

Regional Community Networks in the Australian Agri-Food Industry

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Abstract

The opportunity for networks of producers in the Australian agri-food industry to use the Internet to enhance their activities is considerable. This paper presents an outline of the initial findings of a Masters' research project, which seeks to discover the current and potential opportunities that the Internet can offer these networks.

Key Words

Internet, E-Commerce, Community Networks, Agri-Food

INTRODUCTION

The term 'Regional Community Network' has been chosen to convey that these are networks of people and organisations, which form a community on a geographical basis or are part of a community in a particular geographic region. A community can be defined as a grouping of individuals (and organisations) aligned around a common interest (Barksdale 1998). These networks form a 'community of interest' which has an established mission, vision and/or focus. Membership of these networks consists of primary producers and other 'stakeholders' in a region such as service providers and government representatives. They are, ideally, initiated and driven by producers but are sometimes initiated by government authorities such as in the case of the Alpine Valleys Agribusiness Forum, which was initiated by four local Shires and a local Council.

There is a growing awareness among those involved in the agri-food industry in Australia that collaboration has become a prerequisite for sustainable competitive advantage both on a domestic and international scale. A study of agricultural producers undertaken in Western Australia concluded that although a grower's primary reason for group formation is to increase their profit margins, they are aware that 'grouping up' can also give them many opportunities that are often not available to individual growers (Murray-Prior et al 1998).

Although not yet a prerequisite for success, the Internet has become a useful tool for agri-food networks to achieve their objectives by enhancing their ability to keep up with current business practice. Figure 1 suggests a general sequence of online initiatives a network may employ as part of their Internet strategy. By creating a website, the Internet can be used as a marketing tool to capture new markets for its' members, individually and collectively. A website can also provide a network with a more efficient means of disseminating information to its' members and can provide a platform for sharing information. Finally, the Internet may be used to enable a more efficient supply chain by providing electronic feedback from further down the chain.

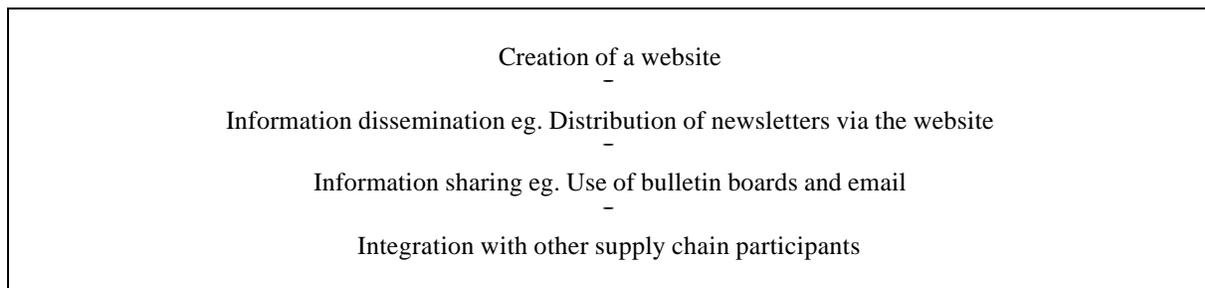


Figure 1: Use of the Internet by Regional Community Networks in the Australian Agri-Food Industry

According to Rogers (1995), the 'trialability' of an innovation, such as the use of the Internet by network members, will influence its rate of adoption. In this situation, trialability means introducing new ways of using the Internet in stages, as illustrated in Figure 1. The more familiar network members become with the Internet, the more they will be prepared to progress to the next stage and, therefore, the more they will benefit from this technology.

RESEARCH METHODOLOGY

A multi-method model of research has been adopted to achieve the objectives of this research project. A small number of case studies (qualitative research) will be conducted, including in-depth interviews with network leaders. To achieve the desired research outcomes, the results of these case studies will be combined with an online survey (quantitative research) which will be emailed to network members. While this model of research and its advantages have not been appreciated, the case for combining methods generally is strong (Gable 2000).

The rationale for using both qualitative and quantitative research methods for this project was principally to eliminate any conflict between the perceptions of individual members of producer groups and the perceptions of the leaders of these groups. The use of *multiple* case studies allows for a cross-case analysis of different agri-food industries in different regions throughout Australia. This is important as outcomes may vary according to the State in which the group exists or whether the group members produce the same product or a variety of products.

CASE STUDIES

Although the Internet has been commercially accessible since the early to mid 1990's, uptake of the Internet in the Australian agri-food industry has been relatively slow. Table 1 confirms that in 1999, while Internet penetration rate in Australia was comparatively high in global terms (41% of the population), the number of farms with Internet access was low at 18%. And although the most recent statistics, released by the Australian Bureau of Statistics in September this year, reveal that the number of farms using the Internet grew to 34% in June 2000, the rate remains well below the national business average of 56% (NOIE 2001).

	Australia	Germany	USA
Internet penetration rate [Internet users in % of the population]	41	19	42
Percent of Farms with Internet access (in 1999)	18	57	29
International Internet bandwidth [Mbps]	729	11612	28308

Table 1: Indicators of e-commerce readiness (Stricker et al 2001).

It is easy to understand why Internet access on Australian farms is low when bandwidth (capacity for data to be sent and received over the Internet) in Australia is considerably lower than the bandwidth available in the USA or Germany, as can be seen in Table 1. Not only is Internet bandwidth very slow in Australia, but it is still too expensive for many people in rural areas. This was reinforced in a presentation given by Ian McClelland, a grain farmer and Chairman of the Birchip Cropping Group, at the ABARE Outlook 2001 conference in July. He remarked that "using the Net in the bush is still expensive (and) despite it's staunch advocates, use of the Net is very time consuming, and the attempt to find information is slow, often tedious and frequently fruitless" (McClelland 2000).

Despite the negative aspects of using the Internet in rural areas, there are a number of networks in the Australian agri-food industry that have been proactive in regards to their adoption of the Internet. The first case study, of the Birchip Cropping Group (BCG), is a producer initiated and driven network. The second is a case study of the Victorian Agribusiness Forums which have been initiated by local government with the establishment of the Alpine Valleys Agribusiness Forum¹. While not producer initiated, the Agribusiness Forums have become more producer driven over time.

Birchip Cropping Group (BCG)

An initial case study for this research project was conducted of the Birchip Cropping Group. BCG² is a farmer driven agricultural research organisation operating as a not-for-profit incorporated association, based in Birchip in

¹ Alpine Valleys Agribusiness Forum <http://www.alpvalleys.com.au>

² Birchip Cropping Group <http://www.bcg.org.au>

north-west Victoria. The Group's mission is to improve the profitability and long term viability of Mallee and Wimmera communities through research, demonstration and exchange of ideas amongst farmers and industry groups.

BCG has a website offering functions such as a weather update, weekly editorial and a bulletin board which provides members with the opportunity to ask questions and add comments to a given theme posted by a mediator at a particular point in time.

In addition to the website, the group has developed a number of innovative methods of using the Internet to enhance the activities of its' members. The first project, due to be implemented in September this year, is the Virtual Field Day. This is a software package, developed by undergraduate university students, that will allow for the distribution of information on cropping trials to BCG members over the Internet. The system will enable a user to view images and textual information, listen to audio recordings of exports, and watch videos about the crop at biweekly intervals during the developmental cycle.

The second online project involves the implementation of the APSIM package, a PC-based crop simulator developed by the Agricultural Production Systems Research Unit (APSRU) in Toowoomba, Queensland. This model assesses yield outcomes in relation to historical weather information and can be used as a tool for estimating likely outcomes for a current crop.

Victorian Agribusiness Forums

There are currently four established Agribusiness Forums in operation throughout Victoria - Alpine Valleys, Yarra Valley, Wimmera and Gippsland. The Alpine Valleys (or AlpValleys) forum, was established in 1995 to explore the potential to develop an integrated strategy for sustainable agribusiness growth across the region. As the first forum to form, it is viewed as a model for other existing and future forums to follow. AlpValleys has a website with a newsletter, regional database and annual report. During a recent water debate, the website became a vital resource to AlpValleys as a key information source. During this debate, visits to the site exceeded 1500 in two months.

In addition to these networks, there are a number of projects that have been conducted in Australia which aim to encourage the use of the Internet by producers in the agri-food industry. The Commonwealth Government's Networking the Nation³ program has funded two of these projects, the MECIS-NN⁴ project and the FM500⁵ E-Business project.

MECIS-NN

The MECIS-NN⁶ project was developed by Central Queensland University (CQU) in conjunction with the DCITA⁷. The project was established to investigate the needs of the Australian beef industry for electronic feedback systems along the supply chain.

One of the objectives of MECIS-NN was to develop a method for allowing beef producers to access electronic feedback from processors over the Internet in a convenient way (Gregor & Menzies 2000). The project produced a particularly successful outcome for the Bluegum Beef group who has since amalgamated with another group of beef producers, the Capbeef Cooperative. The new group will have a single group database residing at Capgrains office in Rockhampton.

Gregor and Jones (1999) applied Rogers' diffusion theory to this case study revealing a number of positive and negative aspects, which may influence the rate of adoption of information technology in a rural context. Similar issues, such as lack of time for learning and using electronic communications systems, may also become apparent if Rogers' diffusion theory were applied to other networks of producers in the agri-food industry.

³The National Office for the Information Economy <http://www.noie.gov.au>

⁴ MECIS-NN project <http://www.mecis-nn.cqu.edu.au>

⁵ Farm Management 500 <http://www.fm500.com.au>

⁶ MECIS-NN is an abbreviation of the red Meat industry's use of Electronic Communication and Information Systems - Networking the Nation.

⁷ Australian Department of Communications, Information Technology and the Arts <http://www.dcita.gov.au>

Farm Management 500 (FM500)

The Farm Management 500 E-Business project aims to build awareness of relevant e-business facilities, encourage members to trial and evaluate them and accelerate the adoption of those that prove effective. The focus has been on truly interactive e-commerce websites that enable exchange of information and on-line purchasing.

Farm Management 500 is a network of ongoing farm management discussion groups facilitated by private consultants with a membership that largely consists of broad-acre dryland grain growers and livestock producers of northern and western Victoria and South Australia.

Among the preliminary results and observations of this project, it was found that farm managers readily make use of the Internet as an information source. However, the benefits of utilising the Internet as a means of transacting business are not yet clear. It was also found that the generally slow and poor quality Internet services in rural areas are a major barrier to the promotion and adoption of e-business facilities by farmers (McCarthy 2001).

CONCLUSION

The results of this research project, to date, reveal that the use of the Internet by Regional Community Networks in the Australian agri-food industry is not widespread, despite the growing number of these networks in the industry which has resulted from the increasing awareness of the need for collaboration.

Perhaps the primary reason for the lack of Internet use by these networks is the poor bandwidth in Australia, particularly in rural areas. The results of the online surveys to be distributed to network members in the coming months, may lead to a greater understanding of this situation.

It must be acknowledged, however, that the networks using the Internet to enhance their member's activities, such as the Birchip Cropping Group and the Victorian Agribusiness Forums, are achieving positive outcomes.

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