

The importance of understanding animals digestive process

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Digestive process

The processes in which feed materials from the environment are taken into the animal body and made available to the animal microorganism's use are complex and delightful. Nutrition in animals entails nutrient requirements by animals, the intake of feeds by animals and its utilization in the animal body.

Importance of understanding digestive processes

Most feed materials are often complex and in insoluble forms as they are consumed by the animals. **The aim of digestion processes therefore, is to sequentially convert the feed substances into simple and soluble materials that fit for absorption and assimilation.** All animals have specialized digestive systems designed to meet their nutrient requirements. The digestive tract can be defined as a tube that extends from the mouth of the animal to its anus, constructed with dilations and constrictions throughout its dimension as to form some sections, each with its unique function in the digestive process.

Major steps in the digestive process

Prehension: snatching into or taking the feed into the mouth. Prehension is accomplished differently in different animals as follows.

- **Horse:** performed by the strong and flexible upper lips and incisor

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teeth through jerking movements of the head or neck.

- **Cattle:** uses their long, muscular tongues to pull the feed (grass) into their mouth, cutting it off between the lower incisor and the upper gum, by upward movements of the head and neck.
- **Sheep:** makes the use of their mobile lips rather than tongue to gather food in their mouth.
- **Horses, sheep, and cattle** drink by sucking the fluid into their mouth by aid of tongue and pharynx.
- **Poultry:** picks up food with their **toothless beaks** and passes the feed at the base of their tongue in preparation to swallowing.

Mastication or chewing

This process follows after prehension. **Mastication or chewing involves the grinding and break down of larger feed materials** by animal teeth located in both the upper and lower jaws in preparation to swallowing. Differences do exist in the chewing structures of different animals in the types of teeth and their functions.

Salivary secretion and swallowing

After mastication or chewing the feed material in the animal mouth triggers a salivary secretions. **Salivary secretion serves as a lubricant for the food to be swallowed easily.** Swallowing also referred to deglutition is the pushing down of the feed from the mouth downward the esophagus. This process is accomplished by a series of muscular movements by uplifting the tongue and dilation of the pharynx. The swallowed feed (bolus) then passes into the esophagus then into the stomach. **The amount of the feed swallowed varies with species.**

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Digestion

Comprises **the breaking down of swallowed feedstuff into simple substances that can be absorbed by the animal body**. Different species of animals digest certain types of feed than others. **The variation in digestion is due to differences in the digestive systems in animals** (*monogastrics, ruminants, avian and pseudo-ruminants*).

Absorption

The process or act of taking digested products into the bloodstream. Absorption of digested feed elements mostly occurs in small intestines and large intestines in some animals. Fingerlike projections in the intestines called **villi are the principal organs for absorption that takes up digested feed elements into the bloodstream**. Absorbed elements are carried in the bloodstream to the body tissues, undergo metabolic processes and get utilised for growth, repair and energy.

Egestion

This is the **final stage of digestion**. Also referred to as defecation, is the process or act of discharging undigested foodstuff (Faeces) from the animal body via the anus.

Conclusion

Animals depend on two processes: [feeding](#) and digestion. Understanding the digestive system can help the farmer become more efficient in feeding, have a better understanding of animal health and problems that may occur.

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Reference

The digestive processes in domestic animals, by H. W. Schoening