

## Speech notes

# Changing Agriculture in a Changing Environment

John Williams, Commissioner

### Opening Australian National Field Days, 20<sup>th</sup> October 2009

Welcome to Orange and the Australian National Field Days. It is with great pleasure that I speak with you today and open the 2009 Field Days. I have had the pleasure of browsing the exhibits earlier and I have no doubt you will find them stimulating and informative.

As Commissioner for Natural Resources, I travel widely within NSW and Australia, speaking with people like you; natural resource managers, farmers and others engaged in agriculture and related enterprises. I am aware of the hardships faced by many as they deal with drought and changes to the agricultural sector. I am also constantly rewarded and inspired by the resilience of agricultural communities and the innovation I see.

Australian agriculture has been under increasing stress for decades – belt tightening, pressure to perform, and dealing with a changing and highly variable climate. Survival has required both increased productivity and increased efficiency.

These demands have been significant and many have not survived in the industry. Others have survived by making hard decisions with significant longer term impacts on their businesses. A few have managed to thrive and they are the innovators we need to learn from.

The aim of the Australian National Field Days is to foster innovation in agriculture – our focus in 2009 is on *changing agriculture in a changing environment*. I believe that efficiency and increased productivity are only part of the story.

If efficiency gains and increased production are achieved at the expense of our ecosystems – through eroding the natural resource base of our farming enterprises – then the gains will not be for long. Innovation needs to be for the long term; increasing productivity while retaining or enhancing the natural resources we depend on.

### **Re-designing Australian agriculture for resilience**

Our future should be the one where resilient landscapes support resilient communities and resilient agricultural enterprises that can tolerate a changing climate and be efficient, productive and profitable.

Agriculture is inherently an ecological enterprise. Productivity depends on healthy ecosystems for its success. It is possible to build agro-ecosystems that generate wealth from producing food and fibre – and can adapt to a changing climate – without harming our natural resources. To do so requires innovation and change.

Recently I published, with Fiona McKenzie, ten key steps to redesigning Australian agriculture for resilience. Resilience is the ability of an ecosystem – or community – to bounce back after stress.

I want to introduce three of those ten steps now. These concepts are not necessarily new, but having a focus on the long term resilience of the landscapes – the agro-ecosystems – that underpin our agricultural enterprises is new.

First, all of us, primary producers, researchers, advisors and so on – need to better understand the landscape our enterprises depend on. We need to be able to value, perhaps even put a value on, the ecosystem services we rely on for our wealth and productivity. And we must understand our impact on those services, not just now but over the longer term through many climate and market cycles.

Ecosystem services vary from farm to farm, and what happens on each farm, ultimately accumulates and impacts the wider landscape. Each of us is a student as we seek to understand our landscapes. How are the ecosystem processes on our farms changing? How are these processes impacted by our current use of the land? And importantly, how do our impacts accumulate across the landscape?

Second, we need to become realistic about our climate and learn to live within its variability and to adapt to change. It is time we accepted that there are droughts and there are dry climates. The climatic cycles are long-term – just because we have been able to do something before does not mean we can do so in the future.

Believing otherwise, causes us to farm unsustainably. Not only does this put our businesses at risk, but we erode our natural resource base. Dryland salinity, soil degradation, water scarcity and loss of habitat are all the result.

Sustainable agriculture must be able to cope with long dry periods, such as we experienced in the 1900's, the 1940's and again over the past decade. The evidence suggests these events will only become more frequent in the future.

Third, we must learn to understand and value the ecosystem services our land – and air and water – provide for us. And this understanding is required by all of us, not just individual farmers. The agricultural community can no longer be expected to produce cheap, clean food and fibre, as well as provide a free service to maintain the ecosystem functions of the landscape that are essential to all Australians.

Ecosystem services need to be understood and paid for and recognized as a valued part of the economy. In the future, agriculture should be a larger integrated business – not just about the goods that are produced, but the ecosystem services that are maintained. These include healthy and biodiverse soils, landscapes, rivers and estuaries.

For this to be realized, new markets for ecosystem services need to be developed. In the future we can expect an increasing proportion of a farmer's income to be derived from the management of healthy landscapes and the production of clean water and the sequestration of carbon dioxide.

This is just a start – there is much more I could say on this topic. Let me say simply that it is possible to redesign agriculture in Australia in such a way that ensures resilience of both the industry and the ecosystems on which it depends.

We will need to change and innovate, but as we have seen over the past decade, we must change if we are to remain productive. I am optimistic about our future although the road ahead is unlikely to be easy.

### **Integrating natural resource management**

Let me change track for a moment, from what we must do, to how we do it. As Commissioner for Natural Resources in NSW, I am particularly close to the decision making process in this State. I also travel widely and see how things work in local farming and coastal communities.

Amongst the complex array of legislation, organizations and processes, we do see some new emerging ways forward. One such pathway is the integrated community-driven decision making through Catchment Action Plans that are orchestrated by Catchment Management Authorities - CMAs.

These plans are intended to be delivered by coordinated action from all arms of government and private enterprise. They aim to achieve the 13 natural resource targets – agreed across NSW - for water, land, biodiversity and community.

The CMA provides a community interface with government to build a non-statutory plan that addresses how we manage our regions so that all of the ecosystem values and services are managed in a transparent and connected way – this is the intent. Perhaps we have a way to go but I believe that this is a robust structure and we are seeing progress.

The issue for the CMA, the local government and farming and urban communities is to try and pull together an integrated plan that should – but doesn't always - inform local and state government planning and decision making.

The aim is to integrate the management of natural resources within the region, managing the water, the biodiversity, the land and the community values together.

It is through this joint effort, that ecosystem services can be understood and valued at the landscape scale. I would hope this will then provide a pathway for understanding and valuing of ecosystem services on farm.

This is a huge challenge and we have a long way to go. But the NSW government has supported CMAs by allocating base funding of nearly \$40 million. Combined with support from the Australian Government, this program of regional planning and decision making has the opportunity to make a difference in their regions. I believe we have the foundations for success over the longer term.

I encourage you to browse the exhibits of the Central West and Lachlan CMAs here at the fields days. Both, like all of the CMAs, invest in improving native vegetation, riverine ecosystems, wetlands, soil condition, land capability, economic sustainability and capacity, as well as controlling invasive species. I am impressed with the various incentive and awareness raising programs that they run although funds usually limit how much can be done.

I would like to mention the Central West CMA's sustainable farming program. This innovative program provides opportunities for land managers to explore new and innovative land management practices that sustain and improve natural resources as a part of a productive and profitable farming enterprise.

This sharing of new ideas and promoting and demonstration of innovation is important as we move forward. This is why I am here.

Catchment Action Plans set out the best way for government and private land managers to look after the natural resources that underpin our wellbeing as a community. It is a guide to the best actions to manage natural resources for the benefit of all of us.

The complex problems we are facing cannot be solved by isolated and simple solutions. We need to work together, across sectors, in all of society's interests. We need to work together to build resilient communities in a resilient landscape.

Our landscapes are our future. How we adapt to a changing environment will determine our future. Let it be a resilient future. Let us chose it – let it be the future we want rather than the one we end up with, the legacy of generations of short-term reactive decisions.

I am confidant that our agricultural systems will change for the better – that we will develop agro-ecosystems that can change with us, support us and support our landscape.

I am here today to launch the Australian National Field Days. The fields days aim to advance Australian Agriculture by exposing those involved in the agricultural industry to the latest trends, equipment, education and technology. This is a wonderful opportunity to demonstrate new developments in agriculture – and that is something we need and I am pleased to support.

I am honoured to officially open the 2009 Australian National Field Days. Please enjoy the exhibits.

Thank you.