



THE *Irrigation Association* OF Australia LTD

Leadership in irrigation training, information and representation

Mr Ian Dundas
 Secretary to the Committee
 Standing Committee on Agriculture, Fisheries and Forestry
 Parliament House
 Canberra, ACT 2600

18 April 2005

Secretary: ...*Boalman*.....

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HOUSE OF REPRESENTATIVES
 STANDING COMMITTEE ON
 AGRICULTURE, FISHERIES
 AND FORESTRY

Dear Mr Dundas

The Irrigation Association of Australia would like to make a submission to the *Inquiry into rural skills training and research*.

Summary

The Irrigation Association of Australia believes that increased participation in training and achievement of nationally recognised qualifications is of the utmost importance in delivering improved economic performance and viability for Australia's rural industries and improved water use efficiency in irrigation in particular.

The irrigation industry is facing significant challenges in meeting government and community expectations of water use efficiency and environmental sustainability. This will involve a much more sophisticated knowledge and practice of irrigation using new and rapidly changing technologies. A clear vocational education pathway has only existed in the irrigation industry in the last 2 years and a training culture needs to be developed to drive greater investment in training and skills development.

This will require investment by government, industry associations and individual businesses. A coordinated and consistent set of incentives and support mechanisms would compliment commercial incentives and growing community pressure.

Development of a regulatory environment, preferably industry managed, that rewards and recognises investment in training and research would speed up participation and adoption and promote improved performance and professionalism.

The IAA

The Irrigation Association of Australia is the only national organisation representing the entire value chain of the Australian irrigation industry. Membership includes irrigators, consultants, designers, installers, manufacturers, retailers, education and research organisations and government agencies at all three levels.

The IAA was established in 1983 with the following aims:

- represent the interests of the whole irrigation industry
- improve the exchange of information about irrigation theory and practice
- promote the benefits of irrigation
- enhance the professional standing of those involved in irrigation.

The mission of the IAA is leadership in irrigation training, information and representation. Since its formation the IAA has focussed on developing industry professionalism and technical innovation.

The IAA currently has over two thousand individuals and organisations on its lists and regional committees in all major irrigation areas throughout Australia. These regional committees deal with local issues of importance to the irrigation sector and provide the association with strong local community focus and input.

Over the past few years the association has:

- initiated and funded the development of the National Irrigation Training Plan
- contracted a Training Development Officer to coordinate training and education for the association and the industry
- facilitated the development of national competencies for irrigation and the first vocational qualification pathway for the industry
- written learning, trainer and assessment guides for all irrigation core competencies at AQF levels 2, 3, 4 and 5
- established an internationally recognised certification program for irrigation designers and auditors that is included in the tender requirements of numerous authorities across Australia
- holds the largest irrigation related trade exhibition and conference in the southern hemisphere every second year. This is a major training and industry development event
- been awarded a \$510,000 grant through the National Landcare Program to develop a national training and certification framework for the irrigation industry.

The Association has been active in rural skills training for over 20 years and improving professionalism and long term sustainability have been core concerns of the IAA since 1983.

Introduction

Irrigated agriculture and horticulture in Australia is worth over \$6 billion at the farm gate (DOTARS, 2004). An estimated additional \$2 billion is spent on irrigation related products and services by the rural sector alone. Irrigation is the fastest growing sector of rural production. According to ABS (Water use on Australian farms, 2005) irrigated agriculture involves some 45,000 enterprises or 33% of all farms using just 0.5% of the land. It is a highly intensive and technical practice requiring increasing skill levels.

However, just under half of all irrigated establishments spent less than \$10,000 on capital expenditure over the last 5 years. This indicates a very low level of system improvement and investment in new technologies, in part due to lack of skill and confidence. Approximately a third of irrigation establishments had a gross value of irrigated production of less than \$25,000.

Until recently there were no nationally recognised qualifications in irrigation and no vocational or career pathway. Largely due to efforts by the IAA, nationally accredited qualifications at Certificate II, III, IV and Diploma were introduced in 2003. Prior to this training consisted of extension programs run by the various Departments of Primary Industries and commercially focussed programs run by manufacturers and their dealership. Traineeships and apprenticeships were only available in related trades such as plumbing or horticulture. This industry has no history or culture of vocational training and this represents an enormous challenge. The industry is growing rapidly with increasing technical demands yet there is a very low awareness of, and participation in, formal training. This must change if the industry is to achieve the outcomes set in the National Water Initiative.

Response to the Terms of Reference

- **The availability and adequacy of education and research services in the agriculture sector, including access to vocational training and pathways from vocational education and training to tertiary education and work.**

1. Lack of access to training delivery

One of the major impediments to greater participation in irrigation training is the lack of training organisations delivering the new qualifications. The irrigation qualifications were introduced as part of the Rural Production training package in late 2003.

Since then the IAA has developed learning, trainer and assessment guides for all core competencies at all AQF levels to encourage registered training organisations to deliver the course and to set a baseline for the resource material.

The IAA has widely publicised the qualifications and the pathways by which they can be achieved and supported RTOs to gain accreditation for these qualifications. There are now 22 registered training organisations accredited to deliver the Certificates II & III in Irrigation (NTIS website 2005). Only 15 of these are accredited to deliver Certificate IV in Irrigation and only 12 are accredited to deliver the Diploma in Irrigation. Many of these RTO are based in the major cities further limiting access for rural people.

The IAA has worked hard with the New Apprenticeship Centre and Department of Education in each state and secured access to a range of financial support for irrigation training. However access to incentives remains confusing and inconsistent across the various jurisdictions.

Despite this effort only approximately 80 qualifications have been awarded and these were all through recognition of prior learning. Not one RTO is currently delivering a course based qualification in irrigation.

All private RTOs and many public ones are structured around full cost recovery at least. This makes it very difficult to find RTOs able to deliver to small numbers in diverse locations. This is particularly so for technically based competencies and course work such as irrigation.

On-line learning provides some alternative to this problem. However experience to date has shown that "hands on" practical people such as farmers and contractors are not attracted to this type of delivery and training.

A common issue throughout the industry is the lack of a clear, usable career pathway for participants. The qualification pathway is new to the irrigation industry and support is needed to develop a career pathway so it is usable and available for promotion.

Despite a clear and growing need, irrigation training remains a thin market with concentrations in certain regional areas. There is a strong case for market intervention in the form of incentives and support for regional delivery and incentives and regulatory drivers for increased participation.

2. Inconsistent government incentives

Our experience shows that there is a demand for traineeships and apprenticeships in irrigation but these are hard to market as conditions differ between states and often skills shortage subsidies do not apply in some major irrigation areas.

There are also barriers to participation in the structure of government incentives. The Existing Worker Traineeship is available for two year

programs but in some states the Certificate III in Irrigation is set as a one years course and in others 2 or 3 years. Skills shortage subsidies do not apply in some major irrigation areas. The failure of the NSW government, alone out of all jurisdictions, to continue FarmBiz funding is another example.

The IAA seeks an immediate review of the various incentive and support schemes applicable to the irrigation qualifications with a view to ensuring consistency and relevance to the industry's training needs.

Current incentives tend to favour the Recognition of Prior Learning process over course delivery. While RPL is an important process to get existing business owners and operators qualified and advocates for training, the longer term need is for course delivery for new and existing employees. It is the high input delivery that really needs the support.

The current training package for irrigation is the first ever developed. It is an excellent starting point but it will need frequent and ongoing revision and development to get to an acceptable stage. Further support and assistance will be required to undertake the necessary consultation and development of this package.

3. Need for greater industry involvement

Given the breadth of irrigation systems, practice and crops, few RTOs have the staff to deliver and assess the full range of competencies required. There is a severe lack of appropriate trainers and assessors. The IAA is developing a database of industry acceptable trainers and assessors but without becoming an RTO itself, the opportunities to involve these people is limited.

Financial pressures often mitigate against RTOs using external trainers and assessors. Where partnerships between RTOs and industry have been possible they have been most successful and this style of delivery should be encouraged and supported. There is a need to assist industry in getting involved with RTOs and encourage RTOs to actually deliver rather than just assess.

- **The skills needs of agricultural industries in Australia, including the expertise and capacity of industries to specify the skills-sets required for training, and the extent to which vocational training meets the needs of rural industries.**

1. Significant and growing need exists

Irrigation is rapidly becoming a more technical and sophisticated endeavour requiring higher levels of skills and knowledge. There is a growing move

from gravity to pressurised irrigation with the resultant need for new skills and knowledge. Even where there is no system change there is financial, public and regulatory pressure for greater levels of efficiency and performance.

ABS states that 90% of irrigators still use their own knowledge and observation as their primary decision making tool for irrigation scheduling. The level of use of soil probes for example has risen just 3 % to 13% of irrigators in the last 5 years. Work by the CRC for Irrigation Futures indicates that this may be largely due to a lack of skill in probe calibration and use of associated technology.

There is a very high demand for irrigation skills in the workforce. Many irrigation service companies in irrigation areas across Australia report a severe skills shortage.

2. Low levels of provision and participation

However there is little formal training of either the irrigators or the service sector (installers, manufacturer and agent representatives and consultants) to support this requirement. Despite 22 registered training organisations being accredited to deliver the irrigation qualifications there is not a single scheduled course in which enrolments can be currently taken.

Somewhat paradoxically, RTOs that have attempted delivery report very low levels of interest. The IAA itself has had difficulty in filling its Certified Irrigation Auditor courses on occasions.

The reasons for this are complex. The level of understanding of the new vocational training framework is poor. There is a lack of a training culture as the industry has not had recognised qualifications until recently. Employers particularly are not well equipped to determine their staff training needs and are usually looking for a simple pathway to get staff qualified.

In addition unqualified employers are often reluctant to put staff through training. There is a high need to get existing owner/managers trained so that they are more inclined to train staff.

Cost and ease of access are also factors as discussed previously.

3. Need for stronger drivers for training

The rural community is notoriously shy of formal training and the attainment of qualifications. They look for a specific and immediate purpose and outcome to justify training. In the past this has been access to financial incentives such as the Waterwise on the Farm program in NSW.

There has been reasonable uptake of introductory irrigation short courses linked to incentives such as the Waterwise on the Farm program in NSW but once incentives ceased participation rates dropped. These courses do not provide a qualification and have no assessment of skills development or behavioural change.

However the IAA believes that there is a real opportunity to encourage participation in training through industry regulation such as is required with scheduled chemical application and the farm chemical users course and other OH&S issues. The IAA, together with the Australian National Committee on Irrigation & Drainage, with funding from the National Landcare Program, is developing Certified Professional Irrigator, Certified Irrigation Installer and Certified Irrigation Consultant programs that are based on AQF competencies from irrigation and other training packages.

If this certification is required under site use licenses it could provide a very strong incentive for participation in formal training and for continuing professional development as part of continuing licensing obligations.

- **The provision of extension and advisory services to agricultural industries, including links and coordination between education, research and extension.**

Over the last decade there has been a significant withdrawal of government funded extension and advisory services. The commercial sector is increasingly picking up this role both in the form of paid for advisory services and through informal advice from dealer representatives.

Commercial sector representatives now represent the second most frequent source of new information for most farmers after their neighbours and peers (pers. comm.).

This information transfer is often happening without any quality control or underpinning training. The IAA Certification program for consultants and service providers that is being developed should be encouraged and supported.

In addition the IAA currently funds two industry development officers together with Horticulture Australia Limited and State agencies. These arrangements are a very cost effective way of supplementing the dwindling government advisory services and Departments of Primary Industries and other relevant agencies should be encouraged to explore the expansion of this program. The potential for industry and government to work with commercial sector agents and industry development officers and research officers is immense.

- **The role of the Australian government in supporting education, research and advisory programs to support the viability and sustainability of Australian agriculture.**

The IAA believes that improving irrigation efficiency is a vital element to ensuring the sustainable use of water while at the same time maintaining agricultural production and not adversely affecting rural communities.

Levels of training and education within the irrigation industry are low and this has an effect on the rate of adoption of new technologies and practices and the sophistication of management that can be applied.

Nationally consistent licensing arrangements linked to the new training packages is an area where government intervention could dramatically improve the participation in, and achievement of, training and qualifications.

The Australian Government already provides significant support for a range of initiatives including traineeships and the commitment to match States FarmBiz funding. The Australian Government is to be commended on this. However, there needs to be a more consistent approach to the way this support is administered at state level.

The Australian Government support for the Cooperative Research Centres and in particular the new CRC for Irrigation Futures, is to be commended. The IAA is working closely with the CRC IF on a range of programs to encourage innovation and improve irrigation practice.

The National Water Initiative has been set up in recognition of the immediacy of the challenges inherent in improving water use efficiency in rural Australia and the need for a joint approach and coordinated action across all jurisdictions. While not explicit in the Intergovernmental Agreement of the NWI, training and certification at both macro and micro levels are essential tools in the implementation of the Initiative and the delivery of the agreed outcomes.

- **The adequacy of scientific research on the approaches required for adaptation to climatic variability and better weather prediction, including the reliability of forecasting systems and capacity to provide specialist forecasts**

Agriculture is practiced in Australia in an extremely variable climate and therefore decision making at all levels (from farm to market) and at all scales (field to catchment) is characterised by a high degree of uncertainty. There are several regions where a 'critical mass' of research activity (eg. Qld and WA) has resulted in seasonal climate forecasting systems receiving a reasonable level of exposure but their use in decision making, particularly at the farm level in the irrigation sector, appears to be minimal.

There are several reasons for this lack of uptake of the tools, but one survey of irrigators in the Northern Murray Darling Basin indicated a high level of awareness of the systems but comparatively few placed sufficient confidence in the outlooks to apply climate information to decision making. Anecdotal evidence suggests that the probabilistic nature of seasonal climate forecasts is not well understood and therefore this is limiting the capacity for them to be used in a risk assessment framework.

If the current climate change scenarios are correct in their predictions there will be considerable adjustment required across the agricultural sector in Australia. A greater capacity by the research community to deliver more reliable forecasts combined with an education program to increase the capacity of the end users to more effectively apply them, will be required if this adjustment is to lead to positive outcomes for the agricultural sector, and indeed all of Australia.

Conclusion

The IAA congratulates the Committee for conducting this inquiry into such a vital issue for Australian rural industries and the irrigation industry in particular.

The Association would welcome an opportunity to address the Committee in person and looks forward to the recommendations and subsequent activity.

On behalf of the Irrigation Association of Australia



Jolyon Burnett
Chief Executive Officer

2 May, 2005