Issues Paper 1

Climate Change: Land use - Agriculture and Forestry

This review highlights the problems of quantifying greenhouse mitigation (*3.2 Sources and sinks are frequently small relative to the measurement effort required*). The crux of the problem is the cost of quantifying positive outcomes in relation to the commercial reward. This in turn means a lot of technically possible solutions will not be instigated.

Given there is a need to act now on this issue, rural producers need another incentive to implement changed management that will have the desired greenhouse outcomes for the rest of society. It would also allow Australia to represent to the rest of the world that it is being proactive.

The Carbon Grazing message supplies this alternative incentive. It highlights that the very basis of rural production is carbon. It highlights that the largest reward from managing to increase carbon sequestration into the soil and plant biomass, is increased and more reliable production in both the short term and long term i.e. increased profits.

Carbon Grazing explains why energy, nutrients and water all follow carbon i.e. major contributors to profit. Because carbon is always moving, it is easy to become short of it with incorrect management. While the focus in this discussion is on profit, the text also emphasises the importance of good carbon management for positive environmental outcomes.

To quote the text, "Carbon is what creates wealth for rural producers, be they farmers or graziers. Carbon stocks need to be seen as part of the capital base of a rural operation. Just as it is important to keep the money account in the black, so the carbon balance on a property must also be in the black. Farmers can borrow and pay back from this carbon account, but borrowing more than you pay back leads to ecological poverty, followed by economic poverty".

It is stated in "Carbon Grazing - the missing link", "The greenhouse outcomes of rural production are a reflection of economic efficiency". When carbon is being lost from the soil in a grazing or farming operation, it is a reflection of a commercially inefficient production system. The opposite is the case when carbon is increasing.

Likewise, the level of methane produced per kg of production, is also a reflection of commercial efficiency. This methane production per kg of production is a reflection of the efficiency of the digestive process in ruminant animals. Management to achieve high animal growth rates and high reproduction rates relies on efficiency of digestion. All else being equal, landscapes with higher carbon levels will supply pasture material with higher digestibility.

We have produced a document that is both practical and very readable for rural producers. It takes them from very little knowledge to being able to communicate with scientists.

Carbon Grazing is a systems approach, which is necessary given all the processes that interact in a landscape. It sees the atmosphere as part of the environment that rural producers are managing. This systems approach is a response to reductionist science, which while necessary, can result in negative outcomes if any aspect is overlooked.

The text discusses what the future holds (what has to be adapted to) and solutions i.e. how to adapt. It links carbon management to increased resilience of the landscape. Apart from the correct mix of plants, resilience will be necessary as part of adapting to an even more variable and unreliable climate.

The methane discussion paper identifies edible deep rooted native shrubs as part of the solution to reducing the production of methane per kg of production. They achieve this by being used at the end of dry periods (only green plants available) to allow the removal of livestock from pastures to allow regeneration with the opening rains. The regeneration process is responsible for the introduction of carbon from the atmosphere into the landscape. The regeneration process is also responsible for increasing the digestibility of pastures on offer to reduce methane emissions.

In dry times these edible shrubs are responsible for reducing methane production per kg of production by improving the carbon : nitrogen ratio of the total diet on offer i.e. improving digestibility.

While the text does not discuss carbon trading, it does supply the management processes necessary to maximise the introduction of carbon into the biosphere. Identifying pasture rest as "timing and not time" is critical to seeing the uptake of better carbon management. If rest is seen as time, then animals have to be sold. The terms of trade in agriculture are not favourable enough to allow most producers to be out of production. However, if pasture rest is seen as timing (and not for long as the text identifies), then the animals only have to be removed for a short period of time. Maintaining the animals for a short period of time elsewhere is considered practical and commercially possible.

"Carbon Grazing - the missing link" can be viewed at
www.carbongrazing.com.au

This text is aimed at rural producers, scientists and decision makers be they in government or catchment management authorities.

With thanks,

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