

# **Maximising Your Training Efforts: A New Way Forward For The Australian Cotton Industry**

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The word ‘training’ means many things to many people. More often than not, it is associated with formal academic tertiary training, a TAFE education or a private training company offering a specialised course. However, training can also take numerous other forms. The purpose of this paper is to outline new training strategies being developed within the cotton industry and the benefits they will provide.

Research, Development and Extension funding, has traditionally utilised the extension arm (Cotton Industry Development Officers) within the industry to deliver and be responsible for both extension and training activities. To date, this has been an effective form of delivery. This training extension format strives to regionalise the adoption of innovative technology and empower producers to solve their own local issues through facilitated learning. The adoption of the innovative technology or practice change, uses either, or in many cases both, the local extension officers and/or researchers to create adoption. As a generalisation, some extension activities can be classed as a form of training as they impart knowledge and facilitate management change through active learning methods.

The various extension-training formats used within industry include, major and minor field days, industry information workshops (1/2 - 1 day events) and area wide management groups or generic grower groups which all target the grower directly. This group format allows the extension officer to facilitate learning by utilizing the group dynamics when addressing a subject area. The “train the trainer” approach aims to empower the Cotton IDO or extension officers, by providing them directly with the technical information and training. Subsequently, on return to their production valley the extension officer, charged with the technical expertise, is responsible for extending this information to growers as either group training or as a one on one extension. All these methods have provided solid platforms for extension messages, practice change and at various levels, training opportunities within the cotton industry. It is important to note that the current methods of integrating extension and training activities are effective and certainly not obsolete. However,

there is an alternative model under assessment within the industry. The following information outlines the development and current implementation of this model.

### **What evolutionary changes are occurring?**

In recent years, there has been an addition to the training program that is industry directly developing topic specific short courses, to address an industry need. The first of these courses was the Cotton Integrated Pest Management (IPM) short course. In 1997, the cotton industry funded a review to identify methods for increasing the adoption of IPM within the industry. At this point, a 'typical' grower relied heavily on private and reseller agronomists/consultants to provide insect management advice for their business. The review suggested the creation of an IPM course to empower the producers to become more active in the decision making process and to understand the principles behind the implementation of an effective IPM program. During the development of the IPM short course, a decision was made to align the training to a nationally recognised unit of competency. The education unit came from the Rural Production training package found within the Australian Qualification Training Framework.

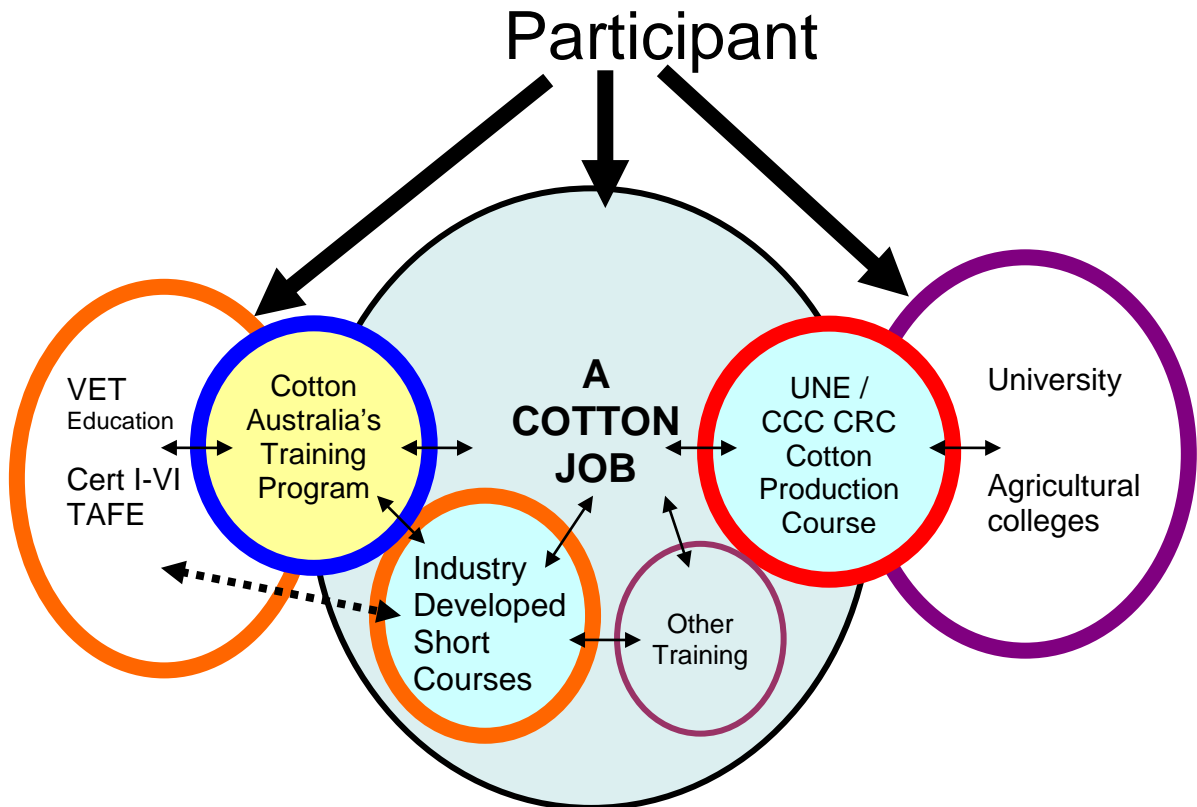
A pilot course was conducted in 2001-02 and the IPM short course was fully implemented from 2002-03 to 2004-05. It was developed and implemented with funds from the Cotton Research and Development Corporation and the former Australian Cotton CRC. Since the course's creation, there have been other courses developed based on this model that links extension activities with vocational training.

Figure one is a diagrammatic view of how the various courses and training found within the cotton industry complement each other. A person looking to enter into the cotton industry has three choices of entry, depicted by the large arrows. They can enter via the tertiary education stream, the vocational stream or directly into the workforce. Each circle represents a different form of training. However, each circle should be considered as interlinked. The smaller arrows represent the linkages which show the flow of information between the circles, the training that is recognised across the groups and the possibility for future collaborative training.

It is important to note, that there is an opportunity for a person entering directly into the industry to expand their knowledge and skills by undertaking either VET, industry developed or tertiary studies in the future. Like wise, a person entering into a cotton position from the tertiary system can benefit from industry developed or VET training once they are involved in the industry. The thicker dotted line that links the VET sector and the industry developed courses represents the new style of training courses that is evolving. These courses provide a strong link between the

extension activities of industry and specific VET training. The Cotton IPM Short Course is one example of this linkage.

**Figure One:** Conceptual model for how the Australian Cotton Industry training programs are integrated.



### **What Are Producer's Opinions Of This VET Alignment For Industry Short Courses?**

Evaluations conducted during the delivery of the Cotton IPM short course within the period 2002-03 to 2004-05 seasons inclusive, revealed major attitudinal and management impacts associated with the course. An evaluation form was collected after each workshop for each of the 20 locations. Over three seasons this resulted in 591 responses to the evaluation questions. After combining all evaluations, participants indicated:

- 77 % would strongly recommend the course to others
- 97.3% said the course met their expectations
- 72% acknowledged that they intended to implement a practice change after attending the course.

Aspects nominated as practice changes included increased confidence to engage with the consultant to develop management decisions, use of plant monitoring in management decisions, and increased levels of personal checking of the crop (Hickman 2005). This information outlines a major achievement of the original objective the course. The successful model used in the course included a two day winter training workshop, followed by two summer field days designed around 'in field' practice of skills. Finally, the participants undertake a review day where participant report back to the group outlining the changes they have introduced because of the course. This framework was created around content and assessment requirements for the unit of competency RTE 50006A "plan and manage long term weed, pest and/or disease control in crops" - a level 5 unit from the Rural Production Training package.

### **How does a producer gain a skill set from a VET education?**

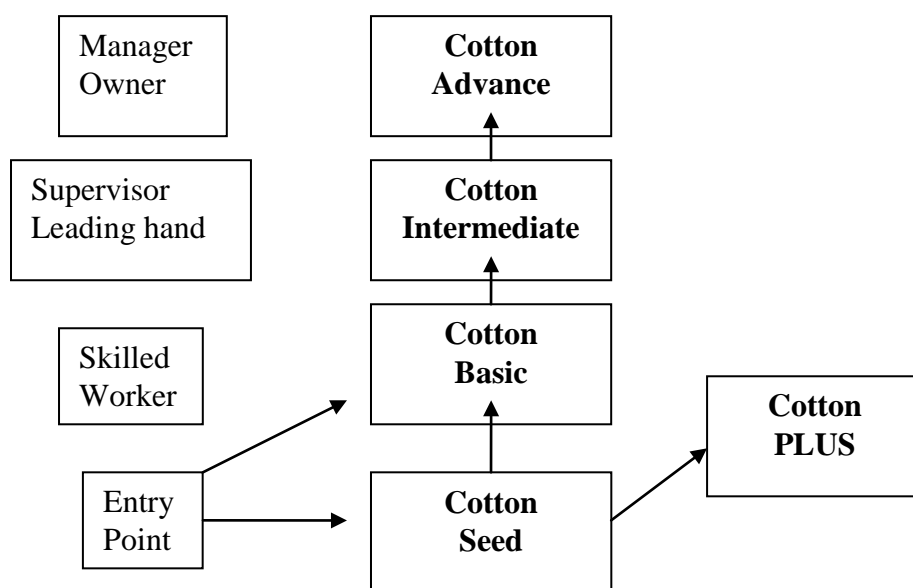
Currently, a participant wishing to gain a formal agricultural qualification from the VET system would need to complete a certificate level qualification in agriculture (Certificate I - IV, or even a diploma). The certificate qualifications have course content (units of competency) determined by state and federal bodies, of which the cotton industry has 2 producers representing the industry's interest. The representation has been very successful in developing competency units that are generic enough to be easily adapted to a wide range of training.

However, reflecting on the VET requirements that must be met by a participant before they are eligible for a certificate qualification has highlighted a significant limitation. This training is providing a restrictive skill set in terms of the skills required of a modern producer. Cotton personnel working in the area of training suggested that there are some competency units that could be removed and some units that could be included from other training packages from outside the Rural Production Training package. Currently, the Rural Production Training package is undergoing a national public review to remove such limitations. Industry has provided comments to this effect.

Cotton Australia is currently addressing the issue of incomplete skill sets. In early 2006, Cotton Australia successfully obtained funding from the federal Department of Education Science and Training (DEST) to develop a competency based cotton specific training program. This training program is formulating a skill set that encompasses environmental, production and business management. Industry is very interested in the outcome of this 12 month pilot program. A project advisory group consisting of representations of industry, state agencies and funding bodies assists the project by providing guidance on the direction, content and blend of skills they wish to see delivered by the training program.

Figure two represents the tiered level of the Cotton Australia’s training program known as the Skills Recognition, Training and Career Pathway. It provides increased vocational training options for students at the high school level which is commercially badged as ‘Cotton Seed’. The preceding level, referred to as Cotton Basics, targets people wishing to enter the cotton industry or those who have recently joined the industry as farm labourers. The top level, Cotton Advance, is targeting the decision makers of the enterprises. Ralph Leutton (Cotton Australia), has a paper in these proceedings outlining this training program in more detail - I encourage you to review his paper. In reference to Figure one, the diagram demonstrates the way in which this pilot training program will provide the linkage between the vocational training sector and the cotton industry. It is not unlike the bridging role provided by the University of New England’s Cotton Production Course which is an industry developed course taught within traditional tertiary framework.

**Figure Two:** Cotton Australia’s Skills Recognition, Training and Career Pathway model. (Source: Cotton Australia, 2006)



### **Why Should Industry Bother To Align Training To A Nationally Recognised Competency Unit?**

Firstly, not all training that is delivered within the industry would warrant or even should be aligned to a competency unit. Not all training or extension requires a form of assessment. As an example, an introduction workshop for potentially new cotton producers in a developing area, requires a more informative discussion rather than a series of technical presentations designed to

generate a specific practice change. It is important to remember that competency based training is another option for industry rather than a method which replaces existing formats of training.

Training activities that are suitable for competency based delivery can provide numerous benefits.

The groups of people or organisations that can benefit are:

- the participants
- the industry and funding organisations and
- the developers of the course.

The following section of the paper outlines the benefits for each of these groups.

### **Benefits to the Participant**

Upon the successful completion of a competency aligned course, participants receive a formal qualification known as a Statement of Attainment. A Statement of Attainment is a nationally recognised document that outlines the skills and knowledge achieved by the participant. The Statement of Attainment can be used as evidence towards a higher qualification known as an award which is referred to as Certificate I to IV, or a Diploma in a subject area. Attendance at a course or workshop that is not competency aligned does not provide the participant with a formal qualification nor evidence that they achieved a certain standard or skill. Certificates of attendance do not reflect any skill sets only that the participant was present at the training. These aspects are important when seeking future employment.

For the producers who are not interested in leaving the farm, there is merit in obtaining the Statements of Attainments. A grower undertaking this form of training is exposed to information presented using three techniques:

- a 'hands on' learning style,
- involves a high level of participant interaction and
- group discussion used to investigate how the training can be practically implemented to their work environment.

Where appropriate, the training occurs at the work site and participants demonstrate their newly learnt skill or show how they can implement the recently learnt knowledge in their business. Therefore, a producer who completes the assessment phase of the training has a recognised level of skill and knowledge which is directly applicable to their business or employment. This learning process fosters better implementation of the training and improved likelihood of the practice change occurring.

A producer can also obtain Statements of Attainment for units of competencies without attending training. This is achieved when a qualified assessor from a registered training organisation (RTO) reviews the producer's skills via an assessment process called Recognition of Prior Learning (RPL). This process allows a producer to have their existing skills assessed. Their skills may have been gained from life experiences, 'on the job' training or from previous courses that may not have been competency based. If successful, the producer can be awarded Statements of Attainment or in some cases a full qualification. The producer then has the option of combining the competency units achieved by RPL with units gained from attending competency aligned training to improve their educational or employment status.

### **Benefits to Industry and Research / Extension funding organisations**

Industry as a whole benefits from courses being linked to vocational training. The granting of Statements of Attainments from an independent RTO, allows industry to benchmark improvements via education qualifications obtained by producers because of cotton industry dollars invested in training. The independent third party assessment provides the legitimacy behind the quoted figures.

This requirement then provides industry with a level of quality control in terms of the standard of training that is delivered, as all competency based training must meet quality standards outlined by the Australian Qualification Training Framework. These quality controls include rigorous assessment techniques which are included in the lesson plan. The assessment aspect of the training ensures growers do understand the information discussed and are able to perform the skill that was the focus of the training. In some cases, an industry that delivers courses which are not aligned to a unit of competency could evaluate the training courses in terms of how many people attended the course, rather than the potential practice change or increased knowledge that was achieved by those that attended. Measuring the potential change or impact on knowledge is measurable through assessments conducted as part of a competency aligned course.

Industry funding bodies can benefit directly from the benchmarking information related to the number of qualifications generated from funding investments. The number of participants matriculating through industry training courses provides data which the funding body can use as evidence that the organisation is addressing the current national skills shortage. This is important at two levels. Firstly, the qualifications illustrate that funding is improving the knowledge and skills within the industry. Secondly, if the organisation has revenue which is linked to federal or state government contributions, then this information can be used by these government organisations to justify their investments to industry. There are funding bodies outside of the cotton

industry that will not fund training unless it is aligned 100% to a national competency. One such organisation is the International Fibre Centre (IFC).

### **Benefits to people developing the short course**

Alignment of a short course, developed by industry, to a unit of competency does not restrict the information which can be delivered. Rather, it can enhance both the course content and process of integrating “hands on” training in the lesson plan. Within the unit of competency there is a set of elements each associated with a series of performance criteria. Simply put, the elements are the key subject areas/skills that must be addressed to within the unit (nee: topic area). The performance criteria are the specific skills or demonstrated knowledge that illustrates the participant has an understanding and can complete the desired skill. These standards do not determine the course content, rather they set the minimum standard for the course.

When developing and aligning a course to a national competency, a process known as mapping is undertaken. The purpose of this step is to assess the relationship between the standards that must be achieved with a competency unit against the original industry objectives for which the training was intended. This assessment provides valuable information for the courses development and is often expressed in the form of a training matrix. In essence, a training matrix is a gaps analysis which allows the developers to design a better teaching structure and content for the course. The training matrix encourages the developers to adopt innovative assessment tasks or activities during the delivery. Ultimately, this encourages the use of a high level of ‘hands on’ activities in the delivery of the training, which is an important aspect of adult learning. Overall, this process develops a more interactive and enjoyable learning environment.

### **What Are The Thoughts Of Participants That Have Completed An Industry Developed Course Which Is Aligned To Competency Unit?**

As outlined earlier in this paper the Cotton IPM short course was the first industry developed course to be aligned to a national competency. An internal review of this course was conducted during the 2005-06 production season, to gather the opinions of past course participants on the future development of the course structure and content.

Results indicated that the alignment of the course to a national competency was seen as irrelevant. Participant opinion indicated that the IPM course was attractive enough without the carrot of the competency accreditation. Despite this response, course alignment was not seen as a negative and a reason for not undertaking the course in the first place, a significant result. Participants also

commented that obtaining a qualification (Statement of Attainment) by completing the course was an unexpected benefit and regarded as providing a future benefit.

A Narrabri grower responded in the following way with respect to the alignment of the IPM course. *“It was reassuring to know a quality assurance mechanism was used to structure the course. This was a subconscious thought but a good thought to have”*. One St George grower responded *“the accreditation is a personal development aspect for those people who do not have professional qualifications (especially employees on farms). This acknowledges peoples abilities.”* An Emerald farm manager commented *“for a farm manager this qualification would be good for the resume”* (Hickman, 2006). These supportive comments justify future alignment of industry developed courses.

### **What does the future hold for training?**

The current training program being developed within the cotton industry will be better integrated in the future. I believe the number of short courses developed by industry and aligned to national competencies will increase. In particular, future industry training could be aligned to the Cotton BMP process and the training program (the Skills Recognition, Training and Career Pathway) currently being piloted by Cotton Australia.

Work currently being undertaken by Cotton Australia will provide a solid framework for the development of skills and career paths within the industry. Provided industry undertakes sound strategic planning, it is quite feasible for producers attending and successfully completing a competency based industry short course or undertaking a RPL process to use these Statement of Attainments towards achieving an industry qualification such as Cotton Advance or Cotton Basics. This integration of short courses, RPL and more traditional vocational training will ensure producers are maximising their input of time and expenses when attending training activities so that they achieve both a formal qualification and practice change within their business.

The alignment of newly developed industry short courses to national competencies has commenced. When developing a short course for industry, the benefit of the final product to the participants is considered. Alignment to a national competency has numerous benefits as outlined by this paper. However, consideration needs to be directed to how a new course can achieve both value adding to the business and providing future educational opportunities for the participant. The following example is the first of these new styles of courses being developed.

The Cotton/Grains Irrigation Course currently being developed is aligned to three different forms of industry qualifications. The aim of the irrigation course is to provide information for improving water use efficiency on farms and ensuring sound environmental management of the water resource within cotton and/or grains enterprises.

The course content is mapped against a series of national competencies that deal with irrigation management. Selection of the competencies was based on the information delivered the irrigation course and the information in the Land and Water module of the Cotton BMP manual. Therefore, participants who attend and complete the Cotton/Grains Irrigation course will also have developed an evidence portfolio or obtained information which allows them to complete the self assessment activities within the BMP manual. Hence, there is a dual benefit in the achievement of these competencies.

This course will also allow participants to achieve other industry accreditations. Currently the Irrigation Association of Australia (IAA) is developing a competency based accreditation known as a Certified Irrigation Manager as standard for all irrigation managers within agriculture. Participants, who complete and successful pass the Cotton/Grains Irrigation Course, will meet over half the units required by the IAA to become a Certified Irrigation Manager. This is another example of how the completion of the Cotton/Grains Irrigation course will provide numerous benefits and opportunities to the participant.

## **Conclusion**

As outlined by this paper, there are certainly dynamic and exciting events unfolding in the area of training. The linkage between vocational education and training and extension activities will continue to strengthen into the future as industries and in particular the cotton industry, recognise the benefits of aligning to national competencies. The cotton industry is regarded by other industries as a leader in this area. I believe the role of training within the cotton industry will be enhanced and become better integrated with other industry activities such as BMP ensuring that the investment of a producer's time and resources is maximised when attending cotton training in the future.

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