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8. Research and extension services

**ENHANCING THE ROLE AND IMPACT OF FARMER BUSINESS  
NETWORKS/ADVISORY SERVICES ON NEW ZEALAND'S AGRICULTURAL  
KNOWLEDGE AND INNOVATION SYSTEM [AKIS]  
- THE RURAL PROFESSIONAL PERSPECTIVE -**

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**Abstract**

*The Agricultural Knowledge and Innovation System (AKIS) is a concept that describes the different organisations and individuals involved in the process of innovation adoption and their links. Organisations are seen as the traditional source of advice, and historically, this was led by government institutions. In developed economies, disengagement of government from information and advice provision has led to a rise in the privatisation of the service leading to a complex set of interrelationships.*

*The aim of this project was to provide recommendations for improving the performance and effectiveness of advisory services in strengthening the knowledge flows between science, in its widest context and practice, and the farming community, and with particular emphasis on the needs of the farmer.*

*This was achieved through a series of interviews with individuals involved in the provision of advice to the farming community based around findings from an initial discussion with cropping, dairy, and beef and sheep farmers.*

*The study found that in order to take the industry forward there needs to be a more cohesive extension programme involving rural professionals engaged in clearly defined roles to support farmers through their decision-making processes.*

**Keywords:** Agricultural Knowledge and Innovation System (AKIS), farm decision making, advisory services, rural professionals', adoption, innovation.

## **Introduction**

In the broadest sense, Agricultural Knowledge and Innovation System (AKIS) is the interaction between scientists, rural professionals and the farming community (see Rolling, 1986; EU SCAR, 2012). In order to better understand AKIS in the New Zealand context, we developed a qualitative semi-structured approach with the following objectives. First, to determine how farmers make decisions and who influences their decision making processes the most. Second, to identify what farmers are looking for from their business networks/advisory services. Third, to establish what best facilitates the flow of information/knowledge/advice between the farmer and his/her business networks/advisory services. Finally, to provide evidence for the current and future role of farmer business networks/advisory services towards increasing the rate of diffusion and adoption of ideas and innovative practices, including sustainable agricultural practices.

The research had three key phases. First, an appraisal of advisory system practice regarding what might be considered new or novel and also best practice through a review of available literature. Second, consultation with the farming community through a series of sector-specific focus groups and a subsequent questionnaire survey<sup>1</sup>. Finally, consultation with the wider agricultural sector through a series of interviews with individuals involved in the provision of advice to the sector, based on findings from the first two phases.

This paper focusses on phase three of the project.

## **Material studied/area description/methods**

### *Rural professional interviews*

In designing the study a methodology was needed that would provide detailed insight into the role of rural professionals in farmer decision making. A qualitative approach, involving interviews with rural professionals, was used as an appropriate way to explore their perceptions and perspectives of farmer decision making processes (Madsen and Adriansen, 2004). The literature review and farmer consultation stages were used to inform the design and conduct of the rural professional interviews. The interviews were

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<sup>1</sup> Paper presented at this conference, Schröer-Merker, E., Bailey, A., Perrier, T., Kartikarisari, A. Kambuta, J. & Old, K. Enhancing the role and impact of farmer business networks/advisory services on New Zealand's agricultural knowledge and innovation systems [AKIS]. The farmer perspective.

semi-structured adapted according to the role and the responses of the interviewee (see, for example, van den Ban, 1993). These complimented the earlier phases of the research by providing further insights into the decision making process of and influences on the farming population of New Zealand

The target audience for the advisory service and wider stakeholder interviews was based upon prior knowledge of the institutions and individuals known to provide advice and information and around the individual organisations identified in the farmer focus group discussions. An effort was made to cover both the North and South islands. Interviews were conducted over the phone, or where convenient, in person, and designed to take about half an hour of the respondents' time. Notes were taken at the time of the interview and then written into a coherent commentary immediately thereafter. These were then reviewed to produce an overview summary of key findings from the consultation.

Two approaches were used to encourage participation. A request was sent out via the NZ Institute of Primary Industry Management e-newsletter outlining the project and inviting participation. Individuals known to the research team were also approached directly.

An interview guide was prepared, comprising an opening statement regarding the project purpose and process focusing on the nature of farmer engagement through the focus groups and questionnaire survey. This was then followed with a series of guideline questions and topics to be covered, with the interview itself taking direction from the initial responses to the questions asked and identified topics of interest.

In the case of each interview, the questions covered the sources of information that respondents thought that farmers were using, how much/how often, why and for what purpose. Specific attention at this point was paid to the types of information and advice being sought. The respondents' thoughts on the value of the different types of information and advice that they and others provide were then sought, focusing in turn on each source covering that which is publicly available, provided by levy organisations specifically, and then that provided by private companies. A question was also asked on what engenders trust between the source of information or advice and the farmer.

Respondents were then provided with the initial key findings from the focus groups and asked to comment on each in turn if they so wished. The findings presented covered the key sources used by farmers; how the sources are used whether for strategic decisions or operational decisions, from awareness raising to implementation; the types of information

being sought; and how the focus group respondents perceived the value of advice including what engendered trust for them.

Thoughts were then sought from the respondents on opportunities for improving information and advice flows. Reference was also made, where appropriate, to the comments provided by farmers in the focus groups.

## **Results**

### *Participants*

Thirteen interviews were conducted with rural professionals from across the industry representing dairy, sheep and beef, and cropping farmers in the North and South Islands of New Zealand. It included those working within or on behalf of the levy organisations, individuals from cooperatives and private businesses both supplying and sourcing products from the farming community, and private consultancies and advisors, including those in the financial sector.

### *Types of Information*

The responses from the interviewees suggest that there are four key reasons that farmer seek information and advice. First, for “reassurance” and “to reaffirm their own thinking”. Essentially, they are looking for confirmation that “they are being effective in the same way as other farmers”. They also want to confirm, if they are considering a change in their system, that it is likely to be successful.

Second, it is about “knowing or trying something new”. It is also about “knowing where things are heading and keeping ahead of the market”, or simply “finding better ways of doing things that are simpler and/or more profitable”. It was also suggested that farmers will actively seek information when something requires “a degree of theoretical basis”, scientific integrity is important, “they want someone who does understand, or the farmer thinks understands, to advise them”.

Third, information and advice are sought in relation to where immediate needs are because of issues that have arisen, or because of ongoing compliance requirements. Three subjects were mentioned: the seeking of advice on policy changes and implications for the farm operation; the ongoing need to manage health and safety; and the desire to find information

related to disease control. The emphasis here is on “asking what others have heard”, in particular other farmers’ consideration around the issues and concerns.

Fourth, the time of year will determine the type of information and advice that is sought. This may be linked to “annual plans”, or “seasonal concerns” as they arise. The emphasis is on information and advice related to the day to day decisions, because “farmers have enough to do there”.

Related to the above four areas was the comment that there is a need within the farming community to improve business decisions, financial skills, planning, and management, although the perception is that farmers “do not relate so well to this”. The tendency is for the focus to be on the day to day operations with information sought on which to “analyse options, base the decision and take action”.

### *Sources of Information*

In considering the sources used, the interviewees commented that a farmer would tend to get information from two to three different sources to then base their decision on. For example, they may “get an idea from a field day, talk with a neighbour, and then talk with a consultant”. The order from which they source information changes depending on the topic and circumstance. The amount of information and advice they seek is also dependent on the farming system, as “different farms and farmers will have different needs” in terms of their everyday demands. This will also be dependent on the season. It was also noted that there are “generic sources” of information and sources of information about something more “specific”, and thus sources will vary depending upon the decision making context.

Whatever the context, the comment was made that relationships are important. Farmers are reliant on the relationships that they have developed. “Leading farmers” would be more active in sourcing out information. A comment was also made that an individual’s “upbringing” sets the context for future interactions. An individual will tend to “associate with people from similar backgrounds”. This could mean they may have a “fear of the professional” and do not feel comfortable with them, primarily to do with differences in language, lack of confidence, and the fear of feeling foolish.

### *Value of Information*

Interviewees were also asked to comment on their perception of value of the different sources including themselves as rural professionals.

An important initial source of information comes from printed media, online resources and events, although it is difficult to know their “true impact”. They are perceived as valuable in triggering awareness, and can be a “valuable education and learning tool”, but only in the context that farmers “pick and choose what they want to read”, where they have an interest.

Events provide “the possibility of accessing further additional information” once that awareness is created, although the events may only be seen as “an opportunity to catch up with other farmers”. Events “well attended are considered a success, but they are missing the next vital link”, “supporting farmers to make a change”.

Peer to peer talking was seen as important for sharing information. The comment was made that if they “see a peer doing it they are potentially more likely to try it”. Some concerns, however, were expressed in that peer to peer discussion “just reinforces what farmers” as individuals do and as such provides “no value”, that they may just be “sharing ignorance.” Discussion groups were seen as having more potential if there was “excellent facilitation”, “relevant topics”, and the involvement of industry specialists with some form of planning, goal setting, and monitoring of progress.

In considering the value of discussion groups, events and field days, alongside printed and online media reference was made to the role and importance of the levy boards. Although seen as “proactive” and “beneficial” to their sectors, concerns were expressed about the “lack of any ongoing relationship” with farmers, and the “limited opportunity for one on one” information and advice provision. The levy boards were seen as “trying to do well”, however, the perception was that they do not always succeed.

Suppliers, vets, agents, and processors are seen as being there to make life easier, the technical experts that are keeping the farmers informed about new products, compliance, and pricing. Emphasis is on the day-to-day operations, and the “continuation of the commodity cycle”, nothing more, “more regulation than extension”, although there is “an element of support liaison”.

In the case of both consultancies and the financial institutions, there were suggestions that these should take on a greater governance and strategic role. The consultant has a role through “coaching”, “growing their client’s capability in farm management” and “reducing dependence” to achieve “a more resilient farming system”. The limited use of

consultants is seen as a result of the “reluctance of farmers to pay for anything”, and a reflection of the “lack of quality consultants’ available”.

The involvement of accountants, banks and lawyers is also seen as currently limited, focused on “a compliance type service” more to do with “hindsight” rather than “a forward-thinking service”. This is seen as an issue in the industry that needs to be addressed. Accountants, it is felt are “safe and trusted”, and “switched on farm accountants can provide good value”. Rural bank managers also have a role in a number of areas as it takes “finance to move things along”.

In considering the public sector, it was suggested that the research undertaken by the Crown Research Institutes and University sector was not applied enough for them and thus “not easily translated into the field”. Government institutions were seen as compliance focused, with farmers resistant to being told what to do. This situation was not aided by ongoing policy and legislative changes and confusing language, thus the difficulties in the translation of the key messages that these institutions were trying to deliver.

In comparing the role of one-to-one information and advice provision and that provided within a group situation, it was suggested that the one to one situation provides more “tailored information”, is “more likely to have an element of trust” and thus can be more effective, although the cost can be prohibitive, and the “quality of individual advice can be questioned”. In a group situation, there is an opportunity for “evaluation” and the “progression of ideas, information and knowledge with others” can be effective due to the range of “thoughts and opinions”.

### *Trust – Building Relationships*

Trust plays an important role in determining whether information or advice is acted upon, “without trust there would be no confidence and no relationship”. Trust was seen as taking time to evolve with “relationships developed over an extended period of time”. “Reputation” was also indicated as important, “farmers talk to other farmers”, and will tend to “trust people that others use”.

In addition to individual relationships, it was noted that “the image of an institution matters”. For a new individual, “the brand and history of the organisation they work for can help them gain the trust of their clients, faster”.



Alongside this is the “confidence” of the rural professional, their “experience”, “impartiality” and “reliability”. An individual also needs “a level of empathy and understanding of the situation”, a key factor is that advice is built on “listening to the client”. Trust will be developed with “credible”, “pragmatic”, “accurate information provision”, and “relevant” to what is needed. Information or advice that provides “achievable solutions” and “that has impact” will also facilitate trust.

### *Improving Information Flow*

In considering the adequacy of information and advice provision, a number of comments arose. It was recognised that a vast amount of information is available, but there is so much it could be “overwhelming”. Additionally, farmers have to “hunt for the information”, and it was suggested that the problem is that when farmers search they do so “infrequently” that “it is not intuitive”.

A number of suggestions to improve provision were made. In terms of content, it was suggested that information needs to be provided in a more “timely fashion” and “required consolidation”, recognising that all organisations have “a part to play”, but that there is an “overarching need for collaboration”. To facilitate coordination, careful consideration should be given as to “where each organisation is best placed to operate and deliver benefit”, as “an individual organisation cannot be everything to everyone”.

It was also felt important to “have a plan around extension” to take an individual from “awareness to a different action or outcome on the farm from what previously has been done”. This would have to be “needs driven”, “funded by farmers”, and also “industry rather than government led”. This would also require “better thinking” on how advice is delivered through “a series of coordinated interlinked activities”.

It was recognised that “people make things happen” and that “individuals are important”. Related to this was the suggestion that the “level of professionalism” within the industry “needs to be raised”, both those providing the information and advice, and the farmers making use of it.

## **Discussion**

It is evident that there is a plethora of information and advice available to the farmer, particularly regarding operational decisions. In relation to more strategic decisions and information regarding new technologies, innovations, and practices, farmers will also

spend time and money trying to source information, where they have an interest, but not necessarily always finding the specifics that they need. This is where there is a role for the wider industry as conduits for independent and impartial knowledge to both meet and stimulate demand.

To engage farmers, and for real learning to take place, there needs to be a shared process. Cooperation provides reassurance. In this context, there is also a role for a lead farmer supported by industry facilitation. The lead farmer's role is effectively as a champion for new ideas and initiatives, there to lead in, and guide others in, implementation. They also have a role in enabling other farmers and industry experts to work more closely together.

These farmer groups should be supported by the allied industries, including the financial institutions. Rural bank managers and accountants associated with individual farm businesses can drive professionalism by taking on a greater governance and strategic role to facilitate leadership in the industry. The groups can then be additionally supported by appropriate coordinated advice from relevant industry experts/specialists. There is also a need for some form of mentoring or coaching process, with some knowledge exchange specifically targeted at rural professionals rather than the farming community.

To facilitate collaboration in the industry there is a need for a realignment of industry roles. Whilst overlap between organisations will and should remain, individual farming groups should be able to have some clarity regarding which organisation or individual within an organisation is best placed to support the group in their decision processes. There is also a potential greater role for research institutions in both providing material, but also engaging more directly with the individual farming groups.

There needs to be a defined extension programme, with targeted projects for individual farming groups. Collaboration and engagement with various organisations will need to be enabled and supported by a facilitator. For this to work, the focus has to be on the needs of the farming groups.

Given that these groups will be led by farmers, facilitated and supported by the industry, they should be funded by farmers.

With the premise of making use of existing farmer professional and social networks, there remains the question of how to get greater uptake by others in the farming community with more limited networks. To facilitate this requires a rural professional lead, an individual such as a bank manager or consultant, paired with a lead farmer and technical experts if

required. This allows both theory and its relevance to the farm business to be demonstrated. Pairing the experts with a farmer is a good technique for generating trust in the information or advice, such that another farmer may be more likely to act upon the information or advice received. This constitutes a move away from allied industry facilitation to a farmer to farmer mentoring role.

## **Conclusion**

The best way to facilitate the flow of information is through developing farmer's professional and social networks. In order to take the industry forward, there needs to be a more cohesive extension programme involving rural professionals engaged in clearly defined roles to support farmers through their decision making processes.

To achieve this the following is recommended:

1. The industry good levy bodies should take the lead in directing the future of the primary industry sector.
2. Farmer learning groups should be established with a lead farmer and guided by a levy board facilitator.
3. There should be a team that supports the farmer learning group across all sectors of the industry.
4. There needs to be a realignment of industry roles and increased professionalism in the industry. This should include an element of mentoring/coaching.
5. There should be a defined extension programme providing an overarching umbrella to the individual farmer learning group project based goals and planned changes.
6. The programme should be funded by farmers. Levy board monies should be used in the facilitation of the programme.
7. To facilitate wider dissemination to others in the farming community, there needs to be involvement of both rural professionals alongside a lead farmer. This could include a searchable database of lead farmers on appropriate industry levy body and rural professional websites.

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