

# INFORMATION BROCHURE



**Lala Lajpat Rai**  
**University of Veterinary and Animal Sciences**  
**Hisar - 125 004 (Haryana)**

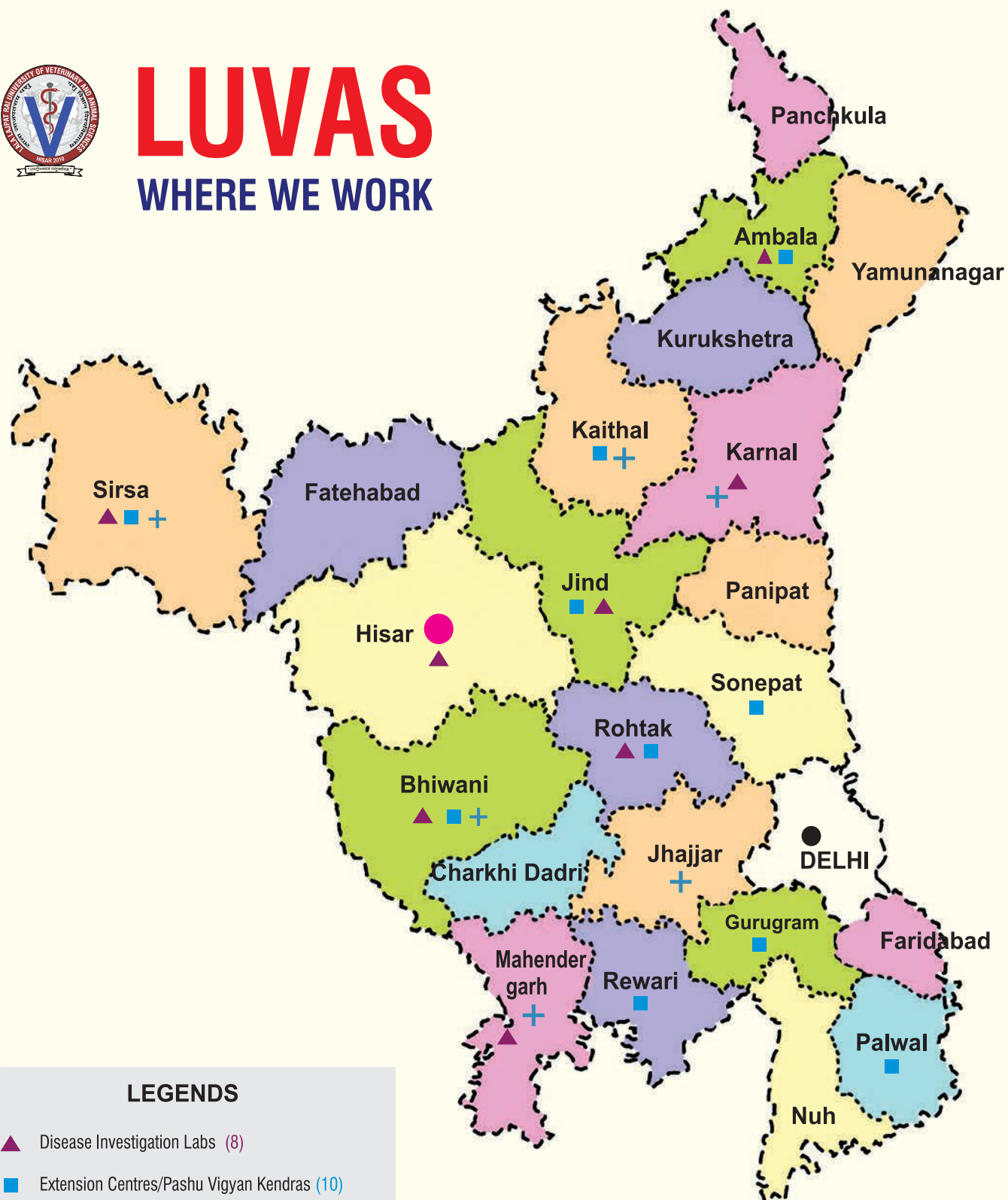


LUVAS



# LUVAS

## WHERE WE WORK



### LEGENDS

- ▲ Disease Investigation Labs (8)
- Extension Centres/Pashu Vigyan Kendras (10)
- LUVAS Main Campus
- + Haryana Pashu Vigyan Kendras (6)

## *Vice Chancellor's Message*

It brings me great pleasure to present our Information Brochure, which highlights the diverse academic and research possibilities available at our prestigious university. LUVAS has been at the forefront of excellence in veterinary and animal sciences education for many years, and we seek to create a supportive atmosphere for our students' entire growth.



LUVAS stands as a beacon of knowledge and innovation in the field of veterinary sciences, offering a range of specialized programs. Our renowned College of Veterinary Sciences is committed to creating qualified veterinarians who can successfully contribute to animal treatment, welfare, and research. We emphasize the importance of the dairy sector at the College of Dairy Science and Technology, and we strive to provide comprehensive knowledge in fields such as dairy technology, dairy engineering etc. Furthermore, Institute of Para-Veterinary Sciences produces skilled professionals in the allied fields of veterinary sciences, including animal health technicians, laboratory technicians, and livestock extension officers. This institute plays a vital role in supporting the veterinary healthcare system and ensuring the well-being of animals.

LUVAS actively pursues national and international collaborations in accordance with our commitment to global participation and knowledge sharing. We are certain that by building collaborations with prestigious institutes both in India and abroad, we can improve our academic programmes and research efforts, and eventually contribute to the advancement of veterinary and animal sciences. We aim to develop faculty and student exchange programmes, collaborative research projects, and knowledge-sharing platforms through our partnerships. These collaborations serve as invaluable opportunities for our students and faculty to gain exposure to diverse perspectives, cutting-edge research, and innovative practices in the field.

I invite you to explore this Information Brochure and discover the exciting opportunities that await you at LUVAS. Whether you are a prospective student, a faculty member, or a collaborator, we assure you of a vibrant academic environment, state-of-the-art facilities, and a dedicated team of faculty and staff.

Join us on this journey of academic excellence, research innovation, and societal impact as we work together to transform the world of veterinary and animal sciences.

Looking forward to future collaborations



**Prof. (Dr.) Vinod Kumar Verma**



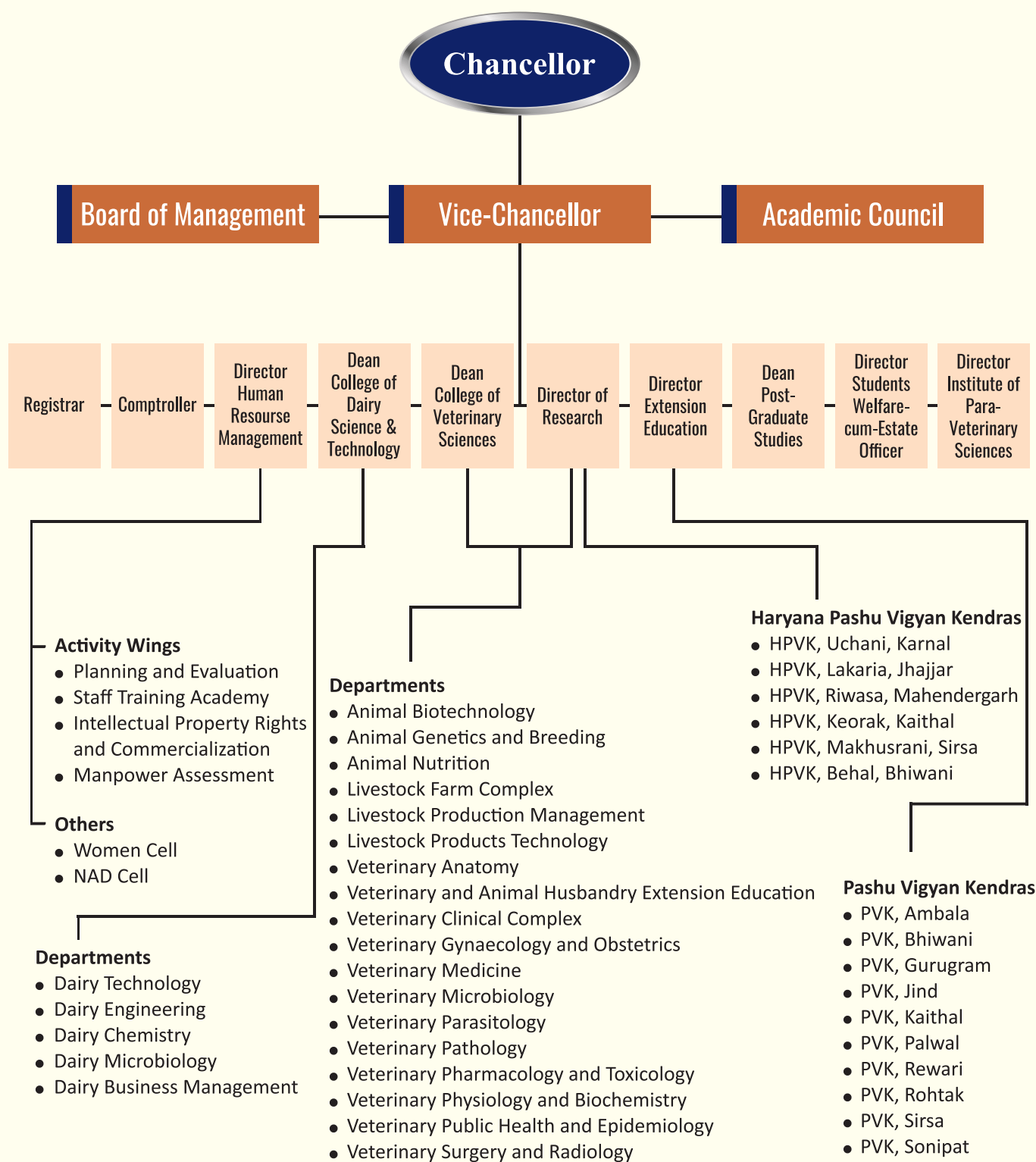
## Index

S.No.	Contents	Page No.
1.	Organizational setup	1
2.	LUVAS at a glance	2
3.	Academics	3 - 6
4.	Research	7 - 11
5.	Visit of Foreign Delegates to LUVAS	12
6.	Extension	13
7.	Area of Collaboration	14
8.	Training and Capacity Building	15-19





# ORGANIZATIONAL SET-UP OF LUVAS



## LUVAS AT A GLANCE

Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS) is a renowned institution dedicated to the advancement of veterinary and animal sciences. Situated in the vibrant city of Hisar, Haryana, India, LUVAS offers a wide range of academic programs, cutting-edge research opportunities, and state-of-the-art facilities.

This university has been established at Hisar, Haryana in pursuance of the Haryana Act No. 7 of 2010 notified on 7th April, 2010 and came into existence w.e.f. December 1, 2010. The University has been named in the cherished memory of Lala Lajpat Rai ji, a great patriot, the foremost freedom fighter, an ardent social reformer and a versatile writer.

### **The major objectives of the university are:**

- i. To impart education in different branches of veterinary, animal sciences, fishery sciences, dairy technology and allied sciences.
- ii. To undertake study in marketing strategies of live-stock and livestock products, conservation of livestock breeds and wild animals.
- iii. To liaise and establish vital linkages with the concerned departments of Animal Husbandry, Fisheries and Dairy Development of the State Government and Union Government and National and International Research Institutes.

The Government of Haryana has allotted a piece of land measuring 1124 acre to build an ultra modern new campus of the University for which foundation stone has already been laid. The new campus is meant to be environmental friendly and energy efficient based on vertical extension and green building concept.

The University has attracted and invested remarkable budget during the past decade leading to construction of state of the art laboratory facilities in various departments at its new campus in Hisar and infrastructure development at its regional centres.





## ACADEMIC PROGRAMME

### (A) College of Veterinary Sciences

Since its inception in the year 1948, the college is a centre of regional, national and international excellence for learning in animal health and production. The college has been playing a crucial role in the development of livestock sector as an instrument of rural development through its multifarious activities. The broader mandate of the college is to conserve animal wealth and increase production through creative higher education and research in veterinary sciences. The college has excellent laboratory facilities and adequate infrastructure for the undergraduate, post-graduate and diploma programmes.



Degree Programme	Duration of Course
1. Bachelor of Veterinary Science and Animal Husbandry (B.V.Sc. & A.H.)	5.5 years
2. Master of Veterinary Science (M.V.Sc.) in 18 disciplines	2 years
3. Doctor of Philosophy (Ph.D.) in 18 disciplines	3 years

\*Click link or visit University website for more details <https://www.luvass.edu.in/>

There are five private veterinary colleges affiliated to LUVAS whose details are as under:

1. International Institute of Veterinary Education and Research, Bahu Akbarpur, Distt. Rohtak
2. M.R. College of Veterinary Science, V.P.O. Hassanpur, Distt. Jhajjar
3. Sanskaram College of Veterinary and Animal Science, Kheri Taluka, Patauda, Distt. Jhajjar
4. RPS College of Veterinary Sciences, Satnali road, Balana, Distt. Mahendergarh
5. Bhumika Institute of Veterinary and Research Center, Sagra, Distt. Mahendergarh

### Glimpses of students activities







## (B) Institute of Para Veterinary Sciences (IPVS), LUVAS, Hisar

Veterinary and Livestock Development Diploma is designed to train human resource in developing para-veterinary personnels. The Para-Veterinarians provide minor veterinary services and assist the Veterinarians for health care and management of livestock and thus contribute towards the development of Animal Husbandry and Dairy sector. They also play an important role in veterinary extension services and are considered as an integral part of veterinary service delivery system. There is a great demand of Para-Veterinarians in Veterinary Hospitals, Veterinary Poly Clinics, Diagnostic Laboratories, Dairy Plants, Livestock Farms and Milk and Meat Processing Units in Government as well as Private sector. There are 16 private institutes in Haryana state affiliated to LUVAS for running Veterinary Livestock Development Diploma courses.

Diploma offered	Name of College
Veterinary Livestock Development Diploma (VLDD)	IPVS, LUVAS and 16 Affiliated Private colleges/Institutes
Diploma in Veterinary Laboratory Technology (DVLTT)	IPVS, LUVAS

\*Click link or visit University website for more details <https://www.luvass.edu.in/>

### Activities



Clinical and Farm Activities of Institute of Para Veterinary Sciences



### (C) College of Dairy Science and Technology

College of Dairy Science and Technology (CODST) was established in the year 2014 as another progressive step of LUVAS to strengthen the dairy production and processing sector in the state of Haryana. Primary mission of the college is to develop highly professional dairy specialists through value based education, research and training in dairy technology for meeting technological and societal needs.



**CoDST**

Degree Programme	Duration of Course
B. Tech. (Dairy Technology)	4 years
Masters of Technology (Dairy Technology)	2 years

\*Click link or visit University website for more details <https://www.luvass.edu.in/>

### GLIMPSES OF STUDENT'S ACTIVITIES



**Faculty Classification**

Designation	Total in Position	Male	Female
Dean/Directors	6	6	-
Professor	25	21	04
Associate Professor	10	7	03
Assistant Professor	116	81	35
<b>Total</b>	<b>157</b>	<b>115</b>	<b>42</b>

**Supporting Staff Classification**

Category	Total in Position	Male	Female
A	07	07	-
B	14	13	01
C	267	232	35
D	72	56	16
<b>Total</b>	<b>360</b>	<b>308</b>	<b>52</b>

**Students Enrollment**

Category	Total in position	Male	Female
B.V.Sc. & A.H.	396	270	126
M.V.Sc.	116	63	53
Ph.D.	83	35	48
VLDD	170	160	10
DVLT	12	09	03
B.Tech. (Dairy Technology)	99	70	29
M.Tech. (Dairy Technology)	08	06	02
<b>Total</b>	<b>884</b>	<b>613</b>	<b>271</b>
Affiliated colleges (B.V.Sc. & A.H.)	596	499	97
Affiliated colleges (VLDD)	1576	1533	43
<b>Grand Total</b>	<b>3056</b>	<b>2645</b>	<b>411</b>

**International Students Enrollment**

Degree	Country	Total
B.V.Sc. and A.H.	Bhutan	11
M.V.Sc.	Afghanistan	07
Ph.D.	Nigeria	06
<b>Total</b>		<b>24</b>

## RESEARCH PRIORITIES : LUVAS





## STATE OF THE ART FACILITIES AT LUVAS

### 1. Regional Research Centre (RRC) on Foot and Mouth Disease (FMD)

The RRC on FMD, Hisar has a mandate to develop effective surveillance and control measures for one of the important diseases of livestock, i.e., FMD in Haryana and Delhi. Additionally, it has been assigned the objective of sero-monitoring of FMD-Control Programme in Haryana and Delhi.



### 2. College Central Laboratory

The College Central Laboratory provides laboratory diagnostic help mainly related to microbiological work to different stakeholders and private pharmaceutical organizations. The Laboratory is mainly dealing with two of the major problems in animals i.e. Brucellosis and Mastitis.



### 3. Disease Investigation Laboratories

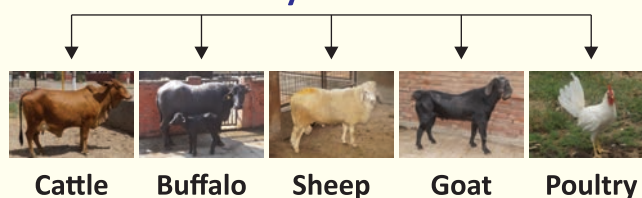
Disease Investigation Laboratories exist at six districts of the state i.e. Ambala, Bhiwani, Jind, Mahendergarh, Rohtak and Sirsa. Facilities provided by these laboratories include: disease outbreak investigation in livestock and poultry, analysis of milk/faecal/ blood samples and advice on prevention and control of diseases to the livestock and poultry owners.



### 4. Livestock Farm Complex

The department is actively involved in imparting quality teaching and hands on training to students in rearing of livestock species and poultry to improve their skills and competence in livestock production. The Livestock Farm Complex (LFC) has facilities of housing, feeding, breeding, record keeping and management of large and small ruminant units, poultry and animals of regional interest to which students are exposed. It also works as a model demonstration unit for students, trainees and livestock entrepreneurs.

#### University Animal Farms



### 5. Disease Free Small Animal House

This is a unique facility which was established in 1974-75 and is engaged in raising different species of laboratory animals viz. Albino Mice (Swiss), Albino Rats (Wistar), Hamster (Golden Syrian), Guinea pigs (Duncan Hartley) and Rabbits (New Zealand white) for biological research and teaching purpose.





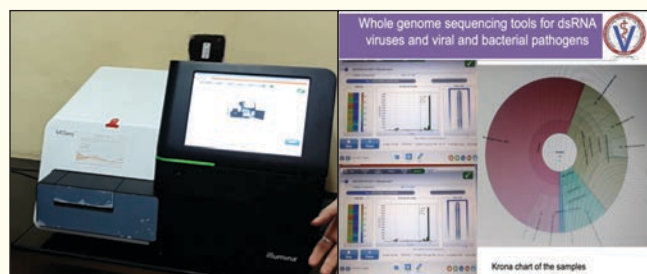
## 6. Veterinary Clinical Complex

Veterinary Clinical Complex provides 24x7 animal health services to the farmers not only of Haryana but also of neighbouring states. Graduate and postgraduate students are imparted practical training in clinical subjects in this complex.



## 7. NGS facility

The department of Animal Biotechnology, LUVAS has created the next generation sequencing facility (NGS), which is being used for the identification of novel pathogens causing outbreaks in animal populations.



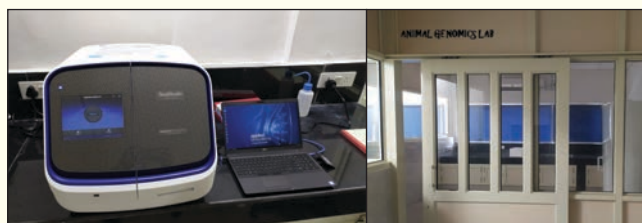
## 8. Antibiotic Residues & Pesticides Testing Laboratory

The department of Veterinary Public Health and Epidemiology has created facilities for testing of samples for antibiotic and pesticide residues.



## 9. DNA Bank

DNA Bank and sequencing laboratory is dedicated to identify candidate markers in the genomic sequences of livestock and poultry associated with production, reproduction and disease resistant traits and creating DNA library for various livestock species for research and teaching purposes.



## 10.ETT-IVF Laboratory

ETT-IVF laboratory is the unique facility created in LUVAS with enthusiastic and dedicated staff committed for rapid multiplication of superior quality indigenous germplasm in the state.

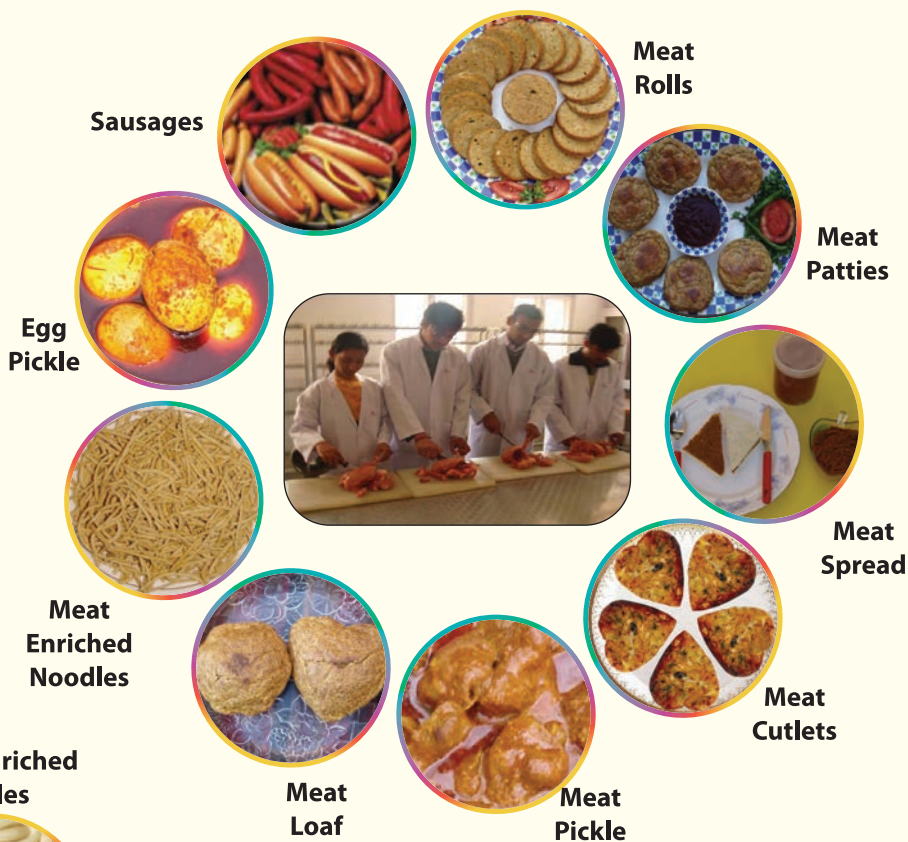




## COMMERCIALIZED DAIRY AND MEAT PRODUCTS

The LUVAS has a strong focus on research and development of meat and dairy products. The research work is undertaken to develop meat and dairy products to enhance protein content. Here are some notable meat and dairy products developed by the LUVAS for commercialization:

### Meat products



### Dairy products





# SUPERIOR LIVESTOCK GERMPLASM MAINTAINED AT LUVAS

## WORLD BEST BUFFALO



### Performance Characteristics

Trait	Mean
Lactation yield (305 days)	2977 kg
Lactation length	312 days
Fat %	6.9 %
Age at first calving	44 months
Service period	130 days
Calving interval	446 days

## CATTLE BREEDS



### Performance Characteristics

Trait	Sahiwal	Hariana
Lactation yield	2604 kg	2142 kg
Lactation length	277 days	232 days
Fat %	5.2 %	4.2 %
Age at First Calving	42 months	42 months
Service period	153 days	133 days
Calving interval	432 days	418 days

## SHEEP STRAINS



### Performance Characteristics

Trait	Harnali	Munjal
Birth wt.	3.39 kg	3.57 kg
3 month wt.	14.18 kg	15.04 kg
6 month wt.	20.10 kg	20.40 kg
Adult wt.		
Male	46.00 kg	50.33 kg
Female	31.82 kg	34.84 kg
Wool Parameter		
Staple length	5.80 cm	6.99 cm
Fibre diameter	25.55 $\mu$	37.22 $\mu$
Medulation %	25.86	60.54

## GOAT BREEDS



### Performance Characteristics

Trait	Beetal	Jakhrana
Body Weight (6 Month)	20 kg	20 kg
Weight at service	30 kg	30 kg
Age at first kidding	540-550 days	540-545 days
Weight at first kidding	35.0 kg	35.0 kg
Kidding (%)	90%	90%
Kidding rate	1.63	1.43



## VISIT OF FOREIGN DELEGATES TO LUVAS



DELEGATION FROM NEPAL AGRICULTURAL  
RESEARCH COUNCIL (NARC)



DELEGATION FROM US EMBASSY



DELEGATION FROM INDONESIA



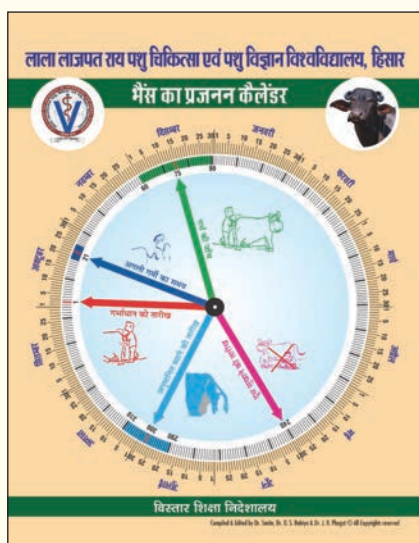
DELEGATION FROM BRAZIL



## EXTENSION TOOLS DEVELOPED BY DIRECTORATE OF EXTENSION EDUCATION

### 1. Breeding calendars of cow and buffalo

Using these simple breeding calendars a farmer can improve breeding efficiency on the farm considerably because it helps the farmer to do the right thing at the right time.



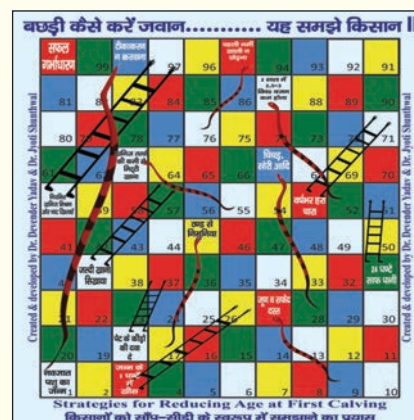
### 2. Milk processing demonstration and exhibition van (Doodh ki chakki):

The purpose of the van is to demonstrate as well as process the milk at farmer's doorstep to increase the awareness among farmers about processing of milk, to increase their income and make them self-reliant.



### 3. Educational games developed for farmers

Directorate has developed Snake & ladder game for easy and better understanding of reducing age at first calving. Crossword puzzle related to different aspects of scientific livestock farming



### 4. Use of ICTs for extension

The Directorate of Extension Education has developed an android e- Pashupalan app, tube channel and also uses social media platforms for information dissemination. The experts of the university regularly deliver Television talks and Radio talks for the benefit of the farming community. The Directorate has started a Pashupalak Kisan Call Centre and Free SMS Service for telephonic consultation/advisories to farmers as per queries.

**Use of ICTs for extension**

<div style="text-align: center; background-color: #e0f0ff; padding: 5px; margin-bottom: 10px;"> <b>Free SMS Service</b> </div> <div style="background-color: #fff; padding: 5px; margin-bottom: 10px;"> <p>• For sending advisories to farmers</p> <p style="text-align: center;">Free SMS</p> </div> <div style="background-color: #fff; padding: 5px;"> <p><b>Android mobile app</b></p> <p>ई-पशुपालन</p> </div>	<div style="text-align: center; background-color: #e0f0ff; padding: 5px; margin-bottom: 10px;"> <b>Pashupalak Kisan Call Centre</b> </div> <div style="background-color: #fff; padding: 5px; margin-bottom: 10px;"> <p>• For telephonic consultation of farmers with experts as per queries</p> <p style="text-align: right;">9300000857</p> </div> <div style="background-color: #fff; padding: 5px;"> <p><b>Facebook and whatsapp</b></p> <p>• For information about extension activities and advisories</p> </div>
<div style="background-color: #fff; padding: 5px; margin-bottom: 10px;"> <p><b>TV TALK SHOW</b></p> </div> <div style="background-color: #fff; padding: 5px;"> <p><b>RADIO SHOW</b></p> </div>	<div style="text-align: center; background-color: #e0f0ff; padding: 5px; margin-bottom: 10px;"> <b>YouTube</b> </div> <p>• For information dissemination</p>



## AREAS OF COLLABORATION

### National and International Collaboration

LUVAS actively seeks collaborations with national and international institutions to enhance its academic and research endeavors. The university believes in the power of partnerships to accelerate knowledge exchange, promote innovation, and address global challenges in veterinary sciences, animal husbandry and dairy sector.

#### Why Collaborate with LUVAS?

**Academic Excellence:** LUVAS boasts to have a team of highly qualified and experienced faculty. Our rigorous academic programs ensure students receive comprehensive knowledge and practical skills, making them highly competent professionals.

**Research Strengths:** LUVAS is at the forefront of innovative research in veterinary sciences, animal husbandry and dairy sector. Our research endeavors focus on addressing global challenges related to animal health, animal welfare, and food security. Collaborating with us provides an opportunity to contribute to groundbreaking discoveries and advancements.

**World-Class Facilities:** LUVAS offers state-of-the-art infrastructure, including modern laboratories, well-equipped animal hospitals, and advanced research facilities. Our campus provides a conducive environment for collaborative research, training, and exchange programs.

**International Recognition:** LUVAS has established strong partnerships with renowned international institutions, fostering academic exchange and collaborative projects. We are committed to promoting cross-cultural understanding and providing a global platform for knowledge sharing.

**Diverse Programs:** LUVAS is committed to offer a wide range of academic programs at the graduate, postgraduate, and doctoral levels. Collaborators can engage in joint degree programs, student exchange, and faculty development initiatives.

### Potential opportunities/collaboration areas

**Joint Research Projects:** To collaborate with LUVAS faculty members on research projects addressing critical issues in veterinary sciences, animal husbandry and dairy sector in the areas of mutual interest. Pool resources, expertise, and knowledge to make significant contributions to the field.

**Faculty and Student Exchange Programs:** To facilitate the exchange of faculty members and students to enhance academic and cultural exchange. This provides an opportunity to learn from diverse perspectives and develop international networks of knowledge and technology exchange.

**Training and Capacity Building:** To organize in collaboration workshops, conferences, training programs, and seminars to build capacity in specialized areas of veterinary sciences, animal husbandry and dairying. To share expertise and foster skill development among researchers, veterinarians, animal health professionals and dairy technologists.

**Technology Transfer and Commercialization:** To collaborate on technology transfer and commercialization of research outcomes, contributing to the development of innovative products, vaccines, and diagnostics for animal health and welfare.

#### Contact Information:

Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS)

**Address :** Director Human Resource Management,  
LUVAS, Hisar-125004

**Email :** [dir.hrm@luvas.edu.in](mailto:dir.hrm@luvas.edu.in)

**Phone :** 01662-256146

**Website :** <https://www.luvas.edu.in/>

***"Join us in shaping the future of veterinary sciences, animal husbandry and dairy sector through global collaborations with LUVAS!"***

***Together, we can make a significant impact on the health and welfare of animals worldwide".***

# TRAINING AND CAPACITY BUILDING

## (Training Modules)

### Module 1: Animal Production

#### Training 1: Skill development training program on dairy farming

##### Content

Breeds and breeding of dairy animals  
 Selection of dairy animals  
 Management of different categories of dairy animals  
 Housing and manure management of dairy farmers  
 Balanced nutrition for improved productivity and fertility  
 Reproductive health management and common diseases of dairy animals  
 Clean and hygiene practices for milk production, storage and handling  
 Economics of dairy farming  
 Record keeping  
 Entrepreneurship development in dairy farming

**Duration of training: One Month**

#### Training 2: Skill development training program on sheep and goat farming

##### Content

Breeds and breeding of sheep and goat  
 Selection of animals  
 Management of different categories of animals  
 Housing management of small ruminants  
 Balanced nutrition for improved productivity and fertility  
 Reproductive health management and common diseases of small ruminants  
 Clean and hygiene practices for meat and wool production  
 Entrepreneurship development in sheep and goat farming

**Duration of training: Two Weeks**

#### Training 3: Skill development training program on commercial poultry farming

##### Content

Understanding the organizational set-up of the poultry industry  
 Different types of housing used for poultry production  
 Sustainable and balanced poultry nutrition  
 Selection of Broilers and Layers  
 Management of different categories of birds  
 Hatchery management  
 Health management  
 Mating systems  
 Diversified poultry production  
 Biosecurity measures  
 Marketing of poultry and poultry products

**Duration of training: Two Weeks**

**Training 4: Training on meat and poultry processing for sustained utilization of livestock resources and promotion of entrepreneurship****Content**

Layout of slaughterhouse  
 Hygienic meat production  
 Processing of meat (chicken, mutton, chevon)  
 Non Comminuted meat products  
 Emulsion based meat products  
 Sausages, meat rolls and nuggets  
 Meat by-products utilization  
 Ready to eat meat products  
 Functional and designer meat products  
 Entrepreneurship development

**Duration of training: Five days****Training 5: Training on milk processing and product development****Content**

Cream separation  
 Standardisation  
 Pasteurisation  
 Milk packaging  
 Heat desiccated milk products (Khoa, and functional khoa based sweets)  
 Heat acid coagulated milk products (Channa, paneer and various paneer based products)  
 Fruit enriched fermented milk products  
 Milk based beverages  
 Fat rich products  
 Frozen dairy products

**Duration of training: Five Days****Training 6: Balanced compound feed and mineral mixture for livestock****Content**

Introduction to various feed ingredients  
 Exposure of feed plant  
 Quality testing of feed ingredients  
 Preparation of compound feed  
 Preparation of mineral mixture

**Duration of training: Two weeks****Module 2: Animal Reproduction****Training 1: Artificial insemination in bovines****Content**

Genetic upgradation of indigenous animals through maximum utilization of elite germplasm  
 Control of venereal diseases  
 Cryopreservation of quality semen and transportation of frozen semen of genetically superior bull from one place to another  
 Monitoring reproductive health of female at estrus and record keeping  
 Avoidance of poor quality semen dissemination and overcoming differences in size of animals

**Duration of training: One Week**



### **Training 2: *In-vitro* embryo production (IVEP) and embryo transfer in bovines**

#### **Content**

Establishment of *in-vitro* embryo production (IVEP) labs

Organization of IVF-ETT training programme for the teaching faculty/Scientists/Veterinary surgeons for implementation of the technique at farm and field level

Production of high genetic merit embryos of indigenous breeds of cattle (Sahiwal, Gir, Red Sindhi, Hariana) and Murrah buffalo

Cryo-conservation of elite germplasm in the form of embryos for future use

Propagation of quality indigenous germplasm through embryo transfer (fresh and frozen) at government farms/ farmer's doorstep/livestock farms/private dairy farms

**Duration of training: One Month**

## **Module 3: Animal Health and Disease Diagnosis**

### **Training 1: Training on veterinary transfusion medicine and blood banking**

#### **Content**

Collection of whole blood from blood donor pets

Processing and separation of different blood components

Blood components storage and importance

Blood typing, recipient screening and donor selection in canine blood banking

Transfusion associated complications and recipient monitoring

Establishing animal blood bank importance and hurdles

Importance of component therapy in pet practice

**Duration of training: Two Week**

### **Training 2: Training in advanced diagnostics in veterinary clinical practices**

#### **Content**

Use of abdominal ultrasonography in diagnosing disease conditions in pets and farm animals

Use of cardiac ultrasonography (echocardiography) in diagnosing disease conditions in pets and farm animals

Use of uro-genital ultrasonography in diagnosing disease conditions in pets and farm animals

Diagnosing and understanding different eye affections in pets and farm animals

Use of radiology in veterinary clinical practices

Laboratory based diagnostics in veterinary clinical practices

**Duration of training: One Month**

### **Training 3: Investigation of outbreaks of economically important diseases of sheep and Goat**

#### **Content**

To provide a glimpse of current economically important diseases of sheep and goat

Collection of epidemiological information of outbreaks of infectious, toxicological and other diseases

Collection and dispatch of clinical samples to concerned laboratory

Laboratory tests for confirmation of the causative agent

Handling of biomedical waste and its management

**Duration of training: One Month**

**Training 4: Investigation of outbreaks of economically important diseases of swine****Content**

To provide a glimpse of current economically important diseases of swine  
Collection of epidemiological information of outbreaks of infectious, toxicological and other diseases  
Collection and dispatch of clinical samples to concerned laboratory  
Laboratory tests for confirmation of the causative agent  
Handling of biomedical waste and its management

**Duration of training: One month****Training 5: Investigation of economically important diseases of poultry****Content**

To provide a glimpse of current economically important diseases of poultry  
Collection of epidemiological information of outbreaks of infectious, toxicological and other diseases  
Collection and dispatch of clinical samples to concerned laboratory  
Laboratory tests for confirmation of the causative agent  
Handling of biomedical waste and its management

**Duration of training: One Month****Training 6: Basics of animal health and management****Content**

Basics of physical and clinical examination of dogs and cats in clinical practice  
Basics of physical and clinical examination of farm animals in clinical practice  
Restraining and handling of dogs and cats for diagnostic and therapeutic purposes  
Restraining and handling of farm animals for diagnostic and therapeutic purposes  
Basic information and understanding of important non-infectious diseases affecting dogs and cats  
Basic information and understanding of important non-infectious diseases affecting farm animals  
Basic information and understanding of important infectious diseases affecting farm animals  
Dogs and cats hygiene and nutritional information  
Basics of good husbandry practices in farm animals

**Duration of training: One Month****Training 7: Clinico-pathological laboratory diagnostic techniques****Content**

Importance of veterinary laboratory diagnosis in livestock health  
Essentials of haematological examination of livestock with particular emphasis on procedures and interpretations  
An orientation with haematological tests performed in blood of livestock  
An orientation with urine and biochemical tests performed for livestock disease diagnosis  
Importance of testing of cerebrospinal fluid and pleural and peritoneal contents for livestock disease diagnosis  
Importance of testing of faecal contents for livestock disease diagnosis  
Importance of important clinico-pathological diagnostic techniques required for diagnosis of specific livestock diseases  
Haematological examination, urine examination, body fluids examination, faecal examination and veterinary laboratory diagnosis

**Duration of training: 3-5 days**

### **Training 8: Role of post-mortem examination, dispatch of specimens and immuno-histochemical diagnostic techniques in animals and poultry disease diagnosis**

#### **Content**

An orientation to post-mortem examination of domestic and companion animals including vetero-legal aspects

An orientation to post-mortem examination of poultry with particular emphasis on disease diagnosis

An orientation with procedures of collection and dispatch of diagnostic specimens for laboratory examination during necropsy and biopsy for disease diagnosis

A brief orientation to histopathological techniques

Pathological changes in important infectious and non-infectious diseases of animals and poultry

Importance of immuno-histochemistry in tumour and disease diagnosis in animals and poultry

(Post-mortem examination, domestic animals, companion animals, poultry, collection, dispatch, specimen, biopsy, pathological changes, immuno-histochemistry)

**Duration of training: 3-5 days**

### **Training 9: Advanced molecular diagnostics in animal health**

#### **Content**

Isolation of quality nucleic acid from diverse biological samples

PCR technology

Real-time PCR

Recombinant DNA technology

Capillary sequencing of nucleic acid

Next Gen Sequencing

Bioinformatic analysis of biological data

Solid phase peptide synthesis

Luminex technology for multiplex assays

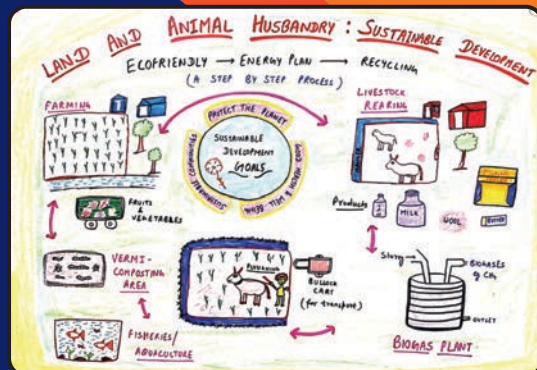
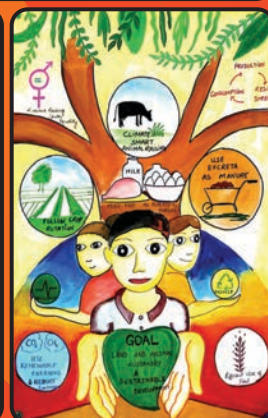
**Duration of training: 21 days**





**Lala Lajpat Rai Ji**

*"Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar has been named in the cherished memory of Lala Lajpat Rai, a great patriot, the foremost freedom fighter, an ardent social reformer and a versatile writer. Lala Lajpat Rai, popularly known as "Punjab Kesri", did his early legal practice at Hisar and also served as a Member and Secretary of the Hisar Municipality."*



**Lala Lajpat Rai**  
**University of Veterinary and Animal Sciences**  
**Hisar - 125 004 (Haryana)**

Website: [www.luvas.edu.in](http://www.luvas.edu.in)

JULY, 2023