Food security, food reality and Australian agricultural opportunity

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As recently as five years ago, food security was a term used when discussing the food supply situation in drought stricken and impoverished developing nations. More recently, however, food security has emerged as a major policy issue in developed nations such as Australia. Unfortunately, much of the policy discussion is misinformed, and some of the proposed solutions are likely to make global food insecurity worse, rather than better. While the issue represents a significant opportunity for Australian agriculture, policymakers are currently infected with 'mining myopia' and have failed to grasp that the agriculture sector can make a major contribution to global food security and deliver sustained wealth for Australia.

Australia is one of the most food secure nations on earth, and is in absolutely no danger of having insufficient food for its population. In fact, Australia ranks fourth in the world behind only Brazil, Argentina and the Netherlands as a net exporter of agricultural products. Depending on the year, Australia exports between 60 and 70% of its total agricultural output, meaning the nation’s farm businesses provide for the food needs of Australia’s 22 million people, plus at least another 50–60 million overseas.

No doubt some will claim that Australia’s current agricultural systems are unsustainable, but the facts confound this argument. For a wide range of agriculture sector indicators including water, fertiliser and energy use efficiency, and rates of adoption of technologies such as conservation tillage and precision agricultural systems, Australian agriculture either leads the world, or is included amongst the top one or two nations.

Australian farmers achieve this, despite farming in some of the world’s most variable climates, and in the almost complete absence of government subsidies or payments for environmental services. Reinforcing this, the most recently published OECD review of world agricultural policies (OECD 2011) identified that Australia expends the lowest amount of public funding on agriculture as a percentage of GDP (0.12%) of any nation globally.

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Global food insecurity

At a global level, however, the issue of food insecurity is one that has gained increasing attention from policymakers, as fears emerge about the ability of the globe’s human population to sustainably produce sufficient food in the future.

There are a range of reasons that the issue has become much more prominent, but perhaps the most important factor has been the change that has occurred in global agricultural commodity prices over the past decade. This change can be observed in global food price indicators. These indicators show that the period of a persistent downward trend in global agricultural prices that was experienced from the 1960s ended around 2000, and that since that time global agricultural and food prices have trended upwards and become more volatile.

Exactly what has triggered this trend change in global agricultural commodity prices is the subject of considerable debate.

The most frequently cited factor is global population growth, with current population estimates approaching 7 billion people, and a further billion increase anticipated over the next fifteen years. It is not immediately apparent that population growth per se has triggered the price change, but an increasing global population constantly adds to demand pressure in agricultural markets.

Another commonly cited factor is the growth in global biofuel production that has occurred since 2000, which has diverted agricultural production that would otherwise have been used as food. Certainly there has been strong growth in biofuel production since 2000, with the EU, the USA and Brazil all implementing policies to boost biofuels (although in Brazil’s case these date back to the 1970s oil shocks). Irrespective of the crops involved, these policies divert land from food production, and therefore add to the upward pressure on global food prices by limiting supply.

A further factor commonly cited as a reason for the change is that the world has reached the limit of available agricultural land, and this has restricted the ability of nations to respond to increased demand for food. There is, however, no compelling evidence to confirm this. Global-scale assessments of available land identify large areas of South America and sub-Saharan Africa where additional land could be converted to agricultural production without environmental damage, and also a large area of highly productive agricultural land in Eastern Europe that is under-utilised. Even China, the nation most frequently considered to have reached the limit of land utilisation, has recorded a 12.5 million hectare increase in crop area over the six years since 2004.

There are a range of logistical and political factors that are limiting the area of land utilised for agriculture in South America and Africa. Development costs are also limiting the productive utilisation of land in Eastern Europe, and deliberate government policies in both Western Europe and North America (‘set aside’) have reduced the amount of land used for crops. Most of these factors could be addressed, but they would require political changes or substantial public investment, and governments have not as yet been sufficiently motivated to take such action. In reality, the limits on agricultural land are economic and political, not agronomic.

Slowing global agricultural productivity growth is widely considered to be contributing to global food insecurity. The relatively high rates of productivity growth observed in the agriculture sectors of developed nations over the period from 1970 to 1990 appear to have slowed (Alston et al. 2009), as the benefits of the ‘green revolution’ have been exhausted. This slowdown in agricultural productivity growth rates has limited the ability of agricultural producers in developed nations to increase production in response to higher prices.

A further important factor contributing to higher global food prices is that in a number of large-population developing nations such as China, India and Indonesia, growing consumer wealth is resulting in a transition to more Westernised diets higher in animal protein, and this is creating sharply increased demand for feedgrains for livestock. There is certainly strong evidence of this trend in China, which
has dramatically increased annual soybean (and more recently corn) imports since 2000. These now amount to almost 50 million tonnes annually (more than twice Australia’s annual volume of wheat production). Such trends are also becoming evident in other ASEAN nations, as per capita wealth increases with the current high rates of economic growth.

The significance of these changing dietary patterns arises from the sheer size of the populations in those nations that are experiencing the transition. Japan, South Korea and Taiwan went through a similar transition during the 1960s and 1970s and the result was major new markets for Australian agricultural products, but collectively these three nations represent just 2.8% of world population. In contrast, China, India and Indonesia together have a population of 2.8 billion people and account for 40% of the world population. In theory, the impact of the economic transition of just these three nations on global agricultural demand over the next two decades will be 13 times as great as was the impact of the economic transition of Japan, South Korea and Taiwan.

A recent review of trends in global agricultural markets by Purdue University researchers (Abbot et al. 2011) concluded that two factors – the global growth in the use of crop products for biofuels, and the large increase in Chinese imports and utilisation of soybeans – are the key factors driving the fundamental changes that have been observed in global agricultural markets over the past decade. What these researchers also noted is that both these are inelastic sources of demand, and they therefore contribute to increased price volatility.

The changes that are occurring in these other developing nations means that there will be a sustained period of growth in demand for agricultural products over the next few decades and beyond. At the same time, it is apparent that there are a range of factors that currently limit the potential of global agriculture to respond to this increased demand. This suggests that global food insecurity will remain a focus for policy-makers over the next few decades, as relatively high food prices persist.

Some illogical responses to global food insecurity

The recent period of elevated food prices has led to renewed concern by policy-makers about food security, and has spawned an entire industry of international and national reviews, academic treatises and books about the issue, as well as renewed interest in the writings of Malthus, and the Club of Rome. It seems that there is an inherent human fascination with predictions of an imminent catastrophe, and no end of instant experts ready to take advantage of this fascination, even in highly food-secure nations like Australia.

Some of the suggestions that have been made to fix global food insecurity are ‘interesting’ to say the least. They include proposals for stopping global trade in agricultural products, banning factory farming, banning the use of genetic modification or agricultural chemicals, the development of urban agriculture, and the concept of food sovereignty, which involves the development of localised food production systems linking producers and consumers, without multinational corporations or government agencies being involved. There are also serious proposals for the widespread adoption of organic and biodynamic farming as a means of solving global food supply shortfalls.

What many of these proposals seem to ignore is the difference between the desires and whims of a limited population of some of the most wealthy and food secure consumers in developed nations, and the future needs of a growing population of poor, food insecure people in some of the poorest nations of the world.

Responding to the desires and whims of the wealthiest and fuzziest consumers in developed nations, especially at a national policy level, seems likely to result in an exacerbation of food insecurity for developing nations, rather than resolving the problem. The United Kingdom (UK) serves as a relevant current case-study. For a variety of reasons; including disease outbreaks, the requirements of the Common Agricultural Policy, the increased focus on organic production, and the imposition of a broad range of regulatory controls (DEFRA 2006); the UK has become progressively less self-sufficient in food since the 1980s. While not likely to result in mass starvation, it is a sign that the UK agriculture sector is becoming less productive. There is now a concerted program underway in the UK to remove many of the regulatory controls and to invest in agricultural research and development (R&D) in an attempt to reverse this trend.
Banning so-called factory farming is frequently proposed as a means of addressing global food insecurity by environmental and some consumer groups. However, there is no doubt that such farms have the potential to be much more efficient in terms of energy and water use per unit of output, especially in intensive production systems associated with pork, poultry and some horticulture commodities.

Larger, well-capitalised businesses can access modern technology and implement advanced production systems. They are also more likely to be able to implement food safety and animal welfare measures than smaller-scale farms. Larger farms are also more likely to achieve consistent production and quality. That is not to say there is no place for smaller, family-scale businesses, but there is no doubt these are often less competitive in producing undifferentiated bulk commodities utilising intensive production systems.

What is also overlooked in relation to large-scale corporate farming entities is that they often serve as a test-bed for new technologies and management systems that will, if successful, later be adopted by smaller scale farm enterprises. In this manner they can act as a catalyst for improved productivity across an entire commodity production sector.

The concept of ‘urban farming’ – where urban residents grow their own food – is also commonly proposed as a way of producing extra food for the world. While the notion of urban residents growing all their own food may have some philosophical appeal, the concept must be a source of great amusement for the teeming masses of recently urbanised citizens in developing nations, many of whom have experienced the sheer hard work and poverty of smallholder farming, and have been desperate to swap that existence for an urban wage-earning lifestyle which enables them to purchase, rather than produce their own food. There are some urban residents in developed nations who take great delight and much satisfaction from the production of some of their own food. This is, however, a far cry from food self-sufficiency, especially given that the most limited resources for many urban residents is time and open space, both of which are essential elements of successful food production.

Organic and biodynamic farming systems are also spoken of in glowing terms as viable alternative production systems that could be adopted to alleviate world food insecurity. There are certainly many examples of the successful implementation of organic farming systems. However, robust, long-term comparisons of the productivity of conventional and organic farming systems (Pimentel et al. 2005) highlight that well-managed organic systems at best match the productivity of conventional farming systems, and in many situations are significantly less productive. An exception to this may be minimal input organic production in low rainfall areas.

An issue often overlooked in relation to high-rainfall organic production systems is that there is a need to maintain fertility and soil nutrients, either by utilising imported organic wastes such as manure, or through rotations involving legumes. A significant expansion of organic production would quickly exhaust available manure supplies, creating greater reliance on crop/pasture rotations for organic farm systems. However as Pimentel and colleagues noted:

Depending on the crop, soil, and weather conditions, organically managed crop yields on a per hectare basis can equal those from conventional agriculture, but it is likely that organic cash crops cannot be grown as frequently over time because of the dependence on cultural practices to supply nutrients and control pests.

Banning or discouraging the use of genetically modified crops is also certain to add to, rather than alleviate food insecurity. While genetically modified (GM) crop varieties may not necessarily result in better yields in trial situations (although they frequently do) their incorporation into farming systems greatly simplifies management for farmers, and therefore increases the probability that optimum yields will be obtained. This is confirmed in two ways – firstly broad measures of national agricultural productivity growth identify much stronger yield growth in commodities where GM varieties are available (maize, feedgrains and soybeans) than for commodities grown without the use of GM varieties (wheat and barley) (Alston et al. 2010), and secondly, in situations where GM crop varieties are available (canola in Canada, cotton in Australia) farmers very quickly choose to use those varieties rather than conventional varieties, confirming the advantages they provide.

The most irrational suggested solutions to global food insecurity are those that involve banning agricultural chemicals. Modern agricultural chemicals have contributed enormously to farm productivity growth over recent decades, for both crop and livestock production (Cooper & Dobson 2007). It is often overlooked that during this period, agricultural chemicals have also become much safer and specific to particular pests, and residue detections have declined dramatically (National Residue Survey 2009). A nation such as India has been transformed from a land of chronic food shortages during the 1960s, to being a net food exporter during the 2000s, largely through the use of agricultural chemicals.

In the Australian context, the use of chemicals has enabled almost 90% of Australian crop producers to adopt no-tillage cropping systems, resulting in major fuel savings while minimising soil erosion and maximising water use efficiency. There are numerous other examples in almost all commodities of similar gains that have been made. It is inconceivable that even current levels of global food production could be sustained without the use of agricultural chemicals, let alone food production increased substantially in the future.

Securing global food security and Australian agricultural opportunity

Australia is in the somewhat unique position of being a major net food exporter, and also being closely tied to Asian economies where most growth in food demand is anticipated in the
future. Global food insecurity therefore represents a major opportunity for Australian agriculture. Australian agricultural products will generally not be cost competitive in the agricultural markets of the poorest nations, however Australia is a cost-effective source of high quality food for the burgeoning Asian middle-classes. This will make an important future contribution to improved global food security, because in the absence of Australian agricultural imports, consumers in these markets would be outcompeting consumers from poorer nations for available food supplies.

Sustainably maintaining and improving Australian agricultural output in the future will require renewed and vigorous efforts to enhance agricultural productivity, utilising all the advantages that modern science and technology can bring. Australian governments will need to increase investment in agricultural R&D, and implement policies that incentivise private sector agricultural R&D investment in order to ensure future agriculture sector growth.

Associated with the above investment is the challenge of re-orienting the mindset of many urban consumers about agriculture and food production. There is clearly a need to assist consumers to better understand the realities of agricultural production and the benefits associated with modern production technologies – including genetic modification and the use of agricultural chemicals.

Wealthy consumers will continue to demand food with specific credence characteristics such as ‘natural’ or ‘organic’, and farmers should pursue those market opportunities. However, care is needed to ensure that agricultural policies facilitate a diversity of production systems, without unnecessarily constraining any of these systems. The fact that some consumers prefer organic food should not become a justification for the banning of genetically modified crops.

Aside from agricultural R&D investment, there are a broad range of other government and industry initiatives that will assist Australian agriculture to take advantage of the enormous opportunities that are emerging. These include taking an objective approach to the development of land and water resources in northern Australia, and abandoning the ‘lock it up and leave it’ mentality that seems to pervade current government decision-making.

There is also a need to re-evaluate the water resource policies of southern Australia, in the light of the higher long-term strategic value of agricultural production. This applies in particular to decisions about the best way to obtain extra water for the environment. While buy-backs might look best from a cost per megalitre perspective, any policy evaluation should include the multi-year economic value generated by productive water use, and therefore favour water infrastructure investments that generate water savings while retaining productive agriculture.

Transport and communications infrastructure servicing rural industries also needs to be considered in a new light, given the dramatic future potential of Australian agriculture. The current priority being given to mining infrastructure and transport needs is having a negative impact on some sub-sectors of agriculture, and reducing agricultural competitiveness.

But perhaps the biggest challenge of all lies in re-orienting the thinking of policy-makers towards the future potential of agriculture. Much current policy-making at both the national and state levels is affected by ‘mining myopia’ – a very short-sighted focus on maximising wealth from minerals exports, without considering the longer-term implications of many of these policies – especially for a growth sector such as agriculture.

To put it very simply, Asian demand for iron ore and steel for building new cities and infrastructure will slow long before its demand for food slows. The reality of mining myopia was brought into sharp focus recently, when the Australian Government made a major announcement about the development of a white paper on Australia’s future engagement with Asia to be carried out by Former Treasury Secretary Ken Henry. In a speech announcing this initiative, the Prime Minister (Gillard 2011) referred to the potential of the mining industry at least six times, but did not mention agriculture once. Hopefully, Ken Henry will adopt a broader perspective and the resulting white paper will help to cure the myopia that currently infests the vision of Australian policy-makers.

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Economic impacts of the suspension of live cattle exports

The suspension of live cattle exports to Indonesia in June 2011 sent shockwaves through the northern Australian cattle industry. Occurring as it did during the peak of the northern cattle muster, it created a very difficult business environment for many cattle businesses and associated transport and other service providers, and left many in the north fearful for their future.

The trade suspension also had a significant impact in Indonesia, occurring as it did during the peak cattle production period. Indonesian feedlots, transport operators and meat processors and retailers all faced a reduction in beef supply, and the potential for a long-term disruption to normal business arrangements.

The lifting of the trade suspension on 6 July 2011 coincided with the imposition of a range of new measures aimed at securing the integrity of the beef supply chain in Indonesia, and ensuring all Australian cattle delivered into this market are traceable. Since that time, the number of accredited live cattle exports to Indonesia has quickly increased, and businesses involved in the trade have had an opportunity to recover some of the losses they have encountered due to the trade suspension.

Research by the Australian Farm Institute, in conjunction with the Centre for International Economics, and Holmes and Company examines the economic and financial implications of the suspension of the Indonesian live cattle trade. The research also examines the alternatives that may be available for the northern Australian cattle industry in the event that the live export trade is curtailed or restricted in the future.

There has been some suggestions that Australia would be better off if live exports ceased and the cattle were processed in Australia and exported as beef. The research has examined the feasibility of establishing beef processing facilities in northern Australia. The research has again highlighted the limitations of beef processing in northern Australia due to high levels of seasonality, a lack of infrastructure and services, a potential lack of skilled personnel, and the slow weight gain and lower turn-off weights of cattle in the region.

The research also examines the feasibility of transporting cattle from northern Australia to southern feedlots or processing centres. Transport costs associated with these options range from $100 to $200 per head, and also invariably result in transported cattle losing between 10 and 15% of their liveweight during transit, which adds further cost.

There are a range of options available to northern beef producers in some areas to adjust their production systems so that they are less exposed to risks associated with the live export trade. These include restructuring their herds in order to turn-off heavier cattle, and also changing genetics to produce animals more suited to other markets. These options appear feasible in some regions but involve trade-offs such as lower herd productivity. In other regions such options are not feasible due to distance and/or pasture productivity. In such situations, a longer-term cessation of live cattle exports would invariably lead to long-term changes in land use, and would necessitate governments considering alternative land use options, such as conservation reserves or carbon sequestration projects.

The research highlights the close complementarity between the northern Australian live cattle industry and the Indonesian beef market, which makes it all the more important that a long-term arrangement is put in place to secure the future of the trade – and the benefits it brings to both Australia and Indonesia.

The full results of this research will be available on the AFI website in the coming months.
Will woolgrowers get a boost from carbon farming?

The potential opportunities for Australian woolgrowers arising from the Australian Government’s Carbon Farming Initiative (CFI) were the subject of research recently carried out by the Australian Farm Institute for Australian Wool Innovation.

Modelling was first carried out to analyse the potential financial impacts of the introduction of a carbon price on sheep farm businesses. Cost impacts will arise because a carbon price will result in higher energy costs, resulting in increased costs for farm businesses using energy and energy-dependent inputs. Other impacts will arise because post-farm supply chains and downstream processors will face higher energy costs and potential emission costs, and these will be transferred back to farmers in higher charges or lower prices.

The carbon price that was modelled commenced at $23/t CO$_2$-e in the year 2012–13, and increased as projected in Australian Government Treasury carbon price modelling. No assumptions were made of likely production responses by sheep farmers or supply chain participants, therefore the results provide an indication of the challenge rather than a projection of future outcomes. The modelling projected average sheep farm cost increases of between 0.5 and 0.9% in year one of the proposed carbon price, and between 1.4 and 1.7% in year three, assuming on-road fuel is included in the policy at that time as proposed by the government.

Farm financial modelling was then carried out to examine the implications of the potential revenue from the CFI for wool businesses. A range of different CFI participation scenarios were developed. These included the use of a technology to reduce methane emissions from sheep, the use of coated nitrogen fertilisers, soil carbon sequestration, the planting of biodiverse tree plantations, and the planting of single species tree plantations. The modelling projected the financial results of each offset scenario as cumulative farm cash income over 30 years, compared with cumulative farm cash income in the absence of the CFI. The farm financial models used included typical sheep farm businesses in the pastoral zone, the wheat-sheep zone and the high rainfall zone.

Based on the assumptions used in this analysis, the only CFI scenario that increased farm revenue was single species tree plantations in the high rainfall zone. In every other case, the farm businesses were projected to be financially worse off as a result of participating in the CFI than they would otherwise have been. The negative results were particular evident for CFI projects associated with soil carbon sequestration, because the credits arising from these will only be able to be sold into low-priced, voluntary carbon markets.

This result was not surprising, as single species tree plantations in the high rainfall zone were estimated, using official methodologies, to result in carbon sequestration rates per hectare that are more than ten times higher than any other CFI offset scenario. Notable in particular was the gap between estimated sequestration rates for single species tree plantations and biodiverse tree plantings. Biodiverse tree plantations, using official methodologies, are only projected to sequester carbon at very low rates, and therefore the revenue potential of such plantings using current methodologies is very limited.

This analysis did not include the cost of a permanent irrigation water entitlement for single species tree plantations, as has been proposed as a requirement in recent CFI regulations. This would obviously reduce the net revenue associated with single species tree plantations, but would have no impact on the profitability of the other CFI scenarios, all of which were negative.

These results indicate that it will require a substantial reduction in CFI offset project transaction costs, and a large increase in sequestration or mitigation rates for any of the other CFI scenarios to approach a break-even return from a farm business perspective.

The report Farm Level Modelling of Greenhouse Emission Mitigation and Sequestration Options for the Australian Wool Industry will be released soon and will be available for purchase on the Institute website.
What should be the Australian Government’s role in

Tony Windsor MP
Independent Federal Member for New England

Traditionally, the Australian Government has had limited involvement in setting land-use policy for agricultural land, as this has primarily been the domain of state governments. However, in recent years the rapid expansion of mining across valuable farmland has highlighted that state laws haven’t kept pace with the environmental pressures these developments pose. At the same time, corporations owned by foreign governments are purchasing large tracts of agricultural land, raising concern about the implications for Australia’s sovereignty. A strong case can be made for greater Commonwealth involvement in both situations.

In answering this question, we must first agree on the definition of prime agricultural land. Is it land where food production can be undertaken with a measurable degree of certainty each year? Should it include areas that are good for growing crops used for fuel or energy? At any rate, the designation of prime agricultural land should also include the catchment area and any connecting pathway between catchment areas. Australia’s best land depends on these intricate systems of ground and surface water.

While mining can create extraordinary wealth, it can also seriously threaten the water resources of entire catchments. This isn’t so much of a problem in drier areas, but destroying the capacity of our most productive land in the pursuit of short-term profit is incredibly short-sighted. Future generations will always need food, and the demands on agriculture will only escalate as the climate changes and the world’s population booms.

Mining and exploratory drilling operations are already underway across several areas of what I would call ‘prime agricultural land’, in the absence of rigorous scientific studies on their impact and against the wishes of local farmers. This shows that current state-based licensing systems aren’t up to the task. Indeed, the large contribution mining companies make to state coffers has raised questions about the states’ commitment to achieving a balanced outcome. In this case, the national – and even global – implications of the issue should take precedence over state sovereignty.

The Commonwealth does already have a role in protecting environmentally sensitive areas from mining under the Environment Protection Biodiversity and Conservation Act. I’ve introduced into parliament an amendment to this Act that would prohibit a mining action that will have, or is likely to have, a significant impact on water resources. This legislation would create a national approach that protects the water resources of Australia’s best agricultural land, while also providing certainty for mining and gas companies. There is scope to delegate the approval process to the states, as long as they can meet this Commonwealth standard.

Australia’s control of its own prime agricultural land is called into question by the purchase of large tracts by front companies owned by foreign governments. A percentage of Australian land has long been owned by overseas interests, and in many cases they were able to provide the capital to develop the land that may otherwise not have been available locally and which has benefited our economy. However, the purchase of land by foreign investors for commercial interests is entirely different to the purchase of land by foreign governments for their own strategic interests. The latter raises the prospect of foreign governments using our land to bypass local industries and pricing in the course of servicing their own food security or mining interests.

The Commonwealth should keep a register of foreign land ownership that identifies both private and government interests. It must have the power to assess cumulative investment through multiple purchases and be able to identify foreign government purchases camouflaged by front companies. An investigation of contractual arrangements from farm sector to end user would complement the register and allow an assessment of whether land purchases are driven by commercial factors or by overseas political strategy. It would also be wise to cast an eye over the ownership of meat and dairy processors to highlight attempts to vertically integrate produce from foreign-owned land and bypass Australian industry.

Protecting the productivity of prime agricultural land is an issue of national significance that deserves a national approach. Identifying the risks to our sovereignty posed by large-scale land purchases by foreign governments is also the natural domain of the Commonwealth. The successful handling of both issues within the context of a growing population and a changing climate demands the Australian Government play a far greater role in decision-making about the future use of prime agricultural land than it has in the past.

Tony Windsor MP is the Independent Federal Member for New England in the Parliament of Australia. He is a primary producer and has lived near the town of Werris Creek his whole life where he operates the property ‘Cintra’.

Tony first entered politics as an Independent Candidate for the Electorate of Tamworth at the New South Wales General Election in 1991, and was elected as the Independent Member for New England in 2001.

At the 2010 Federal Election on 21 August, Tony was again re-elected. With neither side of the Parliament receiving a clear majority at the 2010 Election, Tony was placed in a balance of power situation along with five other crossbench Members in the House of Representatives.
decisions about future uses of prime agricultural land?

Senator Barnaby Joyce
Shadow Minister for Regional Development, Infrastructure and Water; Leader of the Nationals in the Senate; and LNP Senator for Queensland

Australia must recognise that one of its most scarce resources is prime agricultural land. It is crucial to maintaining our nation’s food sovereignty and to providing our nation with sustainable, long-term export opportunities.

Agricultural land has been fundamental to the economic development of Australia in the past and shall continue to be crucial in the future. Prime agricultural land, the very best land, should therefore be off-limits.

If we destroy prime agricultural land it is gone forever. If the Sydney Opera House fell down tomorrow, we could rebuild it, but God is not making any more prime agricultural land.

Some ask how do you define prime agricultural land? Well, it’s a bit like asking ‘how do you define a beautiful woman? You know when you see her.’ Prime agricultural land can be defined by common characteristics such as its yield, its nutrients, its price and its access to water.

Governments everywhere can zone for residential and commercial areas, I don’t think it will be too difficult to zone for a common definition of prime agricultural land.

Defining what is prime agricultural land is largely a matter for the states, and some state governments are moving in this direction. However, the Commonwealth Government does have a role to ventilate these issues and help build the case for change.

A case in point is the current Senate inquiry into coal seam gas, an inquiry that the Nationals party established earlier this year. That inquiry has already held hearings in Dalby, Roma and Narrabri, has received 370 submissions and will report by the end of November.

When talking about prime agricultural land with reference to coal seam gas, it is important to state that some misconceptions have been put out there. It has been stated by some, that farmers have never had property rights over the coal, oil and gas under their property. Without being too verbose, let’s start from the beginning.

Back in the days of the Magna Carta, a Latin phrase summed up the law: *cujus est solum, ejus est usque ad coelum et usque ad infernos*, ‘where one owns the ground, one’s ownership extends up to the heavens and down to the infernal regions’.

This was the longstanding common law until around the 16th century when the Crown resumed gold and silver rights. Then in 1915, Queensland took from landowners the rights for petroleum and gas without compensation due to World War I.

Other states in Australia followed the same path, Victoria and Western Australia, due to the prospect of World War II, South Australia in 1971 and, the final act, in New South Wales, in 1981. Often rights were taken from farmers without compensation. Unlike in the movie *The Castle*, there is no constitutional requirement for state governments to offer just terms.

Just like Dennis Denuto, Australians have picked up the ‘vibe’ on this one. Farmers’ rights may no longer extend to the ‘infernal regions’ but last time I checked they still owned the gates and the roads that mining companies must use.

The consequence of this imbalance in negotiating positions is that farmers get about 75 cents for every $1000 that is made from coal seam gas mining.

Australia needs mining to pay our bills, but property rights are just as essential if you believe in the market economy or justice. What is the point of generations going through the privations of going without, to pay off and improve a block of land, if at some arbitrary point of time, a person you have never met, from a transaction you were never part of, can show a superior ownership right to the one your family worked generations for.

Prime agricultural land should be protected and the rights of the farmer should be protected. The capacity of Australia to feed itself and feed others is a moral obligation we hold.

Prime agricultural land makes up a very small proportion of Australia’s surface. The rivers, creeks, and underground aquifers that feed this land are priceless national assets. Properly managed, this land can produce food for the nation, and for export, for thousands of years. Mining this prime land in pursuit of royalties for cash-strapped governments would be short-sighted in the extreme, and leave future generations of Australians to ponder the selfishness of our actions.

Senator Barnaby Joyce is a champion for rural communities and small business and believes that representing the people is a privilege. As a rural banker and accountant he understands the challenges of small business.

In 1998, Barnaby became the Leader of the Nationals in the Senate. In late 2009 he became the Shadow Minister for Finance and Debt Reduction and in early 2010 became the Shadow Minister for Regional Development, Infrastructure and Water.
The mouse in the room

Recently (25 September 2011), The Age newspaper in Melbourne had a feature on its website which encouraged readers to ask questions about and discuss solutions to global warming. In response to questions about the importance of agricultural emissions, vegan Paul Mahony wrote that the only meaningful way for Australia to reduce greenhouse gas emissions was for everyone to become vegetarian.

In supporting this proposal, reference was made to an old CSIRO and University of Sydney study claiming agriculture contributes 30% of Australia’s greenhouse gas emissions. Where that figure came from is anyone’s guess. According to the latest Australian Government Greenhouse Gas Inventory Report agriculture currently contributes 15.5% of Australian greenhouse emissions, and of that, emissions associated with sheep and cattle are a little over two-thirds, or 10.6% of the national total. Overall agricultural emissions have trended downwards from 1990, and agriculture is the only sector of the economy to have reduced emissions over this period.

The author then further justifies the call to vegetarianism by making the claim that emissions associated with the clearing of forests in Australia and worldwide should also be attributed to livestock, therefore making the emissions associated with sheep and cattle much more significant. How this can be justified is very unclear – land clearing in Australia has essentially been banned over the past decade, with the only clearing that is occurring being the clearing of regrowth on land that was previously clear of trees. In fact the bans on land clearing in Australia (and the resulting reduction in national greenhouse emissions) are the only reason Australia can claim to be meeting its Kyoto Protocol emission target.

The author also argues that white meats are a better source of protein, because animals such as pigs and chooks not only produce less emissions, but are much more efficient digesters of grain than sheep and cattle. In support of this, the author claims that cattle require up to 54 kilograms of feed to produce one kilogram of beef. Unfortunately, there is no reference provided for this ‘fact’. Most knowledgeable people would say that if cattle are fed a grain ration, the normal conversion ratio would be around 7–8 kilograms of grain per kilogram of beef, while pigs and chooks might require 2 kilograms of grain to produce a kilogram of meat. However, what the author has overlooked in this comparison is the fact that ruminants such as sheep and cattle can convert low quality pasture or forage to meat, whereas pigs and chooks cannot.

Australia’s 30 million beef cattle spend most of their lives eating grass, not grain, and are managed on land mostly unsuitable for crops. In addition, in contrast to the author’s claim that sheep and cattle degrade the landscape, many scientists now recognise that ruminants play an important role in recycling nutrients in pasture systems, the alternative to which would be periodic cataclysmic bushfires that totally destroy all biodiversity in their path.

The article not only suggests that Australia needs to reduce sheep and cattle numbers, but also quotes others who believe the only solution is for Australia to replant large areas of farmland to trees. Aside from the enormously damaging social and economic impacts such an action would result in, the proposer seems to ignore the fact that in many areas the natural habitat was grasslands rather than forest, and that in northern Australia and in the low rainfall zones, it is highly doubtful if tree plantations would survive.

Perhaps the most amusing aspect of the entire article is the reference to sheep and cattle emissions as the ‘elephant’ in the room that politicians choose to ignore in developing climate change policy. This imagery is laughable, given that the real elephant in the room is the coal industry and coal fired electricity generation. As the Australian Government National Greenhouse Inventory notes, emissions from the stationary energy sector (mainly electricity generators) are 54% of total national emissions and have increased by over 50% since 1990. Two-thirds of those emissions are associated with coal-fired electricity generation.

Compared to emissions from coal-fired electricity, sheep and cattle emissions are the ‘mouse’ rather than the elephant in the room!
Australian and international farm policy news

Draft of reformed CAP released

On the 12 October 2011, the European Commission released its draft proposal for the future European Common Agricultural Policy (CAP), covering the period 2014–20. This is the first step in a 16 month process of negotiation between member states and the European Council and Parliament. The Commission has proposed a gradual 15% decrease of the CAP budget (from €57.4 million to €50.2 million). The EU parliament is expected to plead for increases in the name of food sovereignty and EU member states are preparing for intensive lobbying to get special deals for their farmers. The highlights of this proposal are:

• Decrease in direct farmers’ subsidies and market related instruments.
• Up to 30% of direct subsidies tied to ‘green actions’ (instead of subsidised green activities).
• Fairer or targeted subsidies with new allocation rules among countries and farmers.
• Doubling the R&D budget, benefiting innovation partnerships between researchers and farmers.
• Increased use of ‘price volatility instruments’. Farmers are encouraged to create subsidised insurance and mutual funds.
• No inclusion of farmers in the carbon trading scheme and new opportunities to get involved in carbon mitigation projects or renewable energy production.
• Increased support for ‘origin’ and ‘sustainability’ marketing and labelling.
• Information and guidelines to monitor supply chain relations.

Possible impacts on international trade have been partially reviewed by the OECD which appeared relatively satisfied. The OECD has just released an ‘Evaluation of Agricultural Policy Reforms in the European Union’ and welcomed most of the changes described but recommended further efforts to better target subsidies, discouraging the use of subsidy ‘ceilings’ which could push the bigger productive farms to decrease their size.

Dairy deregulation also killed dairy market data

In 2000, six months after the deregulation of the dairy industry, the ACCC released a comprehensive analysis of the Australian dairy industry, providing details of prices, revenues and margins of farms, processors and retailers. It included a thorough analysis of the impacts of deregulation and analysed effects of deregulation such as the loss of market share by convenience store to the benefit of major retailers.

In 2011, the dairy industry was again the subject of an investigation by the ACCC. This time, the outcome of the ACCC investigation was a one-page press release, put out on a Friday, which announced that the ACCC found no evidence of unfair practices in the milk market, and that it ‘seemed’ that dairy farmers had not been disadvantaged by milk discounting by major retailers. No data was made available, no analysis was provided, and the entire wording of the ACCC announcement suggested that it had little or no data to rely on, and therefore could not find any problems. It seems dairy deregulation has destroyed transparent dairy industry market data, and with it the ability to identify unfair behaviour in the market.

Has the ACCC priced the full shopping basket?

At the beginning of 2011, Coles supermarket decided to decrease the price of its homebrand milk. Other Australian supermarkets quickly followed. One would have expected consumers to rejoice but surprisingly, the consumer association Choice cautioned that the deal may not be as good as it sounds on the surface. Choice reported that their surveys showed that the price of other food items (such as soft drinks and biscuits) were increasing as milk prices dropped. Regrettably, there has been no data made available to verify this. An ACCC milk price review concluded that the supermarket milk price war did not involve any uncompetitive behaviour and provided a benefit to consumers. The review observed ‘businesses often legitimately reduce their prices, and this is good for consumers and for competition in markets’. Unfortunately, the ACCC only looked at whether consumers were getting cheaper milk, without looking at the prices of other supermarket items in shopping baskets.

A glimpse at the future of US agriculture

The US President is about to start his official election campaign. As a warm up, he’s touring Midwest rural areas and his first speech provides a glimpse of the importance given to agriculture. The strong emphasis on supporting biofuels is apparently shifting. With more corn (about 36%) used in the production of ethanol than for stock feed (35%), the reality of conflicting food and energy issues is becoming more obvious to policy-makers. The President is now referring to the necessity of ‘using refuse, using stuff we don’t use for food to create energy’.

The other emerging issue is the shift of small farm businesses from the agriculture policy framework to a social policy one. The call for ‘more capital to small farmers’ is in reference to the living conditions of these households rather than the economic viability of the businesses. This is the same trend that is being observed in the EU CAP negotiations.

Keep up-to-date with discussion on current issues in Australian and international agriculture policy via the Ag Forum on the Institute website.
In the news

The Institute’s Executive Director Mick Keogh recently chaired the Federal Government’s Drought Pilot Review. He was interviewed regarding this role by the Weekly Times Now in the article ‘Drought aid’s lime twist’ and the Rural News article, ‘“Line-free” drought support’, saying that despite its short duration the trial program had produced several positive results.’

Foreign ownership of Australian farmland has been an issue much discussed in the media lately, with the Institute providing comments for the articles, ‘Should Australia be selling the farm’ (The Age, 20/08/2011), ‘Chinese company push for WA farmland’ (Farm Weekly, 12/08/2011), ‘Need for greater transparency in the purchase of Australian agriculture’ and ‘Farm Institute wants foreign ownership register set up’ (ABC Rural, 18/07/2011).

Out and about
Recently the Institute’s Executive Director, Mick Keogh, has spoken at:
- Cotton Industry Forum, Narrabri, NSW
- Woolworths Young Farmers Training Program, Bella Vista, NSW
- Merino Conference, Wagga Wagga, NSW
- Rural Directions Carbon Days, Clare and Roseworthy, SA
- PrincipleFocus Farm Management Conference, Melbourne
- Calare Carbon Tax Community Forum, Bathurst, NSW
- Westpac Carbon Day, Deniliquin, NSW
- GRDC/DAFF Farm Risk Workshop, Hackney, SA
- Australian Institute of Agricultural Science and Technology Dinner, Melbourne
- Westpac Carbon Day, Warrnambool, Victoria
- PMA Fresh Forum, Longford, Tasmania
- French Trade Commission, Sydney
- Westpac Carbon Day, Tamworth, NSW
- 2011 Nuffield International Conference, Adelaide
- Australian Lot Feeders Association BeefWorks 2011 Conference, Toowoomba, Queensland
- National Biosecurity Forum, Canberra.