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## DEER AND PASTURE MANAGEMENT

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As I was reading the story about Sophie and Tim Hansen, one of the things that struck me was their pasture. It seems to me that one of the unsung benefits of farming deer is that they are one of the best farmed animal types for pasture, and therefore, soil management. At the risk of repeating myself, I believe that the most critical aspect of farming – no matter what your choice of livestock or enterprise - is soil management. My aim has always been to manage feed so that the end result is the addition of organic matter to the soil.

Whenever I drive around the district, one of the observations I make is the evenness of grazing over a paddock. The picture below shows a fairly typical paddock in the area on a property that farms cattle. The patchy nature of the pasture growth indicates an uneven spread of fertility throughout the area primarily due to manure. There are other influencing factors such as grass type, soil moisture and soil type etc, but in the case below it was predominantly a ryegrass paddock.

For those of you that collect cow manure for our vegi patches, you will appreciate what a simple task it is to collect manure - especially if you have hay rings!! If you consider that a 400 – 450 Kg beef cow can produce about 10 tonnes of wet, raw manure a year, this equates to a lot of nutrients put on the ground in a relatively small area. This weight of manure (once again it is difficult to be precise here because of feed inputs quality and digestibility etc) may mean that your cow could produce 50-130 kg nitrogen, 15-30 kg phosphorus and 40-65 kg potassium per year (1). In this situation, as the “fertiliser” is “clumped” together, it causes the pasture closest to the manure to thrive. Coupled with the fact that many animals reject areas of a paddock, which have been contaminated by manure in order to minimise their parasite burdens, the grass now becomes tall and rank making it even less palatable. The “normal” areas are then well grazed and often over-grazed, depending on their management. If over-grazed, the areas around the contaminated pasture may eventually cause the ground to become bare. This can increase the risk of land degradation and promote weeds. Another negative concerning clumps of manure left in paddocks is that it also increases the risk of nutrients and pathogens in manure entering and polluting watercourses due to runoff. There are ways of preventing this uneven distribution of fertility, biological and mechanical, but I see this as one of the potential benefits of farming deer – an even distribution of fertility, as their faeces are smaller and more scattered.



**Local paddock grazed by cattle**

Unfortunately, the last of the dairy farmers in our area sold out about 10 years ago. These blokes were always my first port of call when wanting to learn how to grow grass. Then along came government-assisted programs like “BeefCheque” to help farmers understand pastures. In order to graze ryegrass efficiently, it is important to understand the relationship needed between light, number of leaves, temperature and nitrogen. Rather than going into that here, I would recommend that those who are interested read the article by Danny Donaghy and Bill Fulkerson – see Reference #3.

Tim Hansen's pastures are a little more diverse than mine. I was glad to see that he basically has quite similar pasture management techniques to me. His pasture management is based on the concept of cell grazing. This concept is similar to Allan Savory's "herd effect" (4). Savory believes that, historically, grazing systems have been sustainable because large herds would graze small areas quite briefly and simultaneously stir the ground up and tread in organic matter. They may then not return for a long period – in some cases over a year. Stirring the ground up for a brief period (possibly only hours) is critical as it improves water penetration, soil respiration and new plant germination and establishment. Great idea - but difficult on small acres. Cell grazing is the next best thing.

Unless you have a heap of disposable income, as Tim suggests, improving pasture and environs is a long-term project. In my situation, some of my paddocks are where I want them, but I would need another lifetime to complete my aims. I have shown in the pictures below two of my paddocks. Both of these paddocks have been cell grazed for about 25 years, each one being about two hectares. The top picture shows pasture which is predominantly ryegrass and the bottom one is probably 30% clover 70% ryegrass. The picture that shows the recovering pasture had about 120 hinds in it for 4 days.

The purpose of this discussion is to point out one of the many benefits of farming deer. When they are cell grazed, they tend not to selectively graze and, like sheep, have the ability to graze close to the ground. This is critical if you want to establish ryegrass. Finally, in the picture below – which farm has cattle? Golly, there's another benefit – deer eat blackberries. When will it stop!!!



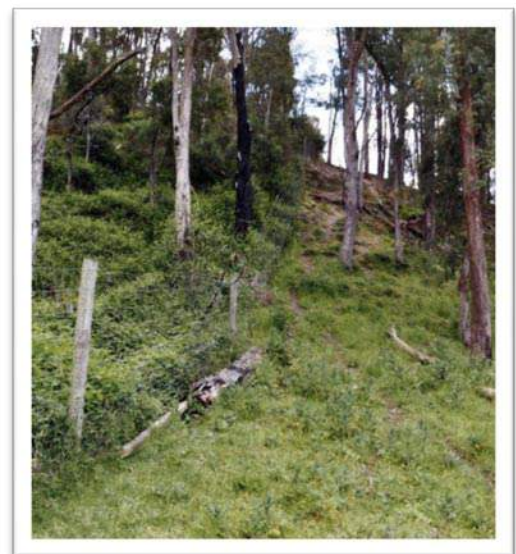
**Ready to be grazed by deer. About 2.5 mt DM/Ha**



**One week after grazing by deer**

#### **References:**

1. Department of Agriculture and Food. Note 509. Manure Management on Small Properties. February 2012
  2. Washington State University Extension. Clean Water for Washington. Animal Manure Data Sheet.
  3. Danny Donaghy and Bill Fulkerson. Principles for developing an effective grazing management system for ryegrass-based pastures
  4. Allan Savory. Holistic Management. 1999.
- Pic 4



**Property LHS farms cattle. RHS farms deer**