



**Hon Tim Mulherin MP**  
Member for Mackay



**Queensland  
Government**

Reference: 08/17116

**Minister for Primary Industries  
and Fisheries**

**28 AUG 2008**

Mr John Carter  
Committee Secretary  
Senate Education, Employment and Workplace Relations Committee  
Department of the Senate  
PO Box 6100  
Parliament House  
**Canberra ACT 2600**

Dear Mr Carter

Please find enclosed the Queensland Department of Primary Industries and Fisheries' submission to the Senate Standing Committee's *Inquiry into the Effects of Climate Change on Training and Employment Needs*.

The effects of climate change on training and employment needs are significant issues for Queensland's primary industries sector. As such, I look forward to hearing the findings of this inquiry.

If you require any further information regarding this matter, please do not hesitate to contact Mr Bruce Turner, Executive Director Strategic Policy of the Department of Primary Industries and Fisheries on telephone 07 3239 3180 or email [bruce.turner@dpi.qld.gov.au](mailto:bruce.turner@dpi.qld.gov.au).

Yours sincerely

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**QUEENSLAND  
DEPARTMENT OF PRIMARY  
INDUSTRIES & FISHERIES**

**SUBMISSION  
TO**

**SENATE STANDING COMMITTEE  
EDUCATION, EMPLOYMENT &  
WORKPLACE RELATIONS**

*Inquiry into the Effects of Climate Change on Training  
and Employment Needs*

## INTRODUCTION

Primary producers are currently dealing with an unprecedented number of challenges. They must adapt to increased global competitiveness, higher input costs, increasing biosecurity threats, competing labour markets and evolving technology.

On top of those challenges, producers must respond and adapt to the significant affects of climate change which could include:

- livestock heat stress arising from increased temperatures which is expected to constrain production
- imposition of targets for renewable energy that will increase biofuel crop production and could reduce the availability of affordable feedstock for intensive livestock
- increased temperature, reduced water supply and elevated CO<sub>2</sub> will interplay to exacerbate known risks to production and may affect the suitability of sites and regions for horticulture.
- elevated CO<sub>2</sub> and heat stress is expected to reduce wheat quality especially protein levels
- the changing climate will increase susceptibility of the production environment to new and increased agricultural pest, disease and weed incursions.
- the Carbon Pollution Reduction Scheme will increase the cost of energy intensive inputs including fertilisers, agricultural chemicals and irrigation water
- transport costs will rise which will not only increase the cost of all goods in regional areas, but also increase the cost of accessing markets.

In light of these challenges it is important that the primary industries sector has access to an appropriately skilled labour force to ensure that it is in a position to respond and adapt to new opportunities that will result from Climate Change. Ensuring Australia's food and fibre production is secure into the future, will therefore require an appropriate response to the issues of *skills and training* and the *attraction and retention of labour*.

## ISSUES

The *skills and training* and the *attraction and retention of labour* issues were recently highlighted in a National Farmers Federation presentation entitled 'An industry perspective of workforce, skills and training issues' where industry noted that:

- there are currently labour shortages within the sector with 100,000 people needed, and 80,000 needing skills
- any approach to address these issues needs to be holistic and cover education and training, workplace relations, human resource management skills, employment participation and regional development and population strategy.
- there has been an ongoing decline in graduate entry into agricultural science and a down turn in post graduate entry.

### *Skills and training*

If the primary industries sector is to remain competitive and productive in the face of the effects of climate change then the sector must have the relevant skills and capacity to prepare and adapt in the form of an appropriately skilled and educated workforce.

Industry has raised with the Department a number of issues and suggestions for addressing this including:

- the delivery of general workforce development and a risk-based approach to training, with a focus on skills development in climate variability preparedness
- the current training delivery mechanisms do not match industry needs and that a more flexible and responsive approach is required
- the available vocational education and training qualifications do not have a focus on climate change, or resource and risk management
- business and farming groups are doing their own training e.g. through private providers or consultants to develop skills required and are avoiding structured learning
- the need for agriculture to move towards a higher level of skills in order to compete with the job attractiveness of other industry groups and utilise advancement in technology and innovation.

It has also been noted that climatic trends can affect the take up of education and training. An example of this is the prolonged drought, which has adversely affected producers, with many experiencing financial difficulty and hardship. Producers' focus has been on their immediate needs such as minimising financial loss and business survival, not training or education.

### *Labour demands*

The primary industries sector is struggling to attract and retain labour, due largely to competition from the resources sector. Labour shortages, particularly shortages of skilled labour, are a major impediment to productivity. This shortage will affect the sector's ability to prepare for and adapt to the effects of climate change.

Labour shortages are strongly linked to difficulties in attracting staff to the industry. Industry has raised concerns about staff recruitment and retention levels within the industry, particularly in the face of competing industries offering significantly greater financial rewards. A prime concern for young entrants (e.g. graduates or school leavers) is the lack of career progression opportunities and opportunities for diversification within job placements. There is also little incentive for mature age workers who have left the sector to return while climate and market conditions make profits and productivity growth uncertain.

Universities are also concerned in regard to the ongoing viability of their agriculture-based courses. For example the Bachelor of Agricultural Science program at the University of Queensland has witnessed a decline in students from 50 in 2003 to less than 20 in 2008. Stipends for post-graduate study are also failing to attract post-graduate students, with financial incentives generally being at or below the minimum wage.

A recent report from the Australian Council of Deans of Agriculture predicts that industry needs at least 2000 graduates per year to enter the workforce, with this demand to increase in coming years. Currently however there are less than 600 graduates per year, and this is in decline.

## **RESPONSE TO DATE**

The Queensland Department of Primary Industries and Fisheries (DPI&F) has adopted a multilayered approach to assisting industry to address these issues and develop the capacity and capability to respond to the affects of climate change. This approach includes:

- developing a Strategic Framework for Investment in Climate Risk Management, with the objective of boosting profitability through investment and policies that support climate risk management by industry and government stakeholders.
- the application of climate science to development of practical sectoral level solutions, through its research, development and extension base, and its linkages and relationships with other service providers.
- establishing a memorandum of understanding with the Queensland Department of Education, Training and the Arts (DETA), whereby DPI&F will provide advice regarding such skilling issues to inform the development of a Queensland Rural Industries' Skills Plan each year.
- Working with DETA to embed sustainability in the VET sector in Queensland and at a national level.
- working with the Agrifoods Skills Council and DAFF to ensure this State's needs are heard at a National level.
- developing a plan with industry, education providers and research organisations to build a skilled workforce, to network and modernise services and to capitalise on research and development potential to foster world-class innovation.
- partnership with schools, Australian agricultural colleges and universities to create and market rewarding and attractive career paths in all aspects of primary industries and a more integrated model to address training and skills development.
- providing training that enables producers to mitigate climate risk through a partnership with the Australian Agricultural College Corporation (AACC) who will progressively undertake and deliver DPI&F's currently non-accredited training and extension activities to increase skills within the sector. DPI&F will be about maximising the capacity of training delivery organisations to meet the defined needs of industry and the challenges of the global agri-business market place

DPI&F is also involved in the Pilot Agribusiness Gateway Schools Project. Six to eight schools will be selected that have a demonstrated passion for the Agribusiness sector. These schools will provide relevant curricula, skills development and opportunities such as relevant work placements with a view to attracting young people to the Agribusiness sector.

## CONCLUSION

Clearly there is a need to build the capacity of the primary production sector to respond positively to the opportunities and challenges presented by climate change.

Industry currently is challenged by issues such as labour attraction and retention as well as the diminishing numbers entering under graduate as well as graduate programs at a tertiary level.

The issue of future food security as a consequence of climate change needs to be a major driver on initiatives that are focused on attracting people to the primary industries sector to address labour force issues and skill shortages.

There is also a need to build the skills of the existing workforce to utilise current technologies that will assist in climate change mitigation as well as becoming more adaptable in farming practises as climate variability develops. There is therefore a role for both formal education programs and practical training options in positioning primary producers to manage climate risk and increase productivity.

Whilst influence through the formal education system and the Gateway schools model is considered vital, the focus cannot be just on formal education and qualifications. Training and skills development outside of the education system is also pivotal, and must be supported by strategies and initiatives that assist the whole of the primary industries sector, whether they are the corporate landholder to the very small landholder.

In the Queensland Skills Plan update provided to the Department of Education, Training and the Arts, industry has clearly stated a preference on providing the skill sets that are relevant as opposed to the need for full qualifications. Training needs to be developed that relates to whole of enterprise. In Queensland such examples of this exist within the Best Management Practice model developed by the Cotton industry and currently been sought by the Sugar industry. This will require a more flexible approach to the delivery of training and flexibility in terms of funding for training, including consideration of funding for training that is currently non- accredited but is providing the skills that industry needs.

There is also a need to urgently attract existing skilled labour to the primary industries workforce to assist in replacing retiring agricultural scientists and academics, with about 50% of the current skills base likely to retire over the next five years. Pathways need to be developed between the school, the vocational sector and tertiary institutions to allow individuals access into higher level skills training that develops the capacity of the industry into the future.

Australia needs a nationally integrated and holistic approach to skills development and education in the primary production sector. The training and education sector needs to develop new approaches to delivering specialist training and enabling skill upgrades in a way that is relevant to modern agriculture and business demands.