

What Future the Cane Industry: Is Training a Vehicle for Change?

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Abstract

This paper reports on research into the training needs of cane growers in Queensland and Northern New South Wales; it was conducted on behalf of the Sugar Research and Development Corporation (SRDC). The full report gives comprehensive insights into industry training needs from the perspective of those most directly involved in the production side of the industry. Many cane growers are faced with the prospect of either exiting the industry or seeking to augment incomes with off-farm employment or diversifying their current farming operations when facing historically low price returns and in some areas the lingering effects of lower than average rainfalls. Prior research has shown farmers undertaking training in other farm businesses have markedly higher gross operating surpluses when compared with non-training businesses. Recommendations show a significant unrecognised demand for competency-based training and a need for adoption strategies to be developed and championed at a whole of industry level and by using lessons learnt from other industry re-structures, cane growers can maintain their right to supply through access to high-level business management training not currently offered. The cane industry is challenged by a need to engage multiple stakeholders and to develop a client designed training program to enable them to develop their own remedies to farm problems.

INTRODUCTION AND BACKGROUND

This paper summarises research conducted on behalf of the Sugar Research and Development Corporation (SRDC, 2004) into the training needs of cane growers in Queensland and Northern New South Wales. The following issues were researched and the key results are presented in the body of this paper:

1. What level of demand exists for competency-based training?
2. What outcomes do growers want to achieve from competency-based training?
3. What are the most effective, accessible and acceptable modes of delivery of high-level business management training?
4. Who provides and funds competency-based training for the cane-growing industry, and what services and products are required?

The recent macro environment of the sugar industry is one of low price returns and this study covers the whole cane industry with cane grower interviewees drawn from Bundaberg, Mackay, Tully, Ingham and Ayr regions of Queensland. Northern NSW cane growers were held in reserve depending upon results emerging from the convergent interview process. As there were no new issues apparent from the interviews, a further round of interviews was not required.

LITERATURE REVIEW

The Cameron and Chamala (2000) study about links between education levels, attitudes and farming management training among Queensland primary producers found increasingly *'unfavourable trading circumstances may result for individual operators*

who remain independent, outside the circle of training/or co-operative activities'. Also prior education levels do not always significantly correlate with training needs so, this has particular relevance for this paper. Tanewski et al. (2000) found in general, business planning has a positive though moderate influence on farm performance. They suggested that further research should include an in-depth examination of '*the internal processes of farm enterprises such as owner's individual and business skills, core human resources or capabilities, communication characteristics between generations, and the attitudes, values, and goals of significant other family members*'.

Individuals have differing learning styles and recognition of this needs to be integrated into any enquiry into the training needs of cane growers and other input providers in the supply chain from cane farm to sugar mill. Considerable research into differing learning styles, particularly in agribusiness noted farmers generally preferred self-directedness in '*choice of topic focus and timing and learning pace*' as overly prescriptive training programs may not be appropriate for most cane growers training, particularly if their learning styles are 'kinesthetic' (e.g. learning by doing).

Considerations about adult training have been highlighted by Rogers (1969) who suggested that '*individuals are the instruments of their own learning*'. Furthermore, '*much of the un-facilitated higher-learning that occurs (in a Central Western Queensland rural sample) does so in what can be termed crisis situations*. It was considered that un-facilitated learning led to '*paralysis of learning rather than stimulation*'. So, 'crisis' is a stimulation for un-facilitated learning but if such learning is not facilitated properly, can lead to paralysis, this begs the response for a 'whole of cane industry' development of facilitated learning programs to support cane growers to not only learn, but move to action to address their situations.

Kilpatrick (1996), in researching support mechanisms during change across Australian rural industries, identified that the greatest support came from family and staff (41%) and other farmers (18%), other than the largest farm operators. Then it seems appropriate that such training should either include family and staff or include a process that supports the learner in transferring their insights and new skills to others in the farming enterprise. In supporting the investigation in this research into the training needs and appropriate delivery modes for cane growers, Bloom's (1956) taxonomy of competency requirements and associated demonstrable skills is seen as an appropriate data organizing and reference tool. Farm businesses which undertook training events had higher gross operating surplus (GOS) per annum than those that did not attend training (\$156,418 GOS compared to \$17,050) and farm business that both trained and made changes had a higher average gross surplus (\$73,170) than other farmers. It also shows farmers who attended training other than a field day had a higher average gross operating surplus (\$83,651) (Kilpatrick, 1996).

RESEARCH METHODOLOGY

The research problem had two primary objectives:

1. To gather accurate qualitative data regarding the accredited training requirements of the Australian sugar industry workers/growers with a particular focus on high-level management training.
2. To raise awareness of the Rural Training Packages and to stimulate interest and demand by growers and their workers to ultimately assist in building the capacity of growers to deal with the significant ongoing changes facing the industry.

Qualitative research (Yin, 1994) was chosen to identify and probe cane growers needs about high-level accredited training in the Australian sugar industry (topic). There needed to be 'contextualization', particularly of industry, regional and family unit specifics in researching farmer attitudes about the topic under investigation, rather than garnering broad generalizations, as noted by other researchers about farm planning needs (Tanewski et al., 2000).

Data Collection and Analysis

Data were collected by a series of in-depth convergent interviews followed by a focus group discussion and investigation of existing literature about the topic in order to triangulate evidence about the phenomena being investigated (Perry et al., 1997) in order to develop propositions about training needs in the sugar industry. The initial convergent interviews were used to gain comprehensive insights into training-needs from the perspective of those most directly involved in the production side of the industry. As many growers have limited knowledge of accredited cane industry training needs, are older, and in general are not highly educated, the topic under investigation meant little to some potential interviewees. So, the topic was only seen as '*imperfectly apprehensible*' (Perry and Coote, 1994; Tsoukas, 1989; Merriam, 1988). However, given the current troubled state of the industry, both economically and socially, the researchers were able to gain a *window* to reality from the interviewees. As a result the research sought to triangulate evidence about training needs, outcomes and acceptable delivery modes from multiple information sources as a means of developing a picture of what was required.

Given the interviewee's demographic limitation, the sample conformed to the proportional representational as required by the reference group. Researchers saw evidence of high productivity, but this did not necessarily translate into high-level whole of farm management systems. However, high producing growers generally recognized their own skills deficits and bought-in necessary information and advice. Five of the 23 interviewees had high-level qualifications, whilst three purchased the required skills (one of these already was highly qualified), but the remainder did not have either the skills or were buying –in required skills.

It was found that women generally had more time to undertake formal training and significantly they took on extra training over and above that necessary for their direct roles. All but one woman interviewed had undertaken training. Researchers believe these women became the 'information brokers' that supported broader informational inputs for farm management decision-making. Whilst women play key roles in on-farm strategic decision making, this did not appear as a to benefit across the whole industry.

Interviews were targeted towards cane growers who attended training. However during the interviews it was discovered that not all growers had attended training recently. There were significant cases in which siblings in the businesses were taking on the role of attending training to gain accreditation whilst parents had not engaged in training. It was found that some cane growers have incomplete qualifications and others have completed qualifications. For example, one grower is currently enrolled in an engineering course. Many male cane growers have accreditation in trade-based programs, and also hold current certificates in chemical applications, occupational, health and safety (OH&S) and Water Allocation Management Plans (WAMP). However, it is evident from the interviews that the proportional gender balance between those with higher-level qualifications is weighted toward males at 60%.

Research Findings

The core findings of this research were that 66% of cane growers (some 4,000) are potentially a target market for high-level competency based training, with derived demand for tailored delivery to meet specific segment needs. These needs differ between the identified sub-groups (entrepreneurs 10%, managers 45%, operationals 45%). This estimation of sub-groups seeking accredited training was drawn from the interview data, using pattern matching and researchers' overviews of all interviews. Furthermore, findings in relation to existing funding for competency-based training found that such training is focused on low-level training only, and is resourced and supported through Registered Training Organizations (RTOs).

Three identifiable sub-groups emerged from the interviewees and these can be extrapolated across the general population of cane growers. Applying segmentation principles from marketing theory suggests that inter alia, market segments should be clearly identifiable, accessible and viable if the allocation of limited resources is to achieve the best investment outcome. In this instance, the segmentation of cane producers results from identifiable differences in their individual business structures (how the farm business operates). Key indicators for determining segments were, whether succession plans were advanced or absent, external or internal mechanisms for support, level of farm management skills, appreciation of information and overall attitudes to the future. The sub-groups were seen as:

- **Sub-group 'entrepreneurs'** - *'those who methodically plan ahead'*, are industry leaders and see the industry from a big-picture with a perspective the *'energy industry'* rather than a single product [sugar] industry.
- **Sub-group 'managers'** - those growers who are involved in farm planning, have an interest in financial management and the fundamental economics of business but who also undertake basic training in a wide range of skill areas including chemicals handling, plant operating and computing skills.
- **Sub-group 'operationals'** - those who require training in trade qualifications for off-farm employment and basic tractor and machinery operating skills and undertake training only if they see that it can be used for direct and immediate benefit. In general this group *'need help in farm management best practice'* and they generally externalize blame about problems rather than attempt to seek solutions themselves, as do the sub-group managers. This sub-group's internal belief system leads them to think that they are *'good business people'*. The focus group also suggested that there may be another sub-group *'compliance'* who will only undertake training if forced by legislation. However often people in other sub-groups refrain for taking a pro-active stance on issues until legislation is enacted.

Currently pressure for change exists at both industry and farm level, but the vision is clouded by State and Federal Government policies, attitudes of industry bodies such as the Bureau of Sugar Experimental Stations (BSES) as well as global trade and industry de-regulation issues. However, if a clear vision were to be articulated about training as a vehicle to facilitate on-farm change, this could promulgate a snowball effect throughout the sugar supply chain. As a result *'actionable first steps'* (Cacioppe, 1997) will need to develop at farm level, but the industry must put a *'whole of industry training framework'* in place so cane growers can develop capacity for change. Across the board collaboration between all key training providers is not occurring because of accelerating territorial disputes based on competition for non-compulsory levy funds. This puts pressures on

training providers to maintain the demarcation lines in order to secure their funding sources.

The achievement of a whole of industry approach to developing a training framework will require integration through the whole value chain. The collective capacity of stakeholders provides more options to progress alliances and promote industry responsive training. Alliances create economies of scale in the development and delivery of high-level training. Coutts (1994) noted the greater the complexity of issues the greater were the time and resources required as shown in Figure 1.

If failure to address change in the short-term does not occur, then the adjustment process and resultant impacts on the socio-economic fabric of cane growing regions will be more significant. Despite regional differences, in general, cane farmers' problems are: small farm size, inability to achieve economies of scale, high input items like contract harvesting, planting, farm expansion in the face of falling commodity prices and ineffective parietal risk management within their industry sector. As a consequence, machinery such as harvester equipment is increasing in weight and size in order to achieve economies of scale (to keep harvesting costs down) to the detriment of soils (compaction resulting in lower yields in the following years). Investment to counter these problems requires high levels of management skills amongst growers. At the financial level, greater skills are required for larger capital investment in plant and/or farm expansion. At the crop management level, problems lie in translating generic crop nutrient trial data to 'nearly similar' in-paddock applications that later can prove problematical on individual farms. Additionally, on-farm production and business management decisions appear to operate in parallel rather than in conjunction, resulting in sub-optimal decisions because all available information is not being fully integrated in the decision making process.

Approaches to problem solving can include:

- a. Continuing to attend shed and productivity board meetings that primarily address production issues,
- b. Continuing ad hoc training and issues based one-off workshops linked to research and development programs, or
- c. Engaging multi-stakeholder and cane growers to develop a client designed methodology that focuses on designing their own remedies to address the 'farm problem'.

CONCLUSIONS AND RECOMMENDATIONS

The sugar industry is in crisis at industry and farm levels. Government agencies can only address issues of compliance while at the farm-level cane growers need skills to help them to survive an industry shakeout. A pro-active approach needs to be adopted at industry leadership level to ensure that an across the board 'whole of industry' 'whole farm planning' program is adopted urgently and the following recommendations and the steps to be taken to address each of these issues are presented as a matter of priority:

- That significant unrecognized demand for competency based training and adoption strategies need to be developed at a whole of industry level.
- That industry leader's champion competency based training to achieve sustainable outcomes for cane growers and industry.
- That industry uses the lessons from other industry re-structures to ensure growers maintain their right to supply through facilitating access to the most effective

accessible and acceptable modes of delivery of high-level business management training.

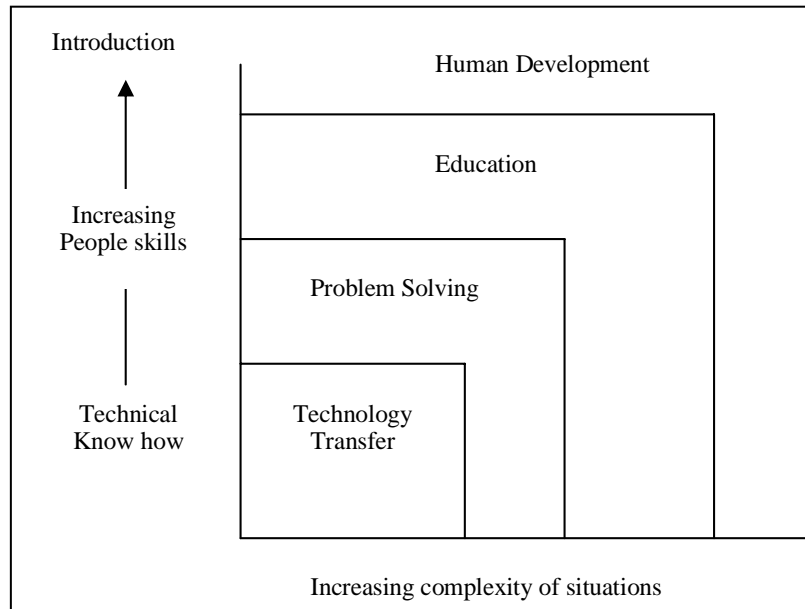
- That the desktop study of current providers and the funding sources for competency-based training for the cane-growing industry, services and products provided, reflects a deficiency in the provision of higher-level training (Australian National Training Authority (ANTA) level 5 and above) across all cane-growing regions (SRDC 2004).

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Figure

Fig. 1. Increasing complexity of issues requires Human Resource Management (HRM) skills.



Source: Coutts, 1994