### Feature Article

**The neglected economics of water policy**

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Driving through central California – and in particular the San Joaquin Valley – one is immediately struck by a number of things. Firstly, the area is technically a desert, which experiences less than 10 inches (250 mm) of rainfall per year, and has many areas receiving less than five inches (125 mm). Secondly however, because of the availability of irrigation water the area is a highly productive farming region that is the powerhouse of Californian agriculture, which in turn is the leading agricultural state of the USA. Californian agricultural production was valued at US$36.2 billion in 2008, 11.2% of the US total.

To put this in perspective, it exceeds the gross annual agricultural output of Australia. California leads US production in dairy, and produces nearly half of US-grown fruits, nuts and vegetables – virtually all of which are produced under irrigation. Cities such as Fresno (with over half a million people) have an economy that is largely based on agriculture, and major industries based on cotton, grains, dairy and horticultural products drive the economy of the entire valley. Because of its scale and concentration, the San Joaquin Valley is a very stark example of the enormous economic wealth that can be generated from agriculture when irrigation water is available.

Australian irrigation areas such as those in the Murray-Darling Basin are not as geographically concentrated, and are also much further removed from major population centres, which perhaps explains why the economic implications of water policy decisions seem to be largely ignored in current debates and processes. Economic impacts are also given scant attention under Australian Government water legislation (the **Water Act 2007**), which requires that economic and social considerations are given a much lower priority than environmental considerations, when it comes to making decisions about the future availability of water for agriculture.

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### Institute Activities

A brief overview of the Institute’s key activities from May to July, and the John Ralph Essay Competition – $2500 prize.

### Following On


### Farm Policy Progress

A review of farm policy developments within Australia and internationally. In this edition: Kiwis feeling the ETS pinch; 40% rise in food prices predicted; approval system for GM crops to be overhauled; EU carbon tax proposal delayed; 2012 Farm Bill; Mercosur trade talks scuttled by Argentine food imports?; and Ohio farmers and Humane Society strike a deal.

### Institute Research and Events


### Farm Policy Journal

The August edition of the *Farm Policy Journal* examines the challenges created by a reduction in the availability of agricultural inputs for farming in the future.
INSTITUTE ACTIVITIES

Out and about

Recently the Institute’s Executive Director, Mick Keogh, has spoken at:

• Australian Grains Industry Conference, Melbourne
• Charles Sturt University Orange Ag Club, Orange, NSW
• NSW Farmers’ Association Annual Conference, Sydney
• Our Farming Futures Conference (Victorian Department of Primary Industries), Mildura
• Potato Industry Conference, Geelong
• Rural and Regional Breakfast, Canberra
• Southern New England Landcare Forum, Walcha, NSW

In the news

The Occasional Paper: The Job Market in Agriculture in Australia, by Professor Jim Pratley and Mick Hay, released by the Australian Farm Institute in April 2010 featured in The Australian Financial Review article by Rachel Lebihan, ‘Farming graduate shortage worse than feared’ (12/04/2010), and also on Radio National, 2UE and 2SM radio.

The Institute’s Agriculture and Greenhouse Emissions Conference received substantial media coverage: South Australian Country Hour broadcast outside of the venue, interviewing many Conference speakers; ABC radio’s Bush Telegraph program interviewed Don Nicolson, Bob Young and Ben Keogh regarding the Conference; and Don Nicolson’s presentation was published on Scoop (www.scoop.nz), ‘Emissions trading – world famous in New Zealand’ (18/05/2010).

Mick Keogh was involved in a discussion of the documentary ‘Food Inc’ on ABC’s Bush Telegraph on Wednesday, 19/05/2010. He also provided comment to Lucy Knight’s Rural Press article, ‘The Greens, friends or foes?’ (28/05/2010). In relation to the Greens’ push, with the Greens arguing that farmers should be teaming up with them to form a new powerful lobby to drive action in areas like conservation, farm stewardship, Landcare, renewable energy and carbon sequestration.

The Institute’s recently released Research Report: Making Decisions About Environmental Water Allocations featured on: ABC’s Rural Report Canberra Region, by Sarina Locke (15/06/2010); Farm Online in Lucy Knight’s article ‘Water buy-up shortcomings’ (18/06/2010); and ABC’s National Interest program, ‘What to do with water bought back’ (18/06/2010).

Peter Mahony, the winner of the May Farm Policy Journal essay competition, was interviewed by Sarina Locke of NSW Country Hour (22/06/2010) regarding his winning entry published on the subject ‘If I were the Australian Minister for Agriculture...’

Call for papers – John Ralph Essay Competition

The November 2010 edition of the Farm Policy Journal will publish the winning entry and the best four other essays in the annual John Ralph Essay Competition. Each year the Australian Farm Institute will award a $2500 cash prize to the winner of the John Ralph Essay Competition. The topic will be announced in July each year, with entries closing in September – essays to be a maximum of 3000 words.

In 2010, the first year of the competition, the topic is: ‘The role of Australia’s primary industries in buffering the Australian economy from external economic shocks.’ Entries close Monday, 13 September 2010 (see back cover for further details).
The neglected economics of water policy

(continued from front page)

This lack of balance in decision-making processes, in conjunction with a paucity of long-term monitoring data about environmental and socioeconomic implications of water policy decisions, will ensure that water policy will remain a highly contentious and much debated issue for an extended period, creating great uncertainty and stress for those regions of Australia that have economies heavily dependent on irrigated agriculture.

The legislative framework for water policy decisions

The National Water Initiative, which was agreed between Australian state governments and the Australian Government in 2004, set in train a process whereby the Australian Government would assume legislative responsibility for the management of water resources in the Murray-Darling Basin, and this was given effect to by the passing of the Water Act 2007 by the Australian Parliament. It is under the requirements of this legislation that the Murray-Darling Basin Authority (MDBA) is now preparing a Basin Plan, which will dictate how much water will be available for irrigation in the Murray-Darling Basin in the future.

A close examination of the wording of the Water Management Act 2007 highlights the limitations the legislation imposes on matters that can be considered by the MDBA in preparing the Basin Plan, and these limitations have been confirmed in MDBA publication (MDBA 2010). In summary, the legislation specifies that there is no legislative requirement to consider economic or social outcomes in determining how much water should in future be made available to the environment, and therefore how much water will be available for irrigation.

Based on the provisions of the legislation, decisions about water availability must be made predominantly on the basis of the need to ensure there are no negative environmental impacts arising from the extraction of water in the basin. Section 4 of the Water Act 2007 includes the key definitions, with the most important definition being the environmentally sustainable level of take. That definition is as follows:

‘environmentally sustainable level of take’ for a water resource means the level at which water can be taken from that water resource which, if exceeded, would compromise:
(a) key environmental assets of the water resource; or
(b) key ecosystem functions of the water resource; or
(c) the productive base of the water resource; or
(d) key environmental outcomes for the water resource.

This provides little clarification about how decisions will be made about which environmental assets or outcomes are considered key, or what constitutes compromise, yet it is on the basis of this definition that the MDBA is required to prepare the Basin Plan.

The lack of clarity about how judgments should be made about what constitutes environmental compromise is reinforced by the recent ‘Sustainable Rivers Audit’ which was carried out to assess the condition of all the rivers in the Murray-Darling Basin (MDBA 2008). In explaining the methodology used in that assessment, the report’s authors noted:

Condition assessments for each Valley are related to a benchmark called Reference Condition. This estimates the status of a component (for example, the fish community) as it would be had there been no significant human intervention in the landscape.

While the report notes that ‘Reference Condition’ is not a target for management, any comparison against such a modelled reference point will inevitably produce a negative outcome, and will also be of little assistance in making judgments about how much environmental improvement is desirable, or deciding what should be the priority environmental elements targeted for improvement.

The period over which this audit was conducted (2004–2007) was a period of extreme drought in the Murray-Darling Basin, which inevitably had a negative impact on the rivers and their associated environment, just as it had a major negative impact on water users. The extent to which environmental conditions reflected the impact of the drought rather than over-extraction of water is unknown. This is an issue acknowledged by the authors of the report, which states:

A severe drought has prevailed over the Basin during the Audit period. It is too soon to say how much this has affected fish and macro-invertebrate communities. It has also limited the availability of sampling sites in some Valleys.

Having said that, the audit and the data it contains is a major advance on the information that was previously available, and it has also enabled the significant shortcomings in environmental monitoring data to be highlighted, and hopefully addressed in the future. The reality, however, is that it will take a number of similar audits over an extended period before there is a better understanding of the impact of natural and human factors on the rivers and their associated environment. Meanwhile, the MDBA
is required under the legislation to make immediate judgments about what constitutes sustainable levels of water extraction, and to incorporate those into the forthcoming Basin Plan.

**Economic and social implications of water policy decisions**

As noted, the legislation under which the MDBA is required to prepare the forthcoming Basin Plan does not explicitly require that the MDBA consider the social and economic implications in reaching any decisions about future water use. Despite this, there have been a number of reports prepared that provide some indications of the potential social and economic implications of forthcoming decisions.

A comprehensive review of relevant economic statistics and other data for the Murray-Darling Basin was published by the MDBA in 2009 (MDBA 2009). This report essentially provides some baseline data describing economic and social conditions in the basin over the period from 2000 to 2006, although it does not provide explicit information about the social and economic implications about changes in water availability.

That review identified that the gross value of irrigated agricultural production (GVIAP) in 2005–06 was approximately $5.52 billion, equal to 37% of the total value of agricultural production in the basin and 14% of national agricultural output. This was produced on 18,634 irrigation farms, which used 1.65 million hectares of land for irrigation (approximately 2% of the agricultural land used in the basin). These farms utilised approximately 7370 gigalitres (GL) of irrigation water, which was 83% of water use in the basin, and generated approximately $750 worth of output per megalitre of water used.

The volume of water used for irrigation in 2005–06 was almost 30% lower than the volume used in 2000–01, reflecting reduced water availability as a result of an extended drought. The report found that employment in agriculture, the largest source of employment in the basin outside the major urban centres, declined by 11.9% between 2001 and 2006, a change that undoubtedly reflected the reduced availability of water. Coinciding with reduced water availability for irrigation, there was a large decline in the production of irrigated annual crops such as cotton and rice, although horticultural production remained relatively constant.

Several research projects utilising this baseline data have been carried out to attempt to gain a greater understanding of the potential economic and social implications of changes in irrigation water availability in the Murray-Darling Basin.

ABARE (Hone et al. 2010) carried out economic modelling to assess the impact of the first stage of the Australian Government’s current water buyback program. This ABARE research was commissioned by the Australian Government Department of Environment, Water, Heritage and the Arts. Under the buyback program, the Australian Government has stated that it will spend $3.1 billion to buy back water entitlements from irrigators. The ABARE research modelled the implications of the first $1.5 billion worth of buybacks, estimated to result in approximately 630 GL per year (or 6% of surface water entitlements) being removed from irrigation.

Compared to annual agricultural output that would occur under a future CSIRO water availability scenario, the ABARE modelling projected that the reduction of 6% in irrigation water (as a consequence of the buyback) would reduce the average annual GVIAP in the basin by 2.4%, although in some regions the reduction was projected to be as high as 3.8%.

The biggest reductions were projected to occur in pasture and fodder production, and in the production of annual crops such as rice and cotton. The research also projected that the buybacks would increase water prices by 16.7%, which would have the impact of reducing the net value of irrigated agricultural production to a much greater degree than the projected impact on GVIAP.

The ABARE analysis utilised models that assumed water would be traded between different users, ‘migrating’ to higher value uses, and therefore the reduction in the value of production will be less than the reduction in water availability. The extent to which this assumption is correct is difficult to determine, although recent history suggests there is some truth to the assumption.

If water is not traded to higher-value production (as is likely to be the case over the short term) and there was assumed to be a linear association between water availability and annual GVIAP, a reduction of 630 GL in water for irrigation would reduce GVIAP by $472.5 million per annum, based on the $750/ML average agricultural output achieved in 2005–06. This would amount to an 8.6% reduction in annual GVIAP, significantly greater than the ABARE projection. It is probable that the

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The MDBA review identified that the gross value of irrigated agricultural production in 2005–06 was approximately $5.52 billion, equal to 37% of the total value of agricultural production in the basin and 14% of national agricultural output.
actual reduction in annual GVIAP is likely to be somewhere between the 2.4% projected by ABARE and the 8.6% projection arising under a no-water-trade assumption.

In considering possible flow-on effects of these changes on regional economies, the ABARE report noted:

Unfortunately, there is little quantitative data available that can provide a reliable guide to the likely flow-on effects of the buyback to regional communities.

While this research has provided a useful starting point in terms of developing some understanding of the economic implications of water policies, it should be noted that it was limited to the projected impacts of half the proposed buybacks, and also only considered the impacts of the buybacks in isolation, rather than the cumulative impacts of the buybacks and other changes that might be proposed in the Basin Plan which has yet to be released.

At the very least, it is reasonable to assume that the full $3.1 billion buyback project could be anticipated to reduce irrigation water availability by 12%, and reduce annual GVIAP by 4.8%, independent of any additional water cuts that may be proposed in the Basin Plan.

The so-called Wentworth Group of Concerned Scientists recently released the results of research that group carried out to analyse how much water the forthcoming Basin Plan should remove from irrigation, and what the economic implications of that would be (Wentworth Group of Concerned Scientists 2010).

The research first considered future water availability, and concluded that:

The best available science suggests that there is a substantial risk that a working river will not be in a healthy state when key system level attributes of the flow regime are reduced below two thirds of their natural level.

This conclusion seems to have been derived from a Murray-Darling Basin Commission Expert Panel report prepared in 2002, which unfortunately did not provide a great deal of scientific evidence in support of the conclusion.

Despite this, the Wentworth Group proposed that to meet this requirement, an additional 3200 GL of water needs to be removed from irrigators and allocated to the environment. This would represent an average 30% reduction in annual irrigation water availability in the basin, although the reductions proposed were not uniform across all regions. The greatest reductions were for the Murray and Murrumbidgee catchments, where it was proposed there would be 39% and 65% cuts in irrigation water availability respectively.

The Wentworth Group report then projected the potential economic impact of the removal of this amount of water from irrigation. A major assumption was that the water would be differentially removed from the least valuable irrigation activities, and as reported in the Executive Summary, the net result would be that in most catchments ‘the reduction in profits would be less than 3%’, although in the Murray and the Murrumbidgee catchments the reductions were projected to be 12% and 26% respectively.

The use of the 3% figure is highly disingenuous, because the Murray and Murrumbidgee regions collectively account for 58% of the historical surface water use for irrigation.

Only much later in the report is it acknowledged that the proposed 30% reduction in irrigation water availability was projected to result in a reduction in annual net returns from irrigation of 9.5% across the entire basin, and that in the Murray and Murrumbidgee regions, the reduction in annual net returns from irrigation would be 11.5% and 25.8% respectively.

There are a number of major limitations and uncertainties associated with this analysis. Firstly, it assumes that all the ‘low-value’ uses of water will be the activities that will cease in the event that less irrigation water is available. Exactly what these low value uses are is somewhat uncertain, as the analysis used 2000–01 data, at which time wine-grape production was highly profitable. There have been major changes in relative returns for different commodities over the decade since 2000–01, which was in many ways an abnormal year for agricultural commodity prices. For example, wine-grape prices that were in excess of $1000 per tonne in 2001 are now below $200 per tonne. This change dramatically alters the economics of water use for this purpose, and will therefore have a dramatic effect on the projected economic impact of reduced water availability.

The assumption that water will quickly move from low value to high value uses also ignores the complexity of multi-enterprise farms where, for example, irrigated fodder production may appear to generate low returns per megalitre of water, but this fodder may subsequently be used in dairy production on the farm to generate much higher returns.
If the results of the ABARE analysis are used to estimate the economic impact of the irrigation cuts proposed by the Wentworth Group, they would result in an annual reduction in GVIAP of 12%, or approximately $660 million per annum.

The assumption also ignores the limitations associated with permanent plantations which have a large investment in fixed irrigation assets and which can be quickly rendered unprofitable with reduced water availability, because they operate on high volumes but narrow profit margins. This could result in water moving from apparently higher value uses to lower value uses that involve less risk, rather than in the opposite direction.

The Wentworth Group report also interchangeably uses the terms ‘lost production’, ‘lost profitability’ or ‘reduced net returns’ when describing the economic impact of reduced irrigation water, but exactly what these terms mean is very unclear. Lost production is obviously a very different measure to lost profitability, and as the ABARE report discussed earlier indicates, the reduction in net profitability would be expected to be much greater in percentage terms than the reduction in lost (gross) production.

Unfortunately, the Wentworth Group report provides very limited details of the methodologies used in calculating the results reported, and as has already been noted, interchangeably uses different terminology to describe projected economic impacts. This makes it very difficult to analyse the validity of the assumptions used, and leaves open the impression that the ‘research’ is more focused on advocating extra water for the environment than it is on gaining a true understanding of likely economic and social impacts.

If the results of the ABARE analysis referred to earlier are used to estimate the economic impact of the irrigation cuts proposed by the Wentworth Group, they would result in an annual reduction in GVIAP of 12%, or approximately $660 million per annum. Alternatively, if this volume reduction in irrigation water is simply multiplied by the average gross value of production per megalitre ($750) the reduction in annual GVIAP would be $2.4 billion per annum, or 44% of the annual GVIAP for the basin. The correct result is probably somewhere between these two figures. This is substantially in excess of the impact projected by the Wentworth Group, especially when considering that the Wentworth Group projections appear to refer to percentage changes in net, rather than gross output. A reduction in the value of gross production of 10%, for example, could be anticipated to equate to a reduction in the value of net production of perhaps 30%, because of the high proportion of fixed costs associated with farm businesses.

An urgent need for additional economic research

The two research reports referred to above are currently the only analyses that have been carried out on the likely economic impacts of forthcoming water policy decisions, and as noted, the report produced by the Wentworth Group is of particularly limited value.

It seems extraordinary to consider that such major government policy decisions, involving the expenditure of tens of billions of dollars of public money and having potentially major implications for more than 3 million people living in or around the basin, are proceeding without detailed economic and social analysis of the implications.

It is difficult to envisage any other government undertaking that would proceed with such scant understanding of the implications. This highlights a major shortcoming in both the Australian Government legislative framework for water, but also in government processes more generally.

At the very least, the government should require that the MDBA make available a full socio-economic analysis of the implications of the forthcoming Basin Plan at the time of its release, so that the proposals contained in the plan can be subject to balanced analysis and discussion. Without such information, it is highly unlikely that a sustainable policy outcome will be achieved.

References


Strong agriculture sector productivity growth

With the recent global economic downturn and continued financial instability, policymakers are looking for new ways to stimulate and sustain growth. The current review of rural Research and Development Corporations (RDCs) by the Productivity Commission, presents an opportunity to revisit the productivity challenge in Australian agriculture.

In 2007, the Institute published a Research Report entitled Productivity Growth in Australian Agriculture: Trends, Sources, Performance. Key points of the report were that the rate of productivity growth appeared to be slowing, and research and development has been a consistent and significant source of agricultural productivity growth in Australia and internationally.

The Australian Government has initiated a review of Australian rural research and development corporation arrangements in Australia. The review is being conducted by the Productivity Commission, which has been asked to review the efficiency and effectiveness of RDCs in enhancing the competitiveness and productivity of Australia’s rural industries.

Comparisons of productivity growth rates between the rural sector and the rest of the Australian economy confirm that productivity growth rates in the rural sector have been the second highest in the Australian economy, with only the communications sector having a higher rate of productivity growth over the period from 1985 to 2006.

The ability of Australian rural industries to continue to generate substantial export revenue and to be a major source of wealth generation in regional Australia depends heavily on the continued international competitiveness of the sector. In the face of competition from developing nation agricultural exporters and challenging climate conditions, productivity growth has been a key factor in enabling the sector to remain competitive.

Productivity estimates may be influenced by a range of factors other than research-induced technical change, including changes in efficiency, scale, effects, seasonal changes, change in infrastructure, education, or communication and transport. While it is acknowledged that rural R&D is not the sole contributor to rural productivity growth, productivity growth in the rural sector in Australia has been higher than that observed for most other sectors, and considerably above the average observed for the entire economy.

This provides good evidence that the innovation system in the rural sector has been performing as well, if not better than, the systems in most other economic sectors in Australia.

In the 2007 Research Report, the relationship between investment in R&D and consequent productivity gains was analysed, recognising significant lags (in the order of 35 years or more) over which this process occurs. Despite this, peer-reviewed econometric analyses contained in the report generally found a significant positive relationship between investment and productivity growth.

A specific initiative has been initiated by the Council of Rural Research and Development Corporation Chairs to evaluate investment returns deriving from Australian research projects funded by rural RDCs. The first round of this analysis estimated an average return for each dollar invested of approximately $11, and the second round concluded that over a 25-year timescale, returns were $10.51 for every dollar invested. But what is the ideal level of investment in R&D to ensure continued productivity gains?

An estimate, from the 1950s to the present day, of public sector R&D expenditure indicates that total public sector expenditure on agricultural R&D in 2006–07 was $884 million (2007 dollars). Within the OECD, the average Gross Expenditure on R&D (GERD) ratio for 2006–07, which includes both government and business expenditure, was 2.26% and Australia ranked 10th highest with a GERD ratio of 2.01%. Leading nations include Sweden, 3.73%, Finland, 3.45%, Japan, 3.39% and USA, 2.62%.

For developed nations, the average gross expenditure on agricultural R&D (including private and government expenditure) was 5.16% expressed as a ratio of agricultural GDP, with the private sector accounting for 54.3% of total expenditure.

If private sector rural R&D investment is added to the public sector investment in Australia, it is likely gross national expenditure on agricultural R&D is about 3.7–4% of rural GDP, a level that is below the OECD average outlined above.

Both the analysis of Australian and international agricultural R&D investment intensity, and the rates of return to agricultural R&D investment intensity indicate that current agricultural R&D investment levels in Australia are lower than optimal. Given all the available evidence points to the strong relationship that exists between R&D levels over the long term and rates of productivity growth, this has the potential to reduce Australian agricultural competitiveness if current investment levels persist into the future.


A summary of some Australian and international farm policy developments

Kiwis feeling the ETS pinch

From 1 July New Zealanders will be paying higher electricity and fuel prices with the introduction of the Emissions Trading Scheme (ETS). Electricity bills are forecast to go up about 5%, while fuel is going to cost 3 cents more per litre, with the government estimating households will pay an extra NZ$5 per week.

New Zealand’s greenhouse gas emissions have risen about 23% since 1990. On 1 January 2015, the agriculture sector will face costs from their methane and nitrous oxide emissions under the ETS. However, agriculture sector participants in the scheme are required to begin monitoring their emissions before 2015. Participants can voluntarily report their emissions from 1 January 2011, but will be required to report their emissions from 1 January 2012.

Participants in the scheme will initially be meat and dairy processors, fertiliser manufacturers and importers, egg producers and live animal exporters. The government has the flexibility to move the point of obligation to the farm level in the future.

In other news from across the ditch, the 18th International Congress of the International Farm Management Association will be held in Christchurch from 20 to 25 March 2011. The event is being hosted by the New Zealand Institute of Primary Industry Management, who are currently calling for papers.

Forty per cent rise in food prices predicted

Jointly prepared by the Organisation for Economic Cooperation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO), the Agricultural Outlook 2010–2019 suggests growing demand from emerging markets and biofuel production are expected to drive up farm commodity prices.

Average wheat and coarse grain prices are projected to be nearly 15–40% higher in real terms relative to 1997–2006, while for vegetable oils real prices are expected to be more than 40% higher. World sugar prices to 2019 will also be above the average of the previous decade but well below the 29-year highs experienced at the end of 2009.

For livestock products, average meat prices in real terms, other than for pigmeat, are expected to surpass the 1997–2006 average over the coming decade initially due to lower supplies, higher feed costs and rising demand. Economic recovery is expected to strengthen consumption of meats relative to cereals, particularly in developing countries, with most growth favouring poultry and pigmeat relative to beef. Average dairy prices in real terms are expected to be 16–45% higher in 2010–19 relative to 1997–2006.

The report states global agricultural production is anticipated to grow more slowly in the next decade than in the past one, but in the absence of unexpected shocks, growth remains on track with estimated longer term requirements of a 70% increase in global food production by 2050.

Approval system for GM crops to be overhauled

Proposals have been developed by the European Commission to introduce greater flexibility into the approval system for genetically modified (GM) crops, allowing European Union member states to decide whether or not to grow them.

At present, once an authorisation licence has been granted, it applies to all 27 member states, with individual governments only able to restrict their cultivation under strict conditions. With the proposed changes, instead of only being able to define ‘exclusion areas’ around conventional and organic crops where GM crops can’t be grown, member states will be able to extend these areas to the extent that GM cultivation will be not be possible in their territories.

Only two GM crop varieties have been approved for cultivation in the EU (MON810, Amflora potatoes) in comparison with 150 that have received global approval. Commercial GM planting in Europe last year covered less than 100,000 hectares, mostly in Spain, compared to 134 million hectares globally. The proposed legislative change would have to be agreed by a qualified majority of EU governments and the
Concern over import measures could undermine renewed talks on a free-trade agreement between the EU and the Mercosur group of South American countries.

European Parliament under the EU’s system of weighted voting.

EU carbon tax proposal delayed

On 23 June at a meeting of the 27 European Union commissioners a tax of €20 per tonne of CO₂ contained in fuels was put forward by Taxation and Customs Union Commissioner Algirdas Šemeta. The issue of a European carbon tax has been delayed indefinitely after Šemeta was asked to investigate the economic impact of the tax. Without a specific deadline being set for the impact assessment on the tax, the issue has effectively been put on standby until the effects of the financial crisis subside.

Climate Action Commissioner Connie Hedegaard has previously thrown her weight behind an EU carbon tax, arguing that it should be one of the tools used to encourage people to use less energy. The agriculture sector should fall under the proposed tax because it currently isn’t included in the EU emissions trading scheme, and Commissioner Hedegaard said that could be an incentive for farmers to explore possibilities such as biogas.

2012 Farm Bill

The process of writing the 2012 United States Farm Bill is underway, with the US House of Representatives Agriculture Committee holding hearings across the country to consider new ideas regarding federal food and farm policy. Starting in April 2010, the process of overhauling current farm programs for the next Farm Bill is lengthy; expected to be completed in 2012. In 2008, The US House of Representatives and the United States Senate overrode the President’s veto for 14 of the 15 titles of the Food, Conservation and Energy Act of 2008, ensuring that all parts of the 2008 Farm Bill were enacted into law. An estimated two-thirds of the existing US$289 billion farm law, which expires at the end of September 2012, goes to nutrition programs. It also includes farm support programs, land stewardship, biofuel development and specialty crop programs.

In other news from the US, in June 2010 draft legislation to allow the direct sale of commodities to Cuba has passed through the House of Representatives Agriculture Committee. The vote on HR 4645, the Travel Restriction Reform and Export Enhancement Act is only a first step toward Congressional approval of the changes, as it will need to go to another Committee before being considered by the House of Representatives.

Mercosur trade talks scuttled by Argentine food imports?

European Union (EU) countries including France, Germany and Italy have expressed concern over restrictions on food imports by Argentina. At a meeting of the Council for Trade in Goods at the World Trade Organisation, the EU said there have been long delays in the granting of certificates to enable the release of EU imports from Argentina’s ports.

Concern over import measures could undermine renewed talks on a free-trade agreement between the EU and the Mercosur group of South American countries. EU Agriculture Commissioner Dacian Ciolos said the restrictions were applied to nearly all agrifood products the EU exports to Argentina, warning that if the measures persist the negotiations with Mercosur will be affected.

Argentina has said it will let the facts speak for themselves, during the first five months of 2010 imports from the EU, including food products, increased substantially.

Ohio farmers and Humane Society strike a deal

Agricultural groups in Ohio have made a deal with The Humane Society of the United States (HSUS) including restrictions on agricultural production in that state. In return HSUS has agreed to drop their ballot initiative for 2010 which sought to institute these restrictions through constitutional amendment. Groups representing Ohio corn, soybean, livestock and poultry associations and the Ohio Farm Bureau Federation supported the agreement, in an attempt to prevent the Humane Society from pushing for tougher measures which farmers feared would drive them out of business.

The agreement follows the creation of the Ohio Livestock Care Standards Board (the Board) in November 2009, the purpose of which is to create state standards for the care and wellbeing of livestock. The agreement includes:

- Joint funding by the agriculture community and HSUS of independent research projects on best practices and welfare standards.
- Shared support for the Board to take action on downer cattle and euthanasia of farm animal provisions consistent with HSUS’s proposed referendum.
- A 15-year transition plan to convert individual stall housing to group housing for gestating sows.

Ohio Governor Ted Strickland said, ‘Instead of expending tens of millions of dollars and unproductive energy fighting an acrimonious campaign through the fall, both sides will be able to continue investing in our agricultural base and taking care of animals.’
Managing environmental water: report released

Major changes are underway in the management of water in Australia, with one of the most significant being the ownership of water entitlements by the environment. When announced water buyback programs are completed and promised water infrastructure investments are implemented, the environment will be the sole largest holder of water entitlements in Australia. That water will be used to restore or improve ecological processes and environmental assets associated with Australia’s major inland rivers.

How that water will be managed; who will be responsible for making decisions about it; how the general community will be able to monitor how well that water is being used; and who will decide whether the environment is receiving sufficient water, are all questions that are yet to be answered.

The recently released AFI Research Report, Making Decisions About Environmental Water Allocations was initiated to advance discussion on these questions, and to identify some preferred options for the future management of environmental water in Australia. Given that the Australian public, in future, will be the owners of water assets valued in excess of $3 billion, it is important to ensure these assets are managed in a way that maximises the return from them and at the same time enables irrigated agriculture to continue to make a large contribution to national economic output.

AFI commissioned the following policy experts to answer some of the questions posed above, and to propose a framework for the future management of environmental water.

• Professor Richard H. Norris, Director of the Institute for Applied Ecology, University of Canberra
• Professor Jeff Bennett, Director of the Environmental Economics Research Hub, Crawford School, Australian National University
• Professor Mike Young, Executive Director of the Environment Institute, University of Adelaide
• Professor Richard T. Kingsford, Director of the Australian Wetlands and Rivers Centre, School of Biological, Earth and Environmental Sciences, University of NSW

The aim of this Research Report was to utilise the knowledge of experts, who have extensive experience in water policy issues, to develop further thinking on how decisions about allocating water to the environment should be made. This is important not only to ensure environmental water is used effectively, but also because the same decision-making framework will be used to determine the quantity of water available for irrigated agriculture.

Making Decisions About Environmental Water Allocations is now available to purchase online. Institute Members and complimentary subscribers receive a copy of the report for free; non-members can purchase copies for $66.

Annual Agriculture Roundtable Conference

The Australian Farm Institute’s Agriculture Roundtable Conference is being held on Wednesday, 10 and Thursday, 11 November 2010. This annual event brings together leaders in Australian agriculture, providing the opportunity to debate the strategic issues shaping the sector.

Each year, conference sessions are structured around a number of themes, and this year there will be a ‘Great Debate’ on the topic of water policy development in Australia. This debate will feature an Affirmative and a Negative team, each with two speakers. All speakers will have five minutes to state their position before the topic is opened to questions from the floor and the master of ceremonies. The statement for debate is That there is too much focus on the environment in water planning decisions.

Other potential topics to be discussed include:

• Science and advocacy – a blurred line?
• Was the Kyoto Protocol a raw deal for farmers?
• Old news or a new era for corporate investment in agriculture?

Starting 6.30 pm on Wednesday, 10 November for the Conference Gala Dinner, the event will be held at the Amora Hotel Jamison, 11 Jamison Street Sydney. Full Conference attendance, including the Gala Dinner, is only $950 (excl. GST). Put a note in your diary today to attend the Agriculture Roundtable Conference and get involved in conversation with the leaders of agriculture.

Register at www.farminstitute.org.au or to find out more call Tracey Bligh on (02) 9690 1388 or email her at info@farminstitute.org.au
Farming in the future with less resources

The August 2010, *Farm Policy Journal* examines the challenges created by a reduction in the availability of agricultural inputs for farming in the future. Is there a need for a second green revolution to address these challenges? Current production systems rely on high fertiliser and pesticide inputs, and water use efficiency needs to be improved quickly enough to maintain or increase output with less water. The Journal will explore how agriculture can respond to increased demand, in an environment where land, water, energy, fertilisers and labour are less readily available and more expensive.

Agriculture is projected to face constraints associated with climate change as well as higher production costs. ‘High-input’ agricultural systems will come under pressure due to both input cost increases and consumer demand for lower-impact agricultural practices. Articles in the August 2010, *Farm Policy Journal* will discuss how agriculture can respond to these challenges.

**Dr Dana Cordell** is Research Principal at the Institute for Sustainable Futures, University of Technology, Sydney (UTS). She co-founded the Global Phosphorus Research Initiative in 2008 with colleagues in Sweden and Australia. Dana organised and co-hosted a high-level national phosphorus workshop, bringing together key Australian stakeholders with a connection to phosphorus in the food chain to address sustainability implications of global phosphorus scarcity and vision a preferred future. Dana is currently a core member of an international consortium of researchers working on the Sustainable Use of Phosphorus project for the EU DG Environment.

**David Hallam** is Officer-in-Charge of the Trade and Markets Division at the United Nations Food and Agriculture Organisation in Rome where he leads work on trade and development issues and food and agricultural trade policy. He has recently completed a major study on the US 2007/2008 food price hike and is now leading FAO’s work on international investment in agriculture. Before moving to FAO he taught Agricultural Economics in the University of Reading and was also Director of the University’s Centre for Agricultural Strategy. David has consulted for the OECD, World Bank, governments and the private sector on international food markets and policy.

**Amin W Mugera** is an Assistant Professor of Agricultural Economics and Agribusiness at the School of Agricultural and Resource Economics, (SARE) and Rural Economy, Policy and Development Program Leader at the Institute of Agriculture, the University of Western Australia. Amin’s research interests are in agribusiness, production economics, farm management, and demand and price analysis.

**David Hallam** is Officer-in-Charge of the Trade and Markets Division at the United Nations Food and Agriculture Organisation in Rome where he leads work on trade and development issues and food and agricultural trade policy. He has recently completed a major study on the US 2007/2008 food price hike and is now leading FAO’s work on international investment in agriculture. Before moving to FAO he taught Agricultural Economics in the University of Reading and was also Director of the University’s Centre for Agricultural Strategy. David has consulted for the OECD, World Bank, governments and the private sector on international food markets and policy.

**Dr Brad Ridoutt** is a Principal Research Scientist with CSIRO’s Sustainable Agriculture National Research Flagship. His research involves the application of life cycle assessment in the food and agriculture sectors to assist businesses and address strategic issues relating to climate change, global water scarcity and food security. Brad is a leader in the field of product water footprinting and is currently engaged in a range of international initiatives aimed at developing and harmonising calculation methods.

**Danielle Vinette** is Executive Director of the Canadian Agricultural Human Resource Council (CAHRC). The CAHRC works to generate greater awareness amongst the agriculture industries, governments, and education institutions of human resource management issues and best practices. Prior to this she spent three years with the Inter-American Institute for Co-operation in Agriculture, an international agriculture development organisation based in Costa Rica. She also served from 2000–2002 as the Director of the XII Inter-American Conference of Ministers of Labour Secretariat and Director of the Summit of the Americas Secretariat.

**Professor Stuart White** is the Director of the Institute for Sustainable Futures at the University of Technology, Sydney and leads a team of researchers across a range of aspects of ‘creating change towards sustainable futures’. His own research has focused on the future of resources use, including technical, economic and policy means to reduce the inefficiency of resource use. He is widely published in many areas of sustainability. Stuart is a founding member of the Global Phosphorus Research Initiative, and has had a lifelong interest in the use of phosphorus in agriculture, starting with his early years growing up on a sheep and cropping farm in Western Australia.

John Ralph Essay Competition
– $2500 First Prize

The Australian Farm Institute is launching an essay competition, with a cash prize of $2500 for the winning entry, to recognise the contribution of Mr. John Ralph to the Institute. John was Chairman of the Institute from its founding in 2003 until his recent retirement, and has played a major part in the Institute’s development. The John Ralph essay competition will be held annually.

In 2010, the first year of the prize, the topic is:

**The role of Australia’s primary industries in buffering the Australian economy from external economic shocks.**

The essay competition is open to anyone, and entries should be a maximum of 3000 words in length. The winning essay and the best four other essays will be published in the November issue of the *Farm Policy Journal*.

Entries will be judged by John Ralph, the AFI Executive Director and the Chair of the Institute’s Research Advisory Committee.

Entries close Monday, 13 September 2010.

For more information and to register go to [www.farminstitute.org.au/news-and-events/JohnRalphEssayCompetition](http://www.farminstitute.org.au/news-and-events/JohnRalphEssayCompetition), or contact the Institute on (02) 9690 1388 or info@farminstitute.org.au

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- Essential Services in Urban and Regional Australia – a Quantitative Comparison
- FarmGAS Calculator: *Final Report and Case Studies* (electronic copy available for free download)
- Conference Proceedings: *Agriculture, Greenhouse and Emissions Trading Conference 2009*
- The Australian Carbon Pollution Reduction Scheme: *An Introduction for Farmers and Agribusiness*
- Some Impacts on Agriculture of an Australian Emissions Trading Scheme
- Value in Value Chains: *Collaborative Business Models and Farm Accreditation Systems Examined*
- Preliminary Modelling of the Farm-Level Impacts of the Australian Greenhouse Emissions Trading Scheme
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