

AGRICULTURAL TRAINING PACKAGE REVIEW - COMPETENCY STANDARDS FOR NUTRIENT MANAGEMENT

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Abstract

Our nation faces significant challenges in repairing past damage to land and water resources, and to the restoration of our environment for future generations. Research suggests strong direct links between education and training and the capacity to change attitudes and practices.

The Rural Training Council of Australia (RTCA) is the national body established by industry to act on industry's behalf in all matters pertaining to the education and training in regional, rural and related industries across Australia. The RTCA has developed and delivered a suite of national learning programs for these industries and they are known as National Training Packages

Last year a review of the Agriculture and Horticulture Training Packages was undertaken resulting in recommendations for improvements. In the near future focus groups will be brought together to scope the needs of four groups within the fertilizer industry. They will include: the farmers who use and spread fertilizers, contract fertilizer spreaders; the retailers who sell fertilizers to farmers; and, people who have the technical skills and knowledge to carry out analysis and provide advice on fertilizer requirements

The third component of success will be to ensure that professional trainers and assessors deliver the skills and knowledge, identified in the Training Packages, to client groups within the Industry. The RTCA stands by ready to provide advice to the industry in this provision of training.

Training and education of all users of nutrients is one of the most important steps to be taken and the RTCA will work closely with the Industry to develop training programs to achieve the successful outcomes.

Introduction

The National Farmers Federation (NFF) represents around 110,000 farm businesses in Australia. The 220,000 member farmers are custodians for at least 70 per cent of Australia's landmass – a responsibility they do not take lightly.

Our agricultural sector and Australia's long-term economic prospects depend upon the sustainable use of our natural resources and conservation of our unique biological diversity.

Rural Australian Exports

Agriculture and Production Horticulture contribute to about 3.0% of the value all goods and services produced in Australia and is worth \$60 billion. It is important to note that Agriculture and Production Horticulture, which is included in the Agrifood industry contributed over \$26 billion to Australia's export in 1999-2000 which is around 25% of all goods and services exported from Australia. Farmers and horticulturists are still increasing productivity, by about 2.5% per year and will continue to make a significant contribution to the Australian economy.

Rural Australian Exports

Australian Exports (a)	1980 \$Am	2000 \$Am	Change \$Am
Total Rural	7,858	26,124	18,266
Wine	10	1,552	1,542
Total Australian Exports	19,222	110,854	91,632

Our nation, however, faces significant challenges in repairing past damage to land and water resources, and to the restoration of our environment for future generations.

Costs of Degradation

Degradation is already costing Australia \$2 billion every year. That figure will rise to more than \$6 billion a year if nothing is done.

Degradation is not just a farming issue, it has profound economic, social and ecological implications that are and will be felt by all communities across the country.

A survey in January of this year by the rural website "the farmshed" found that farmers rated issues to do with salinity, land degradation, water resources and soil erosion as the second biggest set of issues facing the future of agriculture in Australia, rating just behind the high costs of production versus low commodity prices.

Costs of Degradation

Form of Degradation	Estimate \$million per year
Salinity	270
Acid soils	300
Sodic soils or structural decline	200
Erosion	80
Irrigation salinity	65
Water quality	450
Total	1,365

The National Land and Water Audit, which has been undertaken over the last 5 years, has now started to release its findings. Some of the findings of the Audit's risk assessment for dryland salinity across Australia are alarming:

- Approximately 5.7 million hectares are within regions mapped to be at risk or affected by dryland salinity. In 50 years it is estimated that this could increase to just over 17 million hectares.
- 20 000 km of major roads and 1600 km of railways are already at risk and estimated to increase to 52 000 km and 3600 km respectively by 2050.
- More than 200 towns could be affected by 2050.

Although the scale of the degradation issues we currently face are daunting, I have a strong belief that we can meet these challenges in such a way that Australian agriculture will continue to grow and prosper.

Innovation

Australia's farmers have a long history of ready acceptance and uptake of innovation. This has been a key factor in our ability to increase our productivity and remain a competitive force in international markets, in spite of the odds.

Our rural R&D corporations have underpinned this innovation and we are depending on them to deliver the production-based solutions which will not only ensure agriculture's future viability but will also deliver positive outcomes for the environment.

This onus is particularly pertinent with the ever-increasing community expectation for land managers to also deliver outcomes such as protection of biodiversity.

Primary Producers must balance this expectation, with the need to make an economic return.

Changes in land and water use

NFF is under no illusions that such a future will involve significant change in our approach to land and water use in many of our landscapes and there is research to suggest that the farmers most likely to cope with change are those who have undertaken education and training

We have made considerable progress, particularly during the last 10 years of Landcare and other natural resource and environment programs.

At a local level, Landcare has achieved a great deal for our country. This unique concept has resulted in a major cultural change in attitude to looking after the environment.

We have been establishing the right groundwork of awareness and skills on ground.

The value of this investment must not be underestimated.

The challenge for the future is how to pull this all together to deliver strategic, long-term solutions to problems such as dryland salinity and the loss of biodiversity.

Repairing the Country - A Five Point Plan

NFF and the Australian Conservation Foundation joined forces again in May last year to focus the nation's attention on the need for a national, strategic approach to address issues such as dryland salinity.

Whilst we represent very different interests and viewpoints, both organisations recognised the political imperative to highlight the enormity of the challenges ahead requiring a national, whole of community response.

Our organisations, having identified the problem have proposed a five-point plan centred on:

- a 10-year bipartisan commitment to tackling degradation;
- national leadership by the Commonwealth Government;
- a new scale of strategic investment;
- strong private sector engagement; and
- the active involvement of all Australians.

The future will be about repair and change to ensure agricultural production is sustainable and our natural heritage is conserved.

National Action Plan for Water Quality

The NFF welcomed the Council of Australian Governments (CoAG) agreement to support the Prime Minister's 'National Action Plan for Water Quality and Salinity' last November as a crucial first step in what will be a long-term investment plan.

The Action Plan commits \$700 million annually for 7 years of new Federal funding to be matched by the States.

The challenge now lies in the Plan's implementation, in particular issues of equity, requirements for enhanced accountability, and the need for sustained investment.

The Action Plan is not of the magnitude of investment which is required. However, the Action Plan offers the groundwork from which a long-term, sustained commitment can be made.

The NFF believes there must be a commitment to a sustained investment program, over at least the next 10 years. There must be a shift from band-aid exercises which treat systems to accountable, investment-based approaches which address the causes coupled with remedial action.

We believe that it will be the Murray-Darling Basin which leads the way. We are already seeing change such as agreements toward salinity targets for catchments.

Role of Education and Training

The question we need to come to grips with, and soon, is how we can better manage change.

Research suggests strong direct links between education and training and the capacity to change attitudes and practices

Further, there is strong evidence to show profitability is directly to education and training.

Continued funding commitments for programs which invest in capacity include national programs developed by the Rural Training Council of Australia for Agriculture Horticulture and Land Management. As well as these formal courses, extension programs such as Property Management Planning, Farmbis, and Landcare promote an integrated approach to production issues, natural resource management, biodiversity and conservation;

A set of core principles, targets and timelines were developed as a result of the National Action Plan

Managing Natural Resources

As part of this initiative under the National Action Plan, Agricultural Fisheries Forestry Australia (AFFA) have flagged by the year 2010, there should be double the number of landholders and community leaders participating in rural training and leadership courses that incorporate natural resources management. There should also be an increase in levels of participation by landholders in Landcare and other natural resources management groups.

This again is consistent with the initiatives being developed by the Rural Training Council of Australia (RTCA).

The RTCA is the national body established by industry to act on industry's behalf in all matters pertaining to the education and training in regional, rural and related industries across Australia.

Regional, rural and related industries are convenient titles to describe: *Agriculture, Horticulture, Conservation and Land Management and Animal Care*

The RTCA has developed and delivered a suite of national learning programs for these industries and they are known as national Training Packages

National Training Packages

For the first time, the Agriculture and Horticulture industries have analysed what farmers need to know and what skills they need to have in order to operate successful and sustainable businesses. This was done with many focus groups of farmers around Australia (so it is very much a national initiative)

Competencies = Skills + Knowledge

- Observe, record and report in the workplace
- Maintain chemical equipment
- Service and repair farm machinery and equipment
- Organise human resources
- Develop a business plan
- Plan succession, retirement and an estate
- Manage personal skills
- Operate tractors
- Operate a dairy recycling system
- Supervise pastures and crops
- Manage livestock production
- Market products
- Move, count and feed livestock

The national training package addresses the vast and complex skills and knowledge required in the technical, people and business management areas and it does this for all the sectors of Agriculture and Horticulture. It covers all the Occupational Health and Safety and Environmental concerns. The package also recognises that the skills and knowledge, required by people entering Agriculture are different for the Owner Operator, hence there are six levels from entry level through to trades person status to manager and owner operators.

Level 6 Owner Operator	Review the strategic directions of the business	Manage the production system	Manage borrowed funds	Plan succession, retirement and an estate
	Market Products			
Level 5 Owner Operator	Develop a whole farm plan	Develop a business plan	Manage livestock production	Implement a property improvement plan
Level 4 Owner Operator	Supervise pastures and crops	Supervise a herd health program	Organise human resources	Supervise Farm Finances
Level 3 Farm Tradesperson	Service and repair farm machinery and equipment	Establish pastures and crops	Operate a dairy recycling system	Conserve pastures and crops
Level 2 Entry Level	Schedule and maintain a flood irrigation system	Maintain chemical equipment	Carry out basic fencing operations	Carry out basic irrigation routines
	Operate tractors			
Level 1 Entry Level	Manage personal skills	Observe, record and report in the workplace	Move, count and feed livestock	

Agriculture and Horticulture Training Packages

Review - Stage One

Last year David Rumsey carried out a review of the Agriculture and Horticulture Training Packages. This Stage 1 review involved extensive feedback across Australia from a wide range of persons and organisations in regional and urban centres with an interest in the Training Package. In all, input was received from some 400 persons or organisations through submission, participation in workshops, or in a meeting.

In general, those consulted as a valuable resource saw the Agriculture Training Package as a positive move forward in providing a training framework for the Agriculture Industry. It was acknowledged that some fine-tuning and amendments were required. In the course of the discussions on the Training Packages, the perceived strengths of the currently endorsed Agriculture Training Package were repeated or confirmed.

These included:

- National focus
- Flexibility
- Focus on workplace competence

- Relative simplicity of packaging arrangements
- Access to education and learning
- Relevance and usefulness for school students
- Better informed managers and workers
- Commitment to training
- Provision of a better set of tools for human resource management
- Capacity for customisation
- Career Paths
- Recognition
- Cooperation and partnership between training organisations
- Focus on workplace competence

The full report is available on the RTCA website if you are interested.

Review - Stage Two

Stage two of the review has commenced. Currently there are a number of consultants who are reworking the skills and knowledge required for the Agriculture and Horticulture Industries. In the near future there will be a focus groups brought together to scope the needs of four groups within the fertilizer industry. They will include:

- the farmers who use and spread fertilizers,
- contract fertilizer spreaders
- the retailers who sell fertilizers to farmers and
- people who have the technical skills and knowledge to carry out analysis and provide advice on fertilizer requirements

These focus groups will meet over the next two months and the RTCA will be working closely with Doug McGuffog to ensure the interests of the industry are looked after. It is also important to recognise that the Nutrient Industry has been proactive in developing Codes of Practice. I can make personal guarantees that these will be incorporated into the Training Packages.

Once skills and knowledge have been identified for the industry, it will be important that the industry develop resources which can be used and again I know this has already commenced. The third component of success will be to ensure that professional trainers and assessors deliver the skills and knowledge, identified in the Training Packages, to client groups within the Industry. The RTCA stands by ready to provide advice to the industry in this provision of training.

Conclusion

In conclusion, may I say there are many environmental challenges facing nutrient use in our farming and horticultural communities. Judicious use of nutrients is directly proportional to productivity and profitability outcomes. The industry is acting responsibly in this regard and has along with the NFF and peak industry bodies taken steps to ensure all participants in the fertilizer supply chain act appropriately. Training and education of all users of nutrients is one of the most important steps to be taken and the RTCA will work closely with the Industry to develop training programs to achieve the successful outcomes.