

Committee Secretary  
Parliamentary Select Committee on  
Agricultural and Related Industries  
Parliament House  
Canberra ACT 2600

July 20, 2009

Dear Sir/Madam

**Re: Senate Inquiry into food production in Australia – Impact of Managed Investment Schemes**

This submission addresses two issues relating to large-scale agricultural development and operation and look to inform the committee about current practice but make suggestions about securing the long-term sustainability of the production.

The first of the issue relates to location, site selection and the soil, a key component to all agricultural enterprises.

The second looks to establish a framework for future large-scale developments where the communities and the nation could make comment prior to development and where the developer would have their responsibilities to the land formalized.

This submission recognises that the ‘family farm’ model of land custodianship has been replaced by a commercial reality. The Australian nation has an acceptance and understanding, a trust, in the family farm model. This has changed with the move of agribusiness into the sector, the scale of the activity and the impact they have on rural communities, rural markets (the water market, for example) and the environment.

**SITE SELECTION AND CHARACTERISATION**

High-quality soil mapping should be regarded as an essential first step if long-term agricultural production is to be achieved. Australia has a long history of soil degradation and a rethink of practices is warranted, especially as large-scale agribusiness enters the sector.

Australia has a high-quality soil mapping database established by national agencies. Location specific, detailed surveys undertaken by appropriately qualified and

experienced professionals should be undertaken before undertaking new agricultural development or significant increases of farming intensity.

The ongoing operation of an enterprise should include soil health monitoring.

The attached notes investigate the application of a mineral royalty system for agribusiness where a credit/debit scheme is used to measure increases/decreases in the soil's health over time.

The increased emphasis on information about soil conditions should not be regarded as onerous to the agribusiness, the application of high-quality soil data increases certainty for ongoing operational success and long-term sustainability.

### **IMPACT STATEMENTS – ECONOMIC, SOCIAL AND ENVIRONMENTAL**

Today's agribusiness operations can be large scale and their impact very significant. They employ large amounts of capital and, as shown recently, can fail.

Australia has a long history of rural business and agriculture is a key part of the economy. Given a country benefits from a thriving rural economy the very significant change in landscape that agriculture has brought to Australia must be accepted.

New rural industry will also have overwhelmingly positive impacts but as the scale of new developments increase there is a place for more formally measuring the impacts they bring.

Recent Managed Investment Scheme projects, and their poor performance, has focused attention on how these projects are financed, developed and operated.

Agribusinesses can be listed entities and as such the responsibilities of the directors of the company is to the company shareholders not the land. In the future corporate Australia will focus more on more on this sector as food prices rise.

In order to focus the agribusiness sector on the long-term sustainability of their relationship with the land and to make it clear what the balance of their responsibilities are changes should be considered.

A model that may have application comes from the mining industry where a potential development has to consider its economic, social and environmental impact prior to receiving approval. The \$250 million spent by Timbercorp on their olive and almond schemes in the Robinvale district in western Victoria is of the same scale as a mid-sized mining development. If measured by the size of its footprint and scale of landscape modification you could argue its impact on the environment is far larger than that of a mine.

An Impact Statement for this scale of development would have been warranted.

*The opinions expressed in this letter and the attached notes are those of the writer.*

The following notes investigate these ideas further.

Regards

Roderick Davies

## **DETAILED DISCUSSION**

### **INTRODUCTION**

Agriculture has a greater impact on the Australian environment than any other activity but long-term stable food production is a national priority and agriculture has widespread positive economic and social impacts. Any objective analysis therefore requires careful consideration and balance.

Australia's future will benefit immeasurably from a healthy and productive agricultural sector however to secure this will require care. This is especially so as Big Business continue to expand into the sector and mechanisms must be developed that balance business' short-term profit ethos with long-term sustainability, both of the agricultural enterprise and the environment in which it is operating.

The mechanisms need to be well directed, transparent and fair. They need to be in the forefront of directors thinking during the planning and operation of agricultural enterprises so that the duty of directors to their shareholders is balanced with a landowner's responsibilities to the land. These responsibilities need to be clearly established. This note introduces some concepts that may be applied.

### **BUSINESS AND ITS RELATIONSHIP TO THE LAND**

The expanding involvement of agribusiness in Australian agriculture requires a re-think in the relationship between the state, the agribusiness and the land. No longer is the farmer-owner occupier relevant.

A farmer has a real connection to their farm, a connection that develops down the generations as the farm passes down through the family. This connection is an important safeguard for the Australian nation.

If the owner of the land is an Agribusiness the connection is economic. By law, the responsibility is to shareholders not the land. The drive for profit is the overarching principal and if the business fails at a particular site then the business can/will transfer elsewhere.

## **DANGERS HIGHLIGHTED BY FAILED MIS**

Agribusiness is an important sector in Australia's economy but the recent explosive development and collapse of Agricultural Managed Investment Schemes have exposed issues that require attention.

These issues relate to the connection of business to the land. In the past Australia has been comfortable with allowing farmers to have manage the land but is this relevant if the owner is a corporation and should Australia re-examine how comfortable it is with this new situation?

Future agricultural development will be undertaken on a landscape that already has undergone significant modification. Australia, after European settlement, is a highly modified landscape but the next stage of development will, almost by definition, mean an increase in the intensity of use of the land.

This increase in intensity of use needs to be assessed and judged against measures of sustainability.

Irrigated agricultural is a special case and deserves close attention as this activity is capital intensive, generally involves greater modification to the landscape and of course consumes our most important commodity, water.

In my view a key element for sustainable long-term agricultural production is selection of the site where the activity will take place and determination of the characteristics of the soil at potential sites is vitally important for long-term successful operation.

## **THE WATER LICENSING PROCESS – THE BASIS OF A NEW APPROACH FOR WIDER APPLICATION?**

Agribusiness has a growing role in Australia's rural sector and should be encouraged to participate but mechanisms should be developed that ensure responsible behaviour.

A good example of the way governments can ensure appropriate behaviour is the controls that have been introduced in relationship to the use of water in irrigation developments along the Murray River.

Water Licenses are required before water can be extracted from the river and prior to an agricultural enterprise applying this water to the land a soil survey is required. Authorities then judge whether the irrigation design and crop planting layout is appropriate to the site conditions. The overarching principal is to ensure Water Use Efficiency; to minimize the water used and to prevent salinisation through inappropriate application and drainage.

The principals of water trading and the licensing system are positive, the implementation needs to be refined to ensure high quality data is collected early in an irrigation development. Investment in quality data has immense potential payoffs in the future performance of operations especially their long-term sustainability.

### **REFINING THE CURRENT SYSTEM**

The implementation of the water licensing system has issues that require attention. At the key early planning stage it is apparent that the quality of soil survey can be improved. Any cost-benefit analysis of improvements in the quality of the soil surveys will show that investing more early in a development has very dramatic long value.

For instance, an irrigated vineyard in western Victoria or the Riverland costs \$2,500 per hectare to purchase the land (2004 costs), between \$22,000 and \$25,000 to establish the vineyard (irrigation and trellis systems and crop plantings). Soil survey costs have been driven down to as low as \$100 to \$150 per hectares by the developers who tend to regard a soil survey as necessary inconvenience as with no survey you do not get a Water License.

There are numerous stories in western Victoria and the Riverland of soil surveyors being pressured to report favourably about soil conditions over properties that have already been purchased and flagged for development. MIS operators have been named as developers who have influenced surveyors in the past.

Increasing the quality of soil surveying undertaken for the purposes of securing a water license was subject to a two years effort in South Australia's Riverland and the committee would be encouraged to seek advice from the SA government's Department of Water Land and Biodiversity Conservation, specifically the Water Allocation Group. The process change has stalled.

## **SOIL MAPPING AND SOIL SURVEYORS**

In Australia, soil surveying over agricultural land is undertaken by workers with a range of qualifications and knowledge that range from as little as 5 days of formal training to professional scientists with postgraduate qualifications.

The scientists have their professional body, the Australian Society of Soil Science Inc (ASSSI) and members are bound by their code of conduct. A Certified Professional Soil Scientist (CPSS) is an ASSSI member who is accredited by the professional body and there are several levels of accreditation that recognises their degree of experience and knowledge.

The work by the SA government in the Riverland predated the CPSS scheme had the same basic elements. The SA tried to get a wider group of soil surveyors together recognizing that there are practicing soil surveyors who would not necessarily join the ASSSI. It was considered advantageous to get these individuals into an association and give them a Code of Conduct to provide some protection against clients by providing a framework for their surveys and the reporting of results.

An expansion of the newly created CPSS scheme to include these surveyors would be just as effective but require discussion with ASSSI.

## **APPLICATION TO NON-IRRIGATED AGRICULTURE**

There would be no reason the lessons learnt in the Riverland and specific to irrigation developments could not be applied across Australia. CSIRO Land and Water reviewed the progress being made in the Riverland and showed real interest in application across Australia.

Improving the quality of soil survey necessarily increases the cost of the exercise but as noted above the amount currently spent on soil survey in irrigated agriculture is so low that the increase is insignificant.

For non-irrigated agriculture the development costs are much lower. Plantation timber projects have a capital cost of \$1,500 per hectare, well below the \$25,000 for irrigated development, and the detail of survey over these projects would reflect this.

Agribusiness should be obliged to measure the quality of the land prior to any development and the soil is a key element. The quality of the land should be measured before commencement of the project and any degradation or improvement measured and accounted for during operation and at the end of a project.

### **ROYALTIES PAYMENTS FOR SOIL DEGRADATION AND CREDITS FOR IMPROVEMENTS**

Royalties payments would be a mechanism of focusing the operator on the total inputs and outputs of agriculture; a measure of the degree of soil degradation or improvement.

In a mining operation irreversible degradation does occur. Mining royalties recognize this degradation and payment is made to the nation as compensation for the use of the resource. Is there a place for a similar system in agribusiness?

An argument could be made that long term degradation of land that benefits a company for the benefits of their shareholders should be allowed only if the arrangement benefits the nation and a royalty payment for soil degradation would recognise this.

Conversely, if agribusiness' long-term management of the land results in an increase in its quality then this should be recognised and a benefit derived.

Measuring the quality of the soil before a development occurs therefore becomes essential and monitoring the soils' quality through the operation of the project should be the responsibility of the operator.



## **WATER AS AN INPUT**

Water is a key mineral input in this respect. Would including water in a royalty equation focus the operator on water's use? When wine is exported from a region a substantial amount of water is shipped out, when this goes overseas this water is sent around the world. The water in the juice but also is water that has been used in the grape crop's growth. The same is true for irrigated rice and cotton but also from non-irrigated crops such as plantation timber and wheat.

## **SOIL CARBON**

As carbon accounting and trading systems develop all agricultural concerns will look at the new opportunities for achieving returns from their land holdings. Extending the royalty system to include soil carbon should be considered. Periodic carbon balance statements would monitor a land manager's performance; increases of soil carbon would receive credits and could become a valuable commodity in any trading system. Carbon removal from the soil would be subject to royalty payments therefore making the land manager accountable for the quality of the soil on the property.

## **MANAGED INVESTMENT SCHEMES – AN EXAMPLE OF BIG BUSINESS GETTING IT WRONG**

Managed Investment Schemes are perhaps an extreme example of what can go wrong but lessons must be taken from the collapse of the major irrigation projects so that the mistakes are not made again. It would be some comfort if these lessons can be applied more widely to future agribusiness, in general.

Full analysis has not yet been completed but it is clear that Timbercorp's olive schemes in western Victoria have performed very poorly against their own yield expectations. Analysis is required by appropriately qualified and experienced agricultural experts. A detailed review of the quality of the soil data is warranted together with a review of the application of the soil mapping in planting and irrigation design.

During the development of the Timbercorp olive and almond schemes extensive soil surveying was undertaken and these surveys were conducted in accordance with the

rules in place for securing a water license in the Mallee Catchment/Sunraysia Irrigation District. However these rules call for an accredited soil surveyor to undertake the soil mapping and these surveyors need only to have completed a 5 day training program.

If a review of the Timbercorp schemes suggest yield under-performance is related poor planting and irrigation design due to inadequacies of the original soil information, either its content or the weighting given to the information when designing the project, then changes to the rules would be essential. Without such a review, it would be prudent to modify the rules so that new developments are obliged to put increased emphasis on soil data.

Replacing the current accreditation system with one that refers to the ASSSI CPSS scheme is a straightforward remedy, providing the CPSS scheme moves to capture non-members and offer them a form of membership that recognises their knowledge and experience. The surveyors who join would be committed to improving standards and would receive mentoring by senior ASSSI scientists.

The CPSS scheme would ensure that surveyors could only be involved in specialist soil modification activities, such as irreversible physical or chemical amelioration, with appropriate knowledge and experience.

### **IMPACT STATEMENTS FOR MAJOR DEVELOPMENTS**

Finally, the committee should consider whether a major resource development project should proceed without formal approval from the community, from local, state and national government. MIS projects highlight the scale of agribusiness. Timbercorp's olive and almond schemes around Robinvale in western Victoria involve a total capital expenditure of \$250 million, development of irrigated crops over 16,000 hectares and acquisition of 160 gigalitres of River Murray water, equivalent to 30% of South Australia's total River Murray irrigation allowance. Formal approval would be considered after review of the developers Environmental, Economic and Social Impact Statements.

These statements would look at all the positive elements of the development but would be obliged to look into the negative aspects and would be available for public and government consideration and consultation. Formal approval of a scheme would be required.

I would expect appropriately detailed, high-quality site assessments to be an important element of the impact statements and that the soil mapping data would be a key component.

There are many obvious positives that come from agribusiness entering local communities and bringing employment and business opportunities. Any new development however is competing for finite resources and any full discussion of the impact of large-scale agriculture on these communities needs to focus on impact that a powerful new player has on competition for these finite resources.

The MIS experience shows that the benefits can be very short-term, the damage is likely to take much longer to repair.