

EXTENSIONNET

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Niels Röling and Janice Jiggins Visit the West



Niels Röling and Janice Jiggins with APEN WA Chair, Amanda Miller (centre).

APEN WA and Agriculture Western Australia were pleased (read ecstatic!) when Niels Röling and Janice Jiggins accepted an invitation to visit WA during the first week of August. The aims of the visit were:

- to show them the changes that have occurred since their last visit 10 years ago;
- to provide opportunities for people working in agriculture and the environment the opportunity to hear and learn from them; and
- to learn more about the opportunities for overseas work for people interested in such ventures.

During the week Niels and Janice spent time in Perth and country locations Northam and Tammin and worked with staff from Agriculture Western Australia and the University of WA, LCDC coordinators, Bushcare workers and farmers. They were impressed with the enormous social capacity that has been built in the last 10 years to address issues of land degradation and sustainable rural development. However, they expressed concern for the need to “safeguard the social capacity” as The Decade of Landcare comes to a close. “It would be a tragedy to lose this social capacity that has taken so long to nurture and build, and which now represents a

fantastic asset, through a lack of support and funding” said Janice. There were a number of significant discussions and learning points for many of those who came to hear what they had to say. Towards the end of their visit Niels and Janice challenged a large forum in Perth with a seminar on the uncertainties they saw facing agriculture, and hence agricultural extension, and five perspectives that could be used to look at the way we might deal with these uncertainties. The seminar is summarised later in this Newsletter.



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From the Chair

John Bourne

The response to the new **APEN Award for Excellence in Extension** has been very positive. We have received five nominations, and the Committee of Management will be assessing these at its tele-conference next week. In fact the response has been so pleasing that I am wondering why we haven't offered this previously. However the initiative has now been taken, and many thanks again to Amabel Fulton for proposing and running with the idea.

The arrangements for the **National Forum in Perth, November 11th - 12th** are well advanced and fliers are now being circulated. The WA organising committee has put a great deal of time into the event and the support of Agriculture Western Australia is very much appreciated. Some impressive guest speakers from both WA and the eastern states have been arranged. At each of the previous Forums, WA has been well represented, and so I would urge every-one to make a special effort to make the trip west in November. **Thanks also to Sally Marsh** for taking on the Editor's job for this Western Australian issue of *ExtensionNet* – Elwin Turnbull is busy in Nepal at present.

Following a national advertisement, the Committee of Management recently considered three **tenders for the APEN Secretariat**. The current tender of two years, with the option of two additional annual re-negotiations, expired at the end of July this year. We are pleased to announce that the successful tenderer was Rosemary Currie of Creative Management Services. Rosemary has provided a very effective and efficient secretariat for APEN in previous years, and put forward a proposal that more than addressed all of the aspects requested in the tender document.

A final note of interest. The APEN Secretariat continues to receive requests from time to time, from a range of organisations, for **short term consultancies relating to extension expertise**. We have been distributing these as widely as possible through our Network, however can not always get to everyone particularly if there is a short response time. If you would like to be informed of relevant potential consultancies that come up, please contact Rosemary Currie at the Secretariat.



APEN is pleased to acknowledge the support of:



Natural Resources and Environment

- AGRICULTURE
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- LAND MANAGEMENT

From the Guest Editor

Sally Marsh

It's been an exciting time for extension in Western Australia over the past few months. We are in the throes of planning for what promises to be an exciting and challenging National Forum in November. An update on the forum is included in the Newsletter. Just when we thought things couldn't get any busier, Niels Röling and Janice Jiggins accepted our invitation to visit WA at the beginning of August. Their visit proved to be both challenging and inspirational to many who took the opportunity to be involved, not to mention exhausting for Niels and Janice. A report on one of their major presentations is included in the Newsletter. Other articles are accounts of practical extension activities happening in two vastly different arenas. Keith Noble writes of his work as a landuse planner in Central Australia and Kathryn Egerton-Warburton tells of the Woolpro™ team's work with wool growers in WA. I hope you enjoy this and other reading in the Newsletter. We in the West look forward to seeing you all in Perth in November.



Elwin Turnbull is looking for someone to take over the Editor's job as his two year term comes to an end at the AGM in Perth. - Interested? It's very rewarding!

Four uncertainties facing agriculture and five perspectives to deal with them

A summary by Fionnuala Frost and Sally Marsh of a seminar given in Perth by Niels Röling and Janice Jiggins, August 1999.

Four uncertainties facing agriculture worldwide

The agricultural treadmill

The notion of the agricultural treadmill (Cochrane, 1958) describes the agricultural production process in the following manner.

- Many small firms all produce the same product.
- No-one can affect the price of the product, and producers try to produce as much as possible, even when this goes against market trends.
- A new technology will allow those who use it first to capture the windfall.
- After some time, others will follow.
- Those who have not innovated will be forced to innovate to keep up with the current trends.
- Those who are too old, too small, poor or in some way disadvantaged to innovate will eventually drop out and those who capitalised on the windfall profit will capture their business.

This process has benefits for policy-makers. There are considerable benefits from technological change and these are passed on to the consumer since primary products are produced more efficiently and competitively. Labour is freed for other pursuits, and technological investment requires a relatively small investment on the behalf of the state.

However, there are risks associated with the treadmill.

Alternative employment may not be available for the 'freed-up' labour. Companies rather than consumers may capture the benefit. In many instances farm incomes are not sustainable, market pressure leads to unsustainable forms of farming and global competition eventually drives out national agricultural industries.

This treadmill is currently the process that drives agriculture. This process will not sustain the ecological environment.

The future of energy

Our economy is based on cheap energy. We are becoming increasingly reliant on using cheap energy and the amount of energy we currently use is 4 times the amount that is discovered. There is a need to investigate alternative energy sources and incorporate these into the farming systems of today in order to provide sustainable agricultural systems.

Climate change

This is a very real phenomenon that is currently unpredictable. Rainfall and temperature significantly affect biotic response and our current farming systems are, in effect, placing all the eggs in one basket. Climate change has the potential to significantly affect the areas of agricultural surplus and deficit and destabilise our current geopolitical relationships. To a large extent this is out of our control.

The threat of climate change means that having fixed reserves

for biodiversity might be a risky option. There are suggestions that in response to such potential dramatic climate change, germplasm be used to breed crops that are more adaptive to such dramatic changes. While this is a possibility, it should also be stated that neither human nor institutional capacity is as flexible as the movement of germplasm and so this option is potentially very limited.

Ecological function and process

There are interconnected problems in our world and we need to deal with them inside an agricultural context because so much of the globe is under agriculture. Agriculture must relate to Environmentally Sustainable Development (ESD) in order to support populations around the world. The new agenda in agriculture is more than just adding environmental recommendations to current farming systems. Agriculture, and indeed the institutions, must adapt to support ecological process and function.

We can trap ourselves into a way of thinking that views agriculture as "farming" rather than as "management of a resource": a resource that can supply carbon sequestration and fresh water, provide space for recreation and opportunity for recycling, etc

Extension services must not become trapped into the language of production; rather, it must take on a language of opportunities for ESD issues.

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Five perspectives to think about the uncertainties facing agriculture

Equilibrium / non-equilibrium

We have treated agriculture as if it were an equilibrium situation and our management is run on the basis that cycles are relatively closed, with constant outputs and a small number of variables affecting this. This view is challenged by increasing pest and weed resistance, unmanageable nitrate pollution, and chemical contamination both on-farm and of the environment.

What does it mean if agriculture exists in a non-equilibrium environment? We would have to re-consider what we think of as a resource and this would be dependent on how the climate, soil or production environment evolve. A non-equilibrium environment is dependent on "patch dynamics" that take account of inherent instabilities. Agriculture may exist as a patch dynamic.

Regulation / social learning

How should we think about the social processes that will deal with these uncertainties? Economics has been a powerful influence in the way people think about the world. In this paradigm, the basic social process is the market, and if the market fails fiscal policy and regulation are used to achieve outcomes. This approach assumes a centrality of power.

From a perspective of social learning we as a society can and have to "learn our way out". We're facing a problem we have never dealt with before and a process of collective or inter-subjective learning can be a powerful tool. Through this capacity, a group agrees on goals,

mutual perceptions and the way forward. For example, we currently see that consumers are learning to mistrust food. Slick advertising campaigns are spurning this mistrust. GMO foods are appearing in the consumer market without labelling to indicate the origins of the product. These issues are being addressed through social learning and the building of societal capacity, to the extent that consumers are now driving change in agriculture.

Regulation assumes a central power that can provide the knowledge and information required for appropriate policy. We, as a society, are moving towards interactive policy-making and the involvement of local stakeholders. This type of policy making is challenging, dynamic and uncertain, but is far more effective than a centralised regulatory system. The challenges in reaching this point are that central-regulators feel that in a de-centralised environment they are losing power and de-centralisation processes don't usually follow-up with a de-centralisation of resources. This crossroad is where we are now.

Elite science / democratised science

What should be the role and nature of science? There has been a widespread withdrawal of scientists from public resources /sectors. However, as problems become more complex there is a danger in thinking that 'more' or 'better' elite science will solve the problem. Democratised science is a structured effort to build capacity at a local level to enable people to make informed decisions. The negative consequence is that there is no obvious conduit to transfer this learning at local level to policy.

Landcare, and other associated programmes such as Frogwatch, Waterwatch, Rivercare and Bushcare, are examples of democratised science that are recognised worldwide.

What we don't want in democratised science is for people to agree that it is a good idea, but ultimately find it too hard or drift away from what is empirically possible. We need to encourage people to think critically ("Why are things like that?") and build capacity to experiment and draw 'scientific' implication. It is important to recognise, however, that establishing a democratised science is not about pushing the science budget on to farmers, rather it is about establishing a systems research environment where farmers have the capacity to:

- generate research ideas and opportunity;
- build research partnerships;
- design experiments;
- undertake statistical analysis; and
- become part of a democratised science community.

Finally, democratised science is not an alternative science, but rather a complementary science to elite science that results in an extension of scientific capacity.

Rational choice / cognitive triangle

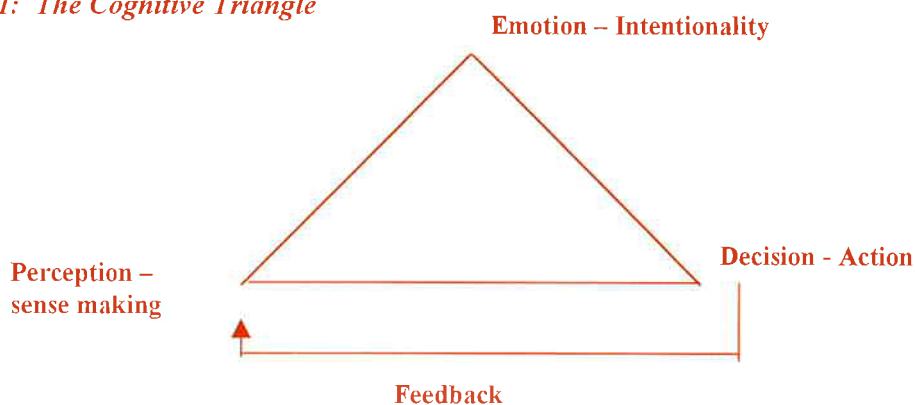
How do we think about what constitutes the "body of knowledge" and how it is used? Two Chilean biologists have challenged conventional ideas about knowledge in their investigations of how an 'organism' (their experiments involved frogs) perceives the world. They conclude that there



A perspective of the crowd who listened to Niels and Janice discuss “Four uncertainties and five perspectives”.

is always an arbitrary translation process, although it is always an empirically-grounded world that is perceived. Hence knowledge is not static, but changes with changing conditions as it is “adapted” into an empirically grounded world. “Knowledge” say the Chileans, “is effective action in the domain of existence”. Given the uncertainties facing us there is considerable possibility that the current body of knowledge may become redundant. In this paradigm knowledge is seen as an adaptive resource rather than a “body of learning” and the nature of cognition is the process of life (see figure 1).

Figure 1: The Cognitive Triangle



This model is a useful way to consider the cognitive process and ways in which this might be enhanced. For example, modelling can be thought of as a way to structure perception/sense-making. Economics has been the dominant science that has sought to explain "intentionality" - saying that people have preferences and make rational choices based on those preferences. This is however an axiomatic way of looking at intentionality. We have yet to truly explore

intentionality and environmental issues are going to be a key driver. For example, can people agree to take less?

Habermas’ rationalities

Habermas considers there are three ways of dealing with the future.

- *Instrumental rationality* – a cause and effect rationality based on control through dealing with products, markets and income.
- *Strategic rationality* –based on anticipation of the actions

of other strategic players where the objective is to win. Much of our society is based on this Darwinistic mentality.

- *Communicative rationality* - based on people coming together, reasoning and working their way out of a problem. Instrumental rationality may not solve the problems we are currently dealing with, and a market-driven society is currently failing to support a sustainable society.



Woolpro™ - Supporting adoption of technology in the West Australian wool industry

Dr Kathryn Egerton-Warburton, Agriculture Western Australia, Albany, WA.

Woolpro is a process to facilitate improved technology adoption and farm profitability throughout the woolbelt of WA. Managed by Agriculture Western Australia (AGWEST), with support from AGWEST's Wool Program and The Woolmark Company, Woolpro was modelled on the Victorian Grasslands Productivity Program.

Comprising farmer evaluations and "focus sites" (where feed profiles and pasture growth rates are measured on selected paddocks), Woolpro aims to:

- develop participants' animal and pasture assessment skills,
- provide information on tools/ 'tactics' to increase productivity and profitability, and
- enable farmers to evaluate performance of technology on farm.

Since it began in 1995, Woolpro has evolved from targeting and working with individuals to targeting and working with groups. Woolpro is further evolving as it nears the end of its current funding phase and looks to the future. There has been an opportunity to consider its achievements, and to consider ways in which those achievements could be built on in the future.

Basis for planning

For the past twelve months, the Woolpro team has been actively planning a new phase. We have asked ourselves the following

questions during this planning phase:

- What are the characteristics of the environment within which Woolpro will operate in the future (i.e. what will agriculture look like in 2008)?
- What will the future "Woolpro" look like?
- How can our experiences in Woolpro Mk I inform our planning for Mk II?
- Have there been developments in extension methodology which need to be incorporated into the way in which Woolpro operates?

Processes

To enable us to answer those questions, we have undertaken a number of activities:

- A series of vision workshops with key stakeholders (including the Woolpro Steering Committee, Woolpro advisers, Project Manager and Woolpro Co-ordinator, other Wool Program Project Managers, Program Manager (Wool)).
- Considering the characteristics of competing extension "products".
- Evaluating the current phase of Woolpro via a mail survey.
- Conducting focus groups to consider issues in relation to participation by women.
- Designing a framework for the improved Woolpro for piloting in pasture season 1999.
- Gathering additional input from participants at the 1999

Woolpro Farmers' Conference.

- Evaluating (on-going) Woolpro to improve the framework - based on learning experiences of facilitators and producer participants.
- Evaluating on-ground outcomes.

What have we learnt?

Woolpro Beyond 2000 Survey

Through the survey sent to Woolpro participants, we were able to establish:

- 60% of respondents perceived Woolpro as being moderately or very successful;
- length of time involved in Woolpro had a strong influence on changes in knowledge, skills and management practices;
- 75% of respondents tended to or strongly agreed that they had made a management change;
- 65% of respondents have more confidence in managing their wool production system;
- the role of the on-farm evaluation in bringing about change needs further consideration; and
- what respondents like and dislike about Woolpro.

Focus Groups – Women in Woolpro

As a result of the three focus groups, we learnt:

- we sometimes underestimate the value of a woman's role in the farm partnership;
- the roles and interests of women on farms, and their

participation in on-farm and off-farm activities;

- the value of direct consultation with women (rather than our guesses); and
- there are some fairly simple (common sense) actions to encourage women to participate.

Framework for Woolpro in the year 2000

We have had some terrific input into our planning for the new Woolpro.

My current thinking in relation to the next Woolpro is to look at ways to enable the farmer groups to operate more effectively; and to consider technology which will really make a difference to the performance of an individual farmer.

The general philosophy of Woolpro to date has been to get the basics right, then fine tune the system. For example, there is little point in growing additional feed during spring through the use of new pasture species when the feed deficit is in summer/autumn. Rather, can the time of lambing, flock structure, fertiliser and stocking rate be designed to achieve optimum pasture production and efficient grazing throughout a typical year?

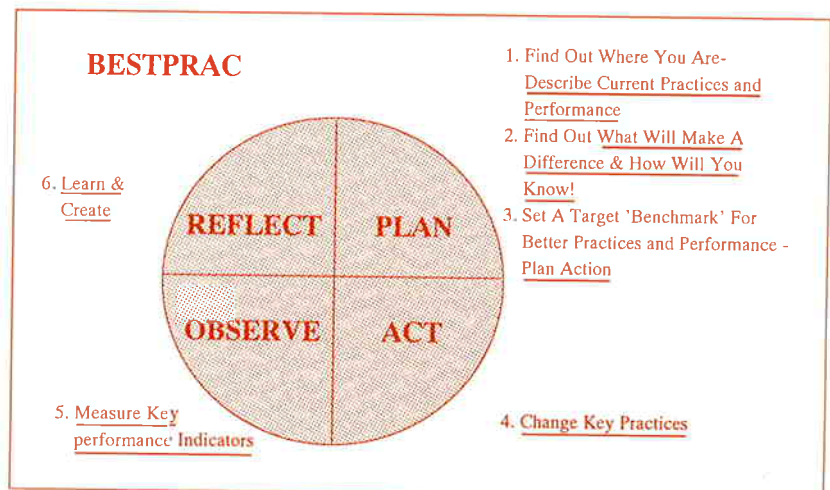
In the future, a Woolpro modelled on the Better Practices process (a structured six-step process based on the action learning cycle) will enable a clear exploration of the farming system (Situation Analysis), and consideration of what will make a REAL difference (Impact Analysis) before planning an on-farm activity. Further, group thinking may add value to an individual's understanding of the situation by introducing different experiences and ideas. It also opens opportunities for Woolpro deliverers (Agency staff and consultants) to learn in partnership with farmer participants.

We have recently received some feedback from colleagues involved in the PPP (Paired Paddock Program) project in Victoria, together with input from participants at the 1999 Woolpro Farmers' Conference. This information is still in the melting pot.

The next Woolpro will be an evolving creature (much like the first) as we learn from our experiences in working with farmers.

Acknowledgements

The concepts described here are the result of the input of many members of the Woolpro project team. I would also like to thank David Pannell for his guidance in preparing the survey. ☺



PLEASE KEEP THOSE ANNUAL SUBSCRIPTIONS COMING IN FOLKS!
REMEMBER....GET THEM IN BY 31st. OCTOBER IF YOU WANT
YOUR CHAPTER TO BENEFIT FROM YOUR SUB'S!

IF YOU ARE A NON-MEMBER AND PLAN TO JOIN AND COME TO THE WA FORUM,
 \$ JOIN WHEN YOU PAY FOR YOUR REGISTRATION AND PAY THE MEMBER PRICE!

Contact Rosemary at the APEN Secretariat for details. Contact details, page 12

