh Saini	NC Sharma Award at 38 th Annual Convention of The Indian Society for study of Animal Reproduction (ISSAR) at COVS, Mannuthy, Thrissur, Kerala	December 06, 2023
75	Dr. Pallavi Khajuria	Louis Pasteur Excellence Award on occasion of Rabies Day by Pashudhan Praharee	September 28, 2023
		Kranti Jyoti Savitribai Phule Women Achiever's Award by Pashudhan Praharee	January 26, 2024
		Received Experienced Women Researcher award-2024 Awarded by Society of Biological Sciences and Rural Development	March 08, 2024
76	Dr. Sandeep Kaswan	Best Oral Presentation Award at 5 th National Conference of SVAHE-23, KCVAS, Amritsar, Punjab, India	October 14, 2023
		Best Teacher Award-2023 of COVS, Rampura Phul at GADVASU, Ludhiana	February 18, 2023
Library			
77	Dr. Nirmal Singh	IFLA WLIC Virtual Participation Grant for attending IFLA WLIC to be held at Rotterdam, Netherlands.	July 27, 2023



		Appointed as Editorial Board Member of DESIDOC Journal of Library & Information Technology (a DRDO Publication)	March 18, 2024
Directorate of Extension Education/KVKs/RRTCs			
78	Dr. Parminder Singh	ANSI Fellow award during the 20 th Biennial international conference held at Madras Veterinary College, TANUVAS, Chennai	January 23, 2024
79	Dr. Rakesh Kumar Sharma	Life Time Achievement Award at 5 th National Conference of Society of Veterinary and Animal Husbandry Extension Education (SVAHE) at KCVAS, Amritsar	October 12, 2023
80	Dr. Gagandeep Singh	Young Extension Scientist award at 5 th National Conference of SVAHE at KCVAS, Amritsar	October 14, 2023
		Best oral presentation award at 5 th National Conference SVAHE at KCVAS, Amritsar	October 14, 2023
81	Dr. Anil Kumar	Farmer Led Extension Award by SVAHE, Ludhiana	September 12, 2023
		Appreciation Certificate by ICAR-ATARI, Zone I, Ludhiana for contribution in crop residue management	September 28, 2023
82	Dr. Piverjeet Kaur Dhillon	1 st position in oral presentation in international conference SSAFNS-2023 organized by School of Agriculture, LPU, Phagwara	November 23, 2023
		Best Way of Presentation in 21 days winter school organized by ICAR-CIPHET, Ludhiana during December 01-21, 2023	December 21, 2023
83	Sh Nirmal Singh	Appreciation Certificate by District Administration for outstanding contribution to promoting vegetable production in the district Taran Tarn	January 26, 2024
84	Dr. Prabjeet Singh	Best Teacher Award during All India Vice Chancellor's Convention	March 18, 2024
85	Dr. Balbir Singh Khadda	Dr. Balram Jakhad Krishi Jyoti Award-2023 from the AIASA New Delhi on the occasion of National Conference on Millets: magical crop for nutritional sustainability organized by All India Agriculture Students Association (AIASA), Pusa complex, New Delhi at Jagannath University, Jaipur	April 28, 2023
		Extension Scientist award-2023 on the occasion of National Conference organized by Society for Veterinary & Animal Husbandry Extension Education at KCVAS, Amritsar	October 12, 2023
		Best paper (Oral) presentation award in the VIII th International Conference on GRISAAS-2023, Raichur, Karnataka, India	December 18, 2023



86	Dr. Harmeet Kaur	Best extension worker award for the year 2023 in recognition of her contributions in extension mandates at the university level amongst the university outstations, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	March 18, 2024
		Young Scientist award for outstanding contribution and recognition in the field of plant protection organized by Jagannath University and AIASA-Rajasthan at Jagannath University - Jaipur, Rajasthan, India.	April 28, 2023
		Farmer Led Extension Award (Female) for outstanding contribution in the field of extension on the occasion of National Conference on Smart Livestock Extension for Enhancing Farmers' Income-An Extension Bounty organized by Society for Veterinary & Animal Husbandry Extension Education	October 12, 2023
87	Dr. Navjot Singh Brar	Young scientist award for contribution and recognition in the field of Agronomy by All India Agricultural Students Association (AIASA), Rajasthan in National conference organised by Jagannath University and AIASA-Rajasthan	April 28, 2023
88	Dr. Sumanpreet Kaur	Best poster presentation award	October 14, 2023



Awards and Honours by students

S. No	Name of the Student	Detail of the Award/Honour	Date of the Awards
College of Veterinary Science			
Animal Genetics & Breeding			
1.	Rana Partap Singh	Best poster presentation award during the 5 th National Conference of SVAHE held at KCVAS, Amritsar	October 14, 2023
2	Sehajpal Singh	Best poster presentation award during the 5 th National Conference of SVAHE held at KCVAS, Amritsar	October 14, 2023
Veterinary Anatomy			
3	Navodita	Best poster presentation award, XXI NAVS convocation cum Scientific convention, Ludhiana	2023
Centre for One Health			
4	Brinda S	Best poster presentation award in National Public Health India Conference (NPHICON 2024) organized by the National Centre for Disease Control New Delhi	February 25, 2023
5	Rhythm	E-essay award during G20 University connect, Emerging Young Minds, under theme Climate Smart Agriculture, Food System and One Health, organized by Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	August 23, 2023
6	Wavhal Nilam Pandurang	E-poster and E-essay award during G20 University connect, Emerging Young Minds, under theme Climate Smart Agriculture, Food System and One Health, organized by Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	August 23, 2023
7	Gurbir Singh	Quiz award during G20 University connect, Emerging Young Minds, under theme Climate Smart Agriculture, Food System and One Health, organized by Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	August 23, 2023
8	Preeti	Commonwealth Veterinary Association Essay Competition on the topic “What does Veterinary Sustainability look like in your country”	October 2023
9	Natashal Sambyal	Best oral presentation award for research work “Customised milk safety and hygiene practices tool for dairy farmers” during 5 th National Conference of SVAHE held at KCVAS, Amritsar	October 14, 2023



10	Anamika Sahu	Best poster presentation award at National Public Health India Conference held at New Delhi organized by NCDC, India.	August 25, 2023
		Best Ph.D. thesis award during XIX Annual Conference of Indian Association of Veterinary Public Health Specialists (IAVPHS) held at LUVAS, Hisar	December 08, 2023
11	Preeti	Best poster presentation award during XIX Annual Conference of IAVPHS held at LUVAS, Hisar	December 08, 2023
12	Akshara Babu	Best poster presentation award during XIX Annual Conference of IAVPHS held at LUVAS, Hisar	December 08, 2023
13	Kriti Singh	Second Prize for Poster Presentation at CDC, Panjab University, Chandigarh	March 16, 2024
		Awarded with SIIP Young Scientist Award-2023 during International Conference on “One Health Initiative: Harmonizing Human, Animal and Environmental Health, organized by GLA University, Mathura	January 18-20, 2024
Department of Veterinary Medicine			
14	Arzoo	2 nd prize for poster presentation, 3 rd prize for oral presentation and 3 rd prize for poster presentation during 40 th Annual Convention of Indian Society for Veterinary Medicine at Mannuthy, Kerala	February 24, 2024
15	Sachin Jashandeep Singh	3 rd prize for poster presentation and 3 rd prize for oral presentation during 40 th Annual Convention of Indian Society for Veterinary Medicine at Mannuthy, Kerala	February 24, 2024
17	Divya	1 st Prize for oral presentation during 40 th Annual Convention of Indian Society for Veterinary Medicine at Mannuthy, Kerala	February 24, 2024
Veterinary Microbiology			
18	Sundus Gazal	ISVIB-GADVASU Woman Scientist Award-2022 in XXVII Annual Convention of ISVIB and National Conference organized by SKUAST-Kashmir	July 29, 2023
19	Ipsita Kar	Best poster presentation award in XXVII Annual Convention of ISVIB and National Conference organized by SKUAST- Kashmir	July 29, 2023
20	Pallvi Slathia	Best oral presentation award in the 7 th International Hybrid Conference on Veterinary and Livestock at Goa	November 25, 2023



		Mahima Best Thesis Award for M.V.Sc. thesis in International Conference on 'Impact of Climate Change on Socio-Economics and Ecological Transformation in Himalayan Region' 2023 at SKAUST, Kashmir	September 22, 2023
21	Perna Tikute	ISVIB Young scientist award: XXVII Annual convention of ISVIB & National Conference on "Leveraging Emerging Biotechnologies for One Health" being organized at SUKAST (K).	July 27-29, 2023
Department of Veterinary Pathology			
22	Priyanka	2nd Best Poster Presentation Award for the paper during the Annual IAVP Congress held at IVRI, Izatnagar	December 22, 2023
23	Sonam Sarita Bal	1st Best Clinical Case Presentation Award during the Annual IAVP Congress held at IVRI, Izatnagar	
24	Rajat Sood	2nd Best Clinical Case Presentation Award during the Annual IAVP Congress held at IVRI, Izatnagar	
25	Himanshu Garg	Consolation Clinical Case Presentation Award during the Annual IAVP Congress held at IVRI, Izatnagar	
Department of Veterinary Pharmacology & Toxicology			
26	Sivaraman Rama Narayanan	Dr. V.V. Ranade Young Scientist Award	Conference of Indian Society of Veterinary Pharmacology and Toxicology and National Symposia organized by College of Veterinary and Animal Science, Bikaner, Rajasthan, 2023
27	Sushree Sangita Mohapatra	First prize for oral presentation in the session on antimicrobials and antimicrobial resistance	
28	Natasha Yadav	Second prize for oral presentation in the session of Ethnopharmacology	
Department of Veterinary Surgery & Radiology			
29	Jena, B., Mohindroo, J., Mahajan, SK., Singh, R. & Gupta K	Bernstein International Travel fellowship by International Veterinary Radiology Association (IVRA) at Dublin, Ireland for the paper entitled, Point hear wave elastography studies on canine renal affections.	June 18-23, 2023
30	Singh J.J., Khosa J S, Anand A, Mohindroo J, Singh N and Sangwan V	Gold medal in equine surgery session at the 46th Annual Congress of Society held at Bhubaneswar, Odisha	December 08, 2023



31	Jena B, Mohindroo J, Mahajan SK and Gupta K	Gold medal in Radiology and Imaging Session at the 46th Annual Congress of Society for Veterinary Surgery and National Symposium Bhubaneswar, Odisha	December 08, 2023
32	Khan H, Anand A, Sangwan V and Khosa J	Appreciation certificate in equine surgery session at the 46th Annual Congress of Society for Veterinary Surgery and National Symposium at Bhubaneswar, Odisha	December 08, 2023
33	Kush Karan, Ashwani Kumar, Arun Anand, Pallavi Verma, Vandana Sangwan & Neelam Bansal	Best Clinical article award - during the 39 th Annual Convention of Indian Society for Veterinary Medicine, held at GBPUAT, Pantnagar	February 24, 2023
Department of Veterinary Animal Husbandry & Extension Education			
34	Niharika Thakur	Best poster presentation in 5 th National Conference for Society of Veterinary and Animal Husbandry Extension	October 14, 2023
35	Kritika Verma	Best M.V. Sc Thesis Award at 4 th International Conference on Innovations to Transform Agriculture, Horticulture and Allied Sectors (ITAHAS-2023) Hyderabad.	June 23, 2023
		Best poster presentation award at 21 st NAVS Convocation-cum-Scientific Convention, Ludhiana.	July 02, 2023
		Young Scientist award at 5 th International Conference on “Global insights on Research and development in Agriculture, Horticulture and Allied Sciences”, Nagpur.	October 07, 2023
Department of Livestock Products Technology			
36	Shilviya Bhat	Best poster presentation award at Indian Poultry Science Association Conference at SKAUST, Kashmir	September 15, 2023
Department of Animal Nutrition			
37	Patil Pragati Dinkar, Gore Prasad, Pradip Kumar, Ajay Kumar, Patil Nilakshi Prakash	Award for National Talent Scholarship	October 01, 2023 -February 02, 2024
Department of Veterinary Gynaecology and Obstetrics			
38	Gurbeer Singh Sandhu	Young Scientist award in 38 th Annual Convention of ISSAR Mannuthy, Thrissur.	December 08, 2023



39	Pardeep Singh	Third best poster presentation award in 38 th Annual Convention of ISSAR at Mannuthy, Thrissur.	December 08, 2023
40	Satnam Singh	Best poster presentation award in the 38 th Annual Convention of ISSAR at Mannuthy, Thrissur.	December 08, 2023
College of Dairy & Food Science Technology			
41	Shefali Sirame	Best paper award during 13 th IDEA Convention & International Conference on Recent Advances in Engineering Applications for Sustainable Dairying	October 14, 2023
		First Position award in e-Poster competition organized during the G-20 University Connect program on Climate Smart Agriculture, Food Systems and One Health held at Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana	August 23, 2023
42	Hanish Sharma	Best poster presentation award at XXI NAVS Convocation –cum-Scientific Convention at Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	July 1-2, 2023
		Best paper award during 13 th IDEA Convention & International Conference organised at Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	October 13-14, 2023
43	Diksha	Best poster award at 13 th IDEA (Indian Dairy Engineers Association) by College of Dairy Science & Technology, , Ludhiana	October 14, 2023
College of Fisheries			
44	Prapti Sudan	Young Woman Scientist award at the National Conference on ‘Transforming Rural Poverty to Prosperity Through Sustainable Fisheries’ held at College of Fisheries, Kishanganj, BASU, Patna	July 21, 2023
45	Simran Kaur	Best Oral Presentation award at the National Conference on ‘Transforming Rural Poverty to Prosperity Through Sustainable Fisheries’ held at College of Fisheries, Kishanganj, BASU, Patna	July 21, 2023
46	Parmeet Kaur	Best poster presentation award at the National Conference on ‘Transforming Rural Poverty to Prosperity Through Sustainable Fisheries’ held at College of Fisheries, Kishanganj, BASU, Patna	July 21, 2023
College of Animal Biotechnology			
47	Raman Sidhu	Best oral presentation award at XXXV Annual Convocation and National Conference of the Indian Association of Veterinary Microbiologists, Immunologists and Specialists in Infectious Diseases	April 08, 2023



48	Samridhi Singh	Best oral presentation award: XXI NAVS Convocation-cum-Scientific Convention, Ludhaina	July 1-2, 2023
49	Bhavya Mahajan and Rasman Kaur	2 nd Best poster award- Ideathon 2023 organized by COABT, GADVASU. Under the theme: Biotechnology in Animal Production (UG category)	July 17, 2023
50	Samridhi Singh and Anupreet Kaur	3 rd Best poster award- Ideathon 2023 organized by COABT, GADVASU. Under the theme: Biotechnology in Animal Health (PG category)	July 17, 2023
College of Veterinary Science Rampura Phul			
51	Yuvraj Singh, Rupenpreet Kaur, Muskan Moudgil	FIRST position in all India Veterinary science Quiz organized by COVS Rampura Phul in collaboration with Vetic Petcare, Gurugram	August 28, 2023
52	Bhupesh Kumar, Simran Kaur, Nimish Hans Garg	Fourth position in all India Veterinary science Quiz organized by COVS Rampura Phul in collaboration with Vetic Petcare, Gurugram	August 28, 2023
53	Adarsh Bhambri	Best Speaker in Youth Speaker forum organized by All India Radio, Ludhiana	April, 2023

Participation of faculty in Conferences/ Symposia/ Workshop/ Trainings etc. (2023-24)

Sr. No.	Name of the Conference/ Symposium/Workshop/Training	Organizing Agency, Place, and Date	Name of Faculty Member(s)
International Participation (Overseas)			
1	International Training on Phytochemicals for Livestock Products	Mahidol University, Thailand, Sept 1-Nov 30, 2023	Dr. O.P. Malav
2	Faculty International Training Program	Katholieke University, Belgium, Sept 18-Dec 18, 2023	Dr. S.K. Dash
3	University of Wisconsin Training	Madison, USA, Sept 27-Dec 18, 2023	Dr. Neeraj Kashyap, Dr. Bharti Deshmukh
4	3rd International Congress on Biological & Health Sciences (ICBH)	Afyon Kocatepe University, Turkey, Apr 14-16, 2023	Dr. Anuradha Gupta, Dr. Varinder Uppal, Dr. Neelam Bansal, Dr. Kritima Kapoor
5	International Seminar on Veterinary Embryology	Iranian Veterinary Anatomical Association, Oct 20, 2023	Dr. Anuradha Gupta, Dr. Neelam Bansal, Dr. Varinder Uppal, Dr. Kritima Kapoor
6	Pain Assessment in Farm Animals	Massey University, New Zealand, Aug 21-Oct 14, 2023	Dr. Sikh Tejinder Singh
7	Bovine In-Vitro Embryo Production	University of Sao Paulo, Brazil, Jul 19-Dec 11, 2023	Dr. Gurjot Kaur Mavi
8	GHG Emission Mitigation & Nutrient Conservation	University Putra Malaysia, Feb 7, 2024	Dr. Pavan Kumar
9	2nd International Conference on Food & Agriculture Science	BRIN National Research Agency, Yogyakarta, Indonesia, Dec 12-14, 2023	
10	Advances in Large Animal Internal Medicine	Cornell University, USA, Sept 13-Oct 1, 2023	Dr. Ashwani Kumar Sharma
11	Retinal Pathologies in Diabetes	Wayne State University, USA, Apr 11-Jul 9, 2023	Dr. D.K. Gupta
12	Make Radiology Fun Again Webinar	University of Sydney, Feb 28, 2024	Dr. Jitender Mohindroo
13	Penn Annual Conference 2023	University of Pennsylvania, Sept 28-29, 2023	Dr. Ashwani Kumar Sharma
14	Webinar on French Bulldogs	University of Sydney, Oct 12, 2023	Dr. Raj Sukhbir Singh



15	WSAVA Congress & FECAVA Euro Congress	Lisbon, Portugal, Sept 27-29, 2023	Dr. Randhir Singh
College of Dairy & Food Science Technology			
16	11th One Health Conference	Dhaka, Bangladesh, Jun 12-14, 2023	Dr. R.S. Sethi
17	Biosensor Design & Application	NAHEP-IDP, University of Guelph	Dr. Gopika Talwar
18	Ohmic Heating & 3-D Printing	NAHEP-IDP, University of Queensland	Dr. Narender Kumar
University Library			
19	88th World Library Congress	Rotterdam, Netherlands, Aug 21-25, 2023	Dr. Nirmal Singh
International Conferences/Workshops attended in India			
Directorate of Extension Education & KVKs			
1	Sustainable Animal Nutrition Conference	Madras Veterinary College, Chennai, Jan 23-25, 2024	Dr. Parminder Singh
2	Smart & Sustainable Agriculture Conference	LPU, Jalandhar, Nov 22-23, 2023	Dr. Piverjeet Kaur Dhillon
3	Innovative Advances in Agriculture	Astha Foundation, Meerut, Jul 10-16, 2023	Dr. Balbir Singh Khadda
4	Global Research in Sustainable Agriculture	Astha Foundation & UAS Raichur, Dec 18-20, 2023	
University Library			
5	ICALUC-2023	MS Randhawa Library, PAU, Ludhiana, Oct 5-6, 2023	Dr. Nirmal Singh
College of Veterinary Science			
6	Veterinary Dermatology Conference	Kochi, Kerala, May 19-21, 2023	Dr. Sushma Chhabra
7	Theriogenology Symposium	ISSAR 2023, Kerala, Dec 6-8, 2023	Dr. Narinder Singh
8	Rural Transformation Congress	RARI, Durgapur, Jaipur, Dec 18-20, 2023	Dr. Ramandeep Kaur Dhaliwal
9	Teaching Workshop	University of Saskatchewan, Feb 14-15, 2023	Dr. Mudit Chandra
10	Current Advances in Agriculture	Shri Mata Vaishno Devi University, Jammu, Jul 10-11, 2023	Dr. Alveena Ganai
11	WOAH Teaching Academy Workshop	GADVASU, Ludhiana, Feb 14-15, 2024	Dr. Harkirat Singh
12	WOAH Teaching Academy Workshop	GADVASU, Ludhiana	Dr. Arun Anand
13	Extension Education Congress	SEE, India	Dr. Parteek Singh Dhaliwal



14	38th Annual ISAR Symposium	CoVAS, Mannuthy, Kerala, Dec 6-8, 2023	Drs. Ajeet Kumar, Amarjeet Bisla, Nakul Gulia
College of Dairy & Food Science Technology			
15	Genome Editing for Food Security Workshop	GADVASU, Ludhiana, Feb 27-Mar 3, 2023	Dr. R.S. Sethi
16	11th International Fermented Foods Conference	SASNET & NEHU, Shillong, Nov 21-22, 2023	Drs. P.K. Singh, Santosh Kumar Mishra
17	13th IDEA Convention	Indian Dairy Engineers Association, Ludhiana, Oct 13-14, 2023	Drs. Inderpreet Kaur, Varinder Pal Singh, Nitin S. Wakchaure, Manvesh Kumar Sihag, Anju Boora Khatkar
College of Fisheries			
18	Genetic Improvement of Traits Workshop	ICAR-CIFA, Oct 28, 2023	Dr. Abhishek Srivastava
College of Animal Biotechnology			
19	Genome Editing for Sustainability Workshop	GADVASU, Ludhiana	Drs. Ratan Kumar Choudhary, Vishal Sharma
20	SVBBI Annual Convention & International Symposium	IVRI, Bareilly	Dr. Ratan Kumar Choudhary
21	Advanced Bioinformatics Training	IVRI, Bareilly	Dr. Ratan Kumar Choudhary
22	One Health Conference	GLA University, Mathura, Jan 18-20, 2024	Dr. Kalpana Singh
Participation in National conference/Workshops in India			
23	Faculty development program on “Leading for achieving Academic Excellence”	IIM Amritsar, Punjab August 07-11, 2023	Drs. Neeraj Kashyap, SK Sahoo, Bharti Deshmukh, Rebeka Sinha, Sushma Chhabra, V. Mahajan, Jasmine Kaur, Harkirat Singh, Sasmita Barik, M Honparkhe, Adil Majid Bhat
24	XXI NAVS Convocation-cum- Scientific Convention on Strategies for Enhancing Productivity of Dairy Animals	NAVS and GADVASU July 01-02, 2023	40 Faculty members attended the conference



25	Recent Developments in Livestock Phenome Data Recording, Analysis and Interpretation in the Era of Genomics	ICAR- National Research Centre on Camel, Bikaner January 03-12, 2024	Dr. Ravi Kant Gupta
26	Brainstorming workshop on “Investing in Agro-Technologies for Self-Reliance”	TDP-DST, SKUAST-Jammu. October 05-06, 2023	Dr. S K Sahoo
27	Faculty Development Program on “Leading for achieving academic excellence”	IIM, Amritsar August 28 to September 01, 2023	Drs. Navdeep Singh, Paramjit Kaur Alveena Ganai Apoorva Shekhar Amarjeet Bisla
28	Equine reproduction and foal management	Indian Association of Equine Practitioners at Pune, Maharashtra February 06, 2024	Dr. Navdeep Singh
29	21 days sponsored Winter School Training	NDRI, Karnal January 18-February 07, 2023	Dr. Digvijay Singh
30	Teaching Academy Workshop WOAHA (OIE) Twinning Project	COVS, GADVASU In Collaboration with University of Calgary, Canada February 14 - 15, 2024	Dr. Nitin Mehta Dr. Rajesh V. Wagh
31	Faculty Development program on Academic leadership	IIM, Amritsar September 4-8, 2023	Drs. M.S. Bal, Anuradha Gupta, Neelam Bansal, Varinder Uppal, Opinder Singh, Kritima Kapoor, R K Sharma, N. K. Singh, Pooja Devi, Manjinder Sharma, Ajeet Kumar, Adil Majid Bhat
32	National Conference on Sustainable Development and Socio-Economic Upliftment of Agrarian Society.	CCS HAU and National Agricultural Higher Education Project (NAHEP)-IDP	Dr. Anuradha Gupta
33	6th Jammu and Kashmir Agricultural Science Congress in theme “Advances in Veterinary Sciences”,	Shere-e-Kashmir University of Agricultural Sciences and Technology- Jammu	Dr. Kritima Kapoor



34	5th National Conference of Society for Veterinary & Animal Husbandry Extension Education (SVAHE) on “Smart Livestock Extension for Enhancing Farmers’ Income - An Extension Bounty”	KCVAS, Amritsar October 12-14, 2023	Drs. Saloni Singla, Digvijay Singh, Manjinder Sharma, A K Singh, Harmanpreet S Sodhi, Sandeep Kaswan, Rakesh Kumar Sharma, Gagandeep Singh, Niharika Thakur, Rajesh Kasrija, Jasmine Kaur, Parteek Singh Dhaliwal, Akshita Chadda, Balbir Singh Khadda, Gulgul Singh
35	Online Program on “Applied Statistical Concepts and Tools for Research Data Analysis”	NanaJi Deshmukh Veterinary Science University, Jabalpur September 25-29, 2023	Dr. Akshita Chadda
36	Workshop: PPAK-NVF VETopia-2023-Continuing Education Program	Pet Practitioner Association of Karnataka-National Veterinary Foundation, Bangalore August 22-23, 2023	Dr. Raj Sukhbir Singh
37	Online workshop: Basic Biostatistical Data Analysis using SPSS	Rajendra Institute Medical Sciences, Ranchi, Jharkhand and Science Tech Institute, Lucknow September 21- 27, 2023	Dr. Raj Sukhbir Singh
38	CAFT-Advances in Anaesthesia, Surgery and Imaging in Farm and Companion Animals	Department of VSR, GADVASU, Ludhiana January 23 - February 12, 2024	Dr. Gurpreet Singh Preet
39	46th Annual Congress of ISVS and National Symposium on “Emerging Trends in Farm, Companion and Wild Animal Surgery	Odisha University of Agriculture & Technology, Orissa	Dr. Anju Poonia
40	XXVII Annual Convention of ISVIB and National Conference “Leveraging Emerging Biotechnologies for One Health”	SKUAST, Kashmir July 27-29, 2023	Drs. Gurpreet Kaur, Paviter Kaur, Mudit Chandra, Adarsh Mishra, Ratan Kumar Choudhary
41	XXXV Annual Convention and National Conference of IAVMI	CSKHPKV, Palampur April 07-08, 2023	Drs. Deepti Narang, Adarsh Mishra, Kalpana Singh



42	32nd National Congress of Veterinary Parasitology and National Symposium on "Sustainable Control of Parasitic Diseases for Improved Productivity of Livestock in Current Scenario"	IAAVP, BASU, Patna November 29 – December 01, 2023	Drs. N K Singh, Harkirat Singh
43	Winter school on "Recent Advances in Veterinary Sciences and Animal Husbandry"	ICAR-IVRI, Regional station, Palampur in collaboration with NADCL Baramulla J and K. November 02-22, 2023	Dr. Alveena Ganai
44	Short term course on NAAC documentation –A key Insight	IQEC Cluster, India 06-27 February, 2024	Dr. Paramjit Kaur
45	Animal Funeral Conclave	PHD Chamber of Commerce and Industry, PHD House New Delhi. May 23, 2023	Drs. Kuldip Gupta, N D Singh
46	Winter school Training Program	FVSc and AH, Shuhama and sponsored by IDP-NAHEO, SKUAST-Kashmir December 11-31, 2023	Dr. Omer K Baba
47	Veterinary Pathology Congress-2023	ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, UP December 20-23, 2023	Drs. Kuldip Gupta, Amarjit Singh
48	Applied concepts in One Health to address zoonoses, antimicrobial resistance and food safety	School of Public health, GADVASU, Ludhiana February 19 - March 10, 2024	Dr. Saloni Singla
49	Faculty Induction Training Program	HRMC, GADVASU, Ludhiana October 16-20, 2023 (Part-I) December 11-15, 2023 (Part-II)	Drs. Mehak Jandyal, Kapil Kimar Gupta, Naveen K Verma, Abhijeet Fernandis, Gitesh Saini, Sunil Punia, Manu. M, Kalpana Singh, Priya, Suresh Kumar, Priyanka, Gulgul Singh, Sahil, Prabhjinder Singh



50	Faculty Induction Training Program	HRMC, GADVASU, Ludhiana February 19- March 01, 2024	Drs. Aasif Ahmad Sheikh, Ashok Kumar, Tanmay Mondal, Vikram Jakhar, Abrar- UI-Haq, Sanjay Choudhary, Harneet Kour, Sarbjeet Kaur, Mousami Bora, Vishal Sharma, Alveena Ganai, Afroz Jahan, Nishchal Dutta, Jay Prakash Yadav, Sasmita Barik, Nakul Gulia, Dipti Nain
51	VII annual convention of SVBBI and International symposium	ICAR-IVRI, Izatnagar, UP December 14-15, 2023	Drs. Chanchal Singh, Sasmita Barik
52	National Conference of Indian Society for Buffalo Development and Symposium on Modern Approaches for Sustainable Buffalo Production in the Scenario of Climate Change	DUVASU, Mathura, UP from October 27-28, 2023	Drs A K Singh, J S Hundal, R.S. Sethi
53	38th Annual Convention and International Symposium of Indian Society for Study of Animal Reproduction.	CoVAS, Mannuthy, Kerala December 06-08, 2023	Drs. Ajeet Kumar, Amarjeet Bisla, Nakul Gulia
54	31st Annual conference of IAAVR and National Symposium on “Livestock Health and Poultry: A Paradigm Change to maximize Productivity for Sustainable Farmers	LUVAS, Hisar, Haryana August 28- September 01, 2023	Drs. M Honparkhe, Ajeet Kumar, Dipti Nain
55	Teaching Academy Workshop	Dean, COVS, GADVASU February 14-15, 2024	Dr. Amarjeet Bisla
56	Faculty Development Program	IIM, Amritsar August 21 – 25, 2023	Drs. Navdeep Singh, J. Mohindroo, SK Mahajan, Arun Anand, Ashwani Kumar, Vandana Sangwan, N. Umeshwori Devi, Jasmeet Khosa, Harmanpreet S Sodhi, Jyoti
57	46th Annual Congress of ISVS and National Symposium on ‘Emerging trends in Farm, Companion and Wild Animal Surgery.	Bhubaneswar, Odisha December 06-08, 2023	Drs. Jitender Mohindroo, Navdeep Singh



58	40th Annual Convention of Indian Society for Veterinary Medicine & National Conference	Kerala Veterinary & Animal Sciences University, Pookode, Manutthy February 22-24, 2024	Drs. Asmita Narang, Shabnam Sidhu, Gurpreet Singh Preet
59	Advanced faculty training course on “Advances in Anaesthesia, Surgery and Imaging in Farm and Companion Animals”	Department of Veterinary Surgery & Radiology, CoVS, GADVASU January 23 – February 12, 2024	Dr. Adil Majid Bhat
60	International Symposium on One Health: Opportunity, Challenges and Solutions and XIXth Annual Conference of Indian Association of Veterinary Public Health & Specialists	Department of Veterinary Public Health & Specialist	Drs. J S Bedi Randhir Singh
61	Workshop on Climate change and animal production in Punjab	DLF, GADVASU, Ludhiana, September 13, 2023	Dr. J S Hundal
62	XX Annual Convention of Indian Society for Advancement of Canine Practice National Congress on Canine Practice & National Symposium “Insights on Latest Developments in Companion Animal Practice and Health Care Management”	ISACP and SKUAST-K, At SKUAST-Kashmir April 25-27, 2024	Dr. J S Hundal
63	Recent advances in diagnostic, therapeutic and nutritional management of canine	Indian society for advancement of canine practice, Durg, CG April 20-22, 2023	Dr. Sandeep Uniyal
64	Workshop on J-Gate@ CeRA for Northern Region	Agricultural Education Division, ICAR and CSK HPKV, Palampur, October 17, 2023	Dr. Nirmal Singh
65	Online Koha Admin Training	Best Book Buddies Technologies Pvt. Ltd., New Delhi March 1, 2023	Sonia Bansal
66	Webinar on Unleashing the Power of Data Analytics: Shaping the future of an Innovative Research Ecosystem	DELNET March 28, 2024	Sonia Bansal
67	Awareness Program on ORCID and INFLIBNET Services for Scholarly Communities	IISER, Mohali November 07, 2023	Sonia Bansal



68	Workshop on Academic Leadership Skills, Managing Workplace Relationship and Conflicts	HRMC, GADVASU March 27, 2024	Sonia Bansal
69	Faculty Development Program	IIM, Amritsar August 07-11, 2023	Drs. R S Sethi, Harsh Panwar, Namita Rokana, Vikas Sangwan, Manvesh Kumar Sihag, Anju Boora Khatkar, Sunil Kumar, P K Singh, S Sivakumar, Nitika Goel, Rekha Chawla, Inderpreet Kaur, Varinderpal Singh, Amandeep Sharma, Gopika Talwar, Narender Kumar
70	12th NEP-Orientation and Sensitization Program	UGC-Malaviya Mission Teacher Training Centre, Ishwar Saran PG College, Prayagraj, UP. May 07 – 15, 2024	Dr. Sunil Kumar
71	Emerging Engineering and Technological Intervention in Processing and Value Addition of Milk Products”	ICAR-National Dairy Research Institute, Karnal. January 10-30, 2024	Drs. Manvesh Kumar Sihag, Gajanan P Deshmukh
72	CAFT training “Recent Advances in Analysing Qualitative and Quantitative Data in Social Sciences	ICAR -Indian Agricultural Research Institute, New Delhi January 05 -25 ,2024	Dr. Nitin S. Wakchaure
73	Online Program on Augmented and virtual reality	ICAR- IASRI February 16, 2023	Dr. Anju Boora Khatkar
74	13th Annual Session of the Society of Life Sciences on ‘Biodiversity Conservation and Restoration of Ecosystems’	AKS University, Satna, M.P. November 24-25, 2023	Dr. Abhishek Srivastava
75	VIROCON-2023 ‘Advancement in Global Virus Research Towards One Health’	ICAR-National Research Centre for Banana, Tiruchirappalli and Indian Virological Society at Tiruchirappalli December 1-3, 2023	Dr. Anuj Tyagi



76	3rd Aquatic Animal Epidemiology	ICAR-NBFGR, Lucknow November 29 to December 01, 2023	Dr. Naveen Kumar B.T
77	Winter School on Applying One-health concept in Zoonoses, Antimicrobial Resistance and Food Safety	Centre for One Health, GADVASU, Ludhiana February 19 - March 10, 2024	Dr. Siddhnath
78	13th Indian Fisheries & Aquaculture Forum-2024	ICAR-CIFRI in collaboration with AFSIB, India at Kolkata February 23-25, 2024	Drs. Vijay Kumar Reddy, Prabhjeet Singh
79	Advanced Statistical and Machine Learning Techniques for Analysis of Agricultural Research Data	Uttar Banga Krishi Vishwavidyalaya, Cooch Behar (W.B.) February 19-28, 2024	Dr. Abhishek Srivastava
80	CAFT training	Advanced Insights on Theriogenology to Ameliorate Reproductive Health of Domestic Animals from GADVASU, Ludhiana. January 18-February 07,	Dr. Ratan Kumar Choudhary
81	Research-Extension Interface meet on Precision Livestock Farming for KVKs Animal Scientists	ICAR- ATARI Zone I, in collaboration with GADVASU, Ludhiana September 01, 2023	Dr. Adarsh Mishra
82	Training workshop on “Prevention and Management of Common Diseases in Pigs”	Directorate of Extension Education, GADVASU, Ludhiana in collaboration with PUM Netherlands November 21, 2023	Drs. Adarsh Mishra & Manu M
83	Four days Training Program on ‘ Laboratory Quality Management System (LQMS) and Internal Audit as per IS/ISO/IEC 17025:2017’	National Institute of Training for Standardization, Bureau of Indian Standards, Noida, Uttar Pradesh, India December 19-22, 2023	Drs Satparkash Singh & Adarsh Mishra
84	One-day National Workshop on “Strategies for processing and efficient utilization of livestock byproduct for environmental sustainability.”	Indian Veterinary Research Institute (IVRI) in Bareilly, Uttar Pradesh. March 15, 2024	Drs O.P. Malav, Mehak Jandyal



85	Workshop on “Social Media Skills in Transfer of Technology”	GADVASU, Ludhiana, (Online Mode) and Extension Education Institute, CCS HAU, Haryana March 04-07, 2023.	Drs. O.P. Malav, Sandeep Singh Dhaliwal, Prabhjinder Singh
86	AgMOOC-a six-week online course on “Practical animal nutrition for augmenting livestock and poultry productivity”	TANUVAS, Chennai and Commonwealth of Learning, Canada July 11 - August 31, 2023	Drs. Sandeep Kaswan, Chetna Mahajan
87	Participated in Remotely Piloted Aircraft Training Program	IoTech World Avigation Pvt., Gurugram April 06- 10, 2023	Drs. Harjot Singh Sohi, Suryendra Singh
88	Participated in training Program on “Extension strategies for linking farmers to markets”	PAMETI, Ludhiana May 16-19, 2023	Dr. Anjuly Sharma
89	Participated in Indian Mushroom Conference -2023	College of Agriculture, Vellayani, Kerala August 18-19, 2023	Dr. Harjot Singh Sohi
90	Research Extension Interface Meet on Precision Livestock Farming for KVK Animal Scientist	ICAR-ATARI, Ludhiana September 1-2, 2023	Dr. Prateek Jindal
91	Training cum Workshop under PUM on Prevention and Management of Common Diseases in Pigs	GADVASU, Ludhiana November 21, 2023	Dr. Prateek Jindal
92	Participated in workshop on Agri Clinic and Agri Business Centre	SBI-RSETI, Barnala December 27, 2023	Dr. Suryendra Singh
93	Attended review meeting regarding data collection from 30 farmers on damage to wheat crop due to rainfall	ICAR-ATARI, Ludhiana April 26, 2023	Dr. Suryendra Singh
94	Webinar on Lumpy Skin Disease (LSD): Lessons learnt from the previous outbreak	GADVASU, Ludhiana May 30, 2023	Dr. Suryendra Singh
95	CAFT training Program on: “ICT- enabled solutions for Agricultural Extension and Market Linkages in the New Normal”	Bihar Agricultural University, Sabour, Bhagalpur, Bihar January 30- February 19, 2023	Dr. Suryendra Singh
96	Participated in Review workshop (CRM)	ICAR-ATARI, Ludhiana September 10-11, 2023	Dr. Suryendra Singh



97	Winter School on “Igniting the Millet Renaissance: Advancing the Millet Year with Post-Harvest Engineering and Technology for Nutritional Security, Loss Minimization and Enhanced Profitability”	ICAR-CIPHET December 01-21, 2023	Dr. Piverjeet Kaur Dhillon
98	Millets: Magical crops for nutritional sustainability	AIASA, Pusa complex, New Delhi and Jagannath University, Jaipur, Rajasthan April 29-30, 2023	Dr. Balbir Singh Khadda
99	XXII Biennial National Symposium	The Indian Society of Agronomy at New Delhi	Navjot Singh Brar

Conferences/Symposia/Workshops/Trainings (other than extension Trainings) organized

S. No	Name of Conferences/Symposia/workshops/trainings	Organizing / Funding Agency	Date
College of Veterinary Science, Ludhiana			
Department of Animal Genetics & Breeding			
1.	<p>Training organized for faculty and students by National Guest Faculty with the following lectures</p> <ul style="list-style-type: none"> • Breeding Strategies for improvement of crossbred dairy cattle • Different Sire Evaluation methods used in dairy cattle • Animal Genetic Resources in India and Conservation of Animal Genetic Resources • Gene concept, DNA and its replication • Introduction to Molecular Techniques and Modern approaches for the selection of dairy animals • Introduction to Population Genetics • Response to selection and Methods of Multi trait selection. 	Department of Animal Genetics & Breeding, COVS	June 19-20, 2023
Directorate of Livestock Farm			
2	<p>Nine days of Student's Entrepreneurship training on Opportunities and Challenges in commercial Livestock Farming</p> 	IDP-NAHEP	May 29 - June 08, 2023.
3	<p>One day Student's Entrepreneurship training on Entrepreneurial Opportunities in Dairy Animal Breed Improvement</p> 	IDP-NAHEP	June 19, 2023
4	<p>Three days Industry expert lectures on Scope and Significance of Ethno-Veterinary Practices</p> 	IDP-NAHEP	June 26-28, 2023



5	<p>2-day training conducted for 20 SC beneficiaries</p> 	AICRP Poultry (SCSP component)	September 21-22, 2023
6.	<p>Training under the project of BVSc & AH on Commercial dairy farming and entrepreneurship development</p> 	IDP-NAHEP	December 04-08, 2023
Veterinary Anatomy			
1	<p>Hands on Training on Artificial Intelligence by Dr Pankaj K. Sa, Professor of Computer Science and Engineering at National Institute of Technology</p> 	NAHEP, ICAR	November 20-21, 2023
2	<p>Training on Entrepreneurship by Dr Mahendra Partap Singh Tomar, Assistant Professor (Cast preparation)</p> 	NAHEP, ICAR	May 09-12, 2023
3	<p>Training on Entrepreneurship by Dr. Parveen Kumar Gahlot, Professor-cum-Head, Department of Veterinary Anatomy</p> 	NAHEP, ICAR	August 21-24, 2023

5	<p>Training on Entrepreneurship by Dr Virender Pathak, Assistant Professor, Department of Anatomy & Histology & Dr. G.C. Negi College of Veterinary and Animal Sciences, CSK HPKV, Palampur, (HP) India-176 062</p> 	NAHEP, ICAR	November 22-24, 2023
6	<p>Training on Entrepreneurship by Dr Santosh A Gaikwad, Professor of Anatomy, Mumbai Veterinary College (Taxidermy)</p> 	NAHEP, ICAR	December 11-15, 2023
7	<p>Training on Entrepreneurship by Dr. S. Sivagnanam Associate Prof.- cum- Head, Dept. of Veterinary Anatomy, Veterinary College & Research Institute Theni, Tamil Nadu</p> 	NAHEP, ICAR	September 22, 2023

Department of Centre for One Health

8	<p>21 Days Winter School on “Applied Concepts in One Health to Address Zoonoses, Antimicrobial Resistance and Food Safety”</p> 	ICAR, New Delhi	February 19-March 10, 2024
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Department of Livestock Production Management			
9	Development of entrepreneurship skills in broiler farming with improved strains	IDP	May 25-30, 2023 May 31-June 06, 2023 June 07-13, 2023 June 19-24, 2024
University Library			
10	Workshop on 'How to access e-books'	M/s EBSCO Information Services	February 14, 2024
11	Lectures series on sensitization workshop for Students of Agricultural Universities to Experience Virtual Reality Modules	NAHEP ICAR	July 05-07, 2023 August 23 - 25, 2023 November 29 – December 01, 2023 January 15 – 19, 2024
Veterinary Medicine			
12	10 Days Advances and Hands-on Practice in Large Ruminant Internal and Preventive Medicine by Dr. Christopher Luby, Assoc. Prof. & Head, Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, Canada	IDP- NAHEP	August 01 – 10, 2023
13	Advances in Ultrasonographic techniques for the diagnosis of bovine diseases by Dr. R. Ramprabhu, Prof, TANUVAS		June 30, 2023
14	9 Days training on the Application of Artificial Intelligence in Medical research: Integrating epidemiological and genetic data		July 3, 2023 & July 11 – 18, 2023
15	2 Days of hands-on Training in Equine Medicine by Dr. Harnoor Kaur Dawra Equine Specialist, Mahalaxmi Race Course, Mumbai		November 28 - 29, 2023
16	4 Days Training on Basics of Echocardiography in Small Animal Practice by Dr. Abhishek Chandra Saxena, IVRI		November 16 – 19, 2023
17	5 Days Entrepreneurship scope of Ultrasonography in small animal practice by Dr. Sumathi Devaraju, TANUVAS		November 20 – 24, 2023
18	3 Days Hands-on Training on Cat Diseases by Dr. Chandreyee Sen Veterinary Practitioner, Kolkata, WB		November 30-December 01, 2023
19	3 Days of hands-on training on blood and its component transfusion in small animal practice by Dr. G.R. Baranidharan, Associate Professor & Section Head, TANUVAS		December 03-05, 2023

Veterinary Microbiology			
20	One-month Advanced Training Course on Microbiological & Molecular Biological Techniques	Veterinary Microbiology	June, 2023
21	Training on Applications of MALDI-TOF in Bacterial Identification		February 20, 2024
22	Training on Entrepreneurship in Bacterial and Viral Diagnostic Microbiology lab development and Animal Health care	ICAR 89: (IDP) - NAHEP	November 30-December 07, 2023
23	Training on 'Entrepreneurship in Serological and Immunological Diagnostic Microbiology lab development and Animal Health care'	ICAR 89: (IDP) - NAHEP	
Animal Nutrition			
24	Workshop on "Use of Paddy Straw in Animal Production" for officials of dairy development department, Punjab	Animal Nutrition, GADVASU, Ludhiana.	August 14, 2023
25	Workshop on the theme " Opportunities and Challenges in Dairy Animal Nutrition"	Centre of Excellence for Dairy Skills in India	December 06, 2023
26	64th National Symposium of Compound Feed Manufacturers Association (CLFMA) on Livestock sector 2023. 	Animal Nutrition	August 18-19, 2023
Veterinary Parasitology			
27	Students Entrepreneurship Training on Parasitological Interventions in Veterinary Diagnostic Laboratory 	ICAR 89: (IDP) - NAHEP	June 13-16, 2023
Veterinary Pathology			
28	Training on "Vetpreneurship in Poultry Disease Diagnosis"	IDP- NAHEP	May 03-12, 2023
29	Entrepreneurship Training in Diagnostic Veterinary Pathology	IDP- NAHEP	June 05-09, 2023



30	Entrepreneurship and Innovation in Poultry Health and Disease Diagnosis	IDP- NAHEP	November 30-December 08, 2023
31	Training on Enhancing the soft skills of the students	IDP- NAHEP	July 11-12, 2023
32	Artificial Intelligence Training	IDP- NAHEP	November 28-29, 2023
Veterinary Surgery and Radiology			
33	Training in Veterinary Diagnostic Imaging	Under DIMSCA, ICAR-22, SCSP Subhead	January 16– 18 2024
34	Hands-on Training on Veterinary Anaesthesia	Under DIMSCA, ICAR-22, SCSP Subhead	January 09-11, 2024
35	Center for Advanced faculty Training	ICAR	January 23-February 12, 2024
Teaching Veterinary & Clinical Complex			
36	Organized Brainstorming Session on Health Strategies for enhancing productivity of dairy animals	IDP-NAHEP	June 02, 2023
37	Advanced training for private veterinary practitioners on intermittent hemodialysis technique in dogs	IDP-NAHEP	November 23, 2023
38	Organized BSF show at Dog Show		December 03, 2023
39	Organized Training program on soft skills at Mahatma Gandhi State Institute of Public Administration - MGSIPA, Chandigarh for 180 undergraduate students	IDP-NAHEP	
40	Organized 3-day Hoof trimming training programme for unemployed youth and progressive farmers.	IDP-NAHEP	January 17-19, 2024.
Veterinary & Animal Husbandry Extension Education			
41	Brain storming session on Role of Extension Education and Extension Strategies for Enhancing Productivity of Dairy Animals	NAVS, New Delhi	June 08, 2023
42	Certificate course in Dairy Business Management	Mooofarm Company	June 05-30, 2023
43	Goat Milk Competition	AICRP on Goat Improvement	March 20-22, 2024
44	Training on Student skill development programme	IDP-NAHEP	October 25-27, 2023 October 30-November 03, 2023 November 06-10, 2023

Veterinary Gynaecology			
45	Training on Student Skill Development	IDP-NAHEP	May 29-June 02, 2023 June 07-09, 2023 June 12-16, 2023 July 24-28.2023 July 10-14, 2023 August 07-10, 2023 August 10-11, 2023 November 20-24, 2023
46	Student Entrepreneurship Training Program	IDP-NAHEP	June 12-14, 2023
47	Industry Expert Training Program	IDP-NAHEP	June 19-23, 2023 November 29-30, 2023
Veterinary Physiology & Biochemistry			
48	Entrepreneurship Development Programme on Commercial Dairy Farming 	IDP-NAHEP	3-7 July 2023 December 18-22, 2023
Directorate of Human Resource Management Centre			
49	Expert Lectures on Ethics & Integrity for Professionals by Dr Sarabjit Singh, Professor Journalism, PAU Ludhiana 	Directorate HRMC	June 02, 2023
50	Expert Lecture on Paranomics: Discovering and Developing Parasite Resources Bank by Dr. Tilak Chandra Nath, Director (External Affairs) Sylhet Agricultural University, Bangladesh, Bangladesh 	Directorate HRMC	July 12, 2023



51	<p>One day workshop on RTI act, 2005 by Dr Sandeep Kumar Gupta, Professor, Veterinary Biochemistry, COVS, Luvas, Hisar & Sh Gurbhajan Singh Naggar, Advocate District Court Ludhiana</p> 	Directorate HRMC	October 09, 2023
52	<p>1st Induction Training Programme for Newly Recruited Faculty</p> 	Directorate HRMC	October 16-20, 2023
53	<p>1st Faculty Induction Training Programme (Part II Practical Session)</p> 	Directorate HRMC	December 11-15, 2023
54	<p>Interaction cum Guest Lecture regarding NIRF Ranking by Dr K. Veeranjanyulu, Librarian & Head, PJTASU, Hyderabad</p> 	Directorate HRMC	January 10, 2024
55	<p>2nd Induction Training Programme for Newly Recruited Faculty</p> 	Directorate HRMC	February 19 – March 01, 2024

56	<p>Role of trade in transmission of transboundary aquatic animal disease” by Dr. Eduardo Leano, Senior Programme Officer, Network of Aquaculture Centers in Asia-Pacific (NACA) Bangkok, Thailand</p> 	Directorate HRMC	March 11, 2024
57	<p>One Day Workshop on 1. Academic leadership skills 2. Managing workplace relationships and conflicts 3. Emotional Intelligence 4. Stress management for students by Dr Parul Rishi, Faculty HRM and Chairperson, Centre for Corporate Social Responsibility, Indian Institute of Forest Management, Bhopal, Madhya Pradesh</p> 	Directorate HRMC	March 27, 2024
College of Animal Biotechnology			
58	IDEATHON-2023 on “Biotechnology in Precision Livestock Farming”	COABT	July 17, 2023
59	Workshop cum hands on training on “Automatic nucleic acid extraction and pathogen detection by real time PCR technique	COABT and Himedia Laboratories Pvt. Ltd	February 15, 2024
60	Workshop on NARES-Blended Learning Platform	COABT and ICAR-IASRI	August 23, 2023
61	E-quiz and Elocution contest on theme “Digital/Artificial Intelligence in Agriculture and Allied Sectors” under G20 University connect on climate smart agriculture programme	COABT	August 19, 2023
College of Veterinary Science, Rampura Phul			
62	Orientation training regarding use of CeRA for faculty and students	COVS, RP and CODFST, Ludhiana	October - November, 2023
63	One day workshop on clinical exposure of BVSc & AH students on ethical handling of cases.	COVS, Rampura Phul & Agro Pharma Pvt Ltd	July 21, 2023



<p>64</p>	<p>10 Days Short course on Evolving Trends in Applied Anatomy and its Implications in Veterinary Clinical Practice</p>	<p>Indian Council of Agricultural Research, New Delhi</p>	<p>February 07-16, 2024</p>
<p>65</p>	<p>3 days online lecture series on “Alternatives to antibiotics for control of bacterial infections”</p>	<p>College of Veterinary Science, Rampura Phul</p>	<p>October 09-11, 2023</p>



Invited Lectures Delivered by Faculty (Outside Campus)

S. No.	Faculty Name and Lecture Details
1.	Dr. R. S. Sethi: “Non-target toxicity from dietary exposure to pesticides: Looking before you leap into Nano pesticide” at the International Conference on Sustainable and Applied Nanotechnology for Agriculture and Health, IIT Madras, July 19-21, 2023
2.	Dr. Santosh Kumar Mishra: <ul style="list-style-type: none"> • “Micro-nano bubbles: A multifaceted technology for the food industry” at the 11th International Conference on Fermented Food, Health Status, and Social Wellbeing, SASNET, Gujarat, November 21-22, 2023. • “Bio-protective cultures for food safety” at ICAR-sponsored 21-day Winter School on One Health Approach to Combat AMR, Zoonoses, and Food Safety, PG Institute of Veterinary and Research, Jaipur, Rajasthan, December 1-21, 2023
4.	Dr. Harsh Panwar: “Early Academic Career – Funding Opportunities” at the Society for Promotion of Farm & Companion Animals, Bihar Animal Sciences University, August 3, 2023 (Online)
5.	Dr. P.K. Singh: “Every White Fluid is not Milk” at National Milk Day Celebration 2023, Chandigarh, November 26, 2023
6.	Dr. Abhishek Srivastava: “Fish Farming for Higher Profitability in Punjab” at AKS University, Satna, M.P., November 25, 2023
7.	Dr. Naveen Kumar BT & Dr. Prabjeet Singh: “Control of Diseases in Shrimp Culture” and “Best Management Practices for Shrimp Farming” at FPO Training Program, Mansa, May 9, 2023
8.	Dr. S.N. Datta & Dr. Sarbjeet Kaur: “Machi Palan Vich Vhibhinta Lye Yog Sambhavanawan” and “Sustainable Machi Palan Lyi Yog Uparle” at World Fisheries Day Outreach Program, FFDA, Sangrur, November 21, 2023
9.	Dr. Anuj Tyagi: <ul style="list-style-type: none"> • “Basics of Next-Generation Sequencing (NGS) and Quality Control of NGS Data” at Online Workshop on Bioinformatics in Veterinary, Fishery, and Allied Sciences, November 6-8, 2023 • “Genomic Characterization of Phages for Therapeutic Applications: Approaches & Challenges” at VIROCON-2023, ICAR-NRC for Banana, Tiruchirappalli, December 1-3, 2023
11.	Dr. Yashwant Singh: <ul style="list-style-type: none"> • “Quality Milk Production: Need of the Hour” at Winter School on Emerging Problems and Recent Advances in Applied Sciences, Astha Foundation, Meerut, February 23, 2024 (Online). • “Abiotic and Biotic Stress on Dairy Animals: Challenges and Mitigation Strategies” at 21-day Summer School on ECOBASM-2023, August 25, 2023 (Online)
13.	Dr. Jay Prakash Yadav: “Zoonotic Diseases: Strategies for Prevention and Control” at RPS College of Veterinary Sciences, Mahendergarh, Haryana, July 6, 2023
14.	Dr. Amit Sharma: “Intensive Kajali Sheep Production vs. Prevalent Paddy-Wheat Cropping System of Punjab” at National Conference, SVAHE, KCVS, Amritsar, October 12-14, 2023



15.	Dr. Subhash Chandra: “Protection and Welfare of Performing Animals and Animal Welfare in Commercial Livestock Farming Practices” at DUVASU, Mathura, July 2, 2023
16.	Dr. Sandeep Kaswan: “Cost-effective Technical Service Deliverables for Economic Small Ruminant Production in India” at KCVAS, Amritsar, October 12, 2023
17.	Dr. Neelam Bansal: “Plastination and Its Application in Veterinary Science” at ICAR-sponsored Short Course at COVS, Rampura Phul, February 7-16, 2024
18.	Dr. Anuradha Gupta & Dr. Varinder Uppal: “Applied Anatomy of Forelimb and Hindlimb in Domestic Animals” and “Practical Demonstration of Surgical Approaches to Long Bones” at 33rd Training Course on Advances in Anesthesia, Surgery, and Imaging in Farm and Companion Animals, January 23 – February 12, 2024
19.	Dr. Anuradha Gupta: “Role of Livestock in Sustainable Development of Agrarian Society” at NAHEP-IDP, LUVAS, Hisar, October 26-27, 2023
20.	Dr. J.S. Bedi: “Interdisciplinary Approach to Public Health Challenges” at Centre for One Health, LUVAS, Hisar, December 7-8, 2023
21.	Dr. Daljeet Kaur: “Integration of Dairy Farming with Backyard Poultry Farming to Improve Profitability” at Animal Welfare Camp, Village Sekha Kalan, Distt. Moga, September 30, 2023 and at Animal Welfare Camp, Village Panje-K-Uttarh, District Firozpur, October 6, 2023
23.	Dr. Kulvinder Singh Sandhu: “Integrated Farming System for Better Returns to Farmers” at KVK Tarn Taran, Sama Palace, Harike Pattan, October 14, 2023
24.	Dr. Nitin Mehta: <ul style="list-style-type: none"> • “Industrial Design and Technological Interventions for ‘Shree Anna’ Based Functional Livestock Products” at SVPUAT, Meerut, February 9, 2024 (Online). • “Entrepreneurship Development Through Value Addition in Livestock Products” at RAJUVAS, Bikaner, November 1, 2023
25.	Dr. OP Malav: <ul style="list-style-type: none"> • “Meat Processing Sector in India: Growth, Challenges, and Opportunities” at RAJUVAS and MANAGE, October 31, 2023. • “Strategies for Development of Functional Meat Products” and Mahidol University, Thailand, November 24, 2023
26.	Dr. Pavan Kumar: “Sustainable Meat Production: Prospects and Challenges” at ICAR Winter School, SVPUAT, Meerut, February 23 – March 14, 2024
27.	Dr. D.K. Gupta: “Diagnosis, Treatment, and Prevention of Bovine Mastitis” at IDP-NAHEP, GBPUAT, Pantnagar, September 29, 2023 (Online)
28.	Dr. Ashwani Kumar Sharma: “Fore Stomach Disorders in Cattle and Buffaloes” at CAFT Veterinary Medicine Program, TANUVAS, Chennai, October 20, 2023
29.	Dr. Mudit Chandra: “Application of MALDI TOF in Disease Diagnosis” at XXVII Annual Convention of ISVIB and National Conference, SUKAST, July 27-29, 2023
30.	Dr. Deepti Narang: “Overview of Mycobacterial Diagnostic Assays” at XXXV Annual Convention and National Conference of IAVMI, CSKHPKV, Palampur, April 7-8, 2023
31.	Dr. JS Hundal: “Enhancing Canine Well-being with Omega-3 Fatty Acids” at Indian Society for Advancement of Canine Practice Conference, SKUAST-Kashmir, April 25-27, 2024
32.	Dr. Amit Sharma: “Scientific Methodology for Using Waste Citrus Fruits in High-Value Silage/Feed for Livestock” at Citrus Exhibition-Cum-Seminar, Dr. JC Bakshi Fruit Research Station, Abohar, January 20, 2024



33.	<p>Dr. Kuldip Gupta:</p> <ul style="list-style-type: none">• “Cytopathology of reproductive tract affections in dogs”. TANUVAS, Chennai on July 7-8, 2023• Leukogram interpretation & Cytological interpretation of tumourous lesions. In one day capacity building Program on Clinical Data Interpretation for Final year students and faculty members, SKUAST, Jammu on July 25, 2023• Cytology of tumours in animals. In training on “An approach to disease diagnosis: Hands on Training on Cytology and Histopathology” on September 23, 2023
34.	<p>Dr. L.D. Singla:</p> <ul style="list-style-type: none">• “Current Status of Vector-Borne Parasitic Zoonosis in India” at Narendra Deva University of Agriculture & Technology, Kumarganj, Ayodhya, December 17, 2023• “Importance of Parasites in Public Health” Satish Chander Dhawan Government College, Ludhiana, September 16, 2023
35.	<p>Dr. SK Mahajan: “General Ophthalmological Exam in Small Animals and Affections of the Cornea” at SAPA, Gurugram, November 28, 2023</p>
36.	<p>Dr. SK Mahajan: “Surgical Management of Common Ophthalmic Affections in Small Animals” at Pet Practitioners Association of Telangana, January 7, 2024</p>
37.	<p>Dr. M Honparkhe & Ajeet Kumar: “Reproductive Ultrasonography: A Tool in Infertility Management and Advanced Obstetrical Procedures” and “Infertility Investigation in Males for Better Conception Rate” at ASCAD Training, Mhow Veterinary College, February 19-23, 2024 (Online)</p>
38.	<p>Dr. M Honparkhe: “Infertility Management in Large Ruminants by Ultrasonography Technique” at Shirval Veterinary College, Nagpur, December 13-15, 2023 (Online)</p>
39.	<p>Dr. M Honparkhe & Ajeet Kumar: “Improved Reproduction is the Way Forward for Increasing Productivity” and “Prospects of Sex-Sorted Semen in India” at IAAVR Annual Conference, LUVAS, Hisar, February 7, 2024</p>
40.	<p>Dr. Digvijay Singh: “Veterinary Physiology vis-à-vis Veterinary Extension” at SVAHE 5th Conference, KCVAS, Amritsar, October 12-14, 2023</p>
41.	<p>Dr. Piverjeet Kaur Dhillon: “Paneer and Whey Technologies” at Agri-Processing Fair, ICAR-CIPHET, Ludhiana, October 5, 2023</p>
42.	<p>Sh. Sahil: “Fish-Cum-Livestock Integrated Farming; Liming and Manuring in Aquaculture” at KVK, Barnala, March 6, 2024</p>
43.	<p>Dr. Prabjeet Singh: “Inland Saline Shrimp Farming” at Workshop for Farmers and Stakeholders, Sri Muktsar Sahib, February 2, 2024</p>
44.	<p>Dr. Prabjeet Singh: “Shrimp Farming” at State-Level Workshop for Farmers and Stakeholders, Punjab Remote Sensing Centre, PAU, Ludhiana, March 22, 2024</p>
45.	<p>Dr. Balbir Singh Khadda: “Present Status and Future Prospects of Millets Production in India” at AIASA-Rajasthan and Jagannath University, Jaipur, July 10-16, 2023</p>
46.	<p>Dr. Navjot Singh Brar: “Scientific Cultivation of Fodder Crops for Silage Making” at ICAR-ATARI, Ludhiana, April 18, 2023 (Online)</p>
47.	<p>Dr. Parul Gupta: “Capacity Building of Rural Youth Regarding Skill Development Courses” at KVK, Mohali, Government College for Women, Padijala, November 7, 2023</p>



(b) On Campus

S.No.	Name of the Faculty and Detail of the Lectures
1.	<ul style="list-style-type: none"> Dr. V. Mahajan. Exposure to the disease diagnostic tools and workflow. Dr. M.S. Bal. Systematic approaches for the outbreak investigation of infectious diseases. <p>In ICAR sponsored 21 days Winter School on “Applied Concepts in One Health to Address Zoonoses, Antimicrobial Resistance and Food Safety” on March 02, 2024</p>
2.	Dr. V. Mahajan. Animal Diseases on farm: Management Practices. In two-day refresher course for Animal Scientists at ICAR-ATARI, Ludhiana on September 01, 2023
3.	Dr. J.S. Bedi. Can Improved Farm Biosecurity Reduce the Need for Antimicrobials in Food Animals? ICAR-ATARI on September 01, 2023
4.	<ul style="list-style-type: none"> Dr. J.S. Bedi. One Health: Scope and initiatives in India Dr Simranpreet Kaur. Addressing AMR and Zoonotic diseases as emerging One Health issues. <p>In National Seminar on ‘One Health for Sustainable Future: Issues & Challenges’ at Government Girls College, Ludhiana on March 16, 2024</p>
5.	Dr. J.S. Bedi. Interdisciplinary approach to Public Health by Centre for One Health. ICAR sponsored 21 days Winter School on “Applied Concepts in One Health to Address Zoonoses, Antimicrobial Resistance and Food Safety” on February 19, 2024
6.	Dr. R.S Grewal. <ul style="list-style-type: none"> Paddy straw feeding to the field officials of Dairy Development on August 09, 2023 Precision and climate smart livestock production at ICAR-ATTARI on September 02, 2023 Using nutritional technology on augmenting productivity of bovine to VO on September 22, 2023 Strategies to develop buffalo farming in Punjab on January 11, 2024 at COABT, Ludhiana
7.	P P Dubey. Way forward in breeding for increasing productivity of dairy animals. In XXI NAVS(I) Convocation-cum-scientific convention at GADVASU, Ludhiana on July 1-2, 2023
8.	Dr Navdeep Singh. <ul style="list-style-type: none"> Reproductive management for augmenting fertility at dairy farm. In training for KVK scientists by ICAR-ATARI, Ludhiana September 1-2, 2023 Reproductive management at livestock farms on 8.9.2023 and Hands on practice on USG in Large Animals on 9.9.2023 by DEE, Ludhiana
9.	Dr Navdeep Singh. <ul style="list-style-type: none"> Demonstration and Hands-on training on color Doppler on February 28, 2023 and pregnancy diagnosis in cattle in cattle and buffalo on February 29, 2023 Hands on practice on USG in large ruminants and buffaloes on March 1, 2024. In training on “Reproductive ultrasonography for better reproductive management in small and large ruminants” by DEE, Ludhiana on February 29-March 1, 2024
10.	Dr. Digvijay Singh. Importance of feeding mineral mixture with special reference to prevention of mineral and vitamin deficiency disease in goats. In online MOOC course by GADVASU from February 05-09, 2024
11.	Dr. Ramandeep Kaur Dhaliwal. Breed characteristics and identification of dairy animals. FPO-based Scientific Dairy Farming by DEE, Ludhiana from February 13-15, 2024



12.	<p>Dr. Daljeet Kaur</p> <ul style="list-style-type: none">Record keeping and preparation of project proposal for Dairy Farm on June 21,2023 in Certificate Program in Dairy Business Management course from June 5-30, 2023Future prospects and opportunities in Poultry Farming on 22.09.2023 in Poultry farming and hatchery management” under AICRP on Poultry Breeding at LudhianaShelter Management of Backyard Poultry. In 03-days training on Backyard Poultry Farming and Evaluation Addition at PAMETTI, Ludhiana on 18.10.2023
13.	<p>Dr. Suresh. Artificial Intelligence in Modern Dairy Farming. Refresher Course for KVK Zone-1 Animal Scientists at ICAR-ATARI on September 01, 2023</p>
14.	<p>Dr. Nitin Mehta. Role of essential oils to combat the issue of food safety and antimicrobial resistance in foods of animal origins. In 21 days, winter School on “Applied concepts in One Health to address Zoonoses, Antimicrobial Resistance and Food” by COH, Ludhiana on March 05, 2024</p>
15.	<p>Dr. D.K. Gupta. Recent approaches in diagnosis and treatment of bovine mastitis. Technical Program for Research –Extension Interface meet on Precision Livestock Farming for KVKs Animal Scientists by ICAR-ATARI, Ludhiana on September 01,2023</p>
16.	<p>Dr. Gurpreet Kaur. Role of Microbiology in diagnosing and prevention of surgical infections during 33rd CAFT Course, Department of Veterinary Surgery and Radiology, Ludhiana on February 07, 2024</p>
17.	<ul style="list-style-type: none">Dr. Mudit Chandra. Practical demonstration of MALDI-ToF for rapid identification of pathogenDr. Deepti Narang. Bovine Tuberculosis: neglected and or re-emerging zoonosis? In ICAR “Applied concepts in One Health to address zoonoses, antimicrobial resistance and food safety” by COH, Ludhiana from February 19-March 06, 2024
18.	<p>Dr. J.S. Hundal</p> <ul style="list-style-type: none">Use of crop residue as alternate feed ingredients in animal feeding at ICAR-ATARI, Ludhiana on September 02, 2023Intellectual property rights, research output and maximizing research impact through collaboration on 22.09.2023, 18.10.2023 and 23.02.2024 in FIT training by HRMC, LudhianaUpcycling feed processing waste through animal feeding: A revolutionary biowaste management and environment footprint reduction strategy at COH, Ludhiana on 05.03.2024
19.	<p>Dr. Udeybir Singh Chahal</p> <ul style="list-style-type: none">Use of Paddy Straw in Animal Production. Workshop on “Practical demonstration on urea and molasses treatment of paddy straw” by DDB, Punjab on 14.08.2023Preparation of Mineral mixture, Uromin lick, By pass fat, by pass protein and feed analysis. Specialized dairy farming training course by DEE, Ludhiana November 20-December 4, 2023Analysis and Reporting of Milk and Feed Samples. In workshop for Dairy Development Department of Punjab “Use of NIR for feed and fodder testing” from February 22-23,2024Production of silage at PAMETI training on
20.	<p>Dr. Amit Sharma. How to prepare test report to make it more understandable. In training on “Analysis and reporting of milk and feed samples by DEE, Ludhiana on 22-02-2024</p>



21.	Dr. Paramjit Kaur. Medicinal plant as an alternative approach to anthelmintic resistance in ruminants. In online training on “Ethnoveterinary practice” by Department of Veterinary Pharmacology & Toxicology, Ludhiana. 01-13.05.2023
22.	Dr. L.D. Singla. <ul style="list-style-type: none"> • Vector Borne Parasitic Diseases of Zoonotic Importance” during training course on “One Health Approach for Protection of Animal Health” from 31st July to 5th August 2023 by Centre for one Health, GADVASU, Ludhiana. • Opportunities and scope of human resource development in one health context. In 21 days Winter School on “Applied concepts in One Health to address Zoonoses, Antimicrobial Resistance and Food” from 19 February 2024 to 10 March 2024, Centre for One Health, GADVASU, Ludhiana.
23.	Dr. N. K. Singh. Emerging resistance for anti-parasitic drugs: How to tackle the challenge with sustainable approaches on July 31, 2023 and 28.02.2024 in training organized at COH, Ludhiana
24.	Dr. Harkirat Singh. Practical demonstration of the advanced molecular and rapid diagnostic tools in the diagnosis of parasites of animal and public health significance. 28.02.2024. In training organized at COH, Ludhiana
25.	<ul style="list-style-type: none"> • Dr. Navdeep Singh Basics of Radiographic interpretation on 16.01.24 and Anesthesia case discussion on 09.01.2024 • Dr. J. Mohindroo. Interpretation of selected small and large animal radiographs on 18.01.24 Demonstration of anaesthetic procedures in canine patients on 09.01.2024 • Dr. S.K. Mahajan. Basics of Ultrasound on 16.1.24 and Induction and maintenance of general anesthesia using total intravenous anesthesia on 10.01.2024 • Dr. Arun Anand. Radiographic interpretation of thoracic disorders on 18.1.24 and Maintenance of general anesthesia using Inhalant anesthetic agents on 10.01.2024 • Dr. Ashwani Kumar. Ultrasonography of abdomen and thorax in large animals on 17.1.24 and Anesthetic emergencies and how to handle them on 11.01.2024 • Dr. Tarunbir Singh. Pre-anaesthetic protocols and considerations in canine patients. 09.01.2024 • Dr. Pallavi Verma. Demonstration of Abdominal ultrasound in small animals on 17.01.24 and General anesthesia induction and maintenance in large animal patients on 09.01.2024 • Dr. Vandana Sangwan. Demonstration of ultrasound in large animals on 17.01.2024 • Dr. N Umeshwori Devi. Working of ultrasound machine and Knobology 16.01.2024 and Demonstration of anesthesia in large animals on 11.01.2024 • Dr. Jasmeet Singh Khosa. Interpretation of selected small and large animal radiographs on 17.1.2024 • Dr. Harmanpreet Singh. Radiographic evaluation of abdomen in small and large animals on 17.1.2024 • Dr. Nikita Gupta. Basics of interpreting small and large animal radiographs on 16.01.2024 and Case discussion on anesthesia cases on 11.01.2014 • In training of DIMSCA in GADVASU



26.	<ul style="list-style-type: none">• Dr Navdeep Singh. Special Consideration in large animal anesthesia on 30.1.2024• Dr J. Mohindroo. Radiographic evaluation of Lungs, Mediastinum and Pleural Space on 23.1.2024 and Ultrasonography of canine abdomen 24.01.2024• Dr S.K. Mahajan. Monitoring of anesthesia in small and large animals on 26.01.2024 and Diagnostic evaluation of eye in Veterinary patients 29.1.2024• Dr Arun Anand. Radiographic evaluation of Heart and major Vessels in small animals on 24.01.2024 and Restorative dentistry in small animals on 29.01.2024• Dr Ashwani Kumar. Diagnosis and surgical management of intestinal affections in bovine 09.02.2024• Dr Tarunbir Singh. Application of bone plating and interlocking nailing in Veterinary orthopedics on and Clinical application of arthroscopic procedures for diagnosis and treatment of skeletal disorders on 31.01.2024• Dr Pallavi Verma. Doppler Ultrasonography in Veterinary patients & Role of endoscopy in diagnosis of gastro-intestinal tract disorders in small animals on 05.03.2024• Dr Vandana Sangwan. Radiographic affections of fore stomach and thoracic affections and Ultrasonography of fore stomach in large animals on 25.01.2024• Dr. N Umeshwori Devi. Corneal grafting technique in Veterinary Surgery on 30.1.2024; Application of skin flaps in reconstructive surgery on 01.02.2024• Dr Jasmeet Singh Khosa. Equine colic patients: Surgical judgment and management 03.02.2024 Evaluation of lame horse on 01.03.2024• Dr Harmanpreet Singh. Surgical management of fore stomach disorders in bovine on 09.02.2024 and Recent trends in soft tissue surgery in small animals 12.02.2024• Dr Nikita Gupta. Basic orthopedic procedures in Veterinary Practice on 30.01.2024• In ICAR-CAFT training at Department of Surgery & Radiology, Ludhiana from January 23- February 12, 2024
27.	<ul style="list-style-type: none">• Dr Navdeep Singh. Large animal abdominal surgery on 06.02.2024; Case discussion on large animal surgery 20-21.9.2021• Dr J. Mohindroo. Large Animal Radiography on 06.02.2024; Radiographic interpretation of thoracic disorders 20.12.2023; Hands on training on large animal surgical procedures 20.09.2023• Dr S.K. Mahajan. Large Animal Radiography on 6.2.2024; Working of ultrasound machine and knobology 20.9.2023; Hands on training on large animal surgery 21.9.2023• Dr. Arun Anand. Interpretation of selected small animal and large animal radiographs 20.12.2023 and Hands on training on large animal surgical procedures 23.09.2023• Dr Ashwani Kumar. Ultrasonography of abdomen and thorax in large animals 20.12.2023 Hands on training on large animal surgical procedures on 20.09.2023• Dr Tarunbir Singh. Basics of interpreting small and large animal radiographs on 18.12.2023; Hands on training on large animal surgical procedures & Orthopedic Procedures in large animals on 20.09.2023• Dr Pallavi Verma. Ultrasonography of abdomen in small animals on 19.12.2023; Hands on training on large animal surgery 21.09.2023; Large animal abdominal surgery on 06.02.2024• Dr Vandana Sangwan. Ultrasonography of abdomen and thorax in large animals on 20.12.2023; GIT Surgery Procedures in large animals on 20.09.2023; Hands on training on large animal surgery & Case discussion on large animal surgery on 21.09.2023; Practical interpretation of radiographs 6.2.2024



	<ul style="list-style-type: none"> • Dr. N Umeshwori Devi. Practical interpretation of radiographs on 6.2.2024; Basics of Ultrasonography 18.12.2023; Hands on training on large animal surgery & Case discussion on large animal surgery on 21.09.2023 • Dr Jasmeet Singh Khosa. Practical interpretation of radiographs Radiographic evaluation of abdomen in small and large animals 19.12.2023; Hands on training on large animal surgical procedures 20.9.2023 • Dr Harmanpreet Singh. Radiographic evaluation of abdomen in small and large animals on 19.12.2023 • Dr Nikita Gupta. Basics of Radiographic interpretation 18.12.2023 • In trainings organized by Directorate Extension Education, Ludhiana
28.	Dr Swaran Singh Randhawa. Way forward in HEALTH for increasing productivity of dairy animals; Issues pertaining to Livestock Health in India. In NAVS conference from July 1-3, 2023
29.	Dr. Raj Sukhbir Singh <ul style="list-style-type: none"> • Mastitis control pregame in bovine. Centre for One Health, Ludhiana on August 3, 2023 • Advances in diagnosis & management of canine renal failure at TVCC, Ludhiana November 23, 2023 • Clinical approach to a neurologic canine patient. In ICAR-CAFT training at Department of Surgery & Radiology, Ludhiana from January 23- March 01, 2024
30.	Dr Anju Poonia <ul style="list-style-type: none"> • Basics of Echocardiography. In ICAR-CAFT training at Department of Surgery & Radiology, Ludhiana from January 23- February 12, 2024 • Ultrasonography of abdomen in small animals in MP VO training by VSR, Ludhiana • Ultrasonography of abdomen in small animals in SC/ST VO of Punjab training by VSR, Ludhiana
31.	Dr. R K Sharma <ul style="list-style-type: none"> • EVP for digestive problems in animals and EVP for general health problems in animals. Veterinary Pharmacology and Toxicology Ludhiana 08.05.2023 • Preventive measures for common diseases of dairy animals, DEE, Ludhiana 09.06.2023
32.	Dr. R K Sharma Infertility in dairy animals; EVM for common ailments; Metabolic diseases of dairy animals. Punjab Dairy Development Board 11-13.07.2023
33.	Dr. R K Sharma. Ethno-veterinary practices. At KVK, Tarn Taran on 14.10.2023 and KVK, Mohali on 17.10.2023
34.	Dr Rajesh Kasrija <ul style="list-style-type: none"> • Various Government schemes for Goat farmers. In awareness camp at Sangwa (Patti) Tarn Taran on 20.02.2023 • Designing various extension tools; Communication patterns: diffusion and adoption of animal husbandry practices, Strategies for making effective farmer groups and community buildings; Concept of need and need based extension. In Certificate course in Dairy Business Management by DEE from June 05-30, 2023 • Reproductive disorders in dairy animals. In training Program for Dairy field assistants, Dairy Development board, Punjab from 26.06.2023 to 21.07.2023 • Tips for Profitable Dairy and Goat farming- an evergreen enterprise at PAU on 21.09.2023
35.	Dr. Akshita Chadda. Value chain analysis of sheep and goat farming by Licious and Sathya Zero grazing organization on 04.12.2023 (Online)



36.	<p>Dr. M. Honparkhe</p> <ul style="list-style-type: none">• Augmentation of fertility in buffaloes and cows Ultrasonographic evaluation of bovine genitalia in training at VGO by DEE, Ludhiana on September 23, 2023• Reproductive ultrasonography in dairy animals. In CAFT training of Veterinary Surgery & Radiology from January 23-February 12, 2024• Basics of ultrasonography procedures, Machine set ups, Buttonology care and maintenance of ultrasound machines; Practical demo and Hands on practice on ultrasonography; Ultrasonographic characteristics of normal and abnormal tubular genital tract of bovines in training by DEE, Ludhiana on January 29, 2024• Role of ultrasonography in infertility diagnosis in dairy animals; An update on cystic ovarian follicles in dairy animals in training at VGO by DEE, Ludhiana on February 26-28, 2024• Advanced technologies for management of female infertility in farm animals in training at VGO by DEE, Ludhiana on February 09, 2024
37.	<p>Dr. A K Singh</p> <ul style="list-style-type: none">• Semen evaluation and factors affecting its quality under field conditions in training at VGO by DEE, Ludhiana on September 23, 2023• Reproductive management of pigs in training by DEE, Ludhiana on 21.11.23• Ultrasonographic characteristics of normal and abnormal ovarian structures of bovines in training by VGO, Ludhiana on January 30, 2024• Various obstetrical instruments for efficient handling of dystocia 29.02. 2024; Uterine involution and strategies to reduce it 03.01.2024 in training by VGO, Ludhiana
38.	<p>Dr. Nakul Gulia</p> <ul style="list-style-type: none">• Demonstration on uterine cytobrush technique on 27.02.2024• Pre-partum and Post-partum genital prolapse and its clinical management 29.02.2024• Hands on practice on USG in large ruminants 09.02.2024 <p>In trainings organized by Directorate Extension Education, Ludhiana</p>
39.	<p>Dr. Amarjeet Bisla</p> <ul style="list-style-type: none">• Strategies to reduce uterine infections in dairy animals on 26.02.2024• Demonstration on uterine cytobrush technique; FTAI protocols in bovine reproductive management on 27.02.2024• Application of alphavirus in bovine on 29.02.2024• Reproductive and obstetrical disorders in goats on 09.02.2024 <p>In trainings organized by Directorate Extension Education, Ludhiana</p>
40.	<p>Dr. Abhishek Srivastava</p> <p>Modulatory effect of dietary herbal supplements on fish growth, health and reproductive potential. In Online course in Ethno-Veterinary Practices May 9, 2023 (Online)</p>
41.	<p>Dr. Anuj Tyagi</p> <p>Addressing Antimicrobial Resistance in the environment through genomics and meta-genomics approach. ICAR-sponsored Winter School on “Applied Concepts in One Health to Address Zoonoses, Antimicrobial Resistance and Food Safety by Centre for One Health from February 19-March 10, 2024.</p>



42.	<ul style="list-style-type: none"> • Dr. B.K. Bansal. Udder and Teat Morphometry in Relation to Udder Health and Milk Quality in Dairy Cows • Dr. Ravindran R. Significance of Anatomy in Diagnostic Cytology • Dr. Varun Bassessar, Dr. Ravindran, Dr. Priyanka. In Hand Post Mortem Examination of Different Domestic Animals • Dr. Priyanka (VPP), Dr. Ravindran R. and Dr. Varun Bassessar. Applications of Immunohistochemistry in Veterinary Sciences • Dr. Yashwant Singh. Morphological parameters: An important selection criterion for a breeding bull • Dr. Priyanka. Technological Advances in Flow Cytometry and their Applications in Veterinary Cellular Anatomy • Dr. Priya. Morphological traits and their linkage with production of dairy animals • Dr. Afroz Jahan. Recent Advancements in Anatomical, Physiological and Pharmacological Perspectives of Blood Brain Barrier • Dr. M.K. Lonare. Fundamentals of Animal Research Ethics: Balancing Scientific Progress and Animal Welfare • Dr Vikrant Sudan. Comparative anatomical analysis of developmental stages in the life cycle of various parasites • Dr. Chetna Mahajan. Various cellular and blood biochemical profiling in Veterinary Clinical Practice <p>In ICAR Short course “Evolving Trends in Applied Anatomy and its Implications in Veterinary Clinical Practice by Department of Veterinary Anatomy, Rampura Phul from February 7-16, 2024</p>
43.	Dr. Suryendra Singh Summer (Maize and Greengram) crops production technologies. Dept. of Agri. & Farmer Welfare, Barnala on 5.04.2023
44.	<p>Dr. Anil Kumar</p> <ul style="list-style-type: none"> • Role of KVKs in strengthening FPOs and marketing opportunities in Workshop by Synergy Technofin on 19.05.2023 • Soil health management practices for better crop production in Kisan Mela by Deptt. of Agriculture at Naushehra Pannuan on 16.08.2023 • Nutrient management in rabi season crop at Gandiwind on 21.12.2023 • Micronutrient management in pear crop and leaf sampling at Kulla, Patti 04.08.2023 • KVKs role in uplifting farmers’ income and livelihood at Amritsar on 05.09.2023
45.	<p>Dr. Piverjeet Kaur Dhillon</p> <ul style="list-style-type: none"> • Value added milk products by PDDDB, Tarn Taran on 21.06.2023 • Chemical composition of milk, Nutritive value and detection of adulterants in milk by PDDDB, Tarn Taran on 11.07.2023 • Demonstration on flavored milk by PDDDB, Tarn Taran on 18.07.2023 • Paneer technology and Dairy mechanization at PDDDB, Tarn Taran 18.10.2023 • Value addition of milk through diverse processing techniques at PDDDB, Tarn Taran on 28.11.2023 • Value addition techniques in vegetables at FASC, Tarn Taran on 01.03.2024
46.	Dr. Prabhjinder Singh Value addition of milk through diverse processing techniques at PDDDB, Tarn Taran on 14.11.2023
47.	Dr. Prabjeet Singh. Shrimp Farming at College of Fisheries 22.02.2024



48.	<p>Balbir Singh Khadda</p> <ul style="list-style-type: none">• Scientific management of dairy animals by Department of agriculture and farmers welfare, SAS Nagar on 12.04.2023• Nutrition management of dairy animals by Department of Agriculture, SAS Nagar on 22.09.2023• Fodder crops of <i>kharif</i> and <i>rabi</i> season, selection of field, seed treatment, seed rate, fertilizer management and harvesting stage of fodder crops• Nutrition management of dairy animals; Importance of green fodder for dairy animals at Dairy training and extension service centre at Chatamli (Ropar) on 24.01.2024 & 12.03.2024• Goat farming an economic venture for rural women at Govt. College for Women, Padiala, Mohali on 07.11.2023
49.	<p>Dr Navjot Singh Brar</p> <ul style="list-style-type: none">• Scientific cultivation of <i>kharif</i> crops by Department of agriculture and farmers welfare, SAS Nagar 12.04.2023 & 22.09.2023• Fodder crops of <i>kharif</i> and <i>rabi</i> season, selection of field, seed treatment, seed rate, fertilizer management and harvesting stage of fodder crops on 17.05.2023 & 28.07.2023• Round the year fodder production, Importance of hay and silage making, and method to prepare hay and silage at 17.05.2023 & 28.07.2023 at Chatamli (Ropar) Dairy training and extension service centre Integrated nutrient management in rabi crops at National fertilizer Ltd, Dera Bassi on 06.10.2023
50.	<p>Dr. Parul Gupta</p> <ul style="list-style-type: none">• Health benefits of Honey and its value addition Khadi, Chandigarh on 19.05.2023• Formation of SHGs and FPO at Dera Jagadri 04.08.2023• Recent techniques in baking technology & Formation of SHGs by Department of Soil and Water Conservation, Mohali on 1.09.2023
51.	<p>Dr. Komal</p> <ul style="list-style-type: none">• Management of Dairy Animals in winter by PDDDB, Mohali 10.01.2024• Goat and Poultry farming by FASC, Ropar on 04.03.2024• Breeds of Poultry at KVK, Ropar on 05.03.2024
52.	<p>Dr. Munish Sharma</p> <ul style="list-style-type: none">• Crop Residue management Govt. College for Women, Patiala, Mohali on 7.11.2023• Scientific cultivation of vegetables and fruits by Department of Agriculture & ATMA Distt Mohali on 12.04.2023 & 22.09.2023
53.	<p>Dr. Bimal Sharma. Prevention of diseases of animals. Dairy Development Centre, Abul Khurana on 19.05.2023</p>
54.	<p>Dr. Mohinder pal Singh. Diseases of animas. Dairy Development Centre, Abul Khurana on 23.07.2023</p>

DISTINGUISHED VISITORS AT KRISHI VIGYAN KENDRAS

Sr. no.	Name and other details of the visitor	Date(s) of visit
1.	Dr. Manoj Sharma, Professor, Directorate of Extension Education, PAU, Ludhiana visited at KVK, Barnala	01.06.2023
2.	Mrs. Poonamdeep Kaur, Deputy Commissioner Barnala with other officers, Dr Jagdish Singh, Chief Agricultural Officer, Barnala, and Dr. Parminder Singh, Soil Conservation Officer visited at KVK, Barnala	13.10.2023
3.	Dr. Inderjit Singh, Honorable Vice-Chancellor, Dr. Prakash Singh Brar, Director Extension Education, Dr. Ashok Kumar, former Director Extension Education, PAU, Ludhiana, Dr. R. S. Grewal, Director Livestock Farm, and others visited KVK, Barnala	21.12.2023
4.	Mr. Admark, The PUM Netherland Senior Expert, from Holland at KVK Barnala	01.01.2024
5.	Dr. Baljinder Kumar, Dean, COVS Rampura Phul at KVK Barnala	30.03.2024
6.	S. Laljit Singh Bhullar, Cabinet Minister Transport, Rural development and Panchayats, Punjab, S. Rana Gurjeet Singh, MLA, Kapurthala at KVK, Tarn Taran	09.12.2023
7.	Mr Adrianus Johannes Martinus, PUM, Netherland at KVK, SAS Nagar	28-29.01.2023
8.	Dr. Anil Kumar ADG (Coordination) ICAR-New Delhi at KVK, SAS Nagar	02.06. 2023
9.	Dr. Inderjeet Singh, Hon'ble Vice Chancellor at KVK, SAS Nagar	20.12. 2023- 24.02. 2024
10.	Dr. Parvender Sheoran, Director ICAR-ATARI, Ludhiana at KVK, SAS Nagar	22.03.2024
11.	Sh. Karambir Singh Ghuman, MLA, Dasuya Constituency, Punjab at RRTC, Talwara	10.10.2023



Dr. Manoj Sharma, Professor at KVK, Barnala



Dr Parakash Brar, DEE at KVK, Barnala



Dr. Inderjit Singh, VC, Dr Parkash Singh Brar, DEE at field farms of KVK, Barnala



Mr. Admark, The PUM Netherland Senior Expert, Holland at farms of Barnala



Sh. Karambir Singh Ghuman MLA Dasuya Constituency at RRTC, Talwara



S. Laljit Singh Bhullar, Cabinet Minister Transport, Rural Development and Panchayats, Punjab, S. Rana Gurjeet Singh, MLA, Kapurthala at KVK, Tarn Taran



DISTINGUISHED VISITORS AT GURU ANGAD DEV VETY & ANIMAL SCIENCES UNIVERSITY CAMPUS, LUDHIANA

Sr. no.	Name and other details of the visitor	Date(s) of visit
1.	Dr. Falgunee Parekh, Principal Scientist of EpiPointe, North Carolina, USA at COABT, Ludhiana	18.05.2023
2.	Dr. Saji George, Associate Professor, Department of Food Science and Agricultural Chemistry & Canada Research Chair in Sustainable Nanotechnology for Food and Agriculture, McGill University, Canada at CODST, Ludhiana.	04- 16.06.2023
3.	S. Gurmeet Singh Khuddian, hon'ble Animal Husbandry, Dairy & Fisheries Minister, Punjab visit dairy farm of university campus	24.06.2023
4.	Dr. Umesh Singh, Director, ICAR-CIRC, and Dr. A K Das PI, FPT Project visited at dairy farm of university	02-04.07.2023
5.	Shri Parshottam Rupala, Minister for Fisheries, Animal Husbandry and Dairying, Government of India.	01.07.2023
6.	Dr. R S Sodhi, President, Indian Dairy Association, Chairman NIFTEM-T, Board Member- International Dairy Federation Brussels, Ex-Managing Director AMUL visited COABT, Ludhiana	04.07.2023
7.	Dr. Elaine Maria Seles Dorneles, Professor, Department to de Medicina Veterinária Preventiva, Escola de Veterinária, Laboratório de Bacteriologia Aplicada, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil	10-18.07.2023
8.	Dr. N. Senthil Kumar Dean, School of Life Sciences, Professor in Biotechnology, Mizoram University, Aizawal, Mizoram	11-18.07.2023
9.	Prof. Dr. Sajid Maqsood, Professor & Department Chair, Department of Food Science, UAE University, UAE at COF, Ludhiana	17-21.07.2023
10.	Dr. Christopher Luby Assoc. Prof. & Head, Large Animal Clinical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, Canada	01 –10.08.2023
11.	Dr. Sarda Parsanna Sahoo, Director, Central Cattle Breeding Farm, Chiplima, Department of Animal Husbandry & Dairying, Ministry of Fisheries Animal Husbandry & Dairying, Government of India	01-04.08.23
12.	Dr. Sandeep Singh Kaura, Advisor, National Skill Development Corporation, MSDE, GOI and Advisor to Govt. of Punjab to Veterinary Clinics	05.08.2023
13.	Sh. Gurmeet Singh Khudian. -Hon'ble Cabinet Minister, Animal Husbandry, Fisheries and Dairy Development	05.08.2023
14.	Dr. Chandra Shekhar Pareek, Full Professor, Department of Veterinary Preclinical Science, Institute of Veterinary Medicine, Nicolaus Copernicus University, Poland	01-11.08.2023
15.	Dr. Venkatesan Sundaram, Associate Professor, School of Veterinary medicine University of the West Indies, Trinidad and Tobago	07-11.08.2023
16.	Dr. Vineet Kumar Singh, Professor, A.T. Still University of Health Sciences, USA	20-26.08.2023



17.	Dr. Azad Ismail Saheb, Research Scientist, Aquaculture Program, Environmental and Life Sciences Research Centre (ELSRC), Kuwait Institute for Scientific Research Salmiya Campus, Kuwait at COF, Ludhiana	26-30.08.2023
18.	Dr. AK Mohanty, Director, ICAR-CIRC, Meerut visited COABT, Ludhiana	15.09.2023
19.	Dr. Adhiraj Mishra, Assistant Commissioner (AH), Department of Animal Husbandry & Dairying, Ministry of Fisheries Animal Husbandry & Dairying, Government of India	18-19.09.23
20.	Dr Abdullahi Ribadu, Professor, National Universities Commission (NUC), Abuja, Nigeria	18-27.09.2023
21.	Prof. Rotimi E. Aluko, Director, Richardson Centre for Food Technology and Research Professor, Department of Food and Human Nutritional Sciences, University of Manitoba, Canada at COF, Ludhiana	11-15.10.2023
22.	Dr. Abdullahi Yusufu Ribadu, Ex-Secretary General of the Association of West African Universities and former Vice Chancellor of the Federal University of Technology, Yola; and Sule Lamido University, Nigeria at CODST, Ludhiana	23.10.2023
23.	Mr Martijin Steenaert, PUM Netherland Senior Expert, Holland	18- 25.11.2023
24.	Dr. N. Felix Vice-Chancellor, Dr. J. Jayalalithaa Fisheries University, Nagapattinam, Tamil Nadu visited COF, Ludhiana	18.03.2024
25.	Dr. N. H. Kelawala Vice-Chancellor, Kamdhenu University, Gujarat at COF, Ludhiana	20.03.2024
26.	Dr. Tilak Chandra Nath, Director (External Affairs) Sylhet Agricultural University, Bangladesh, Bangladesh visited Directorate of Human Resource Management Centre, GADVASU, Ludhiana	12.07.2023
27.	Dr. Eduardo Leano, Senior Program Officer, Network of Aquaculture Centers in Asia-Pacific (NACA) Bangkok, Thailand visited Directorate of Human Resource Management Centre, GADVASU, Ludhiana	11.03.2024
28.	Dr Parul Rishi, Faculty HRM and Chairperson, Centre for Corporate Social Responsibility, Indian Institute of Forest Management, Bhopal, Madhya Pradesh visited Directorate of Human Resource Management Centre, GADVASU, Ludhiana	27.03.2024
29.	Padma Bhushan Dr. RS Paroda, Chairman, Trust for Advancement of Agricultural Sciences (TAAS), New Delhi, and Former Director General, Indian Council of Agricultural Research (ICAR) alongwith Padma Shree Dr. G. S Khush, Father of Rice Revolution and World Food Prize at during 47 th Vice Chancellors Convention of Indian Agricultural Universities Association	17.03.2024
30.	Dr. Sukhpal Singh, Chairman, Punjab State farmers and farmer workers Commission and S. Kuldip Singh Jassowal, Director, Dairy Development Department during Pashu Palan Mela	14.03.2024
31.	Sh. Mohinder Singh Gill, International Triple Jumper at 16th Annual Athletic meet GADVASU, Ludhiana	12.03.2024
32.	Governor of Punjab, Shri Banwarilal Purohit, Chancellor of the University, Dr O. P. Chaudhary, Joint Secretary, National Livestock Mission, Government of India and Dr DVR Prakash Rao, President of National Academy of Veterinary Sciences at 4 th Vet Varsity Convocation	06.03.2024



33.	Dr. Ashok Kumar, Assistant Director General of ICAR, New Delhi at Centre One Health, GADVASU, Ludhiana	05.03.2024
34.	Dr. Ravishankar, C. N., Director and Vice-Chancellor, ICAR-CIFE, Mumbai, College of Fisheries, GADVASU, Ludhiana	01.03.2024
35.	Dr. Loleen Berdhal, Professor and Executive Director and Dr. Jay Wilson, Professor from the University of Saskatchewan, Saskatoon, Canada visited College of Veterinary Science, GADVASU, Ludhiana	16.02.2024
36.	Padma Shri Dr. K K Sarma visits Department of Surgery & Radiology (VSR), GADVASU, Ludhiana	05.02.2024
37.	S. Kashmir Singh, Joint Director, Dairy Development Department at Directorate of Extension Education, GADVASU, Ludhiana	30.01.2024
38.	Member of Legislative Assembly from Ludhiana West, Sh. Gurpreet Singh Gogi visited at Dog show	03.12.2023
39.	Dr. Navin Kumar Jain, National Coordinator, Institutional Development Plan (IDP), Dr. Sangeeta Toor, Director and Dr. G.S. Bedi, Joint Director Department of Animal Husbandry, Punjab at Alumni Meet-2023 GADVASU, Ludhiana	18.11.2023
40.	Dr. R S Sodhi, President, Indian Dairy Association (IDA), Dr Kamal Kumar Garg, IAS, Additional Secretary, Department of Science, Technology and Environment., Government of Punjab alongwith other dignitaries at International Conference on Dairy Engineering Applications at College of Dairy Science and Technology, GADVASU, Ludhiana	13-14.10.2023
41.	Dr Rajesh Sharma, Senior Manager NDDDB, Dr Renu, GM (procurement) Milkfed at Guru Angad Dev Veterinary and Animal Sciences University	09.08.2023
42.	Dr. R.K. Singh, President ISVIB at College of Animal Biotechnology, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	19.07.2023
43.	Shri Parshottam Rupala, Minister for Fisheries, Animal Husbandry and Dairying, Government of India. S. Gurmeet Singh Khuddian, Minister for Agriculture, Animal Husbandry, Fisheries, Dairy Development and Food Processing, Govt. of Punjab, Dr DVR Prakash Rao, President, NAVS (I), Dr Umesh ChandraSharma President VCI alongwith other dignitaries at XXI NAVS Convocation-cum-Scientific Convention, GADVASU, Ludhiana	02.07.2023
44.	S. Kultar Singh Sandhwan, Speaker, Punjab Legislative Assembly visited Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana	30.05.2023



Dr. Venkatesan Sundaram from University of West Indies, Trinidad, and Tobago interacting with students



Dr. Elaine Maria Seles Dorneles, Professor, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil at COVS, Ludhiana



Dr. Christopher Luby, University of Saskatchewan, Canada at dairy farm of university



Dr Abdullahi Ribadu, National Universities Commission (NUC), Abuja, Nigeria with post graduate students at clinics



Dr. V.K. Singh, Professor, A.T. Still University of Health Sciences, USA Interaction with students of COVS, Ludhiana



Dr. Saji George, Department of Food Science and Agricultural Chemistry & Canada Research Chair in Sustainable Nanotechnology for Food and Agriculture, McGill University, Canada interaction with students of CODST



*Prof. Dr. Sajid Maqsood, UAE University, UAE at
College of Fisheries*



*Dr. Azad Ismail Saheb, Institute for Scientific
Research Salmiya Campus, Kuwait UAE at
College of Fisheries*



*Prof. Rotimi E. Aluko, University of Manitoba,
Canada at College of Fisheries*



*Dr. Asim K. Pal, Former Joint Director, ICAR-
Central Institute of Fisheries Education (CIFE),
Mumbai*



*Dr. N. Felix, Vice-Chancellor; Dr. J. Jayalalithaa
Fisheries University (TNJFU), Nagapattinam,
Tamil Nadu*



*Dr. N. H. Kelawala Vice-Chancellor, Kamdhenu
University, Gujarat at Collge of Fisheries*



Prof. Abdullahi Yusuf Ribadu, Ex-Secretary General of the Association of West African Universities & former Vice Chancellor of the Federal University of Technology, Yola; and Sule Lamido University, Nigeria with Dean and faculty of Animal Biotechnology College



Mr R S Sodhi, President, Indian Dairy Association, Chairman NIFTEM-T, Board Member- International Dairy Federation Brussels, Ex-Managing Director AMUL visited COABT, Ludhiana



Dr. Tilak Chandra Nath, Director (External Affairs) Sylhet Agricultural University, Bangladesh, Bangladesh



Dr. Eduardo Leano, Senior Program Officer, Network of Aquaculture Centers in Asia-Pacific (NACA) Bangkok, Thailand



Dr Parul Rishi, Faculty HRM and Chairperson, Centre for Corporate Social Responsibility, Indian Institute of Forest Management, Bhopal, Madhya Pradesh



Padma Bhushan Dr. RS Paroda and Padma Shree Dr. G. S Khush and others during 47th Vice Chancellors Convention of Indian Agricultural Universities Association



Dr. Sukhpal Singh, Chairman, Punjab State farmers and farmer workers Commission and S. Kuldip Singh Jassowal, Director, Dairy Development Department at Pashu Palan Mela, GADVASU, Ludhiana



Padma Shri Dr. K K Sarma visits Department of Surgery & Radiology (VSR), GADVASU, Ludhiana



Governor of Punjab, Shri Banwarilal Purohit, Chancellor of the University at 4th Vet Varsity Convocation GADVASU, Ludhiana



Dr. Ashok Kumar, Assistant Director General of ICAR, New Delhi at Centre One Health, GADVASU, Ludhiana



Dr. Ravishankar, C. N., Director and Vice-Chancellor, ICAR-CIFE, Mumbai, College of Fisheries, GADVASU, Ludhiana



Dr. Loleen Berdhal, Professor and Executive Director and Dr. Jay Wilson, Professor from the University of Saskatchewan, Saskatoon, Canada visited College of Veterinary Science, GADVASU, Ludhiana



Member of Legislative Assembly from Ludhiana West, Sh. Gurpreet Singh Gogi visited at Dog show



Dr. R S Sodhi, President, Indian Dairy Association (IDA), Dr Kamal Kumar Garg, IAS at College of Dairy & Food Sciences Technology



Dr Rajesh Sharma, Senior Manager NDDDB, Dr Renu, GM (procurement) Milkfed at Guru Angad Dev Veterinary and Animal Sciences University



Shri Parshottam Rupala, Minister for Fisheries, Animal Husbandry and Dairying, Government of India. S. Gurmeet Singh Khuddian, Minister for Agriculture, Animal Husbandry, Fisheries, Dairy Development and Food Processing, Govt. of Punjab, Dr DVR Prakash Rao, President, NAVS (I), Dr Umesh Chandra Sharma President VCI alongwith NAVS(I) Governing Council Members during XXI National Academy of Veterinary Sciences Convocation-cum-Scientific Convention



S. Kultar Singh Sandhwan, Speaker, Punjab Legislative Assembly visited Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana



VISIT ABROAD:

S. No.	Name of Faculty	Place of Visit	Dates of Visit	Purpose of Visit
1.	Dr. Shakti Kant Dash	Katholieke University, Belgium	20.09.2023 to 18.12.2023	Faculty International Training
2.	Dr. Gursimran Falia	University Putra, Malaysia	06.09.2023 to 20.09.2023	Exposure Visit to Disease Diagnostic Lab under IDP
3.	Dr. Neeraj Kashyap	University of Wisconsin-Madison, USA	29.09.2023 to 18.12.2023	Training on “Application of Data Science and AI/ML in Phenomics Applied to Animal Breeding, Genetics, and Genomics” under the IDP-NAHEP Project
4.	Dr. Bharti Deshmukh	University of Wisconsin-Madison, USA	29.09.2023 to 18.12.2023	Faculty International Training under the IDP-NAHEP Project
5.	Dr. Devendra Pathak	Western College of Veterinary Medicine, USA	15.08.2023 to 14.10.2023	Training on Development of a 3D Model of the Skeleton and Visceral Organs Based on CT or MRI Data
6.	Dr. Rajnish Sharma	Western College of Veterinary Medicine, University of Saskatchewan, Canada	01.08.2023	Faculty International Training under the IDP-NAHEP Project
7.	Dr. Pankaj Dhaka	Ghent University, Belgium	15.12.2022 to 14.03.2023	Faculty International Training under the IDP-NAHEP Project
8.	Dr. S.T. Singh	Massey University, New Zealand	21.08.2023 to 14.10.2023	Faculty International Training under the IDP-NAHEP Project
9.	Dr. Gurjot Kaur Mavi	University of São Paulo, Brazil	19.07.2023 to 11.12.2023	Faculty International Training under the IDP-NAHEP Project
10.	Dr. O.P. Malav	Mahidol University, Thailand	01.09.2023 to 30.11.2023	Faculty International Training under the IDP-NAHEP Project
11.	Dr. Ashwani Kumar Sharma	Cornell University, Ithaca, USA	13.09.2023 to 13.10.2023	Global Perspectives, Advances, and Hands-On Training in Large Animal Internal Medicine
12.	Dr. Dhiraj Kumar Gupta	Wayne State University, USA	11.04.2023 to 09.07.2023	Research on Retinal and Vascular Pathologies in Diabetes, Their Diagnosis, and Future Treatment Options
13.	Dr. Mudit Chandra	University of Florida, Gainesville, USA	01.10.2023 to 17.12.2023	Faculty International Training under the IDP-NAHEP Project
14.	Dr. Gurpreet Kaur	Louisiana State University, Shreveport, USA	28.10.2023 to 17.12.2023	Faculty International Training under the IDP-NAHEP Project

15.	Dr. Udeybir Chahal	University of Belgrade, Serbia	10.05.2023 to 24.05.2023	Nutritional Intervention for Sustainable Animal Production
16.	Amit Sharma	Iowa State University, USA	01.07.2023 to 30.09.2023	Training on Feed Efficiency in Dairy Animals
17.	Dr. N.K. Singh	Panama City, Panama	12.03.2024 to 14.03.2024	Attending FAO Expert Meeting on “Acaricide Resistance Management in Livestock Ticks”
18.	Dr. S.K. Mahajan	Aristotle University of Thessaloniki, Greece	06.09.2023 to 20.09.2023	Faculty International Training under the IDP-NAHEP Project
19.	Dr. Ashwani Kumar	New Bolton Center, Pennsylvania, USA	15.09.2023 to 30.09.2023	Faculty International Training under the IDP-NAHEP Project
20.	Dr. Chanchal Singh	University of Newcastle, Australia	29.09.2023 to 28.11.2023	Training on “Advanced Techniques in the Development of Diagnostic and Prognostic Markers for Cancer” under the IDP-NAHEP Project
21.	Dr. R.S. Sethi	Bangladesh Secretariat, Dhaka	12.06.2023 to 14.06.2023	Attending the 11th One Health International Conference
22.	Dr. R.S. Sethi	University of Saskatchewan, Canada	16.10.2023 to 12.11.2023	Visiting Scientist
23.	Gopika Talwar	University of Guelph, Ontario, Canada	19.07.2023 to 15.10.2023	Faculty International Training under the IDP-NAHEP Project
24.	Narender Kumar	University of Queensland, Australia	12.07.2023 to 14.12.2023	-Do-
25.	Dr. Rekha Chawla	University of Melbourne, Australia	04.09.2023 to 06.12.2023	-Do-
26.	Dr. Prabjeet Singh	Prince of Songkla University, Hat Yai, Thailand	01.08.2023 to 31.10.2023	3-Month International Training under IDP-ICAR-NAHEP Program
27.	Dr. Meera D. Ansal	Various Institutions in Thailand	08.09.2023 to 22.09.2023	15-Day International Short Visit under IDP-ICAR-NAHEP Program





International and National Linkages

International Partners:

- Lincoln Memorial University, USA – Memorandum of Understanding (MOU)
- International Centre of Excellence in Seafood Science and Innovation (ICE-SSI), Prince of Songkla University (PSU), Thailand – MOU
- University Sains Malaysia – MOU
- Massey University, New Zealand
- Aalborg University, Denmark
- College of Western Veterinary Medicine, University of Saskatchewan, Canada – Adjunct Faculty
- Jeju National University, Republic of Korea
- University of Saskatchewan, Canada
- Asymmetrex LLC, Boston, USA
- McGill University, Canada
- Collaborative Project: PREZODE (Preventing Zoonotic Disease Emergence), France – In collaboration with DMC, Ludhiana, and Aadesh Institute of Medical Sciences, Bathinda, as part of an international research project in the Department of Veterinary Parasitology



National Partners:

- National Institute of Veterinary Epidemiology and Disease Informatics (NIVEDI), Bengaluru
- Regional Disease Diagnostic Laboratory, Jalandhar
- ICAR-ATARI, Ludhiana – Financial, Technical Support, and Backstopping
- Punjab Agricultural University, Ludhiana – Teaching, Research, and Extension
- State Department of Fisheries – Organizing Training Programs, Member of the Scientific Advisory Committee of KVK
- State Department of Horticulture – Organizing Training Programs, Member of the Scientific Advisory Committee of KVK
- Department of Soil and Water Conservation – Organizing Training Programs, Member of the Scientific Advisory Committee of KVK
- Department of Dairy Development – Organizing Training Programs, Member of the Scientific Advisory Committee of KVK
- Department of Agriculture & Farmers Welfare, Barnala – Training Programs
- Department of Animal Husbandry, Barnala – Training Programs
- Farm Advisory Service Scheme (FASS) – Trainings provided, KVK Scientists act as resource persons for Kisan Melas and block-level camps organized by FASS in coordination with the State Department of Agriculture & ATMA
- Punjab Dairy Development Board (PDDB), Tarn Taran – KVK Scientists act as resource persons for various training programs organized by PDDB
- State Department of Agriculture – Trainings provided, KVK Scientists act as resource persons for Kisan Melas and block-level camps organized by the State Department and ATMA
- CDPO Tarn Taran (Various Blocks) – Training organized for Anganwadi Workers
- ATMA/NMSA – Trainings provided, KVK Scientists act as resource persons for Kisan Melas and block-level camps organized by the State Department and ATMA
- Department of Horticulture – Joint meetings on various aspects of agriculture and horticulture
- Agriculture Skill Council of India – Skill Development Trainings for Farmers/Rural Youth
- NABARD – Member of the Scientific Advisory Committee of KVK and Resource Person in Training Programs
- Soil Conservation Department, Tarn Taran – Member of the Scientific Advisory Committee of KVK
- Punjab Agricultural University (PAU), Ludhiana – Teaching, Research, and Extension
- ICAR-CIPHET, Ludhiana – Member of the Scientific Advisory Committee of KVK and Resource Person in Training Programs
- Department of Agriculture – Meetings, Joint Diagnostic Visits, Training Programs, Advisory Services, Kisan Mela Surveys, Inspections, etc.
- Department of Animal Husbandry – Training, Diagnostic Field Visits, Advisory Services, etc.
- Department of Fisheries – Collaborative Trainings, Camps, FLDs, etc.



- Department of Horticulture – Training, Diagnostic Field Visits
- Research Linkages with IVRI, Izatnagar; RAJUVAS Bikaner; DUVASU Mathura; and TANUVAS Chennai in the All-India Network Program on Diagnostic Imaging and Management of Surgical Conditions in Animals (since 2014)
- Small Animal Clinicians Association (SACA), Chandigarh – Continuing Education Programs for Small Animal Clinicians
- IIT Delhi – Testing of Suture Materials
- Collaborative Research Projects with National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh
- Carus India Pvt. Ltd. – Awards for Meritorious Students in Clinical Subjects
- CCRAS, Ministry of Ayush, Government of India
- Department of Biotechnology, Government of India
- Departments of Animal Husbandry, Dairy Development, and Fisheries, New Delhi
- ICAR, New Delhi
- ICAR-National Dairy Research Institute (NDRI), Karnal
- Science and Engineering Research Board, DST, India
- University Grants Commission (UGC), New Delhi
- IIT Ropar, Punjab
- ICAR-CIPHET, Ludhiana, Punjab
- Punjab Agricultural Management and Extension Training Institute (PAMETI), Ludhiana, Punjab
- Nestlé India Pvt. Ltd., Moga, Punjab
- Punjab Remote Sensing Centre (PRSC), PAU Campus, Ludhiana – MOU with LUVAS, Hisar
- Food Microbiology Group, Bhabha Atomic Research Centre (BARC)
- ICAR Fisheries Institutes: CIFRI, CIFA, CIBA, DCFR, CIFT, CMFRI, MPEDA – Educational Tours of B.F.Sc. Students under the Student READY Program, as well as PG/PhD/Faculty Research
- Centre for Development of Advanced Computing (C-DAC), MeITY, Mohali – Research and Training
- Punjab Agricultural Management and Extension Training Institute (PAMETI), PAU, Ludhiana – Collaborative Training Programs for Farmers and Students
- MANAGE, Hyderabad – Collaborative Training Programs



Research Publications (along with NAAS Rating 2023)

S. No	Publication Details	NAAS
1.	Adil, S., Khan, H., Sangwan, V. & Anand, A. (2023). Traumatic Pneumothorax due to Iron Rod injury in a mare. <i>Large Animal Review</i> , 29: 233-237.	-
2.	Agrawal, V., Das, G., Singla, L.D., Shukla, S., Maharana, B.R., Jayraw, A.K., Shakya, M., & Jatav, G.P. (2023). Bovine cerebral theileriosis: first molecular report in cross bred cattle calf in India. <i>Journal of Parasitic Diseases</i> , 47(1): 113-117.	5.95
3.	Ahmad, A. S., Sae-Leaw, T., Zhang, B., Singh, P., Kim, J. T., & Benjakul, S (2023). Impact of ethanolic Thai indigenous leaf extracts on melanosis prevention and shelf-life extension of refrigerated Pacific white shrimp. <i>Foods (Basel, Switzerland)</i> , 12(19). https://doi.org/10.3390/foods12193649	11.20
4.	Ahmad, T., Tufani, N.A., Haq, A., Trambo, S.R., Allaie, I.M., Malik, H.U., Dar, N.A., & Dar, A.A. (2023). Clinico-haemato-biochemical changes and therapeutic efficacy of diminazene aceturate and artesunate against bovine babesiosis in Kashmir Valley. <i>Indian Journal of Animal Research</i> . doi10.18805/IJAR.B-5014	6.50
5.	Andrabi, S.A., Sharma, V., Haq, A., Aamir, D., Nawab, N., & Ahmed, J. (2023). Revolutionary world of genome editing through CRISPR/Cas technology: Review. <i>The Pharma Innovation Journal</i> , 12(6): 410-418	5.23
6.	Arpit, Chandra, M., Kaur, G., Narang, D., & Arora, A. K. (2023). Prevalence of antimicrobial resistance genes among Escherichia coli isolated from poultry. <i>Indian Journal of Animal Sciences</i> , 93(10): 946-950.	6.40
7.	Arshad, M. U., Pandey, A., Holeyappa, S. A., & Mandal, A. (2023). Efficacy of ginger (<i>Zingiber officinale</i>) supplemented diet on growth, proximate composition and haematological parameters of common carp, <i>Cyprinus carpio</i> fingerlings. <i>Animal Nutrition and Feed Technology</i> , 23(1):143-150.	6.00
8.	Ashritha B., Sivakumar, S., Chawla, R., Viji P.C., Goel, N., Veena N., Mishra, S.K. (2023). Effect of dairy & agricultural based ingredients and different fat levels of milk on technology optimization and quality characterization of Chhana Podo. <i>Agricultural Mechanization in Asia, Africa and Latin America</i> , 54(8):15351-15358.	6.30
9.	Babu, R. N., Kaur, D., Uniyal, S., Kaur, P., Singh, Y., Kaur, P., & Malik, D. S. (2023). Physico-chemical litter amendments and their impact on broiler chicks' performance. <i>Indian Journal of Animal Sciences</i> , 93(3):293-297.	6.40
10.	Balaji, S., Rai, T. S., Arora, A. K., & Chandra, M. (2023). Prevalence and antibiogram of Staphylococcus aureus isolates from non-pathological samples of sheep. <i>Journal of Animal Research</i> , 13(3): 429-434.	6.50
11.	Behera, R., Chakravarty, A. K., Kashyap, N., Sahu, A., Deshmukh, B., & Dash, S. (2023). Heat index based identification of critical heat stress zone for production traits in murrah Buffalo under subtropical climate. <i>Biological Rhythm Research</i> , 54(3): 334-343.	7.10
12.	Bhardwaj, V., Kumar, P., Komal, Maan, K. S. & Pooja. Effect of supplementation of Ammonium Chloride in diet of pregnant buffaloes during transition period. <i>Veterinary Practitioner</i> . 24(2): 260-262	4.86



13.	Bhat, A. M., Kaur, J., Baba, O. K., Singh, S. T., & Grewal, R. S. (2023). A case of meningioencephalitis resembling listeriosis in a Nili Ravi buffalo calf. <i>Indian Journal of Veterinary Medicine</i> 43(1):115-118.	4.57
14.	Bhat, A. M., Singh S.T., Singh R. & Grewal R.S. (2023). Relationship between passive immunity and health status of new born cattle and buffalo calves. <i>Journal of Animal Research</i> , 13 (4):597-602	4.78
15.	Bhinder, M.S., Nayyar, S., Singh C., & Singla M. (2023) Health status, antioxidants and milk quality of goats reared under stall-fed and free range grazing system. <i>Indian Journal of Animal Sciences</i> , 93(11): 1103–1112.	6.29
16.	Birwal P., Menon R. R, Nath, S. Deshmukh G. P. (2023). Pulsed electric field treated milk improves the quality of curd. <i>Food Science and Technology International</i> .	8.30
17.	Bishnoi, A., Kumar, N., Talwar, G., Kumar, S., & Sharma, A. (2023). Mechanical Strength, Solubility, and Functional Studies of Developed Composite Biopolymeric Film. <i>Journal of Food Processing and Preservation</i> , 2:1-19	8.50
18.	Brar, N. S., Hundal, J. S., & Kaur, S. (2023). Silage production potential of winter cereals and spring corn in rice-based crop rotations. <i>Crop, Forage & Turfgrass Management</i> , 9(2):e20253.	6.60
19.	Brar, N. S., Hundal, J. S., & Kaur, S. (2023). Silage production potential of winter cereals and spring corn in rice-based crop rotations. <i>Crop, Forage & Turfgrass Management</i> , 9(2). doi.org/10.1002/cft2.20253	-
20.	Brar, N. S., Mandal, K., Kaur, S., Sandhu, A. K., Bhullar, M. S., & Singh, M. P. (2023). Quantification of pendimethalin residue in green fodder and silage of winter cereals using gas chromatography-tandem mass spectrometry. <i>Journal of Pesticide Science</i> , 48(4):225-233.	8.53
21.	Buamard, N., Singh, A., Zhang, B., Hong, H., Singh, P., & Benjakul, S. (2023). Ethanolic extract of Duea Ching fruit: Extraction, characterization and its effect on the properties and storage stability of sardine surimi gel. <i>Foods (Basel, Switzerland)</i> , 12(8), 1635; https://doi.org/10.3390/foods12081635	11.20
22.	Buttar, G. S., Sodhi, G. P. S., Manes, G. S., Sunidhi, Kaur, T., Brar, N. S., Kumar, A., Singh, R., & Kaur, S. (2023) Adoption Pattern of Farm-Machinery based Solutions for In-situ Paddy Straw Management in Punjab. <i>Indian Journal of Extension Education</i> , 59 (4): 103-108	5.95
23.	Chahar, G., Deshmukh, S., Gupta, T., & Banga, H. S. (2023). Pathology of Incidental Pseudomonas aeruginosa Infection in a Piglet. <i>The Indian Veterinary Journal</i> , 100(7): 34-36.	4.93
24.	Chaudhary, J., Gautam, T., Gahlaut, V., Singh, K., Kumar, S., Batra, R., & Gupta, P. K. (2023). Identification and characterization of RuvBL DNA helicase genes for tolerance against abiotic stresses in bread wheat (<i>Triticum aestivum</i> L.) and related species. <i>Functional & Integrative Genomics</i> , 23(3):255.	-
25.	Chaudhary, V., Katyal, P., Puniya, A. K., Panwar, H., Arora, M., Kaur, J, Rokana, N., Wakchaure, N., Raposo, A., Raheem, D., & Poonia, A. K. (2023). Pilot-scale process to produce bio-pigment from <i>Monascus purpureus</i> using broken rice as substrate for solid-state fermentation. <i>European Food Research and Technology</i> , 249(7): 1845-1855.	9.50



26.	Cheema, R. S., Singh, A. K., Sharma, A., & Mavi, G. K. (2023). Superiority of a non-enzymatic antioxidant over enzymatic antioxidants in improving the post thaw function of Labrador dog semen. <i>Acta Scientific Veterinary Sciences</i> , 5 (10): 54-61.	7.18
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28.	Choudhary, S., Choudhary, R. K., Kumar, M., Singh, S., & Malik, Y. S. (2023). Epidemiological Status of Leptospirosis in India. <i>Journal of Pure & Applied Microbiology</i> , 17(4):1968-1977.	9.2
29.	Choudhary, S., LaCasse, M., Choudhary, R. K., Rincon, M., Beitz, D. C., & Testroet, E. D. (2023). In vivo and in vitro expression of iC1, a methylation-controlled J protein (MCJ) in bovine liver, and response to in vitro bovine fatty liver disease model. <i>Animals</i> , 13(6): 1101.	9.23
30.	Dattaray, D., Kaur, R., Sharma, S. K., Kumawat, S., & Lonare, M. (2023). Antioxidant Profile of Rats in Mancozeb Induced Toxicity and its Amelioration by Tridax procumbens. <i>International Journal of Current Microbiology and Applied Sciences</i> . 12(8): 14-21.	-
31.	Desai, A. S., Reddy, V. K., & Saini, R. K. (2023). Circular economy and seafood and agro-industrial waste valorisation for healthy foods. <i>International Journal of Food Science and Technology</i> . 58 (5), 2635 –2636, https://doi.org/10.1111/ijfs.16356	9.30
32.	Dhaka, P., Chantziaras, I., Vijay, D., Bedi, J. S., Makovska, I., Biebaut, E., & Dewulf, J. (2023). Can improved farm biosecurity reduce the need for antimicrobials in food animals? A scoping review. <i>Antibiotics</i> , 12(5):893.	-
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34.	Dhaliwal, A. S., Singh, T., Verma, P., Mohindroo, J. & Singh, N. (2023). Lateral abdominal hernia in cattle: suture herniorrhaphy and polypropylene mesh hernioplasty. <i>Indian Journal of Veterinary Surgery</i> , 44(2): 127-131.	4.30
35.	Dhuria, A., Verma, P., Singh, T., Kumar, A. & Mohindroo, J. (2023). Studies on surgical management of obstructive gastric affections in dogs. <i>Indian Journal of Veterinary Surgery</i> , 44(2): 123-126.	4.30
36.	Dogra, S., Randhawa, S. S., Gupta, K., & Kumar, A. (2023). Protothecosis: A Cause of Chronic Enteropathy/ Large Bowel Diarrhoea in Dogs, <i>Journal of Animal Research</i> , 12(4): 535-39.	4.78
37.	Duche, R. T., Singh, A., Wandhare, A. G., Sangwan, V., Sihag, M. K., Nwagu, T. N., Panwar, H. & Ezeogu, L. I. (2023). Antibiotic resistance in potential probiotic lactic acid bacteria of fermented foods and human origin from Nigeria. <i>BMC Microbiology</i> , 23(1): 142.	10.47
38.	Gautam, A. C., Goel, N., & Singh, P. K. (2023). Development of Ricotta cheese spread by using basket centrifuge. <i>Indian Journal of Dairy Science</i> , 76(2).	5.24



39.	Gautam, T., Jan, I., Batra, R., Singh, K., Pandey, R., Sharma, P. K., Balyan, H.S., & Gupta, P. K. (2023). Further studies on nicotianamine aminotransferase (NAAT) genes involved in biofortification in bread wheat (<i>Triticum aestivum</i> L.). <i>Plant Gene</i> , 33:100389.	-
40.	Gavade, S.B., Jadhao, A., & Leishangthem, G.D. (2023). Cytology of malignant peritoneal mesothelioma in a male labrador retriever dog - A case report. <i>Indian Journal of Veterinary Pathology</i> , 47(4): 368-371.	4.97
41.	Ghuman, S. S., Honparkhe, M., & Singh, B. (2023). Assessment of plasma melatonin profile in summer anestrous buffaloes exhibiting differential fertility following melatonin implants treatment. <i>Buffalo Bulletin</i> , 42(3):407-415.	6.20
42.	Ghuman, S., Honparkhe, M., & Singh, B. (2023). Effect of Melatonin Implantation prior to ovsynch plus CIDR protocol on subsequent ovarian activity and pregnancy rate in Summer Anestrous Murrah Buffaloes. <i>Buffalo Bulletin</i> , 42(2): 263-269	6.20
43.	Goel, V., Sharma, S., Chakroborty, N.K., Singla, L.D. & Choudhury D. (2023). Targeting the nervous system of the parasitic worm, <i>Haemonchus contortus</i> , with quercetin. <i>Heliyon</i> , 9: e13699	7.98
44.	Goyal, A., Devi, N. U., Devi, G.L., Singh, T. & Mohindroo, J. (2023). Sub-dermal skin flap reconstruction technique for management of skin tumours in 20 dogs. <i>Indian Journal of Veterinary Surgery</i> , 44(2): 132-136.	4.30
45.	Gulia, N., Bisla, A., & Honparkhe, M. (2023). A review of applications and scope of intrauterine proteolytic enzymes therapy for treatment of uterine infections in dairy animals. <i>International Journal of Veterinary Sciences and Animal Husbandry</i> , 8(3): 66-71.	4.96
46.	Gulia, N., Bisla, A., Deshmukh, S., Singh, A.K., & Honparkhe, M. (2023). Occurrence of Severe Haematometra with CEH-Pyometra, Endometrial Polyps and Cystic Ovarian Disease in a Dog. <i>The Indian Journal of Veterinary Sciences and Biotechnology</i> , 19(4): 106-111.	5.58
47.	Gupta, A., Gupta, R.K., Hundal, J.S., Singla, M., & Malik, D.S. (2023). Study on comparative effect of whole milk and milk replacer feeding on health status in murrah buffalo calves. <i>Haryana Veterinarian</i> , 62(2): 55-58	-
48.	Gupta, N. & Kumar, A. (2023) Elastic osteosynthesis in dogs – A Review. <i>The Pharma Innovation Journal</i> , 12(6): 1021-1025.	-
49.	Gupta, N., Kumar, A., Sangwan, V., Singh, T., & Gupta, A. (2023). A comparative study between stainless steel and titanium elastic nails in the surgical management of canine juvenile femoral fractures. <i>Indian Journal of Animal Sciences</i> , 93(4): 337–341.	6.40
50.	Gupta, R., Sahoo, S. K., Kaur, S., Dash, S. K., & Malhotra, P. (2023). Modelling lactation curve for genetic evaluation of crossbred cattle. <i>International Journal of Bio-resource and Stress Management</i> , 14(5): 677-682.	-
51.	Gupta, S., Chhabra, S., Preet, G. S., & Haq, A. U. (2023). Juvenile cellulitis in a Labrador Retriever pup-A case report. <i>Indian Journal of Veterinary Medicine</i> 43(1): 110-112.	4.57



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54.	Hussain, S. A., Uppal, S. K., Sood, N. K. & Mohindroo, J. (2023). Primary type 3 abomasal ulceration in cattle and buffalo: clinico-biochemical parameters, treatment, and prognostic indicators. <i>Iranian Journal of Veterinary Research</i> , 24 (1):42-50	7.23
55.	Jain, S., Lonare, M. K., Singla, S., Sharma, M., Lonare, M. K., & Kaur, S. (2023). Effect of polyherbal formulation on oxidative stress and genotoxicity in lactating holstein friesian crossbred cattle. <i>Journal Of Veterinary Pharmacology and Toxicology</i> , 22(1), 55-61.	4.43
56.	Jamtsho, C., Kumar, A., Devi, N.U., & Mahajan, V. (2023). Caecal dilatation as a sequel to colonic fecalith obstruction - A report on four bovines. <i>Large Animal Review</i> , 29: 283-288.	-
57.	Jandyal, M., Malav, O.P., Wagh, R.V., & Mehta, N. (2023). Technological effect of dried apple pulp powder on the quality characteristics of functional pork sausages. <i>Haryana Veterinarian</i> , 62(2): 72-77.	-
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59.	Jena, B., Anand, A., & Sangwan, V. (2023). Pre-Maxilla fracture repair using Inter-Fragmentary stainless steel wire in a Foal. <i>Large Animal Review</i> , 29: 193-195.	-
60.	Jha, B., & Singh, S. (2023). Investigating antimicrobial peptide RI12 (K3W) as an effective bio-preservative against Listeria monocytogenes: a major foodborne pathogen. <i>Archives of Microbiology</i> , 205(12): 367.	8.67
61.	Kanwarpal, Sharma, A., Kaswan, S., Singh, C., Hundal, J. S., & Malik, D. S. (2023). Does provision of open area improve growth performance and welfare of large white Yorkshire fattener pigs during summer season in tropical Indian conditions? <i>Journal of Animal Research</i> , 13(1):71-80	4.78
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63.	Kapoor, S., Gupta D.K., Singh R.S. & Narang D (2023). A new herbal teat dip for preventing mastitis. <i>Indian Journal of Animal Health</i> , 62(2):355-363	5.01
64.	Kaur H., Khosa J.S., Mahajan S., Mohindroo J., Singh N. D. & Uppal V. (2023). Surgical management of end stage otitis externa in 20 dogs. <i>Indian Journal of Veterinary Surgery</i> , 44(2): 119-122	-



65.	Kaur P., Sethi R.S. & Malik Y.P.S. (2023). Tissue tropism of Porcine parvoviruses in naturally infected swine population of Punjab, India. <i>Indian Journal of Veterinary Pathology</i> , 47(4), 348-350	5.54
66.	Kaur R., Kaur J., Sethi R.S., Hundal J.S, Singh U. & Nayyer S. (2023). Effect of supplementation of <i>Tinospora cordifolia</i> on nutrient utilization, blood biochemical profile, cell mediated immune response and rumen microbial profile in beetal goat kids. <i>Indian Journal of Animal Research</i> 57(4): 443-448	6.44
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69.	Kaur, J., Brar, R. S., Leishangthem, G. D., Banga, H. S., & Singh, N. D. (2023). Differential diagnosis of infectious bronchitis (IB) and chronic re-spiratory disease (CRD) in chicken by immunohistochemistry. <i>Indian Journal of Veterinary Pathology</i> , 47(1):78-83	5.54
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75.	Kaur, P., Juyal, P.D., Sharma A., Singla, L.D. & Mukhopadhyay, C.S. (2023). Comparative detection efficacy of primers targeting SpeI-AvaI restriction fragment and small subunit ribosomal RNA gene of <i>Babesia bigemina</i> . <i>Indian Journal of Animal Sciences</i> , 93(7): 681–685.	6.40
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