



**BACHELOR's degree:**

VETERINARY MEDICINE AND ZOOTECHNICS

**CATEDRATICO:**

LIC. EDUARDO ENRIQUE ARREOLA JIMENEZ

**STUDENT:**

ROMO CASTAÑEDA JOANA

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THE IMPORTANCE OF VETERINARY MEDICINE IN DIFFERENT FIELDS

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## **The importance of veterinary medicine in the various occupational fields**

### **1. Agricultural sector**

In this area, veterinary surgeons are also of great importance, since animal production is closely related to the health aspect when producing food that is safe for humans. These activities include follow-up of vaccinations, control of outbreaks of epidemics when a disease is triggered in these populations, prevention and treatment of diseases, proper design of facilities, distribution of animals at different stages of the production process, nutrition and reproduction

#### **1.1 Public or private partnerships**

As a promoter or supervisor of livestock industries: cattle (cattle, sheep, goats), dairy, meat, poultry, aquaculture, canicol, pig.

#### **2.1 Airports and seaports**

There are situations where some animals travel from one country to another for commercial purposes, «standing» (live animals) or «carcasses (meat and by-products). It is important the presence of a veterinary surgeon that guarantees optimal conditions for the welfare of the animals during the journey according to the requirements of each species.

#### **2.2 Hostels**

There are public and private shelters, which require plant-based veterinary doctors for both small and large species; in order to ensure animal welfare, in the prevention and control of pathologies.

#### **2.3 In the field**

Represents performing medical work in farms, corrals, animal productions etc. Often involves working outdoors and with limited resources where recursion plays a crucial role for the veterinary doctor

#### **2.5 Equestrian centres/Horse-race tracks**

Require veterinarians to supervise activities related to the preparation, training and physical rehabilitation of recreational horses. Therefore it is very much related to the areas of physiotherapy, orthopedics, among others. It is also your duty to ensure the prevention and/or treatment of any other pathology that may occur there.

#### **2.7 Dolphinariums and/or aquatic entertainment centers, or wildlife in natural ecosystems.**

The presence of a veterinarian in these institutions is crucial for disease prevention and control; in addition to contributing to the enrichment of habitats that are appropriate to the physiology and physiognomy of each species, to contribute to animal welfare as far as possible

## 2.9 Forensic

A forensic veterinarian inspects situations to determine whether or not there was animal mistreatment, looking for evidence in post-mortem cases of legal involvement. For this it is necessary to have very solid knowledge in internal medicine, which allows us to differentiate with assertiveness the postmortem findings between specific pathologies of biological origin and cases of animal maltreatment. You should also know about necropsy and sample sending techniques.

## 2.11 Zoos and wildlife rehabilitation centres.

To practice in zoos and wildlife rehabilitation centers, veterinarians must have a greater knowledge of wildlife medicine, **a highly specialized area involving the mastery of anatomy, physiology and pharmacology in species which function quite differently from one another; to have knowledge about the wildlife behaviour of each species for proper management, and to promote the «enrichment of habitats» that contribute to animal welfare of these alien species in containment.**

## 3.3 Reproductive biotechnology companies

Private companies offering services that improve the reproduction of cattle and horses are very popular on farms to improve the reproduction of animals, thus improving the profitability of these companies.

# 4. Laboratories

- **Laboratory of Molecular and/or Genetic Biology**
- **Biotechnology laboratories: As biotechnology of reproduction.**
- **Microbiology Laboratory To collect samples from animals with infectious processes and determine the microbiological agents causing pathologies and their respective treatments. It is also widely used in research.**
- **Parasitology Laboratory:** Where samples obtained «in the field» are analysed to determine diagnoses and carry out research.
- **Pathology Laboratory:** Where macroscopic samples obtained from necropsies are analyzed in order to determine the diagnosis of doubtful pathologies.
- **Clinical Pathology Laboratory:** Where laboratory samples previously obtained from the animal are processed to help obtain an accurate diagnosis.
- **Biotheriums:** Where live animals are available for biological testing. They are closely related to research.
- **Laboratories for the production of anti-venous serums:** Where snakes and other poisonous animals such as reptiles, arachnids, among others are available; in order to extract the serums used as an antidote for venomous bites or stings, requested and used in human medicine.
- **Research laboratories in various subjects:** In the production of vaccines, drugs for human and animal use. For this type of work it is essential that the veterinary doctor has postgraduate studies in molecular biology and/ or genetics.

**Field work is common for specialists in:**

- **Medicine of large species (horses and/or cattle):** Independent veterinarians or representatives of some company or laboratory, who are called by the different owners to remote farms, where they arrive with their equipment, in their means of transport «at home».
- **Veterinary pathology: When performing necropsies that allow to determine diagnoses of pathologies that have not been clearly identified.**
- **Veterinary medicine and zootechnics:** In animal production or livestock farms such as poultry, pig, herd, etc. where animal health is crucial (preventing the spread of diseases in animal populations).
- **Veterinary microbiology:** In the collection of samples for laboratory analysis and research.
- **Veterinary parasitology:** In the collection of samples to determine when pathologies of parasitic origin.
- **Breeding Bovine and/or equine:** In the implementation of hormonal protocols that help animals to establish their normal reproductive cycles and thus improve productive performance in livestock companies.
- **Animal nutrition:** Establishing the appropriate diets according to the requirements of each species in different physiological stages.
- **Surgeon:** Although some emergency surgeries may be performed «in the field», it is ideal to send as many surgeries as possible to a surgery room, to ensure aseptic procedures.



## **Veterinary medicine**

The role of the Veterinary Physician in any of its fields of action, be it administration, research, teaching, production of food of animal origin and care of small species, They have a key responsibility for the prevention and control of zoonotic pathogens from their source. In this way, animal health becomes a vital axis for the care of public health. The veterinarian is responsible for implementing in his field of competence, the approach of a single health (One Health) which is a philosophy whose orientation is to prevent and treat diseases in animals that affect the health of humans, in harmony with the environment. Under this concept, veterinary medicine protects the health of people and contributes to ensuring public health by preventing diseases from their origin, which affect the world population.

In addition to the above, the Veterinary Surgeons guarantee food safety through food safety, Improve animal health by preventing and eradicating diseases in animals and help manage ecosystems by avoiding imbalances caused by climate change or invasive species.

The scope of veterinary medicine is wide, covering all species, both domestic and wild. In some countries of Latin America, the professional who is engaged in agricultural productivity is called zootechnist and this profession is not equivalent to that of the doctor. The technical professional is called veterinary technician or veterinary nurse.

## **Roles within veterinary medicine .**

The veterinary surgeon (also known as the veterinary surgeon), is a university professional in charge of animal health, with studies equivalent to a bachelor's degree or degree (in Spain). The professional role is the equivalent of a physician in humans. In the Spanish language, these health professionals are also called doctors even if they have not obtained their academic doctorate.

The functions of the veterinary surgeon include diagnosis and treatment of pathology in non-human animals, improvement of animal performance and productive livestock, supervision of manufacture and release, and their status, of foodstuffs of animal origin intended for human consumption (bromatology), epidemiology and public health, research and teaching.

The veterinarian may need the assistance of veterinary assistants or technicians to carry out tasks inherent in the profession, because they are responsible for the correct implementation of medical indications to patients under treatment and for generating professional relationships with patient owners.

The veterinary doctor performs several occupational fields in public and animal health. Among those detailed are: Diagnose, prevent and treat diseases of pet animals (cat, dog, horse, etc.), production animals (cattle, sheep, goats, pigs, etc.) and wildlife (sea lions, seals, turtles, etc.). In addition to managing, organizing, planning and advising establishments zoological parks, ecoparks, private reserves, municipal, provincial or national, in the preservation of indigenous and exotic fauna, in response to preserve species that are endangered.

In addition, the veterinarian must perform professionally with his patients, respecting the ethical and socio-cultural frameworks of societies, always thinking about animal welfare,<sup>54 55</sup> to be carried out within the legal norms.<sup>56 57</sup> With the knowledge acquired during the development of the veterinary medicine career, the student of the career during the teaching-training, incorporating skills to be able to perform also in agro-food knowledge manufactured and finished for human consumption, designing, managing, performing quality controls, in the different industries of food production (poultry, etc., in addition to poultry production) and mainly in the determination of sanitary hygiene.

One of the main objectives is to have a high quality degree training, be able to work in multidisciplinary teams, scientific knowledge and carry out university extension services.



## CONCLUSION

Veterinary medicine helps to treat **any** type of animal, such as animal reproduction, vaccinations, control of outbreaks when a disease is triggered (cattle, sheep, goats),

As the type of animal that move from one place to another, as it is important the presence of a veterinary surgeon regulator to guarantee the conditions for the welfare of animals during the journey according to the requirements of each species.

This field of action has been gaining strength as government and/or private institutions are increasingly concerned about animal welfare. It is the most emotionally difficult to carry, because it involves a permanent contact with actions of human cruelty.

The veterinarian plays a great role in his life, because he proposes to save lives as to kill, He has to prevent diseases, diagnose, just like control of diseases of the animal body.



You have to be a good veterinarian, to make the world better



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