

Deer

Achieved

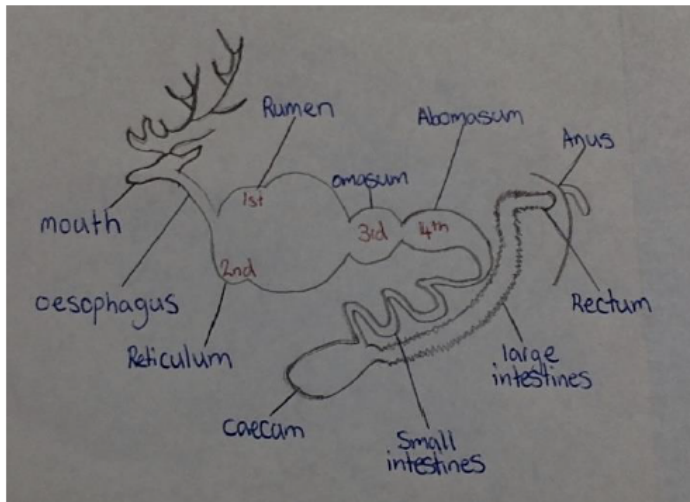
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Animal – Deer

Life Process – Digestion

Management Practice – Feeding Chicory Pasture

Diagram – Describe the life process



Describe the life process – Digestion is the process of breaking down feed and absorbing nutrients. Deer are ruminant animals which means they have four stomach chambers, and breakdown/digest feed chemically. Once the deer has ingested the chicory/feed and it has moved down the oesophagus, it then enters the rumen which is the first of the four stomachs. This stomach is important for the survival of the deer as it's the largest of all four stomachs. This is where microbial digestion starts to take place. Microbial digestion is the process in which microorganisms break down cellulose which occurs through fermentation. It is also the stomach that has the small finger-like projections that are called papillae that help increase the surface area of the rumen in order to absorb some of the nutrients into the bloodstream.

The feed then continues through to the second stomach, another important stomach called the reticulum, which has the honeycomb structure which filters/collects large undigested feed into a small ball (cud) for regurgitation. This stomach also contains microbes for microbial breakdown/digestion.

The feed then moves through the last two stomachs, the omasum and the abomasum, before entering the small intestines, where enzymes continue to chemically break down the feed. The small intestine is also where the feed is absorbed through structures on the wall lining called villi.

These are the most important parts of microbial digestion for a ruminant animal because microbial digestion is needed for the breakdown of cellulose. Cellulose is broken down into VFAs (volatile fatty acids) which are absorbed into the bloodstream by the papillae which results in nutrients absorption. VFAs provide energy and energy is used for movement and growth.

Describe the management practice – My chosen management is feeding chicory crop to deer. This involves cultivating a standard pasture paddock and sowing a chicory seed crop. Chicory is a short-lived leafy herb with a high feed/protein value. Chicory can be incorporated into a rotational grazing system through its active growing months. It has good summer yield but limited cooler season growth. Grown from seed, chicory takes around 75-90 days (about three months) to be at its full potential ready for grazing. Once at its full potential, it is ready to be put into a rotational grazing system through the summer, autumn and spring months. Feeding chicory enhances a deer's digestion because chicory contains 20-26% protein, which is very high. This results in a higher rate of muscle and bone growth and a high rate of MJME (mega joules of metabolizable energy) for movement and growth. This ultimately results in a big, healthy animal ready for slaughter, returning more profit to the farmer.

Mannakitunga – Is the process of showing respect, generosity and care. If the farmer is feeding his deer high-quality feed, like chicory, that is getting them to their full potential faster and healthier, they produce a higher amount of venison. This then results in increased profit for the farmer. This is a great reflection of mannakitunga as it shows a relationship between the farmer and the animal because the farmer produced the good quality feed, and the deer produced the venison. This management practice shows care for the animal and respecting it by feeding it well.

Evaluation – A strength of this management practice relates to the speed that it fattens the deer. Although chicory costs more than standard pasture, it fattens the deer up faster. This results in a quicker turnover of deer on-farm, thus more profit for the farmer. However, there are a couple of weaknesses of this management practice. Although rare, chicory has the potential to bloat deer if too much is digested too quickly, so the volume consumed needs to be monitored. Also, as mentioned above, chicory is not an all-year round crop as its peak growth time is during the summer, spring and autumn months. Therefore, during winter it would not be the best choice of feed for the deer. So overall, feeding chicory to deer is more beneficial for the deer than if the farmer was to feed them a ryegrass pasture, as chicory has higher protein and energy rates, producing more venison and more profit for the farmer.

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