Congress sub theme 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 FARMER PERSPECTIVE -

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Academic Paper

Word Count: 3336

March 2019 - ISBN 978-92-990062-7-6
www.ifmaonline.org - Congress Proceedings

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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 in terms of 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 via consultation with the farming community through a series of sector-specific focus groups and a subsequent questionnaire survey.

The study found that farmers make decisions on the basis of a continuum of awareness creation through careful consideration and onto adoption/implementation. The types of information that farmers are looking for relate to three areas: business, operational, and compliance. The best way to facilitate the flow of information is through a farmer's professional and social networks.

Keywords: Agricultural Knowledge and Innovation System (AKIS), farmer focus group, farmer decision making, advisory services, 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 objectives to determine how farmers make decisions and who influences their decision making processes the most as well as to identify what farmers are looking for from their business networks/advisory services. We also sought to establish what best facilitates the flow of information/knowledge/advice between the farmer and his/her business networks/advisory services and to provide evidence for the current and future role of farmer business networks/advisory services with a view 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. 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 focus group discussions.

This paper focusses on phase two of the project.

Methods

Farmer focus groups

A farmer focus group is defined as a homogeneous group of farmers engaged collectively in a process of harvesting and sharing information, on a specific topic and with pre-defined objectives (Barriball et al., 2005). This qualitative method is a good way to capture attitudes and feelings of farmers to highlight their main concerns that can sometimes be unknown by the researchers (Agricultural Marketing Resource Center, 2009). The focus groups were used to explore sources and types of information being used by farmers and their value, and to identify gaps in the provision.

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Six focus group discussions (FGDs) took place, three in the South Island and three in the North Island. In each island, the FGDs were deliberately stratified into three distinct groups: dairy farmers, sheep and beef farmers, and crop farmers.

Brainstorming

In order to identify the sources of information they use, farmers were asked to identify each source on a single post-it note. These notes were collated and displayed on a white board. This enabled all individuals to contribute to the process and to see what was identified by others. Through the same process, participants were asked to identify the types of information they are seeking.

Discussion

General discussion on both the sources and types of information then followed, for which a semi-structured approach was used. As part of this participants were asked questions to establish the main purposes for which they use each source of information. Discussion also covered the reasons for not using particular sources of information. At the end of this, the participants established a ranking according to the importance of different sources.

The next area of discussion focused on the value of different sources of information and advice provision. Questions covering provision of information from suppliers, customers research sectors, specifically Crown Research Institutes (CRIs) and Universities were asked, with reference also made to advice that is paid for versus advice that is free, and advice provided in a group situation versus advice that is provided to the individual.

The last part of the discussion focused on two areas. First, establishing individuals' opinions on the factors necessary to build a relationship of trust between the farmer and the advisor. Second, on the overall adequacy of information and advice provision, specifically asking if anything or any process is missing.

To conclude the discussion, the main ideas that emerged were summarised and verified by individual participants. It was explained how the results would be used.

Participants were also requested to complete a form providing information about themselves and their farming system.

Transcription and summary

In addition to the facilitator, a note taker was present to record the discussion, which was also audio-recorded. Subsequent to each discussion, notes were written up and recordings checked to produce a report for each group. These were then reviewed to produce a summary of key findings from the focus group discussions.

Results

Participants

In total there were 33 participants in the FGDs comprising a mix of positions and farm types (Figure 1, 2). It is important to note that many of the identified sheep and beef farmers also had some degree of cropping and vice versa. There was a wide range of farm sizes and levels of education. One participant was not a farmer and was there representing a levy organisation.

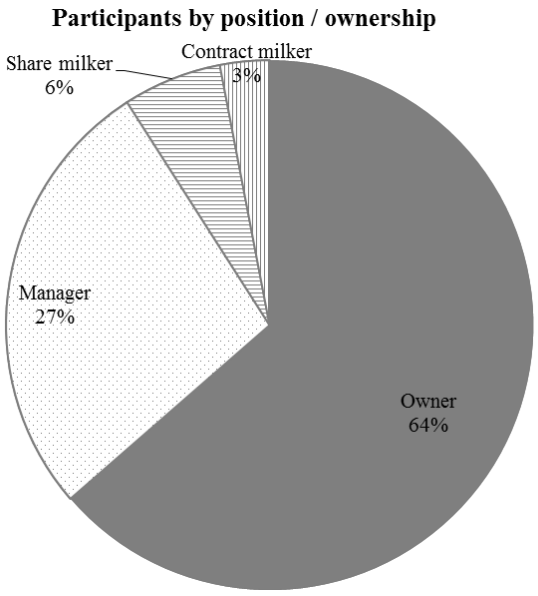

Figure 1. Participants by position/ownership.

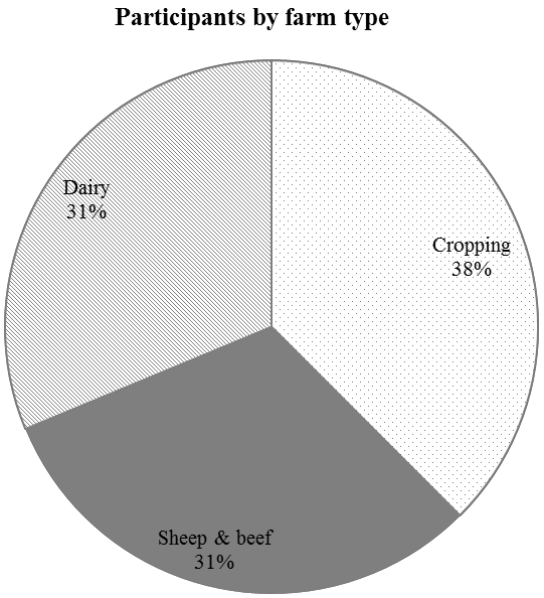

Figure 2. Participants by farm type.

Types of Information

Dairy farmers were most interested in financial, benchmarking, risk management, and tax planning information. Participants in the cropping, and sheep and beef focus groups were more interested in information related to their productive activity; cropping respondents were particularly interested in finding out about innovations and new technologies, soil

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and crop management, market prices and related trends, while the sheep and beef participants were more interested in production systems generally. All participants focused on the financial and productive elements first or second as types of information and advice required. Animal health was also important to those with livestock.

Other areas mentioned were related to investment, but also included getting more information on, e.g. staff management.

Compliance came out as the final, but to some extent, least important area. Farmers are seeking advice in this area not necessarily because they want to but because they have to in order to meet regulatory requirements.

Sources of Information

The sources from which information was sought depended to some extent on the farm type (Figure 3). A wide range of sources of information and advice were used by participants. The graph indicates frequency of mention by individual participants.

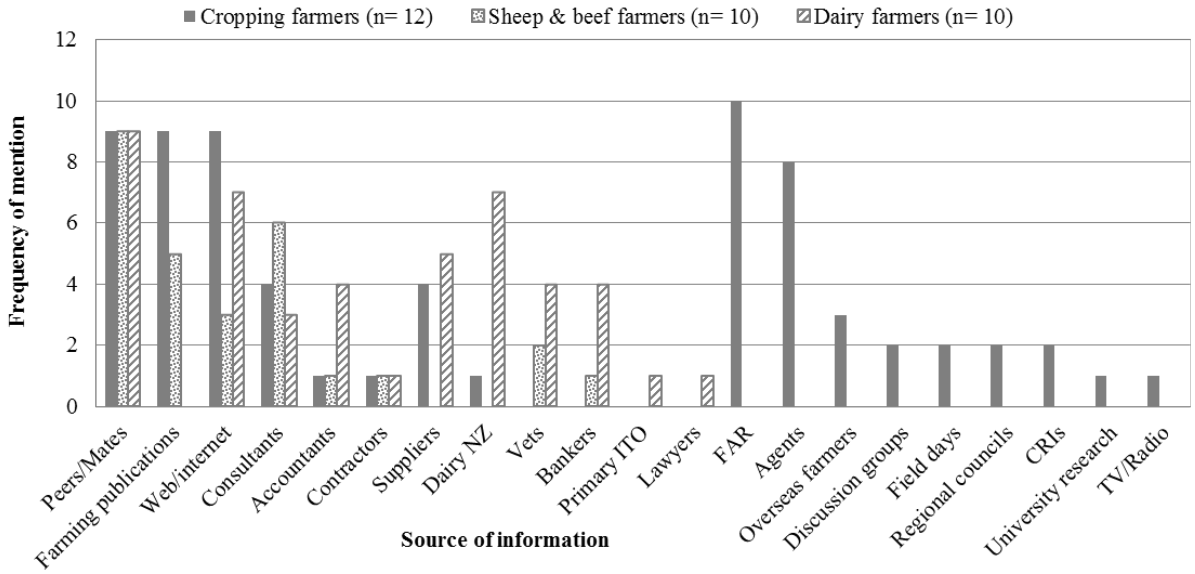

Figure 3. Key sources of information and frequency of mention by farm type.

There is evidence that participants use similar sources. To get information all rely on their mates and peers, the internet and the press. Specific reference to the levy based industry organisations as a key source was mentioned in the dairy (Dairy NZ) and cropping groups (Foundation for Arable Research, FAR).

Agents and suppliers came out as very important in the cropping group; consultants more so for sheep and beef participants; and suppliers, vets, accountants and bankers for dairy

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participants - these were also mentioned by the sheep and beef participants but to a lesser extent.

The order of priority through which information is sought, from general issues to more specific, commonly starts with internet sources (Figure 4). Initial awareness around subjects is also raised through the printed media and networking opportunities. Further details are then sought from the participants' peers, especially in terms of how well particular interests or new ways of doing things have worked out or not. A common medium for this is through individual farmers or, where established, small farmer discussion groups. It was noted that different farmers are good at different things and thus different individual farmers may be consulted.

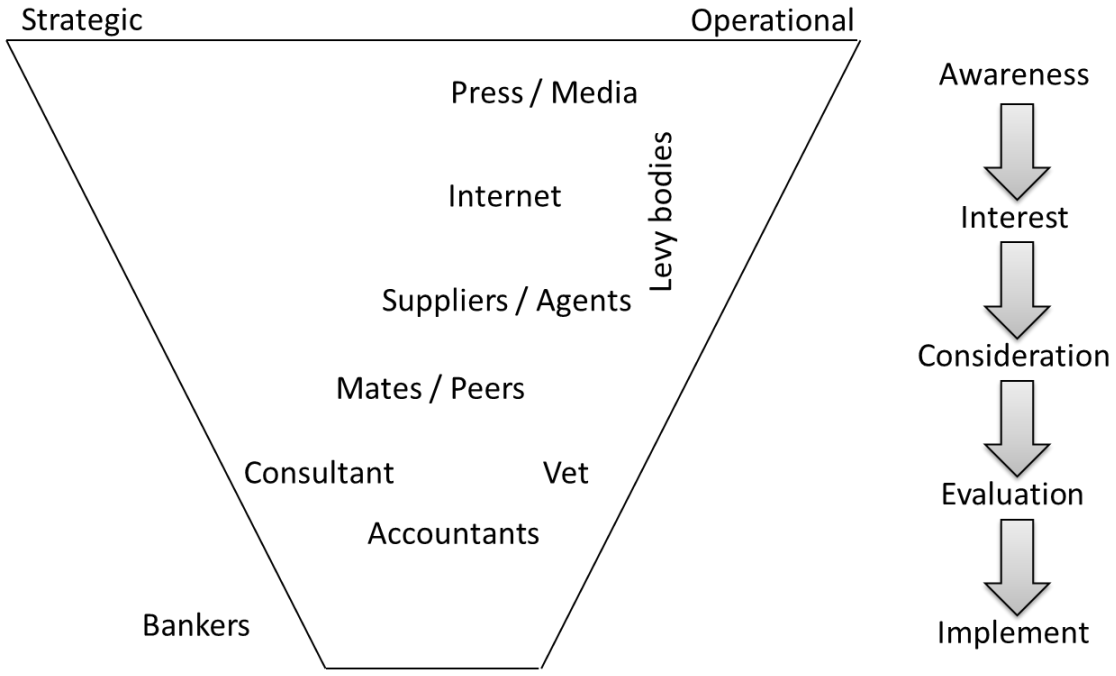

Figure 4. The information gathering process – order of priority.

Value of Information

'Mates and peers' was one of the most mentioned sources for the participants. These neighbours or colleagues are useful to get all kinds of information, from operational management to economic and strategic decisions. The participants also saw this source as a "sounding board" that enables them to make comparison and check if the information they have is useful or not.

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Advice provided on a one-to-one basis, whether from a neighbour or colleague or from elsewhere is seen as specific to an individual's situation and thus potentially highly relevant. It was evident from the participants in the cropping groups that they tended to make more use of such advice in part because they may be working with a much wider range of enterprises. There is some recognition that one point of view can be insufficient and biased. In this context, reference was also made to discussion groups; in the case of those with livestock, vet clubs; and meeting others at field days. Discussion groups and similar group situations emerged as more used by those in the dairy sector.

The value of discussion groups ranges from very low to very useful in terms of getting information quickly and for networking purposes. What is evident from the comments made is that the experience of other farmers is valued, whether it is about the successes that they have had or mistakes that have been made. For discussion groups, it appears important that there is a good facilitator, that the group is not too big so that everyone has the opportunity to participate, and that trust is engendered to facilitate open discussion.

It was suggested that discussion groups focus on a particular area or direction. There were also comments made on the limited lifespan of discussion groups as creativity and innovation diminish over time. Importance was attached to the social and networking opportunities beyond the formal discussion group activity.

Trust – Building relationships

Following discussion on the different sources of advice, participants' were asked about the factors that engendered trust. Some of this had emerged during discussion on individual sources, but participants were explicitly asked to think about this in more detail. What emerged was the need for trust to be earned and not assumed. The level of independence emerged as the major factor of trust, and is why participants tended to trust their industry bodies that were seen as providing unsolicited information. Sales reps were mentioned as good sources of information since their dependence/bias is known and can be accounted for. The need for proof and evidence of results in relation to the information or advice was also important and was a reason many of the participants referred back to neighbours and others farmers who had experience before taking a decision. Level of service is another factor taken into account, this was related to the time spent with an advisor at a single point in time, and alongside this was the development of a long-term relationship.

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Related to this was a comparison between free advice and advice that is paid for. There is generally a good opinion on the value of both, particularly where there is an existing relationship. This includes mates/peers, farmer discussion groups and from agents in terms of free advice, and from independent consultants and agronomists. In general, the most important factor seems to be the quality of the advice given and most participants would be ready to pay for advice as long as there were some good results. It was recognised that the development of a relationship with a consultant was on the basis that they added value to the existing system.

Though there was agreement that many ideas can emerge from discussion groups and similar activities, small groups are perceived as a more efficient use of time because of better trust between the farmers.

Improving Information Flow

In terms of the information and advice that is lacking, some participants expressed the feeling of having too much information, with too many people trying to give them advice. Consequently, it was suggested that it is difficult to know what is relevant and whom to trust. Others felt information was adequate and it was up to each individual to choose the amount of time and money spent on sourcing information and advice. Specific examples of information being sought and not found were also raised. Related to this was the ability to more easily find general information, but not that related to an individual's particular circumstances.

In considering ways to improve the flow of information and advice, the concept of a "dashboard" was suggested, where different organisations come together to provide more targeted and simplified information. The need to link research institutions, individual scientists, industry suppliers, levy organisations and others was seen as important. According to participants, coordination should be the role of the levy organisations as well as Primary ITO[1], funded by farmers through levies, but also with government funding. It was suggested by participants that such monies are not always used wisely, although no specific examples were provided.

There was also the suggestion that information needed to be better targeted, more specific, and directed to those that wanted to improve. Facilitating small groups, in targeted areas

[1] Primary ITO (Industry Training Organisation) is New Zealand's largest industry training organisation, offering nationally recognised, NZQA qualifications in twenty nine industry sectors.

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to minimise travel distance and focused on specific topics, with similarities between farming operations and what farmers wanted to achieve was suggested. Learning groups were mentioned as a particularly useful approach. Improving social interaction and time for networking in a more informal setting was suggested as important.

Discussion

What emerged from the study is that information and advice is available to the farmer, and individual farmers are adept at being able to source relevant information from a relevant source, particularly in regard to day-to-day operations. For other areas related to changing government regulations and compliance, there is reliance on their suppliers and processors for some information. Peers were seen as one of the most valuable sources of information and advice, primarily as a sounding board, or in certain circumstances because of their particular experience. Consultants are more typically used for strategic decisions, but may be used in operational decision making, although they are used by very few farmers.

With regard to the sources of information that are being used, farmers make decisions on the basis of a continuum of awareness creation through careful consideration and onto adoption and implementation. This may arise as a result of something read, heard or seen; an individual may then use the internet to search for more information. The process will necessarily involve some form of social interaction with others, depending on the nature of the decision: going to peers, and then organisations as appropriate for further information. It would tend to be the suppliers and processors for more technically based information, with additional independent advice sought from the industry good levy bodies. For the more strategic levels, information and advice would then be sought from consultants. Those with the most influence are trusted individuals that generally already have some form of relationship with the decision maker.

The primary data gathered suggests that the information and advice sought is dependent on time of year and immediate needs, and is focused on reassurance to reaffirm an individual's thinking encompassing both ongoing practice and/or trying something new. The type of information and advice being sought relates to three areas: business, operational, and compliance. For the latter two the main sources will be the levy boards, suppliers or processors as appropriate. For the former a wide range of sources will be used. For business management the focus of farmers is on financials, tax, market price, and risk management. For operations, there are both the day-to-day productive activities and required decision making, alongside decision regarding the opportunity to implement

innovations. For compliance, the focus is on environmental concerns, in part linked to regional council requirements, and more importantly to farmers' health and safety.

For any advice to be acted upon there needs to be trust, a relationship built over time. With social and professional contact between farmers and others in the industry an important conduit for knowledge exchange is a need to make improved use of existing farmer networks. This is so that any new effort, in the first instance, is directed towards those that want to improve. The evidence is clear that farmers sense test against their farming peers.

This also requires a targeted programme which takes into account the continuum from awareness raising through to adoption and implementation, and the potential sources that would be used at each stage. This will depend on the type of decisions that are being made and also what might be termed the learning styles of the individual decision makers that is the farmers. The various potential sources will include printed and online material, software and mobile app technology, social media and industry events. Events should be carefully targeted. Levy board events have done reasonably well and are seen to be impartial, but events organised by suppliers and focused on the technical considerations may be better placed to provide tailored advice in some circumstances. There is thus a need for the levy boards to work together with the commercial sector.

Knowledge exchange can also be facilitated through farmer learning groups supported by the industry, or through a mentoring or coaching process between the older and younger generations and involving different sectors of the industry. For this to work, the focus has to be on the needs of the farming groups. There should be a clear reason and objective for interaction within the group, with information and advice targeted and simplified to the goal in question, and topics discussed specific and relevant to all. The process should also involve performance monitoring and benchmarking.

Conclusion

Farmer decision making is both operational and strategic, with information and advice sourced from a range of sources. There is a continuum from awareness creation through careful consideration to adoption and implementation. In order to take the industry forward there needs to be a more cohesive extension programme using printed and online media alongside targeted events for awareness creation. The wider community of rural professionals should then be engaged in clearly defined roles to support farmers through

the subsequent decision making processes. The best way to facilitate this flow of information is through a farmer's professional and social networks.

There was a strong desire from the farmers for a "one stop shop". This may not be feasible, but realigning the rural professional framework should be done in such a way as to provide clarity regarding where or who from advice and information should be sought.

References

Agricultural Marketing Resource Center (2009) *Conducting Focus Groups*. http://www.agmrc.org/business-development/starting-a-business/marketbusiness-assessment/articles/conducting-focus-groups/ (assessed 20 April 2017).

Barriball, K., Byles, S. and Biddick, L. (2005) Developing farmer focus groups as a knowledge transfer mechanism: A practical experience. *Proceedings of the 15th International Farm Management Conference, Campinas, Brazil*.

EU SCAR (2012) Agricultural knowledge and information systems in transition – a reflection paper. Brussels.

Rolling, N. (1986) Extension Science increasingly preoccupied Knowledge systems. *Socialogia Ruralis*, 25, 269-290.