The Market Garden:  
Action Research with Horticultural Enterprises

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Summary  
This paper is about discovery – the discovery of a quality system solution for a group of small horticultural enterprises who were caught between a rock and a hard place, and of self-discovery, finding out more about myself and my consultancy.

Key Words  
Action research, horticultural enterprises, quality systems

Introduction
There are many reasons why organisations implement quality systems. For many it is because the customer requires it. This situation is no different within the horticultural industry. The customers of fruit and vegetable producers - major chain supermarkets, market agents and distributors are insisting that their suppliers implement a Hazard Analysis Critical Control Points (HACCP) based quality system. HACCP is an internationally recognised methodology that is used to prevent, eliminate or reduce food safety risk to an acceptable level.

For many such businesses, the quality system solution let alone its development and implementation, is not so obvious. This paper reviews some of the lessons learnt by a number of small horticultural enterprises and their consultant / facilitator whilst working together through the medium of action research.

Setting the Scene
A group of successful, small, family based potato growers were faced with the dilemma of developing and implementing a quality system or lose their market. They began to ask a number of questions:

- Why do they need a quality system in the first place when they have been producing top quality produce for years?
- Will the quality system work?
- What will they get out of it?

They are offered the opportunity of joining a training program that the industry suggests will solve their dilemma. They relax. Their problems are solved. Or are they not?
Out of the Frying Pan and Into the Fire
The training program doesn’t go very well. The material doesn’t seem right for the group’s operations and the trainer has decided that he doesn’t want to continue with the group. The growers are left in a bind. The industry association suggests that the group continues with another facilitator – the author in this case. The program does continue, however a raft of issues emerge. It was time to discuss the undiscussables. Before long we were taking our first steps in action research.

Action Research
Dick (1992, p. 2) noted that action research is a methodology that has two aims: an action aim (to bring about change in some community or organisation or program); and a research aim (to increase knowledge or understanding on the part of the researcher or the client or both. The situation lent itself to action research - the group needed to address their immediate problem but in a way that would advance the collective interest of the group. Our first few steps pursuing this new methodology were shaky, however once we all developed confidence in each other and the level of trust was raised, we would improve. Our simple model of action research was:

- Plan the action together.
- Act and observe both individually and collectively.
- Reflect together.
- Revise our plan of action.

Planning the Initial Action
Our immediate problem appeared to be the training program itself. The program was not going to meet customer food safety requirements. Rather than continue as intended we thought that we should firstly resolve all our concerns about the course. We decided that the program required modification if it was to meet the group’s perceived immediate and longer-term needs, however there was some essential information missing. We decided to share the workload and sought new information collectively:

- What were the market requirements? – growers and their customers.
- Had the group’s training needs changed? – growers.
- How could the training intervention be improved to meet changing needs? – growers and facilitator.

We also agreed to meet a couple of days later and share the new found information in an attempt to resolve the situation. We could then make a joint decision as to whether or not the program would continue and, if so, in what form.

Our First Action and Observation - Collecting Data
The data collection was a little easier than we anticipated. However we were not expecting to open a can of worms in the process. Growers found that their customers were quite keen to talk about their own requirements and preferences for linking into their corporate quality systems. The existing program would not facilitate that process. This reinforced my feelings that we were on the wrong track and needed to reassess our options. The growers did come up with a number of suggestions to improve both the content and process of the training. Together we developed a preliminary solution that would allow the training intervention to continue. It was still structured to allow it to
remain within the government funded framework, but more importantly, modified to meet the specific grower needs.

**Data Evaluation and Initial Reflection**
For the first time the group and facilitator were able to sit down and share information knowing that our outcome would be based on common knowledge and consensus. The information the group found was quite surprising. I was able to make a contribution as well.

**Determining Market Requirements.** Anecdotal evidence from the group suggested that there were a number of reasons why fruit and vegetable growers and packers needed to, and were, implementing quality systems:

- Food safety concerns were causing retailers, processors, market agents, exporters and other customers handling fresh fruit and vegetables to implement HACCP based quality systems. This was having a flow-on effect with an increasing number within the market strongly suggesting, if not demanding, that growing and packing operations implement a HACCP based quality system. The reasons for this, and even aspiring to formal certification, were similar to those in other sectors involving small businesses in Australia and overseas (Boon & Ram, 1998, p. 21; Brown et al., 1998, p. 273; Bryde & Slocock, 1998, p. 468; Jones et al., 1997, pp. 651-52).
- In some cases quality systems were determining market access. No quality system - no access (or future access) to a particular market.
- Growers were also faced with the difficulty that different customers had different requirements and that one system would not satisfy all. Disturbingly, at the time we were investigating potential solutions, the major supermarket retailers and market agents were not consulting with each other to determine an industry solution. This meant in some cases growers would need to develop, implement and manage two or three separate systems if they were to satisfy existing customer needs. A key question for us was how were we going to pull two or three potential solutions into one. The AS/NZS ISO 9002 international standard, the focus of the training program, was not necessary for the domestic market and only a requirement for some segments of the export market, and HACCP was not considered in this model.
- Quality systems were offering better control of the business throughout the scope of operations resulting in a more consistent quality of produce.

**The Training Program.** The data collected also reinforced that the existing training program was not appropriate. The content was a cause for concern for two reasons. Firstly, the program was based on the ISO 9002 standard. Many small businesses believed that the advantages of this standard had been outweighed by the disadvantages (Chittenden et al., 1998, p. 85). The disadvantages were seen to be related to the significant resources required to develop, implement and manage the system, the high financial and time costs associated with the process and the difficulty associated with interpreting and applying the standard to one’s own business.

Secondly, the ISO 9002 standard did not include the HACCP methodology, a specific market requirement. Although the training package did have a HACCP component, HACCP was not effectively integrated within the quality system standard. However, if
HACCP was successfully linked with ISO 9002, a new dimension would be added to the already complex quality system.

A new question was posed. Could the content of the training program be modified to meet grower specific needs? We decided to resolve this issue at the time as the Program Coordinator, an industry representative, was present. The Program Coordinator had organised funding for the training and had put the group together. As a result of the open discussions the group wanted to spend more time with HACCP even if it was to the detriment of the ISO 9002 system. I felt comfortable with this decision knowing that ISO 9002 was largely inappropriate for their purposes whilst HACCP was essential for their businesses. The Program Coordinator was somewhat uneasy about the proposed changes as the original course was 75% funded by government and certain outcomes were expected. Subsequently, I was only able to change some aspects of the existing training package e.g. delete those elements of the ISO 9002 standard that were not appropriate and introduce a more practical approach to the HACCP methodology.

We also looked at the training process. Whilst the group was happy with it we all felt that the intervention could be improved by allowing more time for small group work particularly following the introduction of new theory. This would allow further, more intimate discussion that would enhance understanding and facilitate the practical application of such knowledge into individual grower operations.

**Diagnosis and Redefining the Problem**

Without realising it, we had almost completed our first cycle of action research. It was time to reflect on what we had achieved and redefine our initial problem. The inappropriate training intervention had been dealt with and the potential outcome of our work appeared to be far more suitable. What we needed to do was set up a framework where we could review our future actions as they occurred and mould both the process and content to meet the actual requirement. We introduced a period of reflection at the conclusion of each training session and an opportunity for open discussion prior to the commencement of new material.

**Refocusing on the Problem and Some New Questions**

We refocused on the problem and two more questions became apparent:

- Is there a more appropriate quality system solution?
- What additional resources were available to help with the quality manual writing?

The group asked me to investigate and report on the first new question, however I thought that it was appropriate for them to ask others within their markets what they were doing. As I searched for information the group would talk to their market agents and supermarket contacts. We could then share our findings.

The second question was put to the Program Coordinator. One of the problems noted early in the piece was the lack of progress of the group towards the development of their quality system documentation. This stemmed from lack of capability rather than desire. Many of the group had limited English language skills and had difficulties in interpreting many of the quality terms and requirements. We were able to obtain the assistance of two Workplace Language trainers from a local Institute of TAFE. They
would work closely with each business helping the growers understand the system requirements and develop their quality manual.

**Implementing the New Plan**
The modified training program began by allowing some time for open discussion at the commencement of each session (reflection on the previous week and homework – the practical application of the new knowledge) and at closure (reflection on the session and the possibilities for action). Two Workplace Language Unit trainers facilitated the process of understanding and application of the quality system and HACCP requirements to the grower’s own business and the completion of the necessary writing tasks.

The dynamics of the group were also changing. Whereas early in the piece growers saw each other as competitors, the group began to collaborate and cooperate with each other, often sharing the writing load and working on a common manual that would suit everyone’s requirements. The group worked closely with the Workplace Trainers communicating openly and sharing resources with each other. Furthermore, members of the group were inviting the larger group into their homes for additional quality system writing sessions.

**Program Renewal**
The group, and for that matter I, received a tremendous boost in confidence and energy knowing that we were back on the right path again. We accepted that we all had much to learn and that we were now heading towards a positive outcome. That outcome was not the one initially intended but we believed this new one was far more appropriate. We would continue with the modified scheduled training process for another six sessions, following the principles underpinning our model of action research, and adjusting content and application to meet the group’s specific needs.

**Program Outcomes**
The group worked extremely well together sharing information and communicating openly. Much work was being done outside the formal sessions with the larger group splitting into two separate writing teams that tackled different aspects of the quality system and HACCP requirements. We were able to reflect upon this completed homework in the following training session. As a result of this additional work nearly half of the group were able to implement the first stages of the ISO 9002 quality system – developing control measures and procedures for some of the more practical elements of the standard. The HACCP method was also being applied in businesses to identify potential food safety hazards and then putting control measures in place that would prevent, eliminate or reduce such hazards to an acceptable level.

The group went on to use this forum and action research principles for problem-solving and decision-making in addressing a number of additional questions:

- Is there a more appropriate quality system solution?
- How might grower agricultural practices change to meet more environmentally friendly and food safety risk management requirements now that the HACCP method questioned what they were doing?
A Place in the Market
Perhaps the most appropriate outcome for a number of the growers who participated in this training intervention was that they re-established themselves in the market, meeting the specific needs of their customers. HACCP and their understanding of quality system requirements offered them a degree of security. They had the knowledge that their produce could meet ‘customer requirements’ and that their operational processes could support their endeavors. Since the end of the training intervention, several have taken the next step of linking into their principle customer’s quality system.

Conclusion
Action research proved to be a stimulating medium for group problem-solving. Whilst encouraging individual and collective stretch in the search for new knowledge and application, it facilitated community learning and sharing as each and every member of the group made their own contributions.

Personal Reflection
In many ways this action research project provided me with the opportunity and the motivation to reflect and to confront what I was doing and the direction that I was heading with my consultancy. Interestingly, prior to this assignment, I had never taken the time to do so, but then again, I did not have a supportive framework like action research to assist me. I started to question what I was doing, how I was doing it and why. The answers were a surprise to me. I have changed a number of my personal and consultative behaviours as a result of this experience:

• I learn from others (and their mistakes) and am more open for them to learn from me. I am still learning to learn and I take great pleasure in sharing my knowledge.
• I share information regardless of my perception of its value – letting the receivers be the judge.
• I am more aware of my personal value system and encourage others to work within theirs.
• I am far more collaborative nowadays – in the past I was fiercely competitive.
• I prefer to share the responsibility for giving and receiving new knowledge and encourage others to interpret such in their own way.
• My practice has moved from having on the shelf solutions to one of conjointly finding better ways of working together and problem-solving, leading to better decision-making practices.

I have also made the conscious decision to further my learning in the field of supply chain quality improvement from the perspective of the small horticultural enterprise. This group, and the others that I have worked with since then, have provided me with the questions that have stimulated my curiosity to follow up with their concerns whilst empowering me to research on their behalf.

References

