



Progress Report
(April, 2022 to March, 2023)
for
Institutional Development Plan for
Improved Learning Outcome, Skill
and Entrepreneurship at GADVASU
Ludhiana

Submitted to PIU – NAHEP,
ICAR
April, 2023

Project Title: Institutional Development Plan for Improved Learning Outcome, Skill and Entrepreneurship at GADVASU, Ludhiana

Project profile:

- a. Component: 1a
- b. Sub-project title: Institutional Development Plan

Project Objectives:

Objective 1: Strengthening academic programmes for producing industry and market-ready professionals and improving learning outcomes.

Objective 2. Harnessing on faculty and student development programmes for enhancing competence and diversity.

Objective 3. To develop innovative and sustainable revenue generation models.

Achievements of Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana

Strengthening of Teaching infrastructure:

- Animal models and Simulators: Various animal models and simulators (Qty: 24) were installed in the Departments of Veterinary Anatomy, Surgery & Radiology, Gynaecology & Obstetrics to give a realistic approach to teaching clinical techniques and develop a better understanding in students by demonstration and self-practicing.
- Analysis and modelling software
- Image Analysis Software for upgrading existing Microscope
- Upgradation of imaging system of trinocular microscope
- 200 KVA/160 KW silent 3 phase Gen Set
- Multipara Monitor

Training and Capacity Building: A number of interactive expert lectures of visiting professors from institutes of national as well as international repute, guest faculty, exposure visits and remedial classes involving UG students and faculty were conducted for all the constituent colleges. Twelve faculty members and fifty students from constituent colleges of GADVASU have visited key institutes abroad for faculty and students' international training. Further, four short visits for

interinstitutional collaboration with various foreign institutions of global repute have been conducted.

Expert lectures and workshops: Key thematic areas of expert lectures organized under IDP were topics of veterinary, dairy and fisheries' industry importance which were delivered by various industry experts, career options after graduation, Entrepreneurship Development and capacity building for enhancement of entrepreneurial skills, soft skills development, technical skill upgradation, Interface between academia and industries etc.

Major Innovations during the period

- **Faculty and Students' International Training:** With an aim of improving learning outcomes and strengthening the academic programmes along with enhanced exposure to different universities abroad, faculty as well as student international training programmes were conducted by GADVASU. In this series, a total of twelve faculty members, from the College of Veterinary Science (09), College of Dairy Science and Technology (02) and College of fisheries (01) were trained at various esteemed laboratories around the world. Twenty undergraduate students from COVS pursuing B.V.Sc. & A.H. degree have been trained at premier universities of Brazil, Israel, Malaysia and Vietnam for 2–6-week duration, twenty B.F.Sc. students were trained at Prince of Songkla University, Thailand for 2 weeks and ten B. Tech (Dairy Technology) students were trained at University of South Australia, Australia for 2 weeks.
- **International Visiting Professors teaching students at GADVASU:** A total of 19 International Visiting Professors were invited under IDP programme with an aim to expose the undergraduate students of COVS, CoDST and CoF with the advanced knowhow, exposure of our students for further academic improvement and enhanced skill development and to enable productive international cooperation with GADVASU.
- **Remedial classes:** Remedial classes were organized for undergraduate students of all constituent colleges of GADVASU to raise the level of comprehension and improve the knowledge, skills and attitude of the students. The initiative was aimed at improving the practical skills of students and improve other academic deficiencies during the COVID period. These classes were conducted during off hours and Saturdays for the weaker students.
- **Industry Experts:** Various industry personnels positioned at different strata were invited to interact with undergraduate students as well as faculty members. This interaction was essential

to give first hand exposure of working in industries and a mutual cooperation with institute for possible funding in future along with placements of students. It was also beneficial to inculcate entrepreneurial spirit amongst students. The talks were focussed on commercial and business models of various activities in veterinary, dairy and fisheries. Along with that, discussions on establishment and running a private small as well as large animal clinic were the key feature of these interactions.

- **Entrepreneurship Training Courses:** Undergraduate students were exposed to various facets of business development and enterprise establishment in areas of meat and egg processing, breeding and management of pig for quality pork production and its processing, establishment of semen station, running a private clinic, entrepreneurship in small animal practice and animal feed development and establishment of post mortem unit as a successful business model.
- **Soft skill development of undergraduate students:** Skill development courses particularly soft and life skill development were conducted by constituent colleges for UG students. Talks on critical thinking, leadership development, personality, attitude, team building, self-motivation, communication skills as well as management and coping strategies for stress were delivered to students by experts from various institutions.
- **Academia Industry Interface:** College of Fisheries, Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana GADVASU, organized academia-industry Interface on “Ornamental Fisheries” to promote entrepreneurship skills among fishery graduates. The platform brought together various stakeholders, including ornamental fish traders, state fisheries officers of Punjab and students.
- **Meetings/Workshops:**
 - ✓ College of Veterinary Science, GADVASU conducted Brain Storming Meeting- cum-Workshop on Transforming Veterinary and Animal Sciences Universities into Multi-disciplinary Education and Research Universities (MERU) as Per National Education Policy (2020) from March 29-30, 2023. It aimed at gathering valuable inputs and suggestions from speakers from Veterinary Universities, ICAR, Department of Animal Husbandry Government of India and Stakeholders from different parts of country for preparing a road map for implementation of NEP in Veterinary Universities, which in turn will be of great benefits to the students, particularly at undergraduate level. Various eminent personalities like Present & Former Deputy Director General (Animal Sciences)

ICAR, Present & Former Vice Chancellors of Veterinary Universities etc. participated in this workshop.

- ✓ Alumni Meet 2022: An alumni meet was conducted on 30th April 2022. More than 500 participants from diverse backgrounds viz. Veterinary, Fisheries, Dairy Sc. and Bio-technology etc. joined this event. Technical sessions were conducted in the respective colleges of the University, where experts from the relevant fields shared their knowledge and experiences, as well as exchanged their ideas. The alumni enthusiastically participated and urged the university for such meets in future so that they can contribute to their almatamater. The house of the alumni decided to organize the next Alumni Meet on 3rd Saturday of November, 2023 so that alumni from across the globe could plan in advance and join the event.
- **Exposure visits of students:** The UG students of different constituent colleges have visited various ICAR and state institutions across the country along with various industries, units, breeding stations, farms of progressive farmers and entrepreneurs to have onsite knowledge of enterprises.
- **Strengthening Teaching and Learning:** To meet the unprecedented situations and hassle-free learning and teaching, GADVASU is regularly updating its You tube channel with video tutorials for quick access of students.

Monitoring and Evaluation

All the activities carried out under IDP are monitored by concerned authority on frequent basis. Outcomes are evaluated regularly and further improvements are suggested on the basis of feedback received from beneficiaries. Project monitoring and Evaluation cell (PME) provides regular inputs for further improvement in the activities to be undertaken and progress is kept in tandem with set approved objectives and indicators.

Activities conducted under IDP project during 2022-23

1. Faculty International Training:

No.	Name of Faculty	Place of Training	Purpose/ Area of work	Duration
1	Dr. Wagh Rajesh Vishwanath Assistant Professor, Department of Livestock Products Technology	Department of Food and Nutrition Bio Nanocomposite Research Center, Kyung Hee University, Dongdaemun-gu, Seoul, Republic of Korea	Intelligent packaging	August 11, 2022 to February 11, 2023
2	Dr. Sunil Kumar Assistant Professor, Department of Dairy Technology	School of Agriculture and Food Sciences, University of Queensland, St Lucia Campus, Brisbane, Australia	Protein and Powder Technology	August 15, 2022 to February 15, 2023
3	Dr. Surjya Narayan Datta Assistant Professor, Department of Fisheries Resource Management	Department of Aquaculture & Fisheries, University of Arkansas at Pine Bluff, Pine Bluff, Arkansas, USA	Capacity Building in intensive aquaculture systems	September 01 to November 30, 2022
4	Dr. Navdeep Singh Professor cum Head, Department of Veterinary Surgery & Radiology	Department of Clinical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, New York, USA	Diagnostic Imaging	September, 20 to December 21, 2022
5	Dr. Mrigank Honparkhe Principal Scientist cum Head, Department of Veterinary Gynaecology and Obstetrics	Dept of Veterinary Biomedical Sciences University of Saskatchewan	Ovarian ultrasound biomicroscopy	September 29 to December 27, 2022

		Saskatoon SK S7N 5B4 Canada		
6	Dr. Simrat Pal Singh Saini Professor, Department of Veterinary Pharmacology and Toxicology	University of Pittsburgh PA, USA	Pharmacology	October, 01 to 15, 2022
7	Dr. Amandeep Sharma Associate Professor, Department of Dairy Engineering	School of Agricultural Sciences, Southern Illinois University Carbondale, USA	Artificial Intelligence and Neural Network	October 13, 2022 to January 18, 2023
8	Dr. Ashwani Kumar Singh Professor, Department of Veterinary Gynaecology and Obstetrics	Department of Clinical Sciences, Swedish University of Agricultural Sciences, UPPSALA, Sweden	Semen Cryopreservation in boars	December 01 to 31, 2022
9	Dr. Pankaj Dhaka Assistant Professor, Centre for One Health	Faculty of Veterinary Medicine, Ghent University, Belgium	Anti-microbial Resistance	December 15, 2022 to March 14, 2023
10	Dr. Sushma Chhabra Professor, Department of Veterinary Medicine	Koret School of Veterinary Medicine, The Hebrew University of Jerusalem, Israel	Dermatology	January 16 to 30, 2023
11	Dr. Swarn Singh Randhawa Director of Clinics	Koret School of Veterinary Medicine, The Hebrew University of Jerusalem, Israel	Critical/ Emergency Care	January 16 to 30, 2023
12	Dr. Raj Sukhbir Singh Professor, Department of TVCC	University of Wisconsin- Madison, USA	Canine Neurological Diseases	March 01 to 21, 2023

2. Short Visits/ Seminars

No.	Name of Faculty	Visit / Seminar Details	Purpose	Duration
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1.	Dr. Inderjeet Singh	University of Saskatchewan, Saskatoon, Canada	Inter institutional Collaboration	August 03 to 17, 2022
2.	Dr. Anuradha Gupta	Federal University of Minas Gerais, Brazil	Inter institutional Collaboration	November 25 to December 10, 2022
3.	Dr. R S Sethi	FAO Regional Office for Asia and the Pacific, Bangkok, Thailand	Inter institutional Collaboration	December 01 to 15, 2022
4.	Dr. Amarjeet Singh Bajaj	Clinic for Poultry and Fish Medicine, University of Vety. Medicine, Vienna, Austria.	Inter institutional Collaboration	February 21 to March 09, 2023

3. Students' International Training

No.	Name of Student	Place of Training	Purpose	Duration
1.	Shubhpreet Kaur	Centre of Excellence in Seafood Science and Innovation, Faculty of Agro-Industry, Prince of Songkla University	Acquaintance with developments in fishery sector	August 06 to 30, 2022
2.	Arnaa Armaan Muzaddadi			
3.	Jai Bansal			
4.	Shivam Aerry			
5.	Abdullah M Hasbullah			
6.	Aritra Mukherjee			
7.	Shivangi Kushwaha			
8.	Ankita Singh			
9.	Amaanat Kaur			
10.	Rivanshi			
11.	Diksha Khatri			
12.	Shalu			
13.	Kapish Purkayasth			
14.	Saumya Mehta			
15.	Lavanya			

16.	Shreya Khajuria			
17.	Upjeet Kour Tulla			
18.	Anjali Chaudhary			
19.	Jashanpreet Singh			
20.	Ankita Kataria			
21.	Prabhujeev singh	Koret School of Vety. Medicine, Hebrew University of Jerusalem. Israel.	Updates regarding critical care and emergency operations	January 16 to 31, 2023
22.	Hargun Singh			
23.	Gurbir Singh			
24.	Divya			
25.	Kirandeep Kaur			
26.	Gurinder Singh	Universiti Putra Malaysia, Malaysia	Updated knowledge regarding small animal practice	February 07 to March 21, 2023
27.	Rajbir Kaur			
28.	Ramanpreet Singh			
29.	Kanwarsher Singh Gill			
30.	Harjot Chopra			
31.	Nishtha Piplani	Federal University of Minas Gerais, Brazil	Advances in Veterinary Medicine	November 25 to December 10, 2022
32.	Muskaan Thakur			
33.	Gagandeep Kaur			
34.	Mehakdeep Kaur Sandhu			
35.	Harshpreet Kaur			
36.	Gurleen Sandhu	Vietnam National University of Agriculture Trauquy-Gialam, Hanoi, Vietnam	Diagnosis and Therapeutic advances	March 07 to 20, 2023
37.	Krishiv Vasudeva			
38.	Arzoo			
39.	Arshnoor Kaur			
40.	Kuljeet Singh			
41.	Anuragdeep Kaur	University of South Australia,	Dairy Microbiology and Probiotics	March 08 to 22, 2023
42.	Nikita Gaur			

43.	Navneet Kaur	Adelaide, Australia		
44.	Harmandeep Kaur			
45.	Tarun			
46.	Diksha			
47.	Harman Bawa			
48.	Mansi Miglani			
49.	Lori			
50.	Maninderpreet Kaur			

4. Remedial Courses

No.	Name of Course/Subject Area	Date	No. of participants
College of Veterinary Science			
1.	Veterinary Anatomy-I	September 07 to 23, 2022	50
2.	Veterinary Gynaecology and Obstetrics	September 12 to November 26, 2022	75
3.	Livestock Production Management	September 12 to 22, 2022	50
4.	JRF examination preparation	September 15 to 19, 2022	41
5.	Veterinary Surgery	September 19 to December 03, 2022	33
6.	Veterinary Pharmacology and Toxicology	September 27 to November 04, 2022	08
7.	Veterinary Anatomy-II	October 03 to 21, 2022	20
8.	Veterinary Physiology and Biochemistry	October 03 to 15, 2022	43
9.	Veterinary Parasitology	October 12 to 20, 2022	05
10.	Veterinary Anatomy-III	November 14 to 23, 2022	11
College of Dairy Science and Technology			
1.	Dairy Engineering	April 07 to May 28, 2022	22
2.	Dairy Chemistry-I	April 8-June 11, 2022	6
3.	Dairy Microbiology-I	April 07 to June 11, 2022	06
4.	Dairy Chemistry-II	April 08 to June 11, 2022	13
5.	Dairy Technology	April 13 to June 19, 2022	06
6.	Dairy Economics and Business Management	April 13 to June 19, 2022	03
7.	Dairy Chemistry-III	December 21, 2022 to 08 January, 2023	17

8.	Livestock Economics	December 22, 2022 to 08 January, 2023	21
9.	Dairy Microbiology-II	December 30, 2022 to 08 January, 2023	20
College of Fisheries			
1.	Fisheries Resource Management	April 02 to June 18, 2022	20
2.	Aquaculture	April 02 to June 16, 2022	14
3.	Aquatic Environment Management	April 09, 2022	03
4.	Fish Processing Technology	April 21 to June 18, 2022	19

5. Industry Expert Lectures/Talk

No.	Title of Activity	Date	Name of Expert	Total no. of participants
College of Veterinary Science				
1.	The Future of Work: Preparing the Young Veterinary Workforce in India for Possible Disruptions	June 07, 2022	Dr. Miftahul Barbaruah, Director, Vet Helpline, India Pvt. Ltd. Assam	29
2.	Commercial fodder processing- The next game changer for Indian Dairy	September 06, 2022	Dr. Harinder Singh, Director, Excellent Enterprises Pvt Ltd	51
3.	Make hay while the sun shines		Dr. Manoj Sharma, Principal Extension Scientist, Directorate of Extension Education, Punjab Agricultural University	
4.	Dissemination of Various nutritional technologies for the upliftment of dairy farmers			
5.	Bypass nutrient technology for enhancing dairy animal productivity		Dr. Subhash Parnerkar, Professor-cum-Head, Deptt. of Animal Nutrition, Khalsa College of Veterinary and Animal Sciences	
6.	B.V.Sc & A.H. - A gateway to entrepreneurship	September 13, 2022	Dr. Rajnish Tyagi, Managing Director, HATVET Pharma Private Limited	78
7.	Art of running private small animal clinics			
8.	Scope of Veterinary Graduates in Pharmaceutical Industry	September 14, 2022	Dr. Rajnish Tyagi, Managing Director,	61

9.	HATVET Pharma: A company or a business model.		HATVET Pharma Private Limited	
10.	Recent update on advancements in "Sex sorting technology"	September 16, 2022	Dr. Prakash Kalarickal, Vice President, Business Development- Asia, Oceania, Middle East & Africa Stgenetics- Sexing Technologies	30
11.	Current status of Sexed semen production in India.			
12.	Issues and Challenges in herbal products in animal health/marketing- A perspective of Alarsin Pharmaceuticals	September 20, 2022	Mr.Ajay Patel, Managing partner and Owner/Partner at Alarsin Pharmaceuticals (Industry Leader), Mulgaon, Andheri East, Mumbai	30
13.	Novel Ayurvedic products in the field of animal reproduction produced by Alarsin Pharamaceuticals			
14.	Indian Herbs- phytogenic feed supplements and formulations for sustainable livestock production	September 21, 2022	Dr. Shivi Maini, General Manager- Technical (Industry Leader), Indian Herbs Specialties Pvt. Ltd	31
15.	Application of phytogenics for sustainable companion animal wellness			
16.	Ration balancing for enhanced buffalo production	October, 11, 2022	Dr. Avijit dey, Principal Scientist (Animal Nutrition), ICAR-Central Institute for Research on Buffaloes, Hisar	48
17.	Enteric methane production from buffaloes and its abatement			
18.	Importance of minerals in animal feeding			
19.	Feeding management of livestock during summer			
20.	Role of inoculants in quality silage preparation			
21.	Silage entrepreneurship: A new business avenue			
22.	Rumen manipulation technique: A critical strategy to improve the productivity of animals		Dr. Manoj Sharma, Principal Extension Scientist, Directorate of Extension Education, Punjab Agricultural University, Ludhiana	
			Mr. Sunil Kumar Attri, Silage Business Lead, Cirteva Agriscience seeds Private Ltd. (MNC), Ludhiana	
			Dr. Ravi Prakash Pal, Scientist (Animal Science) Forage, Millets and	

			Nutrition, Deptt. Of Plant Breeding & Genetics, PAU, Ludhiana	
23.	Current Companion Animal pharm market & Business Prospect	October 11 to 12, 2022	Mr. Raman Talwar, Vice President Sales (Virbac Animal Health India Pvt. Ltd)	50
24.	Basics of Dermatology and Common Dermatology Diseases & Diagnosis Approach		Dr. Amit Kumar Kushwaha, Sr. Product Manager, Virbac (Companion animal	
25.	Daily Derma- Virbac Patented Technologies and Benefits			
26.	Virbac Solutions		Dr. Jitendranath Saha, General Manager, Virbac (Marketing Poultry & Cattle),	
27.	Poultry Management			
28.	Common Dermatology Diseases & Diagnosis Approach		Dr. Amit Kumar Kushwaha, Sr. Product Manager, Virbac (Companion animal)	
29.	Basics of Dog Nutrition			
30.	Poultry Diseases- Treatment and Prevention		Dr. Jitendranath Saha, General Manager, Virbac (Marketing Poultry & Cattle)	
31.	Locally available feedstuffs for nutritional security of Livestock	October 28, 2022	Dr. Sanjay Kumar Verma, Principal Scientist (Animal Nutrition), Cattle Nutrition & Management Division, ICAR Central Institute for Research on Cattle	42
32.	Cow beyond milk			
33.	Feeding management of transition animals		Dr. Prashant Shinde, Commercial Director (Dairy Feed), Cargill India Pvt. Ltd	
34.	Feeding of dairy calves			
35.	Nutritional approaches for hindgut health of ruminants		Dr. Debashis Roy, Associate Professor & OIC, Deptt. Of Animal Nutrition, College of Veterinary & Animal Sciences, SVPUAT, Meerut	
36.	Nutrition and calf health			
37.	Various methods of crop residue improvement for better production of ruminants		Dr. Manoj Sharma, Principal Extension Scientist, Directorate of Extension Education,	

			Punjab Agricultural University, Ludhiana, Punjab	
38.	Introduction to the Indian pharmaceutical Industry & Animal Health Industry	November 1 to 3, 2022	Dr. Amanjot Singh, Senior Technical Executive, Intas Animal Health, Ahmedabad	63
39.	Emerging Animal Health Industry Sectors			
40.	Veterinarian's Scope in Pharmaceutical Industry			
41.	Regulatory Framework for Animal Health in India			
42.	Advances in Veterinary Medicine- An update			
43.	Transition Cow Management- Prerequisite for Animal Health Productivity			
44.	Manufacturing process of Conventional to Modern veterinary vaccines	November, 18, 2022	Dr. Guddeti Sreenivasa Reddy, Senior Vice President, Manufacturing & Projects (Retired), Indian Immunologicals Limited, Hyderabad	88
45.	Global importance of zoonotic diseases and preparedness			
College of Dairy Science and Technology				
46.	Powerful tool for Pathogen Testing in Dairy, Beverages and Food products	September 01, 2022	Dr. Ramakant Lawaniya, Technical Support Manager- India Institute: Hygiena International New Delhi	19
47.	Smart Era of Cleaning & Sanitation Verification is Just One Touch Away – ATP Technology			
48.	Rapid Sterility Test & Release of UHT/ESL Beverages	September 02, 2022	Dr. Ramakant Lawaniya, Technical Support Manager- India Institute: Hygiena International New Delhi	21
49.	Demonstration of Rapid Detection of Hygiene Indicators			
50.	Role and importance of Food and dairy technocrats in infant nutrition industry	September 27, 2022	Mr. Darpan Bahl, Process Specialist, Nestle India Ltd., Moga, Punjab	40
51.	Roller dryer and other relevant technologies associated in processing of infant cereal formula			

52.	Insights into to Process of Pasteurization-Industrial context	October 10 to 11, 2022	Mr. Mithun Chhoker, Deputy Manager (Corporate Quality Assurance), Mother Dairy Fruit & Vegetable (P) Ltd., New Delhi	38
53.	Practices for Hygiene maintenance in a dairy processing unit as per Regulatory Requirements.			
54.	Good manufacturing process- a practical approach			
55.	Infrastructural requirements for setting up a dairy processing plant			
56.	Concept of manufacturing of rennet casein and milk protein concentrate using ring dryer technology	October 12 to 13, 2022	Mr. Mritunjay Kumar, Senior Manager, Amar Tea Pvt. Ltd (Society Tea), Vadodara, Gujrat	24
57.	Concept of manufacturing of WPO,IP grade and edible grade lactose by using membrane technology and centrifuge-based dryer			
58.	CIP system and Passivation technique			
59.	UHT processing and packaging			
60.	Practical Demonstration on finding the proportion of cow milk, buffalo milk and added water in mixed milk	November, 04,2022		15
61.	Ethical Dairy Business Plan for India to double the income of dairy farmers within one year			
College of Fisheries				
62.	Management of Shrimp Viral diseases	September 13, 2022	Dr. Amerneni Ravi Kumar	39
63.	Innovative approaches for shrimp disease management with reference to bacterial diseases			
64.	Status of Aquaculture in India	September 14, 2022	Dr. P. Haribabu	37
65.	Shrimp Pond Health Management			

6. Students' Entrepreneurship Training Courses:

S. No.	Name	Department & College	Type	Date	Number of participants
1	Egg processing: A lucrative entrepreneurial venture	Livestock Products Technology, COVS	Meat Processing (Pork and Poultry) as entrepreneurial venture	August 01 to 05, 2022	99
	Setting up an entrepreneurial venture: Challenges and opportunities				
	Entrepreneurship in Agri-business				
	Food Marketing Practices				
	Pork Processing: A profitable venture				
	Meat Processing: My personal experience				
	Entrepreneurial opportunities in pork processing				
	Hygienic dressing and marketing of pigs: Farm to fork				
	Establishment of Poultry processing unit as a startup				
	Poultry processing: A key entrepreneurial venture				
2	Pig breeding and genetics	Veterinary Gynecology and Obstetrics, COVS	Pig Breeding, Management and pork Processing as enterprise opportunity	October 03 to 07, 2022	130
	Modern housing and shed design favorable for all climate in Swine				
	Balance Diet and Nutrition in Swine				
	Farm management and biosecurity at private farms				
	Control and prevention of diseases at farm				
	Import/export of swine				
	Marketing and sale of pigs in northern region				
	Value addition of pork				
	Impact of Artificial Insemination at pig farm				
	Swine Economics				
3	Scenario of pig farming at international level vis a vis opportunity for India to export the pork	Veterinary Gynecology and	Boar semen Processing for successful	October 17 to 21, 2022	130

	<p>Establishment of boar semen station</p> <p>Selection of breeding boars through conventional and new generation molecular approach</p> <p>Training and nutrition of boar for semen collection</p> <p>Collection and handling of boar semen in laboratory</p> <p>Processing of boar semen for liquid storage at 17 degree Celsius: Boar semen quality assessment through fluorescent probes</p> <p>Clean and hygienic boar semen production: An approach to reduce the use of antibiotics</p> <p>Artificial insemination in pig: Will the AI in pig become more efficient and sustainable</p> <p>Intra- uterine and laparoscopic AI in pig: a way towards efficiency</p> <p>Cryopreservation of boar semen: will the problem be solved in near future</p>	Obstetrics, COVS	enterprise development		
4	<p>Introduction to canine reproduction and estrous cycle and endocrinology</p> <p>Reproductive anatomy in dogs</p> <p>Breeding management and predicting fertile period in bitches</p> <p>Vaginal Exfoliative Cytology and Vaginoscopy in Bitches</p> <p>Reproductive ultrasonography in dogs.</p> <p>Semen collection, evaluation, freezing and artificial insemination in Dogs</p> <p>Management of infertility associated breeding disorders in dogs</p> <p>Medical termination of pregnancy in bitches</p> <p>Common obstetrical disorders in female dogs and its management</p>	Veterinary Gynecology and Obstetrics, COVS	Canine Reproduction Management for successful private pet practice	October 10 to 14, 2022	131

	Recent advances in non- surgical contraception dogs				
5	Qualities of a successful Entrepreneur	Veterinary Medicine, COVS	Entrepreneurship in Small animal practice	November 14 to 18, 2022	111
	Opportunities to Vets in canine industry				
	Setting up of manufacturing canine diagnostics				
	Setting up of a multispecialty canine hospital				
	setting up a Canine cardiology center				
	Demonstration of electrocardiography				
	Hands on training on electrocardiography				
	Demonstration of echocardiography				
	Creation of Dog breeding centers				
	Creation of Pet behavioral Clinics				
6	Purchase and Quality of Raw Material for the preparation the of type - II mineral Mixture	Animal Nutrition, COVS	Entrepreneurship in Animal Feed Processing	March 01 to 07, 2023	40
	How to formulate type-II Mineral Mixture; Practical Approaches				
	Hands on training on Mixing protocol of type-II Mineral Mixture				
	Hands On training on preparation Of Type-II Mineral Mixture				
	Hands on training on packaging and storage of Mineral Mixture for sale				
	Hands on training on cleanliness and maintenance of the plant for maximizing mineral mixture Production				
	Purchase and quality of raw material for the mineral Mixture for the Kandi Zone				
	How to formulate Mineral Mixture for Kandi Zone; Practical Approaches				

	Hands on training On Mixing protocol of Mineral Mixture Kandi Zone				
	Hands On training on the preparation and packaging of mineral Mixture Kandi Zone				
	Machinery for the preparation of mineral Mixture at fully Automatic Mineral Mixture Plant				
	Handling, Mixing, Plant Operation and Preparation of Mineral Mixture at the Commercial Scale				
7	Biopsy Examination	Veterinary Pathology, COVS	Establishment of Post Mortem examination Unit	March 10 to 15, 2023	30
	Hand on training on interpretation of biopsy slides				
	Post-mortem examination of animals				
	Hands on training on large animal post-mortem				
	Post-mortem examination of poultry				
	Hands on training on poultry post-mortem				
	Post-mortem examination in vtro-legal cases				
	Interpretation of gross lesions in poultry				

7. Students' Skill Development Courses:

No.	Organizing Department	Type and category	Date	Total number of participants
1.	Veterinary Anatomy	Critical thinking, Leadership	June 1-15, 2022	103
2.	Veterinary Gynaecology and Obstetrics	Stress management and Happiness	July 25-29, 2022	117
3.	Veterinary Anatomy	Communication skills	July 5-8, 2022	108
4.	Veterinary Microbiology	Attitude, Team Building	July 14-August 2, 2022	140
5.	Veterinary Pathology	Behavioural Complex & analysis	July 25-29, 2022	75

6.	Veterinary Surgery & Radiology	Self-motivation and communication skills	July 29-August 12, 2022	86
7.	Vet Anatomy	Emotional Intelligence	September 9-21, 2022	111
8.	Veterinary Gynaecology and Obstetrics	Human Values and Professional Ethics	September 19-23, 2022	92
9.	Veterinary Gynaecology and Obstetrics	Motivational speaking and personality development	September 27 -October 01, 2022	115
10.	Vety. Physiology and Biochemistry	Interpersonal skill development and scientific temper	September 27 to October 03, 2022	142
11.	LPM	Goal setting and time management	September 27 to 29, 2022	110
12.	TVCC	Motivation and leadership	September 28 to October 03, 2022	102
13.	TVCC	Stress management	September 29 to October 4, 2022	102
14.	LPT	Self-awareness and empathy	October 03 to 07, 2022	69
15.	Vety. Microbiology	Communication skill and leadership development	October 07, 2022	60
16.	Veterinary Gynaecology and Obstetrics	Information technology and computing	October 31 to November 04, 2022	138
17.	Vet. Anatomy	Socially awakened and responsible citizens	November 16, 2022	96
18.	Veterinary Microbiology	Habits and relationships	November 22 to 23, 2022	149
19.	Vet. Anatomy	Spirituality and Leadership	December 19 to 23, 2022	134
20.	Vet. Parasitology	Stress and Time Management	January 09 to 12, 2023	52
21.	LPT	Life skills and mindfulness	January 09 to 12, 2023	82
22.	Vet. Parasitology	Communications skills and personality development	January 10 to 13, 2023	63
23.	CoDST	CV writing, Personality	June 30 to July 08, 2022	61
24.	CoDST	Leadership, public speaking and goal setting	August 25-31, 2022	18
25.	CoDST	Self-esteem and motivation	October 10 to 14, 2022	31

26.	CoDST	Success and Prosperity	January 02 to 06, 2023	22
27.	CoDST	Cyber Security and computer skills	January 30 to February 03, 2023	40
28.	CoF	Writing Skills and time management	August 30 to September 2, 2022	28
29.	CoF	Literature in Personality development	September 12, 2022	30
30.	CoF	Handling disabilities and special needs	September 21, 2022	30

8. Academia- Industry Interface

No.	Title of Activity	Date	Total number of participants
1.	Enhancements in Elemental Analysis by LC-ICPMS	July 06, 2022	40
	Novel host centric approaches against microbial and zoonotic infections		
	Fresh milk quality and quality test to ensure milk safety		
2.	Brainstorming Colloquy on Ornamental Fisheries	July 28, 2022	101
3.	Organization and Management of Bovine Semen Station- Issues and Challenges	September 15, 2022	45
4.	OIE guidelines for minimum standard of cryopreservation of semen		
5.	Mastitis management at organized farms	September 16, 2022	30
	Better calf management for replacement		
	Role & Opportunity of Nutritionist in Animal health and Feed Industry		
	Dairy sector-Are we ready for next transformation		
	Automation in Dairy farm Management		
6.	Breaking barriers to introduce low-cost rabies prophylaxis	October 07, 2022	80
7.	Latest trends in veterinary Pharmaceuticals- A perspective of Virbac India in Animal reproduction	October, 12, 2022	31
	Virbac as a Market Leader Pharmaceutical in Animal Health		
8.	Emerging areas in Veterinary Sector		52

	How can Veterinary graduates make oneself ready for serving in private sector	November 17, 2022	
9.	Contribution of Indovax in control of Poultry diseases in India	December 01 to 02, 2022	28
	Application of Good Manufacturing practices in production of poultry vaccines at Indovax		
	Economic impact of avian mycoplasmosis on poultry industry in India		
	New insights on some significant bacterial poultry diseases and their control		
10.	Genus India as an opportunity in Veterinary Sector	December 07, 2022	20
	To make Veterinary graduates ready for private sectors		

9. List of Exposure Visit of Students to Industries and Plants

Date	Visit	Organizing College/ Deptt.
May 09 to 23, 2022	ICAR- Central Institute of Freshwater Aquaculture (CIFA), Bhubaneshwar	College of Fisheries
	Dr. M.G.R Fisheries College and Research Institute (Ponneri)	
	TNJ Fisheries University	
	Feed Industry- C P Aquaculture (India) Pvt. Ltd. Muttukadu	
	Experimental Station of ICAR-Central Institute of Brackish water Aquaculture (CIBA), Tamil Nadu	
	ICAR- Central Institute of Fisheries Technology (CIFT)	
	ICAR- Central Marine Fisheries Research Institute (CMFRI)	
	Central Institute of Fisheries Nautical and Engineering Training (CIFNET)	
	Processing Plant-Geo Aquatic Products Pvt. Ltd.	
	Marine Products Export Development Authority (MPEDA)	
	Fish landing harbors in Kochi, Kerala.	
May 30, 2022	Punjab Home Guards Canine Breeding and Training Institute, DeraBassi, Mohali	TVCC, COVS
May 31, 2022	Punjab Police Academy, Phillaur	TVCC, COVS

June 06 to 12, 2022	G. B. Pant University of Agriculture and Technology, Pantnagar	College of Fisheries
	ICAR- Directorate of Coldwater Fisheries Research (DCFR), Bhimtal.	
June 28, 2022	Punjab Police Academy, Phillaur	TVCC, COVS
June 29, 2022	Punjab Home Guards Canine Breeding and Training Institute, DeraBassi, Mohali	TVCC, COVS
July 06 to 07, 2022	Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST)- Jammu	College of Fisheries
	Bagh-e-Bahu Public Aquarium, Jammu	
July 08, 2022	Fish farm of progressive fish farmer, Mr. Sultan Singh of Village Butana, Nilokheri in Haryana	College of Fisheries
July 08, 2022	Paras-Asees compound feed plant, Moga,Punjab	COVS
July 11, 2022	Shrimp farm of S. Dilbagh Singh, S. Navdeep Singh and S. Davinder Singh in village Fakharsar Theri, Sri Muktsar Sahib.	College of Fisheries
	Fish farm of S. Sukhpal Singh, Village Badbar, Barnala	
July 27, 2022	Punjab Police Academy, Phillaur	TVCC, COVS
July 28, 2022	Punjab Home Guards Canine Breeding and Training Institute, DeraBassi, Mohali	TVCC, COVS
August 08 to 12, 2022	Unati Coop Society, Ltd., Talwara	COVS

10. Guest faculty/ National /International Visiting Professor/Expert Agri-preneurs:

S.No.	Organizing Department	Role	Name	Date
1.	Animal Nutrition	Guest Faculty	Dr. Mocherla VAN Suryanarayana	June 20-23, 2022
2.	Veterinary Pathology	Guest Faculty	Dr. Vipin Kumar Gupta	July 11-19, 2022
3.	LPM	Guest Faculty	Dr. RS Yadav	July 18-22, 2022
4.	Veterinary Gynaecology and Obsterics	Guest Faculty	Dr. GN Purohit	August 1-5, 2022
5.	Veterinary Anatomy	Guest Faculty	Dr. Pawan Kumar	August 29-September 2, 2022
6.	Veterinary Anatomy	Guest Faculty	Dr. O.P. Choudhary	September 12 to 16, 2022

7.	Veterinary Physiology and Biochemistry	Guest Faculty	Dr. Dilip Kumar Swain	September 27 to October 01, 2022
8.	Veterinary Anatomy	Guest Faculty	Dr. P. Jagapathi	October 03 to 08, 2022
9.	Veterinary Surgery & Radiology	Guest Faculty	Dr. M.Raghunath	October 10 to 14, 2022
10.	Veterinary Physiology and Biochemistry	Guest Faculty	Dr. Ravindra Kumar	October 10 to 14, 2022
11.	Centre of One Health	Guest Faculty	Dr. Nagappa Karabasavanar	November 7-16, 2022
12.	Veterinary Microbiology	Guest Faculty	Dr. Dhinakar Raj Gopal	December 12 to 16, 2022
13.	CoDST	Guest Faculty	Dr. Sanjeev Kumar	July 4 to 8, 2022
14.		Guest Faculty	Dr. P S Minz	August 9-13, 2022
15.		Guest Faculty	Dr. D.N. Yadav	February 06-10, 2023
16.		Guest Faculty	Dr. Rahul Kumar Anurag	February 27- March 03, 2023
17.	CoF	National Visiting Professor	Dr. Swarndeeep Singh Hundal	December 06, 2022 to January 06, 2023
18.	Veterinary Anatomy	International Visiting Professor	Dr. Baljit Singh	July 25-August 1, 2022
19.	Veterinary Surgery & Radiology	International Visiting Professor	Dr. Jalila Abu	August 22-26, 2022
20.	ADRC	International Visiting Professor	Dr. Hazilawati Binti Hamzah	August 22-26, 2022
21.	Centre of One Health	International Visiting Professor	Dr. Shovik Ghosh	November 20 to 25, 2022
22.	Centre of One Health	International Visiting Professor	Dr. Ashutosh Verma	December 5-13, 2022
23.	Vety. Physiology and Biochemistry	International Visiting Professor	Dr. Yogesh Saini	February 12-January 05, 2023
24.	ADRC	International Visiting Professor	Prof. Gad Baneth	February 05-11, 2023
25.	Veterinary Gynaecology & Obstetrics	International Visiting Professor	Dr. Bikash Sahay	February 21- March 01, 2023
26.	TVCC	International Visiting Professor	Dr. Amandeep Singh Chohan	February 03-10, 2023
27.	Animal Genetics and Breeding	International Visiting Professor	Dr. Bhanu P. Chowdhary	February 06-24, 2023

28.	Veterinary Gynaecology & Obstetrics	International Visiting Professor	Dr. Ido Braslavsky	February 05- March 01, 2023
29.	Veterinary Medicine	International Visiting Professor	Dr. Fabienne D. Uehlinger	February 24- March 02, 2023
30.	Veterinary Microbiology	International Visiting Professor	Dr. Rubin Joe	February 26- March 4, 2023
31.	Veterinary Pathology	International Visiting Professor	Dr. Abdulwahab Kammon	March 06-11, 2023
32.	Veterinary Anatomy	International Visiting Professor	Dr. Jay Wilson	March 14-22, 2023
33.	CoDST	International Visiting Professor	Dr. Anton Blencowe	November 09 to 19, 2022
34.		International Visiting Professor	Dr. Nidhi Bansal	March 12-22, 2023
35.	CoF	International Visiting Professor	Dr. Soottawat Benjakul	November 01 to 05, 2022
36.		International Visiting Professor	Dr. Kartik Baruah	November 01 to 05, 2022

Plan ahead for 2023-24

- Skill Development for students
 - ✓ Student Entrepreneurship trainings
 - ✓ Student Skill Development Programme
 - ✓ Remedial courses for weaker section students
 - ✓ Student short duration Internship
- Students' exposure visits and trainings
 - ✓ Students will be sent to various international universities and institutes of repute for academic exposure.
 - ✓ Exposure visit of students to Industries and plants
- Faculty upgradation
 - ✓ International level training for faculty to enhance efficiency and competence
- Visiting Professorship/Adjunct faculty/Guest faculty
- Linkages with industries
 - ✓ Industry experts/faculty for workshops and lectures

1. Output-Outcome Monitoring

S. No.	Particulars	April 22 to March 2023		
		Plan	Achievement	Remarks (Action plan for areas where improvement is needed)
1.	Number of new facilitative units established to enable academic and research infrastructure (IIIC- Industry Institution Interaction Cell / Start up cell / incubation cell / experiential learning unit / placement cell etc.)	-	-	-
2.	Number of pilot courses added / upgraded on communication skills, entrepreneurial skills, information processing, creative and innovative thinking, leadership skills, industry-oriented courses etc.	-	-	Seven short courses (5-7 days) on different aspects of entrepreneurship development viz. processing of meat, feed processing, small animal practice, establishment of post mortem units and small animal management and reproduction were conducted.
3.	Additional revenue generated through institutional activities with industries in INR lakhs	-	-	-
4.	Revenue generated through public usage of infrastructure for academic activities in INR lakhs	-	-	-
5.	Number of MoUs signed with industry for knowledge exchange programs/ internships / short term training programs etc.	-	8	1. MoU between GADVASU and 1 Pb R & V Sqn NCC Unit, Ludhiana 2. Research Collaboration with Frontier Dairy Junction, Halwara, Ludhiana

				<p>3. Research Collaboration with Kamdhenu University, Gandhinagar, Gujrat</p> <p>4. MoU with Central Council for Research in Ayurvedic Sciences, Ministry of AYUSH, GoI</p> <p>5. MoU with Sheep Farm, AHD, Govt. of Punjab</p> <p>6. Research Collaboration with Prince of Songkla University, Thailand</p> <p>7. Collaboration with Himedia Laboratories Pvt. Ltd.</p> <p>8. MOA Collaboration with National Bank for Agriculture and Rural Development (NABARD).</p> <p>9. MOU with Moofarm Pvt. Ltd., Gurugram, Haryana</p> <p>10. MoU between Carus laboratories Pvt. Ltd., Karnal, Haryana</p>
6.	Improved AU revenue generation (% change in internal revenue of AU)	-	63.0	-
7.	No. of International trainings undertaken by faculties under IDP component	-	12	More number of faculty will be sent for international training in coming months
8.	Number of national trainings undertaken by faculties under IDP component	-	-	-
9.	No. of International trainings undertaken by students under IDP comp	-	50	More number of students will be sent for international training in coming months

10.	Number of national trainings undertaken by students under IDP comp	-	-	-
11.	No. of direct beneficiaries of the project	-	2339	-
12.	No. of female beneficiaries out of total direct beneficiaries	-	984	-

2. Input and Activity Monitoring

Input/Activity Indicator	Sub Head/category	Expenditure/ input in INR lakhs		Justification
		Planned	Utilized	
Goods and Equipments	Equipment, Plant & Machinery	-	-	-
	Office equipment	-	-	-
	Laboratory equipment	-	51.1562	For strengthening of teaching infrastructure
	Furniture & fixtures	-	-	-
	Computers and Peripherals	-	-	-
	Books and Journals	-	-	-
Civil works	Minor repair and renovation work	-	-	-
Human capacity building	National level training	Nil	Nil	-
	International level training	-	74.65511	12 faculty members have been to various institutes of repute for global exposure
	Short visit/ seminars	-	9.61045	4 administrators/ officers visited universities abroad for Inter-institutional collaboration
	Meetings and workshops	-	6.41601	Alumni meet for enhanced participation of alumni of GADVASU
Consultancy	National level consultancies	Nil	Nil	-
	Travel	-	0.29077	-

Recurrent cost / Miscellaneous	Contractual services	-	12.16246	Salary of Contractual Staff under IDP
	Operational costs	-	166.75165	National/International/Guest visiting professor, Expert/Motivational talk, Contingency
	Institutional charges	-	18.77	
TOTAL		-	339.81265	

3. Case studies/ success stories





IDP Success Story of Sajib Sikder
An Entrepreneurial Journey on the Path of Excellence

Sajib Sikder has completed his B.Tech Dairy Technology from College of Dairy Science and Technology, GADVASU, Ludhiana. After completion of his studies, he went for a small startup of an ice cream company in his own hometown, Dhanbad, Jharkhand. He started this company with a vision of fulfilling customers' needs and providing the best quality product in the market. Today, he is working as an Assistant Production Manager (Aseptec Packaging Section) and also simultaneously running his own startup with assistance from his father. His ice cream brand, **Snowbites**, stands different from other ice cream manufacturers in the way that he develops flavor and does R&D in ice cream as per customer's needs and market demands. His motive is to bring some new players in market rather than selling his products to the same old distributors. It is his new way of marketing strategy and as well as providing jobs and source of income to new comers. So, he is not just earning for himself but building ways for other entrepreneurs too. In his company, presently there are 38 employees among which 14 are women. During COVID, when many people lost their jobs, he made them join his business as a distributor which increased his sales as well as it helped others with a steady source of income. Sajib says *"IDP-NAHEP programmes have helped me a lot in acquiring various entrepreneurial skills. Now I am of the view that one should go for entrepreneurship and provide jobs to others, rather than looking after jobs for himself."*


The success of Sajib is an inspiration to all those who believe in their dreams and work hard to achieve it.


Sajib Sikder
 CoDST, GADVASU

" Skill Development programmes and entrepreneurial trainings under IDP Project has made me realise my true potential and I decided to follow my dreams of turning myself into an entrepreneur "

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Sajib Sikder, a student from CoDST started an Ice cream company (brand Snowbites) Dhanbad, Jharkhand and presently has 38 employees.





IDP Success Story of Khushwant Singh Brar
Success Comes To Those Who Will and Dare

Khushwant Singh Brar, M.F.Sc. student of Department of Fisheries, Aquaculture, College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana, Punjab, is one of the sincere, hardworking and inquisitive students. In his version, he enrolled in degree programme with some haziness but got his clear path after attending entrepreneurial sessions and trainings under IDP project. Interested in shrimp farming at grassroot level, he opted his project accordingly but he met with a major accident in middle of his project and got stuck. Bodridden for many months, he had his zeal and commitment that fuelled his future course of action. Despite many requests from his teachers and well wishers to modify his project that may involve less amount of field work, he insisted to carry on. *"My level of motivation always remained high, thanks to my Alma mater and IDP, NAHEP-ICAR, who enabled me to meet successful entrepreneurs and motivational speakers."* says Singh. With passing time, he became more focussed with no looking back attitude and tried to gather the information through multiple activities carried out under IDP project pertaining to entrepreneurship development at college and university level. He completed his degree programme slightly late as compared to his batch mates, but with no grudges and positive mindset, he moved on his chosen path. With continuous guidance, he constructed shrimp ponds in 3-acre area in his native village Gaddan Doh, Tehsil Abobar, District Fazilka (Punjab) in April 2022. Right from the beginning, he was focussed to take up shrimp farming as an entrepreneurial venture in a scientific manner. His well-planned shrimp farm with all the biosecurity measures tells his story of hard work and commitment. He is expecting to harvest 8-9 tonnes of export quality shrimp and going to harvest by mid-October to the parties from Andhra Pradesh. With the knowledge gained during expert talks under IDP project, he is even trying to harvest shrimp in winter months, which is relatively a tough task. He owes a lot to IDP, NAHEP-ICAR that propelled him to delete word impossible from his dictionary.

Khushwant Singh Brar
 CoF, GADVASU

" IDP project of NAHEP, ICAR was really a huge blessing for me during difficult pandemic time and gave me wings to fly higher with my own power "

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Khushwant Singh Brar, a student from CoF, an entrepreneur in Shrimp farming in District Fazilka (Punjab) since April 2022. He has established a name in shrimp farming and is motivating other students to start their own ventures.



Simrandeep Singh
CoVS, GADVASU

“ I was always inclined to do something new, the day I joined my college. Turning motivation into action was the biggest challenge. I sincerely thank IDP-NAHEP for giving me an opportunity to interact with promising entrepreneurs who have shown me the way forward. ”

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IDP Success Story of Simrandeep Singh
The Quest to learn and experience: A first step towards entrepreneurship development

Simrandeep Singh, a student of B.V.Sc. & A.H. has been a sincere and hardworking student who has developed keen interest in starting up his own venture after his graduation. Right from the beginning, he started planning for the same, however, he was not able to channelize his efforts due to lack of proper guidance. He was regularly contacting entrepreneurs on various social media platforms for direction and path enlightenment. When various entrepreneurs were invited on campus under IDP project, he enthusiastically participated and gained insights for successful business ventures from them. In one of the conferences at GADVASU, he presented his ideas on poster entitled “Inclusive Entrepreneurial innovations-Breakthrough ideas, Sustainability & productivity” and was awarded 2nd prize. After that he got the opportunity to represent university as STUDENT AMBASSADOR at Agri India Hackathon, the largest virtual gathering to create dialogues, and accelerate innovations in agriculture. His consistent efforts led him to pursue prestigious internship from dairy business analytics firm, Jordbrukare India Pvt Ltd which deals with market intelligence, risk management, dairy economics and market access. Currently he has been

assigned duty to work on understanding economics of various categories of dairy farms prevalent in regions of Punjab and Uttar Pradesh, assessing opportunity costs, economic feasibility and techno-financial sustainability of these model dairy farms. He had also enrolled himself for remedial classes in entrepreneurship development and extension methodologies. “My passion to understand economics and entrepreneurship has been lightened up by IDP Project and I am fortunate enough to get so many opportunities, be it soft skill development, entrepreneurship development programmes or remedial classes. I am really thankful to NAHEP- IDP for bringing best out of me.” Says Simrandeep Singh. It is indeed a motivating thing for others who wish to follow their dreams with passion and great zeal.

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Simrandeep Singh, an undergraduate student from CoVS is interested in starting up his own venture after his graduation. He owes a lot to trainings and interactions conducted under IDP. He had represented GADVASU as a STUDENT AMBASSADOR at Agri India Hackathon.



Akanksha Gautam
CoF, GADVASU

“ I strongly believe that IDP-NAHEP provided me a strong platform to interact with international faculty through webinars/virtual tours. Such interactions broadened my vision and I developed a strong desire to pursue my higher education abroad ”

2



IDP Success Story of Akanksha Gautam
A Dream Come True: Hard Work & Sincerity Always Pays Off

Akanksha Gautam, a final year B.F.Sc. student of College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana, Punjab, is one of the all-rounder students of her batch, who is always ready to experiment with innovative ideas. Keen to learn, Akanksha participated in all the activities held under IDP, since the inception of project in GADVASU. Even during difficult COVID situation, she never felt disappointed and not only participated enthusiastically in all the events, but also remained focused for her target. During one of the interaction sessions in the form of virtual tour, arranged under IDP programme with the International Centre of Excellence in Seafood Science and Innovation (ICE-SSI), Faculty of Agro-Industry, Prince of Songkla University Hat Yai Thailand, she interacted with experts and took a challenge to seek admission in the same institute for higher studies. A well-known quote “Where there is a will, there is a way” fits her determined approach. The great zeal to pursue higher studies abroad helped her to secure admission in fully funded integrated 4 year Masters/Ph.D. programme in Food Science in the same Institute i.e. ICE-SSI, Faculty of Agro-Industry, Prince of Songkla University Hat

Yai Thailand. It is one of the international centres known for high end research with special emphasis on utilisation of seafood processing waste for transformation into functional ingredients and food additives. Besides, the other important research areas are application of non-thermal technologies, along with active packaging and natural preservatives for shelf life extension and safety assurance of seafood and seafood products.

Akanksha says “Thanks to IDP-ICAR, NAHEP which provided me the right platform to widen my outlook and ignited the hidden instinct in me and I developed a quest for research abroad”. She will be working under the guidance of a well renowned food scientist, Professor Sottawat Benjakul, a globally renowned scientist. She will undertake her research study on extraction of nutraceuticals and bioactive compounds from seafood processing waste. The success of Akanksha will be a motivation for all those, who dream big and also work hard with sincerity to chase and achieve it.

3

Akanksha Gautam, an undergraduate student from CoF got placement in 4 year Masters/ Ph.D. programme in Food Science at Faculty of Agro-Industry, Prince of Songkla University Hat Yai Thailand. It could have been materialized after establishing a linkage with university under IDP.



Ankita Singh
CoF, GADVASU

Saumya Mehta
CoF, GADVASU

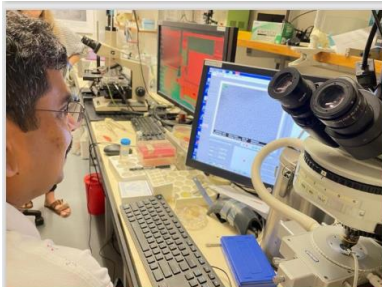
“ IDP Project has given us life time golden opportunity in form of International Exposure in one of the Premier Institutes in the field of Sea Food Processing, & from there no looking back for us ”

IDP Success Story of Ankita Singh & Saumya Mehta
Standing Out of Crowd : Discipline & Earnestness to Move Ahead with Excellence

Ankita Singh and Saumya Mehta, B.F.Sc. final year students of College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana, Punjab, were among the batch of 20 students, who got an International exposure under IDP-NAHEP during the month of August 2022. In their words, this International exposure training under IDP was a life changing opportunity for them. The training at International Centre of Excellence in Seafood Science and Innovation (ICE-SSI), Faculty of Agro-Industry, Prince of Songkla University, Hatyai Thailand not only broadened their horizon, but also opened up avenues of higher education for them. With lot of gratitude to NAHEP, ICAR and their parent institute GADVASU, Ankita and Saumya say, “We will always be indebted to IDP-NAHEP through which we got the golden opportunity to undergo International training at ICE-SSI, Faculty of Agro-Industry, Prince of Songkla University, Hatyai Thailand”. During their exposure visit-cum-training, the students had intensive hands on sessions on the modern aspects of sea food processing, non-thermal processing, microbiological techniques for seafood safety, sea food quality assurance and packaging technology

under the mentorship of Prof. Sootawat Benjakul a world renowned food scientist. Impressed by the active involvement in all the sessions, hardworking attitude and the scientific acumen of both the students, Prof. Sootawat offered them a placement to study in fully funded Integrated Masters/ Ph.D programme in Food Technology at ICE-SSI, only. Ankita and Saumya will be working on utilisation of seafood processing waste for transformation into functional ingredients and food additives. This big accomplishment of both the students will be a right impetus for other students. Ankita and Saumya give the whole credit to IDP project at GADVASU for changing their lives and setting a new path of illustrious career for them.

Ankita Singh & Saumya Mehta, undergraduate students from CoF were offered placement in fully funded Integrated Masters/ Ph.D programme in Food Technology at Faculty of Agro-Industry, Prince of Songkla University Hat Yai Thailand. It was during their visit to university under students’ International training programme. They both are highly indebted to IDP for life changing opportunity.



Dr. Ajeet Kumar
CoVS, GADVASU


“ In my Research on freezing bull semen, I was stuck at a point since last eight years. My Sincere thanks to NAHEP- IDP for giving me an opportunity to learn and evolve. Now, I am confident that I will surely find a solution of my research problem ”


IDP Success Story of Ajeet Kumar
New learning experience of Antifreeze Protein: Science of Minimizing Sperm Damage

Dr. Ajeet Kumar has been freezing bull semen using a programmable bio freezer obtaining a post thaw sperm motility around 60%. However, he has been stuck at this point since last 8 yrs due to lack of basic knowledge of Thermodynamics, Cryophysics, and Cryomicroscopy. He was unable to fine tune his freezing protocol further to improve post thaw semen quality. Meantime, Dr. Kumar got an opportunity to visit The Hebrew University of Jerusalem, Rehovot, Israel (World ranking - 77) for 03 months under IDP-NAHEP sponsored International Faculty Training Program. During training, he learnt the techniques of cryomicroscopy, evaluation of melting point, freezing point and thermal hysteresis of media, infrared thawing in the Cryobiology lab. The research work conducted during the visit was focused at understanding the ice crystallization and re-crystallization leading to sperm injuries during semen cryopreservation. The bull semen was processed in tris citrate fructose extender and various cooling rates were applied and ice crystal formation was observed with and without supplementation of antifreeze protein (AFP III) under cryomicroscope. It was observed that AFPIII supplementation


@50uM improved post thaw semen quality of bull. He also understood the pattern of ice crystal shape and size during freezing. The IDP-NAHEP sponsored international faculty training improved his skill, understanding and experience on measures to curtail ice crystallization and recrystallization in sperm. It has also enabled his teaching skills, refining research program related to male infertility and semen technology. Upon his arrival, he has submitted a project to DBT entitled “Improving quality and fertility of cryopreserved dairy bull semen by modulating ice recrystallization and cooling rates within critical temperature zone”. The presentation about his work during training was applauded by faculty and students and he is teaching the learnt skills with passion and enthusiasm.

Dr. Ajeet Kumar, Professor, Veterinary Gynaecology and Obstetrics, CoVS visited The Hebrew University of Jerusalem, Israel under Faculty International Training programme and submitted a project to DBT on the training areas upon return which is under consideration.





IDP Success Story of Prabjeet Singh
A Long Cherished Dream Finally Comes True!!



Dr. Prabjeet Singh
CoF, GADVASU

“ I strongly believe that IDP-NAHEP has proven to be a unique platform to meet the research aspirations of many researchers like me ”

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Dr. Prabjeet Singh, Assistant Professor, Department of Fisheries Resource Management, College of Fisheries, Guru Angad Dev Veterinary and Animal Sciences University has been actively involved in organising workshops under IDP-NAHEP project. His sincerity paid him well in form of an International Fellowship. While exploring international institutes for establishing linkages with scientists for inviting them as experts for UG students under IDP, Dr. Prabjeet Singh came in contact with World Renowned Scientist in the field of Sea Food Processing, Prof. Sootawat Benjakul, Director, International Centre of Excellence in Seafood Science and Innovation (ICE-SSI), Faculty of Agro-Industry, Prince of Songkla University-Hatya, Thailand. With similar kind of research interests, both of them gelled well resulting in exchange of creative and novel ideas for a common goal i.e. Development of Fisheries Sector as prime research and entrepreneurial choice. Unexpectedly, Prof. Sootawat offered Dr. Prabjeet two weeks “Visiting Researcher Fellowship” under “Reinventing University” Program by ICE-SSI, PSU, Thailand. He successfully completed the fellowship and he worked on advanced seafood processing technologies to extract functional nutraceutical/ industrial by-products, especially from shrimp, under the mentorship of Dr. Sootawat, Director of ICESSI and Dr. Avtar Singh, Vice-Director Research and International Affairs. During his stay at PSU, Thailand, he held several meetings proactively with the Vice-President International Affairs; Head, Department of Aquatic Science; Dean, Faculty of Natural Resources; and Dean, Faculty of Veterinary Sciences at PSU, to work out the modalities for future collaborations between PSU and GADVASU, for student exchange programs, advanced trainings and internships of fisheries/ veterinary professionals and capacity building of faculty of the two universities. This accomplishment will certainly help students/faculty of GADVASU to earn global recognition and alliances for developing fruitful collaborative research projects, which will open up new avenues mutually benefiting academic and research exchange programmes between the two universities, for sustainable growth of livestock and fisheries sectors. He dedicates his achievements to IDP-NAHEP and is hopeful that the collaboration will be fruitful for both countries as a whole.

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Dr. Prabjeet Singh, Assistant Professor, CoF was offered two weeks “Visiting Researcher Fellowship” under “Reinventing University” Program by Prof. Sootawat at ICE-SSI, PSU, Thailand. Later a research collaboration in form of MoU was materialized between GADVASU and ICE-SSI, PSU, Thailand.

4. Photographs of activities: Attached in the last.

During this period (April 2022 to March 2023), a number of expert lectures, exposure visits, remedial classes involving experts from industries, academia and various entrepreneurs, were conducted for students. Some unique initiatives have been taken to motivate students and for development of their soft skills, many soft skill courses had been conducted. The international exposure to faculty and students has been a new addition in this year.



Alumni Meet 2022



Various Teaching Models for UG students

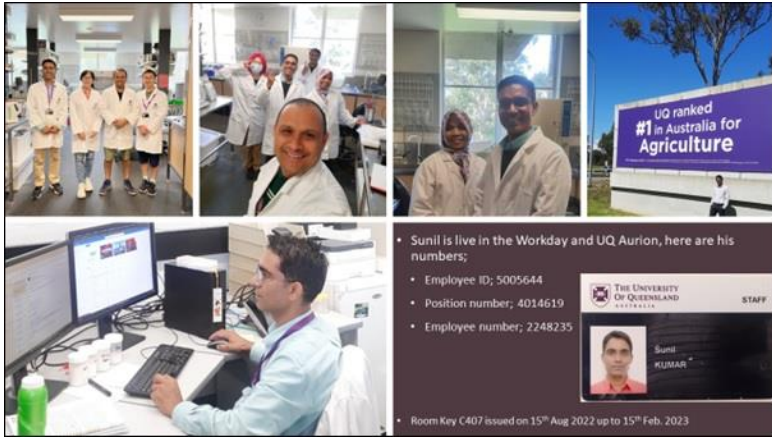


Students Skill Development Courses



Industry Experts Talk





Faculty International Training



Students' International Training



Brain-Storming Session Transforming Veterinary and Animal Sciences Universities into Multi-disciplinary Education and Research Universities (MERU) as Per National Education Policy (2020)