Agricultural Competitiveness White Paper Submission - IP278
Agricultural Landscapes Research Chapter, Ecological Society of Australia
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The Agricultural Competitiveness Issues Paper

Submission, April 2014

Organisation:
Agricultural Landscapes Research Chapter
Ecological Society of Australia Incorporated

Dear Mr Joyce,

Thank you for the opportunity to comment on the Agricultural Competitiveness Issues Paper.

The Ecological Society of Australia Incorporated (ESA) is the peak group of ecologists in Australia, with over 1,500 members from all states and territories. Over the 50 year history of the ESA, members have contributed much to the scientific understanding of Australia's landscapes as they respond to changes over time. Research, including some long-term monitoring, has been published in many internationally recognised, peer-reviewed journals, including the ESA's own publications *Austral Ecology* and *Ecological Management and Restoration*. Members of the ESA Agricultural Landscapes Research Chapter seek to undertake and disseminate scientific research that better informs our understanding and delivery of socially and ecologically resilient biodiverse agriculture production systems. Our members come from all states and have carried out detailed research in all the agro-ecological regions in Australia for many years. We distil insights from this work in the next few pages, and we would welcome being involved in the development of the Agricultural Competitiveness White Paper.

We applaud the identification of issues affecting agricultural competitiveness and the vision to carry Australian agriculture forward. We have identified two further issues that we believe should be incorporated in the White Paper to ensure the sustainability of agriculture in the short and long-term. These are:

1. The incorporation of the protection and enhancement of the natural environment within and surrounding agricultural areas. The natural environment underpins the productivity, viability and sustainability of agriculture in Australia and throughout the world (Fischer et al., 2006). By natural environment we mean areas that contain native remnant vegetation, ranging from individual paddock trees to large tracts of intact bushland/grassland. Remnant vegetation is vital to protect Australia's remaining biodiversity (Lindenmayer and Luck, 2005, Hobbs, 1993), and has been shown to provide benefits to agricultural productivity and sustainability (Hobbs, 1993), and therefore competitiveness. These benefits include, but are not limited to:
    - The provision of ecosystem services (McAlpine and Wotton, 2009) such as
        - Water retention
        - Reduction in water and wind damage/erosion to farm livestock, crops and infrastructure
        - Soil stability
        - Natural pest controls
        - Nutrient cycling
        - Crop pollination
    - Societal benefits of native vegetation, green space and enhanced landscape amenity (Pannell et al., 2006).
    - Landscape resilience to natural disasters and climate variation

2. The support of the diversification of agricultural production systems so a variety of agricultural systems are undertaken in a given landscape. This would increase the resilience and sustainability of agriculture over the longer term. This would include not only a diversity of on-farm products, but also other profitable and sustainable industries such as ecotourism, farm-based tourism and farm forestry.

By addressing these two issues we believe that the Agricultural Competitiveness White Paper could become a more important document that directs agricultural production in a sustainable manner.

We note a number of other issues are also currently not discussed in the Issues Paper, these include:

- No mention of climate variability or climate change in the Issues Paper. This is a great oversight, especially as the Intergovernmental Panel on Climate Change (IPCC) 2013 report forecasts up to a 40% drop in agricultural production in Australia. Climate change and its influence on agricultural, environmental and social systems in Australia needs to be discussed as adverse weather events (droughts, fires, floods etc.) will ultimately negatively affect rural communities and agricultural competitiveness (IPCC, 2013).

- Much of this Issues Paper focusses on increasing agricultural productivity, but there is little focus on reducing post-production losses. For example, the Food and Agriculture Organisation of the United Nations (FAO) states that “95% of the research investments during the past 30 years were reported to have focused on increasing productivity and only 5% directed towards reducing losses” (FAO, 2011). By focussing on reducing losses related to harvesting, handling, storage, processing, packaging, transportation and marketing, it is likely that productivity increases will not need to be as large as currently forecast.

- There is no discussion of the potential environmental and social impacts of doubling agricultural productivity by 2050, especially in northern Australia. There needs to be a cost-benefit analysis undertaken to weigh both the short-term and medium to longer-term benefits of increasing agricultural productivity with the negative impacts associated with soil nutrient changes, biodiversity loss and social pressures.

- There are no policies mentioned for funding innovation and research that will benefit the natural environment and farm productivity. We suggest funding actions that would:
    - Put a dollar value on ecosystem services
    - Provide more incentives for farmers to protect and restore native vegetation on their land. This would likely benefit their farm productivity over the short and long-term
    - Train and employ people to work with landholders and Landcare groups to better protect the natural environment, and make known the benefits natural areas have for farming areas.
    - Exploring of opportunities for the addition of native species products to existing farm income streams.
    - Fund long-term research initiatives that show the effectiveness of restored and revegetated land for biodiversity, ecosystem services and agricultural productivity.

Going through the Issues Paper in more detail, we make the following comments:

Issue 1: Ensuring food security in Australia and globally

- We believe the 'expanding agricultural production' should be changed to 'expanding agricultural production in an ecologically sustainable manner', and that expert opinion be sought from natural resource managers and academics from ecological and social science backgrounds.
- Page 8 – Though the expansion and intensification of agriculture may be required, in many parts of Australia and especially in southern Australia there are no 'additional water supplies'. Australia is the driest continent in the world and frequently undergoes drought conditions (BOM, 2013). These droughts are forecast to increase as the climate continues to change (IPCC, 2013), meaning that water is likely to become increasingly scarce. This will have an impact on agricultural production as well as the environment, as stated in the Murray Darling Basin Plan (Basin Plan, 2012). As suggested by the Productivity Commission, landholders should be supported to adapt to conditions such as drought, rather than be reliant on government relief packages (Productivity Commission Inquiry Report, 2009). Groundwater depletion, soil condition and current environmental declines need to managed by the government for the long-term security of Australians.
- Page 9 – What does the paper refer to when it recommends 'converting previously undeveloped sites to agriculture'? As stated throughout our submission, any clearing of native vegetation (either remnant areas that have not been previously cleared or naturally regenerated areas) will have an adverse impact on the natural environment, contribute to climate change and soil loss and likely negatively affect agricultural areas and rural communities through the loss of ecosystem services and natural assets. Land clearing has had a large detrimental effect on Australia's biodiversity, with 5 bioregions in Australia retaining less than 30% of their native vegetation (National Land and Water Resources Audit, 2001). Government policy should remain clear and true to the evidence that land clearing is, at the Australian scale and in many regions, a socially and economically, as well as environmentally, undesirable outcome (McIntyre and Hobbs, 1999).
- Rather than seeking to clear new areas for production, governments in Australia can contribute to food security by maintaining small-scale agricultural and horticultural production in fertile areas in close proximity to major urban centres.

Issue 2: Farmer decisions for improving farm gate returns

- Page 12 and 13 – There is a focus on drought relief for landholders but little mention of tasks to maximise farm resilience to drought, such as diversification of productivity. Rather than focussing on increasing farm productivity and expanding agricultural areas, we believe that there should be a greater focus to making agricultural areas more resilient by diversifying productivity.
- There is no mention of the benefits of carbon farming for increasing landholder income. The Issues Paper outlines the benefits of repealing the carbon pricing scheme by reducing electricity costs for landholders (Page 24), but it does not examine the benefits of keeping the current carbon price via the Carbon Farming

Initiative and carbon credits related to this. We believe that maintaining and increasing the ability of landholders to trade carbon credits would greatly increase their potential farm income.

- In this section, the Issues Paper asks 'What are the drivers and constraints to farmers adopting alternative business structures, innovations and practices that will assist them in improving farm-gate returns?' A significant body of social research already exists which indicates that where farmers, research scientists and government policy-makers are assisted in coming together to plan and undertake projects in an interactive way, the adoption of outcomes is enhanced (Wyborn et al., 2012). Long-term funding of programs by government will enable the interactive building of trust and shared understanding required to achieve such outcomes.

Issue 5: Enhancing agriculture's contribution to regional communities

- We agree that maintaining productive agricultural areas is vital to sustain vibrant rural communities. Enhancing rural communities can be done in a number of ways not mentioned in the Issues Paper. These include nature-based activities such as farm-based tourism and ecotourism. This relies on having agricultural landscapes that contain a high proportion of native vegetation and natural assets in a good condition.
- Rural communities will not only benefit from increased agricultural productivity, but agricultural areas that contain a diverse number of agricultural enterprises. This would not only make the agricultural areas more important from a tourism perspective, but also make them more resilient to adverse weather events such as droughts.

Issue 6: Improving the competitiveness of inputs to the supply chain

- As discussed earlier, the quest for expansion of Australia's agricultural production in northern areas should proceed with extreme caution. While run-off is undoubtedly higher in the north, this is but one of many essential considerations for successful expansion. Seasonal challenges (including a likely increase in the frequency and severity of cyclones and major flooding), likelihood of pest invasion of crops, and impacts on ecosystem services must all be assessed in a comprehensive cost-benefit analysis taking account of both the short and longer-term impacts.
- Emphasis in this section is also placed in the growing challenge faced by farmers in meeting their energy costs. While biofuels may present a feasible alternative, full consideration is needed of the benefits and costs of introducing additional mono-cultures into already stressed production systems. A more efficient and cost-effective approach may be to support the introduction of alternative energy systems, particularly solar and wind, to farm production.

Issue 7: Reducing ineffective regulations

- We strongly discourage reducing any regulation or so-called green tape that would adversely affect the natural environment or make it more likely the Government will need to increase its expenditure to 'buy-back' environmental outcomes. This especially relates to reducing the effectiveness of the Environment Protection and Biodiversity Conservation Act, as suggested by the NFF (Page 28 and 29). Any steps

to increase environmental degradation, such as allowing or increasing the clearing of land for agriculture, or the grazing of currently protected areas, is likely to be detrimental to the agricultural sector over the short and long-term due to a reduction of the benefits that the natural environment provides (Dorrough et al., 2007), including but not limited to ecosystem services, ecotourism and green market values.

Issue 9: Assessing the effectiveness of incentives for investment and job creation

- We believe that incentives for agriculture are important, but that more incentives should be focussed on enabling landholders to protect remnant areas on their properties, and to undertake restoration activities on areas of their land. The ecological awareness of Australians and the high value placed on the functioning and resilience of productive ecosystems should be reflected in the assessment of appropriate, effective and efficient policy measures. The protection of remnant areas on private land and the restoration of cleared and/or degraded areas via activities such as habitat revegetation (with native plant species) is likely to help sustain farm productivity, as mentioned above, and have biodiversity benefits.

We would welcome the opportunity to be involved in the development of the Agricultural Competitiveness White Paper. We can deliver additional insights from our membership and the important contribution they can provide in understanding Australia's productive systems.

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