Exemplar for internal assessment resource Agricultural and Horticultural Science for Achievement Standard 91529

#### Venison

# Student 5: Low Achieved

### **Economic:**

One of the factors affecting profitability of venison is the price. Venison is paid in \$/kg. Venison has always been a very volatile industry, because of the fluctuating supply and the small market. There is also a seasonal component with venison pricing as European demand peaks between October and November during the traditional hunting season and Christmas. Between 07/07/08 and 07/07/12 the price per kg of AP stag has been between \$6.50 and \$9.00. The large spike in 2009 can most likely be attributed to the global financial crisis. The New Zealand dollar plummeted against the Euro which is the currency of the majority of New Zealand's venison export markets. With the low New Zealand dollar, exporters got a greater return on their exported goods, not only for venison but all New Zealand exports. The NZD reaches a low of \$0.39 in 2009. This lead to the profitability of deer farming increases for a short period. This is important because the price paid for the producer is a governing factor in determining whether a product is profitable (1). But the price received for a product is dependent on the supply and demand for the product, which in this case is venison.

The exchange rate is a factor that affects the profitability of venison farming. During the global financial crisis when the New Zealand dollar plummeted, venison farmers saw a temporary increase in export returns (2).

Another factor contributing to the profitability of venison is the costs involved producing it. Due to deer being naturally giddy and jumpy, special farm management practices are required to farm deer both profitably and safely. One of these practices is having a curved race. This is because deer like to avoid eye contact with humans as they enter yards. Deer have even been known to rush back towards those herding them when being herded towards the yards down a straight race. Also due to their skittish nature it is best to use a "quiet, assertive manner" when working with deer. All aggressive or ill-tempered animals should be ear tagged and culled from the herd, to limit stress on the animals. Another practice which limits the stress of animals is the design of the yards themselves. www.teara.govt.nz/ says "Yarding and handling principles are the same for a large deer farm as a small one. A few large yards can lead to progressively smaller ones as deer move towards central holding pens. This will avoid deer piling up in the corner of large pens. In paddocks, fences need to be made of netting at least 2 metres high." This need for larger fences is because deer are much more agile than cattle and sheep. Thus they can leap over normal fences or push between wires. These practices relieve the stress of the animals and make the animals easier to manage. Since deer farming is a small part of the New Zealand agricultural industry, it may be more expensive to put in new fences and yards as specialist are harder to find specialists who can put build these features. Also, it is important to keep herds calm, as injured stock may lead to vet bills or having to put the animal down. All these things are part of the profitability equation under costs. Since costs are to be minimised, it is imperative that these practices are implemented and maintained on deer farms to make venison production as profitable as possible.

The importance of feed is represented by the fact that "Fawn losses from birth to weaning can be high for intensively farmed deer. Often 6–10% of calves born to adult hinds and 12% born to yearling hinds are lost. The most common causes are starvation, misadventure and dystocia (large calves causing a difficult birth)." - http://www.teara.govt.nz. Since starvation is such a big limiter of how many fawns a farmer can raise, it is imperative that they get the feed they need to sustain them through the hard summer. These lost fawns are huge financial loss because they are the farmer's future herd. With a smaller herd the farmer will get fewer returns on the stock he is slaughtering because there will be less

of them. Also the extra feed consumed by the pregnant hinds would've gone to waste if their fawns die. This affects profitability two ways, the quantity produced had decreased because of the dead fawns and the costs have increased through feed consumption.

The fact that there are exclusive deer farm races and fences and other on farm practices like soothing the animals to keep them calm really are not big influences on profitability, yes the races and fences may be expensive but all farming specializations have different equipment they must purchase, deer is no different. Also, calmer and more relaxed herds may lead to less injury thus reducing cost and possible loss of stock if things got really out of hand.

The critical factor influencing profitability with venison is feed management. This is because all these other factors rely on having a product to sell, if your herd dies out you go bankrupt. There are some costs involved but the costs involved in feeding the herd over summer is well outweighed by the returns of a strong healthy herd with plenty of fawns. This is why I believe feed management is the critical factor that impacted the profitability of deer farming in NZ. I believe that if feed is managed properly the primary production of venison can be profitable.

## **Cultural:**

One of the factors affecting the demand of venison is that it isn't very competitive against other meats such as beef, lamb, pork and poultry. Traditionally these meats are much more commercial and popular to the consumer, making it harder for venison it become a big player in the NZ agricultural economy. For example in 2013 the value of venison exports was only 171.2 million USD whereas beef was 2,142.8 million NSD and lamb was 2,283.2 million NZD (Source: Beef + Lamb New Zealand Economic Service, Statistics New Zealand). This goes to show that there is simply not the same level of demand for venison as there is for other meats. But that does not mean there is no demand, it just limits the export options for venison producers and creates a rather volatile and unstable market. But however, this does affect profitability, because with such small and volatile markets, it limits the farmer's ability to produce venison.

## **Physical / Climatic:**

Most deer farms are located in Southland, Canterbury, Hawke's Bay and Manawatu. These regions all have similar features. One of these features is that these places all have rolling hills with a little bit of flat land, as this kind of landscape is very close to their natural habitat. Canterbury, Hawke's Bay and Manawatu all have similar rainfall (400-1200mm) and an average temperature of between 10-15 degrees Celsius. Canterbury however has very thin soil, so irrigation is needed for pasture growth. Southland is very similar in both terrain and rainfall but it is a bit colder with an average temperature of 5-10 degrees Celsius. Southland also has a heavier soil which can grow grass with irrigation. Deer are farmed on the rolling hills because it is easier for the farmer to do so. Deer farming does not have high returns like lamb, beef or dairy farming so it cannot afford the flat plains to farm deer on, and the steep rocky terrain nearer the mountains is too expensive or dangerous to fence.

Deer seem to do well in these 4 regions, because they can handle the conditions such as little grass or there is not enough rainfall for pasture growth. In these situations they will eat trees and shrubs to compensate. Deer are a mix between grazers and foragers; they can graze pasture when available and forage for shrubs and other plants when pasture is not available. However in the summer, it is important to maintain feed quality. This requires supplementary feeds and crops. These crops and feeds ensure that the deer are well feed over the otherwise harsh summer months. The summer months experience less rain and it gets very dry, leading to less to no pasture growth. This ultimately ties into being a cost. This is a huge contributor to the costs of running a venison farm.