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Extending Horizons

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Setting up the PEN: APEN assists with the establishment of an extension network in the Philippines.



Participants at the initial establishing workshop for the Philippines Extension Network (PEN)

Recently APEN was awarded a grant from AusAID to help establish a sister organisation called the Philippines Extension Network (PEN). While there is an extensive network of extension officers and NRM facilitators throughout the Philippines, many of them operate in fairly remote situations with limited opportunities for contact with fellow practitioners. The extension activities of the Department of Agriculture were devolved some years ago to local municipalities, making it even more difficult for practitioners to get together much and swap ideas and information.

Past Treasurer, **Horrie Poussard** was in the Philippines last year looking at the development of Landcare in Southern Philippines, supported mainly by a multinational organisation ICRAF. While there, the issue of improving contact between Philippine extension practitioners was widely discussed, with the APEN project being the outcome.

Part of the project was the funding of an

initial "establishing workshop" which was held at University of the Philippines, Los Banos on March 1-2. Horrie along with APEN President **Jane Fisher**, was there to assist the process of establishing PEN, and to develop the basis for an on-going close relationship between PEN and APEN.

This is the first step for APEN to foster other extension networks but is in line with a continuing appreciation at national and international levels of the need for such mechanisms to share ideas and information and thus improve the skills and knowledge of extension practitioners.

The PEN project is currently funded by AusAID for this year only, although there are good hopes for a further extension of funding following a successful establishment of PEN. There may well be other opportunities for funding similar network development in other developing countries in future years.

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FROM THE CHAIR

Jane Fisher

APEN President

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Great news - APEN has a sibling! PEN (Philippines Extension Network).

I am writing this from a meeting room at the University of Los Banos, Laguna. Around me, the interim committee of PEN are energetically discussing the structure of the new organization. Well done **Horrie Poussard**, who initiated this venture following discussions with **Dennis Garrety** of ICRAF (International Centre for Research in Agroforestry) when Horrie visited the Philippines as a guest of ICRAF to look at Landcare in August last year. From small things, big things grow. An interesting snippet from a report about extension in the Philippines "Some extension workers are forced to spend several hours a day hitching to meetings" - *next time you are feeling under resourced, reflect on that!*

Amabel Fulton has resigned from the Committee of Management (CoM). Amabel has been a driving force within APEN, initiating the Tasmanian Chapter, and serving with distinction on the last National Conference Committee. Personal commitments and new professional directions have led to this decision. I hope that in the future Amabel can return to the CoM, and perhaps lead the organization.

The CoM met in Sydney in early February for strategic planning and policy development. This was the first time that the CoM has met in person other than at an annual general

meeting, and followed on from the decision to start developing policy that was made at the Melbourne Forum. It was wonderful to put faces to names, and to start to move from a group to a team with a common understanding of issues - like a definition of extension.

The meeting was ably facilitated by **Stuart McMahon** following exhaustive planning with **Greg Cock**, **Mark Paine** and me. As well as attempting to define extension, we worked on a new mission statement for the organization. More on this in the next issue. We addressed succession planning, funding for APEN, and developed a timetable for future Forums. The meeting was very productive, and much more enjoyable than teleconferencing where silence means assent. Thanks to **Rosemary Currie**, **John James**, **John McKenzie**, **Amanda Miller**, **Mark Paine**, **Terry Reid**, **John Warren**, and to **Sally Marsh**, **Greg Leach** and **Roger Johnson** who generously contributed their time and intelligence to the planning for the organization.

It is rewarding to report that two sectors - horticulture and aquaculture - are encouraging industry members to join APEN. **Les Baxter** of Horticulture Australia was particularly enthusiastic, promising support for ExtensionNet and for the Conference.

FROM THE EDITOR

Mark Paine

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What strange times we live in!

I doubt there has ever been a period when the function of extension in society was more important than it is today. Together with this demand for service has come an equally strong call for the discipline to present itself as a relevant and vibrant player in areas where the management of change is a vital aspect of work. This issue addresses these dual challenges: responding to an increasing demand for service while expressing a contemporary image.

Ian Tarbotton discusses how extension played a role in a project that was using a combination of farmer and researcher knowledge to develop a decision tool for managing the perennial problem of internal parasites in sheep. The project team used multiple methods to ensure coverage of diverse farming situations and also probing for a depth of analysis into a range of farmer decisions.

Jeff Coutts refers to a number of projects to construct his argument that extension needs to be more specific about the various roles it is playing in society. This article by Jeff is based on a presentation he gave at the APEN 2000 Forum which was considered by many

to be a highly relevant response to current issues facing extension. We therefore are publishing his article with a view to making his framework more widely available and for extending discussion about the relevance of extension in policy and practice.

Peter van Beek challenges extension to take a practice led approach to defining a place for the discipline. Peter identifies several critical actions performed by extension as a way to ensure we are relevant to the needs of stakeholders while contributing to the development of our discipline.

We are starting to receive more news from the chapters with particularly interesting information from the Philippines (**Horrie Poussard**) and South Australia (**Ray Farrelly**). Excitement is building as APEN 2001 draws near - be sure to keep abreast of developments as the conference is only six months away. Finally, following a suggestion by **John Petheram**, ExtensionNet now has an ISSN number. This means your articles are formally recognised by institutions and they therefore have more credibility within your CV or as references within project reports.

The Editorial Committee is seeking feedback and suggestions for improvement, so please send me any comments, no matter how brief, and indicate whether you want your comments published. If you have any articles for publishing please contact me.

How can farmers help us to help them?

Endoparasite (internal parasite) management is a very complex area of pastoral livestock farming. In New Zealand, farmers have no obvious "neutral information provider" following the privatisation of public extension services and with veterinarians retailing anthelmintic products. This creates difficulties for farmers when they make decisions about endoparasite management. These difficulties include the development of parasite resistance to some proprietary anthelmintic drenches and concern about anthelmintic residues in animal products and environmental contamination.

A meat industry (Meat NZ) funded research study was set up to develop a decision tool to aid in the management of endoparasites. This paper discusses the approaches used to work with farmers in the development of an appropriate decision tool.

Multiple insights enrich

The development team included a combination of people with expertise in parasitology and social research who worked with farmers to come to an understanding of their decision making related to endoparasites. This understanding guided the decision tool development process.

The approach involved focus group meetings with sheep and cattle farmers in nine regions of New Zealand. Existing networks and farmer groups, (such as the Sheep Council) assisted in the setting up of these voluntary meetings. Farmer interest in participating in the small groups to share their understanding and contribute to the decision support tool development was high. The regions were selected on the basis of differences in the type of livestock farming, climatic differences and geographic spread across the country.

The three hour focus group meetings were designed to rapidly investigate farmers' understanding of endoparasite management. A cognitive mapping software package called Decision Explorer (Brightman 1997) enables a qualitative map of decision making and strategies to be made. By projecting it onto a large screen a group can focus and form a shared decision

Combining forces to develop decision tools for complex problems

process view by starting with a *clean sheet*. The responses to questions asked of the group were added as items that were later linked to form a cognitive map of activities that formed a logical sequence. The initial question asked was "what are the activities you associate with the management of endoparasites on your farm?". A group view was constructed by ensuring no item was added to the diagram until the group universally agreed on the significance and relation of the item to others in the diagram. This approach was used to create three separate diagrams one each on general management, regional issues and information gaps. The topic category "general management" identified the management activities typical of the farmers in the focus group. "Regional issues" recorded management factors which were unique to a region and may require consideration when making recommendations for providing endoparasite information to a region. "Information gaps" were those topics where farmers were seeking solutions to problems but where they perceived considerable ambiguity in advice from service providers. The cognitive map in Figure 1 identifies *best liveweight gains* as the overall goal for the group. Three key activities were selected by the group as strategies to achieve this goal, these included monitoring faecal egg counts, minimising drenching and developing a programme with the vet. A large number of activities are required to realise these strategies in practice. Activities are often interdependent or related in some way. The arrows indicate the linkage and sequencing of activities.

Comparative analysis of information gaps identified that "the impact of boluses on drench family resistance" was a question common to all regions. Many groups were also concerned about 1) the ambiguity in advice provided on the appropriateness of dosing ewes with anthelmintics, and 2) how effective the rotation of drench families is on delaying the development of resistant strains.

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Other forms of data collection used during the focus group meetings were audio recordings and written questionnaires. The transcriptions of audio recordings gave insights into farmer reasoning and the basis of debates thereby aiding with interpretation of the output from Decision Explorer.

Focus group participants completed a written questionnaire to describe the demographics and farming systems represented in the groups. This questionnaire also asked about information sources and key people who had informed the farmer about endoparasite management. Veterinarians were the most important informant to the farmer on this topic.

Another questionnaire was completed by participants looking at paired comparisons of six management aspects compared with the farmers' own management. A map of farmer beliefs was then generated to identify which aspects of farm management were closely related to the management of endoparasites. Profitability and animal health were the two aspects most closely associated with improving the management of endoparasites.

A feedback comment from one farmer participant was “we could have met together for a week and would not have gained the depth and completeness that this meeting has”.

A planning approach to decision making could provide the basis for integrating monitoring with control strategies.

Farmers emphasised the need for long term benefits rather than focusing on a short term gain (e.g. this season).

A feedback comment from one farmer participant was “we could have met together for a week and would not have gained the depth and completeness that this meeting has”. A summary of outcomes from the focus group meetings were sent to all participating farmers. This included a two page summary of key points that compared results across regions.

In planning the focus groups and during other parts of the study veterinarian input was also gained. Veterinarians said they would like a decision tool that assisted with planning endoparasite management on a seasonal cycle. Some veterinarians were seeking a decision tool that will assist them to give advice that farmers see as independent from any sales activities related to animal remedy products. A forward planning approach that has a medium to long term focus would help to make the purpose of any purchase decisions clear because the attributes of the product would need to be made explicit in terms of contribution to the overall plan. Veterinarians also discussed the benefits of farmers monitoring (e.g. lamb live weights) to help to objectively measure changes in performance and make changes to the original plan. A planning approach to decision making could provide the basis for integrating monitoring with control strategies.

From discovery to design

Results from scientific research are not often released in a form that is amenable to direct uptake by farmers. An appreciation of farmers’ world view is necessary to understand their needs. In this endoparasite project a process was used to incorporate farmers’ views, knowledge and needs in the design process. The practicalities of doing this can be daunting but with robust project planning and the use of appropriate tools like Decision Explorer and focused written questionnaires, useful insights are attainable. In this case participant feedback showed that they valued being part of comprehensive focus group discussions on the topic. The challenge was how to incorporate these findings into a decision tool for farmers that would be easy to use and understand.

The farmers said they wanted to plan the management of endoparasites but they explained that their primary mode of opera-

tion is more one of *trouble-shooting*. In Figure 1 the development of a programme with the vet refers to this desire for forward planning or having a programme for endoparasite management. This planning approach is consistent with the moves in the agricultural industry toward product traceability and quality assurance (QA). Therefore, one design criterion for the decision tool was the facility to enable and encourage planning to be undertaken. A decision tool that enabled effective planning would therefore diminish the stress and risks to poor animal performance arising from trouble-shooting.

A planning approach has implications for the way information is used in the decision making process. Planning is a process (ie. a way of performing the management action) rather than treating information as a prescription or a final solution. A planning process approach to information considers situational and seasonal variables when managing endoparasites. Farmers want to have access to third party support when they develop their plans. This second design criterion for the tool specified an ability to enhance participatory approaches to decision making and enable farmers and service providers to incorporate unique farming situational variables into the decision making process. Examples of these variables include pasture species, stock policies and resistance problems. There was a fear that anthelmintic resistance would reduce the options available to farmers. This had led to the need for a longer planning time frame. Farmers emphasised the need for long term benefits rather than focusing on a short term gain (e.g. this season). This time dimension related to a third design criterion whereby the tool needed to support decision making in relation to the financial performance of sheep and cattle enterprises.

Distinct differences were revealed between the regions which raised a fourth design criterion. These differences require a planning approach that is robust across regions and farming systems. The researchers came to the realisation that there are three levels of information support to farmers managing endoparasites:

National — those technical facts or prin-

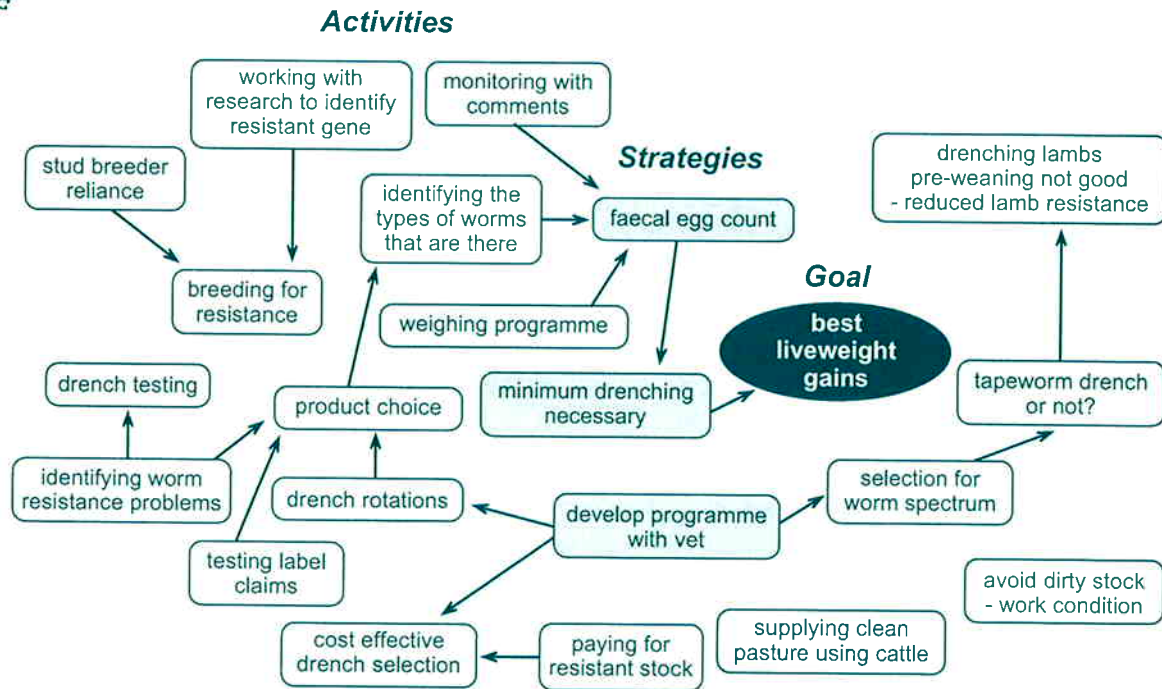


Figure 1: Cognitive Map

principles which apply across the whole country

Regional – the information that applies to a region with particular climatic and farm system features. Some of this information will apply to multiple regions.

Individual farm – the information tailored to a particular farm with its own system, history, scale and management.

Where to from here?

Involving farmers in the development of a decision tool ought to improve the likelihood of delivering to farmers' needs but is also an important learning experience in its own right. Prior to the focus group meetings a key direction of the programme was to produce a manual so farmers could understand the biology of parasitic nematodes. This science push approach suggested that an exhaustive understanding of the information was necessary for effective management outcomes. This was also based on the assumption that acquiring the right knowledge would effect behaviour change, when often knowledge is just one contributing factor. Following the exploratory focus group meetings the whole emphasis was changed to one of supporting the forward planning of endoparasite management.

A decision tool has been produced which is designed to encourage the devel-

opment of a 12 month plan for endoparasite management. A key feature of the tool is a decision tree that embodies a sequence of questions arranged in a way to promote effective diagnostic analyses and information searching routines as part of the process of developing the management plans. Two farmer groups, along with a sample of veterinarians, will evaluate the tool prior to its release to a wider population of service providers and farmers.

For complex management topics such as endoparasites the interdisciplinary approach linked with considerable farmer input was a valuable and effective way to progress the development of decision support.

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References

- Brightman, J. 1997. Decision Explorer Users Manual. Banxia Software. Sage Publications, London.
- Tarbotton, I.S.; Paine, M.S.; Heath A. 2000. Technology attributes for farm decisions – management of endoparasites. Proceedings of the New Zealand Society of Animal Production 60: 30-35.

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Five Domains of Extension

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What has been missing is a clarification of the domains in which extension now operates.

Extension's role in such policy processes is increasingly being recognised and sought after.

Introduction

Extension was once referred to as the handmaiden of research. Over the last decade or so however, extension has emerged as a discipline in itself. In so doing, practitioners and academics redefined the meaning of the term extension as going beyond technology transfer (Coutts 1994). In the late 1980's Roling (1988) wrote a book entitled Extension Science which provided a watershed in the way extension was viewed and used. Since then, extension's role with respect to research has been renegotiated.

The baggage of the metaphors associated with extension (that is: an extension of university teaching; extending research; extension lead or ladder etc), however, means that debate about terms, definition and function continues. Some practitioners are shying away from the term extension and reaching for names such as innovation specialists or development officers. On the other hand, other groups are beginning to associate themselves with the term as they recognise what the discipline has to offer them in their work, industries and communities.

What has been missing is a clarification of the domains in which extension now operates. By clarifying these domains we can take the discussion further and better position extension in the policy and the total Research, Development and Extension (RDE) environment.

This article explores extension's relationship with research by describing five distinct, though complementary and sometimes overlapping, domains of extension.

Extension and its relationship to research

Extension domains

Extension is increasingly being seen as having a role independent of research (as well as interdependent with research). An overarching role for extension has also emerged – that of monitoring and evaluating the RD&E processes for development. I believe that these different roles can be captured under five distinct though complementary domains of extension. My thinking about these domains was inspired by Owen's 5 forms of evaluation (Owen 1993) where evaluation was shown to have an overt role at all stages of a project

rather than just as a tack-on at the end. Likewise, in the past, extension had been viewed as coming in after the research had been completed. We now need a framework to think about extension that is occurring beyond this limited domain.

The domains I propose are:

Domain P: Defining (policy and) RDE needs and Priorities

Domain L: Facilitating Linkages with formal (policy and) research

Domain X: Facilitating information eXchange and access

Domain I: Facilitating Informal research and learning

Domain M: Researching (policy and) RDE Methodologies and processes.

These domains will be dealt with in more detail later.

Policy

At the risk of increasing the complexity, I have flagged policy in some of these domains. RD&E occurs within a policy and legislative context, and extension is increasingly seen to have a role in interactive policy development (Van Woerkum 1995). Morris et al (2000) in their paper entitled Negotiating environmental and production outcomes in practice, brought attention to work they were undertaking in New Zealand at the interface of extension science and political science. They pointed out that...in both agricultural and environmental areas, policy processes involving discussion documents, proposed policies, submissions, hearings and appeals through the courts are familiar to us...But whether these processes are leading to effective policy that will deliver sustainable outcomes in economic, social as well as environmental terms has been questioned, particularly by land managers. (p6) Extension's role in such policy processes is increasingly being recognised and sought after.

Players

The domains of extension are moving away from the public/private divide. Players in each domain can come from a range of groups involved in extension at some level. These players include: public extension (increasingly directed at natural resource management issues) [Pub]; privatised/commercialised or user-pay extension services [Priv]; industry based exten-

sion services [Ind]; consultancy services [Con]; and community extension [Com]. Also, as the Queensland Department of Natural Resources extension strategists are showing, the extension function is not necessarily limited to those staff with designated extension roles. Likewise, landholders and community persons fulfil extension functions in a number of these domains.

Domain P: Defining (policy and) RDE needs and Priorities

Traditionally, extension was 'out there' working one on one with the farming community. Government RDE programs informally received the information they needed to determine farming needs and research priorities from this source. With the reduction of such close association in day to day activities with the community, new processes have been needed to work through and capture needs and priorities of landholder and community groups. Increasingly, the 'needs' and priorities of a highly urbanised nation need to be brought into the equation as society attempts to come to terms with multiple claims on land use (Roberts & Couatts 1996).

It is in this domain that extension skills and processes are providing the breakthroughs. Morris et al (2000) provide an example of the role of extension applicable to this domain. The context was farm dairy effluent and the interplay between practices – farming; advising; researching and policy. Practice theory formed the basis of the investigation. Techniques including (modified) Rapid Rural Appraisals, workshops, surveys and interviews were used to highlight issues and gaps. These techniques found...significant misalignment between researchers', farmers', extension and policy agents' perceptions and expectations of factors required for effective farm dairy effluent management (p9) and...provided a process that identified opportunities to improve stakeholder competencies and alignment, and agreed strategies that would enable continual improvement and strengthening of the technological change. The authors concluded that:

*...further development of this model has the potential to break through into a **policy development paradigm** that fits much bet-*

ter the collaborative, multi-disciplinary, integrative way of doing things that is essential for making progress on many of today's policy programs (Morris et al 2000 p9) (my emphasis).

Domain L: Facilitating Linkages with formal (policy and) research

Traditionally, research applications to funding bodies had to nominate how the extension component would be carried out. A survey of final reports and new proposals carried out by Woods et al (1993) concluded that...most activities described in the technology transfer component were aimed at the awareness stage of the knowledge assimilation process (p19). They did note however, that...more new projects involved end users in the research process, used existing groups for information dissemination or formed new groups to enhance the adoption process. This trend has grown through the 1990s, and the concept of co-learning groups has developed.

One example of the co-learning approach was that undertaken within a New South Wales Agriculture project (funded by the then Meat Research Corporation) aimed at establishing Lotus (a pasture legume) in the grazing system. Producer groups were linked into the formal research program from the outset of the project. Existing groups (chiefly Landcare groups) as well as specially established groups were used. Lotus sites were planted on farms as a basis for farmer learning in tandem with formal trials on the research station. A conclusion of the final evaluation of the co-learning component of the project was that

...the key and consistent element that characterised stakeholder understanding of co-learning was that of mutual learning – that learning occurred in all groups and was not just one-way. The co-learning sites were clearly not just demonstration plots transposed onto farms, but were genuine opportunities for researchers, district agronomists, company agronomists and producers to learn more (quickly) about how Lotus responded to a range of climatic/soil and managerial situations. (Bilston et al 1999 p 30)

I include more traditional awareness and

technology transfer in this domain – those activities to assist the appropriate industry or community to be aware of formal research outcomes and their relevance.

Domain X: Facilitating information eXchange and access

Traditionally, extension officers provided a strong information sharing role as they moved from farm to farm. They had some knowledge of research being undertaken, what was in the farming journals, and what different producers were doing on their farms. They handed out fact sheets and booklets and put people in touch with the 'experts' and/or other farmers who had tried different approaches. They were at the end of the telephone when needed or in the local bar for informal discussions about whatever was current at the time. As extension officers moved away from this one-on-one interaction, new methods of facilitating information exchange have had to be developed.

The development of comprehensive crop notes, booklets, manuals and workshop packages have to some extent come in to fill this gap. Property Management Planning, FarmBiz and other workshop approaches have sought to provide relevant and current information in cohesive and timely packages. Call centres have attempted to fill in the gap left by fewer extension officers at the end of an ad-hoc phone call.

The internet is increasingly replacing filing shelves in farms and in government offices – but without the personal touch to assist people in the maze. Easdown (2000 pers com) points out that there is a huge need for cyber extension officers who can provide information pathways and link people with the information and experts through the internet.

Domain I: Facilitating Informal research and learning

In this domain, there is no essential link between the formal research process and the role of extension. Research becomes one of the many information sources which landholders or communities may