

Beware - Agency Staff Bearing Gifts : Our Action Learning Adventure

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Farming has long been a challenging business. Historically government agencies have provided support for our farming communities to help meet these challenges. Traditionally these services were delivered on an individual basis by extension staff. Researchers were 'institutionally' separated from extension services and indeed from the farming practitioners. AS we have entered the later phase of this century the situation has been changing. Rural communities have been inundated by advice from all fields. Action learning has reached the 'conservative' realms of agricultural extension and posed yet another challenge for our farming practitioners.

Traditional extension practices have focused on the linear research extension implementation model. This model did serve a vital role. However, in the current climate of rapid change and limited resource staff, it is not an easy model to sustain. For development and implementation of Controlled Traffic Farming (CTF) a new medium had to be found. Enter the action learning model. This mode of delivery has been able to better integrate research, development and extension. However this mode of extension has brought its own challenges.

Attempting to change from the linear research extension adoption model to the circular action research model is not simple. The traditional linear model tends to deal with single practices eg contour banks/stubble cover and has not subjected extension staff significantly to developing the scientific/technical base. Indeed an advantage of the linear model is that there is a substantial research base to start with.

When reviewing the development of CTF the difficulties associated with the lack of science appears. It is a real challenge to involve producers and extension staff very early in the research and development timeline when there is a lack of factual research data. However, with the linear model the research staff had little or no direct contact with the 'real world' or a systems approach which farmers deal with on a day to day basis (farmers being the target audience of the research). Researchers could not be positive that their efforts were addressing the needs of those directly involved in the field.

With all the acknowledged problems of the process, imagine the challenge faced by Central Queensland (CQ) farmers in the mid 90's when confronted by three speakers - a research officer, an extension officer and a development officer - all offering advice:

- 50% reduction in fuel bills by removing compaction!
- Gantry farming and worse!
- Working up and down the slopes as opposed to contour cultivation to increase efficiency and reduce erosion!

Where did it all begin?

Controlled Traffic is not a new concept as a dryland or irrigated agricultural practice. Much research, development and on-farm work has occurred over at least the last 20 years. USA and Great Britain have looked at the practice mainly for rotational cropping, herbicide and insecticide spraying and vegetable growing. In Australia, South Australia has looked at 'Gantry' farming and

researchers such as Dr. Jeff Tullberg at the University of Queensland (Gatton), have had positive results from Controlled Traffic including reduced energy requirements, reduced fuel use and improved trafficability (Cannon et al. 1997).

It could be argued that the use of roadbeds for dryland cultivation probably started with traction engines - it was certainly tried in the 1940's. Combine this with the positive results from Tullberg's work and the question arises - why did producers not take up the practice? It had been proved that large savings in energy requirements could be made. It is not simple to arrive at an answer to the question but 'let's have a go'.

What happened in C.Q.?

'Can we get six growers to give a best bet system a go?' That was the question posed by Yule and Cannon in 1991. From that beginning, Controlled Traffic farming on over 200,000 hectares has been the result. A result which is about the triumph of attitude change over traditional paradigms. Why did large-scale broad acre dryland growers in Central Queensland 'Have a go?' Action learning underpinned the process.

As noted above, traditionally extension was based on a linear adoption model - basically a positivistic approach. As Carr & Kemmis (1986 pg.186) highlight:

Positivistic research relies on prediction based on laws established in past situations expressed as controlled intervention as its basis for informing future action. Interpretative research relies on a notion of practical judgement based on the understandings of the practitioner derived from the observation of previous situations. Action research involves both controlled intervention and practical judgement...conducted by individuals and groups committed to not only understanding the world but to changing it

The moments of action research (Fig. 1 - Carr & Kemmis 1986 Pg.186) were integral to the process.

Fig. 1 The Moments of Action Research

4) Reflect → 1) Plan ↓
5) Observe ↑ ← 2) Act

Action is essentially risky, but is retrospectively guided by past reflection on which basis the plan is made and prospectively guided towards observation and the future reflection which will evaluate the problems and effects of the action. (Carr & Kemmis 1986 Pg.186). Despite the complexity that CTF is dealing with it is possible to define the stages of the action learning process. For farmers in CQ the planning stages commenced with a number of workshops run from Biloela in the Callide Valley to Clermont on the Central Highlands.

The 'action' moment of the cycle is often likened to a 'probe into the future'. At least one Co-operator in each district was prepared to try the practice of controlled traffic on sloping dryland areas. Reflection based on previous 'compaction' workshops and practical judgements encouraged these growers to 'have a go'. Action generally entails a risk that judgements might not turn out the way expected.

Perceived difficulties were machinery adaptation, ability to drive straight and potential increase in erosion, weeds in the wheeltracks and effects of driving into the sun. With planning, action, observation and reflection, many of these problems have been largely overcome or moved on. And so the cycle continues.

The original six growers in CQ have now multiplied significantly. The outcomes have demonstrated the power of the process. Once the basic concepts were in producers hands, the innovations flowed and the perceived problems faded to the background.

Practitioners as Researchers

It has been said that action research can bridge the gap between research and practice. That certainly has been the case in Central Queensland.

The selling points of CTF were mainly the cost savings - from \$10 to \$30/ha. As growers have 'cycled' forward, this point has been largely surpassed by the potential and demonstrated potential of major bottom line cash flows from opportunity cropping and significant increases in yields. Another one of our support factors for involving farmers in the research and development process, was their deep concern for their land. Farmers have been observing the massive problem of soil erosion and the threat it is posing to the long term sustainability of their businesses, especially for future generations of their families.

When CTF began in CQ one of the difficulties was that we did not have all the answers - much of the research was still continuing on compaction in CQ or on erosion processes for downhill layouts.

What we learned though, was that if you have a best bet systems approach - **put it in the hands of the producers**. As Dr Don Yule always says 'Each paddock becomes an experiment. Each producer an advocate for positive results.'

Are there any negative aspects?

It would seem that all CTF practitioners - producers, development officers, extension officers, research officers - have some constraints to overcome in the search for both a viable and sustainable agricultural future. Action learning strategies have allowed our learning community to overcome many constraints. Indeed, 'action research is a deliberate process for emancipating practitioners from the often unseen constraints of assumptions, habit, precedent, coercion and ideology. Of course any particular project only achieves these results in a partial way; to imagine that it could be otherwise is to seek a scientific vantage point beyond the reach of history and human interests'. (Carr & Kemmis 1986 Pg.192)

Many were wary of the proposed 'CTF Gifts'. Although we acknowledge that CTF is not a panacea for all the problems and plight of agriculture, there now exists well trialed and well accepted benefits of the system.

Leadership, Vision, Inspiration, Purpose, Direction & Resolve

Thanks to the early adopters who ventured into uncharted areas and into the action learning cycle. Also thanks to those that were out in front of Don, Wayne and Stew - who made their properties available for the benefit of other producers and our industry.

References

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