



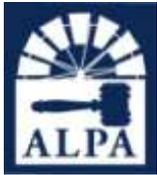
## **National Farmers' Federation**

### **Submission to the Review of the Australian Centre for International Agricultural Research (ACIAR)**

30 November 2012

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## NFF Member Organisations



## **Introduction**

It is generally agreed that world population will continue to grow, driving demand for arable land and water. This will bring pressure to bear on Australia's natural resources and the environment but may also change the way these resources are valued and used. The world population is projected to expand to over 9 billion by 2050, an increase of over 50 per cent. At present it is estimated that Australian farmers feed about 60 million people each day, with 40 million of them overseas in our export markets<sup>1</sup>. Whilst there are many uncertainties in global trends affecting Australia's future, we can be certain that there will be more mouths to feed and an increased demand for food and fibre to match. Over recent years the mismatch between demand and supply of food has been witnessed in famines, civil unrest and even high prices at Australian checkouts for some commodities. It is appropriate for Australia to seek to understand these trends and develop strategies to address it.

The National Farmers' Federation (NFF) welcomes the opportunity to provide comment on the appropriateness, effectiveness and efficiency of ACIAR and make recommendations for improvements. The comments below focus on the need for ACIAR's work program to effectively link to Australia's domestic agricultural R&D system, providing dual benefits for both developing nations and Australian primary producers.

## **A worthy investment**

Food security concerns are at the forefront of policy deliberations for many nations around the globe, with the global food crisis continuing to impact on world markets and affecting the livelihoods of millions of people, particularly in developing nations. The Australian Government's National Food Plan Green Paper released this year, highlighted that while food production grew by 179% from 1961 and 2008, in comparison to a 117% increase in world population, about one billion people around the world still suffer chronic hunger and a further one billion are 'food insecure'. The reasons for this are complex but include inefficiency and waste, inequality in food purchasing power, political instability, corruption and war.

The NFF and its members support the Australian Government in contributing to global food security and addressing the developed world's collective moral obligation to help alleviate the hunger of billions of people. An approach aimed at improving sustainable agricultural production in developing countries, is consistent with World Bank claims that agricultural and rural development can be up to four times as effective in increasing incomes and reducing poverty as development in other sectors in many developing countries. However, consistent with the expenditure of all public funds, it is prudent that the efficiency and effectiveness of the operations of ACIAR is regularly reviewed and relevant changes made.

*The NFF supports the work undertaken by ACIAR, and welcomes the current review to improve the appropriateness, effectiveness and efficiency of their operations.*

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<sup>1</sup>PMSEIC (2010). *Australia and Food Security in a Changing World*. The Prime Minister's Science, Engineering and Innovation Council, Canberra

## **Impacts of Australia's R&D are felt globally**

The majority of food, particularly in developing countries, is consumed where it is produced. The adaptation of new technology, particularly some of Australian agriculture's low input farming systems, can assist in ensuring that developing economies can have access to affordable and safe food. Australian agriculture has an enviable record of productivity improvement, built on the back of innovation from research and development and the need to improve production efficiency. These lessons translate well to agriculture in other countries, and provide an opportunity to offset the growing demand for food in these developing countries. As an example, Australia's 'precision farming' technologies retain crop residue and place nutrients and water to match plant requirements. This translates into the smallholder 'conservation farming' systems that also work well in Asia increasing the returns for rural producers and reducing the degradation of natural resources.

The skills and knowledge Australia contributes to agricultural development partnerships is built on the domestic investment into agricultural research, development and extension (RD&E). This RD&E is based in a cooperative approach utilising funding from both industry and government. For these benefits to continue, there are a number of constraints that need to be addressed as a matter of priority: the total investment in Australian agricultural R&D has not grown for about 30 years; has declined in research intensity (R&D expenditure as a proportion of output value generated); and has more than halved as a share of total public research expenditure. NFF is of the view that government must commit to continued matching contributions, to drive further productivity in Australia's agricultural sector.

Eroding funding for agricultural R&D reduces Australia's capability to contribute to global food production, reduces Australia's national science capacity and exacerbates the global food security problems of tomorrow. Reductions in domestic agricultural R&D are out-of-step with global sentiment, and with funding for Australia's international aid efforts, which recognises the need to increase food production.

The NFF also believes that ACIAR may also play a role in attracting philanthropic investment into agricultural R&D within Australia, for the purpose of delivering learning's to developing countries. The NFF understands that there are models of this internationally and it could be a potential avenue for ACIAR to explore.

The skills, knowledge and experience drawn upon by ACIAR have been developed by agricultural scientists working with Australian industries through domestic agricultural research programs supported by the Rural Research and Development Corporations, Cooperative Research Centres, CSIRO and Universities. Without a strong domestic research and development effort to support innovation in Australian agriculture and the development of agricultural scientists, Australia would not be able to: improve the productivity and sustainability of production; adapt technologies and knowledge developed internationally to domestic farming systems; or support Australia's continued contribution to agricultural production in developing countries.

Of direct relevance for ACIAR's forward work program is the experience and knowledge of the human talent drawn upon in the Australian aid effort to encourage rural development. This availability of human capital was developed through Australia's investment in skills and education to underpin domestic agricultural production. It is crucial that the investment in skills and expertise base in Australian agriculture is continued. A decrease in domestic investment in both education and agricultural R&D will surely have flowon implications for the work undertaken by ACIAR. NFF is of the view that this should be a critical consideration into the future of agricultural R&D investment.

The NFF believes that Australia has an enormous opportunity to expand the base of domestic research funding for work on agricultural productivity. This expanded funding base needs to include both increased public investment and better engagement with Australian and international agribusiness to promote private investment in R&D. Through an increased investment, Australian research can support farmers, allow Australians to take up new knowledge and innovations as they are developed internationally; and at the same time, provide roadtested technologies that contribute to our international food security obligations.

*It would be appropriate for the review of ACIAR to acknowledge these matters and support efforts to increase domestic agricultural R&D.*

### **The challenge of maximising dual benefits**

While the NFF supports ongoing investment in improving sustainable agricultural production in developing countries, the challenge for the Australian Government and agricultural community is to maximise opportunities and realise dual benefits' for both developing countries and Australian primary producers. ACIAR reports that it brings benefits to Australian agriculture, but the NFF believes that the benefits could be improved if this work was better targeted and aligned with Australia's priority issues.

The NFF has continued to raise concerns at the increased investment in research to support rural development as part of Australia's aid effort without sufficient consideration as to how this links with our domestic RD&E effort. Going forward, it will be important that the work of ACIAR is directly linked to domestic agricultural R&D priorities and outcomes, and that the choice of countries which Australia partners with is made on an informed basis.

There is potentially an increased range of spin off benefits to Australian primary producers from the work of ACIAR. NFF believes this opportunity could be realised through closer and more cooperative links with the Australian agricultural sectors. Building relationships directly between developing countries, Australian primary producers and RD&E experts would provide additional and valuable experience. In addition, it would also provide problem-solving skill capacity and would be useful in encouraging fresh perspectives and approaches to home-grown problems.

Areas of focus that may provide dual benefits on skills and knowledge transfer include:

- Effective farming practice and risk management under seasonal and climatic variability, including recovery from natural disasters
- Preservation of soil fertility and nutrients

- Development and adoption of new plant varieties/technologies for tropical and arid/semi arid regions
- Sustainably integrating agriculture with the natural environment
- Improving fertiliser, energy and water use efficiency
- Reduction in food wastage during harvest, marketing and transportation
- Development of transparent and competitive commodity markets
- Agricultural policy development and governance arrangements.

Funding of such programs also provides for the development of international networks, improved communication and wider knowledge exchange. Such linkages can also prove useful for facilitating future trade agreements into markets of value to domestic food producers, and access to a wider range of genetic seed stock.

*ACIAR needs to more appropriately link to domestic agricultural R&D systems, in addition to international aid goals, to realise dualbenefits' for both developing countries and Australian primary producers.*

### **The skills and labour challenges**

The Australian Government's recent National Food Plan Green Paper highlighted ACIAR's work, showing a high return on investment through improving sustainable agricultural production in developing countries. The Green Paper reports, with a total expenditure of \$234 million under 90 ACIAR projects delivering \$11.4 billion of benefits to developing countries and importantly \$1.2 billion to Australia. This positive return may face challenges in the near future from limited access to the skills and labour required to undertake the work – a challenge shared by the Australian agricultural sector.

There are both positive and negative impacts felt domestically from Australia's investment in international aid. On the positive side, overseas students partly subsidised to study agriculture within Australia add to the critical mass required to continue agriculture programs that also include domestic students, and these overseas students also contribute to local communities and the broader economy while there are studying in Australia.

However, a significant challenge associated with this issue is the emerging human resource limitations within Australian agriculture. This covers the entire spectrum of labour requirements, from primary producer succession, through to RD&E staffing. These challenges can become exacerbated as people who otherwise may be working in science based roles within Australian agriculture, may be attracted to international research positions. There will most likely be a flow of skilled staff back into Australia from these positions. However current numbers of entrants into the agricultural workforce, including those undertaking tertiary education, will not be enough to meet the future needs of both markets and the number of entrants will need to be increased for the ongoing success of each sector.

In the 2012 Rural Research and Development Policy Statement, the Australian Government acknowledged that as a result of the government's 2011 policy statement, *An Effective Aid Program for Australia: Making a real difference—Delivering real results*,

there will also be increased focus on agricultural research for international development aid, placing further demand on Australian expertise as more opportunities for overseas research become available. The pathway suggested by the government for domestic rural R&D agencies and universities to cooperate with ACIAR to establish additional overseas based postgraduate scholarships and postdoctoral fellowships, was welcomed by the NFF. The NFF agrees that focusing on agricultural research projects that benefit both the developing countries and Australia, is a step in the right direction, but more is required.

A concerted effort to engage with Australian society on the importance of agriculture and food production will assist in ensuring that agriculture is seen as progressive and dynamic industry attracting the brightest and best from Australia and abroad. A collaborative and cooperative strategy from government, including ACIAR, that demonstrate career prospects and opportunities to make real contributions to global problems, will deliver the additional personnel needed to address these shared labour issues.

Access to labour and skills remains a priority for the NFF and a significant challenge for the Australian agricultural industries. Access to skills and labour has a significant bearing on the productivity of the sector, but also impacts on the potential for innovation in the sector. Agriculture holds the dubious title of being the most ‘mature occupation’ in the nation. By 2018 over 102,000 or 33.4 per cent of the existing Agriculture, Forestry and Fishing workforce is set to be 65 years or over. Over 56 per cent will be aged over 55 years. It is a trend undermining some of industry’s most critical occupations: half of our agricultural scientists are nearing retirement, combined with relatively poor uptake of VET (vocational education and training) and tertiary courses across agriculture. The NFF is of the opinion that proactive solutions are required to counteract the workforce declines facing the agriculture industry. In the longer term the retirement of farmers from the industry as well as professionals in roles which support the agricultural industries is a significant concern for the industry, and strategies to address these shortages need long term support.

Limited surveys and anecdotal evidence indicate that there has been a decline in the visibility of the agricultural industries, particularly among urban Australia. A challenge for industry is to improve the profile of the sector and awareness of the opportunities that it provides. Engaging in the education system through school based programs such as the Primary Industries Education Foundation (PIEF) and the Primary Industries Centre for Science Education (PICSE) to improve ‘agricultural literacy’ provides a mechanism to encourage young Australians to consider a career in agriculture, but also to improve the awareness and understanding in the broader Australian community on agricultural and rural issues. It is important that there is a long term commitment to school based programs to ensure these programs bear fruit.

To directly tackle these issues, the NFF has taken a lead role and facilitated the development of the National Agribusiness Education, Skills and Labour Taskforce (NEST) – an industry led and developed initiative, representing all aspects of the agribusiness sector including education providers, training organisations and industry peak bodies involved in increasing the awareness, interest and participation aspects of the industry.

The priorities of NEST are:

- Identify issues critical to the success of the agriculture, education, skills and workforce sector;
- Work cooperatively towards developing and acting upon solutions to address these issues;
- Foster greater understanding and cooperation between all constituents within this part of the sector; and
- Act as the forum tasked with taking agreed solutions/actions to key decision-makers on behalf of the sector.

It is only through a concerted effort that the Australian farming sector, and related industries such as international agricultural R&D, will be able to attract and retain the workforce required to meet future needs.

*ACIAR needs to consider how to work with agriculture, science and education industries to attract more workers to the agricultural science field, rather than limit the abilities of domestic agriculture by drawing from the existing talent pool.*

### **Building relationships**

Closely relevant to the work by ACIAR, it is important that the Australian agricultural sector gains a more in-depth understanding about the issues facing agriculture internationally, including in growing markets such as the Asian region; and the reasons why sensitivities regarding trade with Australian agriculture exist. To maximise benefits from trade, Australian farmers need to have empathy with international farm sectors, as our ability to effectively influence these factors will be limited until these issues are fully understood.

Similarly, the role that Australian agriculture plays on the international market as an exporter of food and fibre products is often misscommunicated. There is a view from some that a trade relationship with Australia will spell the end of agriculture in certain countries. This is far from being the case. The NFF believes improved cultural awareness and a greater understanding of foreign languages among the Australian agricultural sector would lead to improved mutually beneficial trade relationships. In addition more communication of the constraints that Australian agricultures faces and the limited capacity of production would help alleviate any fears in this regard.

The reality is that Australia is a strong but not a dominant player on global agricultural markets, accounting for around one per cent of total global trade in agricultural products. It must be remembered that not all of Australia's agricultural production is exported, with the domestic market absorbing a significant share. In relation to our agricultural exports we service over 100 markets in total. Facts such as these are often ignored and the NFF and its members therefore dedicate significant effort to ensuring that these messages are communicated to overseas farmers and farm groups, government, media and opinion leaders.

It is vital that the Australian agricultural groups continue to work closely with the Australian Government on these relationship building efforts. The NFF hopes that the importance of this role by Government is well recognised and continues to be invested in.

*ACIAR needs to consider its role in building relationships between the Australian agriculture sector and international farmers.*

### **Communicating a job well done**

Finally, in these global efforts to promote food security, there is a need for government to clearly communicate and demonstrate to domestic food producers and the broader public, the benefits of the often significant investment of tax-payers funds into overseas countries and their food production and trading systems. This should be aimed at achieving results that assist in building ongoing public support base for this expenditure, particularly given tightening budgets and increasing health spending associated with an aging population into the future.

*ACIAR needs to effectively communicate the benefits it delivers for developing countries and the Australian agriculture sector.*

### **Conclusion**

In summary, the NFF believes that ACIAR can continue to deliver effective and efficient outcomes for developing countries and Australian primary producers, but this will require a number of commitments which include: reinvestment in domestic agricultural RD&E; closer links between the work undertaken by ACIAR and research undertaken with the Australian agricultural RD&E system; and a more effective communications program to demonstrate the benefits